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PRECONCEPTIONAL CARE: OPPORTUNITIES AND CHALLENGES

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The aim of the study was to identify the opportunities required for straightening of preconceptional health and care, according to medical literature. Benefits and potential risks were mentioned. Some international experiences related to preconceptional care management were analyzed, by making references especially to those from US, including the actions initiated by Centers for Disease Control and Prevention (CDC).
In this article the WHO position is mentioned which develops a global consensus on preconceptional care to reduce maternal and childhood mortality and morbidity, proving a "menu of interventions" which lists the health problems, behavioral problems and risk factors in thirteen domains, evidence-based interventions to address them and mechanisms of delivering them.
A special section is dedicated to some controversies in preconceptional care management, priority at the medical primary care.
The WHO recommendations and the international experience represent a good support for health care systems from different countries to improve the access to the care before getting pregnant and overcoming inequalities. In this context, authors consider that the improving of preconceptional care in each country depends, first of all, on the wish of governors and health care providers.
In conclusion, the hypothesis to review the family planning concept is suggested, considering that it has equally to include two main components – contraception and preconceptional care. It will provide real opportunities for people to achieve their reproductive life plan to have not only wanted, but also healthy children.

Key words: *preconceptional care and health, family doctor, family planning, opportunities, challenges*

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ПРЕГРАВИДАРНАЯ ПОДГОТОВКА: ВОЗМОЖНОСТИ И ПРЕПЯТСТВИЯ

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В статье приводятся результаты обзора ряда исследований, посвящённых тематике прегравидарной подготовки.
Изучен международный опыт по организации системы услуг, направленных на снижение риска для здоровья будущих матерей и детей на этапе планирования беременности, преимущества и потенциальные риски. Более наглядно описан опыт США, в том числе описаны мероприятия, инициированные Центрами по контролю и профилактике заболеваний (CDC).
Представлена позиция Всемирной организации здравоохранения (ВОЗ), которая определила глобальный консенсус по прегравидарному уходу с целью снижения материнской и детской смертности и заболеваемости, разработав комплекс мероприятий, основанных на данных доказательной медицины, с учётом проблем здоровья, поведенческих проблем, а также факторов риска.
Отдельный раздел посвящён спорным аспектам по организации услуг в прегравидарной подготовке партнёров, преимущественно на этапе первичной медицинской помощи. Рекомендации ВОЗ и международный опыт представляют собой хорошую основу для достижения успеха в преодолении проблем и улучшения доступа к услугам по планированию и подготовке к беременности. В данном контексте авторы считают, что улучшение прегравидарного ухода в каждой стране зависит в первую очередь от воли руководителей служб здравоохранения и поставщиков медицинских услуг.
В заключение, авторы выдвинули гипотезу о целесообразности пересмотра концепции планирования семьи,

которая помимо контрацепции должна включать прегравидарную подготовку. Этот новый подход обеспечит реальные возможности людей в реализации их репродуктивных планов, чтобы дети родились не только желанными, но и здоровыми.

Ключевые слова: *прегравидарная подготовка, семейные врачи, планирование семьи, возможности и препятствия*

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Preconceptional care as a medical technology is not a recent innovation. It is mentioned as an important part of pre- and postnatal health care system since last century, even if its importance is very well known in pregnancy planning. Multiple studies were carried out in this field. Both health and preconceptional medical care have scientific approach based on evidence. It is a paradox, but the importance of preconceptional care is underestimated in a lot of countries, including developed ones. Even when the impact of interventions during antenatal, intranatal and neonatal periods don't influence the maternal/neonatal mortality rates, the preconceptional stage need to be explored.

SOME ASPECTS INVOLVING THE IMPACT OF PRECONCEPTIONAL CARE INTERVENTIONS

A healthy future generation and access to health care for all begin with a healthy pregnancy and early childhood development. This, in turn, results in healthy children, healthy, productive adults, and later, healthy elderly people. In this regard, maternal and reproductive health are critical aspects of the life-course approach [7, 32].

In high-income countries, women postpone childbearing until ages when their fecundity has decreased, whereas women in low-income countries would benefit from delaying pregnancy and spacing of subsequent pregnancies. Since the most critical period for organ development occurs before many women even know they are pregnant, the first contact with antenatal care is often too late for advice about health-promoting changes in lifestyle. Moreover, there is a growing body of evidence that women's, as well as men's, health and lifestyle before conception can affect pregnancy outcomes. Globally, at least four out of ten women report that their pregnancies were unplanned, highlighting the need for population-wide approaches for evidence-based preconception care. Women with chronic diseases such as diabetes, hypertension and obesity face specific reproductive planning [28].

New evidences show that investing in health early in life has benefits for health promotion and disease prevention throughout the life course. Pre-conception and pregnancy are an important time when health behavior and outcomes can be influenced, including the prevention of future development of non-communicable diseases [32].

The World Health Organization (WHO) pointed out that preconception care is relevant for all women of reproductive age, if they do not use a safe contraception method or they agree to become pregnant, which means they will keep it [2, 12].

Preconception care can contribute to reducing maternal and childhood mortality and morbidity in both high- and low-income countries. In addition to optimizing general preconception health and risk awareness of the population as a whole, it can address the relatively high levels of maternal and childhood mortality and morbidity in socially marginalized and economically deprived families and communities [15].

Implementing interventions before conception may be limited by the extent of pregnancy planning and awareness of preconception health issues, but an observational study found that women who reported advice from health professionals before pregnancy were significantly more likely to adopt healthier behavior before pregnancy, including taking folic acid and keeping to a healthier diet [15]. This is encouraging because new researches showed that a mother's diet before conception could permanently affect how her child's genes function [8].

Pre-conception care focuses on aspects of health that benefit all men and women, regardless of their reproductive plans [6]. As many pregnancies are unplanned, it is important for healthcare providers to address risk factors that negatively affect health and pregnancy outcomes during the reproductive years [23]. The pre-conception period also provides a unique opportunity to tackle health inequalities before they form. A woman's health and wellbeing at conception is the biggest predictor of pregnancy outcomes. By addressing the health of all women during this time, healthcare providers can help ensure that more infants have the best start in life regardless of socio-economic background [12].

Improving preconception health can result in improved reproductive health outcomes, with potential for reducing societal costs as well. Preconception care aims to promote the health of women of reproductive age before conception and thereby improve pregnancy-related outcomes [5].

While evident benefits, there are some potential risks of preconception care in some countries. Attention needs to be given to ensure that preconception care is not misused to limit the autonomy of women and to undermine their rights. A strong focus on preconception care could run the risk of defining girls as being in a preconception state even before their menarche and women as being in a preconception state for the entire duration of their fertile period when they are not pregnant [15]. This could lead to women being barred from participating in situations and taking up work in some areas because it would increase the risk of adverse maternal and child health outcomes. In addition, some women may be vilified or prosecuted for their conduct, such as smoking or drinking alcohol.

Further, an emphasis on preconception care could reinforce the notion that the focus of all efforts to improve the health of girls and women should be at improving maternal and child health outcome rather than at improving

the health of girls and women as individuals in their own right. In addition, blanket approaches targeting the entire population of girls and women could be seen to imply that all girls and women will invariably become mothers.

Governments should be alert to these risks. They should put in place mechanisms to reduce their likelihood, to detect them when they appear and to respond promptly and effectively if they do. Civil society bodies such as experienced women's rights organizations could play a valuable role both embedded in government-headed committees and working groups.

MANAGEMENT OPPORTUNITIES TO IMPROVE PRECONCEPTIONAL CARE

The goal of preconception care is to improve pregnancy outcomes and women's health in general through prevention of disease and management of risk factors that affect pregnancy outcome and the health of future generations [19, 22, 28].

Subsequently, four public health models were developed synthesizing preconception care delivery at a population level: (1) primary care; (2) hospital-based and inter-conception care; (3) specific preconception care clinics; and (4) community outreach [25]. Heterogeneity of risk factors, health systems and strategies of care reflect the lack of consensus about the best way to deliver preconception care. The proposed models aim to reflect differing aspects of preconception healthcare delivery. An ideal preconception visits entail risk screening, education, and intervention if indicated [25, 26].

In February 2012, a WHO meeting brought together researchers, practitioners and program managers with experience in preconception care, as well as United Nations agencies and partner organizations to achieve a global consensus on the place of preconception care as part of an overall strategy to prevent maternal and childhood mortality and morbidity [31]. Interventions were developed based on evidence, for domains concerning preconceptional care: nutritional conditions, tobacco use, genetic conditions, environmental health, infertility/sub-fertility, interpersonal violence, too-early, unwanted and rapid successive pregnancies, sexually transmitted infections (STIs), HIV, mental health, psychoactive substance use, vaccine-preventable diseases, female genital mutilation. WHO is also committed to support regions and countries in implementing a step-by-step process to improve availability of and access to preconception care interventions [14, 21].

Even where strong public health programs are in place across the life-course, they do not guarantee that women enter pregnancy in good health. There is growing experience in implementing preconception care initiatives both in high-income countries, such as Italy, the Netherlands and the United States and in low- and middle-income countries, such as Bangladesh, the Philippines and Sri Lanka [31].

In our opinion, the US experience in developing programs for strengthening preconceptional care represents a particular interest for preparing couples before conception. In 2006, the Centers for Disease Control and Prevention (CDC), national subject matter experts on preconception care and representatives from many local, state and national organizations launched the public – private partnership known as the Preconception Health and Health Care (PCHHC) Initiative to expand prevention efforts for preconception health and healthcare [12]. The initiative built upon the 10 recommendations of CDC's Select Panel on Preconception Care, which were aimed to improve a woman's health before conception, whether before a first or a subsequent pregnancy. The recommendations are: (1) individual responsibility across the lifespan; (2) consumer awareness; (3) preventive visits; (4) interventions for identified risks; (5) interconception care; (6) prepregnancy checkup; (7) health insurance coverage for women with low incomes; (8) public health programs and strategies; (9) research and (10) monitoring improvements [5].

The CDC engaged leaders and practitioners in various fields to ensure implementation of the recommendations and convened five workgroups in the areas of clinical, public health, consumer, policy and finance, and surveillance and research. PCHHC was formed to guide implementation of the goals, recommendations, and action steps outlined by the select panel [10, 13]. The Reconvened Select Panel recommended increased focus and clear actions to improve preconception health and health care. To improve preconception health at the population level, the Panel calls for emphasis on: (1) action to shift social determinants of health; (2) engagement of and social marketing to consumers and (3) public health, and (4) community preventive services [11, 29]. For health care, the Panel recommended emphasis on: (1) implementation of the women's clinical preventive services, particularly visits that include preconception care; (2) development and implementation of clinical care supports and tools; (3) action to improve provider knowledge, attitudes, and behaviors, and maximize changes in the health care system and (4) enhanced use of technology and health information technology. In addition, the Panel identified a number of areas in need of crosscutting action to advance implementation of national recommendations for preconception health and health care.

According to this, the future of preconception care will require an innovative multigenerational approach to health promotion for women and men to achieve optimal reproductive health outcomes.

Currently, international cooperation and the exchange of knowledge between researchers become more and more important. An opportunity in this context was the third European Congress on Preconception Health and Care, held in Uppsala, Sweden, in February 2016 [28]. The Congress was hosted by the Medical Faculty at Uppsala University and the PrePreg Research Network. The specific aims of the congress were: (1) to review the status of preconception health and care in Europe and globally; (2) to present recent preconception health research results; (3) to exchange experiences with different methodologies used in clinical research, including issues relating to gender and ethics; (4) to exchange experiences of implementing and evaluating reproductive health care interventions, including the use of social media to promote preconception behavior change and (5) to develop new research collaborations.

CONTROVERSIES IN PRECONCEPTIONAL CARE

All physicians should suppose the occurrence of pregnancy and inform about maternal, fetal and neonatal health risks, determined by concomitant diseases and their treatment [1]. Special attention among all healthcare systems is assigned to the primary healthcare role, which include preconceptional care services.

A review by Shannon et al. identified primary care as the most common setting for preconception health service delivery [24]. However, the authors also concluded that there is no agreed consensus on the best method to deliver care within primary care. It is possible that many strategies acting synergistically are needed to improve service delivery.

Little is known about the preconception interventions that general practitioners (GPs) provide. Ojukwu O. et al. did a research in maternity and general medicine units, interviewing women and healthcare providers, in order to evaluate GPs' knowledge, attitudes and views towards preconception health and care in the general practice setting [20]. A lack of knowledge and demand for preconception care was found, and although reaching women before they are pregnant was seen important, it was not a responsibility that could be adequately met by GPs. The GPs did not feel they should be responsible for providing routine pre-pregnancy health and care advice; they considered nurses to have a more prominent role in delivery of care. In conclusion, authors mentioned that the implementation of preconception policy and guidelines is required to engage women and men and to develop proactive delivery of care with the potential to improve pregnancy and neonatal outcomes. The role of education of nurses in improving preconceptional health remains under-developed.

Some studies have found low motivation from GPs to promote preconception care such as folate supplementation because of their own personal beliefs [17, 30]. One Australian study established that GPs did not promote use of folic acid as they held the belief that neural tube defects were so rare that folate was not needed or that folate did not always prevent neural tube defects anyway. Although the GPs considered preconception care desirable in order to improve maternal and child health, they stated that there was little demand for the service. The small numbers of patients presenting for advice when trying to conceive have been identified by several other studies.

Stephenson J. et al. established that despite a high level of pregnancy planning, awareness of preconception health among women and health professionals is low and responsibility for providing preconception care is unclear [27]. However, many women are motivated to adopt healthier behavior in the preconception period, as indicated by halving of reported smoking rates in this study. The link between health professional input and healthy behavior change before pregnancy is a new finding that should invigorate strategies to improve awareness and uptake of pre-pregnancy health care, and bring wider benefits for public health.

The organization of the care system makes the time spent on an act in general practice (approximately 15 minutes), although with ambitious: communicate with the patient, apply his knowledge in all areas of the medicine in a rigorous way, practice a preventive medicine... The field of general medicine is immense, the medical knowledge is constantly increasing, but the contact and the listening must remain priorities. The general practitioner cannot answer this request alone. It is therefore important that he/she can rely on a well-controlled and validated support system, in order to focus on less standardized tasks [4].

Other authors mentioned the individualized approach in preconceptional care, women being divided in three groups: (1) the "prepared" group; (2) the "poor knowledge" group and (3) the "absent pre-pregnancy" group, and argued that different preconception strategies are needed to target different women [3]. The majority of the GPs did not view men's preconception health as a priority. Studies show that men have a lower knowledge of preconception care and are less likely to see their GPs for preconception interventions [18]. This is congruent with men's limited involvement in reproductive and sexual health for preventive health care in general.

GPs also face difficulties with prioritizing preconception care together with other preventive care issues. Consequently, potential interventions for improving the delivery of preconception care guidelines should also focus on providing tools and resources to assist GPs in delivering the content and evidence base of the guidelines. The studies identified some of the barriers and enablers to the delivery and uptake of preconception care as perceived by GPs. Further research is necessary to determine which of these should be targeted or prioritized for intervention. Consideration must also be given to the views of women on the barriers and enablers to the delivery and uptake of preconception care [16, 17]. Understanding the views of both women and GPs as well as the theoretical basis for changing their behavior will be essential when designing effective implementation strategies for improving the delivery and uptake of preconception care. These strategies may also need to consider the role practice nurses and other health professionals may have in facilitating better uptake of preconception care, especially among high-risk patients who should be actively targeted. Promotional materials and letters of invitations from GPs advising patients of the availability of and the need for preconception care could also be used to increase the uptake of preconception care. Given the potential for evidence-based PCC to reduce maternal and neonatal morbidity and mortality, it is essential that effective strategies are put in place to deliver evidence-based preconception care guidelines.

It is obvious that preconceptional care is associated with pregnancy and family planning notions. Without analyzing too many data, we can see that the term of family planning in population perception and providers services, has the same meaning as contraception.

According to WHO, family planning allows people to attain their desired number of children and determine the spacing of pregnancies. Thus, high-quality family planning services and the people who deliver them respect, protect, and fulfill the human rights of all their clients [9].

CONCLUSIONS

The number of topics on couple preparation for pregnancy in medical literature is impressive. It is obvious

that health strengthening of reproductive age population correlates with social and economic context, public health level and cultural background in each country. The WHO recommendations and the international experience represent a good support for getting success, including the increasing access to the medical services and overcoming inequalities, especially for women from socially vulnerable groups. Only a live reproductive plan for each young person and a visit to a very well skilled providers in preconceptional care, during the pregnancy planning, may reduce mother's and baby's health risks.

At the same time, traditionally in every culture, family term involve childbirth. As a normal situation, the pregnancy should be planned as well. The woman's and her child's/family's rights for health and live quality are based on reducing maternal and perinatal risks, especially before pregnancy. Even if it is a family planning method, preconceptional care is not viewed as an important activity neither by the individuals or couples nor by medical providers. In this context, the family planning term is incomplete.

We consider that there is a need to change the paradigm, as well as it is necessary to update family planning concept, which should include two components: (1) contraception to prevent unwanted pregnancy or to ensure the interval between births and (2) preconceptional care.

Regardless the particularities of the demographic situation, those responsible for family planning programs will be able to consider each component equally important for the population in each country. This new approach of family planning can also be applied at couple's level. It will provide real opportunities for people to achieve their reproductive life plan to have not only wanted, but even healthy children.

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