

# Changing Care in Changing World – Reproductive Marker of Cardiovascular Disease Risk in Women

*You cannot connect the dots looking forward; you can only connect them looking backwards... Steve Jobs.*

In recent years, the field of gynecology has undergone a transformative evolution, embracing a holistic approach that combines medical, psychological, emotional, and social well-being. Women's health care has had a facelift by changing to a holistic health-care approach. New dimensions in health care are being added with recommendations from three different organizations advising us to look into the future health of women in a different aspect:

- First was the American College of Obstetrics and Gynecology (ACOG) Guidelines of 2016 modified in 2018
- Second, “Reproductive passport in pregnancy” by the International Federation of Obstetrics and Gynecology (FIGO) in 2023
- Finally, “White Paper of International Menopause Society” on World Menopause Day in October 2023.

All these are going to bring a paradigm shift in the perspective of “PREVENTIVE HEALTH OF WOMEN” across ages by addressing the issue of when to start assessing women for preventive services.<sup>[1-4]</sup>

With increasing life expectancy, women are living longer after menopause. However, longevity is not translating to healthy aging. Rising to the need of keeping our elderly population healthy by keeping them independent and productive is an urgent need of the hour. The World Health Organization (WHO) and the United Nations declared the decade from 2021 to 2030 as a “Decade of Healthy Aging.” Keeping in line with this theme, various professional organizations and researchers all over the world have brought forward the concept of “In-utero Origin of Adult-onset Metabolic Disorders” initially proposed by Barker. Assessment of risk factors right from an adolescent age will pave the path for a healthy midlife.

It is often truly thought that pregnancy is a state of physiological stress that can unmask preexisting or subclinical diseases. Any complications that arise during pregnancy can also have a lasting impact on a woman's health. These comorbidities may manifest later in life and may even have intergenerational effects. In fact, women who experience complications during pregnancy, such as hypertensive disorders of pregnancy (HDP) or gestational diabetes mellitus and other adverse pregnancy outcomes (APOs), are particularly at risk for future cardiometabolic diseases.



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The ACOG recommends an initial postpartum evaluation within the 1<sup>st</sup>–3 weeks after delivery as 12%–23% of maternal deaths occur in this period.<sup>[1]</sup> Hence, complete biopsychosocial evaluation within the 1<sup>st</sup>–3 months is mandatory to optimize interconception and long-term health benefits. The FIGO also recognizes that the postpartum period, also known as the “fourth trimester,” is a unique opportunity for health-care professionals to provide support and guidance to women who have experienced a complicated pregnancy. Consequently, if we aid in optimizing the health of women during this critical time, they can improve their long-term health outcomes to ensure a healthy midlife and postmenopausal transition.<sup>[2]</sup>

The FIGO Committee on the Impact of Pregnancy has come out with an innovative idea of the “FIGO Pregnancy passport.” This new concept would be the most convenient, pragmatic, and effective tool for postpartum care. It should be used widely all over the world.<sup>[2]</sup> The FIGO Pregnancy Passport gives information about:

- Baseline contact data
- Prepregnancy and family history of diabetes, hypertension, and heart disease complications during pregnancy and delivery
- All data available at the time of discharge
- Patient is called for the assessment in the postpartum period at 6 weeks, 3 months, 6 months, 1 year, and beyond 1 year when needed
- Conditions which need follow-up are gestational diabetes, HDP, grossly deranged lipid profile, kidney disorders, and obesity
- This card has information regarding risk indicators and long-term interventions advised to the patient
- This sheet is folded as a passport and handed over to the patient. It empowers women with not only knowledge about their health status but also interventions that they can take such as weight control, diabetic diet, exercise, and medications

- She can also know when to get routine tests done in pregnancy.

Another pathbreaking recommendation was given by the International Menopause Society as White Paper on “Reproductive Markers of CVD in women” on World Menopause Day (October 18, 2023).<sup>[5]</sup> All these suggestions have shifted the pendulum of assessing women at the menopausal transition to catching them up right at an adolescent age. They can then be followed up in the reproductive age and can be assessed again at menopausal transition keeping in mind all APOs.

Markers of cardiovascular disease (CVD) in the early stages of life (adolescence) are polycystic ovarian syndrome with menstrual irregularities, functional hypothalamic amenorrhea, infertility, APO such as preeclampsia, gestational hypertension, gestational diabetes, miscarriage, stillbirth, placental abruption, preterm birth, low birth weight, small for gestational age, parity (<1 or ≥5), substance abuse, endocrine disorders requiring therapy, breast cancer, chemotherapy, radiation therapy, etc.,. It has also laid stress on what we have been missing traditionally such as psychosocial, depression, and anxiety aspects, abuse and intimate partner violence (inducing chronic stress), socioeconomic and cultural status, race, and poverty. Poor health, literacy, and environmental risk factors (air pollution) have also been addressed in these suggestions.

White paper by IMS highlighted that besides reproductive markers, menopause is an opportunity to reassess lifestyle, recognize ongoing and potential health concerns, and encourage a proactive approach to future well-being, particularly cardiovascular well-being.<sup>[6]</sup> Four factors important in menopause are cardiometabolic health changes, symptoms of menopause, the reproductive lifespan, and menopausal hormone therapy (MHT). Hot flushes, sleep disturbances, and mood changes are synonymous with CVD as are often the identifiable risk factors. The added risk is found in women with early menopause and premature ovarian insufficiency. MHT, whether protective or harmful, is controversial. Early MHT has been found to be protective for CVD risk factors and early adoption of lifestyle changes also beckons toward healthy aging.

WHO also reiterated the fact that CVD and not breast cancer is the leading cause of death in both developing and developed countries. A woman’s awareness of her own cardiovascular risk is crucial in prompting her to take preventative measures against CVD.<sup>[7]</sup> Research has shown that providing such interventions can lead to improved knowledge of cardiovascular risk factors, increased self-efficacy for healthy eating, and greater

engagement in physical activity among women who have experienced complicated pregnancies. Overall, the pregnancy passport is a valuable tool that benefits both care providers and the public. It promotes better communication, personalized care, and patient empowerment. As such, it should be considered an essential component of postpartum care for women who have experienced complications during pregnancy to reduce their risks of long-term adverse health outcomes. We would have to plan for the future health of midlife women well in advance. It is prudent to go back and take all the relevant history when an individual enters midlife.

Artificial intelligence can be of great help in planning postnatal visits because women often tend to miss their postnatal visits due to their postnatal stress, fatigue, emphasis upon care of newborns, lack of transport, or language barriers. Telemedicine has also come in a big way helping physicians to take blood pressure and blood sugar measurements, managing weight, and counseling about tobacco use or mental health disorders in pregnancy. We are changing the care of women with changing times and making it more result-oriented and meaningful.

To conclude, the role of prevention is paramount in mitigating future risks and improving health outcomes. Women are diagnosed and treated for CVD at lower rates than men<sup>[8,9]</sup> and this is a prime opportunity for early intervention by addressing this systemic gap. The 2019 ACC/AHA guideline for the primary prevention of CVD and the 2021 AHA scientific statement on APO have endorsed that a detailed history of APO is important for comprehensive CVD risk assessment in women.<sup>[10]</sup> Purpose served by pregnancy passport are early identification of risk factors for chronic diseases. It has helped to development prevention strategies for APO, thereby preventing adverse life events in midlife and menopause. Emphasis has been laid on taking the active role in self-management. This will lead to better health outcomes and satisfaction.

Adopting a life course perspective, with attention to women’s reproductive milestones as outlined in this IMS White Paper, will be beneficial for clinicians now. In future, sex-specific risks will hopefully be incorporated into standardized CVD risk calculators.

With all these recommendations about early diagnosis and prevention, the future for midlife and menopausal women is bright. Reduction of intergenerational disease by adopting a preventive strategy will help us to pave the way for a bright and healthy future.

“Aging is not lost youth but a new stage of opportunity and strength.”

–Betty Friedan

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

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**Submitted:** 14-Dec-2023

**Revised:** 14-Dec-2023

**Accepted:** 14-Dec-2023

**Published:** 30-Dec-2023

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**Website:** <https://journals.lww.com/jomh>

**DOI:** 10.4103/jmh.jmh\_248\_23

**How to cite this article:** Ahuja M. Changing care in changing world – Reproductive marker of cardiovascular disease risk in women. *J Mid-life Health* 2023;14:149-51.