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RCMOS - Multidisciplinary Scientific Journal The Knowledge.
ISSN: 2675-9128. São Paulo-SP.

Year VII, v.2 2026 | Submission: 04/01/2026 | Accepted: 07/01/2026 | Publication: 10/01/2026

Advances and Protocols in High-Risk Prenatal Care, Long-Acting Hormonal Contraception, and Outpatient Gynecological Care

Advances and Protocols in High-Risk Prenatal Care, Long-Acting Hormonal Contraception, and Ambulatory Gynecological Care

Advances and protocols in high-risk prenatal care, long-acting hormonal contraception and outpatient gynecological care

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Summary

This article analyzes clinical advances, diagnostic guidelines, and intervention protocols applied to contemporary gynecological and obstetric medicine. Based on specialized medical literature and guidelines from international scientific societies, the study investigates the determining factors in reducing maternal and perinatal morbidity and mortality through the early identification of pathologies in high-risk pregnancies, such as pre-eclampsia and gestational diabetes. The work also addresses the physiological mechanisms, clinical efficacy, and safety profile of the insertion of intrauterine devices (IUDs) and subdermal hormonal implants, evaluating the impact of preventive medicine on primary and secondary gynecological care.
Keywords: Gynecology and Obstetrics. High-risk prenatal care. Long-acting contraception. IUD. Women's health.

Abstract

This article analyzes clinical advances, diagnostic guidelines, and intervention protocols applied to contemporary gynecological and obstetrical medicine. Grounded in specialized medical literature and international scientific society guidelines, the study investigates the key factors in reducing maternal and perinatal morbidity and mortality through the early identification of high-risk pregnancy pathologies, such as preeclampsia and gestational diabetes. Furthermore, the paper addresses the physiological mechanisms, clinical efficacy, and safety profile of Long-Acting Reversible Contraception (LARC), specifically Intrauterine Devices (IUDs) and subdermal hormonal implants, evaluating the impact of preventive medicine in primary and secondary gynecological care.
Keywords: Gynecology and Obstetrics. High-risk prenatal care. Long-acting reversible contraception. IUD. Women's health.

Introduction

Women's healthcare has undergone profound transformations in recent decades.

driven by the evolution of technical and scientific knowledge, by the introduction of new methods

diagnoses and the strengthening of preventive medicine. As Rezende and point out

Montenegro (2017), modern gynecology and obstetrics require a comprehensive approach, in which

Primary prevention and early intervention in reproductive and gestational pathologies determine

reducing morbidity and mortality rates and promoting women's well-being at all stages of life.

life.

Prenatal care is one of the most impactful public and private health interventions.

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in the preservation of maternal and neonatal life. The proper classification of gestational risk and the Rigorous monitoring for vascular, endocrine, and infectious complications allows the obstetrician To institute prophylactic therapies capable of preventing premature birth and acute fetal distress. integration between routine outpatient care and emergency preparedness in units of Emergency care and maternity wards establish the necessary safety network for safe transportation.

of the pregnant woman.

This article aims to discuss best clinical practices and current protocols in Gynecological and obstetric care, based on established scientific guidelines. Through from the systematic analysis of high-risk prenatal screening criteria and the effectiveness profile. Regarding long-acting reversible contraception, the aim is to demonstrate that medicine based on Evidence-based care, standardization of medical procedures, and humanization of care are the pillars. fundamental to excellence in women's health care.

Methodology

The methodological approach adopted in this study is based on a systematic literature review. and in the descriptive analysis of clinical guidelines and international medical consensus, a structure Recommended by the Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO) and by the American College of Obstetricians and Gynecologists (ACOG) for updating practices. medical. Data collection is based on manuals from the Ministry of Health and scientific articles. indexed in the PubMed/MEDLINE database and recommendations from the World Health Organization (WHO). The analysis considers clinical parameters for gestational risk stratification, criteria of the Risk Score. Apgar score, glycemic and blood pressure profiles, as well as continuation and failure rates of testing methods. Long-acting reversible contraceptives (LARCs). These Variables were correlated with theoretical and epidemiological frameworks developed by authors such as Cunningham et al. (2018), Speroff and Fritz (2014), and Berek (2020), who examine the Reproductive physiology and gynecological endocrinology.
Additionally, the methodology evaluates the effectiveness of care flows in obstetric emergencies. and maternal-focused emergencies. The impact of adopting standardized protocols is examined in identification of hypertensive syndromes of pregnancy and hemorrhagic syndromes, validating how the Systematizing medical procedures prevents serious complications during labor and delivery.

immediate postpartum period.

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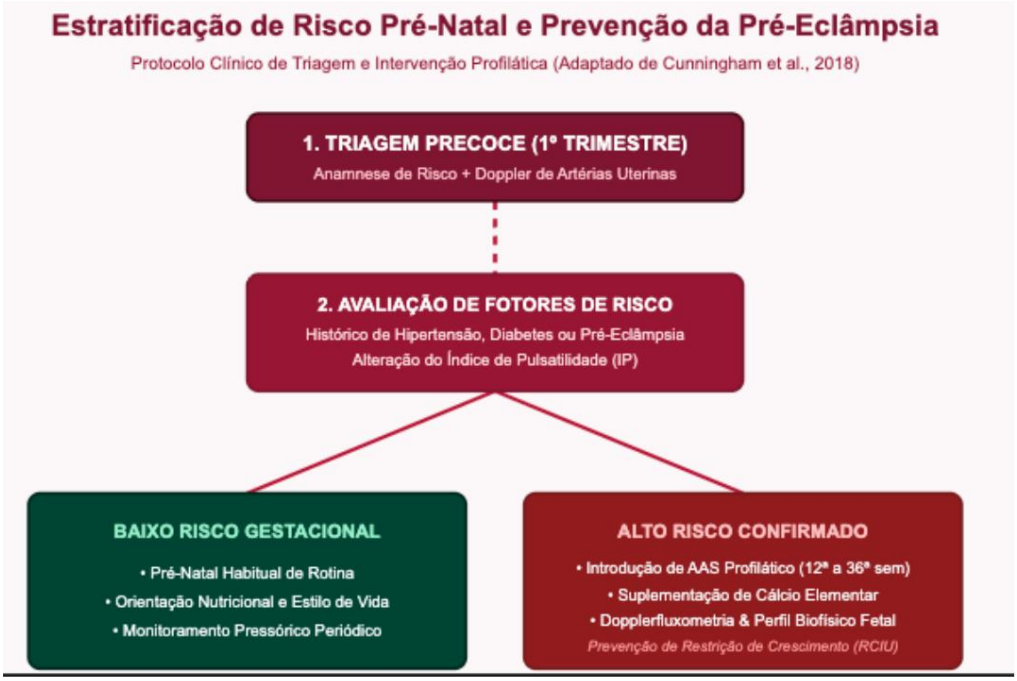
Chapter 1: Risk Stratification and Management of Complications in Prenatal Care

Structured prenatal care is the fundamental pillar for guaranteeing maternal health and...
prevention of adverse perinatal outcomes. According to Cunningham et al. (2018), assistance
Prenatal care should begin in the first trimester of pregnancy, allowing for accurate dating of the gestational age.
Gestational cancer can be detected through early ultrasound and initial screening for pre-existing conditions.
Continuous stratification of gestational risk at each outpatient visit ensures identification.
of pregnancies that evolve from a low-risk profile to highly complex cases.
Hypertensive syndromes of pregnancy, particularly pre-eclampsia and eclampsia, are among the...
among the leading causes of maternal mortality worldwide. The pathophysiology of pre-eclampsia
Eclampsia involves the improper remodeling of the uterine spiral arteries by invasion.
Trophoblastic disease, resulting in placental ischemia and systemic endothelial dysfunction. Screening
early detection through Doppler velocimetry of the uterine arteries in the second trimester, associated with the use
Prophylactic use of acetylsalicylic acid and calcium carbonate in high-risk patients reduces
significantly increases the incidence of severe forms of the disease and intrauterine growth restriction.



The management of gestational diabetes mellitus (GDM) represents another critical challenge in care.
contemporary obstetrics. As recommended by the consensus of the International Federation of
Gynecology and Obstetrics (FIGO), metabolic screening through the oral glucose tolerance test
A glucose tolerance test (OGTT) between the 24th and 28th week of gestation allows for the diagnosis and immediate initiation of treatment.
Dietary control and physical activity. In cases where euglycemia is not achieved by other measures.
In addition to non-pharmacological methods, the introduction of prophylactic insulin therapy prevents fetal complications such as

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macrosomia, shoulder dystocia and neonatal hypoglycemia.

Urinary tract infections and reproductive tract infections during pregnancy require
Constant laboratory monitoring to prevent upward bacterial proliferation. Bacteriuria.
Asymptomatic, when not diagnosed and treated through routine urine cultures, it evolves
frequently for acute pyelonephritis, a proven risk factor for triggering work-related complications.
Antibiotic therapy is used for premature labor and premature rupture of membranes.
Antibiogram-guided tests and post-treatment cure monitoring ensure the maintenance of
Uterine quiescence until the end of gestation.

It is concluded that the success of prenatal care is based on strict adherence to the guidelines.
diagnostic protocols and the establishment of an empathetic and ongoing doctor-patient relationship.
Medical intervention is necessary, based on the early identification of physiological changes and
It reduces pathological risks, minimizes complications during childbirth, and ensures the safe birth of newborns.
healthy, consolidating prenatal care as the most effective preventative measure in obstetrics.
modern.

Chapter 2: Mechanisms, Efficiency, and Safety Profile of Long-Acting Hormonal Contraception Duration

The evolution of contraceptive medicine has allowed the development of long-lasting reversible methods.
long-term reversible contraception (LARC), represented by hormonal and non-hormonal intrauterine devices (IUDs) and
through subdermal hormonal implants. As analyzed by Speroff and Fritz (2014), the methods
LARC methods exhibit real-world effectiveness rates exceeding 99%, rivaling those of other methods.
irreversible surgical procedures, since their protection is independent of daily adherence or correct use by the patient.

The levonorgestrel-releasing intrauterine device (LNG-IUD) works by thickening the
cervical mucus, inhibiting the passage of sperm, and by inducing an atrophic reaction in the
endometrium that prevents implantation. This local mechanism of action gives the method a very high effectiveness.
Contraceptive efficacy with minimal systemic absorption of hormones. In addition to the indication
In the contraceptive field, the LNG-IUD is widely used as a first-line treatment for
Abnormal uterine bleeding secondary to adenomyosis or minor uterine fibroids.
promoting a significant reduction in menstrual flow and chronic pelvic pain.

The etonogestrel-releasing subdermal implant represents the most effective contraceptive method.
available in current medical practice. Inserted into the subdermal plane of the inner side of the arm, it is not available in current medical practice.
Dominant under local anesthesia, the implant releases constant doses of progestin, inhibiting

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Primarily, it triggers the peak of luteinizing hormone (LH) and prevents ovulation. The rapid
The reversibility of the method and the immediate return of fertility after implant removal make it...
a first-choice option for women seeking high contraceptive security combined with
Future reproductive planning.
The insertion of non-hormonal IUDs, such as copper and silver devices, offers an alternative.
highly effective for patients with absolute contraindications to the use of exogenous hormones, such as
such as women with a personal history of breast cancer or severe venous thrombophilia.
The mechanism of action of the copper IUD is based on the induction of an aseptic inflammatory response in the
endometrium and the cytotoxic effect of copper ions on spermatozoa, altering their
motility and viability prior to fertilization.
Therefore, expanding access to and properly prescribing reversible contraceptive methods is crucial.
Long-term counseling constitutes a fundamental medical strategy in women's health.
Individualized contraception, in which the gynecologist assesses the patient's comorbidities, her
Lifestyle habits and reproductive plans ensure the selection of the safest and most comfortable method.
promoting reproductive autonomy and significantly reducing non-viable pregnancy rates
planned.

Chapter 3: Outpatient Approach to Abnormal Uterine Bleeding and Benign Pathologies

Abnormal uterine bleeding (AUB) is one of the most frequent complaints during consultations.
outpatient gynecological procedures, significantly affecting quality of life, productivity, and
emotional health of women of childbearing age and in perimenopause. According to Berek (2020), the
SUA investigations should follow the PALM-COEIN classification system, developed by FIGO.
which categorizes the causes of bleeding into structural etiologies (polyp, adenomyosis, leiomyoma,
Malignancy/Hyperplasia) and non-structural (coagulopathy, ovulatory dysfunction, endometrial,
iatrogenic and unclassified).
The initial diagnostic evaluation of SUA requires a detailed medical history and gynecological physical examination.
complete and the performance of complementary imaging and laboratory tests. Ultrasound
Transvaginal pelvic ultrasound is the examination of choice for evaluating the myometrium and mapping fibroids.
Uterine and endometrial echo measurement. In postmenopausal women or women with endometrial echo.
Abnormally thickened endometrium, outpatient hysteroscopy with vision-guided endometrial biopsy
Direct examination allows for the precise histopathological diagnosis of endometrial polyps, hyperplasia, or
early endometrial neoplasms.
The therapeutic approach to benign gynecological pathologies should prioritize clinical treatment.

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Conservative treatment before resorting to invasive surgical procedures. Pharmacological management of
Chronic pelvic pain associated with endometriosis and adenomyosis includes the use of progestogens.
Isolated GnRH analogs or the insertion of a levonorgestrel-releasing IUD. Inhibition of
Endometrial proliferation and ovarian cycle suppression provide symptomatic relief from
dysmenorrhea and heavy bleeding, while preserving the patient's pelvic anatomy.
Cervical pathology and screening for precancerous lesions of the cervix represent...
Another critical area of outpatient gynecology is the periodic performance of Pap smears.
(Pap smear) and the HPV-DNA test allow for the early detection of squamous intraepithelial lesions.
Low-grade (LSIL) and high-grade (HSIL) cytology. In cases of abnormal cytology, colposcopy with biopsy is performed.
Directed examination of acetowhite areas or areas with abnormal stippling establishes the diagnosis and guides the...
indication for transformation zone excision procedure (TZE) or high-frequency surgery.
(CAF).
In short, a methodical and up-to-date outpatient approach to benign gynecological conditions prevents
It avoids unnecessary surgical interventions and promotes the early diagnosis of pre-existing pathologies.
neoplastic. The gynecologist's ability to integrate ultrasound, hormonal and
Histopathological analysis allows for the design of personalized therapeutic strategies that restore quality of life.
They give the patient life and preserve her reproductive function.

Chapter 4: Medical Assistance in Emergency Rooms and Obstetric Emergencies

Urgent and emergency care in gynecological emergency rooms and maternity wards.
It requires the attending physician to have a high capacity for quick clinical reasoning and assertive decision-making.
and strict adherence to advanced obstetric support protocols. As Kurjak points out
According to Chervenak (2006), obstetric emergencies are characterized by the potential for rapid deterioration.
of maternal and fetal health status, requiring synergistic and trained multidisciplinary teams in
handling critical situations.
Bleeding during pregnancy in the first and third trimesters represents extremely serious situations.
Severity in emergency services. In early pregnancy, vaginal bleeding accompanied by
Pelvic pain requires rapid differential diagnosis between ongoing miscarriage and trophoblastic disease.
Gestational and ectopic pregnancy. *Point-of-care* transvaginal ultrasound .
Combined with quantitative measurement of serum beta-HCG, this allows confirmation of the location of the sac.
To diagnose gestational hypertension and tubal rupture in ectopic pregnancy, indicating the need for surgical intervention.
urgently to stop hypovolemic shock.
In the third trimester, placental abruption and placenta previa represent...

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The main causes of heavy bleeding and acute fetal distress. Placental abruption manifests itself typically with intense abdominal pain of sudden onset, uterine hypertonia, and dark bleeding for via vaginal delivery. The medical approach in a case of placental abruption with a live and viable fetus is the resolution Immediate delivery via the quickest method, often an emergency cesarean section, accompanied by Maternal fluid replacement and transfusions to prevent the development of coagulopathy.

Disseminated intravascular coagulation (DIC).

Sepsis of gynecological and obstetric origin, resulting from chorioamnionitis, abortion Infectious endometritis or puerperal endometritis requires immediate recognition of the signs of response. Systemic inflammation and organ dysfunction. Implementation of the "first-hour bundle" for sepsis. This involves collecting blood cultures, measuring serum lactate levels, and early fluid resuscitation with... crystalloids and the immediate administration of broad-spectrum empirical antibiotic therapy via intravenous.

It is concluded that excellence in gynecological and obstetric emergency medicine depends on... technical readiness of the team and standardization of medical procedures based on flowcharts of Risk. Swift medical action, guided by scientific evidence and validated protocols, is the guarantee. fundamental for damage control, preservation of maternal life and reduction of morbidity and mortality perinatal care in highly complex hospital settings.

Chapter 5: Screening in Women's Health, Preventive Medicine, and Menopause

Preventive medicine applied to gynecology extends to all stages of development. feminine, with a special focus on the menopausal transition and climacteric. According to Speroff and Fritz (2014), the progressive decline in ovarian estrogen production induces metabolic changes, Cardiovascular, bone, and urogenital factors that impact women's longevity and overall health. Regular gynecological checkups act as a general health screening tool, allowing for the detection of... Early detection not only of neoplasms of the reproductive system, but also of chronic non-communicable diseases. Hormone Replacement Therapy (HRT) during menopause has undergone significant evolution in their prescription schemes, aligning with the concepts of "window of opportunity". The introduction HRT in symptomatic women under 60 years of age or less than 10 years of age

Menopause presents an extremely favorable benefit-risk profile, promoting the relief of symptoms. vasomotor symptoms (hot flashes), improved lipid profile, and primary prevention of muscle wasting. Bone and osteoporosis. The use of estrogens via transdermal injection reduces the risk of events.

venous thromboembolic agents are used to prevent the drug from undergoing first-pass metabolism in the liver.

Mammographic screening for the early detection of breast cancer represents the strategy of

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The greatest impact on reducing mortality from malignant neoplasms in women. The guidelines of
FEBRASGO recommends annual mammograms for women starting at age 40.
Age in the usual at-risk population. In cases of dense breasts or in patients with mutations.
Confirmed genetic factors (such as BRCA1 and BRCA2) or a significant family history, supplementation
diagnosis is made using breast ultrasound or pelvic and breast magnetic resonance imaging.
ensures the identification of impalpable nodules in early stages.
Assessment of bone health during menopause using bone densitometry of the lumbar spine and neck.
The femoral artery allows for the early identification of osteopenia and osteoporosis before they occur.
of fragility fractures. Guidance on adequate intake of elemental calcium, supplementation
Vitamin D supplementation and the practice of physical exercises with mechanical load, combined with treatments
Antiresorptive pharmacological agents (such as bisphosphonates), when indicated, preserve the architecture.
Bone health and functional independence in elderly patients.
In short, a preventive approach during menopause requires a holistic view from the gynecologist and
Multidisciplinary approach. Individualization of hormone replacement therapy, mammographic screening.
Continuous cervical and bone health monitoring, along with attention to bone and cardiovascular metabolism, ensures that the woman
Go through the aging process with dignity, vitality, and preservation of your autonomy.
functional.

Final Considerations

The analysis developed throughout this article shows that modern gynecology and obstetrics
They require continuous integration between scientific rigor, preventive medicine, and technical readiness.
for conduct in hospital emergencies. The evolution of diagnostic protocols and guidelines.
treatment has allowed prenatal care to be transformed into a powerful tool for
prevention of serious complications, in which the systematic screening of pathologies such as pre-
Controlling eclampsia and gestational diabetes ensures a safe delivery and preserves maternal health.
Democratizing access and improving medical prescriptions for contraceptive methods.
Long-acting reversible contraceptives (LARCs), with particular emphasis on the levonorgestrel-releasing IUD and...
Etonogestrel implants are establishing themselves as extraordinary advances in reproductive health.
The high effectiveness and excellent safety profile of these methods provide autonomy in
family planning for women, reducing the rates of unplanned pregnancies and offering
Highly effective non-surgical therapeutic alternatives for the treatment of uterine bleeding.
abnormal.

Outpatient gynecological care based on international classification systems,

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Like FIGO's PALM-COEIN for abnormal uterine bleeding, it optimizes the investigation workflow.
It diagnoses and avoids unnecessary mutilating surgeries. The gynecologist's ability to
Correlating clinical data, ultrasound findings, and histopathological results ensures...
Prescription of personalized hormonal and non-hormonal therapies that restore well-being and...
patient's quality of life.

In the context of urgent care and obstetric emergencies, adherence to strict protocols is essential.
advanced support and immediate recognition of serious conditions such as third-party hemorrhages.
Trimester, ruptured ectopic pregnancy, and severe sepsis are essential safeguards for reducing the risk of premature birth.
Maternal and perinatal mortality. Swift medical action and assertive decision-making under pressure.
They demonstrate the importance of continuous education and practical training for hospital teams.

The approach to menopause and the menopausal transition through the concept of the window of
The opportunity presented by hormone replacement therapy reaffirms the gynecologist's role as the primary healthcare provider.
Medical assistant in the prevention of chronic diseases in women. Personalization of HRT through various routes.
non-oral methods, combined with periodic mammographic screening and density monitoring
Bone mineral density reduces cardiovascular risks and prevents fragility fractures, promoting a
Active and healthy aging.

Furthermore, the humanization of medical care and respect for women's reproductive rights.
Clear communication about these principles should permeate all stages of gynecological and obstetric care.
diagnoses, the conscious agreement on therapeutic options, and the guarantee of a welcoming environment.
In the doctor's office and in the surgical center, they strengthen the doctor-patient relationship and raise the levels of
Adherence to the proposed treatments.

Continuous training of the medical team and constant updating in light of issued consensus guidelines.
Adherence to international scientific societies is a matter of ethical and professional responsibility.
Evidence-based medicine acts as a compass that guides the selection of the best tests.
medications and interventions, eliminating outdated practices and ensuring maximum safety in
preventive and therapeutic procedures.

Finally, it is concluded that investment in specialized medical training and infrastructure...
Outpatient care and the standardization of hospital emergency protocols constitute the definitive path.
for the consolidation of a highly efficient women's health system. The ongoing commitment of
A gynecologist and obstetrician, with science, ethics, and complete dedication to women's lives, transforms...
Daily medical practice as an unparalleled vector for preserving health and social progress.

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