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Evaluation of the evidence-based practices for the management of PCOS in the Latin America context: the consensus of the Latin American Association of Gynecological Endocrinology (ALEG)

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Evaluation of the evidence-based practices for the management of PCOS in the Latin America context: the consensus of the Latin American Association of Gynecological Endocrinology (ALEG)

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ABSTRACT

Objectives: Polycystic Ovary Syndrome (PCOS) is a complex condition affecting approximately 1 in 10 women of reproductive age. However, limited data are available regarding the specific characteristics and needs of women with PCOS in Latin America. This consensus sought to evaluate the evidence-based practices for the management of PCOS for Latin American populations, consolidate regional insights, identify eventual gaps in implementation and identify key research opportunities.

Methods: Using the Delphi strategy, experts from various Latin American countries selected and reviewed a subset of recommendations from the 2023 International Evidence-Based Guideline (EBG) for the Assessment and Management of PCOS. Virtual and in-person meetings facilitated discussions on the selected recommendations, followed by voting rounds to achieve consensus.

Results: A total of 33 recommendations for PCOS diagnosis and treatment were evaluated. In the initial voting round, 25 recommendations achieved strong agreement (80%–100% support), while eight received less than 80% agreement. After further discussions on their relevance and potential to influence behavior change among health professionals and public health policies, the remaining recommendations achieved near-unanimous support in the second round.

Conclusions: This consensus underscored evidence-based practices for PCOS diagnosis and treatment deemed appropriate for the Latin American context. It also highlighted implementation barriers such as cost and accessibility, while identifying opportunities for research to improve PCOS management and address regional challenges. These findings aim to enhance clinical care and inform public health strategies tailored to the needs of Latin American women living with PCOS.

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Introduction

Polycystic ovary syndrome (PCOS) is a complex and heterogeneous endocrine-gynecological condition that affects around 1 in 10 women of reproductive age. It is associated with reproductive, hormonal, and cardiometabolic dysfunctions, such as insulin resistance and related comorbidities [1,2]. While the etiology of the syndrome remains uncertain, evidence indicates that intricate interactions among genetic, environmental, and behavioral factors significantly contribute to its onset and the heterogeneity of its clinical presentation [3,4].

Despite advancements in diagnosis and management, challenges remain that compromise the development of models of care globally that ensure timely and effective healthcare for this population. These challenges include the heterogeneity of the syndrome's presentation, varying effects on each woman, clinical context, healthcare coverage, health professional perceptions, and the availability of treatment options. In this sense, numerous studies have explored the prevalence, clinical presentation, associated abnormalities, and models of care for PCOS across continents.

However, limited information is available on these critical aspects in women with PCOS from Latin American populations [5–12]. These studies indicate that women with PCOS exhibit a more adverse metabolic profile compared to non-PCOS controls across various countries from the region. Most findings report body mass index (BMI) levels in the overweight or obese range among women with PCOS, highlighting its significant role in shaping the disease phenotype. Furthermore, components of metabolic syndrome, including central obesity, low HDL-C levels, and hypertension, are commonly observed in women with PCOS across Latin American nations. While studies in these populations suggest a potential genetic component in the development of PCOS, genome-wide association studies (GWAS) have not yet included Latin American cohorts.

Indeed, Latin America is characterized by populations with diverse ancestry profiles. For instance, in Brazil, ancestry contributions are estimated at 62% European, 21% African, and 17% Amerindian, while Pacific Latin American countries are predominantly Amerindian. In contrast, Argentina and Chile exhibit a more balanced mix of European and Amerindian ancestry, with lower African contributions compared to Brazil [5]. This genetic diversity suggests that varying genetic backgrounds could contribute to the phenotypic heterogeneity of PCOS.

Latin America is a highly heterogeneous region, with significant variations in access to resources such as employment, healthcare, and education. Additionally, most countries exhibit notable disparities in sociodemographic profiles, while lifestyle and dietary habits differ widely, shaped by a richly diverse cultural heritage. Given these differences, women with PCOS in Latin America should not be treated as a homogeneous population when investigating a multifactorial syndrome such as PCOS. This nuanced understanding is crucial for accurate research and effective healthcare interventions tailored to the region's diverse populations.

In this context, this consensus gathers expert opinions from Latin America to assess the recommendations of the 2023 International Evidence-Based Guideline (EBG) for the Assessment and Management of PCOS [3]. It consolidates regional insights, identifies eventual gaps in implementation and highlights research opportunities specific to the region. This initiative aims to inform health professionals and public health systems to potentially contribute to the development of effective programs and policies tailored to the specific needs of women with PCOS in Latin America.

Methods

Preparation

In collaboration with the Research Directorate of the Latin American Association of Gynecological Endocrinology [ALEG; GGSS, MLMV] and methodologists [AMB, DAB] from the University of Rosario, Bogotá, Colombia, it was agreed to develop a consensus among experts using the Delphi strategy. The protocol for this process was not registered. The Delphi strategy followed the recommendations of Gattrell et al. on consensus methods in biomedicine [13].

Expert selection

Following the guidelines for the Delphi method, 17 experts in the field of gynecological endocrinology and 3 residents in Obstetrics and Gynecology of the Universidad del Rosario, Bogotá, Colombia, were selected and organized into four working groups, each consisting of a coordinator and 4 thematic experts (Table 1). The selection criteria included ALEG membership, clinical experience in managing PCOS, academic and research achievements, and participation in scientific events across Latin America. The ALEG president extended written invitations to eligible members, who voluntarily agreed to participate.

Defining the scope and consensus objectives

Coordinators were assigned to specific sections of the 2023 EBG [3] based on their expertise and subspecialties. Each working group then identified the key recommendations from their assigned section of the EBG. The selection of these recommendations was guided by clinical judgment, country-specific experience, and regional needs in this field. These key issues were then sent out for evaluation during the consensus process, with priority given to the most relevant aspects of the condition. Coordinators were assigned to specific sections of the 2023 EGB [3] based on their expertise and subspecialties. Within each working group, coordinators and members collaboratively reviewed their assigned sections and identified the key recommendations to be prioritized. This selection process was guided by clinical judgment, the practical applicability of the recommendations in their respective countries, and the specific regional needs and challenges in managing PCOS. The aim was to focus on recommendations that would have the most significant impact in the Latin American context.

Consensus development

Before the formal meeting, each group member received a virtual outline of objectives, functions, and approved recommendations for

Table 1. Consensus development team.

ALEG Research Directorate	GGSS, MLMV	
Methodologists	AMB, DAB	
Working groups (recommendations)	Coordinator	
1 (1.1–2.1)	IDMS	LBM, GBC, SP, AVR[a]
2 (2.2–3.5)	SL	GR, JAMV, ACL, IDLP
3 (3.6–4.11)	PMS	ARB, AEC, AB, CACR[a]
4 (5.1 – 5.9)	AM	AMGQ, MST, MAB[a], TJRF
Critical review and editing	PMS, PC, AM	

[a]Gynecology and obstetrics residents at the Universidad del Rosario, Bogotá, Colombia.

review. Virtual meetings were held to discuss the main issues regarding each selected recommendation from the EBG, address them using the best available scientific evidence and applicability to the region, and draft comments. These draft documents were submitted to the University of Rosario's epidemiology department to create a questionnaire for an initial vote. In this first round, members rated the relevance of recommendations on a scale of 1–9.

During the in-person meeting, groups presented the available evidence supporting each recommendation [14]. After the first round of voting, a new section of discussion was done for those recommendations not approved by at least 80% of participants. A second round of voting was conducted under the same parameters. Statistical analysis was performed on the results to calculate agreement percentages, which informed whether further literature review or a final vote was necessary to confirm the recommendations.

The four key components of the Delphi method were adhered to: anonymity, interaction, controlled feedback, and statistical group responses.

Final phase

After the in-person meetings, a final session was held with the University of Rosario's epidemiology group to synthesize the findings. Main results, based on group consensus, are presented below.

Results

A total of 33 recommendations for the diagnosis and treatment of women with PCOS were selected and reviewed (Table 2). In the first voting round, 25 recommendations received strong support with agreement levels ranging from 80% to 100%. The remaining eight recommendations received less than 80% support in the initial vote. However, after a more thorough discussion of their relevance and potential to influence behavior change among health professionals, these recommendations achieved near-unanimous support, with agreement levels between 81.8% and 100% in the second round. These recommendations are considered both appropriate and applicable to the Latin American population and to the context of health care in the countries of the region. The content of the discussions surrounding these eight recommendations, which were voted on twice, is detailed below.

Weight stigma

> *Recommendation 3.6.1 many women with PCOS experience weight stigma in healthcare and other settings. The negative psychosocial impacts of this stigma should be acknowledged [3].*

Weight stigma refers to negative perceptions and judgments directed at individuals based solely on their weight. For women with PCOS, weight stigma can severely impact both mental and physical health, contributing to distress, poor academic performance, and general life difficulties [15]. This stigma is often based on physical appearance alone, without considering other aspects of the individual, leading to avoidance of the issue or reluctance to address it.

Women with PCOS are particularly vulnerable to weight stigma, as conditions like overweight and obesity often accompany the syndrome. This stigma frequently arises in healthcare settings, where women should feel protected, but also occurs in other contexts. Acknowledging these impacts is essential, as the evidence suggests that weight stigma can contribute to further negative outcomes, including weight gain, unhealthy eating behaviors, and reduced exercise.

This recommendation is particularly relevant in Latin America, where weight stigma is often not consciously addressed. Emphasizing this issue, can help initiate behavioral changes and positively influence both primary and secondary prevention efforts. Given the high prevalence of obesity in the region, this recommendation is essential. Additional proposed actions in clinical settings include educating healthcare professionals on patient-centered care and implementing alternative strategies for interdisciplinary management of obesity (Table 3).

In the first voting round, 76.2% of participants initially supported the recommendation. However, after further discussion of its importance, it received unanimous support (100%) in the second round.

Inositol for non-infertility treatment

> *Recommendation 4.7.1 inositol (in any form) could be considered in women with PCOS based on individual preferences and values, noting limited harm, potential for improvement in biochemical hyperandrogenism, menstrual cycles and metabolic measures, yet with limited clinical benefits including in ovulation, hirsutism or weight [3].*

Insulin resistance and compensatory hyperinsulinemia are common features of PCOS, affecting even women with normal weight. While metformin is an effective treatment for the management of insulin resistance and related metabolic alterations, its use may be limited by mild gastrointestinal side effects, prompting the exploration of alternative treatments.

Inositol, a structural component of cell membranes involved in hormone signal transduction [16], has gained attention as a potential adjunct therapy. Among its stereoisomers, myo-inositol (MI) is the most prevalent in the human body and plays a role in glucose uptake as well as FSH-mediated granulosa cell proliferation and maturation [17]. MI is converted to D-chiro-inositol (DCI) under the influence of insulin, supporting glycogen production and glucose uptake [18].

In women with PCOS, hyperinsulinemia may increase ovarian epimerase activity, potentially disrupting the balance between MI and DCI by favoring excessive DCI synthesis, which could compromise MI-dependent processes such as aromatase activity in granulosa cells and contribute to androgen excess [19]. Despite these theoretical mechanisms, evidence supporting the efficacy of inositol supplementation in PCOS remains incomplete, and questions persist regarding its benefits [20]. In this context, a study by Genazzani and collaborators suggest that, in women with PCOS who have a family history of diabetes, epimerase activity may be more significantly impaired. According to their proposal, DCI supplementation could potentially improve the metabolic and reproductive profiles in such cases [21]. Concerns have also been raised regarding misinformation, conflicts of interest in promoting these supplements, and their high cost. Rigorous research and evidence-based guidance are essential to clarify the role of inositol in managing PCOS and to support informed decision-making (Table 3).

In the first voting round, 57.1% of participants initially supported the recommendation. After further discussion of this issue, support rose to 81.8% in the second round.

Table 2. Recommendations from the EBG selected for review and voting rounds.

Recommendations	Round 1	Round 2
Weight Stigma 3.6.1 EBR Many women with PCOS experience weight stigma in healthcare and other settings and the negative biopsychosocial impacts of this should be recognized	16 (76.2%)	22 (100%)
Combined Oral Contraceptive Pills (COCP) 4.2.1 EBR The COCP could be recommended in reproductive age adults with PCOS for management of hirsutism and/or irregular menstrual cycles.	19 (90.5%)	
Anti-androgen pharmacological agents, alone or in combination 4.6.1 EBR In combination with effective contraception, anti-androgens could be considered to treat hirsutism in women with PCOS, if there is a suboptimal response after a minimum of six months of COCP and/or cosmetic therapy	20 (95.2%)	
Inositol 4.7.1 EBR Inositol (in any form) could be considered in women with PCOS based on individual preferences and values, noting limited harm, potential for improvement in biochemical hyperandrogenism, menstrual cycles and metabolic measures, yet with limited clinical benefits including in ovulation, hirsutism or weight	12 (57.1%)	18 (81.8%)
Inositol 4.7.2 EBR Metformin should be considered over inositol for metabolic measures, hirsutism and central adiposity, noting that metformin has more gastrointestinal side effects than inositol	17 (81.0%)	
Adverse pregnancy outcomes 4.10.2 EBR Healthcare professionals should recognize that pregnant women with PCOS have an increased risk of: • Higher gestational weight gain • Miscarriage • Gestational diabetes • Hypertension in pregnancy and preeclampsia • Intrauterine growth restriction, small for gestational age babies and low birth weight • Preterm delivery • Cesarean section	21 (100.0%)	
Metformin in pregnancy 4.11.1 EBR Healthcare professionals should be aware that metformin in pregnant women with PCOS has not been shown to prevent: • Gestational diabetes • Late miscarriage (12 weeks^{+1} day to 21 weeks $^{+6}$ days gestational age) • Hypertension in pregnancy • Pre-eclampsia • Macrosomia or birthweight ≥ 4000 g	17 (81.0%)	
4.11.2 EBR Metformin could be considered in some circumstances (e.g. risk for preterm birth), to reduce preterm delivery and limit excess gestational weight gain, in pregnant women with PCOS	14 (66.7%)	18 (81.8%)
Depression and anxiety 2.2.4 PP Severity of symptoms and clinical diagnosis of depression or anxiety should guide management The optimal interval for anxiety and depression screening is not known. A pragmatic approach could include screening at diagnosis with repeat screening based on clinical judgment, risk factors, comorbidities and life events, including the perinatal period. Screening for mental health disorders comprises assessment of risk factors, symptoms, and risk of self-harm and suicidal intent	17 (81.0%)	
Psychosexual function 2.3.1 CR Healthcare professionals could consider the multiple factors that can influence psychosexual function in PCOS including higher weight, hirsutism, mood disorders, infertility and PCOS medications	19 (90.5%)	
2.3.2 CR Permission to discuss psychosexual function should be sought noting that the diagnosis of psychosexual dysfunction requires both low psychosexual function, combined with related distress	15 (71.4%)	21 (95.5%)
Information needs 2.6.1.1 EBR Tailored information, education and resources that are high-quality, culturally appropriate and inclusive should be provided to all with PCOS	20 (95.2%)	
2.6.1.3 CR Entities responsible for health professional education should ensure that information and education on PCOS is systemically embedded at all levels of health professional training to address knowledge gaps	19 (90.5%)	
Dietary Intervention 3.3.2 CR Any diet composition consistent with population guidelines for healthy eating will have health benefits, and within this, healthcare professionals should advise sustainable healthy eating tailored to individual's preferences and goals	20 (95.2%)	
3.3.3 PP Tailoring of dietary changes to food preferences, allowing for a flexible, individual and co-developed approach to achieving nutritional goals and avoiding unduly restrictive and nutritionally unbalanced diets, are important, as per general population guidelines	17 (81.0%)	
Biochemical hyperandrogenism 1.2.5 PP For the detection of hyperandrogenism in PCOS, the assessment of biochemical hyperandrogenism is of greatest value in patients with minimal or no clinical signs of hyperandrogenism (i.e. hirsutism)	19 (90.5%)	
1.2.1 EBR Healthcare professionals should use total and free testosterone to assess biochemical hyperandrogenism in the diagnosis of PCOS; free testosterone can be estimated by the calculated free androgen index	18 (85.7%)	
1.2.9 PP If androgen levels are markedly above laboratory reference ranges, causes of hyperandrogenemia other than PCOS, including ovarian and adrenal neoplastic growths, congenital adrenal hyperplasia, Cushing's syndrome, ovarian hyperthecosis (after menopause), iatrogenic causes, and syndromes of severe insulin resistance, should be considered. However, some androgen-secreting neoplasms are associated with only mild to moderate increases in androgen levels. The clinical history of time of onset and/or rapid progression of symptoms is critical in assessing for an androgen-secreting tumor	20 (95.2%)	

(*Continued*)

Table 2. Continued.

Recommendations	Round 1	Round 2
Clinical hyperandrogenism **1.3.1. EBR** The presence of hirsutism alone should be considered predictive of biochemical hyperandrogenism and PCOS in adults	16 (76.2%)	20 (90.9%)
1.3.5 EBR A modified Ferriman Gallwey score (mFG) of 4–6 should be used to detect hirsutism, depending on ethnicity, acknowledging that self-treatment is common and can limit clinical assessment	15 (71.4%)	19 (86.4%)
1.3.7 CR Healthcare professionals should: • Be aware that standardized visual scales are preferred when assessing hirsutism, such as the mFG scale in combination with a photographic atlas. • Consider the Ludwig or Olsen visual scales for assessing female pattern hair loss. • Note that there are no universally accepted visual instruments for assessing the presence of acne. • Recognize that women commonly treat clinical hyperandrogenism cosmetically, diminishing their apparent clinical severity. • Appreciate that self-assessment of unwanted excess hair growth, and possibly acne and female pattern hair loss, has a high degree of validity and merits close evaluation, even if overt clinical signs of hyperandrogenism are not readily evident on examination. • Note that only terminal hairs need to be considered in defining hirsutism, and these can reach >5 mm if untreated, vary in shape and texture, and are generally pigmented. • Note that new-onset severe or worsening hyperandrogenism, including hirsutism, requires further investigation to rule out androgen-secreting tumors and ovarian hyperthecosis. • Monitor clinical signs of hyperandrogenism, including hirsutism, acne and female pattern hair loss, for improvement or treatment adjustment during therapy.	19 (90.5%)	
Ultrasound and polycystic ovarian morphology (PCOM) 1.4.4 CR Follicle number per ovary (FNPO), 20 in at least one ovary should be considered the threshold for PCOM in adults	19 (90.5%)	
1.4.5 CR Ovarian volume (OV) 10 ml or follicle number per section (FNPS), 10 in at least one ovary in adults should be considered the threshold for PCOM if using older technology or image quality is insufficient to allow for an accurate assessment of follicle counts throughout the entire ovary.	18 (85.7%)	
1.4.9 PP In patients with irregular menstrual cycles and hyperandrogenism, an ovarian ultrasound is not necessary for PCOS diagnosis.	18 (85.7%)	
Cardiovascular disease risk 1.8.3 CR All women with PCOS, regardless of age and BMI, should have a lipid profile (cholesterol, low density lipoprotein cholesterol, high density lipoprotein cholesterol and triglyceride level) at diagnosis. Thereafter, frequency of measurement should be based on the presence of hyperlipidemia and additional risk factors or global cardiovascular risk	21 (100.0%)	
Preconception risk factors 5.1.1 EBR Women with PCOS should be counseled on the adverse impact of excess weight on clinical pregnancy, miscarriage, and live birth rates, following infertility treatment	20 (95.2%)	
Letrozole 5.3.1 EBR Letrozole should be the first-line pharmacological treatment for ovulation induction in infertile anovulatory women with PCOS, with no other infertility factors	21 (100.0%)	
Clomiphene citrate versus metformin 5.4.2.1 EBR Clomiphene citrate could be used in preference to metformin in women with PCOS with anovulatory infertility and no other infertility factors, to improve ovulation, clinical pregnancy and live birth rates	18 (85.7%)	
Gonadotrophins 5.5.5 EBR Gonadotrophins could be second-line pharmacological therapy for women with PCOS who are anovulatory and infertile, with no other infertility factors and who have failed first line oral ovulation induction	21 (100.0%)	
In vitro **fertilization (IVF) and** *in vitro* **maturation (IVM) 5.7.0.1 CR** In the absence of an absolute indication for *in vitro* fertilization (IVF)/intracytoplasmic sperm injection (ICSI), IVF could be offered in women with PCOS and anovulatory infertility, if first- or second-line ovulation induction therapies have failed	21 (100.0%)	
Gonadotrophin releasing hormone protocol 5.7.1.2 PP The use of a GnRH antagonist protocol for women with PCOS undergoing IVF/ICSI is recommended as it enables the use of an agonist trigger, with the freezing of all embryos generated if required, without compromising the cumulative live birth rate, to reduce the risk of significant ovarian hyperstimulation syndrome.	20 (95.2%)	
Choice of FSH 5.7.3.1 CR Either urinary or recombinant follicle stimulating hormone (FSH) could be used in women with PCOS undergoing (controlled) ovarian (hyper) stimulation for IVF/ICSI, with insufficient evidence to recommend a particular type of FSH preparation	19 (90.5%)	
Adjunct metformin 5.7.5.1 EBR Adjunct metformin therapy could be used before and/or during FSH ovarian stimulation in women with PCOS undergoing IVF/ICSI treatment with GnRH agonist long protocol, to reduce the risk of developing ovarian hyperstimulation syndrome and miscarriage	15 (71.4%)	21 (95.5%)
Anti-Müllerian Hormone (AMH) in the diagnosis of PCOS 1.5.1 EBR Serum anti-Mullerian hormone (AMH) could be used for defining PCOM in adults	7 (33.3%)	21 (95.5%)

Data are expressed as N (%). EBR: evidence-based recommendations; CR: Consensus Recommendations; PP: Practice Points. These Guideline recommendations were reproduced with permission from Monash University.

Metformin in pregnancy

> *Recommendation 4.11.2. metformin could be considered in some circumstances (e.g. risk for preterm birth), to reduce preterm delivery and limit excess gestational weight gain, in pregnant women with PCOS* [3]

Metformin, a widely available and accessible insulin-sensitizing medication, primarily acts by suppressing hepatic gluconeogenesis and glucose output, while also enhancing peripheral insulin action [22,23]. It is commonly used to manage PCOS, aiding in weight control, fertility, menstrual regulation, and potentially reducing the risks of miscarriage and pregnancy complications. However, recent evidence as reported in the EBG 2023, suggests that metformin does not significantly improve most maternal complications in women with PCOS. Furthermore, as metformin crosses the placenta [24], concerns have been raised regarding its potential long-term metabolic effects on offspring [25]. Despite these

Table 3. Research opportunities in Latin America.

- Multinational study on the prevalence of women with PCOS in different Latin American countries.
- Intervention studies focused on educating medical staff to manage obesity in a respectful and patient-centered way.
- Clinical trials for inositol: predefined dosages and clinical outcomes, pharmacokinetic studies.
- Studies on the use of metformin during pregnancy for women with PCOS and increased risk of preterm birth, exploring maternal and offspring long-term outcomes.
- Multinational study on clinical hyperandrogenism considering different ethnicities: cutoff value for mFG in unselected populations in the region.
- Multinational study on AMH values in women of reproductive age with and without PCOS in Latin American populations.

concerns, metformin appears effective in preventing preterm birth, influencing gestational age at delivery, and possibly reducing gestational weight gain.

Further research is needed to specifically explore its benefits in women with PCOS at higher risk of preterm delivery, such as those with a history of late miscarriage or preterm birth (Table 3). Additionally, studies should investigate the effects of combining metformin with non-pharmacological interventions, such as lifestyle modifications, for glycemic control in women with PCOS and established gestational diabetes.

In the first voting round, 66.7% of participants initially supported the recommendation. However, after further discussion of its relevance, support increased to 81.8% in the second round.

Psychosexual function

Recommendation 2.3.2. Permission to discuss psychosexual function should be sought noting that the diagnosis of psychosexual dysfunction requires both low psychosexual function, combined with related distress [3].

Psychosexual dysfunction is defined as sexual difficulties that originate from psychological factors, including depression, low self-esteem, and negative body image. These risk factors are more prevalent in women with PCOS, and the treatments frequently used for PCOS, such as hormonal contraceptives and ovulation induction agents, may also affect psychosexual function in the general population, although specific data regarding their effects on women with PCOS remain limited [26].

In this context, the prevalence and severity of psychosexual dysfunction and its associated distress in women with PCOS are not well understood. A meta-analysis linked to EBG, highlighted the negative impact of excess body hair on sexuality in this population, noting lower self-perceived sexual attractiveness and satisfaction compared to controls. However, it is unclear whether these issues are accompanied by sufficient distress to meet the clinical criteria for psychosexual dysfunction [27].

Therefore, screening and assessment of psychosexual concerns—conducted with appropriate consent—may benefit sexually active women by facilitating targeted interventions to improve sexual function, mitigate the social impact of PCOS, and enhance quality of life. Furthermore, training healthcare professionals to address these issues sensitively during consultations could improve patient care.

Future research should investigate both psychosexual function and related distress in women with PCOS to deepen understanding of the scope and impact of psychosexual dysfunction in this group.

In the initial voting round, the recommendation received support from 71.4% of participants. Following additional discussion on its relevance, this support increased to 95.5% in the second round.

Clinical hyperandrogenism

Recommendation 1.3.1. The presence of hirsutism alone should be considered predictive of biochemical hyperandrogenism and PCOS in adults [3].

Recommendation 1.3.5. A modified ferriman gallwey score (mFG) of 4–6 should be used to detect hirsutism, depending on ethnicity, acknowledging that self-treatment is common and can limit clinical assessment [3].

Hirsutism, defined as the presence of excessive terminal hair in a male-pattern distribution in women, is the most common clinical manifestation of hyperandrogenism in women with PCOS, with a prevalence of 65%–75%. It results from both androgen excess and the individual response of the pilosebaceous unit to androgens [28].

The mFG scoring system is widely used to standardize the evaluation of hirsutism [29]. The mFG score assesses terminal hair growth in nine body areas, rating hair growth from 0 (no hair) to 4 (male-pattern hair), with a maximum score of 36. While self-scoring in shaved areas can be useful for follow-up, it correlates only modestly with observer scoring. Ethnic variations significantly influence mFG scores, necessitating population-specific cutoffs. In this sense, The Endocrine Society recommends the following cutoffs: United States and United Kingdom (Black and White women): ≥8; Mediterranean, Hispanic, and Middle Eastern women: ≥9 to ≥10; South American women: ≥6; Asian women: from ≥2 (Han Chinese) to ≥7 (Southern Chinese) [30]. Systematic reviews also reveal ethnic differences: East Asian women tend to be less hirsute compared to White women, while Hispanic, South Asian, and Middle Eastern women are generally more hirsute [31,32]. However, data on women with PCOS in Latin America remain limited, and existing studies, primarily conducted in referral populations, may not reflect real-world scenarios [5,28].

Given that hyperandrogenism in PCOS can often be assessed clinically in a cost-effective manner, further studies on unselected populations in Latin America are needed to establish accurate mFG cutoffs for hirsutism specific to this region (Table 3).

In the first voting round, the two recommendations were supported by 76.2% and 71.4%% of participants, respectively. After discussion of these issues, they received support of 90.9 and 86.4% of participants in the second round.

Adjunct metformin (IVF/ICSI)

Recommendation 5.7.5.1 Adjunct metformin therapy could be used before and/or during FSH ovarian stimulation in women with PCOS undergoing IVF/ICSI treatment with GnRH agonist long protocol, to reduce the risk of developing ovarian hyperstimulation syndrome and miscarriage [3]

Ovarian hyperstimulation syndrome (OHSS) is a severe complication associated in women with high ovarian reserve undergoing ovarian stimulation for oocyte retrieval, particularly when using the long GnRH agonist combined with an hCG trigger and when more than 15–20 oocytes are obtained [33]. Among them, PCOS patients represented a group prone to develop OHSS in the past, until major changes in stimulation protocols were introduced to avoid this threatening iatrogenic condition. Nowadays, good medical practices recommend using GnRH antagonist protocols, suspending hCG for final oocyte maturation, prescribing

a GnRH analogue trigger instead and deferring embryo transfer in patients at risk of developing OHSS [34]. If these precautions are taken, it is extremely rare to observe patients with severe OHSS, making many clinics declare themselves as an OHSS free status [35].

Metformin, commonly prescribed in PCOS patients with insulin resistance, has been associated with a lower incidence of OHSS when patients are stimulated using the long GnRH agonist protocol [36]. However, as previously mentioned, GnRH antagonist protocols are currently preferred, representing a simpler scheme for patients and a safer way of obtaining a high number of good quality oocytes, avoiding the risk of OHSS caused by GnRH analogue trigger.

During the first voting round, 71.4% of participants supported the recommendation. After further discussion highlighting its relevance, support rose to 95.5% in the second round.

Anti-Müllerian hormone (AMH) in the diagnosis of PCOS

Recommendation 1.5.1 serum anti-mullerian hormone (AMH) could be used for defining PCOM in adults [3].

Anti-Müllerian Hormone (AMH) is considered today an excellent marker of ovarian reserve and ovulatory response to an ovarian stimulation cycle, being comparable to antral follicle count in reproductive medicine [37]. It is expressed by preantral, and small antral follicles and it exhibits minor variations along the menstrual cycle, which represents another advantage for its use [38]. AMH decreases with age and becomes undetectable at menopause.

Women with PCOS are particularly known for exhibiting larger ovarian volumes secondary to a higher number of antral follicles, which in fact defines PCOS morphology. Consequently, AMH values are also higher in women with PCOS compared to women without PCOS at equivalent ages, which represents a useful tool for clinicians when calculating the appropriate doses of gonadotropins for a controlled and safe ovarian stimulation cycle [39].

It is important to emphasize that, in adult women with irregular cycles and hyperandrogenism, additional confirmation of polycystic ovary morphology (PCOM) is not necessary. For those lacking the second criterion for defining PCOS, transvaginal ultrasound provides well-defined criteria for PCOM. However, as an imaging test, it can delay diagnosis by requiring patient referral beyond the clinical consultation, thus burdening public health systems, particularly in some countries. In this context, AMH measurement could simplify the diagnostic process. However, AMH values can vary significantly depending on factors such as age, BMI, ethnicity, use of combined oral contraceptives, and the day of the menstrual cycle. Currently, cutoff values for AMH are specific to the assay used and the population studied.

While the body of literature linking AMH and PCOS continues to grow, no consensus has yet been reached regarding the cutoff value for diagnosing PCOS morphology with AMH at different ages [40,41]. Latin America is no exception, and the fact that AMH is often not available or covered by health insurance in many of our countries further complicates the establishment of real cutoff values. We see a great opportunity for a multinational study to explore AMH values in PCOS and non-PCOS women of reproductive age across Latin American countries. Given our diverse ethnic backgrounds, there may be differences in AMH values among PCOS patients in the Latin American region compared to populations in Europe, Asia, or North America (Table 3). Preliminary data suggest that AMH values in our PCOS population are also elevated compared to non PCOS patients.

In the first voting round, 33.3% of participants initially supported the recommendation. However, after further discussion of its relevance, support increased to 95.5% in the second round.

Limitations

This study has limitations. First, it employed the Delphi approach, which is less rigorous than the ADAPTE process recommended in the EBG. The study targeted recommendations deemed impactful or challenging, fostering discussion and highlighting research opportunities instead of fully adapting the EBG to the local context. Widely accepted recommendations were excluded from assessment, situating this study within the broader EBG framework. Second, only gynecological endocrinology experts were included, excluding other disciplines and patient input, which may have biased the selection of recommendations for evaluation. Considering variations in healthcare access across countries, further research incorporating diverse disciplines and country-specific patient perspectives could enhance local PCOS care.

Conclusions

In this consensus, a subset of the recommendations issued by the 2023 EBG for the assessment and management of PCOS was selected to be voted on for agreement by experts from various Latin American countries, members of the ALEG. The primary aims of this consensus were to assess whether the recommendations were applicable to the Latin American context, identify recommendations that, while appropriate, were not traditionally followed in the region (to encourage behavior change), and highlight others that, despite being valid, may face implementation challenges due to regional barriers such as cost or availability.

This process helped underscore recommendations that could support primary and secondary prevention of comorbidities and have the potential to influence public health policies in the region. Additionally, it allowed us to identify opportunities for further research that could provide invaluable information for improving the management of Latin American women living with PCOS.

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Authors contributions

PMS, AM: were involved in the conception and design of the study, data collection and analysis, and drafted the article.

GGSS, MLMV, AMB, DAB: were involved in the design of the study, data collection and analysis.

PC: revised critically the manuscript for important intellectual content.

SP, ACL, AB, AEC, AVR, ARB, AMGQ, CACR, GBC, GR, IDLP, IDMS, JAMV, LBM, MAB, MST, SL, TJRF: were involved with data collection and analysis.

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Data availability statement

All relevant data are included within the manuscript, and no additional data are available.

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