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Narrative Review

Weight and Emergency Contraception: A Narrative Review of BMI, Efficacy, and Access

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Abstract

Background: Emergency contraception (EC) is a time-sensitive component of reproductive healthcare that prevents pregnancy after unprotected intercourse or contraceptive failure. Emerging evidence suggests that the effectiveness of some oral EC methods, particularly levonorgestrel (LNG), may be reduced among individuals with higher body weight or body mass index (BMI), raising important clinical and counselling considerations.

Methods: This narrative review synthesizes pharmacologic, clinical, and health services literature examining the relationship between body weight or BMI and emergency contraception effectiveness. A targeted literature search was conducted in PubMed, Google Scholar, and relevant guideline sources to identify studies on emergency contraception, body weight, BMI, levonorgestrel, ulipristal acetate, and intrauterine devices. A narrative approach was chosen due to heterogeneity in study design, outcome measures, and populations, and the limited number of randomized trials powered to detect pregnancy outcomes across BMI categories. Included sources comprised clinical trials, pooled analyses, pharmacokinetic studies, systematic reviews, and clinical guidelines addressing oral LNG, oral ulipristal acetate (UPA), and intrauterine device (IUD)–based emergency contraception; studies not relevant to EC efficacy, BMI, or access considerations were excluded.

Results: Evidence suggests that the effectiveness of oral LNG emergency contraception may be reduced at higher body weight or BMI, although findings are heterogeneous and remain subject to debate. Oral UPA and copper intrauterine devices appear less affected by body weight but are constrained by prescription requirements, cost, and clinical availability. Counselling is further complicated by gaps between available evidence, clinical guidance, and real-world access.

Conclusions: Body weight and BMI are relevant considerations in emergency contraception counselling, but should not be the sole determinants of method selection. Clinicians should engage in shared decision-making that incorporates available evidence, uncertainty in effectiveness estimates, and timing of intercourse, patient preferences, and access constraints to support equitable, weight-inclusive emergency contraception care.

Key messages

- Emergency contraceptive pill effectiveness may be reduced at higher BMI, particularly for levonorgestrel, though evidence remains heterogeneous.
- Ulipristal acetate and intrauterine devices are less affected by BMI but are limited by prescription, cost, and procedural access.
- Clinicians should incorporate BMI, timing, access, and patient preferences into shared decision-making rather than relying on a single EC option.
- Structural and legal barriers disproportionately affect higher-BMI patients and should be considered during counseling.

More Information

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Introduction

Emergency contraception (EC) is one of the cornerstones of reproductive autonomy, offering a critical chance to prevent unintended pregnancy after contraceptive failure or unprotected intercourse. Emergency contraception is primarily available in oral and intrauterine forms, and it is most effective when used promptly and appropriately. While long-acting contraceptive implants exist for ongoing pregnancy prevention, they are not established or recommended as emergency contraception methods [1,2].

Despite its importance, growing evidence suggests that emergency contraception effectiveness may be compromised in individuals with an elevated body mass index (BMI) or body weight, warranting consideration of BMI or weight during counseling and shared decision-making regarding oral emergency contraception options [3-5]. Studies have suggested reduced effectiveness of oral emergency contraception, particularly oral levonorgestrel (LNG), in individuals weighing ≥75–80 kg or with a body mass index (BMI) ≥26–30 kg/m^2, with variability in reported thresholds across studies and analyses [3-5]. These findings raise concerns. Recent reviews published after 2020 continue to support a cautious interpretation of the BMI–emergency contraception relationship, noting that oral levonorgestrel may be less effective at higher BMI, while also emphasizing that the clinical evidence remains heterogeneous and incomplete [6]. More recent comparative evidence has also continued to favor intrauterine emergency contraception over levonorgestrel-containing methods overall, reinforcing the importance of including IUD-based options in counseling discussions [7]. Despite this, potential weight-related differences in effectiveness are inconsistently reflected in product labeling and variably addressed during clinical counseling and are not consistently incorporated into public health guidance on emergency contraception [8,9].

This narrative review aims to underscore the clinical evidence surrounding EC efficacy and BMI, with a focus on oral LNG, oral UPA, and IUD-based methods. Given the heterogeneity of available clinical and pharmacokinetic data, including several studies published in the past decade examining pharmacokinetic variation and clinical outcomes, this review seeks to synthesize existing evidence while explicitly acknowledging areas of uncertainty and limitation. The goal is to contextualize current findings within clinical practice and access considerations, rather than to assert definitive conclusions where data remain inconclusive. The following sections review pharmacokinetic and clinical evidence, counseling implications, and access considerations relevant to weight-inclusive emergency contraception care.

Methodology: Literature search strategy

A targeted literature search was conducted to identify studies examining the relationship between body weight or body mass index (BMI) and emergency contraception efficacy, pharmacokinetics, counseling, and access. PubMed and Google Scholar were searched for English-language sources using combinations of the terms "emergency contraception," "levonorgestrel," "ulipristal acetate," "copper IUD," "LNG-IUD," "body weight," "BMI," "obesity," "efficacy," "pharmacokinetics," and "access." Relevant clinical guidelines and regulatory documents from organizations including the CDC, WHO, EMA, ACOG, and the American Society for Emergency Contraception, were also reviewed. We included randomized trials, pooled analyses, cohort and observational studies, pharmacokinetic studies, systematic reviews, and major guideline statements relevant to EC and BMI. Sources not directly related to emergency contraception, body weight/BMI, or access and counseling implications were excluded. A narrative review approach was selected because of heterogeneity in study designs, outcome measures, and populations, as well as the limited number of randomized trials powered to assess pregnancy outcomes across BMI categories.

Mechanism and pharmacokinetics of emergency contraception in the context of BMI

Emergency contraception primarily functions by delaying or inhibiting ovulation and is most effective before the luteinizing hormone (LH) surge. Available methods include oral levonorgestrel (LNG), oral ulipristal acetate (UPA), copper intrauterine devices (IUDs), and the 52-mg levonorgestrel intrauterine device (LNG-IUD), for which emerging evidence supports use as emergency contraception.

A. Oral Levonorgestrel (LNG)

Oral LNG is a synthetic progestin that inhibits or delays ovulation by suppressing the LH surge. It is most effective when taken within 72 hours of unprotected intercourse. Consistent with updated U.S. Food and Drug Administration labeling, there is no evidence that oral levonorgestrel has any effect after ovulation; its mechanism of action is limited to delaying or preventing ovulation, and it does not disrupt implantation or existing pregnancies [10,11].

Several pharmacokinetic studies suggest that individuals with higher body weight or BMI exhibit lower peak plasma concentrations (Cmax) of oral levonorgestrel, and a larger volume of distribution compared with normal-weight individuals. These studies report reduced serum concentrations [12]. Randomized trial data indicate that double dosing of oral levonorgestrel does not improve ovulation suppression in individuals with obesity [13].

B. Oral Ulipristal Acetate (UPA)

Oral ulipristal acetate (UPA) is a selective progesterone receptor modulator that delays or inhibits ovulation primarily by preventing follicular rupture, even after initiation of the luteinizing hormone surge, through progesterone receptor–mediated effects at the follicular level [11,14].

Pharmacokinetic data suggest that oral UPA maintains more stable serum levels than oral LNG across different BMI categories, though its efficacy may still be reduced at very high BMIs [3,5]. A recent review similarly concluded that ulipristal acetate remains the preferred oral emergency contraceptive in many higher-BMI clinical scenarios, while emphasizing that levonorgestrel appears less effective above BMI thresholds of approximately 26 kg/m^2 or body weight above 70 kg [6]. Oral UPA's lipophilic nature leads to a larger volume of distribution in obese individuals, potentially lowering the concentration available for receptor binding. However, it appears to retain more consistent ovulation suppression in overweight populations compared to oral LNG and may be considered the preferred oral option for patients with BMI >30 kg/m^2 in many clinical contexts.

C. Copper IUDs

Copper intrauterine devices provide the most effective form of emergency contraception, with failure rates below 0.1%, independent of body weight. More importantly, the copper IUD is not affected by pharmacokinetic alterations, making it the most weight-stable and reliable EC option across all BMI categories [15]. However, access barriers, including appointment availability, socioeconomic factors, procedural constraints, and cost, limit the use of copper intrauterine devices in both emergency and routine office-based clinical settings.

Clinical efficacy of emergency contraception by BMI

Several analyses suggest reduced effectiveness of oral emergency contraception, particularly oral levonorgestrel (LNG), among individuals with higher BMI or body weight, although findings vary by study design and outcome measure.

A. Oral Levonorgestrel (LNG)

Oral LNG has long been the most widely used EC method globally due to its over-the-counter availability, affordability, and favorable side effect profile. However, multiple analyses that suggest a possible reduction in efficacy in individuals with BMI ≥26 kg/m^2 or weight ≥75 kg. A pooled analysis of clinical trial data by Glasier, et al. found that oral LNG's risk of failure appeared to increase substantially with weight, with an odds ratio of pregnancy of 1.75 for overweight users and 2.61 for obese users, compared to those with normal BMI [3].

B. Oral Ulipristal Acetate (UPA)

Oral UPA appears to have more consistent efficacy than oral LNG across several weight categories, particularly in individuals with BMI ≥30 kg/m^2. In the pooled analysis by Glasier, et al. oral UPA maintained a more stable efficacy curve, with no statistically significant increase in failure rates until BMI exceeded 35 kg/m^2 [3]. A retrospective review of patients receiving oral UPA demonstrated lower pregnancy rates compared to oral LNG users across weight categories, suggesting that oral UPA may be more effective in individuals with higher BMI, although outcome-based evidence remains limited [16].

Nevertheless, oral UPA's efficacy also appears to attenuate at extremes of obesity. Pharmacokinetic modeling suggests that patients with BMI >35 kg/m^2 may still experience suboptimal serum concentrations, although not to the same degree as with oral LNG [5]. More recent pharmacokinetic analyses and clinical modeling studies published after 2020 have further supported the possibility that body weight may influence levonorgestrel exposure and ovulation suppression, although the clinical impact on pregnancy outcomes remains uncertain [17].

C. Levonorgestrel Intrauterine Device (LNG-IUD)

The 52-mg levonorgestrel intrauterine device (LNG-IUD) has emerged as a potential option for emergency contraception, although the evidence base remains more limited than for copper intrauterine devices. A randomized noninferiority trial demonstrated that the LNG-IUD was noninferior to the copper IUD for the prevention of pregnancy when placed within five days of unprotected intercourse, with low pregnancy rates observed across study participants [18]. A 2023 Cochrane systematic review of progestin versus copper IUDs for emergency contraception identified only one eligible randomized study (711 participants) and concluded that the evidence for comparative pregnancy outcomes remains very uncertain, underscoring the need for additional studies before stronger conclusions can be drawn [19]. Available data suggest that LNG-IUD efficacy as emergency contraception does not vary significantly by body weight or BMI, likely reflecting its local intrauterine mechanism rather than the systemic ovulation-dependent mechanism of oral levonorgestrel, although subgroup analyses stratified by BMI remain limited.

In addition to its potential role as emergency contraception, the LNG-IUD offers the benefit of immediate initiation of effective ongoing contraception. However, because clinical experience with LNG-IUDs as emergency contraception is relatively recent, continued surveillance and additional studies are needed to better define efficacy, acceptability, and outcomes across diverse populations, including individuals with higher BMI.

D. Copper intrauterine devices

The copper IUD remains the most consistently effective method of EC regardless of BMI. Data from a large systematic review and meta-analysis report failure rates under 0.1% across all weight groups, with no evidence of reduced effectiveness in individuals with elevated BMI [15]. Unlike oral agents, the copper IUD's mechanism is not subject to metabolic variation, making it the most reliable EC option across body sizes. However, its utility is limited by access, procedural

requirements, and provider availability in time-sensitive scenarios. More recent meta-analytic evidence also supports the superior overall effectiveness of copper IUD–based emergency contraception compared with levonorgestrel-containing methods, while highlighting its added benefit of providing ongoing contraception after insertion [7].

E. Summary of clinical impact

Despite its widespread use, oral levonorgestrel protection is less effective in patients with elevated BMI, particularly those ≥30 kg/m^2 [3-5]. Pooled analyses of phase III trials of oral ulipristal acetate demonstrate that pregnancy risk following EC use is strongly associated with additional unprotected intercourse after treatment [16].

Oral UPA may provide improved efficacy in some higher-BMI populations, but remains prescription-only in the United States; while advanced prescription of emergency contraception may mitigate access barriers for some patients, real-world access challenges persist due to variability in clinician awareness, prescribing practices, and pharmacy availability [9,20]. The 2024 U.S. Medical Eligibility Criteria for Contraceptive Use do not impose weight-based restrictions on emergency contraception methods, noting that available evidence regarding BMI-related differences in effectiveness remains limited and inconsistent [21]. Copper intrauterine devices offer uniform protection across all BMI groups but face logistical and access-related barriers. In addition, patient acceptance may be influenced by personal, ethical, or religious considerations, underscoring the importance of informed, patient-centered counseling [22].

Access and equity challenges in emergency contraception for higher-BMI patients

While clinical evidence suggests that body mass index (BMI) may influence the effectiveness of some emergency contraception (EC) methods, interpretation of these findings remains controversial due to heterogeneity and limitations in the available evidence, which has informed existing regulatory and public health guidance [8,23,24] . This uncertainty has implications for counseling and access to appropriate EC methods, particularly for individuals with higher body weight (Table 1).

A. Regulatory perspectives on BMI and emergency contraception efficacy

Regulatory agencies, including the European Medicines Agency (EMA), the U.S. Centers for Disease Control and Prevention (CDC), and the World Health Organization (WHO), have reviewed evidence regarding the potential impact of body weight and body mass index (BMI) on oral emergency contraception efficacy. In 2016, both the EMA and CDC concluded that available evidence was insufficient to support definitive BMI- or weight-based warnings, citing limitations including small sample sizes, heterogeneity in study design, reliance on secondary analyses, and inconsistent pregnancy outcome data [8,24]. The World Health Organization similarly maintained guidance supporting the use of oral emergency contraception across all weight categories, emphasizing the absence of conclusive evidence demonstrating clinically meaningful reductions in effectiveness [23].

Since these regulatory reviews, additional pharmacokinetic modeling studies and clinical trials have further examined the relationship between BMI and oral emergency contraception efficacy. Post-2016 data suggest reduced serum concentrations of oral levonorgestrel in individuals with elevated BMI and attenuated ovulation suppression near the luteinizing hormone surge [17]. More recently, a randomized trial in individuals weighing ≥80 kg did not demonstrate statistically significant differences in pregnancy rates between oral ulipristal acetate and standard- or double-dosing of oral levonorgestrel, highlighting the challenges of conducting adequately powered emergency contraception trials and the ongoing uncertainty in outcome-based evidence [25].

While heterogeneous, these findings underscore the need for continued re-evaluation as new evidence emerges and support counseling approaches that transparently acknowledge uncertainty rather than impose rigid weight-based thresholds. In this context, a cautious and patient-centered clinical approach may reasonably prioritize oral ulipristal acetate as a first-line oral emergency contraception option for some individuals with elevated BMI, given signals of preserved efficacy in some studies, while acknowledging that definitive outcome-based evidence remains limited [3,25].

B. Prescription barriers

In the United States, oral ulipristal acetate (UPA), which may be more effective than oral levonorgestrel for some higher-BMI individuals, remains prescription-only, limiting its utilization in urgent settings. Oral UPA's mechanism of action supports its consideration as a preferred option in patients with BMI ≥30 kg/m^2, yet time-sensitive access is frequently undermined by delays in obtaining prescriptions, lack of provider familiarity, or pharmacy stock shortages [8,9,26-28,36]. More recent U.S. pharmacy studies support this concern. In southwestern Pennsylvania, only 44% of pharmacies stocked levonorgestrel on the shelf and only 5% had ulipristal acetate immediately available [29]. In Georgia, only 3% of pharmacies stocked ulipristal acetate, and nonmetropolitan pharmacies were less likely to stock levonorgestrel or ulipristal acetate than metropolitan pharmacies [30]. Oral ulipristal acetate should not be used in individuals with ongoing or recent exposure to progestin-containing contraceptives, and initiation of hormonal contraception after its use should be delayed for five days to avoid interference with its mechanism of action [8,23].

In contrast, oral levonorgestrel (LNG) is often widely available over the counter, making it the most commonly

Table 1: Summary of Key Studies Examining BMI and Emergency Contraception Effectiveness.

Author, Year	Study Methodology	Sample Size	Population	BMI / Weight Categories	EC Type	Pregnancy Rate Outcomes	Adjusted Effect Estimates	Statistical Significance	Key Findings	Limitations
Glasier, et al. 2011 [3]	Pooled analysis of randomized trials	n = 3445	Women requesting EC internationally	Normal, overweight, obese	LNG, UPA	Overall pregnancy rate ≈1.2%	OR pregnancy: overweight 1.75; obese 2.61 vs normal BMI	Reported in pooled analysis	LNG effectiveness declined with increasing BMI; UPA effectiveness less affected until higher BMI ranges	Secondary pooled analysis; limited U.S.-specific data
Kapp, et al. 2015 [4]	Observational cohort study	n = 1731	Women receiving LNG EC	BMI <25 vs ≥25 kg/m²	LNG	Higher pregnancy rates observed among BMI ≥25 users	Adjusted analyses suggested increased pregnancy risk among overweight users	Reported in adjusted model	Suggested possible reduced LNG effectiveness in overweight individuals	Observational design; potential confounding
Festin, et al. 2017 [5]	Pooled analysis of clinical trials	n = 6873	Women receiving LNG EC	Stratified by weight and BMI	LNG	Pregnancy risk increased with higher body weight	Adjusted OR for pregnancy increased with weight categories	Reported in pooled models	Suggested decline in LNG efficacy at higher body weight	Secondary analysis of trial datasets
Praditpan, et al. 2017 [12]	Pharmacokinetic study	n = 20	Women with normal vs obese BMI	BMI <25 vs ≥30 kg/m²	LNG, UPA	Not applicable (PK study)	Not applicable	Not applicable	Lower LNG serum concentrations observed in obese individuals	Small sample; no clinical outcomes, PK outcomes only
Ventrici, et al. 2020 [17]	Pharmacokinetic modeling study	Modeled cohorts	Simulated BMI-stratified groups	BMI 18–40 kg/m² modeled	LNG	Not applicable (modeling study)	Modeled changes in LNG exposure with higher BMI	Not applicable	Higher LNG doses predicted to increase serum concentrations in higher BMI groups	Model-based; not clinical outcomes
Cleland, et al. 2012 [15]	Systematic review & meta-analysis	7034 women across studies	Women receiving copper IUD EC	All BMI groups	Copper IUD	Failure rate <0.1%	Not BMI-specific	Not applicable	Copper IUD highly effective across BMI groups	Access barriers not assessed
Gemzell-Danielsson, et al. 2013 [11]	Retrospective pooled analysis	≈2218	Women requesting EC	Stratified by BMI/weight	UPA vs LNG	Lower pregnancy rates among UPA users	Comparative analyses favored UPA over LNG	Reported in pooled data	UPA may retain efficacy better across BMI categories	Retrospective design
Turok, et al. 2021 [18]	Randomized noninferiority trial	n = 638	Women requesting EC	All BMI groups	LNG-IUD vs copper IUD	Pregnancy: 1 LNG-IUD vs 0 copper IUD	Noninferiority margin met	Noninferiority demonstrated	LNG-IUD noninferior to copper IUD for EC	Limited BMI subgroup analysis
Edelman, et al. 2022 [13]	Randomized controlled trial	n = 70	Individuals with obesity	BMI ≥30 kg/m²	LNG (single vs double dose)	No pregnancies observed	No improvement in ovulation suppression with double dose	Not statistically significant	Doubling LNG dose did not improve ovulation suppression	Small sample; ovulation surrogate outcome
Edelman, et al. 2024 [25]	Randomized clinical trial	n = 322	Individuals ≥80 kg	Weight ≥80 kg	UPA vs LNG	Pregnancy outcomes rare; no significant difference	Adjusted comparisons showed similar outcomes	Not statistically significant	Outcome evidence for BMI-related differences remains limited	Low event rate

accessed emergency contraception option for many patients, despite uncertainty regarding its effectiveness at higher BMI. However, over-the-counter availability does not guarantee equitable access, as out-of-pocket costs may limit utilization among individuals with lower income or without insurance coverage, contributing to delayed or foregone use [20].

Advance prescription of emergency contraception represents an effective strategy to mitigate access barriers associated with prescription-only ulipristal acetate. Providing oral UPA prescriptions in advance of need allows patients to obtain the medication while insurance coverage applies, reduces delays at the time of use, and facilitates informed counseling regarding method selection and limitations. Evidence suggests that advance provision of emergency contraception improves timely utilization without increasing unsafe sexual behavior and may be particularly beneficial for individuals at risk of reduced efficacy with oral levonorgestrel [20,28].

C. Intrauterine devices and procedural access

Copper intrauterine devices (IUDs), though the most

effective EC method for all weight groups, require clinical placement by trained providers. Emergency IUD access is limited in many regions due to scheduling constraints, procedural requirements, and provider availability within the narrow time window required for emergency use. Individuals with obesity may also encounter provider bias or limited availability of same-day IUD placement, further constraining access to intrauterine emergency contraception.

D. Weight bias and counseling inequities

Weight stigma remains a pervasive force in reproductive healthcare. Studies have shown that individuals with obesity are less likely to receive contraceptive counseling, are more frequently subjected to provider judgment, and report delayed or avoided care altogether due to prior experiences of discrimination [31]. These barriers intersect with broader socioeconomic and racial disparities in reproductive healthcare access, potentially amplifying inequities in emergency contraception counseling and method availability [32-34].

Together, these intersecting factors highlight how structural inequities, weight stigma, and healthcare access barriers may influence emergency contraception counseling and method availability for higher-BMI individuals.

E. Implications for clinical practice

For clinicians, these findings support proactive, time-sensitive counseling that incorporates body weight, timing of intercourse, and real-world access barriers while acknowledging uncertainty where evidence remains mixed. Advance provision of emergency contraception and early discussion of intrauterine options may help mitigate access barriers for patients with higher BMI.

Clinical counseling recommendations and ethical considerations

The intersection of weight, pharmacologic efficacy, and access creates a complex clinical challenge for providers offering and patients requiring emergency contraception (EC). In the absence of standardized, BMI-specific guidelines, clinicians are often left to navigate this uncertainty on a case-by-case basis. Clearer counseling strategies and a more consistent approach are increasingly important.

A. Evidence-informed counseling

Despite growing data on EC efficacy and BMI, few professional guidelines offer definitive recommendations for weight-based EC selection. The U.S. Medical Eligibility Criteria for Contraceptive Use acknowledges decreased efficacy of oral levonorgestrel (LNG) in patients with higher BMI but does not recommend against its use [35]. In practice, this ambiguity often translates into default reliance on oral levonorgestrel, particularly due to its over-the-counter availability, even when alternative options such as oral ulipristal acetate (UPA) or copper intrauterine devices (IUDs) may be more appropriate for some patients.

While observational analyses and pharmacokinetic studies suggest that oral UPA may retain greater efficacy than oral LNG in individuals with higher BMI, randomized clinical trials have produced mixed results, and definitive superiority has not been consistently demonstrated [3,25]. Accordingly, counseling should present oral UPA as a potentially more effective option rather than a guaranteed improvement.

Professional organizations such as the American Society for Emergency Contraception emphasize patient-centered counseling, advance provision of emergency contraception, and prioritization of oral ulipristal acetate or copper intrauterine devices for individuals at higher risk of reduced efficacy with oral levonorgestrel. These recommendations underscore the importance of aligning method selection with individual clinical characteristics, including body weight, timing of intercourse, and access considerations [20]. A pragmatic counseling framework is outlined below and should be applied within shared decision-making that prioritizes patient preferences and access.

- BMI <25 kg/m^2: Oral LNG, Oral UPA, or copper IUDs are all appropriate based on timing, access, and preference.
- BMI 25–29.9 kg/m^2: Oral UPA or copper IUDs may be prioritized if available; oral LNG may still be effective but with slightly reduced confidence.
- BMI ≥30 kg/m^2: If oral emergency contraception is being used, oral ulipristal acetate may be preferred over oral levonorgestrel in some individuals, though evidence remains mixed; copper intrauterine devices remain the most effective and weight-neutral option.

In addition to copper intrauterine devices, the 52-mg levonorgestrel intrauterine device has emerged as a potential emergency contraception option, although available outcome data remain limited and ongoing investigation is warranted. Oral ulipristal acetate should not be used in individuals with recent or ongoing progestin exposure, including those late for depot medroxyprogesterone acetate injections, those who have missed multiple combined oral contraceptive pills, or those planning to initiate or resume progestin-containing contraception within five days of EC use [8,23].

Providers should also counsel patients on the limits of existing data and engage in shared decision-making, emphasizing the time-sensitive nature of emergency contraception and discussing potential access delays or systemic barriers to more effective methods. When clinically appropriate, clinicians should routinely offer advance prescriptions for emergency contraception to reproductive-aged individuals who are not seeking pregnancy and are not

already protected by long-acting reversible or permanent contraception.

Failure of oral EC is frequently attributable to repeated episodes of unprotected intercourse later in the same menstrual cycle, underscoring that emergency contraception does not provide ongoing contraceptive protection [16]. Counseling following EC use should therefore explicitly address the importance of initiating an effective ongoing contraceptive method to reduce subsequent pregnancy risk.

Clinicians should discuss options for long-acting reversible contraception or other highly effective methods when feasible, while ensuring that initiation of progestin-containing contraception following oral ulipristal acetate is appropriately delayed for at least five days to avoid interference with its mechanism of action.

B. Ethical imperatives: Informed consent and justice

From an ethical perspective, the lack of discussion of potential weight-related differences in efficacy, where suggested by available evidence, undermines the principles of informed consent. Patients who receive oral levonorgestrel without being counseled on its possible reduced effectiveness in higher weight categories may overestimate the degree of protection provided, placing them at higher risk of unintended pregnancy and its associated consequences, particularly in regions with restricted abortion access.

Moreover, the principle of justice demands that patients of all body types receive equally effective care. The current system, which limits access to more effective emergency contraception methods based on prescription status, provider availability, or geographic region, structurally disadvantages higher-BMI individuals. This is concerning, especially given the high prevalence of obesity among reproductive-aged individuals in the United States and its disproportionate impact on communities of color [31,34,36].

C. Provider training and systemic change

Education regarding BMI-related emergency contraception efficacy should be incorporated into medical, pharmacy, and nursing curricula to equip providers with the tools needed for equitable care. Electronic medical record prompts, standardized EC counseling scripts, and updated patient education materials may improve the quality and consistency of counseling.

Policymakers and professional organizations should also advocate for expanded over-the-counter access to oral ulipristal acetate, reduction of regulatory barriers to same-day IUD placement, and consideration of updated labeling informed by emerging pharmacokinetic and clinical evidence. These changes would represent meaningful steps toward patient-centered, equitable reproductive healthcare.

Conclusion and future directions

As the landscape of reproductive healthcare continues to shift under the weight of political, legal, and systemic pressures, emergency contraception (EC) remains one of the few remaining tools for individuals seeking control over their reproductive choices. Yet emerging evidence suggests that for individuals with elevated body mass index (BMI), the effectiveness of certain oral emergency contraception methods may be reduced under specific clinical circumstances. Pharmacologic and clinical evidence suggest a potential decline in the efficacy of oral levonorgestrel (LNG), the most widely used oral EC, as BMI increases. Importantly, null findings in randomized trials such as those reported by Edelman et al. should be interpreted in the context of feasibility limitations intrinsic to emergency contraception research, including recruitment challenges and low pregnancy event rates, while also underscoring that current outcome-based evidence remains incomplete [25]. While oral ulipristal acetate (UPA) and copper intrauterine devices (IUDs) offer more effective alternatives, structural barriers, including prescription requirements, limited procedural access, and widespread misinformation, continue to restrict their use.

This review underscores the need for careful clinical recalibration in the context of evolving evidence. Recent reviews and systematic analyses published after 2020 continue to support cautious, evidence-informed counseling, particularly when discussing oral levonorgestrel efficacy at higher BMI and the comparative effectiveness of intrauterine emergency contraception [6,7,19]. While available data suggest potential differences in oral emergency contraception efficacy by BMI, findings remain heterogeneous, and post-2016 evidence has not definitively demonstrated the inferiority of oral levonorgestrel sufficient to mandate regulatory change. These challenges are further heightened by an increasingly restrictive legal environment, in which failure of emergency contraception may carry life-altering, serious consequences due to constrained abortion access [37].

These recommendations are intended to complement existing regulatory guidance while supporting transparent, patient-centered counseling. Ultimately, the goal is not to restrict choice, but to promote equitable, weight-inclusive emergency contraception counseling that supports informed decision-making in real-world clinical settings. As the clinical community works to preserve reproductive autonomy in an era of increasing restriction, weight-inclusive and evidence-informed emergency contraception is both a medical and ethical imperative.

Declarations

Ethics approval and consent to participate: Ethics approval and consent to participate are not applicable for this study, as it is a narrative review of previously published literature and did not involve human participants, animals, or identifiable data.

Authors' contributions: YA conceptualized and drafted the initial manuscript. SE, BA and TR contributed to the literature review, data extraction, and manuscript revision. MG supervised the overall project, contributed to manuscript structuring, and provided final critical revisions. All authors reviewed and approved the final manuscript.

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