

# Evidence-Based Contraceptive Guidance for Young Women Following Induced Abortion: A Systematic Summary

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**Objective:** To summarize the best available evidence on post-abortion contraceptive counseling for young women (aged 15–24 years) and provide an evidence-based basis for clinical practice.

**Methods:** Following the “6S” model, we systematically searched international and Chinese guide websites, professional association websites, and databases in both Chinese and English, from inception to June 2025. The types of literature included clinical decisions, evidence summaries, guidelines, and expert consensus. Two researchers independently performed literature screening, data extraction, and quality assessment. Guidelines were assessed by AGREE II, systematic reviews by AMSTAR 2.0, and RCTs and expert consensus by JBI critical appraisal tools. Evidence was graded using the JBI Evidence Grading System (2014) and synthesized by topic.

**Results:** Fifteen articles were included the following: 3 clinical decision aids, 7 guidelines, 2 expert consensus statements, 2 systematic reviews, and 1 RCT. Thirty-three pieces of evidence were summarized across seven categories: provision of contraceptive services, timing of initiation, assessment and counseling, values clarification, complications and management, follow-up, and support.

**Conclusion:** This summary provides contraceptive guidance for young women after induced abortion. Healthcare providers should integrate local policies and personal preferences, follow patient-centered principles, and translate this evidence into practice to increase uptake of efficient contraceptive methods and reduce unintended pregnancies among young women.

**Systematic Review Registration:** Fudan University Center for Evidence-Based Nursing (Registration No. ES20257666).

**Keywords:** post-induced abortion, young women, contraception, evidence summary

## Introduction

Unintended pregnancy remains a significant concern in global public health, particularly among young women, leading to a high rate of induced abortions.<sup>1</sup> The World Health Organization (WHO) estimates that there are about 73 million induced abortions performed worldwide each year, nearly half of which are classified as unsafe.<sup>2</sup> A significant number of these pregnancies and abortions are among young women, including 15% of abortions among teenagers aged 15–19 years and 26% among young women aged 20–24 years.<sup>3</sup> These young women face unique reproductive health challenges. Without appropriate intervention, these individuals face increased risks of adverse reproductive outcomes, including infection, menstrual irregularities, impaired fertility, and psychological distress such as anxiety and depression.<sup>4–6</sup> Moreover, the social and educational disruption caused by unintended pregnancy can have lasting effects on young women's personal development and future opportunities.<sup>7</sup>

Unintended pregnancies and induced abortions in young women are caused by various factors. Limited knowledge of sexual and reproductive health is a primary issue,<sup>8</sup> compounded by tolerant attitudes towards premarital sex and engagement in such activities.<sup>8–10</sup> Inconsistent or non-use of contraception further exacerbates the problem.<sup>9</sup> Societal stigma associated



with premarital sex and out-of-wedlock pregnancies also plays a significant role.<sup>11</sup> Many young women experience unintended pregnancies due to the failure to utilize contraceptives or reliance on less effective methods.<sup>12</sup> In China, a nationwide cross-sectional study, 2,370 adolescents who had an abortion were enrolled and 39% of all these young women experienced repeat abortion. Overall, 67.9% of the unintended pregnancy was due to no contraception used at all.<sup>13</sup> According to reports,<sup>14</sup> approximately 33 million young women aged 15–24 worldwide still have unmet contraceptive needs. The 2030 Agenda for Sustainable Development includes Sustainable Development Goal (SDG) Indicator 3.7.1, aiming to meet the family planning needs of women of reproductive age using modern methods.<sup>15</sup> However, in the 2019 study, among about 300 million adolescent women aged 15–19 years worldwide, 15 million unmet need for family planning were observed.<sup>16</sup> The adolescent contraceptive needs were only met by modern methods in 59.2%, which is lower than the worldwide level of 75.7%.<sup>16</sup> These findings indicate the importance to provide young women with effective contraceptive methods to help them prevent unintended pregnancies and avoid unnecessary abortions.

However, recent literature has emphasized that contraceptive counseling for young women in clinical practice faces multiple challenges, including knowledge gaps among providers and youth,<sup>17</sup> healthcare provider biases,<sup>18</sup> youth-specific counseling needs, and structural barriers to contraceptive access.<sup>19,20</sup> Healthcare providers' personal values and perceptions regarding contraception significantly influence their counseling practices; for example, clinicians' views on side effects and their impact on contraceptive continuation can shape whether certain methods are recommended or discouraged.<sup>18</sup> Such biases may affect youth's access to and adherence with contraceptive methods. Additionally, many clinicians lack confidence in providing comprehensive contraceptive education,<sup>21</sup> while youth require counseling that addresses developmental and psychosocial factors—including confidentiality concerns, discussions about sexual maturation, and the specific needs of vulnerable populations.<sup>22,23</sup> Furthermore, young people continue to face social, cultural, and systemic barriers that hinder consistent contraceptive use, necessitating targeted strategies to overcome these obstacles.<sup>19,20</sup>

In recent years, several authoritative organizations have released relevant guidelines and recommendations. For instance, UpToDate published “Contraception: Postabortion” in 2017 and updated it in 2025,<sup>24</sup> while ACOG issued “Counseling Adolescents About Contraception”<sup>25</sup> in the same year. In 2018, UpToDate further issued “Contraception: Overview of issues specific to adolescents”, also updated in 2025.<sup>26</sup> In 2022, the Royal College of Obstetricians and Gynecologists (RCOG) in the UK issued a document “Best practice in post-abortion contraception”.<sup>27</sup> In 2022, WHO also released “Abortion care Guideline”.<sup>28</sup> In 2020, the Chinese Journal of Obstetrics and Gynecology also issued “Guidelines for Contraceptive Services in Adolescents” in China.<sup>29</sup> Although these documents provide updated frameworks for contraceptive counseling and emphasize individualized approaches tailored to youth-specific challenges, they have several limitations: inconsistent target populations, areas, scopes, and purpose across sources, alongside uneven methodological quality. More importantly, no existing single source offers a comprehensive synthesis of evidence specifically focused on contraceptive guidance for young women (aged 15–24) following induced abortion—a population with unique reproductive health needs. Furthermore, no coherent, structured framework currently exists to facilitate the translation of existing guidelines into routine clinical practice.

To address this gap, this study aims to systematically retrieve, evaluate, and synthesize the best available evidence on contraceptive guidance for young women after induced abortion. By adhering to the evidence-summary reporting standards of the Evidence-Based Nursing Center of Fudan University, we developed a rigorous, evidence-based framework to inform clinical practice. The findings are intended to support healthcare providers in delivering individualized, patient-centered contraceptive counseling that improves method uptake, reduces repeat unintended pregnancies, and ultimately enhances the reproductive health and autonomy of young women.

## Methods

This evidence summary followed the evidence summary reporting standards of the Evidence-Based Nursing of Fudan University,<sup>30</sup> which covers six components: problem identification, literature search, literature screening, literature appraisal, evidence synthesis and grading, and formulation of practice recommendations.

## Study Registration

This evidence summary was registered with the Evidence-Based Nursing Center of Fudan University (Registration No.: ES20257666).

## Problem Establishment

Fudan University Center for Evidence-based Nursing proposed the PIPOST<sup>31</sup> model to address the first step in evidence summary reporting standards: problem formulation.

The first P refers to the target population (young women aged 15–24 years who have undergone induced abortion); I refers to interventions (provision of contraceptive counseling, education, and guidance); the second P refers to professionals (healthcare providers including physicians, nurses, and contraceptive counselors); O refers to outcomes (uptake of highly effective contraceptive methods, reduction in unintended pregnancy and repeat abortion rates, improvement in contraceptive knowledge, and correct use of contraceptive methods); S refers to settings (hospitals, clinics, community health centers); and T refers to types of evidence (clinical guidelines, summary of evidence, expert consensus, systematic reviews/meta-analyses, high-quality randomized controlled trials (RCTs), quasi-experimental studies).

## Evidence Retrieval

Following the “6S”<sup>25</sup> evidence resource model, a top-down searches were conducted across databases and professional sites, including: Up To Date, BMJ Best Practice, World Health Organization (WHO), Guidelines International Network (GIN), the UK’s National Institute for Health and Care Excellence (NICE), Scottish Intercollegiate Guidelines Network (SIGN), the U.S. National Guideline Clearinghouse (NGC), Canadian Medical Association: Clinical Practice Guidelines (CMA Infobase), the U.S. Centers for Disease Control and Prevention (CDC), Registered Nurses’ Association of Ontario (RNAO), American College of Obstetricians and Gynecologists (ACOG), the UK’s Royal College of Obstetricians and Gynecologists (RCOG), the JBI Evidence Based Healthcare Center Database (JBI), Cochrane Library, PubMed, CINAHL, Embase, Web of Science, Medlive, China National Knowledge Infrastructure (CNKI), Chinese Wanfang Database, and Chinese Biomedical Literature Database (CBM). The search period covered the time from the establishment of the database to June 28, 2025. Taking Pub Med as an example, the retrieval strategy is illustrated in [Figure 1](#).

## Inclusion and Exclusion Criteria

The inclusion criteria were as follows: studies covering young women aged 15–24 post-abortion; evaluating contraceptive methods (LARC, short-acting methods) or interventions (counseling, education); reporting contraceptive knowledge, unintended pregnancy rates, repeat abortion rates, uptake of effective methods, or correct use; including high-quality RCTs, systematic reviews, guidelines, evidence summaries, quasi-experimental studies; published in English or Chinese.

The exclusion criteria were as follows: abstract-only records, duplicate publications, studies with insufficient scientific quality or incomplete data, irrelevant studies.

## Literature Screening and Data Extraction

All retrieved literature was imported into Endnote and duplicate literature was removed. All literature was independently screened by two researchers who received systematic evidence-based training. In the first round of screening, they reviewed titles, abstracts, and keywords. Subsequently, they read full text and re-screened the literature to evaluating the quality of the re-screened literature. When there was dispute, an authoritative expert specializing in evidence-based research was consulted to reach a consensus. Priority for conflicting evidence was determined by recent results, recognized principles, and high-quality studies.

## Literature Quality Evaluation Criteria

The Appraisal of Guidelines for Research and Evaluation (AGREE II) tool<sup>33</sup> was used to evaluate the quality of the guidelines. Expert opinions, consensuses, quasi-experimental studies, randomized controlled trials, and cohort studies were evaluated using the Australian JBI Evidence-Based Health Care Center tool.<sup>34</sup> Meanwhile, due to the lack

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#1 "Abortion, Induced" [MeSH]
#2 "Abortion*" [Title/Abstract] OR "Induced Abortion*" [Title/Abstract] OR "Abortions, Induced"
[Title/Abstract] OR "Abortion Rate*" [Title/Abstract] OR "Rate*, Abortion" [Title/Abstract] OR
"Abortion*, Drug-Induced" [Title/Abstract] OR "Abortion, Drug Induced" [Title/Abstract] OR
"Drug-Induced Abortion*" [Title/Abstract] OR "Abortion*, Rivanol" [Title/Abstract] OR "Rivanol
Abortion*" [Title/Abstract] OR "Abortion*, Saline-Solution" [Title/Abstract] OR "Abortion, Saline
Solution" [Title/Abstract] OR "Saline-Solution Abortion*" [Title/Abstract] OR "Anti-Abortion
Group*" [Title/Abstract] OR "Anti Abortion Groups" [Title/Abstract] OR "Group*, Anti-Abortion"
[Title/Abstract] OR "Embryotom*" [Title/Abstract] OR "Fertility Control, Postconception"
[Title/Abstract] OR "Postconception Fertility Control" [Title/Abstract] OR "Abortion Technique*"
[Title/Abstract] OR "Technique*, Abortion" [Title/Abstract] OR "Abortion Technic*" [Title/Abstract]
OR "Technic*, Abortion" [Title/Abstract] OR "Abortion*, Soap-Solution" [Title/Abstract] OR
"Abortion, Soap Solution" [Title/Abstract] OR "Soap-Solution Abortion*" [Title/Abstract] OR
"Previous Abortion*" [Title/Abstract] OR "Abortion*, Previous" [Title/Abstract] OR "Abortion
Histor*" [Title/Abstract] OR "Histor*, Abortion" [Title/Abstract] OR "Abortion Failure*"
[Title/Abstract] OR "Failure*, Abortion" [Title/Abstract]
#3 #1 OR #2
#4 "Young Adult" [MeSH]
#5 "Adult*, Young" [Title/Abstract] OR "Young Adult*" [Title/Abstract] OR "Adolescent*,
Female" [Title/Abstract] OR "Female Adolescent*" [Title/Abstract] OR "young" [Title/Abstract]
OR "youth" [Title/Abstract] OR "teenage" [Title/Abstract] OR "student*" [Title/Abstract] OR
"graduate" [Title/Abstract] OR "early adult" [Title/Abstract] OR "minor" [Title/Abstract] OR
"emerging adult" [Title/Abstract] OR "young women" [Title/Abstract] OR "youthful"
[Title/Abstract] OR "undergraduate" [Title/Abstract]
#6 #4 OR #5
#7 "Contraception" [MeSH]
#8 "Birth Control" [Title/Abstract] OR "Contraceptive Method*" [Title/Abstract] OR "Fertility
Control" [Title/Abstract] OR "Inhibition of Fertilization" [Title/Abstract] OR "Fertilization
Inhibition" [Title/Abstract] OR "Female Contraception*" [Title/Abstract] OR "Contraception*,
Female" [Title/Abstract] OR "Male Contraception*" [Title/Abstract] OR "Contraception*, Male"
[Title/Abstract] OR "Family Planning Service*" [Title/Abstract] OR "Planning Service*, Family"
[Title/Abstract] OR "Service*, Family Planning" [Title/Abstract] OR "Family Planning"
[Title/Abstract] OR "Pregnanc*, Planned" [Title/Abstract] OR "Planned Pregnanc*" [Title/Abstract]
OR "Family Planning Program*" [Title/Abstract] OR "Program*, Family Planning" [Title/Abstract]
#9 #7 OR #8
#10 "guideline" [Title/Abstract] OR "standard" [Title/Abstract] OR "consensus" [Title/Abstract]
OR "recommendation" [Title/Abstract] OR "evidence summary" [Title/Abstract] OR "systematic
review" [Title/Abstract] OR "meta analysis" [Title/Abstract] OR "RCT" [Title/Abstract] OR
"randomized controlled trial*" [Title/Abstract] OR "best practice" [Title/Abstract]
#11 #3 AND #6 AND #9 AND #10

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**Note:** #=search line number; \*= truncation symbol for word stems; " "=phrase searching; ( )=grouping for Boolean operations; AND/OR/NOT= Boolean operators; [Title/Abstract]= limited to title and abstract fields; [Mesh]=Medical Subject Headings.

**Figure 1** PubMed search strategy.

of recognized quality assessment tools for best practice evidence, evidence summaries, and recommended practices, we assessed the quality of these types of evidence by tracing back the original studies from which each source and selecting the appropriate assessment tools for quality evaluation. Use the AMSTAR 2.0 standard<sup>35</sup> to evaluate the quality of the systematic reviews. All literature quality assessments were independently conducted by two researchers who had

received training in evidence-based practice. Disagreements between the two reviewers were resolved through discussion by consulting a third researcher when necessary.

## Evidence Extraction and Summary

Two researchers carefully and thoroughly read these 15 articles, extracting, analyzing, and comparing evidence that is consistent with the research topic and objectives. Then, they synthesized and classified similar and repetitive evidence into preliminary themes through discussion. Evidence was extracted and synthesized based on the following criteria: for independent evidence items, original texts were maintained without excessive embellishment; for similar recommendations, the version with more professional, brief, and strong readability was selected; for complementary recommendations, evidence was combined into complete statements following logical order; and for conflicting evidence, priority was given to high-quality evidence, evidence-based sources, and latest published authoritative literature. If there was any disagreement about evidence classification or interpretation, a third researcher with experience in evidence-based methods was consulted to reach a consensus. Through multiple rounds of discussion employing an iterative consensus-building approach, our research team carefully reviewed each piece of evidence, referencing similar frameworks developed in the field, to generate the final themes and entries.

This study used the evidence grading and evidence recommendation level system (2014 edition)<sup>36</sup> of the JBI Evidence-Based Health Care Center (Australia) to uniformly grade the original literature included with evidence. According to the design type of literature, the level of evidence is ranked from Levels 1 to 5, with Level 1 representing the highest quality and Level 5 the lowest. Meanwhile, by analyzing the feasibility, validity, suitability, and clinical significance of adopted evidence, an expert meeting was convened to establish the strength of evidence recommendations. Finally, it was divided into strong recommendation (grade A) and weak recommendation (grade B).

## Results

### Literature Screening Results

The search yielded 3,634 records. After removing duplicates, screening titles/abstracts (n=3,115), and full-text review (n=52), 15 documents were included the following: 3 clinical decision aids, 7 guidelines, 2 expert consensus statements, 2 systematic reviews, and 1 RCT (Figure 2). Figure 2 shows the literature screening process. Table 1 lists the general characteristics of the included literature.

### Results of Literature Quality Evaluation

#### Quality Evaluation Results of Guidelines

This study used AGREE II to assess the quality of seven guidelines. Due to standardized scores of  $\geq 60\%$  in each field, four guidelines were rated as A-level, while two guidelines were rated as B-level, indicating overall high quality. For detailed content, refer to Table 2.

#### Quality Evaluation Results of Expert Consensus

Two expert consensus<sup>25,42</sup> studies from ACOG were included in this study. One<sup>42</sup> of these received every item rated as “Yes.” In the other,<sup>25</sup> all items were evaluated “Yes” except for Item 6, which was assessed as “unclear.” Both showed high quality and were retained.

#### Quality Evaluation Results of Systematic Reviews

Table 3 displays the quality evaluation findings for the two systematic reviews that were included.<sup>44,45</sup> The systematic reviews were evaluated using the AMSTAR 2.0 standard.

#### Quality Evaluation Results of RCT

One randomized controlled trial<sup>45</sup> from PubMed was included in this study. All appraisal items were rated “Yes” except for Item 2 (allocation concealment) and Item 6 (blinding of outcome assessors), which were evaluated as “Unclear”, and Item 4 (blinding of participants) and Item 5 (blinding of interventionists), which were rated “No.” The overall quality was considered high, and the study was retained.

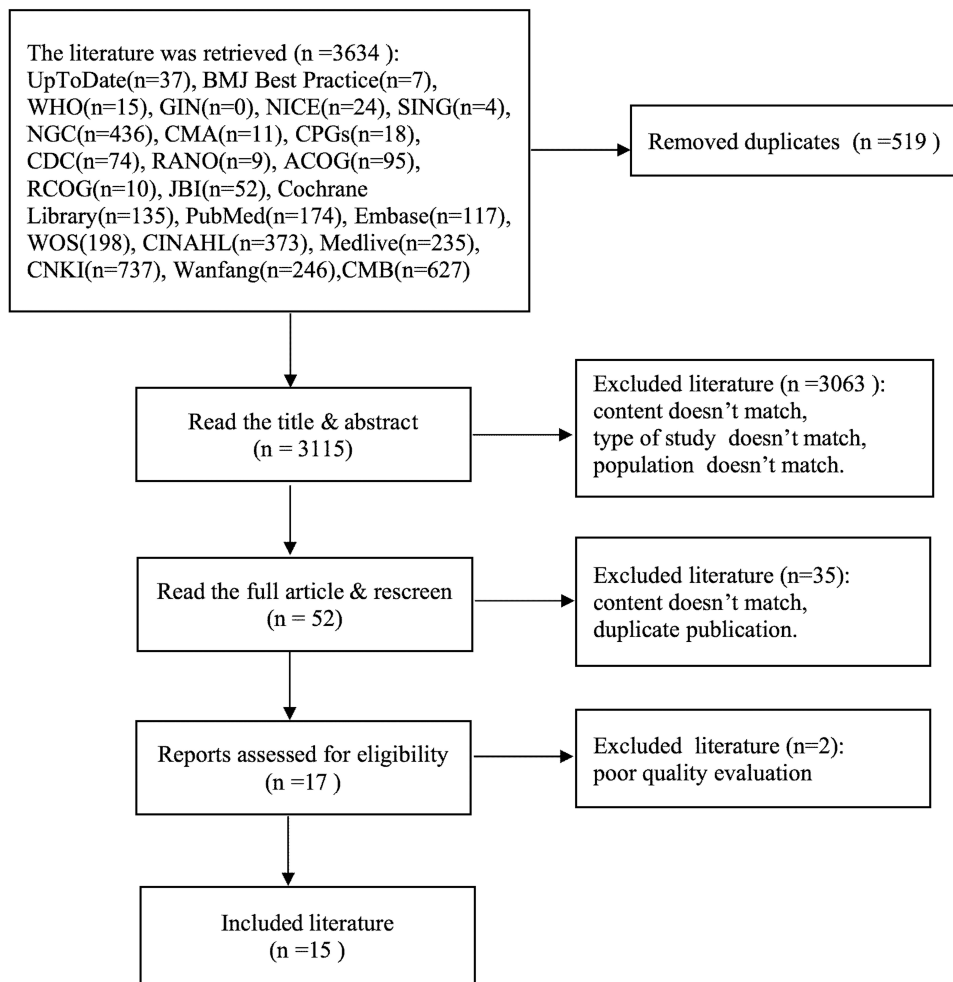


Figure 2 The flow chart of literature screening.

## Best Evidence Synthesis

This study presents a comprehensive overview of the evidence on contraceptive guidance for young women following induced abortion. It encompasses provision of contraceptive services, timing of contraceptive initiation, assessment and counseling, values clarification, contraceptive methods introduction, complications and management, and follow-up and support. In total, 33 pieces of evidence are presented in Table 4.

Table 1 General Characteristics of Included Literature (n=15)

Included Literature	Publication Year	Source	Type	Main Topic
Tyson et al <sup>26</sup>	2025	UpToDate	Clinical Decision	Contraception: Overview of issues specific to adolescents
Bednarek et al <sup>24</sup>	2025	UpToDate	Clinical Decision	Contraception: Postabortion
Dehlendorf et al <sup>37</sup>	2025	UpToDate	Clinical Decision	Contraception: Counseling and selection
Kavanagh et al <sup>27</sup>	2023	RCOG	Guideline	Best practice in post-abortion contraception
WHO <sup>38</sup>	2025	WHO	Guideline	Selected practice recommendations for contraceptive use, fourth edition
WHO <sup>39</sup>	2025	WHO	Guideline	Medical eligibility criteria for contraceptive use, sixth edition

(Continued)

**Table 1** (Continued).

Included Literature	Publication Year	Source	Type	Main Topic
WHO <sup>28</sup>	2024	WHO	Guideline	Abortion care guideline, second edition
CDC <sup>40</sup>	2024	CDC	Guideline	US medical eligibility criteria for contraceptive use
Gu et al <sup>29</sup>	2020	WanFang	Guideline	Guidelines for Adolescent Contraceptive Services
NHC, China <sup>41</sup>	2018	CNKI	Guideline	Post-Abortion Contraceptive Service Standards
ACOG <sup>42</sup>	2021	ACOG	Expert Consensus	Access to Postabortion Contraception
ACOG <sup>25</sup>	2017	ACOG	Expert Consensus	Counseling Adolescents About Contraception
Iwarsson et al <sup>43</sup>	2024	PubMed	RCT	Effects of structured contraceptive counseling in young women: Secondary analyses of a cluster randomized controlled trial (the LOWE trial)
Ti et al <sup>44</sup>	2021	PubMed	Systematic Review	Contraceptive values and preferences of adolescents and young adults: A systematic review
Wang et al <sup>45</sup>	2024	PubMed	Systematic Review	Effectiveness of post-abortion care services to protect women's fertility in China: A systematic review with meta-analysis

**Abbreviations:** RCOG, Royal College of Obstetricians and Gynecologists; WHO, World Health Organization, CDC, Centers for Disease Control and Prevention; NHC, National Health Commission, China; CNKI, China National Knowledge Infrastructure; ACOG, American College of Obstetricians and Gynecologists; RCT, Randomized Controlled Trial.

**Table 2** AGREE II Quality Appraisal Results for Guidelines (n=7)

Included Literature	Standardized Scores in Various Domains (%)						≥60%	≥30%	Quality Evaluation
	Scope & Purpose	Stakeholder Involvement	Rigor of Development	Clarity of Presentation	Applicability	Editorial Independence			
Kavanagh et al <sup>27</sup>	100	88.89	82.29	100	66.67	100	6	6	A
WHO <sup>38</sup>	97.22	91.67	98.96	97.22	66.67	100	6	6	A
WHO <sup>39</sup>	97.22	91.67	98.96	100	68.75	100	6	6	A
WHO <sup>28</sup>	92.86	92.86	91.96	97.62	83.93	100	6	6	A
CDC <sup>40</sup>	100	97.22	100	100	75.00	100	6	6	A
Gu et al <sup>29</sup>	100	80.56	70.83	97.22	68.75	58.33	5	6	B
NHC, China <sup>41</sup>	100	80.56	69.79	97.22	89.58	50	5	6	B

**Note:** A = high quality (standardized score ≥60% in all six AGREE II domains); B = moderate quality (standardized score ≥30% in all domains, but <60% in some domains).  
**Abbreviations:** WHO, World Health Organization; CDC, Centers for Disease Control and Prevention; NHC, National Health Commission, China.

**Table 3** Quality Evaluation Results of Included Systematic Reviews

Item	Ti et al <sup>44</sup>	Wang et al <sup>45</sup>
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Y	Y
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	Y	Y
3. Did the review authors explain their selection of the study designs for inclusion in the review?	Y	Y
4. Did the review authors use a comprehensive literature search strategy?	Y	Y
5. Did the review authors perform study selection in duplicate?	Y	Y
6. Did the review authors perform data extraction in duplicate?	Y	Y
7. Did the review authors provide a list of excluded studies and justify the exclusions?	Y	Y
8. Did the review authors describe the included studies in adequate detail?	Y	Y
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Y	Y
10. Did the review authors report on the sources of funding for the studies included in the review?	N	N

(Continued)

**Table 3** (Continued).

Item	Ti et al <sup>44</sup>	Wang et al <sup>45</sup>
11. If meta-analysis was performed, did the review authors use appropriate methods for statistical combination of results?	N/A	Y
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N/A	Y
13. Did the review authors account for RoB in primary studies when interpreting/discussing the results of the review?	Y	Y
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	Y	Y
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N/A	Y
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	Y	Y

**Abbreviations:** Y, Yes; N, No; N/A, Not Applicable.

**Table 4** Evidence Summary on Contraceptive Guidance for Young Women Post-Induced Abortion

Category	Evidence Content	Evidence Level	Recommendation Level
Provision of Contraceptive Services	1. Service providers should be qualified family planning institutions (eg., maternal and child health family planning service centers at all levels, obstetrics and gynecology specialty hospitals, general hospitals). <sup>29</sup>	5	<b>A</b>
	2. Providers must master comprehensive contraceptive method information, indications/contraindications, side effects, and patient-centered counseling skills. <sup>37,41</sup>	I	<b>A</b>
	3. Principles, Adhere to non-discrimination, confidentiality, and informed consent; all services must respect patient privacy and autonomous decision-making, avoiding imposed medical or social biases. <sup>26,28,29,37,38,40,42,44</sup>	I	<b>A</b>
	4. Post-abortion period is a critical opportunity for contraceptive counseling; personalized recommendations should be provided during the final stage of abortion consultation after trust is established, along with immediately available methods. <sup>27</sup>	5	<b>A</b>
Timing of Contraceptive Initiation Post-Abortion	5. Immediate post-abortion contraceptive initiation is safe and recommended, which can significantly reduce the risk of repeat abortion and improve contraceptive uptake and continuation. <sup>24,41,42</sup>	I	<b>A</b>
	6. Following surgical abortion, most methods can be initiated same-day, except in cases of postoperative complications (eg., bleeding, infection, etc) or fitting-dependent barrier methods (cervical caps, diaphragms). <sup>24,27,40,42</sup>	4	<b>A</b>
	7. Following medical abortion, most contraceptive methods can be initiated immediately, even while awaiting pregnancy tissue expulsion; however, IUD insertion should be delayed until expulsion is confirmed (approximately 1 week later). <sup>24,27,39-42</sup>	I	<b>A</b>
	8. No backup method needed for immediate post-abortion initiation; for initiation within 7 days post-procedure, advise 7 days backup contraception or abstinence. Copper IUD is effective immediately; progestin-only oral pills require 2 days backup contraception. <sup>24,38</sup>	I	<b>A</b>

(Continued)

Table 4 (Continued).

Category	Evidence Content	Evidence Level	Recommendation Level
Assessment and Counseling	9. Analyze causes of unintended pregnancy, For those using contraception, assess usage patterns and identify failure reasons; for non-users, explore reasons for non-use. <sup>41</sup>	5	B
	10. Comprehensive assessment, Includes developmental status, values/ preferences, side effect concerns (weight gain, infertility), medical contraindications, non-contraceptive benefits (acne improvement, menstrual regulation), and special conditions (chronic disease, physical/intellectual disability, obesity). <sup>26,37,41,42,44</sup>	2	A
	11. Counseling approach, Provide patient-centered, individualized counseling through shared decision-making to facilitate optimal method selection and address practical barriers (cost, access, confidentiality), while also providing information on STI prevention, emergency contraception access, and method discontinuation. <sup>24–27,37,40,42</sup>	2	A
	12. Standardized counseling protocols (eg., Post-Abortion Care protocols, structured counseling) significantly improve uptake of highly effective contraceptive methods. <sup>29,41,43,45</sup>	1	A
	13. Anticipatory guidance (explaining common side effects and management) at counseling initiation improves contraceptive adherence and continuation. <sup>26</sup>	1	A
	14. Do not assume all post-abortion patients want immediate contraception, nor coerce them to accept or delay contraception counseling. Counseling should provide medically appropriate options, inform about post-abortion fertility return and access to contraceptive services, and always respect patient autonomy and choice. <sup>24,27,38,42</sup>	5	A
Values Clarification	15. Young women's values in contraceptive decision-making include, effectiveness, convenience, privacy, concerns about side effect, safety, and non-contraceptive benefits (eg., acne improvement, dysmenorrhea relief). <sup>26,29,37,44</sup>	3	B
	16. Values clarification, Provide comprehensive, objective information through shared decision-making to help adolescents select methods aligned with personal preferences, life circumstances, and values. <sup>26–28,37</sup>	3	B
Contraceptive Methods Introduction	17. Methods should be presented by effectiveness, prioritizing most effective options (eg., LARC), covering all available methods including long-acting and emergency contraception. <sup>24–26,41</sup>	1	A
	18. Long-Acting Reversible Contraceptives (LARC-IUDs and implants) are highly effective, user-independent, with high continuation and satisfaction; recommended as first-line for all women including nulliparous adolescents. <sup>25,26,29,37,43</sup>	3	A
	19. Comprehensive method information includes, IUD, implants, DMPA, progestin-only pills (POPs), combined hormonal methods, barrier methods, fertility awareness methods, and emergency contraception, with indications, initiation timing, and key points. <sup>27,29,38–40</sup>	5	B
	20. Except sterilization, all methods are reversible; fertility typically returns rapidly after discontinuation. DMPA may have short-term effects, requiring 10–12 months for fertility recovery. <sup>26,37–39</sup>	3	A
	21. Recommend that all non-barrier method users use condoms consistently and correctly for “dual protection” against STIs. <sup>24–26,29,37</sup>	1	A
	22. Patients should be informed of “typical-use” effectiveness, not just “perfect-use” effectiveness - to support realistic informed choices. <sup>27,38</sup>	5	B

(Continued)

**Table 4** (Continued).

Category	Evidence Content	Evidence Level	Recommendation Level
Complications and Management	23. Common complications of IUD include menstrual abnormalities (irregular bleeding/ amenorrhea), expulsion, and discomfort (pain/foreign body sensation). Less common complications include device displacement, perforation, and infection. For mild menstrual abnormalities without other discomfort, no treatment is needed; short-term NSAIDs may be used for pain. Consider alternative contraception if symptoms persist or are unacceptable Young women require regular follow-up and counseling to improve tolerance. Severe pain, malodorous vaginal discharge, or fever require prompt medical attention. <sup>26,29,38</sup>	I	A
	24. Common complications of subdermal implants include bleeding pattern changes (irregular bleeding/amenorrhea), which usually require no medical intervention. Persistent bleeding or post-amenorrhea bleeding recurrence warrants investigation for pregnancy, STIs, etc. Adequate anticipatory counseling and education improve compliance and satisfaction. <sup>26,27,29,38</sup>	I	A
	25. Common complications of DMPA include menstrual changes (irregular bleeding/amenorrhea). No treatment is needed for amenorrhea, but method change may be considered if unacceptable NSAIDs or hormonal medications may relieve severe or prolonged irregular bleeding. <sup>26,29,38</sup>	I	A
	26. Common complications of combined oral contraceptives (COCs) include early pregnancy-like symptoms and irregular bleeding; most are mild and require no specific treatment. <sup>26,29</sup>	2	B
	27. Common complications of emergency contraception include nausea, vomiting, and menstrual abnormalities. If vomiting occurs within 2 hours of dosing, retake one pill to avoid reduced efficacy. If the period is >1 week late, a pregnancy test is recommended to rule out pregnancy. <sup>29,38</sup>	2	B
Follow-up and Support	28. Schedule a post-abortion follow-up between 7 and 14 days to confirm recovery, <sup>28</sup> with additional visits at 1, 3, 6, and 12 months to assess contraceptive use — especially LARC and other highly effective methods — adherence, and satisfaction, with particular attention to high-risk repeat abortion groups and users of short-acting or less effective methods. <sup>25,41,45</sup>	I	A
	29. Follow-up should be individualized by contraceptive method, <sup>38</sup>	4	B
	(1) IUD, 3–6 weeks post-insertion.		
	(2) Subdermal implant, no routine follow-up. on-demand consultation advised.		
	(3) Progestin-only pill, 3-months follow-up.		
	(4) Combined hormonal contraception, annual follow-up.		
	(5) All methods, counsel that women may return at any time to discuss side effects or other concerns.		
30. Follow-up modalities, supplement face-to-face and telephone contacts with instant-messaging platforms (eg., Facebook Messenger, WeChat) to maximize follow-up uptake; provide clear contact details for timely consultation and feedback. <sup>25,26,28,29,45</sup>	I	A	
31. Follow-up content, at minimum, assess side-effects, correct use, and STI prevention, <sup>25,26,29</sup> focus on discontinuation reasons and perform pelvic examination when indicated. <sup>38</sup>	5	A	
32. Medical guidance, clearly inform the situation requiring medical treatment (eg., severe abdominal pain, fever, heavy or malodorous discharge post-IUD insertion). <sup>38</sup>	4	A	
33. Continuous of care, simplify follow-up pathways, encourage return visits for side effect discussion or method change, provide ongoing psychological and medical support. <sup>26,38,42</sup>	5	A	

**Note:** A = strong recommendation; B = weak recommendation. Evidence levels (1–5) are based on the JBI Evidence Pre-Grading System (2014), with Level 1 indicating the highest quality and Level 5 the lowest.

## Discussion

### Scientific Rigor and Evidence Profile

The evidence obtained from this summary is both reliable and instructive for contraceptive guidance in young women after induced abortion. This summary strictly followed the evidence summary reporting standards of the Evidence-Based Nursing of Fudan University. The AGREE II tool<sup>33</sup> showed that five of the seven guidelines were Grade A and two were Grade B, indicating high methodological rigor and clinical applicability. The JBI critical-appraisal checklists for expert consensus and RCTs,<sup>34</sup> together with the AMSTAR 2.0 standard for systematic reviews (2017 update),<sup>35</sup> confirmed that all key items met high-quality thresholds. The evidence extraction was completed by two researchers independently to minimize individual bias, and all evidence was graded using JBI Evidence Pre Grading system, with recommendation strength determined through expert meetings based on the FAME structure.<sup>36</sup>

### Critical Links in Post-Induced Abortion Contraceptive Care

#### The Critical Importance of Immediate Post-Abortion Contraceptive Initiation

Evidence 5–8<sup>24,27,38–42</sup> provide a comprehensive overview of post-abortion contraceptive timing—immediate initiation, same-day methods after surgical or medical abortion, and the need for back-up contraception. Several literatures<sup>26,27,29,42</sup> underscore the importance of timely initiation of contraception following induced abortion to prevent unintended pregnancies. According to the American College of Obstetricians and Gynecologists (ACOG), access to postabortion contraception is crucial, although not all patients opt to initiate contraception immediately after the procedure.<sup>42</sup> The recovery of ovulation after abortion occurs on average 21–29 days post-abortion but may occur as early as 8–10 days.<sup>24</sup> Most women ovulate within 1 month, emphasizing the importance of prompt contraception initiation to prevent unexpected repeat pregnancies.<sup>28,46</sup>

Evidence from multiple sources<sup>24,27,41,42</sup> suggests that contraception should be started immediately after the abortion procedure; same-day initiation increases both uptake and satisfaction while significantly reducing the risk of repeat abortion among young women.<sup>24,27,41,42,47</sup> Cowett et al<sup>48</sup> and Hohmann et al<sup>49</sup> both demonstrated that same-day Etonogestrel-implant or Levonorgestrel-IUD insertion after D&E can ensure a 100% placement rate, and the 6-month continuation rate is significantly higher than delayed insertion. Hershman's study also confirmed that immediate insertion of LARC after abortion can significantly reduce the 3-year repeat-abortion rate compared to women who did not receive LARC on the same day.<sup>50</sup> These findings suggest that immediate initiation provides an advantage in reducing the vulnerability window of pregnancy, especially considering the rapid recovery of ovulation.<sup>28</sup>

The safety of various contraceptive methods after abortion has been established. All contraceptive methods are safe and effective when initiated immediately after abortion including hormonal contraception (depot medroxyprogesterone acetate (DMPA), intrauterine devices, and subdermal implants).<sup>40,42,51</sup> Specifically, research has shown that beginning systemic hormonal contraception, such as DMPA, does not affect the success of subsequent abortions, suggesting that hormonal methods can be safely started at the time of or after an abortion procedure.<sup>46</sup>

Furthermore, clinical guidelines offer recommendations that account for individual variations. While early initiation is typically possible and effective, delayed initiation can be considered in certain cases, particularly when influenced by medical conditions or patient preferences.<sup>52,53</sup> In conclusion, the current evidence supports the practice of early initiation of contraception after induced abortion, with a strong preference for same-day initiation to ensure optimal effectiveness and prevent subsequent unintended pregnancies. Individualizing the timing of initiation based on patient needs and preferences is an important aspect of post-abortion reproductive care.

#### Patient-Centered Assessment and Values Clarification

Evidence 9–16 states that, patient-centered assessment involves understanding not just medical eligibility for contraceptive methods, but also personal, social, and contextual influences on young woman's contraceptive decision-making. In addition to completing standard medical eligibility screening, healthcare providers should understand the circumstances of the unintended pregnancy (contraceptive failure or non-use), developmental stage, health literacy, specific concerns about side effects (weight gain, changes in menstrual bleeding, etc), and desire for non-contraceptive benefits (acne treatment, menstrual regulation, etc.). For youth with chronic diseases, obesity, and/or disabilities, individualized

risk–benefit assessment is critical to ensure safe and appropriate method selection. Overall, this individualized assessment enables providers to identify factors that may act as barriers or facilitators to contraceptive use and, ultimately, to person-centered recommendations.

The core of this individualized process is shared decision-making (SDM). Research has shown that person-centered contraception counseling for adolescents and young adults is directly associated with higher quality of care and increased uptake of preferred methods.<sup>54</sup> For example, Durante et al<sup>55</sup> emphasize that transitioning from a presumptive to an adolescent-centered, SDM approach can promote better communication, adherence, and reproductive autonomy, thereby clarifying values in real time. Ash et al<sup>56</sup> further described contraceptive choice pathways and demonstrated how structured, dialogue-based on efficacy within the SDM framework supports informed and preference consistent decision-making.

Comprehensive evaluation is not limited to method selection, but also includes behavioral risk assessment and dual protection planning. Loh et al<sup>57</sup> reported that the initiation of LARC may reduce the use of condom; through SDM, healthcare providers and patients can jointly develop a plan to protect against sexually transmitted infection (STI) when needed, ie., combining risk assessment with value negotiation. At the same time, assessment must address personal concerns, as demonstrated by Watson et al,<sup>58</sup> who indicated that community college students are generally concerned about contraception affecting future fertility, which may pose barriers to the use of contraceptives.<sup>58</sup> This finding is consistent with subsequent studies that emphasized the importance of incorporating discussions about fertility in patient-centered counseling to improve contraceptive uptake among youth.<sup>59</sup> A systematic review<sup>44</sup> in 2022 confirms that young people hold different contraceptive values, ranging from menstrual suppression to absolute discretion, and these values must be explicitly explored to meet their specific needs. The ACOG guideline<sup>60</sup> emphasized that prioritizing the patient's values in SDM can promote informed, autonomous choices and higher satisfaction. Similarly, for young women with IBD or other chronic conditions, personalized counseling will weigh the choice of estrogen-containing against the specific condition of the disease,<sup>61</sup> emphasizing the importance of personalized counseling that considers individual health conditions.

### Provision of Comprehensive Contraceptive Information with LARC Prioritization

Healthcare providers should present all contraceptive methods but prioritize those with the highest efficacy like long-acting reversible contraceptives (LARC), so young women have comprehensive and unbiased information upon which to base their decisions. Long-acting reversible contraceptives (LARC), such as intrauterine devices and subdermal implants, should be recommended as first-line methods due to their higher efficacy, continuation rates, and cost-effectiveness.<sup>27,29,38–40</sup>

In contrast to these benefits, a knowledge gap in LARC still exists in young women. According to a recent systematic review,<sup>62</sup> the analysis found that AYAs (adolescents and young adults) have significant knowledge gaps entering their LARC counseling sessions, with misconceptions regarding eligibility, the reversibility of long-acting methods, and beliefs around infertility being prominent. Another study by Sharma et al<sup>63</sup> supports the presence of a knowledge gap in young women, finding that these misbeliefs, specifically around eligibility, the reversibility, and the effectiveness of IUDs as emergency contraception, can lead to underutilization of LARC among AYAs. These findings further support and supplement the proposed study on the necessity to target the young women's existing knowledge gap of LARC through education and counseling. Tailored educational approaches with a strong focus on were found to be significantly effective in increasing young women's LARC acceptance and utilization.<sup>43</sup>

However, provider-based barriers, including implicit biases towards individuals of certain age, parity, or socioeconomic status, may preclude equitable LARC provision.<sup>64</sup> This could lead to a hesitancy to offer or recommend LARC to young women, thereby continuing to fuel the disparity in contraceptive access and quality of contraceptive care. Policy statements<sup>65</sup> and recent studies<sup>66,67</sup> support eliminating implicit and explicit bias in contraceptive care with the ultimate goal of person-centered contraceptive care.

In conclusion, providing comprehensive contraceptive information, employing LARC as a first-line option, and addressing providers and clients' knowledge gaps through structured education, can all be key elements to quality post-abortion contraceptive care among young women. These, and other approaches to address quality contraceptive care for women, work together to improve reproductive autonomy, as well as increase method uptake and continuation and avert future repeated unintended pregnancy.

## Systematic Follow-Up and Continuity of Care

Based on the evidence included in the literature, systematic follow-up and continuity of care are considered key components in maintaining contraceptive use, preventing repeated unintended pregnancy, and supporting the overall health of young women after induced abortion. According to the WHO guidelines,<sup>28</sup> comprehensive post-abortion care (PAC) should include not only safe management of abortion procedure, but also counseling and follow-up to ensure physical and mental health. Several evidence suggest developing a structured follow-up schedule to confirm recovery from 7 to 14 days, followed by contact at 1, 3, 6, and 12 months after abortion to assess contraceptive use, particularly adherence and satisfaction with LARC and other highly effective methods. This schedule is particularly important for high-risk populations, such as women with a history of repeated abortions or who use short-acting or ineffective contraceptive methods.<sup>25,28,41,45</sup>

Follow-up after abortion can reduce mortality and morbidity due to unsafe abortion and can prevent future unintended pregnancies through provision of contraceptive services.<sup>68,69</sup> In addition, follow-up after abortion should also include psychosocial support, which may help reduce negative emotional outcomes. One study found that mental health disorders occur more frequently after induced abortion compared to other pregnancy outcomes, and psychological support throughout follow-up may be important.<sup>70</sup> A randomized controlled trial in Kenya found that person-centered telephone follow-up resulted in significantly better post-abortion mental health, suggesting that mobile-based support is feasible in resource-poor settings.<sup>71</sup>

Innovative strategies such as mobile-based support and electronic health tools are increasingly recognized for their potential to improve follow-up engagement. During the COVID-19 pandemic, telemedicine-based approaches received special attention. Dixon et al<sup>72</sup> conducted a prospective cohort study evaluating the use of long-acting reversible contraception (LARC) NHS Lothian telemedicine abortion services, indicating that telemedicine can be an effective platform for post-abortion follow-up. Similarly, Reynolds-Wright et al<sup>73</sup> described a post-abortion contraception text-and-call service aimed at supporting patients in accessing effective contraception after remote medical abortion. Educational interventions, such as demand-based education through platforms like WeChat, have been proven to support post-abortion recovery and provide valuable information to women, thereby improving overall outcomes.<sup>74</sup> Electronic health tools have become an important way to follow-up after abortion. Shahrokhi et al systematically reviewed 33 studies and identified their effectiveness in enhancing follow-up, promoting contraceptive counseling, and reducing nursing barriers, which can improve post-abortion outcomes for young women.<sup>71,75</sup>

In addition, targeted support mechanisms such as youth-friendly education, counseling, and clinical services have been proven to promote young people's acceptance of post-abortion contraception. A study reports that facilities supported for youth-friendly education and counseling significantly increase youth utilization of service, highlighting the importance of tailored support services in post-abortion contexts.<sup>76</sup> Similarly, the development of youth-friendly post-abortion care services is considered a key factor in reducing barriers and increasing contraceptive prevalence, as demonstrated by the attributes identified in program supported by Pathfinder.<sup>77</sup>

## Limitations

The findings of this evidence summary specifically focus on young women aged 15–24 after induced abortion and may not be directly applicable to women of other reproductive ages or in other reproductive health contexts. Despite an extensive search of major Chinese and English databases, we may have missed unindexed gray literature and local guidelines. Most of the included evidence was in English or reflected clinical contexts in China, and their generalizability to other ethnic, cultural, or health-system settings is uncertain. Furthermore, the legality of abortion varies significantly by region, which may influence the availability and provision of post-abortion contraceptive services. Healthcare providers should consider local values, resources, and policies to confirm and adapt the recommendations prior to implementation.

## Conclusion

We systematically reviewed the available evidence on seven areas of contraception guidance for young women after induced abortion: the provision of contraceptive services, timing of initiation post-abortion, assessment and counseling, values clarification, introduction of contraceptive methods, complication management, and follow-up and support. The

evidence supports the use of contraception soon after abortion with long-acting reversible contraceptive methods prioritized, and the delivery of a structured and personalized follow-up care for at least 12 months. This evidence-based framework provides healthcare providers with actionable strategies to overcome barriers such as stigma and lack of training while promoting young women's reproductive autonomy. It serves as a practical reference to facilitate contraceptive uptake and continuation, ultimately helping to reduce the risk of repeat unintended pregnancies in young women.

In the future, when applying in clinical practice, healthcare providers should fully consider the local policies and personal preferences and adhere to the patient-centered principle. The focus of future research may be on the implementation of the above strategies, situational adaptation, and the evaluation of long-term effects. This will help to improve the evidence-based practices of the above-mentioned key area of reproductive health for young women.

## Data Sharing Statement

The data supporting the results of this study are available from the first author (Lewei Tu) upon reasonable request.

## Ethics Statement

This study does not require ethical approval because it is based only on a review of publicly available literature.

## Disclosure

The authors declare no conflicts of interest.

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