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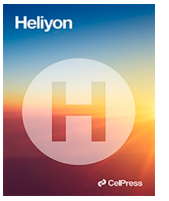

Research article

Quality evaluation of clinical practice guidelines for placenta accreta spectrum disorders

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ABSTRACT

Introduction: We evaluated the quality of the published clinical practice guidelines on placenta accreta spectrum (PAS) disorders to provide reference for the development of high-quality PAS guidelines.

Methods: China National Knowledge Infrastructure (CNKI), Wan Fang, PubMed, Embase, Web of Science, and Cochrane Library were systematically searched. Quality assessments were conducted using the appraisal of guidelines for research and evaluation (AGREE) II framework and Reporting Items for practice Guidelines in Healthcare (RIGHT) checklist. Intraclass correlation coefficients (ICCs) were used to measure the agreement among reviewers.

Results: In total, 13 guidelines from different countries, published between 2015 and 2021 were included. There included 9 official guidelines, 3 consensuses, and 1 standard reference and covered subjects including epidemiology, diagnosis and treatment. The mean standardized scores across 6 domains (scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence) were 53.63%, 27.35%, 33.57%, 72.01%, 19.39% and 41.02%, respectively. Of the 13 guidelines, 11 were classified as grade B, whereas 2 as grade C. According to the RIGHT checklist, the overall reporting rate of the 13 guidelines ranged from 28.57% to 54.29%.

Conclusion: The current guidelines for PAS demonstrate commendable methodological and reporting qualities. However, the methodological and reporting quality of PAS CPGs still need to be further improved, particularly in stakeholder involvement, the rigor of development, applicability, and editorial independence domains.

1. Introduction

Placenta accreta spectrum (PAS) is a pathological condition characterized by the infiltration of placental villi into the myometrium to varying depths [1]. This condition is associated with severe adverse maternal outcomes, such as postpartum hemorrhage and perinatal hysterectomy [2]. The increasing incidence of PAS emphasizes the need for standardized treatment approaches. Early intervention is crucial to reduce the incidence and severity of PAS complications. Therefore, high-quality clinical practice guidelines have been introduced to ensure effective management of PAS.

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Clinical practice guidelines play a pivotal role in helping medical practitioners make informed decisions in specific clinical situations [3]. Multiple studies on PAS have evaluated prenatal testing and management and perioperative protocols. Although these studies have reported favorable outcomes, the comprehensive integration of these findings into routine clinicians practice remains challenging. Notably, significant variation persists across various aspects of PAS, such as ultrasound signs, risk stratification, timing of pregnancy termination and perioperative approaches. Oğlak SC et al. demonstrated the potential use of antepartum factors in predicting emergency cesarean delivery for pregnancies complicated by placenta previa [4]. Furthermore, termination regarding the need for preoperative coagulation-related tests, such as partial thromboplastin time or prothrombin time, platelets, and D-dimers and fibrinogen levels [5]. Therefore, a quantitative evaluation of current guidelines is necessary to compare their applicability.

The aim of this study was to evaluate the quality of the published clinical practice guidelines on PAS disorders using the appraisal of guidelines for research and evaluation II (AGREE II) guideline evaluation tool [6] and Reporting Items for Practice Guidelines in Healthcare (RIGHT) statement [7] to provide a reference for the development of high-quality PAS guidelines.

2. Materials and methods

The following electronic bibliographic databases were searched for relevant studies published up to March 2022, China National Knowledge Infrastructure (CNKI), Wan Fang, PubMed, Embase, Web of Science, and Cochrane Library. Our search terms included "PAS", "placenta accreta spectrum", "placenta accreta", "placenta increta", "placenta percreta", "guideline", "consensus", "recommendation" and "opinion". Two independent reviewers (CH and HP) screened the titles and abstracts, studies without-dated guidelines from the same organization, expert commentaries, reviews, original articles, and guideline interpretations were excluded. Disagreements between the reviewers were resolved through discussion with a third reviewer (JH). Full texts of relevant studies were obtained when decisions could not be made based solely on abstracts.

Each study included in the analysis was evaluated based on several factors, including the organization responsible for issuing the clinical practice guidelines and the country of origin and publication year. The primary outcome of each guideline was identified and documented, distinguishing between general aims, such as diagnostic or treatment studies, and specific purposes, such as epidemiology-related guidelines. Data were collected in a standardized format, using established guidelines; the extracted data included guidelines version, reference numbers, and total number of pages.

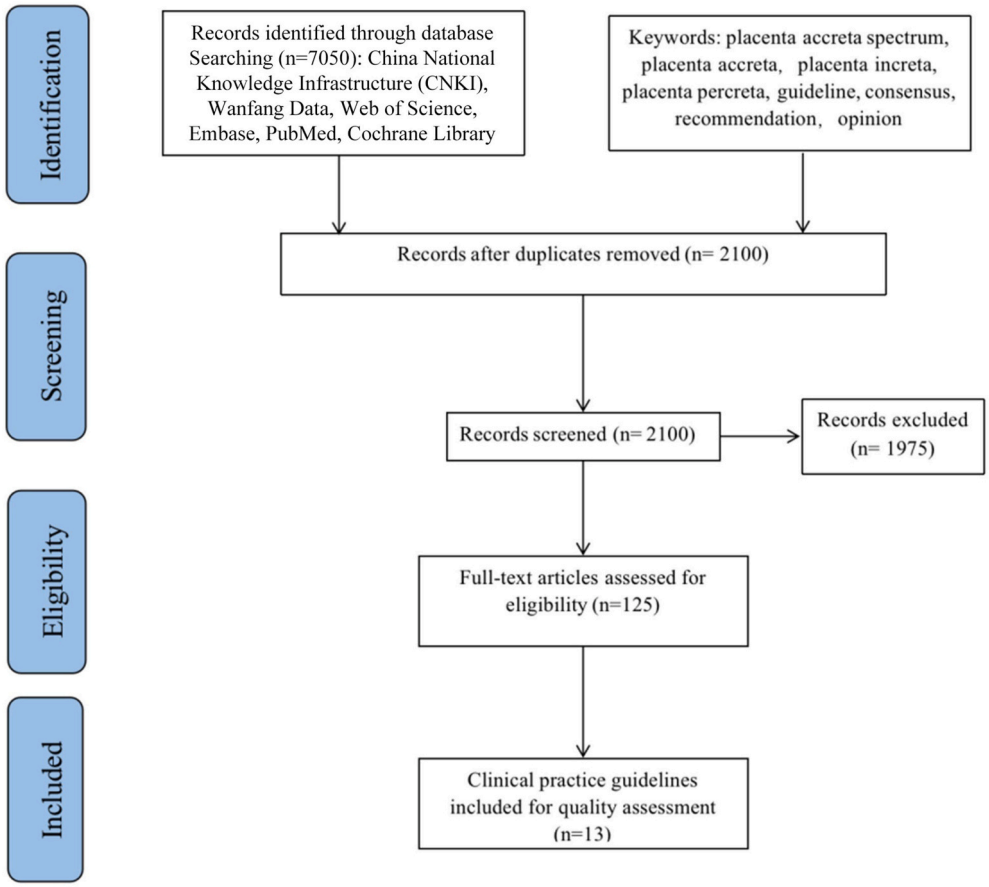

Fig. 1. Literature selection process.

Table 1
Characteristics of the included clinical practice guidelines.

Number	Year of publication	Organization	Category	Country	Continent	Main topic	Version	Evidence quality	Page	Reference number
1	2015	CPM	Consensus	China	Asia	Diagnose Treatment	First	–	6	54
2	2018	SGO ACOG SMFM	Consensus	America	North America	Diagnose Treatment	Updated	GRADE	15	99
3	2018	RCOG	Guideline	England	Europe	Diagnose Treatment	Updated	GRADE	48	220
4	2018	FIGO	Guideline	–	Europe	Introduction	First	–	4	23
5	2018	FIGO	Guideline	–	Europe	Epidemiology	First	GRADE	9	75
6	2018	FIGO	Guideline	–	Europe	Conservative treatment	First	GRADE	8	62
7	2018	FIGO	Guideline	–	Europe	Nonconservative treatment	First	GRADE	10	97
8	2018	FIGO	Guideline	–	Europe	Diagnose	First	GRADE	7	43
9	2019	SOGC	Guideline	Canada	North America	Diagnose Treatment	First	GRADE	15	88
10	2020	ACR	Criteria	America	North America	Diagnose	First	–	8	53
11	2021	SMFM	Consensus	America	North America	Diagnose	First	–	13	66
12	2018	IS-AIP	Guideline	America	North America	Treatment	First	GRADE	16	92
13	2018	ACOG SMFM	Consensus	America	North America	Diagnose Treatment	Updated	GRADE	17	99

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Number 3.Placenta Praevia and Placenta Accreta: Diagnosis and Management: Green-top Guideline No. 27a.
Number 4.FIGO consensus guidelines on placenta accreta spectrum disorders: Introduction.
Number 5.FIGO consensus guidelines on placenta accreta spectrum disorders: Epidemiology.
Number 6.FIGO consensus guidelines on placenta accreta spectrum disorders: Conservative management.
Number 7.FIGO consensus guidelines on placenta accreta spectrum disorders: Nonconservative surgical management.
Number 8.FIGO consensus guidelines on placenta accreta spectrum disorders: Prenatal diagnosis and screening.
Number 9.No. 383-Screening, Diagnosis, and Management of Placenta Accreta Spectrum Disorders.
Number 10.ACR Appropriateness Criteria Placenta Accreta Spectrum Disorder.
Number 11.Special Report of the Society for Maternal-Fetal Medicine Placenta Accreta Spectrum Ultrasound Marker Task Force: Consensus on definition of markers and approach to the ultrasound examination in pregnancies at risk for placenta accreta spectrum.
Number 12.Evidence-based guidelines for the management of abnormally invasive placenta: recommendations from the International Society for Abnormally Invasive Placenta.
Number 13.Obstetric Care Consensus No. 7: Placenta Accreta Spectrum.
CPM: Chinese Society of Perinatal Medicine; SGO: Society of Gynecologic Oncology; ACOG: American College of Obstetricians and Gynecologists; SMFM: American Society of Maternal-Fetal Medicine; RCOG: Royal College of Obstetricians and Gynecologists; FIGO: International Union of Obstetrics and Gynecology; SOGC: Canadian College of Obstetricians and Gynecologists; ACR: American Radiological Society; IS-AIP: International Society for Abnormally Invasive Placenta; GRADE: the method of graded assessment, development and evaluation of recommendations.

Two independent appraisers (CH and HP) evaluated each set of PAS guidelines according to the AGREE II user manual and the RIGHT checklist. Any inconsistency was resolved by a third reviewer (JH) after a thorough discussion.

The AGREE II user manual defines each item and assists the user in determining a suitable assessment score. Individual items were rated using a scoring system from 1 to 7, where 1 indicated "absence of the item" and 7 indicated "exceptional quality in item reporting." The cumulative score of the individual items within each respective field constituted the final evaluation result for that field. Standardized scores were calculated using the following formula = ([actual score − lowest possible score]/[highest possible score–lowest possible score]) × 100%.

The AGREE II classified the overall assessment into three distinct grades: "recommended" (Grade A) with a standardized total score of 6 fields ≥60%, "recommended with modifications" (Grade B) with ≥3 fields with a standardized total score ≥30%, and "not recommended" (Grade C) with ≥3 fields with a standardized total score <30%.

The RIGHT checklist consists of 22 items, which are divided into 35 sub-items. The items cover the following domains: basic information (items 1–4), background (items 5–9), evidence (items 10–12), recommendations (items 13–15), review and quality assurance (items 16–17), funding and declaration and management of interests (items 18–19), and other information (items 20–22). Each item was evaluated as "Yes" (reported majority information), "No" (relevant information was not reported) and "NA" (not applicable).

Data are presented as medians and ranges. We analyzed the percentage distribution between the quality of evidence and the number and strength of recommendations across different categories. Two statistical methods, namely, the intraclass correlation coefficient using two-way analysis of variance and the Klonbach coefficient using reliability analysis, were used to evaluate the consistency of scores. An intraclass correlation coefficient >0.75 and a Klonbach coefficient ranging from 0.81 to 1 indicates good consistency. A mean or median standardized score in each field ≥50.00% indicates high quality. The range represents the difference between the maximum value and the minimum values a range ≥50.00% indicates a significant difference in quality. P-values <0.05 were considered statistically significant. Statistical analyses were performed using SPSS version 26.0(IBM Corp. Armonk, NY, USA).

3. Results

In total, 13 guidelines from different countries were included based on predefined inclusion and exclusion criteria (Fig. 1) [8–20]. These include 9 guidelines, 3 consensus statements, and 1 standard reference, encompassing 3 continents, and published between 2015 and 2021 (Table 1). Of these, 9 were evaluated for evidence quality and recommendation strength using the Grading of Recommendations, Assessment, Development and Evaluation framework. These publications covered subjects including epidemiology, diagnosis, and treatment, with 8 containing diagnosis and 8 containing treatment recommendations.

The intraclass correlation coefficient(> 0.75) and Klonbach coefficient (> 0.81) indicated good consistency, allowing further

Table 2
Results of Inter-rater reliability tests.

Number	Intraclass correlation coefficients (95%CI)	Clonbach coefficient	F value	P value
1	0.87 (0.717–0.942)	0.928	13.816	<0.01
2	0.90 (0.751–0.952)	0.946	18.644	<0.01
3	0.88 (0.733–0.946)	0.932	14.726	<0.01
4	0.83 (0.618–0.929)	0.923	12.990	<0.01
5	0.90 (0.781–0.956)	0.949	19.550	<0.01
6	0.93 (0.833–0.968)	0.961	25.933	<0.01
7	0.90 (0.781–0.956)	0.948	19.146	<0.01
8	0.86 (0.694–0.936)	0.921	12.720	<0.01
9	0.86 (0.698–0.938)	0.925	13.255	<0.01
10	0.76 (0.521–0.893)	0.862	7.272	<0.01
11	0.80 (0.593–0.910)	0.891	9.152	<0.01
12	0.77 (0.538–0.896)	0.871	7.724	<0.01
13	0.84 (0.674–0.931)	0.916	11.944	<0.01

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analysis (Table 2).

Of the 13 guidelines, 11 were classified grade B, whereas 2 were grade C (Table 3) (primary outcome measures). The mean score for the scope and purpose domain across all guidelines was 53.63%. In total, 9 guidelines scored > 50%, whereas the remaining inadequately addressed health concerns and the target populations. On average, only 27.35% of the criteria in the domain for stakeholder involvement were met. Notably, the viewpoints of the target population were not taken into consideration, moreover, the guidelines did not provide detailed information about the research expertise of the authors. For rigor of development domain, the mean score was 33.57%. This low score was primarily due to unclear descriptions of the search process, inadequate consideration of the impact on health when forming recommendations, and a lack of detailed descriptions of the external review and updating process. Furthermore, the clarity of the presentation domain exhibited significant variation, with Chinese guidelines scoring lower than others. Regarding the applicability domain, only 1 guideline described the factors influencing application and the potential funding challenges associated with recommendations [13]. Regarding the editorial independence domain, 2 guidelines stated that their content was not affected by funding [17,19,19], whereas 1 identified the funder without describing its impact [20]. Conflicts of interest were not addressed in 2 guidelines [20,15].

According to the RIGHT checklist, the overall reporting rate of the 13 guidelines ranged from 28.57% to 54.29% (Table 4). Among the 7 domains, the "background" domain 59.62%) had the highest reporting rate, followed by "basic information" domain (55.13%), the "review and quality assurance" domain 7.69%) got the lowest reporting rate. The details of overall reporting quality assessment were reported in Figs. 2 and 3.

There was a high correlation between the completeness of reporting of CPGs by AGREE II and RIGHT ($r = 0.74$, $P < 0.005$) (Fig. 4).

The primary recommendations extracted from the included guidelines involved epidemiology, diagnosis and treatment of PAS.

Epidemiological recommendations were provided by 6 guidelines [8–10,20,15,19] with a primary focus on the identification of risk factors associated with PAS. Although variation existed, a consensus emerged among the guidelines regarding the predominant risk factors for PAS, such as uterine scarring and placenta previa. In addition, advanced maternal age, multiple pregnancies, uterine adhesions, a history of hysteromyoma removal, and the use of assisted reproductive technology were identified as risk factors across the guidelines.

In total, 8 guidelines provided insights into the clinical diagnosis of PAS [8,9,20,14–17,19]. These guidelines emphasized that

Table 3
Domain scores and overall assessment of the clinical practice guidelines (CPGs) for placenta accreta spectrum (PAS) using the appraisal of guidelines for research and evaluation (AGREE) II framework.

Number	Domain scores (%)						Recommended Grade
	Domain 1 Scope and purpose	Domain 2 Stakeholder involvement	Domain 3 Rigor of development	Domain 4 Clarity of presentation	Domain 5 Applicability	Domain 6 Editorial independence	
1	41.67	16.67	20.83	75.00	12.50	0	C
2	52.78	52.78	33.33	80.56	37.5	41.67	B
3	72.22	44.44	53.12	75.00	25.00	37.5	B
4	58.33	13.89	13.54	8.33	0	33.33	C
5	38.89	13.89	14.58	63.89	10.41	33.33	B
6	72.22	30.56	25.00	86.11	20.83	33.33	B
7	33.33	16.67	25.00	88.89	22.91	33.33	B
8	52.78	19.44	23.96	86.11	16.67	33.33	B
9	66.67	33.33	58.33	83.33	27.08	29.17	B
10	47.22	41.67	59.38	83.33	16.67	41.67	B
11	50.00	11.11	26.04	61.11	20.83	100.00	B
12	55.56	25.00	44.79	58.33	14.58	33.33	B
13	55.56	36.11	38.54	86.11	27.08	83.33	B
Mean	53.63	27.35	33.57	72.01	19.39	41.02	–
Median	52.78	25.00	26.04	80.56	20.83	33.33	–
Range	38.89	41.67	45.84	80.56	37.50	100.00	–

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Table 4
Reporting quality evaluation of clinical practice guidelines for placenta accreta spectrum.

Domain	Sub-item	1	2	3	4	5	6	7	8	9	10	11	12	13	Reporting rate
Domain1	**1a**	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	84.62%
	1b	Y	N	N	N	N	N	N	N	N	N	N	N	N	7.69%
	1c	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	84.62%
	2	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	76.92%
	3	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00%
	4	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	76.92%
	Reporting rate	66.67%	16.67%	66.67%	50.00%	66.67%	66.67%	66.67%	66.67%	33.33%	66.67%	66.67%	50.00%	33.33%	55.13%
Domain 2	**5**	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	100.00%
	6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	100.00%
	7a	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	69.23%
	7b	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00%
	8a	N	N	N	N	N	Y	N	N	N	Y	N	N	N	15.38%
	8b	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00%
	9a	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	92.31%
	9b	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	100.00%
	Reporting rate	50.00%	50.00%	62.50%	62.50%	50.00%	75.00%	62.50%	62.50%	62.50%	75.00%	62.50%	62.50%	37.50%	59.62%
Domain 3	**10a**	N	Y	N	N	N	N	N	N	Y	N	N	Y	N	23.08%
	10b	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00%
	11a	N	N	N	N	N	N	N	N	Y	N	N	Y	N	15.38%
	11b	N	N	Y	N	N	N	N	N	Y	N	N	Y	N	23.08%
	12	N	N	Y	Y	N	Y	Y	Y	Y	N	N	Y	Y	61.54%
	Reporting rate	0.00%	20.00%	40.00%	20.00%	0.00%	20.00%	20.00%	20.00%	80.00%	0.00%	0.00%	80.00%	20.00%	24.62%
Domain 4	**13a**	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	84.62%
	13b	Y	Y	Y	N	N	Y	Y	N	Y	N	N	N	Y	53.85%
	13c	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	Y	76.92%
	14a	N	Y	N	N	N	N	N	N	N	N	N	N	N	7.69%
	14b	N	N	N	N	N	N	Y	N	N	N	N	N	N	7.69%
	14c	Y	N	N	N	N	N	N	N	Y	Y	N	N	N	23.08%
	15	N	N	N	N	N	N	N	N	N	N	N	Y	N	7.69%
	Reporting rate	57.14%	57.14%	42.86%	0.00%	14.29%	42.86%	57.14%	28.57%	57.14%	28.57%	14.29%	42.86%	42.86%	37.36%
Domain 5	**16**	N	N	Y	N	N	N	N	N	Y	N	N	N	N	15.38%
	17	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00%
	Reporting rate	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	7.69%
Domain 6	**18a**	N	N	N	N	N	N	N	N	N	N	Y	N	Y	15.38%
	18b	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00%
	19a	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	84.62%
	19b	N	Y	Y	N	N	N	N	N	N	N	Y	N	N	23.08%
	Reporting rate	0.00%	50.00%	50.00%	25.00%	25.00%	25.00%	25.00%	25.00%	0.00%	25.00%	75.00%	25.00%	50.00%	30.77%

(*continued on next page*)

Table 4 (*continued*)

Domain	Sub-item	1	2	3	4	5	6	7	8	9	10	11	12	13	Reporting rate
Domain 7	**20**	N	Y	Y	N	N	N	N	N	N	Y	Y	N	N	30.77%
	21	N	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	Y	69.23%
	22	N	Y	N	N	N	N	N	N	N	N	N	Y	N	15.38%
	Reporting rate	0.00%	100%	66.67%	0.00%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	66.67%	33.33%	38.46%

Y，Yes; N，No.

Domain 1 basic information; Domain 2 background; Domain 3 evidence; Domain 4 recommendations; Domain 5 review and quality assurance; Domain 6 funding and declaration and management of interests; Domain 7 other information.

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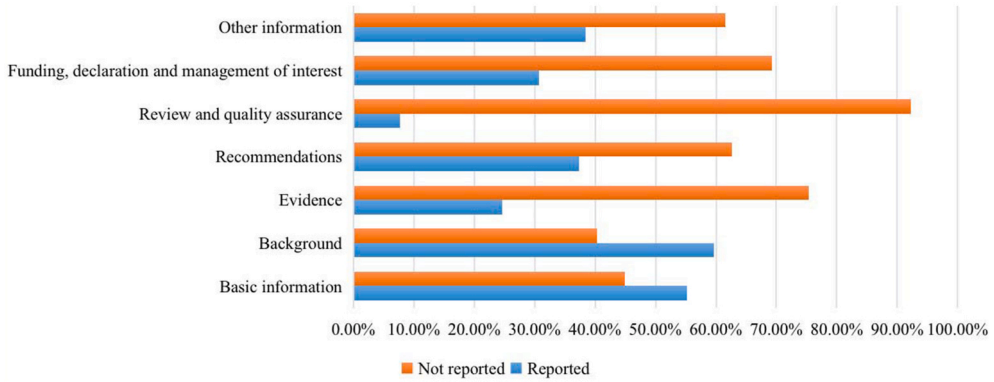

Fig. 2. Mean reporting rates of the Reporting Items for practice Guidelines in Healthcare (RIGHT) checklist sub-items by domain.

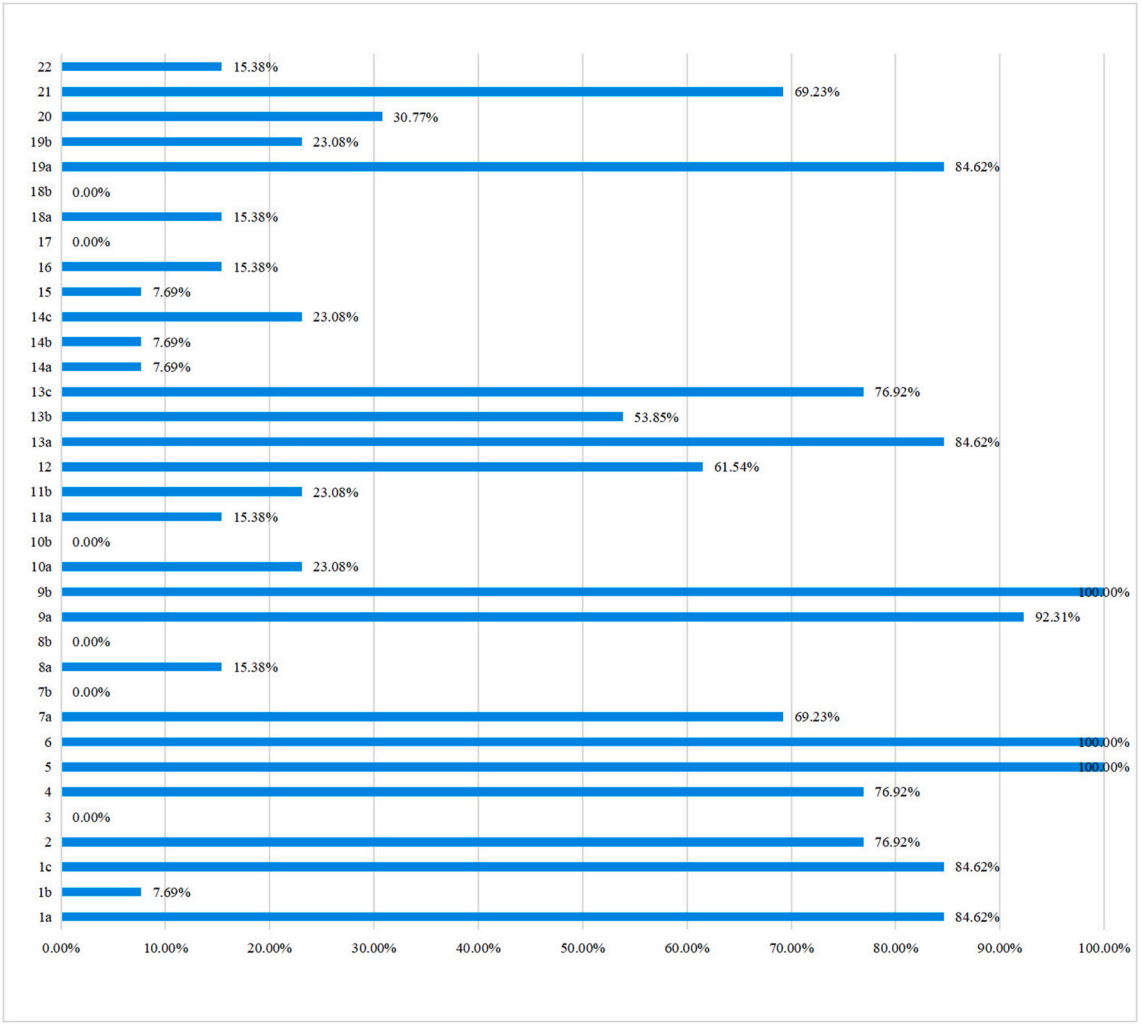

Fig. 3. Reporting compliance to each sub-item of the Reporting Items for practice Guidelines in Healthcare (RIGHT) checklist in the included guidelines.

prenatal diagnosis is primarily dependent on advanced imaging techniques, with ultrasound being the preferred diagnostic modality [12]. Notably, relevant soft indicators detected through ultrasound included abnormal placental blood flow in placenta, the absence of a hypoechoic zone between the placenta and myometrium, and a reduction of the myometrial thickness. Although magnetic resonance

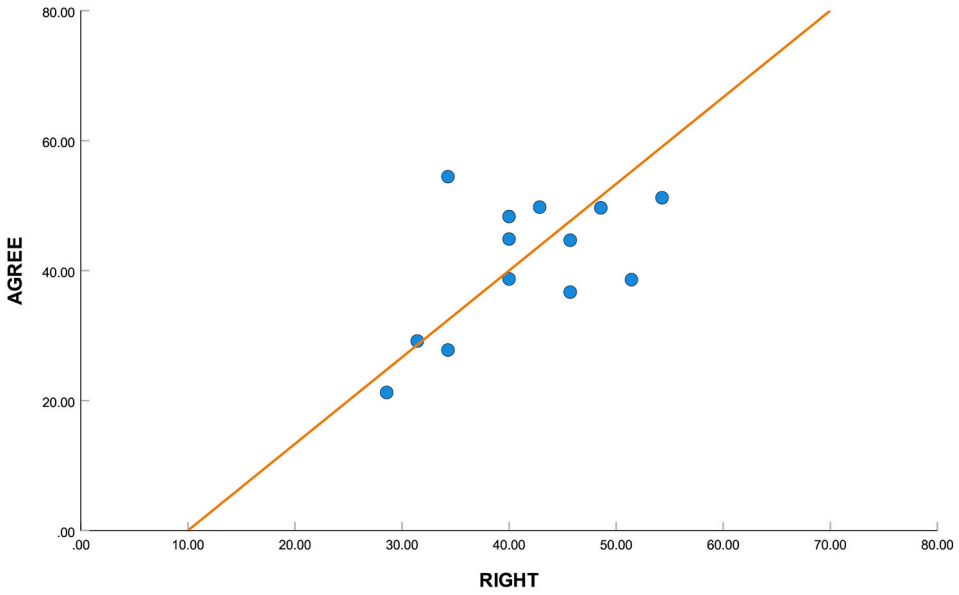

Fig. 4. Correlation plot of proportions of reported items from the Appraisal of Guidelines for Research and Evaluation (AGREE) II instrument and Reporting Items for Practice Guidelines in Healthcare (RIGHT), (n = 13).

imaging (MRI) was recommended as an adjunctive diagnostic modality, ultrasound remained the primary diagnostic method for PAS. Most guidelines recommend repeating ultrasound every 3–4 weeks to evaluate suspected PAS [20,9,14]. The American College of Obstetricians and Gynecologists concluded that cervical length is not associated with the risk for preterm birth, whereas the Royal College of Obstetricians and Gynecologists reports that a shorter cervix is associated with very preterm birth before 34 weeks and intraoperative bleeding [8,9]. Therefore, the effect of cervical length on preterm birth remains controversial.

In total, 7 guidelines presented treatment recommendations for PAS, including preoperative preparation, intraoperative and postoperative management [8,9,20,12,15,18,19]. The crux of PAS treatment revolves around intraoperative management. The guidelines propose various hemostatic measures including leaving the placenta in situ, partial excision and uterine reconstruction. Adjunctive hemostasis measures include the administration of tranexamic acid, and coagulation factor, blood vessel occlusion, and using uterine tamponade. Hysterectomy is used to stop uncontrolled bleeding following the application of these measures [20,8,12,13,15,16]. Notably, after leaving the placenta in situ, the guidelines do not recommend using methotrexate as a postoperative adjuvant method due to its toxicity [20,12,15].

Regarding delivery timing for PAS patients, most guidelines recommend termination at 34–36 weeks of gestation. The Society of Obstetricians and Gynecologists of Canada guidelines recommend termination at 34–36^{+6} weeks for PAS patients with placenta previa or bleeding, and at 36–37 weeks for those without placenta previa [15]. The administration of dexamethasone for fetal lung maturation remains uncertain. Furthermore, the Royal College of Obstetricians and Gynecologists recommends terminations at 34–35^{+6} weeks for women without preterm birth risk, and consider dexamethasone administration before 34 weeks of gestation for those at risk for preterm birth [9]. Conversely, the American College of Obstetricians and Gynecologists and Chinese guidelines recommend dexamethasone administration before 37 weeks of gestation [20,8]. Mass transfusion strategies also vary among the guidelines. The Chinese guidelines recommend a 1:1:1 transfusion strategy for red blood cells/fresh frozen plasma/platelets, whereas the Royal College of Obstetricians and Gynecologists recommends a transfusion strategy ranging from 1:1:1 to 1:2:4 [20,9].

4. Discussion

The increasing incidence of PAS has significant implications for maternal and fetal outcomes [21,22]. Therefore, the development of standardized guidelines plays a pivotal role in guiding clinical practice, moreover, the quality of these guidelines is crucial in determining their effectiveness and availability [23]. The AGREE II and RIGHT tool used for quality evaluation, offers a quantitative assessment of the methodological quality of international PAS guidelines or consensus statements, providing a valuable reference for the formulation and continuous improvement of PAS guidelines. There is research on the quality evaluations of various CPGs of PAS [24]. Our study focused on methodological and reporting quality; we evaluated the methodological and reporting quality of PAS CPGs using the AGREE II and RIGHT instruments.

In total, 9 guidelines, 3 consensus statements, and 1 standard reference from different countries were included in this study, emphasizing the significance of PAS in the global obstetrical community. Of the 6 domains, the highest scoring were clarity of presentation and scope and purpose. Conversely, the domains with the lowest score were applicability and stakeholder involvement. Of the 13 guidelines, 11 were classified as grade B, whereas 2 were grade C. This emphasizes the potential for enhancing the quality of PAS guidelines, particularly in stakeholder involvement, the rigor of development, applicability, and editorial independence. The

stakeholder involvement scored > 50% in only 1 guideline indicating that patient preferences are increasingly important in treatments discussions [8]. Therefore, guidelines should consider the perspectives of their intended users, including patients. Although patient perspectives, expectations, and preferences have become increasingly important in healthcare, many guidelines do not adequately consider these viewpoints. Furthermore, the overall score in the rigor of development significantly impacts clinicians' confidence in implementing guidelines. The low score in this domain can be attributed to several factors, such as the inadequate description of evidence strengths and weaknesses, the absence of an external review of the evidence before publication, and a lack of information about the update process. This non-systematic development approaches significantly contribute to lower quality guidelines and even can lead to a decline in the credibility of the guidelines. Applicability obtained the lowest score potentially due to the inadequate description of the advantages and disadvantages of this domain and the failure to fully consider the economic aspects of the recommendation. Considering the complex nature of clinical practice, no tools are available to describe the application of guidelines and identify potential barriers. In addition, various factors, such as influencing elements and resource investment related to guideline implementation, remain inadequately addressed. Regarding editorial independence, guidelines lack explanations concerning the financial implications associated with their development and the potential conflicts of interest among the panelists; this lack of transparency can complicate the use of these guidelines. Notably, conflicts of interest and funding sources can introduce biases into the guidelines, which makes it imperative to report them comprehensively.

Based on the evaluation results of RIGHT, there was still room for CPGs improvement. The average reporting rate of RIGHT items in all guidelines was 40.88%. Overall, item 3 (abbreviations and acronyms), 8b (intended primary users), 10b (how the outcomes were selected and sorted), 17 (quality control procedures for guidelines), 18b (the role of funding/funders in various stages of guideline development) of RIGHT checklist, failed to score satisfactorily. In the domain of basic information, the item of abbreviations and acronyms, none of the organizations reported it. The reason for the low reporting rate in this item was that CPGs did not provide a list of abbreviations. In the domain of recommendations, the reporting rate of items 14a, 14b and 14c were only 7.69%, 7.69% and 23.08%, respectively. Three items described whether the values and preferences of the target populations were considered in the formulation of each recommendation and whether cost and resource implications were considered in the formulation of recommendations. Only a few organizations reported these items. It is worth realizing that the reporting of patient preferences and values plays an important role in guiding clinicians to make decisions. They obtained good reporting rates in the domains of basic information and background. In the domain of background, the reporting on the basic information was standard, which included description of the health problems, aims of the guideline, and target populations. When developing guidelines, several factors should be taken into consideration, such as equity, feasibility, and acceptability.

Comparing the evaluation results of AGREE II and RIGHT, there was a high correlation between them. The results of the two groups were mostly consistent.

11 CPGs were assessed as "recommended with modifications" using AGREE II instrument, and these CPGs also assessed relatively higher reporting quality using RIGHT, which indicates that these CPGs are representative in terms of quality and quantity.

This study had several limitations that need to be acknowledged. First, only Chinese and English guidelines were included potentially introducing language-related bias. Second, we only assessed the methodological quality of the guidelines without considering the quality of evidence and there are a big heterogenicity on characterize the placenta accreta and the subtypes, these can lead to bias of the overall evaluation outcome of the guidelines. Third, the evaluation process allocated equal weight to all 6 fields of AGREE II and RIGHT determining recommendations based solely on the count of fields meeting the criteria. This might deviate from an accurate reflection of the true quality of the guidelines. The strength of this study is that we conducted a comprehensively quality assessments of PAS guidelines using the AGREE II framework and RIGHT checklist, which has guiding significance for the development of higher quality PAS guidelines in clinical practice.

PAS represents a significant global health challenge, prompting the formulation of evidence-based clinical guidelines in several countries and regions to address its introduction, epidemiology, management, and treatment. A discernible shift is noticeable toward the adoption of evidence-based methodologies in formulating guidelines, ensuring heightened precision, lucidity, and facilitation of comprehension among medical administrators and practitioners. This study critically assessed the limitations of current PAS guidelines and offers valuable insights to enhance the quality of future guidelines. In future endeavors, increased emphasis must be placed on enhancing stakeholder involvement, the rigor of development, applicability, and editorial independence domains.

In conclusion, the current guidelines for PAS demonstrate commendable methodological and reporting qualities. The methodological and reporting quality of PAS CPGs still need to be further improved, particularly in stakeholder involvement, the rigor of development, applicability, and editorial independence domains.

Disclosure of conflict of interest

None.

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Data availability statement

All data generated or analyzed during this study are included in this published article.

CRediT authorship contribution statement

Caihong Hu: Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Conceptualization. **Weishe Zhang:** Supervision, Resources, Funding acquisition, Conceptualization. **Heyang Pu:** Investigation, Formal analysis. **Kuilin Fei:** Resources, Funding acquisition. **Qi Li:** Resources, Funding acquisition. **Jingrui Huang:** Writing – review & editing, Methodology, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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