



## Clinical practice guidelines for perinatal bereavement care: A systematic quality appraisal using AGREE II instrument

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### ABSTRACT

**Purpose:** This study aimed to evaluate and analyze the methodological quality of the published clinical practice guidelines (CPGs) for perinatal bereavement care and provide a reference for implementing best clinical practices.

**Methods:** We performed a systematic and comprehensive search in five electronic databases (PubMed, The Cochrane Library, Web of Science, CNKI, Wan Fang Database), eight guideline databases, and six websites of professional organizations from March 2021 to June 2021. Four researchers used the Appraisal of Guidelines for Research and Evaluation (AGREE II) instrument to appraise the selected CPGs independently. The inter-rater reliability of AGREE II domains was calculated using the intraclass correlation coefficient with 95% CI.

**Results:** We included a total of 8 CPGs. The mean scores of six domains ranged from the lowest score of 46.61% (editorial independence) to the highest score of 87.85% (clarity of presentation). Subgroup analysis showed no statistical difference. Each domain achieved “good” and “very good” intraclass reliability. Two CPGs were deemed as grade A (strongly recommended), five were rated as grade B (recommended with modifications), and one was evaluated as grade C (not recommended).

**Conclusions:** Healthcare professionals in obstetrics and neonatology play an important role in helping bereaved parents and families to cope with perinatal loss. High-quality CPGs for perinatal bereavement care can serve as useful resources to improve the quality and outcomes of clinical practice. More efforts should be made to disseminate the best practices for perinatal bereavement care. When implementing GCPs in countries or regions with different backgrounds, professional translations, strict validations, and cultural adaptations should be taken into account.

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### Introduction

Perinatal loss refers to the nonvoluntary end of pregnancy or the death of newborns between 20 weeks of gestation and 28 completed days after birth (DeBackere et al., 2008; Robinson et al., 1999), including miscarriage, stillbirth, and neonatal death (DiMarco et al., 2002; Sereshti et al., 2016). There are about 2.6 million stillbirths, and 2.1 million newborn deaths occur each year worldwide (Lawn et al., 2016; World Health Organization, 2022). Perinatal bereavement describes the objective situation of perinatal loss or the entire experience of parents and family members adjusting to living after perinatal loss (Chan et al., 2008; Fenstermacher & Hupcey, 2013). It is a complicated and devastating experience with substantial physical, psychological, emotional, economic, social, and intangible costs (Das et al., 2021; Meunier

et al., 2021; Nuzum et al., 2018). Among these impacts, negative psychological symptoms were most frequently reported, including high rates of anxiety, grief, hopelessness, stigma, and guilt (Fernández-Ordoñez et al., 2021; Pollock et al., 2020; Westby et al., 2021). The symptoms are individual, lasting for months to years, which affect not only the family relationship but also the consequence of subsequent pregnancy (Fernández-Sola et al., 2020). When bereaved parents are unable to cope effectively, they may even have suicide intentions (Cassaday, 2018).

It is well known that perinatal bereavement care is essential to help parents reduce the impact of traumatic stress and improve the bereavement experience (Hawes et al., 2022; Qian et al., 2021). Perinatal bereavement care refers to the care provided by interdisciplinary healthcare professionals to the bereaved parents considering their religious, secular, ethnic, social, cultural values, and personal preferences (Kalu et al., 2020). It includes physical, psychological, emotional, and spiritual care, and is extended to siblings and grandparents (Siassakos et al., 2018). Over the past few decades, a few organizations such as

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Perinatal Loss and Infant Death Alliance (PLIDA), Resolve Through Sharing (RTS), and Stillbirth and Neonatal Death Charity (Sands) have provided a series of educational programs and resources on perinatal bereavement care for healthcare professionals around the world (Gardiner et al., 2016; Leitao et al., 2021; Salgado et al., 2021).

However, providing perinatal bereavement care is still stressful and challenging for many healthcare professionals (Ratislavová & Štípková, 2019). Their professional knowledge, supportive skills, and attitudes are not adequately prepared to meet the needs of bereaved parents and families (Aydin et al., 2019). The national survey among healthcare professionals in Italy (Ravaldi et al., 2018) suggested that a considerable proportion of professionals lacked the knowledge of best practices recommended by international guidelines, which is the primary cause of lack of confidence and discomfort in their practice of perinatal bereavement care (Martínez-Serrano et al., 2018). Besides, many countries and regions have not yet developed a standardized pathway for perinatal bereavement care and the interdisciplinary perinatal bereavement care team, resulting in inconsistent practices among clinical healthcare professionals. Some professionals choose positive coping strategies of empathy and reflection, while others adopt negative coping strategies of avoidance, neglect, or even unequal treatment (Qiaoqiao et al., 2021). Due to economic level and socio-cultural context, some countries and regions even neglect bereavement care and perceive perinatal loss as a taboo subject, particularly in low- and middle-income countries (LMIC) where the burden is greatest (Flenady et al., 2016). As a result, healthcare professionals are unable to play the right role in perinatal bereavement care, causing job stress, compassion fatigue, and burnout, which further affects the quality and satisfaction of perinatal bereavement care (Favrod et al., 2018).

Equipping healthcare professionals in obstetrics and neonatology with the best clinical practice is essential to effectively support parents and families during the period of perinatal loss. A standardized, scientific, and clear clinical practice guideline (CPG) is a valuable recourse to assist healthcare professionals in translating evidence into best clinical practice (Rosenfeld et al., 2013). There are several CPGs for perinatal bereavement care around the world. However, the quality of the guidelines differs significantly due to the different composition and research background of the guideline development organization, variations in evidence standards, and guideline development methodologies (Li et al., 2020). Implementing clinical practice following low-quality guidelines is detrimental to the health and well-being of bereaved women, as well as a waste of economic and medical resources (Ge et al., 2018). Therefore, it is necessary to evaluate and compare the methodological quality of the different guidelines. The present review was conducted to assess and compare the quality of the existing CPGs for perinatal bereavement care using the Appraisal of Guidelines for Research and Evaluation (AGREE II) (AGREE Collaboration, 2003), and to assist healthcare professionals in selecting the best clinical practice to apply in a particular clinical situation (Zhou et al., 2021).

## Methods

### Search strategy

Relevant CPGs for perinatal bereavement care were extensively searched in PubMed, The Cochrane Library, Web of Science, China National Knowledge Infrastructure (CNKI), and Wan Fang Database from March 2021 to June 2021. At the same time, we searched eight guideline databases, including Guidelines International Network (GIN), National Guideline Clearinghouse (NGC), New Zealand Guidelines Group (NZGG), Scottish Intercollegiate Guidelines Network (SIGN), World Health Organization (WHO), Queensland Clinical Guidelines (QCG), National Institute for Health and Clinical Excellence (NICE), and Medlive. In addition, six websites of professional organizations were retrieved to avoid omission, including Perinatal Loss and Infant Death Alliance (PLIDA), Resolve Through Sharing (RTS), Stillbirth and Neonatal Death

**Table 1**  
Search strategy in PubMed.

#1	Perinatal Death [Mesh]
#2	Perinatal loss OR Perinatal bereavement OR Stillbirth OR Neonatal Death [Title/Abstract]
#3	#1 OR #2
#4	Guideline OR Consensus OR Recommendation OR Standard [Title]
#5	#3 AND #4

Charity (Sands), the Perinatal Society of Australia and New Zealand (PSANZ), Stillbirth Centre of Research Excellence (CRE), and Health Service Executive (HSE). The search was carried out by combining Mesh descriptor and free terms. Keywords, including “Perinatal Death”, “Perinatal loss”, “Perinatal bereavement”, “Stillbirth”, “Neonatal death”, “Guideline”, “Consensus”, “Recommendation” and “Standard” were used to identify potentially eligible CPGs. Taking PubMed as an example, a typical search strategy is shown in Table 1.

### Inclusion and exclusion criteria

The inclusion criteria were: (a) containing recommendations for perinatal bereavement care; (b) published in either English or Chinese; (c) being published or endorsed by a national or international professional organization; and (d) healthcare-professional-used guidelines. Exclusion criteria included (a) repeated guidelines, guideline interpretations, guideline overviews, and translated versions of original guidelines; (b) guidelines with incomplete information; and (c) guidelines with no download permission.

The latest version of a revised guideline and guideline supplements were selected for analysis in this study. Guidelines for perinatal palliative care that did not mention bereavement care were not included in this study.

### Literature selection

Fig. 1 presents the process of selection of the literature. Duplications were identified and deleted through the reference management software, EndNote. Two researchers independently reviewed the titles and abstracts to eliminate irrelevant, repetitive, unavailable full-text, and non-guideline literature. Following the initial screening, the full text of potentially eligible literature was carefully read and further evaluated according to inclusion and exclusion criteria. Disagreements were decided by the third researcher or resolved through group discussion.

### Data extraction

CPGs data, including guideline title, country, year of publication/update, developed organization/published journal, applicable population, grading system of evidence, and the number of references, were extracted by two appraisers.

### Quality appraisal of the guidelines

We determined the quality of the included CPGs with the use of the second version of Appraisal of Guidelines for Research and Evaluation (AGREE II) (Brouwers et al., 2010), an internationally accepted instrument for assessing the rigor and transparency in guideline development from a methodological dimension (Burls, 2010). AGREE II instrument consists of six domains and two overall assessment items (Brouwers et al., 2010). The six domains have 23 items including “scope and purpose,” “stakeholder involvement,” “rigor of development,” “clarity of presentation,” “applicability,” and “editorial Independence.” The two overall assessment items are “A rating of the overall quality of the guideline” and “Whether appraisers recommend the guideline for use in practice.” Each of the 23 key items has specific reporting criteria and is rated on a 7-point Likert scale (1 = “strongly disagree” to 7 = “strongly

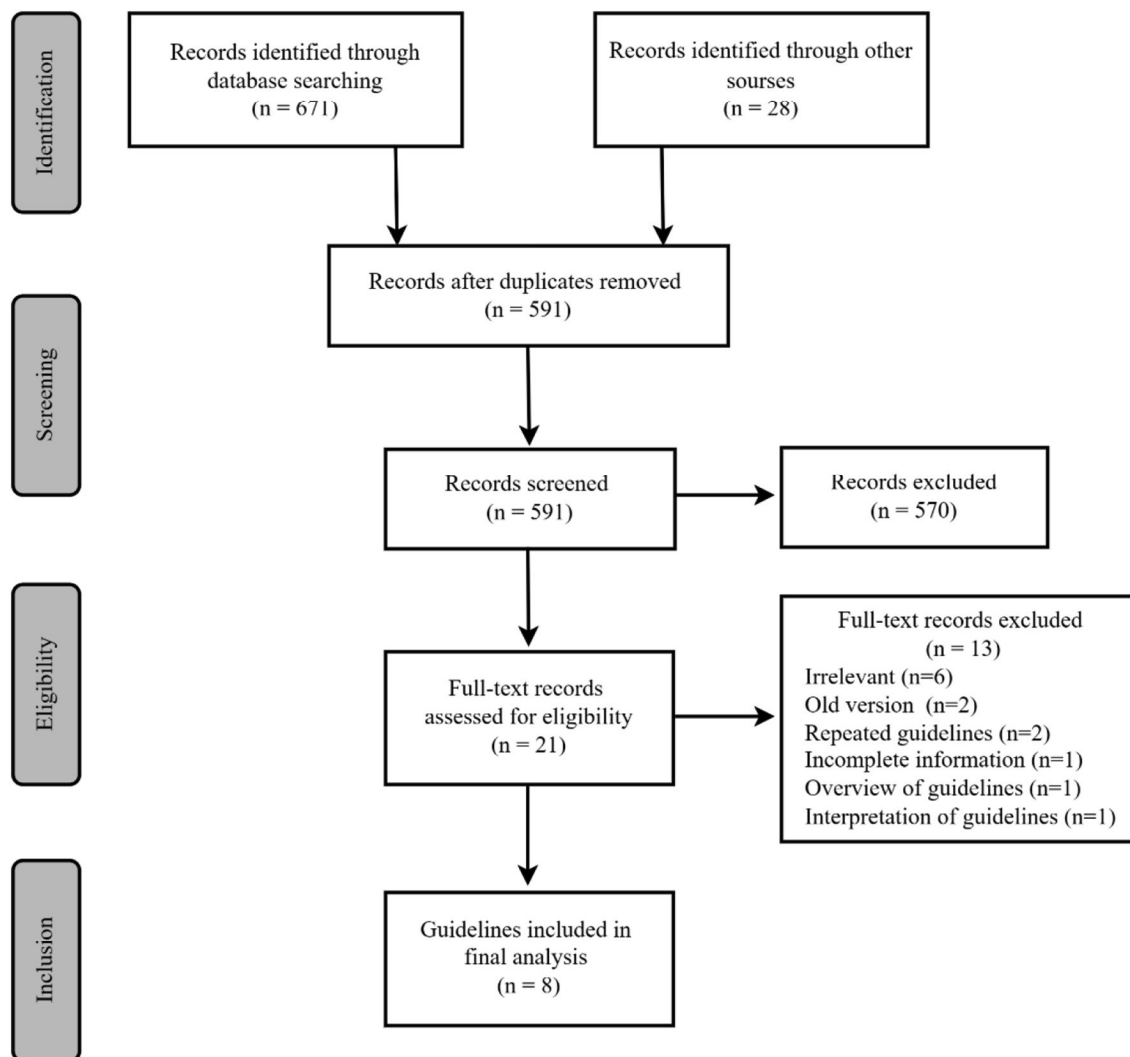


Fig. 1. Flow diagram of the guideline identification process.

agree”) (Brouwers et al., 2010). A higher score for each item indicates that the methodological description of the guideline development is more detailed and precise. For the second overall assessment item, appraisers choose “yes,” “yes, with modifications,” or “no” to answer. Each domain’s standardized score should be calculated using the following formula: (actual score – minimum possible score)/(maximum possible score – minimum possible score) × 100%, ranging from 0% to 100% (Brouwers et al., 2010). Summing up the scores of all items in each domain can obtain the actual score. Our study used a score of 60% as a threshold to measure the methodological quality of CPGs. According to the scores in all domains, the recommended standards of the guideline were divided into the following three levels: (a) grade A (strongly recommended): 5 or more domains scoring ≥60%; (b) grade B (recommended with modifications): 3 or 4 domains scoring ≥60%; (c) grade C (not recommended): 2 or fewer domains scoring ≥60%. The score for the overall assessment of each guideline was also calculated and reported as an average.

The guideline quality assessment team was composed of five researchers, including four quality appraisers and a professor with more than ten years of scientific research experience in obstetrics and gynecology. To increase the reliability of the assessment, four appraisers evaluated each guideline independently using AGREE II. All appraisers read the AGREE II manual and completed the online overview tutorial available at <https://www.agreetrust.org>. When the score of each item

varied by >2 points, discussions and a second reassessment would be conducted to reach a consensus.

#### Investigation of heterogeneity

The basic information of CPGs was managed using Excel 2020. Statistical analyses were performed in IBM SPSS 26.0. The inter-rater reliability of AGREE II domains was examined with the use of the intraclass correlation coefficient (ICC) at a 95% CI, ranging from 0 to 1. Degree of agreement per ICC has been recommended as follows: <0.20 poor; 0.21–0.40 fair; 0.41–0.60 moderate; 0.61–0.80 good; 0.81–1.00 very good (Romeo et al., 2019).

## Results

#### Search results

A total of 699 records were retrieved, of which 108 records were excluded as duplicates. We eliminated 570 records after reviewing the titles and abstracts. Then, we further screened the full text based on the inclusion and exclusion criteria. Finally, eight CPGs (Health Services Executive, 2019; Management of Stillbirth, 2020; National bereavement care pathway for pregnancy and baby loss, 2020; *Paediatrics & Child Health*, 2001; Perinatal Society of Australia and New

**Table 2**  
Characteristics of the included 8 CPGs.

Guidelines	Year of publication	Country /Region	Organization/ Journal	Applicable population	Grading system	References
Clinical Practice Guideline for Care Around Stillbirth and Neonatal Death (Perinatal Society of Australia and New Zealand, 2020)	2020	Australia and New Zealand	Perinatal Society of Australia and New Zealand, PSANZ	Stillbirth and Neonatal Death	–	383
Management of Stillbirth: Obstetric Care Consensus (Management of Stillbirth, 2020)	2020	USA	The American College of Obstetricians and Gynecologists, ACOG	Stillbirth	GRADE	139
The RESPECT Study for consensus on global bereavement care after stillbirth (Shakespeare et al., 2020)	2020	UK	International Federation of Gynecology and Obstetrics, FIGO	Stillbirth	–	16
A pathway to improve bereavement care for parents in England after pregnancy or baby loss: Stillbirth (National bereavement care pathway for pregnancy and baby loss, 2020)	2020	England	The National Bereavement Care Pathway, NBPC	Stillbirth	–	–
Queensland Clinical Guideline: Stillbirth care (Queensland Health, 2019)	2019	The State of Queensland	Queensland Health	Stillbirth	NHMRC, GRADE	96
National Standards for Bereavement Care Following Pregnancy Loss and Perinatal Death (Health Services Executive, 2019)	2019	Ireland	Health Service Executive, HSE	Pregnancy Loss and Perinatal Death	–	260
Late Intrauterine Fetal Death and Stillbirth (Green-top Guideline No. 55) (Royal College of Obstetricians and Gynaecologists, 2010)	2010	UK	Royal College of Obstetricians and Gynaecologists, RCOG	Stillbirth	GRADE	176
Guidelines for health care professionals supporting families experiencing a perinatal loss ( <i>Paediatrics &amp; Child Health</i> , 2001)	2001	Canada	Canadian Paediatric Society, CPS	Perinatal Loss	–	34

GRADE: Grading of Recommendations Assessment, Development, and Evaluation.

NHMRC: National Health and Medical Research Council.

Zealand, 2020; Queensland Health, 2019; Royal College of Obstetricians and Gynaecologists, 2010; Shakespeare et al., 2020) were confirmed to be eligible for assessment (Fig. 1).

#### Guideline characteristics

Table 2 summarizes the general characteristics of the included CPGs. Eight CPGs from Australia and New Zealand, the State of Queensland, Ireland, England, Canada, the USA, and the UK were eligible. All CPGs have been developed for health care professionals in English, two of them belong to the consensus, and one belongs to the clinical pathway. And, all of them were developed or endorsed by the following professional organization: Perinatal Society of Australia and New Zealand (PSANZ), The American College of Obstetricians and Gynecologists (ACOG), The National Bereavement Care Pathway (NBPC), Queensland Health, Health Service Executive (HSE), Royal College of Obstetricians and Gynaecologists (RCOG), and Canadian Paediatric Society (CPS). Six of the eight CPGs were developed or updated in the past three years, while the remaining two were released in 2010 and 2001. Five CPGs focused on stillbirths, while three CPGs applied to pregnancy loss and perinatal death. Only three CPGs explicitly described and implemented the grading system to assess the quality of evidence and the risk of bias.

#### Quality appraisal of guidelines

The standardized scores of individual domains in the included CPGs are presented in Table 3, varying widely from a low of 2.08% to a high of 94.44%. The highest overall scores were achieved for the domains of “clarity of presentation” and “scope and purpose” with scores of  $87.85 \pm 6.13$  and  $79.29 \pm 14.57$ , respectively, followed by the “stakeholder involvement” and “applicability” domains. The lowest overall scores were achieved in the “rigor of development” and “editorial independence” domains, with scores of  $54.30 \pm 19.39$  and  $46.61 \pm 30.67$ , respectively. The “editorial independence” domain obtained the highest variability with a standard deviation of 30.67. The overall assessment had an average score of 4.66 (total score of 7), with the highest score being 6.25, and the lowest score being 3.00. Of the 8 CPGs analyzed, two CPGs had five or six domains scoring  $\geq 60\%$  were rated as the grade of A. Five CPGs achieved the grade of B, while one CPG attained the grade of C.

Our study conducted a subgroup analysis based on the time of publication, the target population, whether to use a grading system, and whether a professional organization issued the guideline, finding no statistical difference within the group ( $P > 0.05$ ).

#### Domain1: scope and purpose

The domain evaluates the overall objectives of the guideline, the specific health questions, and the target population. The mean score of this domain was 79.29%, with the highest being 94.44% from CPGs developed by Queensland Health and HSE. The CPG from CPS had the lowest score of 54.76%. Most CPGs did well in this domain. Only two CPGs scored below 60% because they did not describe the definition of the target population in detail.

#### Domain2: stakeholder involvement

This domain evaluates whether the appropriate development group has developed the guideline, whether the guideline represents the views and preferences of the intended population, and whether the target users have explicit definitions. The mean score of stakeholder involvement was 71.70% (range 41.67%–94.44%). Half of the 8 CPGs scored below 60%, as not introducing the structure of the guideline development group, members’ detailed information, and division of labor in detail. The guideline development team sought the views and preferences of the target population mostly through a simple review of the existing literature, and rarely by involving the target population in the development team or conducting formal public consultations.

#### Domain3: rigor of development

The domain focuses on assessing the process used to gather, select, and synthesize the evidence, the methods to formulate the recommendations, and the procedure for updating the guideline. The mean score for this domain was 54.30%, with an extensive range from 25.52% to 86.98%, and the low scores were concentrated in items 7, 8, 9, and 14 (Fig. 2). Only three CPGs rated more than 60%. The older the CPG was, the worse the quality evaluation in this domain. Most guidelines did not adequately report detailed strategies for retrieving evidence, the

**Table 3**  
The standardized score of each domain in the included CPGs.

Guideline	Domains(%)						Average overall assessment	Would you recommend? yes/ywm/no	Grade
	Scope and purpose	Stakeholder involvement	Rigor of development	Clarity of presentation	Applicability	Editorial independence			
PSANZ 2020	90.28	84.72	79.69	86.11	77.08	31.25	6.00	4/0/0	A
ACOG 2020	86.11	41.67	43.23	90.28	61.46	87.50	4.50	0/4/0	B
FIGO 2020	55.95	84.72	51.56	72.22	61.46	83.33	4.75	1/3/0	B
NBPC 2020	70.83	58.33	25.52	90.28	73.96	22.92	3.50	0/4/0	B
Queensland Health 2019	94.44	93.06	86.98	94.44	87.50	79.17	6.25	4/0/0	A
HSE 2019	94.44	94.44	53.13	93.06	86.46	58.33	4.50	0/4/0	B
RCOG 2010	87.50	59.72	64.58	86.11	75.00	8.33	4.75	0/4/0	B
CPS 2001	54.76	56.94	29.69	90.28	48.96	2.08	3.00	0/2/2	C
Mean / Mean ± SD	79.29 ± 14.57	71.70 ± 17.49	54.30 ± 19.39	87.85 ± 6.13	71.49 ± 11.73	46.61 ± 30.67	4.66	-	-

Ywm = yes, with modifications.

criteria for inclusion and exclusion of evidence, levels of evidence, and external review. Health benefits, side effects, and risks were considered when formulating recommendations, but supporting data and balancing methods were lacking. Although half of the 8 CPGs provided the updating procedure, the description was not clear enough.

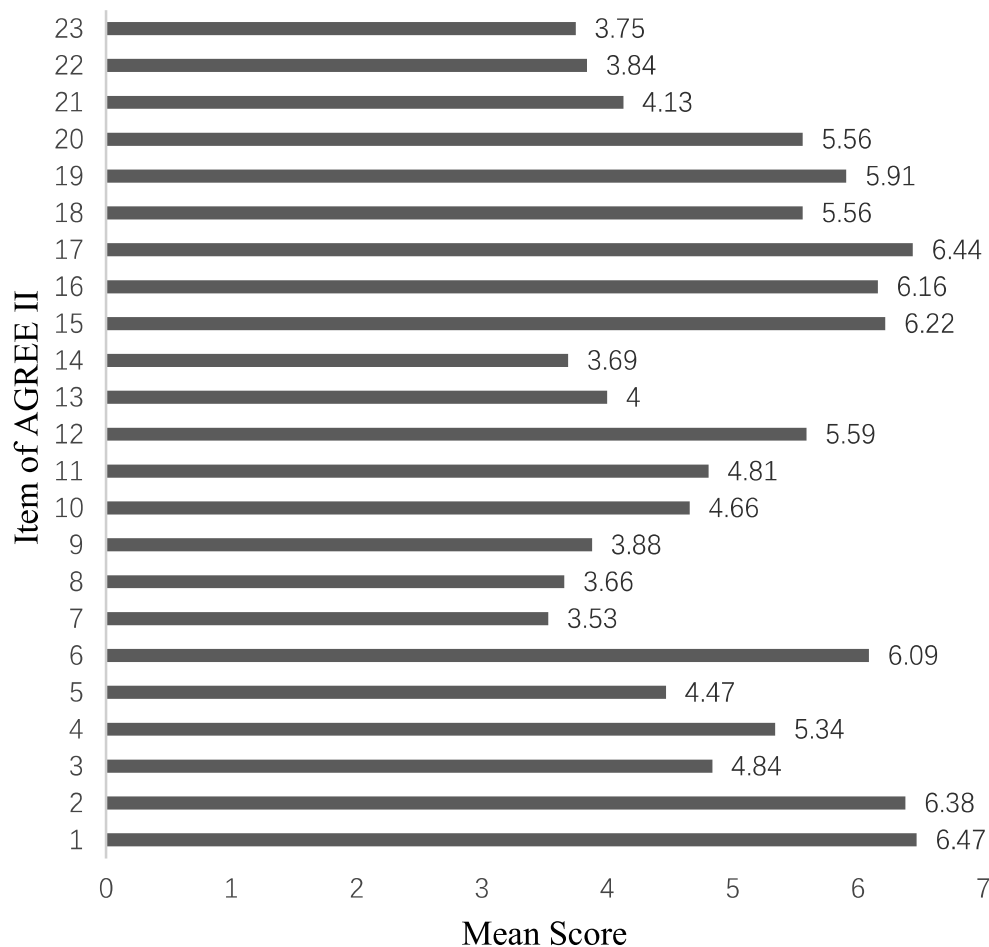
*Domain4: clarity of presentation*

The domain is mainly concerned with the language, structure, and format of guidelines. The mean score of “clarity of presentation” was 87.85% (range 72.22%–94.44%), which was the highest in all domains.

Almost all CPGs had clear recommendations and described different options for perinatal bereavement care, including but not limited to the selection of delivery and analgesic methods, care at different stages after diagnosis, and the choice of different autopsy procedures. The intuitive table, flow Chart, and framework for the practice were used to present essential recommendations to be easily identified.

*Domian5: applicability*

This domain describes the possible barriers and facilitators to implementing the recommendations of the guidelines, strategies for



**Fig. 2.** Mean score for each item of AGREE II instrument in the included CPGs.

implementation, potential resource implications associated with the application of the recommendations, and monitoring and auditing criteria. Applicability is essential because it relates to translating the best evidence in perinatal bereavement care into clinical practice. The average score of applicability was 71.49% (range 48.96%–87.50%). Item 18, 19, and 20 (Fig. 2) had average scores higher than 5.5, which indicates that most CPGs had focused on the strategies for applying recommendations to practice. The average score for the 21st item (Fig. 2) was lower than the other three items in this domain. Only the two CPGs with higher scores provided chapters and monitor and audit criteria implementation details.

#### Domian6: editorial independence

This domain addresses the independence of guideline formulation, the source of funding, and the competing interests. This domain achieved the lowest score of all domains, with an average score of 46.61% (range 2.08%–87.50%). Five of the 8 CPGs mentioned the funding source but didn't state that the funding body was independent of the guideline's content. Only three CPGs explicitly and specifically described conflicts of interest among members of the Working Party in guideline development.

#### Consistency

Inter-rater reliability was indicated by the intraclass correlation coefficient (ICC) value. Table 4 summarizes the results of ICC value for each domain of AGREE II instrument. Domain “clarity of presentation” and “applicability” achieved ICC of 0.61 and 0.73, respectively, while the remaining domains achieved ICC > 0.80. According to the classification criteria, the inter-rater reliability in this study was assessed as “good” and “very good.”

Scope and purpose: item1–3; Stakeholder involvement: item4–6; Rigor of development: item7–14; Clarity of presentation: item15–17; Applicability: item18–21; Editorial independence: item22–23.

#### Discussion

As far as we know, this is the first study to assess the methodological quality of CPGs for perinatal bereavement care. The number of CPGs is small, with only 8 CPGs included in this study. About 75% of the included CPGs were created or endorsed by professional associations in the last three years, suggesting that perinatal bereavement care has been an issue of clinical concern and urgency in recent years. However, the results of our study show that the overall quality is mediocre. There was great variation in quality assessment among the 8 CPGs, as well as variation among domains within each CPG.

The high scores obtained in the domains of “scope and purpose” and “clarity of presentation” indicate that guideline developers might pay more attention to these aspects of CPGs. In the process of evaluating the guidelines, it is not difficult to find that each CPG has a different

focus. For example, the CPG from FIGO emphasized determining principles of a global consensus on bereavement care after stillbirth, whether in low-and-middle-income countries (LMIC) or high-income countries (HIC) settings. While, the CPGs developed by ACOG focused on managing and evaluating stillbirth, including genetic evaluation; fetal autopsy; and examination of the placenta, umbilical cord, and membranes. There are five CPGs centered on stillbirth, which may be related to the fact that stillbirth accounts for most perinatal deaths and often has profound emotional, psychiatric, and social effects. Comparing the CPGs, different countries and regions have different definitions, management methods, review procedures, and legal documents for perinatal loss. Therefore, the country's legal regulations, cultural characteristics, and religious customs should be fully considered when applying GCPs to clinical practice.

The “editorial independence” domain had tremendous variability among all six quality domains, with the lowest score of 2.08%. Most CPGs did not clarify whether the funding organizations' views influenced the recommendations presented, probably because the guideline developers were professional organizations and did not involve commercial involvement in developing CPGs. Guideline developers often have competing interests and may influence recommendations, but these interests are often underestimated. Therefore, more measures should be taken to minimize the influence of competing claims on the formulation of the recommendations and improve the reliability of the guideline development.

“Rigor of development” is an essential domain for assessing the guideline development closely related to transparency and trustworthiness. But the mean score of this domain was 54.30%, having a lot of room for improvement. The reporting methods for recommendation formulation and evidence evaluation were quite different. CPGs developed by ACOG, Queensland Health, and RCOG recommended best practices strictly based on the grading system. Part of the CPGs did not mention the level of evidence due to limited resources and the apparent lack of high-quality evidence, and the actual recommendations were based on the consensus of the working group after reviewing the available evidence. A few CPGs even did not mention the methods used to formulate recommendations, just included references following each recommendation. The development of CPGs must be evidence-based, including evidence retrieval, evaluation, integration, and dissemination. Otherwise, scientific validity will be questioned, not to mention improving clinical practice. The relevant evidence should be comprehensive and up-to-date to ensure the timeliness and reliability of CPGs. Therefore, the CPGs should provide a clear statement about the procedure for updating. For example, time interval, explicit criteria, or updating methods has been given, and the guideline update team was established.

The “applicability” domain had a score of 71.49%. Reported factors related to perinatal bereavement care include a suitable physical environment and the perinatal bereavement capabilities of healthcare professionals. Health education leaflets, various evaluation scales, and related websites are provided for the implementation of recommendations. The interdisciplinary perinatal bereavement care team, community hospital, and professional organization support are related to potential resources. Audit criteria were ought to include explicit operational definitions, the time and frequency of measurement, the measurement tools, and the content of the measurement. For example, how and when to measure the effectiveness and quality of care provided by healthcare professionals?

The “stakeholder Involvement” domain achieved moderate scores of 71.70%. Information on members of the guideline working party was available in specific sections. The members included relevant clinicians, researchers, content experts, policymakers, clinical administrators, and funders, few CPGs mentioned methodology experts such as systematic review experts, epidemiologists, statisticians, and library scientists. The target population's views and preferences are critical to improving clinical practice satisfaction and implementing shared decision-

**Table 4**  
Inter-rater reliability for AGREE II domains.

AGREE II domain	Inter-rater reliability		
	Intraclass correlation coefficient (ICC)	Degree	P
Scope and purpose	0.81	very good	<0.001
Stakeholder involvement	0.83	very good	<0.001
Rigor of development	0.89	very good	<0.001
Clarity of presentation	0.61	good	<0.001
Applicability	0.73	good	<0.001
Editorial independence	0.93	very good	<0.001

ICC: < 0.20 poor; 0.21–0.40 fair; 0.41–0.60 moderate; 0.61–0.80 good; 0.81–1.00 very good (Romeo et al., 2019).

making. In addition to describing how views and preferences are collected, CPGs need to clearly describe the results of the collection and how they will be used in guideline development or recommendation formation. In the future, to improve the applicability, transparency, and methodological rigor of CPGs for perinatal bereavement care, the AGREE II instrument can be used as an essential reference by the guideline working party to guide the guideline development and update, especially in the domains of “stakeholder involvement,” “applicability,” “rigor of development,” and “editorial independence.”

According to our assessment, two CPGs with grade A ratings are recommended for direct use. Five CPGs with grade B ratings can be used in clinical practice after appropriate modifications. When healthcare professionals feel overwhelmed in the face of perinatal bereavement, they can seek the help of high-quality CPGs. Understanding the experience of bereaved parents and perinatal grief theories can help to develop the ability of empathy. Learning good communication skills is beneficial to breaking bad news and helping parents make shared decisions. Knowing the causes and high-risk factors of perinatal loss can not only solve parents' doubts but also benefit the next pregnancy. Conducting appropriate investigation, audit, and classification can ensure the reliability of perinatal mortality data. “Report of the 7th annual meeting of the international stillbirth alliance” (Heazell et al., 2013) highlights the education and training of healthcare professionals as a priority for perinatal bereavement support. Medical and Nursing organizations have the responsibility of staff education and support to cultivate the specific capacity and resilience required to address perinatal loss. To improve the quality of information and the effectiveness of education, evidence-based and high-quality CPGs could be used as guidance. It is worth noting that as witnesses and caregivers of perinatal loss, healthcare professionals also have emotional burdens. We suggest that organizations should take this aspect into account in clinical education.

#### Limitation

There are some limitations to our study. First, only CPGs published in Chinese and English were included. Perinatal bereavement care guidelines in other languages were ignored. CPGs that cannot be obtained in the full text were excluded. There is a risk of selection bias. Secondly, the supplementary document of the CPGs from NBPC including several templates and tools to adapt and use in the local setting was not obtainable, so the quality might be underestimated by our research team. Moreover, although the researchers have been trained before the evaluation, individuals' different understanding of the AGREE II instrument might lead to differences in the scores of items and bring certain deviations. In addition, AGREE II has its limitations, and the evaluation results must be viewed objectively. AGREE II can only evaluate the methodological quality of CPGs except for the reporting quality and content completeness. We suggest that additional evaluation tools can be added according to the research purpose when evaluating CPGs, such as the RIGHT (Reporting Items for Practice Guidelines in Healthcare) instrument (Chen et al., 2017), which can be used to assess the reporting quality of CPGs. Some items in AGREE II lack clear criteria for judging. The appraisers can only judge whether these items exist but cannot judge whether the content is correct or complete. The importance of each domain of AGREE II is not equal. CPGs cannot be graded simply by the number of domains that score more than 60%. Before using AGREE II for CPGs evaluation, each domain may be weighted in an appropriate proportion to obtain a total score to determine which CPG to recommend.

#### Conclusion

Perinatal loss is not common, but extremely traumatic. Any insensitive or inappropriate care can worsen this trauma. High-quality CPGs for perinatal bereavement care can provide reliable evidence to increase

the capacity of healthcare professionals, standardize the management of perinatal loss, and improve the outcomes of clinical practice. In addition, CPGs can be used to guide education in obstetrics and neonatology. This review evaluated and compared the methodological quality of CPGs for perinatal bereavement care. Although there are two CPGs with a quality rating of A, it is worth noting that professional translations, strict validations, and cultural adaptations should be well considered when implemented in countries or regions with different backgrounds.

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I would like to declare on behalf of my co-authors that the work described was original research that has not been published previously, and is not under consideration for publication elsewhere, in whole or in part.

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#### Declaration of Competing Interest

All authors declare that there is no actual or potential conflict of interest, including financial and other relationships with people or organizations.

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