




BMJ Open Characteristics and quality of clinical practice guidelines addressing acupuncture interventions: a systematic survey of 133 guidelines and 433 acupuncture recommendations

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ABSTRACT

Objective To systematically summarise acupuncture-related Clinical Practice Guidelines (CPGs)'s clinical and methodological characteristics and critically appraise their methodology quality.

Design We summarised the characteristics of the guidelines and recommendations and evaluated their methodological quality using the Appraisal of Guidelines Research and Evaluation II (AGREE II) instrument.

Data sources Nine databases were searched from 1 January 2010 to 20 September 2020.

Eligibility criteria for selecting studies We included the latest version of acupuncture CPGs, which must have used at least one systematic review addressing the benefits and harms of alternative care options to inform acupuncture recommendations.

Data extraction and synthesis Reviewers, working in pairs, independently screened and extracted data. When there are statistical differences among types of CPGs, we reported the data by type in the text, but when not, we reported the overall data.

Results Of the 133 eligible guidelines, musculoskeletal and connective tissue diseases proved the most commonly addressed therapeutic areas. According to the AGREE II instrument, the CPG was moderate quality in the domain of clarity of scope and purpose, clarity of presentation, the rigour of development, stakeholder involvement and low quality in editorial independence, and applicability. The study identified 433 acupuncture-related recommendations; 380 recommended the use of acupuncture, 28 recommended against the use of acupuncture and 25 considered acupuncture but did not make recommendations. Of the 303 recommendations that used Grading of Recommendations Assessment, Development and Evaluation to determine the strength of recommendations, 152 were weak recommendations, 131 were strong recommendations, of which 104 were supported by low or very low certainty evidence (discordant recommendations).

Conclusion In the past 10 years, a large number of CPGs addressing acupuncture interventions exist. Although these

Strengths and limitations of this study

- This systematic survey includes a comprehensive search of eligible clinical practice guidelines (CPGs) and systemic and explicit eligibility criteria.
- This study used the Appraisal of Guidelines Research and Evaluation II instrument to evaluate the methodological of eligible CPGs.
- This study investigated the utilisation of the Grading of Recommendations Assessment, Development and Evaluation in CPGs.
- This study documented recommendations discordant with respect to evidence strength and certainty.
- Limitations include the exclusion of guidelines not supported by any systematic reviews; our findings, therefore, do not apply to the lowest methodological quality guidelines.

guidelines may be as or more rigorous than many others, considerable room for improvement remains.

INTRODUCTION

With more than 3000 years of history, acupuncture is one of the widely used complementary and alternative therapies.^{1 2} Among the 192 WHO member states, 183 have used acupuncture.³ In Norway, 34%–64% of doctors recommend acupuncture to their patients.⁴ The increasing acupuncture application in practice has led to growing demands for clinical practice guidelines (CPGs), with many countries and academic organisations including acupuncture in their CPGs.^{5 6}

Trustworthy CPGs base their recommendations on systematic reviews (SRs) assessing the benefits and harms of alternative care options, rate the certainty of the evidence and grade the strength of recommendations.^{7 8}

CPGs help clinicians, managers and policy-makers select the best available evidence to support decision making. Despite the existing large number of acupuncture-related CPGs, the clinical and methodological status of CPGs, including recommendations, remain underexplored.

This systematic survey summarises acupuncture-related CPGs' clinical and methodological characteristics and critically assesses their methodology quality.

METHODS

Definition

Acupuncture and acupuncture point

In this study, acupuncture is used in a broad sense refers to interventions that use any stimulation on acupuncture points, including manual acupuncture, electric acupuncture (electroacupuncture), acupressure, moxibustion, warm needling, fire needling, transcutaneous electrical nerve, laser acupuncture, microsystem acupuncture, thread-embedding therapy, medicine acicula, point injection, acupoint paste; magnetic acupuncture, blood-letting therapy, acupotomy.⁹

Acupuncture point: the point in humans where stimulation and manipulation are performed in acupuncture therapies.¹⁰

Types of CPG

This study divides eligible CPGs into three types: acupuncture-specific CPG (all recommendations include acupuncture interventions), traditional and complementary medicine (T&CM) CPG (all recommendations include T&CM interventions), and Comprehensive CPG (all recommendations include conventional interventions, and some include acupuncture interventions).

Acupuncture recommendation

We define acupuncture recommendations as recommendations (including for, against or considered but did not make recommendations) in which authors considered acupuncture as a treatment or prophylactic (eg, prevent nausea and vomiting after chemotherapy) option.

Conventional medicine

Conventional medicine is defined as pharmacological, and other non-pharmacological used in conventional medicine systems to treat, prevent disease, or restore, correct, or modify physiological function.¹¹

Outcome classification

We categorised outcomes into symptoms (eg, pain, insomnia); function (eg, poststroke motor function); surrogate outcomes (eg, blood pressure); quality of life (eg, short Form 36 survey); morality and major morbid events (eg, myocardial infarction).¹²

Eligibility criteria

Eligible CPGs met all the following criteria: (1) title or abstract included keywords 'CPG' or 'guideline' or 'guidelines' or 'guidance'; If the CPG had no abstract,

introduction, scope, purpose, rationale, background or objectives presented at least one of these keywords; (2) full text included 'acupuncture' or 'acupressure' or 'transcutaneous electrical nerve'; (3) the CPG used at least one SRs addressing the benefits and harms of alternative care options to inform recommendations; (4) the CPG addressed patient prevention or treatment; (5) the CPG included at least one recommendation addressing acupuncture and (6) the latest version of a CPG when multiple versions exist. This study excluded health technology assessment.

Literature search

LL, HZ and YZ developed the search strategy. The keywords included guideline, recommendation, advice, opinion, acupuncture, transcutaneous electrical nerve stimulation, acupressure, etc (detail in online supplemental material 1). Two reviewers (ZC and XS) systematically searched databases including MEDLINE, EMBASE, Trip medical database, the Guidelines International Network, Agency for Healthcare Research and Quality, National Institute for Health and Care Excellence, Canadian Medical Association's CPGs database, the New Zealand Ministry of Health, China National Knowledge Internet (CNKI), Wanfang Data, China Biology Medicine, and China Science and Technology Journal Database from 1 January 2010 to 20 September 2020. Without language restriction, we searched subject terms and free words. The reviewers managed records using EndNote (V.X9.0).

CPGs selection, data extraction and analysis

Reviewers, working in pairs, independently screened and extracted data. After title and abstract screening, reviewers retrieved and evaluated potentially eligible guidelines' full texts, resolving disagreement by discussion or consultation with a third reviewer (XS). To collect data, we designed a structured data extraction table in Excel.

Reviewers extracted two types of information from each CPG: (1) CPG level information, for example, region of the publication, types of CPG, target users, and diseases or conditions investigated, (2) recommendation level information, for example, strength and direction of the recommendation, intervention (eg, types of acupuncture and acupoints), comparators included in the recommendation, outcomes informing the recommendation.

To compare the variables across different types of CPGs, we used the χ^2 and, when necessary, Fisher's exact test. When there are statistical differences among types of CPGs, we reported the data by type in the text, but when not, we reported the overall data. We showed all data in the tables. This study conducted the analyses using Statistical Package for the Social Sciences (SPSS, V.22) and set the significance level at 5% ($p < 0.05$).

Quality appraisal

The study used the Appraisal of Guidelines Research and Evaluation II (AGREE-II) instrument, which includes 23 appraisal criteria (items) organised within six domains: scope and purpose, stakeholder involvement, the rigour of development, clarity of presentation, applicability, and editorial independence, to assess the quality of CPGs. Reviewers rated each item on a seven-point scale from strongly disagree (score 1) to strongly agree (score 7). We calculated the scaled domain score (higher score indicates better quality) according to AGREE II (the 'obtained score' was the sum of the appraisers' scores per item)¹³: (Obtained score – Minimum possible score) / (Maximum possible score – Minimum possible score). Prior to quality appraisal, eight reviewers received training in AGREE II with repeated assessment until the chance-corrected agreements were ≥ 0.6 for each pair of reviewers in each domain. Two reviewers (ZC and XT) independently assessed each CPG, and when the discussion failed to resolve the disagreement, a third reviewer (XS) arbitrated the case.

AGREE II instrument does not set minimum domain scores or patterns of scores across domains to differentiate between high quality and low quality guidelines. As previously suggested, we considered domain and overall scores under 50% to indicate low quality, $>50\%$ as moderate quality and $>80\%$ as high quality.^{14–16}

Patient and public involvement

No patient involved.

RESULTS

Literature search

Our initial search yielded 8943 citations, of which 3122 were excluded due to duplicate publication and 4848 deemed ineligible. Of the 973 full texts, we excluded 840 reports for the following reasons: 793 did not include any recommendation regarding acupuncture, 28 were not CPGs, 16 had unavailable full texts and 3 were duplicate publications. The 133 CPGs deemed eligible, including 433 acupuncture recommendations (figure 1).

Characteristics of included CPGs and recommendations

Table 1 and online supplemental material 2 present eligible CPGs' summary characteristics.

The organisations that conducted CPGs were from North America (49, 36.8%), Asia (44, 33.2%), Europe (31, 23.3%), Oceania (6, 4.5%) and international organisations (eg, WHO) (3, 2.2%). Guideline category proved comprehensive in 89 (66.9%), acupuncture-specific CPGs in 31 (23.3%) and T&CM specific in 13 (9.8%). Sixty-nine (51.9%) used Grading of Recommendations Assessment, Development and Evaluation (GRADE) to assess the certainty of the evidence, and 59 (44.4%) used GRADE to assess the strength of recommendation.

Figure 2 shows CPGs and recommendations' therapeutic areas distribution, quantity, and methodological

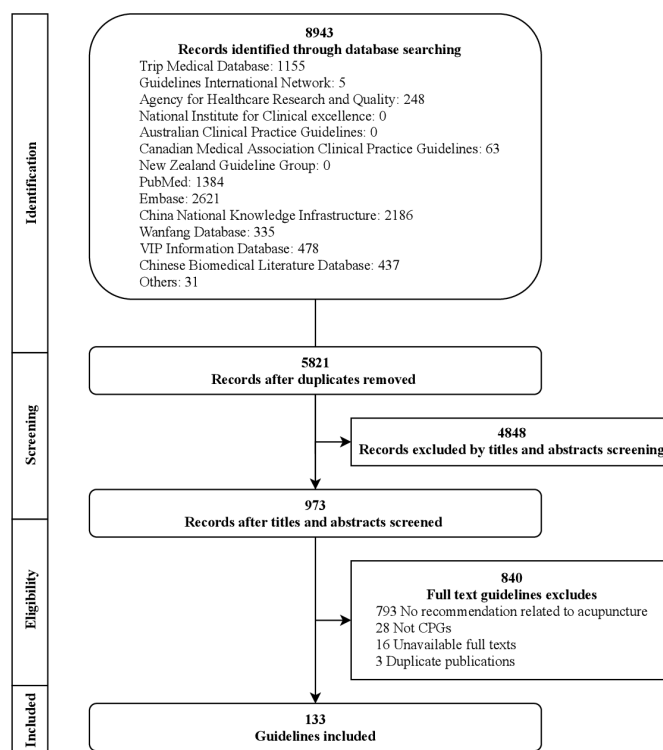


Figure 1 The Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow diagram. CPG, clinical practice guideline.

rigour. Areas most frequently addressed proved musculo-skeletal and connective tissue diseases (39, 29.3%), neurological disorders (21, 15.8%) and oncology (11, 8.3%). CPGs seldom addressed endocrine, nutritional and metabolic, ophthalmology, cardiovascular diseases, respiratory diseases and dermatology (one per therapeutic area).

Methodological quality of CPGs

Table 2 presents CPGs AGREE II rating. Of all CPGs, domains evaluated by AGREE II scored from the highest to lowest include: 'scope and purpose,' 'clarity of presentation,' 'rigour of development,' 'stakeholder involvement,' 'editorial independence,' and 'application.' The first four domains proved moderate quality (ie, 50% or higher rating), and the last two domains deemed low quality (ie, scored less than 50%).

For comprehensive CPGs, 'clarity of presentation' (75.2%), 'scope and purpose' (74.0%), 'editorial independence' (53.4%) and 'rigour of development' (51.6%) proved moderate quality; meanwhile 'stakeholder involvement' (49.8%), and 'application' (32.1%) proved lower quality. For T&CM CPGs, 'clarity of presentation' (68.2%), and 'scope and purpose' (66.0%) were moderate quality; meanwhile 'editorial independence' (48.7%), 'rigour of development' (45.9%), 'stakeholder involvement' (32.7%) and 'application' (22.4%) were lower quality. For acupuncture-specific CPGs, 'scope and purpose' (95.2%) was high quality; and 'clarity of presentation' (79.8%), 'rigour of development' (71.3%), and 'stakeholder involvement' (67.8%) were moderate

Table 1 Characteristics of 133 included CPG in the study

Variable	N (%)
Region	
International	3 (2.3)
America	49 (36.8)
Asia	44 (33.1)
Europe	31 (23.3)
Oceania	6 (4.5)
Type of CPG	
Comprehensive CPG	89 (66.9)
T&CM CPG	13 (9.8)
Acupuncture-specific CPG	31 (23.3)
CPGs with at least one acupuncture recommendation supported by systematic reviews	
Comprehensive CPG	46 (34.6)
T&CM CPG	7 (5.3)
Acupuncture-specific CPG	12 (9.0)
The health intent*	
Treatment	129 (97.0)
Prevention	17 (12.8)
Target users*	
Healthcare provider	127 (95.5)
Policy-maker	9 (6.8)
Patient	39 (29.3)
Using GRADE to assess the certainty of the evidence	
Reported	69 (51.9)
Not reported	64 (48.1)
Using GRADE to assess the strength of recommendation	
Reported	59 (44.4)
Not reported	74 (55.6)

*One CPG can contribute to more than one category. CPG, clinical practice guidelines; GRADE, Grading of Recommendations Assessment, Development and Evaluation; T&CM, traditional and complementary medicine.

quality; meanwhile ‘application’ (35.4%) and ‘editorial independence’ (33.2%) were lower quality.

The low rating in the ‘application’ domain reflects inadequate consideration of resource use (52, 39.1%) and monitoring/auditing standards. The absence of a conflict-of-interest (COI) statement (61, 45.9%) and lack of explicit explanation on how COIs are considered (58, 43.6%) from CPGs developers led to the low rating in the ‘editorial independence’ domain. In addition to item 5 in AGREE II, whether guideline developers considered patients’ values and preferences, we evaluated whether the CPG explicitly explained how they considered it. The results showed that 43.6% reported considering patients’ values and preferences, of which only less than 10.5% explicitly explained how they were considered (online supplemental 3 table A).

Acupuncture recommendations specific analyses

Evidence supporting acupuncture recommendations

Table 3 shows the evidence that supported acupuncture recommendations. Type of study design used to inform acupuncture recommendations from the most to the least frequently are randomised controlled trial and controlled clinical trial, SR and meta-analysis, observational study, narrative review, expert consensus and Chinese classic texts/textbook. Of all acupuncture recommendations, 314 (72.5%) used GRADE to assess the certainty of evidence. Low or very low certainty evidence supported over 80% of the 314 acupuncture recommendations.

Direction, strength and rationale of the recommendations

Of the 433 acupuncture recommendations, 380 (87.8%) recommended or suggested using acupuncture, 28 (6.4%) recommended or suggested against, and 25 (5.8%) did not make recommendations. Of the 303 (70.0% of all recommendations in the guidelines) recommendations that used GRADE to determine the strength of recommendations, 152 (50.2%) were weak recommendations, and 131 (43.2%) were strong recommendations, of which 104 (79.4%) were supported by low or very low certainty evidence (we will refer to this situation as discordant recommendations¹⁵ (table 4).

online supplemental 3 table B shows the rationale when making acupuncture recommendations. For all CPGs, treatment benefits are the main reason for recommending or against acupuncture (264, 61.0%). Forty-one (36.3%) comprehensive CPGs consider the certainty of evidence as an important issue in making recommendations, while T & CM and acupuncture-specific CPGs seldom consider certainty (1, 0.4%). Less than 10% of all CPGs reported patients’ values and preferences, cost, adverse events and feasibility as part of their rationale for making acupuncture recommendations.

Patient characteristics in acupuncture recommendations

Acupuncture recommendations report patient information poorly. Of all acupuncture recommendations, only 16 (8.7%) reported the severity of the disease. Seventeen (15.0%), 3 (4.5%), and 101 (39.8%) of the comprehensive, T & CM and acupuncture-specific CPGs reported the stage of the disease (online supplemental 3 table C).

Acupuncture interventions in the recommendations and remarks

Acupuncture recommendations and remarks reported limited details regarding acupuncture intervention (table 5). Comprehensive CPGs most frequently include manual acupuncture and acupressure in acupuncture recommendations. T&CM and acupuncture-specific CPGs most frequently include manual and electro-acupuncture in acupuncture recommendations. Most acupuncture recommendations in all CPGs focus on stand-alone usage of acupuncture therapies, and only 99 (22.9%) recommendations use acupuncture as a combination/ adjunct therapy. Moreover, almost no recommendations reported

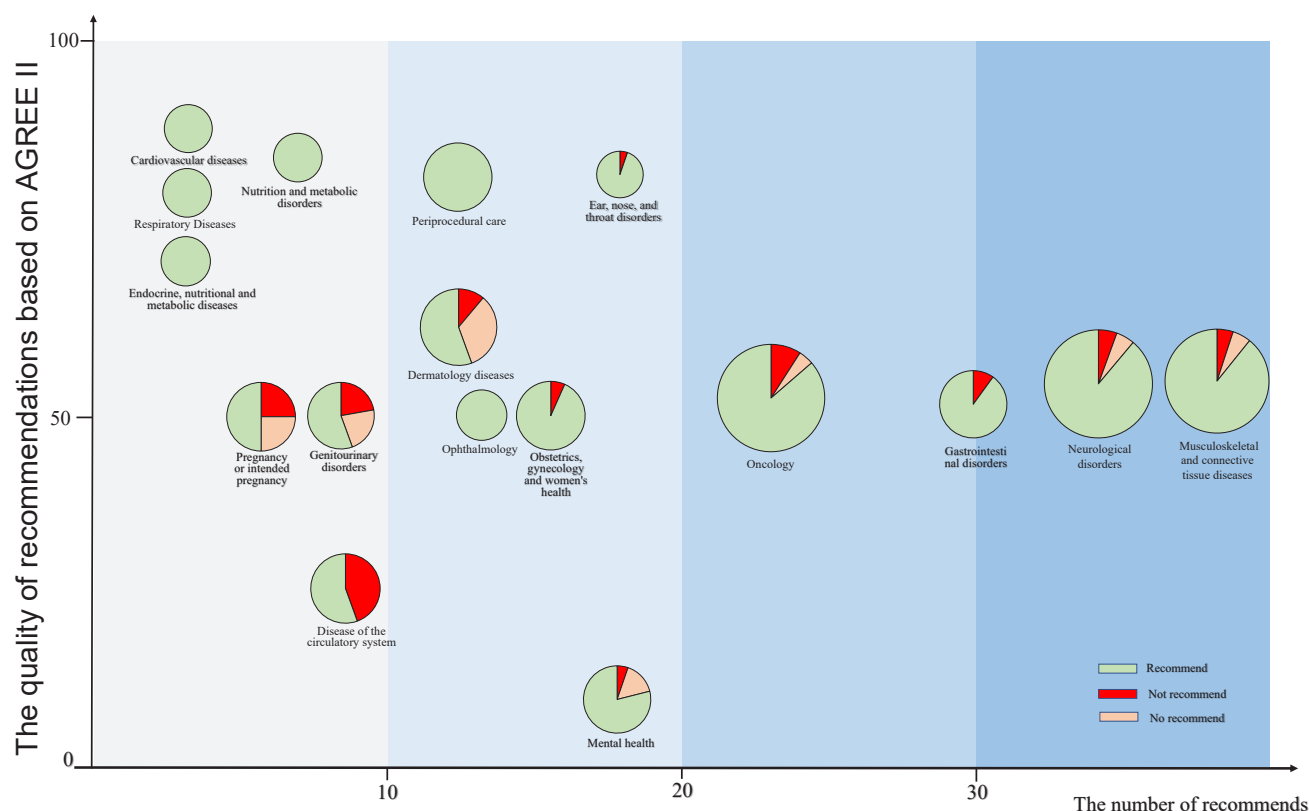


Figure 2 A multidimensional plot for acupuncture guidelines and recommendations' quantity, methodological rigour and distribution of therapeutic areas. Each pie represents a therapeutic area. (1) Pie size: number of CPGs (larger=more studies). (2) Pie colour: direction of recommendation (green: recommend for, red: recommend against; pink: did not make a recommendation). CPG, clinical practice guideline.

the acupuncture points selection except for acupuncture-specific CPGs (206, 81.1%).

Comparators in acupuncture recommendations

Approximately three-quarters of the CPGs recommendations (323, 74.6%) did not report the comparators (online supplemental 3 table D). Among all CPGs recommendations that reported the comparators, comprehensive CPGs most often compared acupuncture with no acupuncture (12, 10.6%), T&CM CPGs most often

compared acupuncture with non-pharmacological therapy (22, 33.3%), and acupuncture-specific CPGs most often compared acupuncture with conventional medicine (32, 12.6%).

Outcomes summarised to inform acupuncture recommendations

Among all acupuncture recommendations, 130 (30.0%) did not summarise the outcomes used to inform recommendations: 43/113, 38/66 and 49/254 were in comprehensive, T&CM and acupuncture-specific CPGs. Of the

Table 2 The methodological quality of 133 CPGs (%)

Domain	Comprehensive CPGs	T&CM CPGs	Acupuncture-specific CPGs	Total	P value
Scope and purpose	74.0	66.0	95.2	78.4	0.386
Stakeholder involvement	49.8	32.7	67.8	50.1	
Rigour of development	51.6	45.9	71.3	56.3	
Clarity of presentation	75.2	68.2	79.8	74.4	
Application	32.1	22.4	35.4	30.0	
Editorial independence	53.4	48.7	33.2	45.1	

CPG, clinical practice guidelines; T&CM, traditional and complementary medicine.

Table 3 Evidence supports acupuncture recommendations

Variable	N (%)
Type of study supporting acupuncture recommendations* (n=433)	
SR or meta-analysis	135 (31.2)
RCT or CCT	250 (57.7)
Observational studies	114 (26.3)
Narrative review	36 (8.3)
Expert consensus	24 (5.5)
Chinese classic texts/ Textbook	4 (0.9)
Not reported	47 (10.9)
Recommendations used GRADE to assess the certainty of evidence (n=314)	
Comprehensive CPG	46 (40.7)
T&CM CPG	24 (36.3)
Acupuncture-specific CPG	244 (96.1)
Certainty of evidence supporting recommendations using GRADE (n=314)	
High	5 (1.6)
Moderate	33 (10.5)
Low	105 (33.4)
Very low	157 (50.0)
Not reported	14 (4.5)

*One recommendation can contribute to more than one category. development, and evaluation, CCT, controlled clinical trial; CPG, clinical practice guidelines; GRADE, Grading of Recommendations Assessment, Development and Evaluation; RCT, randomised controlled trial; SR, systematic review; T&CM, traditional and complementary medicine.

remaining 382, from the most to the least summarised types of outcomes are: symptoms (253, 58.4%), function (86, 19.9%), quality of life (29, 6.7%), surrogate outcomes (12, 2.8%), mortality (1, 0.2%) and major morbid events (1, 0.2%) (online supplemental 3 table E).

DISCUSSION

This study identified 133 CPGs and 433 recommendations addressing acupuncture intervention published between 2010 and 2019 that most frequently addressed musculoskeletal and connective tissue diseases (29.3%), neurological disorders (15.8%), obstetrics, gynaecology, and women's health (9.7%), and oncology (9.0%) (figure 2). Guidelines overwhelmingly recommended in favour of acupuncture (87.8% of recommendations), with the remainder split more or less evenly between recommendations against or no recommendation. Of the 303 (70.0%) recommendations that used GRADE to determine the strength of recommendations, 152 (50.2%) were weak recommendations, 131 (43.2%) were strong recommendations, of which 104 (79.4%) were supported by low or very low certainty evidence (discordant recommendations). According to the AGREE II instrument,

Table 4 Direction and strength of acupuncture recommendations

Variable	N (%)
The direction of the recommendation (n=433)	
In favour	380 (87.8)
Against	28 (6.4)
Did not make recommendations	25 (5.8)
Strength of the recommendation assessed with GRADE (n=303)	
Strong	131 (43.2)
High and moderate certainty of the evidence	26 (19.8)
Low and very low certainty of the evidence	104 (79.4)
Not reported	1 (0.8)
Weak	152 (50.2)
High and moderate certainty of the evidence	10 (6.6)
Low and very low certainty of the evidence	135 (88.8)
Not reported	7 (4.6)
Not reported	20 (6.6)

GRADE, Grading of Recommendations Assessment, Development and Evaluation.

included CPGs proved moderate quality in 'scope and purpose,' 'clarity of presentation,' 'rigour of development' and 'stakeholder involvement,' but low quality in 'editorial independence' and 'applicability' domains.

Strengths and limitations

Our study, the most comprehensive that systematically evaluated CPGs addressing acupuncture interventions, has several strengths. First, this systematic survey includes a comprehensive search of eligible CPGs, systemic and explicit application of eligibility criteria, duplicate and independent study selection and data extraction, and rigorous methodological assessment of CPGs using the AGREE-II instrument. Second, our research investigated the utilisation of the GRADE approach in CPGs and recommendations. Moreover, we documented recommendations discordant with respect to strength and certainty. Third, this survey identified the missing aspect in AGREE II that most acupuncture-related CPGs did not explicitly report how they consider patients' values and preferences, hindering guidelines' applicability.

The limitation of our study includes: (1) we did not include Japanese and South Korean guideline databases, and (2) we excluded guidelines not supported by any SRs—thus, results do not apply to the lowest methodological quality guidelines.

Relation to other studies

Jeremy Y Ng *et al*¹⁷ investigated the quantity and quality of T&CM (eg, herbal medicine, acupuncture, chiropractic and osteopathic manipulation) guidelines in

Table 5 Details of acupuncture interventions in the recommendations and remarks

Description of acupuncture intervention	N (%)			P value
	Comprehensive CPGs	T&CM CPGs	Acupuncture-specific CPGs	
Type of acupuncture* (n=433)				
Manual acupuncture	57 (50.4)	37 (56.1)	121 (47.6)	<0.001
Electroacupuncture	13 (11.5)	13 (19.7)	42 (16.5)	
Acupressure	19 (16.8)	2 (3.0)	5 (2.0)	
Moxibustion, warm needling, fire needling	6 (5.3)	12 (18.2)	55 (21.7)	
Other†	26 (23.0)	14 (21.2)	97 (38.2)	
Not reported	44 (38.9)	14 (21.2)	15 (5.9)	
Acupuncture alone or with other interventions* (n=433)				
Alone	100 (88.5)	42 (63.6)	192 (75.6)	0.006
With conventional medicine	4 (3.5)	9 (13.6)	16 (6.3)	
With Chinese herbal medicine	2 (1.8)	4 (6.1)	5 (2.0)	
With Non-pharmacological interventions	10 (8.8)	14 (21.2)	41 (16.1)	
Acupuncture points selection (n=433)				
Reported	6 (5.3)	20 (30.3)	206 (81.1)	<0.001
Not reported	107 (94.7)	46 (69.7)	48 (18.9)	
Acupuncture points selection based onTraditional Chinese medicine syndromedifferentiation (n=433)				
Reported	0 (0.0)	1 (1.5)	39 (15.4)	<0.001
Not reported	113 (100.0)	65 (98.5)	215 (84.6)	
Acupuncture points selection based onMeridian syndrome differentiation (n=433)				
Reported	0 (0.0)	0 (0.0)	5 (2.0)	0.177
Not reported	113 (100.0)	66 (100.0)	249 (98.0)	

*One recommendation can contribute to more than one category.

†Include laser acupuncture, microsystem acupuncture, thread-embedding therapy, medicine acicula, point injection, transcutaneous electrical nerve, acupoint paste; magnetic acupuncture, blood-letting therapy, acupotomy.

CPG, clinical practice guidelines; T&CM, traditional and complementary medicine.

MEDLINE, EMBASE and CINAHA, etc. This survey examined a few selected interventions in T & CM and only included three acupuncture-related guidelines. Guo LH *et al*¹⁸ evaluated the methodological quality of acupuncture CPGs conducted by the China Institute of Acupuncture and Moxibustion. Consistent with our results, both articles identified ‘applicability’ and ‘editorial independence’ as Acupuncture-specific CPGs’ main limitations, but they omitted non-Chinese CPGs. Guo Y *et al*⁶ conducted a systematic survey to summarise the diseases and disorders most commonly treated with acupuncture in CPGs and concluded that acupuncture recommendations might be limited to painful conditions. They only searched the National Guideline Clearinghouse database, which might explain their failure to present the broad picture of acupuncture guidelines that our survey describes. None of the three studies analysed whether patients’ values and preferences were explicitly considered, and only Wu *et al* summarised whether CPGs used the GRADE approach.

Implications

Acupuncture guidelines could improve by consistently supporting recommendations with SRs, explicitly considering patients’ values and preferences, providing additional details regarding patients’ characteristics, acupuncture interventions/definition, comparators and outcomes summarised.

Despite available evidence and the wide application of acupuncture as an adjunct therapy in practice (eg, in combination with conventional medicine),^{19–22} acupuncture recommendations often do not address this question. Future guidelines should much more frequently address this issue.

The GRADE approach perceives strong recommendations supported by low or very low certainty evidence (ie, discordant recommendations) as questionable and often inappropriate.²³ Guidelines addressing acupuncture intervention should better understand the GRADE approach, include panels that support the GRADE approach’s optimal usage, and collaborate with well-trained methodologists to avoid discordant recommendations.^{24 25} Both financial and

intellectual COIs can impact panels and guideline developers' judgement and the recommendations.^{26 27} Proper management of COIs can mitigate bias related to it and increase CPGs' credibility. CPGs addressing acupuncture should report guideline' funding sources, declare and manage all guideline developers and panel members' COIs considering available literature.^{28 29}

CONCLUSION

In the past 10 years, many CPGs addressing acupuncture interventions covering various diseases and conditions exist. Although these guidelines may be as or more rigorous than many others, considerable room for improvement remains, particularly, guideline developers should better manage COIs, explicitly considering patients values and preferences and resources utilisation, using more SRs to support recommendations and avoiding discordant recommendations.

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Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request. The full dataset and statistical code will be available on reasonable request by emailing YZ.

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Supplemental material 1

Select Resource(s) to search:

Trip Medical Database
Agency for Healthcare Research and Quality (AHRQ)
National Institute for Clinical excellence (NICE)
New Zealand Guideline Group (NZGG)
Guidelines International Network (GIN)
Canadian Medical Association Clinical Practice Guidelines Database (CMACPG)
Australian clinical practice guidelines-National Health and Medical Research Council (NHMRC)
PubMed
Embase

Search strategy:

- #1 "guidelines as topic" [mesh]
- #2 "guideline" [pt]
- #3 guideline* [tiab]
- #4 guidance [tiab]
- #5 recommendation* [tiab]
- #6 consensus [tiab]
- #7 OR/#1~#6
- #8 "acupuncture therapy" [mesh]
- #9 Acup* [tiab]
- #10 acupuncture [tiab]
- #11 body needling [tiab]
- #12 acupotomy [tiab]
- #13 electro-acupuncture [tiab]
- #14 needling [tiab]

#15 thread-embedding therapy [tiab]

#16 medicine acicula [tiab]

#17 transcutaneous electrical nerve stimulation [tiab]

#18 acupressure [tiab]

#19 moxibustion,

#20 blood-letting therapy

#21 point injection

#22 acupoint paste

#23 OR/#8~#22

#24 #7 AND #23

Characteristics table								
No	Disease Classification	Title	Publication Date	Country / region	Organization/ Society that developed the guidelines	Number of acupuncture related recommendations	Type of the guideline	The health intent
1	Oncology	Management of menopausal symptoms in women with a history of breast cancer	2016	Australia	Cancer Australia	2	Comprehensive	Management
2	Oncology	The Oral Management of Oncology Patients Requiring Radiotherapy, Chemotherapy and / or Bone Marrow Transplantation	2012	UK	The Royal College of Surgeons of England / The British Society for Disability and Oral Health	1	Comprehensive	Management
3	Oncology	American Cancer Society/American Society of Clinical Oncology Breast Cancer Survivorship Care Guideline	2016	US	American Cancer Society, American Society of Clinical Oncology	2	Comprehensive	Management
4	Oncology	Complementary	2013	US	the American College of	2	Complementa	Management

		Therapies and Integrative Medicine in Lung Cancer			Chest Physicians			ry and alternative
5	Oncology	Clinical practice guidelines for the treatment of primary liver cancer with integrative traditional Chinese and Western medicine	2018	China	Chinese Integrative Therapy of Primary Liver Cancer Working Group	2		Complementa ry and Treatment alternative
6	Oncology	Clinical Practice Guidelines on the Evidence-Based Use of Integrative Therapies During and After Breast Cancer Treatment	2017	US	Society for Integrative Oncology	8		Complementa ry and Management alternative
7	Oncology	ESMO-4th ESO ESMO International Consensus Guidelines 2018 for Advanced Breast Cancer (ABC 4)	2018	European	Advanced Breast Cancer (ABC)	1		Comprehensi ve Treatment
8	Oncology	Interventions to Address Sexual Problems in People With Cancer:	2018	US	American Society of Clinical Oncology Clinical	1		Comprehensi ve Management

		American Society of Clinical Oncology Clinical Practice Guideline Adaptation of Cancer Care Ontario Guideline						
9	Oncology	Cancer-related fatigue: ESMO Clinical Practice Guidelines for 2020 diagnosis and treatment	US	ESMO Guidelines Committee	1	Comprehensive	Treatment	
10	Oncology	Prevention and Management of Chemotherapy-Induced Peripheral Neuropathy in Survivors of Adult Cancers: ASCO Guideline Update	2020	US	American Society of Clinical Oncology	1	Comprehensive	Management
11	Oncology	Systemic anticancer therapy-induced peripheral and central neurotoxicity: ESMO/EONS/EANO Clinical Practice Guidelines for	2020	European	the European Society for Medical Oncology (ESMO), the European Oncology Nursing Society (EONS) and the European Association of Neuro-Oncology (EANO).	2	Comprehensive	Management

		diagnosis, prevention, treatment and follow-up						
12	Cardiovascular diseases	Guidelines for TCM Diagnosis and Treatment of Stable Angina Pectoris of Coronary Heart Disease	2019	China	Cardiovascular branch of Chinese society of traditional Chinese Medicine	6	Complementary and alternative	Treatment
13	Musculoskeletal and connective tissue diseases	Musculoskeletal Practice Guidelines for Chronic Pain Management	2010	US	American Society of Anesthesiologists Task Force on Chronic Pain Management	1	Comprehensive	Treatment
14	Musculoskeletal and connective tissue diseases	Patellofemoral Pain	2019	US	Disability and Health From the Academy of Orthopaedic Physical Therapy of the American Physical Therapy Association	1	Comprehensive	Treatment
15	Musculoskeletal and connective tissue diseases	Osteoarthritis: physical medicine and rehabilitation—nonpharmacological management	2013	German	Abteilung für Physikalische Medizin und Rehabilitation	2	Comprehensive	Treatment
16	Musculoskeletal and connective tissue diseases	OSTEOARTHRITIS OF THE KNEE	2013	US	American Academy of Orthopaedic Surgeons	1	Comprehensive	Treatment+Prevention+Manag

	tissue diseases			Board of Directors			ement
17	Musculoskeletal and connective tissue diseases	OARSI guidelines for the non-surgical management of knee osteoarthritis	2014	US	Osteoarthritis Guidelines Development Group	1	Comprehensive Treatment
18	Musculoskeletal and connective tissue diseases	Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians	2017	US	American College of Physicians	1	Comprehensive Treatment
19	Musculoskeletal and connective tissue diseases	Korean medicine clinical practice guideline of lumbar herniated intervertebral disc in adults: An evidence based approach	2017	Korea	Korea Institute of Oriental Medicine	6	Complementary and Management alternative
20	Musculoskeletal and connective tissue diseases	Korean medicine clinical practice guideline on acupuncture for acute ankle sprains in adults: Evidence-based	2017	Korea	Korea Institute of Oriental Medicine	6	Acupuncture therapies Treatment

approach							
21	Musculoskeletal and connective tissue diseases	Non-specific Back Pain Guideline	2017	Malaysia	Kaiser Permanente Washington (KPWA) guidelines	1	Comprehensive Management
22	Musculoskeletal and connective tissue diseases	Health Care Guideline:Adult Acute and Subacute Low Back Pain Diagnosis Algorithm	2018	US	Institute for Clinical Systems Improvement	1	Comprehensive Treatment
23	Musculoskeletal and connective tissue diseases	National Clinical Guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy	2018	Denmark	Danish Health Authority (DHA)	2	Comprehensive Treatment
24	Musculoskeletal and connective tissue diseases	Acute Low Back Pain	2010	US	The University of Michigan Health System	1	Comprehensive Treatment
25	Musculoskeletal and connective tissue diseases	VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF CHRONIC MULTISYMPTOM ILLNESS	2014	US	The Veterans Affairs (VA) and Department of Defense (DoD) Evidence-Based Practice Working Group (EBPWG)	3	Comprehensive Treatment
26	Musculoskeletal	VA/DoD CLINICAL	2014	US	The Veterans Affairs (VA)	2	Comprehensive Treatment

	and connective tissue diseases	PRACTICE GUIDELINE FOR THE NON-SURGICAL MANAGEMENT OF HIP & KNEE OSTEOARTHRITIS			and Department of Defense (DoD) Evidence-Based Practice Working Group (EBPWG)		ve	
27	Musculoskeletal and connective tissue diseases	Clinical Practice Guidelines for the Management of Rotator Cuff Syndrome in the Workplace	2013	Australia	The University of New South Wales, Medicine, Rural Clinical School, Port Macquarie Campus	1	Comprehensive	Management
28	Musculoskeletal and connective tissue diseases	VA_DoD clinical practice guideline for diagnosis and treatment of low back pain	2017	US	The Veterans Affairs (VA) and Department of Defense (DoD) Evidence-Based Practice Working Group (EBPWG)	3	Comprehensive	Treatment
29	Musculoskeletal and connective tissue diseases	Clinical practice guidelines for the use of traditional Korean medicine in the treatment of patients with traffic-related injuries: An evidence-based	2018	Korea	The Korean Academy of Oriental Rehabilitation Medicine (n = 1), Korea Immuno Pharmacopuncture Association (n = 1), Korean Society of Oriental Neuropsychiatry (n = 1),	6	Complementary and alternative	Treatment

	approach				Society of Sports Korean Medicine (n = 1), Korea Institute of Oriental Medicine (n = 2), including a CPG methodology specialist, and current TKM practitioners (n = 2).			
30	Musculoskeletal Chronic Pain Disorder and connective tissue diseases	Medical Treatment Guideline	2017	US	Colorado Department of Labor and Employment, Division of Workers' Compensation	1	Comprehensive	Management
31	Diagnosis and Musculoskeletal management of psoriasis and psoriatic arthritis in adults		2010	UK	Scottish Intercollegiate Guidelines Network	1	Comprehensive	Treatment+Management
32	Musculoskeletal and connective tissue diseases	Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis	2011	US	NASS Evidence-Based Clinical Guidelines Committee	1	Comprehensive	Treatment
33	Musculoskeletal and connective tissue diseases	End-of-Life Care for People Experiencing Homelessness	2018	US	Health Resources and Services Administration (HRSA)	1	Comprehensive	Treatment
34	Musculoskeletal and connective tissue diseases	Evidence-based (GRADE approach) Korean medicine	2017	Korea	Society of Korean Medicine Rehabilitation	11	Acupuncture therapies	Treatment

		clinical practice guidelines of manual acupuncture for the treatment of shoulder pain						
35	Musculoskeletal and connective tissue diseases	Practice guidelines for pharmacists: The management of osteoarthritis	2017	Canada	the School of Pharmacy (Kielly, Davis) and the Faculty of Medicine (Davis), Memorial University St. John's, Newfoundland; and the National School of Pharmacy (Marra), University of Otago, Dunedin, New Zealand.	1	Comprehensive	Treatment+Prevention
36	Musculoskeletal and connective tissue diseases	American College of Rheumatology 2012 Recommendations for the Use of Nonpharmacologic and Pharmacologic Therapies in Osteoarthritis of the Hand, Hip, and Knee	2012	US	American College of Rheumatology (ACR)	2	Comprehensive	Treatment+Prevention
37	Musculoskeletal and connective tissue diseases	Management of chronic pain	2013	UK	The Association of British Neurologists	1	Comprehensive	Treatment+Management

	tissue diseases							
38	Musculoskeletal and connective tissue diseases	Osteoarthritis	2014	UK	the guideline development group (GDG).	1	Comprehensive	Treatment+Management
39	Musculoskeletal and connective tissue diseases	Low back pain and sciatica in over 16s: assessment and management	2016	UK	the National Institute for Health and Care Excellence	1	Comprehensive	Management
40	Musculoskeletal and connective tissue diseases	2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee	2019	US	The American College of Rheumatology i	1	Comprehensive	Treatment+Management
41	Musculoskeletal and connective tissue diseases	Best Practices for Chiropractic Management of Patients with Chronic Musculoskeletal Pain: A Clinical Practice Guideline	2020	US	NA	4	Comprehensive	Treatment+Management
42	Musculoskeletal and connective tissue diseases	Evidence-based clinical practice guidelines for	2019	China	China Association of Acupuncture and Moxibustion	10	Acupuncture therapies	Treatment

	acupuncture and moxibustion for pain after ankle sprain						
43	Musculoskeletal and connective tissue diseases	Evidence-based clinical practice guidelines for acupuncture and moxibustion pain caused by tenosynovitis	2018	China	China Association of Acupuncture and Moxibustion	15	Acupuncture therapies Treatment
44	Musculoskeletal and connective tissue diseases	Evidence-based clinical practice guidelines for acupuncture and moxibustion knee osteoarthritis	2015	China	China Association of Acupuncture and Moxibustion	8	Acupuncture therapies Treatment
45	Musculoskeletal and connective tissue diseases	Evidence-based clinical practice guidelines for acupuncture: sciatica	2018	China	China Association of Acupuncture and Moxibustion	10	Acupuncture therapies Treatment
46	Musculoskeletal and connective tissue diseases	Evidence-based clinical practice guidelines for acupuncture moxibustion treatment of scapulohumeral	2015	China	China Association of Acupuncture and Moxibustion	5	Acupuncture therapies Treatment

		periarthritis*						
47	Musculoskeletal and connective tissue diseases	Clinical practice guidelines of using acupuncture for low back pain	2016	China	China Association of Acupuncture and Moxibustion	15	Acupuncture therapies	Treatment+Prevention
48	Musculoskeletal and connective tissue diseases	Clinical practice guidelines of acupuncture-moxibustion for cervical spondylotic radiculopathy	2017	China	China Association of Acupuncture and Moxibustion	9	Acupuncture therapies	Treatment
49	Musculoskeletal and connective tissue diseases	Clinical Practice Guidelines of Traditional Chinese Medicine for Primary Osteoporosis	2012	China	China Basic Research Institute of Clinical Medicine	2	Complementary and alternative	Treatment+Prevention
50	Musculoskeletal and connective tissue diseases	TCM Orthopedics Clinical Diagnosis and Treatment Guidelines·Knee Arthritis (Knee Osteoarthritis)	2019	China	China Journal of Traditional Chinese Medicine and Pharmacy	1	Complementary and alternative	Treatment+Management
51	Musculoskeletal and connective tissue diseases	Clinical Practice Guidelines for Rehabilitation of Traditional Chinese	2020	China	Rehabilitation Medicine	3	Complementary and alternative	Treatment

		Medicine-Rheumatoid Arthritis						
52	Respiratory Diseases	Evidence-based clinical practice guidelines for acupuncture: bronchial asthma in adults	2014	China	China Association of Acupuncture and Moxibustion	6	Acupuncture therapies	Treatment
53	Disease of the circulatory system	Beyond Medications and Diet: Alternative Approaches to Lowering Blood Pressure -A Scientific Statement From the American Heart Association	2013	US	the American Heart Association	1	Comprehensive	Treatment
54	Disease of the circulatory system	2012ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease	2012	US	ACCF/AHA/ACP/AATS/PCNA/SCAI/STS	1	Comprehensive	Treatment
55	Disease of the circulatory system	Primary & Secondary Prevention of Cardiovascular	2017	Malaysia	the National Heart Association of Malaysia, Ministry of Health (MOH)	1	Comprehensive	Treatment+Prevention

					and the Academy of Medicine			
56	Disease of the circulatory system	STABLE ANGINA	2011	UK	National Clinical Guidelines Centre	1	Comprehensi ve	Treatment+Pre vention+Manag ement
57	Disease of the circulatory system	Evidence-based clinical practice guidelines for acupuncture: pain caused by varicose veins of the lower extremities (draft for approval)	2019	China	China Association of Acupuncture and Moxibustion	5	Acupuncture therapies	Treatment
58	Dermatology diseases	mangement of Atopic Eczema	2018	Malaysia	Malaysian Health Technology Assessment Section (MaHTAS)	1	Comprehensi ve	Management
59	Dermatology diseases	Guidelines of care for the management of atopic dermatitis Section 4. Prevention of disease flares and use of adjunctive therapies and approaches	2014	US	American Academy of Dermatology	1	Comprehensi ve	Management
60	Dermatology diseases	British Association of Dermatologists'	2018	UK	British Association of Dermatologists	4	Comprehensi ve	Management

		guidelines for the investigation and management of generalized pruritus in adults without an underlying dermatosis, 2018						
61	Dermatology diseases	Clinical practice guidelines of Korean medicine on acupuncture and herbal medicine for atopic dermatitis:A GRADE approach	2016	Korea	NA	2	Complementary and alternative	Treatment
62	Dermatology diseases	EDF-Atopic Eczema	2018	European	European Dermatology Forum	1	Comprehensive	Treatment
63	Dermatology diseases	pruritus	2014	European	In cooperation with the European Dermatology Forum (EDF) and the European Academy of Dermatology and Venereology (EADV)	1	Comprehensive	Treatment
64	Ear, nose, and throat disorders	Clinical Practice Guideline:Allergic Rhinitis	2015	US	American Academy of Otolaryngology	1	Comprehensive	Treatment
65	Ear, nose, and	Allergic Rhinitis and its	2010	Canada	the Department of Clinical	1	Comprehensive	Management

	throat disorders	Impact on Asthma (ARIA) guidelines: 2010 Revision			Epidemiology and Biostatistics and Medicine, McMaster University, Hamilton? ?		ve	
66	Ear, nose, and throat disorders	Evidence-based clinical practice guidelines for acupuncture and moxibustion allergic rhinitis	2015	China	China Association of Acupuncture and Moxibustion	10	Acupuncture therapies	Treatment
67	Ear, nose, and throat disorders	Evidence-based clinical practice guidelines for acupuncture: sudden deafness	2015	China	China Association of Acupuncture and Moxibustion	7	Acupuncture therapies	Treatment
68	Endocrine, nutritional and metabolic diseases	Evidence-based clinical practice guidelines for acupuncture: diabetic peripheral neuropathy	2015	China	China Association of Acupuncture and Moxibustion	4	Acupuncture therapies	Treatment
69	Ophthalmology	Evidence-based clinical practice guidelines for acupuncture and moxibustion	2019	China	China Association of Acupuncture and Moxibustion	13	Acupuncture therapies	Treatment
70	Gastrointestinal	Canadian Association	2019	Canada	Canadian Association of	1	Comprehensi	Management

	disorders	of Gastroenterology Clinical Practice Guideline for the Management of Irritable Bowel Syndrome (IBS)			Gastroenterology		ve	
71	Gastrointestinal disorders	Management of Gastroparesis	2012	US	Department of Gastroenterology	1	Comprehensi ve	Management
72	Gastrointestinal disorders	Eating Disorders: recognition and treatment	2017	UK	the National Guideline Alliance	1	Comprehensi ve	Management
73	Gastrointestinal disorders	Evidence-based clinical practice guidelines for acupuncture: chronic constipation	2014	China	China Association of Acupuncture and Moxibustion	7	Acupuncture therapies	Treatment
74	Gastrointestinal disorders	Evidence-based clinical practice guidelines for acupuncture: chronic atrophic gastritis	2015	China	China Association of Acupuncture and Moxibustion	4	Acupuncture therapies	Treatment
75	Gastrointestinal disorders	Evidence-based clinical practice guidelines for acupuncture: puffiness	2019	China	China Association of Acupuncture and Moxibustion	10	Acupuncture therapies	Treatment
76	Gastrointestinal	Evidence-based	2019	China	China Association of	7	Acupuncture	Treatment

	disorders	clinical practice guidelines for acupuncture: toothache			Acupuncture and Moxibustion		therapies	
77	Genitourinary disorders	No. 250-Recurrent Urinary Tract Infection	2015	Canada	Urogynaecology Committee	1	Comprehensive	Treatment
78	Genitourinary disorders	CUA guideline: Diagnosis and treatment of interstitial cystitis/ bladder pain syndrome	2016	Canada	Canadian Urological Association	1	Comprehensive	Treatment
79	Genitourinary disorders	Diagnosis and treatment of chronic bacterial prostatitis and chronic prostatitis/chronic pelvic pain syndrome: a consensus guideline	2014	UK	Prostate Cancer UK	1	Comprehensive	Treatment
80	Genitourinary disorders	CUA guideline: Diagnosis and treatment of interstitial cystitis/ bladder pain syndrome	2016	Canada	Canadian Urological Association	1	Comprehensive	Treatment
81	Genitourinary disorders	Recurrent Urinary Tract Infection	2017	Canada	the Urogynaecology Committee	1	Comprehensive	Treatment+Prevention
82	Genitourinary	Nocturnal enuresis:	2010	UK	National Clinical Guideline	2	Comprehensive	Prevention

	disorders	The management of bedwetting in children and young people			Centre		ve	
83	Genitourinary disorders	The management of lower urinary tract symptoms in men	2015	UK	The National Clinical Guideline Centre	1	Comprehensive	Management
84	Genitourinary disorders	Urinary incontinence in women: the management of urinary incontinence in women	2019	UK	National Collaborating Centre for Women's and Children's Health	1	Comprehensive	Treatment+Management
85	Mental health	THE MANAGEMENT OF POSTTRAUMATIC STRESS DISORDER AND ACUTE STRESS DISORDER	2017	UK	The Management of Posttraumatic Stress Disorder Work Group	1	Comprehensive	Management
86	Mental health	Clinical Practice Guideline for the Treatment of Depression Across Three Age Cohorts	2019	US	American Psychological Association	2	Comprehensive	Treatment
87	Mental health	Australian Guidelines for the Treatment of Acute Stress Disorder	2013	Australia	The Australian Psychological Society;The Royal Australian College of	1	Comprehensive	Management

		& Posttraumatic Stress Disorder.			General Practitioners; The Royal Australian and New Zealand College of Psychiatrists			
88	Mental health	Assessment and Interventions for Perinatal Depression	2018	Canada	Registered Nurses' Association of Ontario	1	Comprehensive	Management
89	Mental health	Canadian Network for Mood and Anxiety Treatments (CANMAT) 2016 Clinical Guidelines for the Management of Adults with Major Depressive Disorder:Section 5. Complementary and Alternative Medicine Treatments	2016	Canada	the Canadian Network for Mood and Anxiety Treatments (CANMAT)	1	Comprehensive	Management
90	Mental health	Supporting smoking cessation	2011	Australia	School of Public Health and Community Medicine, UNSW Australia	1	Comprehensive	Treatment+Prevention
91	Mental health	Evidence-based clinical practice guidelines for acupuncture:	2014	China	China Association of Acupuncture and Moxibustion	11	Acupuncture therapies	Treatment

		depression (revised edition)						
92	Neurological conditions	Guidelines for Diagnosing and Managing Pediatric Concussion	2014	Canada	Ontario Neurotrauma Foundation	2	Comprehensive	Management
93	Neurological conditions	Migraine and Tension Headache Guideline	2018	US	Kaiser Permanente Washington (KPWA)	2	Comprehensive	Management
94	Neurological conditions	National clinical guidelines for non-surgical treatment of patients with recent onset neck pain or cervical radiculopathy	2017	Denmark	Danish Health Authority (DHA)	2	Comprehensive	Management
95	Neurological conditions	Guidelines for Adult Stroke Rehabilitation and Recovery	2016	US	the American Heart Association/American Stroke Association	5	Comprehensive	Management
96	Neurological conditions	VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF UPPER EXTREMITY AMPUTATION REHABILITATION	2014	US	The Veterans Affairs (VA) and Department of Defense (DoD) Evidence-Based Practice Working Group (EBPWG)	1	Comprehensive	Treatment
97	Neurological conditions	Treatment of restless legs syndrome in	2016	US	the Guideline Development,	1	Comprehensive	Treatment

		adults			Dissemination, and Implementation Subcommittee of the American Academy of Neurology				
98	Neurological conditions	Complementary and Alternative Medicine for Idiopathic Parkinson's Disease: An Evidence-Based Clinical Practice Guideline	2018	Korea	the Society of Stroke on KM	8	Complementary and alternative	Treatment	
99	Neurological conditions	Clinical Practice Guidelines for Traditional Korean Medicine for Facial Palsy: an Evidence-Based Approach	2015	Korea	an expert panel (professor Yook, Woosuk University; professor Hong, Daejeon University; professor Yang, Pusan National University; and professor Noh, Semyung University) and a modulator (professor Kim; Woosuk University)	12	Complementary and alternative	Treatment	
100	Neurological conditions	European guideline for the diagnosis and treatment of insomnia	2017	European	European Sleep Research Society	1	Comprehensive	Treatment	
10	Neurological conditions	Clinical Practice	2018	Canada	The American College of	1	Comprehensive	Treatment+Pre	

1	conditions	Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU			Critical Care Medicine (ACCM)	ve	vention+Management
10 2	Neurological conditions	Practice guidelines for acupuncturists using acupuncture as an adjunctive treatment for anorexia nervosa	2015	Australia	University of Western Sydney , National Institute of Complementary Medicine, School of Nursing and Midwifery, Centre for Applied Nursing Research (CANR)	2	Acupuncture therapies Treatment
10 3	Neurological conditions	Headaches	2012	UK	The Royal College of Physicians	1	Comprehensive Treatment+Management
10 4	Neurological conditions	Dementia	2018	UK	the National Institute for Health and Care Excellence	1	Comprehensive Management
10 5	Neurological conditions	VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE 2020 PRIMARY CARE MANAGEMENT OF	2020	US	The Department of Veterans Affairs and the Department of Defense	1	Comprehensive Treatment

HEADACHE							
106	Neurological conditions	Evidence-based clinical practice guidelines for acupuncture: migraine	2014	China	China Association of Acupuncture and Moxibustion	4	Acupuncture therapies Treatment
107	Neurological conditions	Evidence-based clinical practice guidelines for acupuncture: insomnia	2014	China	China Association of Acupuncture and Moxibustion	6	Acupuncture therapies Treatment
108	Neurological conditions	Evidence-based clinical practice guidelines for acupuncture: Bell's facial paralysis (revised edition)	2014	China	China Association of Acupuncture and Moxibustion	7	Acupuncture therapies Treatment
109	Neurological conditions	Evidence-based clinical practice guidelines for acupuncture: primary trigeminal neuralgia	2015	China	China Association of Acupuncture and Moxibustion	6	Acupuncture therapies Treatment+Prevention
110	Neurological conditions	Evidence-based clinical practice guidelines for acupuncture: stroke pseudobulbar palsy (revised edition)	2014	China	China Association of Acupuncture and Moxibustion	12	Acupuncture therapies Treatment

11 1	Neurological conditions	Evidence-based clinical practice guidelines for acupuncture: hypochondriac pain	2019	China	China Association of Acupuncture and Moxibustion	9	Acupuncture therapies	Treatment
11 2	Neurological conditions	Clinical Practice Guidelines for Rehabilitation of Traditional Chinese Medicine-Stroke	2019	China	Rehabilitation Medicine	9	Complementary and alternative	Prevention
11 3	Nutrition and metabolic disorders	HPB-MOH Clinical Practice Guidelines on Obesity	2016	US	Health Promotion Board, Singapore	1	Comprehensive	Management
11 4	Nutrition and metabolic disorders	Evidence-based clinical practice guidelines for acupuncture and moxibustion for simple obesity	2015	China	China Association of Acupuncture and Moxibustion	6	Acupuncture therapies	Treatment
11 5	Obstetrics, gynecology and women's health	Management of Vulval Conditions	2014	UK	Clinical Effectiveness Group	1	Comprehensive	Management
11 6	Obstetrics, gynecology and women's health	Treatment and recommendations for homeless people with Opioid Use Disorders	2014	US	the Bureau of Primary Health Care, Health Resources and Services Administration, U.S.	1	Comprehensive	Treatment

Department of Health and Human Services.								
117	Obstetrics, gynecology and women's health	WHO recommendations for augmentation of labour	2014	International	WHO	1	Comprehensive	Management
118	Obstetrics, gynecology and women's health	Epilepsy in Pregnancy	2016	UK	Royal College of Obstetricians and Gynaecologists	1	Comprehensive	Treatment
119	Obstetrics, gynecology and women's health	Physiologic Basis of Pain in Labour and Delivery: An Evidence-Based Approach to its Management	2018	Australia	School of Public Health, Australia	1	Comprehensive	Management
120	Obstetrics, gynecology and women's health	Primary Dysmenorrhea Consensus Guideline	2017	Canada	1: CLINICAL PRACTICE GYNAECOLOGY COMMITTEE 2: CANPAGO COMMITTEE	1	Comprehensive	Treatment
121	Obstetrics, gynecology and women's health	Evidence-based clinical practice guidelines for acupuncture: primary dysmenorrhea	2014	China	China Association of Acupuncture and Moxibustion	9	Acupuncture therapies	Treatment+Prevention
122	Periprocedural care	Prevention of Acute Nausea and Vomiting	2013	Canada	Pediatric Oncology Group of Ontario	1	Comprehensive	Prevention

		due to Antineoplastic Medication in Pediatric Cancer Patients					
12 3	Periprocedural care	Guidelines on the Prevention of Post-operative Vomiting in Children	2016	UK	The Association of Paediatric Anaesthetists of Great Britain & Ireland	1	Comprehensive Treatment
12 4	Periprocedural care	Management of sore throat and indications for tonsillectomy	2010	UK	Ninewells Hospital and (Chair) Tayside Children's Hospital	1	Comprehensive Management
12 5	Periprocedural care	Guidelines for enhanced recovery after lung surgery: recommendations of the Enhanced Recovery After Surgery (ERASVR) Society and the European Society of Thoracic Surgeons (ESTS)	2019	UK	recommendations of the Enhanced Recovery After Surgery (ERASVR)	1	Comprehensive Management
12 6	Periprocedural care	Evidence-based clinical practice guidelines for acupuncture and	2019	China	China Association of Acupuncture and Moxibustion	11	Acupuncture therapies Treatment

moxibustion							
127	Pregnancy or intended pregnancy	Performing the embryo transfer: a guideline.	2017	US	American Society for Reproductive Medicine - Nonprofit Organization	2	Comprehensive Treatment
128	Pregnancy or intended pregnancy	The Management of Nausea and Vomiting of Pregnancy and Hyperemesis Gravidarum	2016	UK	royal college of obstetricians and gynaecologists	1	Comprehensive Treatment
129	Pregnancy or intended pregnancy	WHO consolidated guideline on self-care interventions for health sexual and reproductive health and rights	2019	International	WHO	2	Comprehensive Prevention
130	Pregnancy or intended pregnancy	WHO recommendations on antenatal care for a positive pregnancy experience	2016	International	WHO	2	Comprehensive Management
131	Pregnancy or intended pregnancy	Dystocia (Primiparous women with lack of progress)	2015	Denmark	Danish Society of Obstetrics and Gynecology)	3	Comprehensive Treatment
132	Pregnancy or intended pregnancy	Intrapartum Care Care of healthy women and their babies during	2017	UK	the National Institute for Health and Care Excellence	4	Comprehensive Management

		childbirth					
13	Dermatology	Evidence-based					
3	diseases	clinical practice					
		guidelines for	2014	China	China Association of	9	Acupuncture
		acupuncture: herpes			Acupuncture and		therapies
		zoster			Moxibustion		Treatment

Supplemental material 3

Table A. Major drawback of application and editorial independence domain

Variable	N (%)
<i>Consider resources utilization</i>	
Reported	52 (39.1)
Not reported	81 (60.9)
<i>Considered patients' values and preferences</i>	
Explicitly reported with details	14 (10.5)
Considered without details	58 (43.6)
Not reported	61 (45.9)
<i>Reporting conflicts of interest</i>	
Reported with details	10 (7.5)
Reported without details	62 (46.6)
Not reported	61 (45.9)

Table B. The rationale for acupuncture recommendations

Factors*	N (%)			P
	Comprehensive CPGs	T&CM CPGs	Acupuncture-specific CPGs	
Treatment effect	59(52.2)	30(45.5)	197(77.6)	<0.001
Certainty of evidence	41(36.3)	0(0.0)	1(0.4)	
Patients' values and preferences	10(8.8)	1(1.5)	27(10.6)	
Cost	2(1.8)	0(0.0)	24(9.4)	
Feasibility	5(4.4)	0(0.0)	0(0.0)	

* One recommendation can contribute to more than one category.

CPG: clinical practice guidelines, T&CM: traditional and complementary medicine.

Table C. Patient characteristics in acupuncture recommendations

Factors	N (%)			P
	Comprehensive CPGs	T&CM CPGs	Acupuncture-specific CPGs	
<i>The severity of the disease</i>				
Reported	5(4.4)	0(0.0)	11(4.3)	0.274
Not reported	108(95.6)	66(100.0)	243(95.7)	

Stage of the disease

Reported	17(15.0)	3(4.5)	101(39.8)	<0.001
Not reported	96(85.0)	63(95.5)	153(60.2)	

CPG: clinical practice guidelines, T&CM: traditional and complementary medicine.

Table D. Comparators in acupuncture recommendations

Comparators in acupuncture recommendations*	N (%)			P
	Comprehensive CPGs	T & CM CPGs	Acupuncture-specific CPGs	
Conventional medicine	5(4.4)	8(12.1)	32(12.6)	<0.001
Traditional Chinese medicine	0(0.0)	2(3.0)	4(1.6)	
Non-pharmacological therapy	8(7.1)	22(33.3)	25(9.8)	
No acupuncture	12(10.6)	1(1.5)	2(0.8)	
Not reported	88(77.9)	34(51.5)	201(79.1)	

* One recommendation can contribute to more than one category.

CPG: clinical practice guidelines, T&CM: traditional and complementary medicine.

Table E. Outcome summarized to inform recommendations

Outcome summarized in recommendations *	N (%)			P
	Comprehensive CPGs	T & CM CPGs	Acupuncture-specific CPGs	
Symptoms	63(55.8)	26(39.4)	164(64.6)	<0.001
Function	20(17.7)	9(13.6)	57(22.4)	
Surrogate outcomes	6(5.3)	0(0.0)	6(2.4)	
Quality of Life	12(10.6)	0(0.0)	17(6.7)	
Mortality	1(0.9)	0(0.0)	0(0.0)	
Major morbid events	1(0.9)	0(0.0)	0(0.0)	
Not reported	43(38.1)	38(57.6)	49(19.3)	

* One recommendation can contribute to more than one category.

CPG: clinical practice guidelines, T&CM: traditional and complementary medicine.