


Traditional, complementary and integrative healthcare: global stakeholder perspective on WHO's current and future strategy

Tido von Schoen-Angerer ^{1,2}, Raj Kumar Manchanda,³ Iva Lloyd,⁴ Jon Wardle,⁵ Janka Szöke,¹ Iracema Benevides,⁶ Natalia Sofia Aldana Martinez,⁷ Festus Tolo,⁸ Ton Nicolai,⁹ Cristal Skaling-Klopstock,¹⁰ Tabatha Parker,¹¹ Dwi Linna Suswardany,^{12,13} Robbert van Haselen,¹⁴ Jianping Liu¹⁵

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ABSTRACT

As the 'WHO Traditional Medicine Strategy: 2014–2023' is entering its final phase, reflection is warranted on progress and the focus for a new strategy. We used WHO documentation to analyse progress across the objectives of the current strategy, adding the role of traditional, complementary and integrative healthcare (TCIH) to address specific diseases as a dimension absent in the current strategy. Our analysis concludes on five areas. First, TCIH research is increasing but is not commensurate with TCIH use. TCIH research needs prioritisation and increased funding in national research policies and programmes. Second, WHO guidance for training and practice provides useful minimum standards but regulation of TCIH practitioners also need to reflect the different nature of formal and informal practices. Third, there has been progress in the regulation of herbal medicines but TCIH products of other origin still need addressing. A risk-based regulatory approach for the full-range of TCIH products seems appropriate and WHO should provide guidance in this regard. Fourth, the potential of TCIH to help address specific diseases is often overlooked. The development of disease strategies would benefit from considering the evidence and inclusion of TCIH practices, as appropriate. Fifth, inclusion of TCIH in national health policies differs between countries, with some integrating TCIH practices and others seeking to restrict them. We encourage a positive framework in all countries that enshrines the role of TCIH in the achievement of universal health coverage. Finally, we encourage seeking the input of stakeholders in the development of the new WHO Traditional Medicine Strategy.

INTRODUCTION

The essential role of traditional, complementary and integrative healthcare (TCIH) in achieving health and well-being and universal health coverage (UHC) is stated in the *WHO Traditional Medicine Strategy: 2014–2023* (WHO TM Strategy) and in the *Astana Declaration on*

SUMMARY BOX

- ⇒ WHO has started drafting a new 10-year traditional medicine strategy that will be presented to the World Health Assembly for approval in 2025.
- ⇒ There is a time window for stakeholders from traditional, complementary and integrative healthcare (TCIH) to reflect and provide input into the new WHO strategy.
- ⇒ Our analysis draws attention to several critical areas: research; regulation of products, practitioners and practices; harnessing of TCIH approaches for health promotion, prevention and treatment; and integration into health systems.
- ⇒ The authors encourage considering TCIH as a key resource in the reorientation of healthcare systems from a disease to a person-centred model.

Primary Health Care, with its corresponding operational framework.^{1 2} The role of TCIH for the achievement of health and well-being for all was reemphasised at the recent WHO Traditional Medicine Summit in India.³

As the World Health Assembly has decided to extend the current WHO TM Strategy until 2025 and for WHO to develop a new 10-year strategy,⁴ reflection on progress and the way forward is needed. To date, much of the focus on the implementation of the WHO TM Strategy has focused on the progress made by its member states,⁵ with less focus on stakeholders such as professional and patient organisations, educational institutions, researchers and practitioners. This might be attributed to the lack of clear reporting mechanism for stakeholders so far. We aim to assess progress in the WHO TM Strategy implementation, and to delineate a TCIH stakeholder perspective for the next WHO TM Strategy.



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For numbered affiliations see end of article.

Correspondence to

Dr Tido von Schoen-Angerer; tido.von.schoenangerer@gmail.com

Box 1 Excerpt from ‘The People’s Declaration for Traditional, Complementary and Integrative Healthcare’, available online (<https://tcih.org/>)

The healthcare we desire

- ⇒ Focuses on the whole person, including physical, mental, social and spiritual dimensions.
- ⇒ Is patient-centred and supports self-healing and health creation.
- ⇒ Is participative and respects individual choices.
- ⇒ Is evidence-based by integrating clinical experience and patient values with the best available research information.
- ⇒ Respects cultural diversity and regional differences.
- ⇒ Is an integral part of community and planetary health.
- ⇒ Uses natural and sustainable resources that are respectful of the health of our planet.
- ⇒ Integrates traditional, complementary and biomedical practices in a supportive and collaborative manner.

Call to action

All countries

- ⇒ Ensure full access to traditional, complementary and integrative healthcare (TCIH) as part of the right to health for all.
- ⇒ Include TCIH into national health systems.
- ⇒ Provide accreditation of TCIH healthcare professionals in accordance with international training standards to ensure high-quality care.
- ⇒ Ensure access and safety of TCIH medicines through specific regulatory pathways.
- ⇒ Fund research on TCIH and disseminate reliable information on TCIH to the public.

All healthcare professionals

- ⇒ Foster respectful collaboration between all healthcare professions towards achieving a person-centred and holistic approach to healthcare.

All media and publications

- ⇒ Ensure accurate and fair reporting on TCIH.

This paper is written from the perspective of the ‘People’s Declaration on Traditional, Complementary and Integrative Healthcare’ (<https://tcih.org/>), a worldwide coalition of over 300 professional and patient organisations, research centres and educational institutions (the authors are cofounders of this coalition). The coalition unites around the TCIH Declaration (see box 1 for highlights from the Declaration) and calls for respectful collaboration between traditional, complementary and biomedical practices.

Various terminologies are used in this field. WHO has defined ‘traditional medicine’ and ‘complementary medicine’ and merged these terms as T&CM.¹ The WHO also uses the term ‘traditional, complementary and integrative medicine’ but has not yet defined ‘integrative medicine’ nor the broader umbrella term.⁶ For the purpose of this paper, we use the more inclusive term ‘traditional, complementary and integrative healthcare’ (TCIH) to refer to the respectful collaboration between various systems of healthcare and their health workers with the aim of offering a person-centred and holistic approach to health.

In this paper, we analyse progress and discuss future perspectives of the following three objectives of the WHO TM Strategy: research; regulation of TCIH practices, practitioners and products (we separate product regulation for convenience of the analysis); and integration into health systems to achieve UHC.¹ We also reflect on the contribution of TCIH to address specific health challenges, an area that is missing in the current TM strategy. The scope of this paper includes traditional and complementary practices, that are or could suitably be part of regulated healthcare.

Progress in the implementation of the WHO TM Strategy was assessed based on the WHO’s 2019 and 2022 progress reports,^{7 8} WHO’s implementation report of the TM strategy,⁹ and the WHO’s T&CM publications since 2014, as available from its website. All identified outcomes and deliverables (publications, expert meetings) were plotted against the policy areas noted earlier and summarised in table 1. Progress at country level was drawn from the 2019 WHO Global Report on Traditional and Complementary Medicine, which is based on a country survey conducted in 2018, that is, halfway through the implementation of the 2014–2023 TM strategy⁵; key findings from this detailed survey are given in table 1.

POLICY PERSPECTIVE 1: INCREASING THE EVIDENCE BASE FOR TCIH

Findings

Countries report that the most common challenge with regard to implementing the WHO TM Strategy was insufficient research data.⁵ Seventy-five countries acknowledged having national research centres for TCIH and 12 reported providing public funding to TCIH research.⁵ In a major development, WHO and the government of India launched a new WHO Global Centre for Traditional Medicine in June 2022. The centre is still being set up in Jamnagar, India and will have a focus on evidence and learning; data and analytics; sustainability and equity; innovation and technology.¹⁰

Discussion

Research and evidence to support healthcare decisions is critical.

While there is a growing body of research on TCIH as indicated by over 26 000 clinical trials on complementary therapies in the Cochrane Central database (MeSH term search on 13 September 2023) and 975 Cochrane complementary medicine-related reviews,¹¹ the scope of the available data is not commensurate with the widespread TCIH use, nor its complexity and diversity.

There is a striking contradiction in the sense that various countries that emphasise the need for more research, fail to invest in the required research.

Another challenge is research methodology. Most TCIH practices are complex systems of theory and practice with a long history of established use.¹² While the

Table 1 Implementation of WHO Traditional Medicine Strategy 2014–2023, based on WHO reporting^{5 7 8}

Policy area	Objective in WHO traditional medicine strategy	WHO implementation ^{7 8}	Country implementation as of 2018 ⁵
Increasing the evidence base	1: To build the knowledge base for active management of traditional and complementary medicine through appropriate national policies	WHO Global Centre for Traditional Medicine in India launched in 2022. WHO guidance document on clinical research in traditional medicine: under preparation. Global report on T&CM implementation (2019)	75 countries have national research institutes for T&CM. 12 countries responded they provide public research funding for T&CM
Regulation of practitioners and practice	2: To strengthen quality assurance, safety, proper use and effectiveness of T&CM by regulating T&CM products, practices and practitioners	Benchmarks for training in Unani (2022), Ayurveda (2022), Tuina (2021), acupuncture (2021), anthroposophic medicine (2023), in preparation for Tibetan medicine, traditional Chinese medicine, Yoga. Benchmarks for practice in acupuncture (2021), Ayurveda (2022), Tuina (2022), Unani (2022), in preparation for cupping, Nuad Thai, traditional Chinese medicine	78 countries regulate T&CM providers
Regulation of products	2: To strengthen quality assurance, safety, proper use and effectiveness of T&CM by regulating T&CM products, practices and practitioners	Guidelines on selection of marker substances for quality control of herbal medicines (2017); guidelines on herbal processing practices (2018); guidelines on good manufacturing practices for manufacture of herbal medicines (2018), key technical issues of herbal medicines with reference to interaction with other medicines (2021). International herbal pharmacopoeia: under preparation. International Regulatory Cooperation for Herbal Medicines (IRCH): ongoing	124 countries had laws or regulations on herbal medicines (+8 since 2012); 35 of these had exclusive regulations for herbal medicines. 47 countries participate in the IRCH as of 2022
Contribution of TCIH to addressing specific health challenges	N/A	WHO expert meeting on traditional Chinese medicine for COVID-19	Not part of WHO reporting so far
Inclusion of TCIH to achieving universal health coverage	3: To promote universal health coverage by integrating T&CM services into healthcare service delivery and self-healthcare	Regional framework for harnessing traditional and complementary medicine for achieving health and well-being in the Western Pacific (2022). Models for T&CM in primary healthcare (2018). Global report on T&CM implementation. Framework for integration of T&CM into health systems: in preparation. Standard terminology on traditional Chinese medicine (2022). Terminologies ongoing for Ayurveda, Siddha, Unani medicine. Inclusion of chapter on traditional medicine in ICD-11. 2 indicators on T&CM in WHO's Global Reference List of 100 Core Health Indicators	13 countries responded having national plan for integrating T&CM into National Health Service delivery

TCIH, traditional, complementary and integrative healthcare; T&CM, traditional medicine and complementary medicine.

number of therapies, products and indications to study in TCIH can be daunting—with each TCIH system (eg, anthroposophic medicine, Ayurveda or Naturopathy) potentially including a wide variety and number of therapies and products¹³—choosing a research design that accurately reflects the specific TCIH practice can be challenging. Research on acupuncture, as an example, require consideration of various issues—many of which are not factored into standard research protocols¹⁴:

- Complexity and variability of the intervention, for example, different acupuncture location methods, needle manipulation techniques, number of treatment sessions.
- Individualised nature of treatment prescription, and use as part of combination of treatments
- Importance of practitioner expertise.

- Contextual factors such as the patient–practitioner interaction and patient expectations.
- Adequate controls, that is, sham acupuncture as a placebo can itself have therapeutic effects.

Guidance has been developed to address these challenges for acupuncture trials¹⁵ and efforts are made in identifying research designs adapted to the specific nature of TCIH.¹⁶

Proposed actions

Increasing the evidence base for TCIH and making results widely available will require the prioritisation and funding in national and global research policies and programmes. Such prioritisation is needed to inform policy and the implementation of safe and effective TCIH interventions. WHO guidance on research designs

is needed, reflecting the complexity and diversity of practices and products.

POLICY PERSPECTIVE 2: REGULATION OF HEALTH PRACTITIONERS AND PRACTICES

Findings

TCIH is widely used around the world with 170 of the 194 WHO member states acknowledging its use. Yet as of 2018 (no newer information available), only 78 countries indicated that they regulate T&CM practitioners.⁵ Categories of practitioners most commonly regulated are from indigenous, traditional medicine; acupuncture; and chiropractic. WHO's support for regulation includes the publication of eight benchmarks for training and seven benchmarks for practice since 2014 (see [table 1](#)).

Discussion

Regulation of health practitioners and practices is recognised as an important basis for ensuring quality, safety and effectiveness of health services.¹⁷ Regulation ensures accountability, which generates trust and legitimacy. This is also important in contexts where the position of TCIH is threatened within the predominant biomedical health-care system.¹⁸

The above figures on the number of countries regulating TCIH practitioners may be an underestimation: for example, only eight member states reported regulating Naturopathy,⁵ while the World Naturopathic Federation's more focused methodology identified 34,¹⁹ suggesting that in addition to countries, professional organisations and other relevant stakeholders should also be surveyed for such reports.

Regulation of TCIH practitioners can also have unintended consequences. It has been argued that regulation subjugates TCIH to the dominant biomedical system in which these practices will always be considered as inferior.¹⁸ Standardisation of training and practices may threaten the essence of indigenous practices that are passed on informally from generation to generation and that are living and dynamic in character.¹⁸

The way forward needs to be nuanced. First, policy-makers, consumers and TCIH practitioners generally support regulation, even if some TCIH practitioners consider self-regulation to be adequate, a view not shared by consumers.¹⁷ WHO benchmarking documents thus continue to be of interest for more formalised TCIH practices. As already the case, compiling benchmarking documents for TCIH training and practices should be a collaborative process between the concerned practitioner organisations, educational institutions and the WHO/regulator. Practitioners can provide insight into education outcomes necessary for the profession, help collating the safety, effectiveness, economics data and play a significant role in regulating practices.¹⁹

Second, regulation should be part of a broader policy framework for TCIH that also defines and protects indigenous practices. This may include, among others, the

protection of indigenous practices, including from unfair use and misappropriation; safety that includes active negotiation of paradigm-specific risk conceptions²⁰; appropriate promotion of practice; and sustainable use of plant and animal species.

Proposed actions

WHO might develop model policies for the regulation of TCIH practitioners and practices, taking into account the distinct nature of formal and informal practices. Countries are encouraged to evaluate and recognise WHO benchmark documents as minimum standards, as relevant for their national context.

POLICY PERSPECTIVE 3: REGULATION OF HEALTH PRODUCTS

Findings

WHO has so far focused on herbal medicines by establishing forums for regulators such as the International Regulatory Cooperation on Herbal Medicine, and developing guidelines on herbal processing, quality control and production, notably the preparation of an international herbal pharmacopoeia (see [table 1](#)). Thirty-five countries reported having specific regulatory pathways for herbal products (the most widely regulated form of TCIH products); this could be an under-reporting as some countries may have specific provisions for TCIH products under the same regulation.⁵

Discussion

The regulation of TCIH health products plays an important role as they are extensively used, including as a form of 'over-the-counter' self-health care without practitioner oversight and this can therefore impart both significant benefits as well as potential risks.

WHO has so far addressed herbal products and has hardly addressed regulation of other types of TCIH products, such as those of mineral or animal origin,¹ nor has it provided guidance on specific registration approaches for TCIH products.

A specific, risk-based approach seems well suited for TCIH products, tailoring regulatory requirements to the intended use and history of use, safety and effectiveness, ensuring rigorous assessment for high-risk products as well as indication claims, while always ensuring quality. Recognising the longstanding history of use and safety profile of many TCIH products, countries such as Switzerland, Germany, Canada and Australia provide specific pathways for TCIH products, ensuring quality, safety and access.^{21–23}

From the perspective of planetary health, TCIH products have potential advantages and disadvantages. Shifting even modestly the prescribing of biomedical pharmaceuticals to TCIH products could reduce carbon emission and pollution from biomedical pharmaceuticals.²⁴ However, unless produced sustainably and in full respect of the Convention on Biological Diversity, including the Convention's Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of

Benefits,²⁵ TCIH products can be a threat to endangered plants and wild animals.²⁶

Proposed actions

WHO should address regulatory issues for all types of TCIH products, not only herbal products. Risk-based regulatory pathways for the full-range of TCIH products should be encouraged in all countries. WHO can provide relevant policy guidance on how to establish such regulations, taking into account the specific efficacy, safety and accessibility considerations of TCIH products.

POLICY PERSPECTIVE 4: CONTRIBUTION OF TCIH IN ADDRESSING SPECIFIC HEALTH CHALLENGES

Findings

Despite their potential and sometimes risks, WHO has not yet issued specific reviews or guidance as to where TCIH interventions may be most useful and how to integrate evidence-based TCIH interventions in disease prevention and management—this was simply not part of the current TM strategy. A notable exception was COVID-19, where WHO and some member countries reacted to the high interest and use of TCIH.²⁷ WHO issued a report on traditional Chinese medicine (TCM) in COVID-19 and in China, for example, national guidelines for TCM in COVID-19 were issued and several herbal products approved for use in COVID-19.

Discussion

The potential of TCIH to help address global health challenges such as non-communicable diseases (NCDs), cancer and antimicrobial resistance (AMR) need to be actively considered and existing evidence and experience taken into account. Lifestyle management and developing self-health care literacy and capacity form a central focus of many TCIH systems (eg, Ayurveda, Yoga and Naturopathy).^{19 28 29} An emerging research base supports greater inclusion of TCIH, with numerous studies illustrating the role of TCIH approaches in addressing NCDs—for example, the benefit of acupuncture and moxibustion for smoking cessation.³⁰

Integrative oncology, that is, using TCIH practices alongside conventional cancer treatments optimises health, and improves quality of life, and clinical outcomes.^{31 32} This may involve integrating a specific therapy based on its evidence; integrating practices based on the patients' health belief models and cultural-religious background³³; or integrating a whole TCIH system, such as anthroposophic medicine, into cancer care.³⁴

TCIH practitioners have also been active in addressing the global AMR challenge by reducing reliance on antibiotics. It has been shown that physicians with additional training in TCIH prescribe fewer antibiotics—largely due to encouraging more self-health care practices and TCIH practices—for uncomplicated infections for similar populations than their conventionally practising colleagues, without adversely affecting outcomes.^{35 36} On the other hand, patient preferences for traditional medicine can be

a contributing element to delaying or avoiding adequate treatment for tuberculosis³⁷ and malaria,³⁸ illustrating the need for effective integration of, and collaboration between, the different approaches.

Proposed actions

WHO should identify and review the potential of TCIH for health promotion, prevention and disease management, and encourage member states to do the same.

POLICY PERSPECTIVE 5: INCLUSION OF TCIH TO ACHIEVE UHC

Findings

The 37 countries of the WHO Western Pacific Region have agreed to define and enshrine in national health policies the role of T&CM in the achievement of well-being and health, and then incrementally establish or strengthen other key components such as ensuring quality, safety and effectiveness of health-care services, increasing coverage and equitable access to services, and enhancing research, evidence generation and innovation over time'.³⁹ The addition of a chapter on TM in the International Classification of Diseases (ICD-11) now allows TCIH data collection as part of routine health information systems.

Discussion

A positive health framework is needed to harness the contribution of TCIH to achieve UHC. India presents an example of a country proactively working towards integration of biomedical and TCIH practices (referred to in India as Ayush-Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa-Rig-pa and Homeopathy) in UHC. The Ayush system includes its own ministry which is responsible for standards and guidelines for regulation of educators, research facilities, products and health services for each recognised system. Historically, each Ayush system and biomedicine worked largely in silos, with encouragement of integration now seen as a national policy priority—the Indian National Health Policy 2017 explicitly calls for mainstreaming the potential of Ayush systems in all aspects of life as part of promotion of good health.⁴⁰ Despite a policy of revitalisation of local health traditions and appropriate inclusion within Ayush, local, indigenous practices are in reality often not included and risk being side-lined.^{18 41}

Although the WHO TM Strategy calls for increased consideration of TCIH integration, some countries are becoming more restrictive. The Spanish Ministry of Health and Ministry of Science, for example, published a 'plan for the protection of health against the pseudo-therapies' (Plan para la protección de la salud frente a las pseudoterapias) in 2018 and have since listed 73 therapies as pseudo-therapies, while 67 are under evaluation, including acupuncture and Ayurveda.⁴²

In this context of variable support, approaches and mechanisms for integration, guidance on models of appropriate TCIH integration into health systems, as under preparation by WHO, will be useful in the coming

years. Such guidance could help countries with achieving an integration that ensures safety and effectiveness for the public, avoiding the possible extremes of banning or permitting all TCIH practices.

Access issues should also be considered. Traditional medicine has long been considered a ‘gap filler’ for UHC in low-income countries where it is widely available and accessible and biomedical care is scarce.⁴³ However, a review of TCIH use in sub-Saharan Africa suggests that demand for TCIH increases rather than decreases as access to biomedical care improves, suggesting preferences that go beyond availability and affordability.⁴⁴ Many higher-income countries do not include TCIH in their health coverage; in these settings, health seeking for TCIH appears to be associated with higher education but not higher income, suggesting that people seek TCIH against significant economic and other barriers.⁴⁵ Including TCIH into health coverage is important to ensure equitable access and counterbalance the risk of unfair commercialisation in this sector.⁴⁶

As part of a positive policy framework, a positive health and well-being model that extends beyond the absence of disease model is also important, because factors such as resilience, sense of purpose, meaningfulness and self-management are increasingly recognised as central aspects of health.⁴⁷ TCIH can contribute to a shift from disease-oriented to person- and community-oriented healthcare³⁹ because traditional and complementary systems typically conceptualise health positively as the ability to balance and actively restore wholeness.^{12 48}

Proposed actions

The TCIH policy framework from the Western Pacific region³⁹ may provide a potential blueprint for integration and for collaboration among all healthcare professions. WHO guidance on TCIH integration into health systems will help countries identify their own preferred model of integration. The inclusion of evidence-based TCIH interventions into health coverage is needed to ensure equitable access. And maybe most importantly, a reorientation of healthcare systems from a disease—to a person-centred model can rely on TCIH approaches as a key component in this reorientation.⁴⁹

CONCLUSION

TCIH presents a significant opportunity to support the achievement of UHC. Increased public investment in TCIH research is needed, as well as greater collaboration between governments and TCIH professionals in developing TCIH strategies to ensure adequate regulation of, and access to, TCIH practitioners, practices and products. TCIH represents a valuable but often untapped resource to address a range of specific health problems. Respectful collaboration between all healthcare professions and partnerships between different actors will be key to achieve UHC, as called for in the Astana Declaration and in the TCIH Declaration.

Taking into account global changes, progress and lessons learnt in TCIH over the last decade, a new and ambitious WHO TM Strategy and plan of action needs to be formulated. We encourage that TCIH stakeholders are actively consulted in the process.

Author affiliations

- ¹International Federation of Anthroposophic Medical Associations, Brussels, Belgium
- ²Division of General Pediatrics, Geneva University Hospitals, Geneva, Switzerland
- ³Health and Family Welfare Department, Government of Delhi, Directorate of Ayush, Delhi, India
- ⁴World Naturopathic Federation, Toronto, Ontario, Canada
- ⁵National Centre for Naturopathic Medicine, Southern Cross University, Lismore, New South Wales, Australia
- ⁶RedePICS Brasil, Brazilian Network of Integrative and Complementary Practices in Healthcare, Belo Horizonte, Brazil
- ⁷Traditional Complementary and Integrative Medicine Network for the Americas, Bogotá, Colombia
- ⁸Keny Medical Research Institute, Nairobi, Kenya
- ⁹EUROCAM, Brussels, Belgium
- ¹⁰European Federation of Homeopathic Patients' Associations, Amsterdam, The Netherlands
- ¹¹Academy of Integrated Health and Medicine, La Jolla, California, USA
- ¹²Indonesian Public Health Association, Jakarta, Indonesia
- ¹³Department of Public Health, University of Muhammadiyah Surakarta, Jakarta, Indonesia
- ¹⁴World Integrated Medicine Forum, London, UK
- ¹⁵Center for Evidence-Based Chinese Medicine, Beijing University of Chinese Medicine, Beijing, China

Twitter Tabatha Parker @drtabthaparker

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ORCID iD

Tido von Schoen-Angerer <http://orcid.org/0000-0003-3601-7480>

REFERENCES

- 1 WHO traditional medicine strategy: 2014–2023. Geneva World Health Organization; 2013.
- 2 United Nations Childrens Fund. Declaration of Astana: global conference on primary health care: Astana, Kazakhstan, 25 and 26 October 2018. Geneva World Health Organization; 2018.
- 3 WHO traditional medicine global summit 2023. Meeting report: Gujarat declaration. Geneva World Health Organization; 2023.
- 4 World Health Organization. Extension of the WHO traditional medicine strategy: 2014–2023 to 2025. Geneva Seventy-sixth World Health Assembly; 2023.
- 5 WHO global report on traditional and complementary medicine 2019. Geneva World Health Organization; 2019.

- 6 Hu X-Y, Lorenc A, Kemper K, *et al.* Defining integrative medicine in narrative and systematic reviews: a suggested checklist for reporting. *Eur J Integr Med* 2015;7:76–84.
- 7 World Health Organization. Updates and future reporting, traditional medicine, report by the director-general. A75/2. Geneva Seventy-fifth World Health Assembly; 2022.
- 8 World Health Organization. Progress reports by the director-general. A72/59. Geneva Seventy-second World Health Assembly; 2019.
- 9 Global strategies and plans of action that are scheduled to expire within one year. WHO traditional medicine strategy: 2014–2023. Eb152/37. Geneva WHO Executive Board 152nd session; 2022.
- 10 Li H, Tomita N, Doi H, *et al.* Preliminary research of the effectiveness of acupuncture (spoon needle) on stress relief of Japanese expatriates in a developing country Myanmar: a retrospective study. *Medicine (Baltimore)* 2023;102:e35085.
- 11 Cochrane Complementary Medicine. Cochrane reviews and protocols related to complementary medicine 2022; 2022. Available: <https://cam.cochrane.org/cochrane-reviews-and-protocols-related-complementary-medicine>
- 12 Kessler C, Michalsen A. The role of whole medical systems in global medicine. *Forsch Komplementmed* 2012;19:65–6.
- 13 Kienle GS, Ben-Arye E, Berger B, *et al.* Contributing to global health: development of a consensus-based whole systems research strategy for anthroposophic medicine. *Evid Based Complement Alternat Med* 2019;2019:3706143.
- 14 Fei Y-T, Cao H-J, Xia R-Y, *et al.* Methodological challenges in design and conduct of randomised controlled trials in acupuncture. *BMJ* 2022;376:e064345.
- 15 Zhang Y-Q, Jiao R-M, Witt CM, *et al.* How to design high quality acupuncture trials—a consensus informed by evidence. *BMJ* 2022;376:e067476.
- 16 de Almeida Andrade F, Schlechta Portella CF. Research methods in complementary and alternative medicine: an integrative review. *J Integr Med* 2018;16:6–13.
- 17 Carè J, Steel A, Wardle J. Stakeholder attitudes to the regulation of traditional and complementary medicine professions: a systematic review. *Hum Resour Health* 2021;19:42.
- 18 Ijaz N, Boon H. Statutory regulation of traditional medicine practitioners and practices: the need for distinct policy making guidelines. *J Altern Complement Med* 2018;24:307–13.
- 19 Lloyd I, Steel A, Wardle J. Naturopathy, practice, effectiveness, economics & safety. Toronto World Naturopathic Federation; 2021.
- 20 Ijaz N. Paradigm-specific risk conceptions, patient safety, and the regulation of traditional and complementary medicine practitioners: the case of homeopathy in Ontario, Canada. *Front Sociol* 2019;4:89.
- 21 Knoess W, Wiesner J. The globalization of traditional medicines: perspectives related to the European Union regulatory environment. *Engineering* 2019;5:22–31.
- 22 Natural and non-prescription health products directorate. Canada Ministry of Health; 2022. Available: <https://www.canada.ca/en/health-canada/corporate/about-health-canada/branches-agencies/health-products-food-branch/natural-non-prescription-health-products-directorate.html>
- 23 Australian Government, Department of Health and Aged Care, Therapeutic Goods Administration. Regulation of complementary medicines in Australia. 2013. Available: <https://www.tga.gov.au/overview-regulation-complementary-medicines-australia>
- 24 Wilkinson JL, Boxall ABA, Kolpin DW, *et al.* Pharmaceutical pollution of the world's rivers. In: *Proceedings of the National Academy of Sciences*. 2022: e2113947119.
- 25 Heinrich M, Scotti F, Andrade-Cetto A, *et al.* Access and benefit sharing under the Nagoya protocol—quo Vadis? Six Latin American case studies assessing opportunities and risk. *Front Pharmacol* 2020;11:765.
- 26 Alves RRN, Borges AKM, Barboza RRD, *et al.* A global analysis of ecological and evolutionary drivers of the use of wild mammals in traditional medicine. *Mamm Rev* 2021;51:293–306.
- 27 Kim T-H, Kang JW, Jeon S-R, *et al.* Use of traditional, complementary and integrative medicine during the COVID-19 pandemic: a systematic review and meta-analysis. *Front Med (Lausanne)* 2022;9:884573.
- 28 Chu P, Gotink RA, Yeh GY, *et al.* The effectiveness of yoga in modifying risk factors for cardiovascular disease and metabolic syndrome: a systematic review and meta-analysis of randomized controlled trials. *Eur J Prev Cardiol* 2016;23:291–307.
- 29 Sultana K, Anjum R, Wani P. Prevention of life-style diseases in Unani system of medicine: a review. *European Journal of Biomedical* 2018;5:256–60.
- 30 Wang J-H, van Haselen R, Wang M, *et al.* Acupuncture for smoking cessation: a systematic review and meta-analysis of 24 randomized controlled trials. *Tob Induc Dis* 2019;17:48.
- 31 Mao JJ, Pillai GG, Andrade CJ, *et al.* Integrative oncology: addressing the global challenges of cancer prevention and treatment. *CA Cancer J Clin* 2022;72:144–64.
- 32 Greenlee H, DuPont-Reyes MJ, Balneaves LG, *et al.* Clinical practice guidelines on the evidence-based use of integrative therapies during and after breast cancer treatment. *CA Cancer J Clin* 2017;67:194–232.
- 33 Ben-Arye E, Samuels N, Daher M, *et al.* Integrating complementary and traditional practices in middle-Eastern supportive cancer care. *J Natl Cancer Inst Monographs* 2017;2017:52.
- 34 Kienle GS, Albonico H-U, Baars E, *et al.* Anthroposophic medicine: an integrative medical system originating in Europe. *Glob Adv Health Med* 2013;2:20–31.
- 35 van der Werf ET, Duncan LJ, Flotow P von, *et al.* Do NHS GP surgeries employing GPs additionally trained in integrative or complementary medicine have lower antibiotic prescribing rates? Retrospective cross-sectional analysis of national primary care prescribing data in England in 2016. *BMJ Open* 2018;8:e020488.
- 36 Baars EW, Zoen EB, Breitzkreuz T, *et al.* The contribution of complementary and alternative medicine to reduce antibiotic use: a narrative review of health concepts, prevention, and treatment strategies. *Evid Based Complement Alternat Med* 2019;2019:5365608.
- 37 Samal J. A review of literature on delays in seeking care for tuberculosis in different Indian states. *BLDE Univ J Health Sci* 2017;2:4.
- 38 Suswardany DL, Sibbritt DW, Supardi S, *et al.* A critical review of traditional medicine and traditional healer use for malaria and among people in malaria-endemic areas: contemporary research in low to middle-income Asia-Pacific countries. *Malar J* 2015;14:98.
- 39 World Health Organization. *Regional framework for harnessing traditional and complementary medicine for achieving health and well-being in the Western Pacific*. Manila: World Health Organization Regional Office for the Western Pacific, 2022.
- 40 National health policy 2017. Delhi Ministry of Health and Family Welfare, Government of India; 2017.
- 41 Albert S, Porter J. Is 'Mainstreaming AYUSH' the right policy for meghalaya, Northeast India? *BMC Complement Altern Med* 2015;15:288.
- 42 Plan for the protection of health against the pseudo-therapies [plan para La Protección de la Salud Frente a Las Pseudoterapias]. 2018. Available: <https://conprueba.es/informate>
- 43 Kasiolo OMJ, Wambebe C, Nikiema J-B, *et al.* Towards universal health coverage: advancing the development and use of traditional medicines in Africa. *BMJ Glob Health* 2019;4:e001517.
- 44 James PB, Wardle J, Steel A, *et al.* Traditional, complementary and alternative medicine use in sub-Saharan Africa: a systematic review. *BMJ Glob Health* 2018;3:e000895.
- 45 Bishop FL, Lewith GT. Who uses CAM? A narrative review of demographic characteristics and health factors associated with CAM use. *Evid Based Complement Alternat Med* 2010;7:11–28.
- 46 Ros B, Lê G, McPake B, *et al.* The commercialization of traditional medicine in modern Cambodia. *Health Policy Plan* 2018;33:9–16.
- 47 Huber M, Jung HP, Dijkstra K. *Handbook positive health in primary care*. Houten: Springer, 2022.
- 48 Baars EW, Hamre HJ. Whole medical systems versus the system of conventional Biomedicine: a critical, narrative review of similarities, differences, and factors that promote the integration process. *Evid Based Complement Alternat Med* 2017;2017:4904930.
- 49 Bokhour BG, Hyde J, Kligler B, *et al.* From patient outcomes to system change: evaluating the impact of VHA's implementation of the whole health system of care. *Health Serv Res* 2022;57 Suppl 1:53–65.