Pharmacovigilance regulatory requirements for the natural health products (NHPs) industry in World Health Organization-defined high health expenditure countries (2020): a scoping review

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Supplementary Table S1. Top 30 countries/regions with the highest Current Health Expenditure[†] (CHE) as defined by the WHO in 2020.

No	Country (Region)	Current Health Expenditure (CHE), in million current US$ for 2020
1	United States of America	3,931,331
2	China	831,350
3	Japan	549,586
4	Germany (EU)	493,206
5	United Kingdom	330,210
6	France (EU)	321,032
7	Canada	212,912
8	Italy (EU)	182,327
9	Australia	151,482
10	Brazil	149,389
11	Spain (EU)	137,295
12	Republic of Korea	136,995
13	Russian Federation	112,690
14	Netherlands (EU)	101,767
15	Switzerland	88,726
16	India	79,076
17	Mexico	67,859
18	Sweden (EU)	62,254
19	Belgium (EU)	57,721
20	Iran	50,053
21	Austria (EU)	49,713
22	Norway	41,354
23	Poland (EU)	38,944
24	Argentina	38,898
25	Denmark (EU)	37,489
26	Indonesia	36,147
27	Israel	33,869
28	Türkiye	33,254
29	Ireland (EU)	30,244
30	South Africa	28,792

EU: Member countries of the European Union

[†] Current health expenditure includes all expenditures for the provision of health services, family planning activities, nutrition activities and emergency aid designated for health, but it excludes the provision of drinking water and sanitation.

Supplementary Table S2. Data extraction table.

Variable Name	Variable Description
ID	Country ID
Country	Country (Region); European region countries are recorded, and will be reviewed as one single region instead of individual countries.
CHE	Current Health Expenditure (CHE) based on WHO global health expenditure database, for the year 2020, in USD.
English_regulations_available	Are regulations or guidance documents available and accessible in English on governmental or regulatory websites?
Book	Is the country covered in main reference book (Barnes et al., 2022).
Regulatory_agency	What is the regulatory agency(ies) of NHPs.
URL	URL of the regulatory / governmental website.
Regulations_NHP	Does the country have regulations for NHPs?
Include_data_extract	Should this country/region be included for data extraction
NHP_definition_provided	Is the definition of NHPs provided in the regulation/related documents?
NHP_definition	What is the definition of NHPs in the regulation?
General_regulation_available	Are there general regulations? i.e., covers as an overall for pharmaceuticals and NHPs.
General_regulation_details	Name of general act / regulation / guidance document.
Gen_year_introduced	Year of introduction of general regulation
Gen_year_introduced_comments	Additional notes on year of introduction of general regulation
Gen_year_updated	Year of update of general regulation.
Gen_year_updated_comments	Additional notes on year of update of general regulation
Specific_regulation_available	Are there specific regulations for NHPs?
Specific_regulation_details	Name of specific act / regulation / guidance document.
Spec_year_introduced	Year of introduction of specific regulation
Spec_year_introduced_comments	Additional notes on year of introduction of specific regulation
Spec_year_updated	Year of update of specific regulation.
Spec_year_updated_comments	Additional notes on year of update of specific regulation
PV_NHPs_available	Does the regulation cover pharmacovigilance for NHPs?
Industry_obligations_present	Are there industrial obligations?
Industry_obligations_details	What are the industry's regulatory obligations for pharmacovigilance for NHPs?
Main_reference	Main references used obtained from official governmental websites / documents / book (Barnes et al., 2022)
Other_references	Additional references used (non-official articles)
Other_comments	Additional comments related to overall findings

Supplementary Table S3. Summary of pharmacovigilance regulatory requirements, extracted as direct quotes from regulations/references, for the NHP industry in selected countries/regions. (n=12)

Country/ Region	Regulatory Authority(ies)	NHP categories	General regulations for all medicinal products combined	NHP specific regulations	General/ specific PV regulations[a]	PV requirements related to ADR/AE reporting by the NHPs industry	PV requirements (other related)
Australia	TGA	Complementary medicines	Therapeutic Goods Act 1989 s 28(5)(e) [1] Therapeutic Goods Regulations 1990 r 15(a) [2]	None	General	The registration or listing of therapeutic goods (the subject goods) is subject to the conditions that the person in relation to whom the subject goods are registered or listed will comply, in relation to the subject goods, with any reporting requirements that are prescribed. A person in relation to whom a medicine is registered or listed must comply with the record-keeping requirements (if any) and the reporting requirements (if any) set out in the document published by the TGA titled PV Responsibilities of Medicine Sponsors, as in force from time to time. Medicines sponsors must [3]: • Report serious AR: ≤ 15 calendar days of Australian sponsor awareness and of any follow-up information. • SSI: ≤72 hours of Australian sponsor awareness and of any follow-up information. • OSI: ≤30 calendar days of Australian sponsor awareness and of any follow-up information • Non-serious AR reports and overseas AR reports: Not routinely	Sponsors are required to have an effective PV system in place. Sponsors must nominate an (one or more) Australian PV contact person ≤15 calendar days of first ARTG entry or of any updates to details.

Country/ Region	Regulatory Authority(ies)	NHP categories	General regulations for all medicinal products combined	NHP specific regulations	General/ specific PV regulations[a]	PV requirements related to ADR/AE reporting by the NHPs industry	PV requirements (other related)
						required to be reported. As specified by the TGA PSUR reporting requirements or specific request. • PSUR: only for those on which this specific condition is imposed as a condition of registration.	
Brazil[b] [4]	Anvisa	Herbal medicinal product	Normative Instruction N° 04/2014 Normative Instruction N° 63/2020 Resolution RDC No. 406/2020	Resolution RDC n° 26/2014 Resolution RDC n° 38/2014	General	Resolution-RDC n° 406/2020 and Normative Instruction n° 63/2020 provide for PV rules applied to drug MAHs. This regulation defines the scope of PV, establishes the obligation to report AEs and their respective deadlines to do it, as well as the request to submit the RMP and the PBRER to Anvisa. No access to regulations in English.	x
Canada	Health Canada	NHP	Food and Drugs Act 1985 s 21.321 [5]	Natural Health Products Regulations 2009 r 24(1) [6]	Specific	(1) A licensee shall provide the Minister with: (a) serious AR that occurs inside Canada: A case report for each, within 15 days after the day on which the licensee becomes aware of the reaction (b) serious unexpected AR that occurs inside or outside Canada: A case report for each, within 15 days after the day on which the licensee becomes aware of the reaction. (2) A licensee who sells a NHP shall annually prepare and maintain a	x

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						summary report that contains a concise and critical analysis of (a) all AR to the NHP that have occurred inside Canada; and (b) all reactions for which a case report is required to be provided under subsection (1) that have occurred (i) during the previous 12 months, and (ii) at a dose used or tested for the diagnosis, treatment or prevention of a disease or for modifying organic functions in humans.	
China[b] [7]	NMPA and State Administration of Traditional Chinese Medicine	Chinese Materia Medica/prepared slices of Chinese crude drugs (PSCCDs), herbal oils and extracts Chinese patent medicines Simple preparations PSCCDs	Drug Administration Law of the People's Republic of China Opinions on the Reform of Review and Approval Process for Drugs and Medical Devices	Unclear	Unclear	Regulations require MAHs to submit annual reports of their PV activities to NMPA, including the production and sale of drugs, post-marketing research, risk management and so forth. No access to regulations in English.	x
EU	EMA	Herbal medicinal product	Regulation (EC) No 726/2004 art 1, 2, 21 [8]	Directive 2001/83/EC 101-108 [9]	General	The MAH (a) shall be required to maintain detailed records of all suspected AR occurring either in the Community or in a third country (b) shall be required to record and to report all suspected serious AR	The MAH shall have permanently and continuously at his disposal an appropriately QPPV. That qualified person shall be responsible for the following:

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						which are brought to his attention by a health care professional to the competent authority of the Member State in whose territory the incident occurred, and in no case later than 15 calendar days following the receipt of the information (c) shall be required to record and report all other suspected serious AR of which he can reasonably be expected to have knowledge immediately to the competent authority of the Member State in whose territory the incident occurred, and in no case later than 15 calendar days following the receipt of the information (d) shall ensure that all suspected serious and unexpected AR occurring in the territory of a third country and brought to his attention by a health care professional are reported immediately, so that they are available to the Agency and to the competent authorities of the Member States where the medicinal product is authorised, and in no case later than 15 calendar days following the receipt of the information. calendar days following the receipt of the information	(a) the establishment and maintenance of a system which ensures that information about all suspected adverse reactions which are reported to the personnel of the company, and to medical representatives, is collected and collated in order to be accessible at least at one point within the Community; (b) the preparation for the competent authorities of the reports referred to in Article 104, in such form as may be laid down by those authorities, in accordance with the guidance referred to in Article 106(1); (c) ensuring that any request from the competent authorities for the provision of additional information necessary for the evaluation of the benefits and risks afforded by a medicinal product is answered fully and promptly, including the provision of information about the volume of sales or prescriptions of the

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						(e) shall submit electronically to the Eudravigilance database information on all non-serious suspected adverse reactions that occur in the Union, within 90 days following the day on which the MAH concerned gained knowledge of the event. The MAHs of herbal medicinal products (traditional and well-established use) are exempted from routine submission of PSURs unless otherwise specified in the marketing authorisation or required through the EURD list. The MAHs of such medicinal products should use alternative mechanisms such as signal management and emerging safety issues channels to communicate relevant new safety information to regulatory authorities. MAHs should notify in writing to the competent authority(ies) of when they become aware of an emerging safety issue from any source, as soon as possible and no later than 3 working days [10].	medicinal product concerned; (d) the provision to the competent authorities, of any other information relevant to the evaluation of the benefits and risks afforded by a medicinal product, including appropriate information on post-authorisation safety studies.
		Homeopathic medicinal product	Regulation (EC) No 726/2004 art 1, 2, 21 [8]	Directive 2001/83/EC art 14 [11], 16 [12], 101-108 [9]	Specific	As for herbal medicinal product. For simplified registration: There are no reporting obligations for suspected AR for MAHs.	As for herbal medicinal product.

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	EFSA	Food supplements	n/a	Regulation (EC) No 178/2002 art 19 [13] Directive 2002/46/EC [14]	None	None	A food business operator shall immediately inform the competent authorities if it considers or has reason to believe that a food which it has placed on the market may be injurious to human health.
		Novel food	n/a	Regulation (EC) No 178/2002 art 19 [13] Regulation (EU) 2015/2283 art 24-25 [15]	Specific	The Commission may, for food safety reasons and taking into account the opinion of the Authority, impose post-market monitoring requirements. Such requirements may include, on a case-by-case basis, the identification of the relevant food business operators.	As for food supplement. In addition: Any food business operator which has placed a novel food on the market shall immediately inform the Commission of any information of which it has become aware concerning: (a) any new scientific or technical information which might influence the evaluation of the safety of use of the novel food; (b) any prohibition or restriction imposed by a third country in which the novel food is placed on the market. The Commission shall make that information available to the Member States.

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India	Ministry of AYUSH	Ayurvedic, Siddha or Unani drug	The Drugs and Cosmetics Act 1940 s 3 [16] Drugs and Cosmetics Rules 1945 Schedule T Part I (r 1.1M), Part IId (r 4) [17, 18]	x	General	Manufacturer shall: (1) maintain a register to record all reports of market complaints received regarding the products sold in the market (2) enter all data received on such market complaints, investigations carried out by the manufacturers regarding the complaint as well as any corrective action initiated to prevent recurrence of such market complaints shall also be recorded. (3) once in a period of six months, submit the record of such complaints to the licensing authority. Reports of any AR resulting from the use of Ayurvedic, Siddha and Unani drugs shall also be maintained in a separate register by each manufacturer. The manufacturer shall investigate any of the AR to find if the same is due to any defect in the product, and whether such reactions are already reported in the literature or it is a new observation.	Additional guidelines for manufacturers of Rasaushadhhies or Rasamaruntjukal and Kushtajat (Herbo-Mineral-Metallic compounds) of Ayurveda, Siddha, and Unani medicine: (1) literature inserted inside the product package should indicate the name, address of the manufacturing unit and telephone number for reporting of any ADR by physicians or patients (2) on receipt of ADR report, it will be the responsibility of the manufacturer to ensure the recall of the product from the market

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		Homeopathic medicines	The Drugs and Cosmetics Act 1940 s 3 [16] Drugs and Cosmetics Rules 1945 Schedule M-I [19]	None	General	None	x
	Central Drugs Standard Control Organisation	Phytopharmaceutical drug	The Drugs and Cosmetics Act 1940 s 3 [16] Drugs and Cosmetics Rules 1945 Schedule M, Schedule Y(Appendix 1B) [20, 21]	None	General	The applicant/MAH shall furnish PSURs every six months for the first two years after approval the drug is granted. For subsequent two years the PSURs need to be submitted annually. In addition, for all pharmaceutical products(including phytopharmaceuticals) [22] : (1) all serious AEs must be reported by the MAH within 15 calendar days of receipt of information from any source to the NRA and National Coordination Centre; (2) all non-serious AEs must be reported by the MAH within 90 calendar days of receipt of information from any source to the NRA and National Coordination Centre.	A qualified and trained personnel should be authorised by the company management as PV Officer-in-Charge with responsibilities of dealing with PV activities at the MAH's organisation [22]. The MAH will collect AEs from different sources. The following methods are required to be established by MAH to strengthen spontaneous reporting [22]: (1) Collection and collation of ICSR via medical inquiries, "contact-us", e-mails, website inquiry forms, MAH's employee designated for the PV work, contractual partners, information on AE from internet or digital media, solicited reports, miscellaneous source of reporting.

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							(2) The MAH should perform at least weekly literature review of their pharmaceutical products by using electronic literature database.
	FSSAI	Health supplements, nutraceuticals, functional food, and novel food	n/a	Food Safety and Standards Act 2006 s 28(2) [23] Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food, and Novel Food) Regulations 2016 [24]	None	None	A food business operator shall immediately inform the competent authorities and co-operate with them, if he considers or has reasons to believe that a food which he has placed on the market may be unsafe for the consumers.
Japan[b] [25]	PMDA	Licensed herbal medicine: Kampo medicine, non-Kampo crude drug products	Regulation for Enforcement of the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices (Order of the Ministry of Health, Labour and Welfare No. 1 of 1961) art 228-20 [26]	None	General	The reporting time period should be within 15 days for reports involving death as an outcome, and within 30 days for other serious AEs. For serious AE considered unexpected, reporting should be 15 days [25].	X

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	Ministry of Health, Labour and Welfare and Consumer Affairs Agency	Foods with health claims and Foods with functional claims	NA	Regulations for Enforcement of the Food Sanitation Act (Order of the Ministry of Health and Welfare No. 23 of 1948) Appended Table 17 (Re: Article 66-2, paragraph (1)) [27]	Specific	(b) When a business operator has received information on health damage related to the products (limited to those that have been diagnosed by a physician and has been diagnosed that the symptoms are caused by or suspected to be caused by the food or additives; the same applies below in (c)) and information on violation of laws, the business operator is to endeavor to provide the information to a prefectural governor, etc. (c) A business operator is to collect information on health damage related to the food for specified health uses, and the foods with functional claims, and when the business operator obtains information that there is a risk of occurrence or spread of health damage related to the food, they are to promptly provide the information to a prefectural governor, etc.	
Republic of Korea	Ministry of Food and Drug Safety	Herbal medicinal product	Pharmaceutical Affairs Act 2013 art 37-3, 68-8 [28, 29] Regulation on Safety of Pharmaceuticals, etc. 2022 art 47, 84, Annex 4-3 [30]	None	General	Where a manufacturer happens to know a harmful case suspected of having been caused by medicinal products, he/she shall file a report with the president of the KIDS. Prompt report of safety information: A manufacturer etc of Medicinal products etc, a drug wholesaler, a pharmacy founder, and a medical institute founder shall promptly	A person who has obtained permission by item shall employ a physician, pharmacist, or oriental medicine pharmacist to perform the affairs of post-marketing safety management, such as re-reviewing new drugs, etc., re-evaluating drugs, and reporting side effects. This person is

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						report a serious ADR to the Chairman of KIDS within 15 days from the recognition date. It shall be the same for a case where serious ADR that emerged in a foreign country is recognized. A manufacturer etc. of Medicinal products etc. and a drug wholesaler shall report the information, which has not been promptly reported in accordance with Article 9 (see above for prompt report of safety information) among the information for collection on Article 5(1-5), to the Chairman of KIDS within 1 month from the end of each quarter.	called a "safety control manager".
		Health functional food	n/a	Health Functional Foods Act, Act No. 6765, amended by Act No. 18183, May 19, 2021 [31]	Specific	After recognizing any unfavorable and unintended sign, symptom or disease associated with the use of health functional foods (hereinafter referred to as "adverse event"), business entities (including pharmacy founders registered under Article 20 of the Pharmaceutical Affairs Act and importers and sellers of imported food, etc. registered under Article 15 of the Special Act on Imported Food Safety Control; hereafter in this Article the same shall apply) shall file a report thereon to the Minister of Food and Drug Safety, as prescribed by Ordinance of the Prime Minister.	x

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South Africa[c]	SAHPRA	Complementary medicine (which includes "discipline specific medicines" and"health supplements")	General Regulations made in terms of the Medicines and Related Substances Act, 1965 (Act 101 of 1965) r 40 [32]	None	General	Applicant/HCR: (1) must inform the Authority, in the manner and within the time frame as determined by the Authority. A holder of certificate of registration (HCR)/applicant and licence holder must inform the Authority of any: (a) new or existing quality, safety or effectiveness concerns related to any medicine or scheduled. (b) substance, including but not limited to adverse drug reactions; and risk management activities associated with paragraph (1). (2) must maintain or have access to records of the reports and case reports referred to in sub regulation (1) above. Guideline on Post-Marketing Reporting of ADR to Human Medicines in South Africa [33]: (1) Applicant/HCR must report to the Authority, the following: (i) all serious suspected ADRs, related or unrelated; and expected or unexpected, occurring in South Africa with any old or registered medicine: within fifteen (15) calendar days of receipt of such information.	Roles and responsibilities of applicant/HCR: (i) should establish and operate a PV system to ensure monitoring and supervision of their medicines registered/marketed in South Africa; (ii) should have an appropriately QPPV to be responsible for the establishment and maintenance of the PV system; (iii) should, through screening of the worldwide literature (via search tools e.g. PubMed), report published accounts of serious suspected ADRs occurring in South Africa related to the active substance(s) of their medicines.

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						(ii) all non-serious, expected and unexpected, suspected ADRs, occurring in South Africa with any old or registered medicine: presented as a line listing/summary tabulation (cumulative table) in a PSUR and submitted to the Authority when requested. (iii) SSI impacting on the risk-benefit profile of a product (including changes in nature, severity or frequency of risk factors): within five calendar days of receipt or identification of such information. (iv) foreign individual case reports: Not be forwarded to the Authority on a routine basis, but should be reported in the context of a SSI or in response to a specific request by the Authority. For any SSI that has been taken by any medicines regulatory agency/authority in another country, including the basis for such action, must be reported within 5 calendar days of first local knowledge of such action. (v) PSUR/PBRER: As prescribed by the Authority as a condition of registration; in the absence of specified frequency, refer to EURD list to determine the frequency of and target dates for	

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						the preparation of the PSUR/PBRER for each registered medicine. For medicines which do not appear in the EURD list, and for which the Authority has not prescribed otherwise, applicants/HCRs should prepare a PSUR/PBRER annually. (2) In addition: (i) applicant/HCR should prepare a national appendix relevant to South Africa on an annual basis which include information on patient exposure in South Africa, ADRs reported in South Africa (in a line listing format) and submit to the Authority upon request (ii) for products that are no longer marketed, post marketing surveillance and reporting of ADRs should continue until six months after the expiry date of the last marketed batch.	

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Switzerland	SwissMedic	Complementary medicines without indications	Federal Act on Medicinal Products and Medical Devices (Therapeutic Products Act, TPA) 2000 art 59 [34]	None	General	Any person manufacturing or distributing ready-to-use therapeutic products must notify the Agency of any AE or reaction which (a) is or may be attributable to the therapeutic product itself, its use or to incorrect labelling or instructions; (b) may endanger or damage the health of the consumer, of the patient, of a third party or of the treated animals.	Any person manufacturing or distributing ready-to-use therapeutic products must put in place a system of notification (including AE or reaction).
		Complementary medicines with indications	Federal Act on Medicinal Products and Medical Devices (Therapeutic Products Act, TPA) 2000 art 59, 114 [34, 35]	None	General	Same as above.	As for complementary medicines without indications. In addition: The application for a marketing authorisation must include the information and documents on PV plan.
		Herbal medicines	Federal Act on Medicinal Products and Medical Devices (Therapeutic Products Act, TPA) 2000 art 59 [34]	None	General	As for 'Complementary medicines without indications'.	As for 'Complementary medicines without indications'.
	Federal Food Safety and Veterinary Office	Food supplement	n/a	No access to regulations in English	None	None [36]	Any person who manufactures, handles, stores, transports, places on the market, imports, exports or carries in transit foodstuffs or utility articles is obliged to ensure self-supervision in accordance with

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							art. 26 FSA (Food Safety Act) [37].
		Novel food	n/a	No access to regulations in English	No access to regulations in English	Unclear. No access to regulations in English.	X
UK	MHRA	Traditional herbal medicinal product	The Human Medicines Regulations 2012 r 182, 188, 190, 191, 193 [38-42]	The Medicines (Traditional Herbal Medicinal Products for Human Use) Regulations 2005 r 9 [43]	Specific	Holder of registration must: (a) submit a report on all serious suspected AR that occur in the UK and countries other than UK to the licensing authority before the end of the period of 15 days beginning on the day following the day on which the holder gained knowledge of the reaction. (b) submit a report on all non-serious suspected AR that occur in the UK to the licensing authority before the end of the period of 90 days beginning on the day following the day on which the holder gained knowledge of the reaction. (c) for PSUR: (i) in the case of an authorisation granted on or after 21st July 2012, the holder must submit PSURs with the frequency as specified in the authorisation for the product, with the dates of submission being calculated from the date of authorisation.	Market authorisation holders must: • operate a PV system • have permanently and continuously at its disposal an appropriately qualified person responsible for PV who resides and operates in the EU or UK and is responsible for the establishment and maintenance of the PV system • maintain and make available upon request a PSMF and ensure it is permanently and immediately available for inspection electronically in the UK • operate, monitor, update a risk management system for the product in accordance with the RMP (if any) for the product • inform of any "relevant changes" in relation to a medicinal product—(a)new risks; (b)risks that have

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						(ii) in the case of an authorisation granted before 21st July 2012 which specifies the frequency and dates of submission of PSURs, the holder must submit PSURs with the frequency and on the dates as specified in the authorisation for the product. (iii) in the case of an authorisation granted before 21st July 2012 which does not specify the frequency and dates of submission of PSURs, the holder must submit a PSUR immediately upon the request of the licensing authority, or depending on product authorised under UKMA(NI)/ UKMA(UK)(Category 2) or UKMA(GB)/UKMA(UK)(Category 1) (aa)at least every six months during the first two years following the initial placing on the market, (bb)once a year for the following two years, and (cc)every three years after that. MAHs are obliged to notify the MHRA of emerging safety issues within 3 working days [44].	changed; or (c)changes to the risk-benefit balance.

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		Homeopathic medicinal product	The Human Medicines Regulations 2012 [45]	None	None	There are no reporting obligations for suspected AR for MAHs.	None
	Food Standards Agency	Food supplement	n/a	The General Food Law (Amendment etc.) (EU Exit) Regulations 2019 [46] Regulation (EC) No 178/2002 art 19 [13] Directive 2002/46/EC [14] The Food Supplements (England/ Wales/ Scotland) Regulations 2003 [47-49]	None	None	A food business operator shall immediately inform the competent authorities if it considers or has reason to believe that a food which it has placed on the market may be injurious to human health.
		Novel food	n/a	The Novel Food (Amendment) (EU Exit) Regulations 2019 r 30 [50] Regulation (EU) 2015/2283, art 24-25 [15]	Specific	The appropriate authority may, for food safety reasons and taking into account the opinion of the Authority, impose post-market monitoring requirements. Such requirements may include, on a case-by-case basis, the identification of the relevant food business operators.	

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USA	US FDA	Dietary supplement	Federal Food, Drug, and Cosmetic Act (FD&C Act) 1938 Title 21 Chapter 9 Subchapter IV Part H §379aa–1, §343 [51, 52]	Dietary Supplement Health and Education Act 1994 [53] Dietary Supplement and Nonprescription Drug Consumer Protection Act (P.L.109-462) 2006 [54]	Specific	Reporting requirements: (1) The manufacturer, packer, or distributor of a dietary supplement shall submit to the Secretary any report received of a serious AE associated with such dietary supplement when used in the US, accompanied by a copy of the label on or within the retail packaging of such dietary supplement. (2) A retailer whose name appears on the label described in paragraph (1) as a distributor may, by agreement, authorize the manufacturer or packer of the dietary supplement to submit the required reports for such dietary supplements to the Secretary so long as the retailer directs to the manufacturer or packer all AEs associated with such dietary supplement that are reported to the retailer through the address or telephone number described in section 343(y) of this title. Submission of reports: (1) Timing of reports (a) The responsible person shall submit to the Secretary a serious AE report no later than 15 business days after the report is received	None

Country/ Region	Regulatory Authority(ies)	NHP categories	General regulations for all medicinal products combined	NHP specific regulations	General/ specific PV regulations[a]	PV requirements related to ADR/AE reporting by the NHPs industry	PV requirements (other related)
						through the address or phone number described in section 343(y) of this title. (2) New medical information (b) The responsible person shall submit to the Secretary any new medical information, related to a submitted serious AE report that is received by the responsible person within 1 year of the initial report, no later than 15 business days after the new information is received by the responsible person. Maintenance and inspection of records: The responsible person shall maintain records related to each report of an AE received by the responsible person for a period of 6 years.	

Anvisa: Brazilian Health Regulatory Agency; AR: Adverse reaction, ADR: Adverse drug reaction, AE: Adverse event; AEFI: Adverse event following immunisation; EEA: European economic area; EFSA: European Food Safety Authority; EMA: European Medicines Agency; EURD: European Union Reference Dates; FSSAI: Food safety and standards authority of India; HCR: Holder of certificate of registration; KIDS: Korea Institute of Drug Safety and Risk Management; MAH: Market authorisation holder; MHRA: Medicines and Healthcare Products Regulatory Agency; NHP: Natural health product; NMPA: National Medical Products Administration; NRA: National Regulatory Authority; OSI: Other safety issues; PBRER: Periodic Benefit–Risk Evaluation Report; PMDA: Pharmaceuticals and Medical Devices Agency; PSMF: PV system master file; PSUR: Periodic safety update report; PV: Pharmacovigilance; QPPV: Qualified person for pharmacovigilance; RMP: Risk Management Plan/Risk Minimisation Plan; SAHPRA: South African Health Products Regulatory Authority; SSI: Significant safety issues; TGA: Therapeutic Goods Administration; United States Food and Drug Administration (US FDA).
n/a: Not applicable; x: missing/no obtainable/accessible information.
[a] General regulations: Same PV requirements for all therapeutic products (i.e., both conventional and NHPs); Specific regulations: Specific PV requirements for NHPs or a subcategory thereof
[b] Information obtained from Barnes et al., 2022.

[c] South Africa's regulations for complementary medicines have been confirmed by the South African Supreme Court of Appeal to be lawful to the extent that they would apply to products/substances which are "medicines" or "scheduled substances" as defined in the Medicines and Related Substances Act, 1965 (Act 101 of 1965). The regulations must be read with this interpretation pending their amendment. A roadmap and transitional process for regulating complementary medicines, as outlined in Guideline 7.02, is being revised. As a result, products regulated as complementary medicines in South Africa are in the process of being registered and facilities associated with their supply licensed, but the process is not yet complete. These products are intended to be governed by regulations as registered medicines [32, 33, 55, 56].

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Disclaimer: This table is intended solely for academic review of regulations and should not be used as a legal reference.

Supplementary Table S4. Definition of NHPs, extracted as direct quotes from regulations/references, by regulations in selected countries/regions.

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
Brazil	Herbal medicinal product	The product obtained from active vegetal raw material (medicinal plant, herbal drug, or herbal derivative), except those that include isolated or highly purified active substances (synthetic, semisynthetic, or natural) or the associations of these with other extracts (herbal or other sources such as animal), with prophylactic, curative, or palliative purpose. This product category includes the herbal medicines and traditional herbal products (THPs), which can be simple (when the active ingredient comes from a single medicinal plant species) or compound (when the active ingredient comes from more than one medicinal plant species). No access to regulations in English.	From Book: Barnes et al., 2022 [Chapter 21]
Australia	Complementary medicine	A therapeutic good consisting principally of one or more designated active ingredients mentioned in Schedule 14 of the Regulations, each of which has a clearly established identity and traditional use: Designated active ingredients: • an amino acid • charcoal • a choline salt • an essential oil • plant or herbal material (or a synthetically produced substitute for material of that kind), including plant fibres, enzymes, algae, fungi, cellulose and derivatives of cellulose and chlorophyll • a homeopathic preparation • a microorganism, whole or extracted, except a vaccine • a mineral including a mineral salt and a naturally occurring mineral • a mucopolysaccharide • non human animal material (or a synthetically produced substitute for material of that kind) including dried material, bone and cartilage, fats and oils and other extracts or concentrates • a lipid, including an essential fatty acid or phospholipid	Therapeutic Goods Regulations 1990 r 2

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		• a substance produced by or obtained from bees, including royal jelly, bee pollen and propolis • a sugar, polysaccharide or carbohydrate • a vitamin or provitamin.	
China	Chinese Materia Medica (CMM)/prepared slices of Chinese crude drugs (PSCCDs), herbal oils and extracts Chinese "patent" medicines (CPMs) Simple preparations PSCCDs	PSCCDs, also known as "TCM decoction pieces" (or Yin Pian) are CMM processed according to TCM practices and principles. PSCCDs are used as prescription drugs for decoctions by physicians, and as raw materials for production of CPMs. CPMs and "simple preparations" refer to products and preparations that use PSCCDs as the material and have a certain type of formulation, specification(s), function(s) and/or caution(s), and which can be used directly for the treatment of diseases under the guidance of TCM practices and principles. No access to regulations in English.	From Book: Barnes et al., 2022 [Chapter 23]
Canada	Natural health product	A substance set out in Schedule 1 or a combination of substances in which all the medicinal ingredients are substances set out in Schedule 1, a homeopathic medicine or a traditional medicine, that is manufactured, sold or represented for use in (a) the diagnosis, treatment, mitigation or prevention of a disease, disorder or abnormal physical state or its symptoms in humans; (b) restoring or correcting organic functions in humans; or (c) modifying organic functions in humans. However, a natural health product does not include a substance set out in Schedule 2, any combination of substances that includes a substance set out in Schedule 2 or a homeopathic medicine or a traditional medicine that is or includes a substance set out in Schedule 2. Schedule 1 1. A plant or a plant material, an alga, a bacterium, a fungus or a non-human animal material	Natural Health Products Regulations 2009 r 1

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		2. An extract or isolate of a substance described in item 1, the primary molecular structure of which is identical to that which it had prior to its extraction or isolation 3. Any of the following vitamins: biotin, folate, niacin, pantothenic acid, riboflavin, thiamine, vitamin A, vitamin B6, vitamin B12, vitamin C, vitamin D, vitamin E, vitamin K1, vitamin K2 4. An amino acid, 5. An essential fatty acid, 6. A synthetic duplicate of a substance described in any of items 2 to 5 7. A mineral, 8. A probiotic.	
India	Ayurvedic, Siddha or Unani drug	All medicines intended for internal or external use for or in the diagnosis, treatment, mitigation or prevention of disease or disorder in human beings or animals, and manufactured exclusively in accordance with the formulae described in, the authoritative books of Ayurvedic, Siddha and Unani Tibb systems of medicine, specified in the First Schedule.	The Drugs and Cosmetics Act 1940 s 3
	Phytopharmaceutical drug	Includes purified and standardised fraction with defined minimum four bio-active or phyto-chemical compounds (qualitatively and quantitatively assessed) of an extract of a medicinal plant or its part, for internal or external use of human beings or animals for diagnosis, treatment, mitigation or prevention of any disease or disorder but does not include administration by parenteral route.	Drugs and Cosmetics Rules 1945 r 2
	Homoeopathic medicines	Any drug which is recorded in Homoeopathic provings or therapeutic efficacy of which has been established through long clinical experience as recorded in authoritative Homoeopathic literature of India and abroad and which is prepared according to the techniques of Homoeopathic pharmacy and covers combination of ingredients of such Homoeopathic medicines but does not include a medicine which is administered by parenteral route.	Drugs and Cosmetics Rules 1945 r 2

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
	Functional foods or nutraceuticals or health supplements	(a) Foods which are specially processed or formulated to satisfy particular dietary requirements which exist because of a particular physical or physiological condition or specific diseases and disorders and which are presented as such, wherein the composition of these foodstuffs must differ significantly from the composition of ordinary foods of comparable nature, if such ordinary foods exist, and may contain one or more of the following ingredients, namely:- (i) plants or botanicals or their parts in the form of powder, concentrate or extract in water, ethyl alcohol or hydro alcoholic extract, single or in combination; (ii) minerals or vitamins or proteins or metals or their compounds or amino acids (in amounts not exceeding the Recommended Daily Allowance for Indians) or enzymes (within permissible limits); (iii) substances from animal origin; (iv) a dietary substance for use by human beings to supplement the diet by increasing the total dietary intake; (b) (i) a product that is labelled as a "Food for special dietary uses or functional foods or nutraceuticals or health supplements or similar such foods" which is not represented for use as a conventional food and whereby such products may be formulated in the form of powders, granules, tablets, capsules, liquids, jelly and other dosage forms but not parenterals, and are meant for oral administration; (ii) such product does not include a drug as defined in clause (b) and ayurvedic, sidha and unani drugs as defined in clauses (a) and (h) of section 3 of the Drugs and Cosmetics Act, 1940 (23 of 1940) and rules made thereunder; (iii) does not claim to cure or mitigate any specific disease, disorder or condition (except for certain health benefit or such promotion claims) as may be permitted by the regulations made under this Act; (iv) does not include a narcotic drug or a psychotropic substance as defined in the Schedule of the Narcotic Drugs and Psychotropic Substances Act, 1985	Food Safety and Standards Act 2006 s 22 Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food, and Novel Food) Regulations 2016

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		(61 of 1985) and rules made thereunder and substances listed in Schedules E and EI of the Drugs and Cosmetics Rules, 1945. List of nutrients, plants, and botanicals are referred to in the Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food, and Novel Food) Regulations 2016.	
Japan	Licensed herbal medicine: Kampo medicine (ethical "prescription" medicine, OTC Kampo medicine)	Herbal medicine with ingredients on 'List of Raw Materials Exclusively Used as Pharmaceuticals'. No access to regulatory instruments in English that explicitly define these products.	From Book: Barnes et al., 2022 [Chapter 24]
	Licensed herbal medicine: Non-Kampo crude drug products	Herbal formulae that are not traditionally practiced under Kampo medicine principles, vitamins etc. No access to regulatory instruments in English that explicitly define these products.	From Book: Barnes et al., 2022 [Chapter 24]
	Foods with Health Claims (Food for specified health uses and Food with nutrient function claims) and Foods with Function Claims	No access to regulatory instruments in English that explicitly define these products.	From Book: Barnes et al., 2022 [Chapter 24] Consumer Affairs Agency Guidelines on Notification of Foods with Function Claims
EU	Herbal medicinal product	Any medicinal product, exclusively containing as active ingredients one or more herbal substances or one or more herbal preparations, or one or more such herbal substances in combination with one or more such herbal preparations. Herbal substances: All mainly whole, fragmented or cut plants, plant parts, algae, fungi, lichen in an unprocessed, usually dried, form, but sometimes fresh. Certain exudates that have not been subjected to a specific treatment are also considered to be herbal substances. Herbal substances are precisely defined by the plant part used and the botanical name according to the binomial system (genus, species, variety and author).	Directive 2001/83/EC art 1(29-32), art 16a(1) Directive 2001/83/EC art 1

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		Herbal preparations: Preparations obtained by subjecting herbal substances to treatments such as extraction, distillation, expression, fractionation, purification, concentration or fermentation. These include comminuted or powdered herbal substances, tinctures, extracts, essential oils, expressed juices and processed exudates. "Traditional herbal medicinal product" means a simplified registration procedure (hereinafter 'traditional-use registration') is hereby established for herbal medicinal products which fulfil all of the following criteria: (a) they have indications exclusively appropriate to traditional herbal medicinal products which, by virtue of their composition and purpose, are intended and designed for use without the supervision of a medical practitioner for diagnostic purposes or for prescription or monitoring of treatment; (b) they are exclusively for administration in accordance with a specified strength and posology; (c) they are an oral, external and/or inhalation preparation; (d) the period of traditional use as laid down in Article 16c(1)(c) has elapsed; (e) the data on the traditional use of the medicinal product are sufficient; in particular the product proves not to be harmful in the specified conditions of use and the pharmacological effects or efficacy of the medicinal product are plausible on the basis of long-standing use and experience. The presence in the herbal medicinal product of vitamins or minerals for the safety of which there is well-documented evidence shall not prevent the product from being eligible for registration, provided that the action of the vitamins or minerals is ancillary to that of the herbal active ingredients regarding the specified claimed indication(s).	

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
	Homeopathic medicinal product	Any medicinal product prepared from products, substances or compositions called homeopathic stocks in accordance with a homeopathic manufacturing procedure described by the European Pharmacopoeia or, in absence thereof, by the pharmacopoeias currently used officially in the Member States. A homeopathic medicinal product may also contain a number of principles. Simplified registration- homeopathic medicinal product: Only homeopathic medicinal products which satisfy all of the following conditions may be subject to a special, simplified registration procedure: • they are administered orally or externally, • no specific therapeutic indication appears on the labelling of the medicinal product or in any information relating thereto, • there is a sufficient degree of dilution to guarantee the safety of the medicinal product; in particular, the medicinal product may not contain either more than one part per 10000 of the mother tincture or more than 1/100th of the smallest dose used in allopathy with regard to active substances whose presence in an allopathic medicinal product results in the obligation to submit a doctor's prescription.	Directive 2001/83/EC art 1(5), art 14
	Food supplements	Foodstuffs the purpose of which is to supplement the normal diet and which are concentrated sources of nutrients or other substances with a nutritional or physiological effect, alone or in combination, marketed in dose form, namely forms such as capsules, pastilles, tablets, pills and other similar forms, sachets of powder, ampoules of liquids, drop dispensing bottles, and other similar forms of liquids and powders designed to be taken in measured small unit quantities; "nutrients" means the following substances: (i) vitamins, (ii) minerals.	Directive 2002/46/EC art 2

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
	Novel food	Any food that was not used for human consumption to a significant degree within the Union before 15 May 1997, irrespective of the dates of accession of Member States to the Union, and that falls under at least one of the following categories: (i) food with a new or intentionally modified molecular structure, where that structure was not used as, or in, a food within the Union before 15 May 1997; (ii) food consisting of, isolated from or produced from microorganisms, fungi or algae; (iii) food consisting of, isolated from or produced from material of mineral origin; (iv) food consisting of, isolated from or produced from plants or their parts, except when the food has a history of safe food use within the Union and is consisting of, isolated from or produced from a plant or a variety of the same species obtained by: traditional propagating practices which have been used for food production within the Union before 15 May 1997; or non-traditional propagating practices which have not been used for food production within the Union before 15 May 1997, where those practices do not give rise to significant changes in the composition or structure of the food affecting its nutritional value, metabolism or level of undesirable substances; (v) food consisting of, isolated from or produced from animals or their parts, except for animals obtained by traditional breeding practices which have been used for food production within the Union before 15 May 1997 and the food from those animals has a history of safe food use within the Union; (vi) food consisting of, isolated from or produced from cell culture or tissue culture derived from animals, plants, micro-organisms, fungi or algae; (vii) food resulting from a production process not used for food production within the Union before 15 May 1997, which gives rise to significant changes in the composition or structure of a food, affecting its nutritional value, metabolism or level of undesirable substances; (viii) food consisting of engineered nanomaterials as defined in point (f) of this paragraph; (ix) vitamins, minerals and other substances used in accordance with Directive 2002/46/EC, Regulation (EC) No 1925/2006 or Regulation (EU) No 609/2013, where: — a production process not used for food production within	Regulation (EU) 2015/2283 art 3(2)(a)

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		the Union before 15 May 1997 has been applied as referred to in point (a) (vii) of this paragraph; or— they contain or consist of engineered nanomaterials as defined in point (f) of this paragraph; (x) food used exclusively in food supplements within the Union before 15 May 1997, where it is intended to be used in foods other than food supplements as defined in point (a) of Article 2 of Directive 2002/46/EC.	
Republic of Korea	Herbal medicinal product	A medicinal product made by using herbal medicine according to the principle of Oriental medicine; "herbal medicine" means raw drugs picked from animals, plants or minerals, and dried, cut or carefully prepared without changing the original forms in most cases.	Pharmaceutical Affairs Act 2013 art 2
	Functional health foods	Foods manufactured (including processing; hereinafter the same shall apply) with functional raw materials or ingredients beneficial to for the human body. “The functional ingredient” is a substance providing health benefits and falls under any of the following subparagraphs. (a) Processed raw material originated from animal, plant, microorganism or water. (b) Extract or purified substance of any ingredient described in subparagraph (a). (c) Synthetic duplicate of purified substance of any ingredient described in subparagraph (b). Combination of any ingredients described in subparagraph (a), (b), or (c).	Functional Health Foods Act 2014 art 2 Health Functional Food Code 2021 chapter 2, item 1

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
South Africa[a]	Complementary medicine (Category D Medicine)	Medicines in Category D shall be classified into the following sub -categories: (a) discipline- specific medicines with such disciplines as determined by the Authority; and (b) health supplements. "Complementary medicine" means any substance or mixture of substances that - (a) originates from plants, fungi, algae, seaweeds, lichens, minerals, animals or other substance as determined by the Authority; (b) is used or purporting to be suitable for use or manufactured or sold for use – (i) in maintaining, complementing or assisting the physical or mental state; or (ii) to diagnose, treat, mitigate, modify, alleviate or prevent disease or illness or the symptoms or signs thereof or abnormal physical or mental state of a human being or animal; and is used- (a) as a health supplement; or (b) in accordance with those disciplines as determined by the Authority. "Health supplement" means any substance, extract or mixture of substances as determined by the Authority, sold in dosage forms used or purported for use in restoring, correcting or modifying any physical or mental state by- (a) complementing health; (b) supplementing the diet; or (c) a nutritional effect, and excludes injectable preparations, medicines or substances listed as Schedule 1 or higher in the Act.	General Regulations made in terms of the Medicines and Related Substances Act, 1965 (Act 101 of 1965) r 1 General Regulations made in terms of the Medicines and Related Substances Act, 1965 (Act 101 of 1965) r 9
Switzerland	Complementary medicines with indications	Medicinal products with an officially authorised indication in a specific field of application which are manufactured according to the manufacturing regulations for complementary therapies such as homeopathy, anthroposophic medicine or traditional Asian medicine and whose field of application is determined according to the principles of the corresponding therapy approach.	Federal Act on Medicinal Products and Medical Devices (Therapeutic Products Act, TPA) 2000 art 4

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
	Complementary medicines without indications	Complementary medicines without an officially authorised indication in a specific field of application which are intended for use in individual therapies.	Federal Act on Medicinal Products and Medical Devices (Therapeutic Products Act, TPA) 2000 art 4
	Herbal medicines	Medicinal products with an authorised indication which exclusively contain one or more herbal substances or herbal preparations and which are not classified as complementary medicines.	Federal Act on Medicinal Products and Medical Devices (Therapeutic Products Act, TPA) 2000 art 4
	Food supplement	Art. 2 para. 3 of the FDHA Ordinance on Food Supplements (FS) (FoodSO; SR 817.022.14) regulates permissible substances in food supplements. The following may be present: a. Vitamins and minerals as specified in Part A of Annex 1 of FoodSO under the conditions stipulated there; b. Other substances as specified in Part B of Annex 1 of FoodSO with the restrictions stipulated there; c. Novel foods, provided they are authorised for FS d. Other foodstuffs, subject to the provisions of letters a-c. No access to regulations in English.	Federal Food Safety and Veterinary Office. Questions and answers about food supplements for establishments (03.07.2025)
	Novel foods	Foods fall under the Novel Food Provisions: • when they had not been used to a significant degree for human consumption in Switzerland or in an EU Member State prior to 15 May 1997 • if they were produced using a process that was non-traditional prior to 15 May 1997 • if this process significantly altered their composition or structure, thereby affecting their nutritional value, the nature of their metabolism or their content of undesirable substances.	Ordinance on Foodstuffs and Utility Articles; (FUAO; SR 817.02) art. 15 para. 1 let. g (in French)

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		No access to regulations in English.	
UK	Herbal medicinal product	A medicinal product whose only active ingredients are herbal substances or herbal preparations (or both). "herbal preparation" means a preparation obtained by subjecting herbal substances to processes such as extraction, distillation, expression, fractionation, purification, concentration or fermentation, and includes a comminuted or powdered herbal substance, a tincture, an extract, an essential oil, an expressed juice or a processed exudate; "herbal substance" means a plant or part of a plant, algae, fungi or lichen, or an unprocessed exudate of a plant, defined by the plant part used and the botanical name of the plant, either fresh or dried, but otherwise unprocessed "traditional herbal medicinal products" mean, if the following conditions are met: (1) Condition A is met if by virtue of its composition and indications the product is appropriate for use without the need for a medical practitioner to— (2) diagnose the condition to be treated by the product; (3) prescribe the product; or (4) monitor the product's use. (5) Condition B is met if the product is intended to be administered at a particular strength and in accordance with a particular posology. (6) Condition C is met if the product is intended to be administered externally, orally or by inhalation. (7) Condition D is met if— the product has been in medicinal use for a continuous period of at least 30 years, and a. in relation to—a THR(NI) or THR(UK), the product has been in medicinal use in the European Union for a continuous period of at least 15 years;	The Human Medicines Regulations 2012 r 8, r 125

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		b. a THR(GB), the product has been in medicinal use in the United Kingdom or a country included in the list published under regulation 125A(1) for a continuous period of at least 15 years. (8) Condition E is met if there is sufficient information about the use of the product as mentioned in condition D (referred to in this Part as its "traditional use"), so that (in particular)— a. it has been established that the traditional use of the product is not harmful; and b. the pharmacological effects or efficacy of the product are plausible on the basis of long-standing use and experience.	
	Homeopathic medicinal product	A medicinal product prepared from homoeopathic stocks in accordance with a homoeopathic manufacturing procedure described by— (a) the European Pharmacopoeia; or (b) in the absence of such a description in the European Pharmacopoeia, (i) in relation to a certificate of registration or marketing authorisation for a national homoeopathic product in force in Great Britain only, the British Pharmacopoeia, or in an pharmacopoeia used officially in an country that is included in a list published by the licensing authority for this purpose; (ii) in relation to a certificate of registration or marketing authorisation for a national homoeopathic product in force in the whole United Kingdom or in Northern Ireland only, in the British Pharmacopoeia or in any pharmacopoeia used officially in an EEA State. This can be a registrable or national homeopathic product. "registrable homeopathic product" meets the following conditions. (1) Condition A is that the product is administered orally or externally. (2) Condition B is that no specific therapeutic indication appears— a. on the labelling of the product; or b. in any information supplied with the product. (3) Condition C is that— a. the product contains no more than one part per 10,000 of the mother tincture; and	The Human Medicines Regulations 2012 r 8, r 102, Schedule 10

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		b. in a case where the product's active substance is a relevant allopathic substance, the product contains no more than 1/100th of the smallest concentration of that substance used in allopathy. (4) In this regulation "relevant allopathic substance" means an active substance whose presence in an allopathic medicinal product means that the product is only available on prescription. (5) For this purpose— a. "allopathic medicinal product" means a medicinal product other than a homoeopathic medicinal product; and b. "allopathy" means treatment using an allopathic medicinal product. "national homoeopathic product" means a homoeopathic medicinal product that— (1) is not a registrable homoeopathic medicinal product; and (2) is indicated for the relief or treatment of minor symptoms or minor conditions in human beings. (3) for this purpose symptoms or conditions are minor if they can ordinarily and with reasonable safety be relieved or treated without the supervision or intervention of a doctor.	
	Food supplement	Any food the purpose of which is to supplement the normal diet and which— (a) is a concentrated source of a vitamin or mineral or other substance with a nutritional or physiological effect, alone or in combination; and (b) is sold in dose form.	The Food Supplements (England/ Wales/ Scotland) Regulations 2003 r 2
	Novel food	'Novel food' means any food that was not used for human consumption to a significant degree within the EU or the United Kingdom before 15 May 1997, irrespective of the dates of accession of member States, and that falls under at least one of the following categories: (i) food with a new or intentionally modified molecular structure, where that structure was not used as, or in, a food within the EU or the United Kingdom before 15 May 1997; (ii) food consisting of, isolated from or produced from microorganisms, fungi or algae; (iii) food consisting of, isolated from or produced from material of mineral origin;	The Novel Food (Amendment) (EU Exit) Regulations 2019 r 8 Regulation (EU) 2015/2283 art 3(2)(a)

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		(iv) food consisting of, isolated from or produced from plants or their parts, except when the food has a history of safe food use within the EU or the United Kingdom and is consisting of, isolated from or produced from a plant or a variety of the same species obtained by • traditional propagating practices which have been used for food production within the EU or the United Kingdom before 15 May 1997; or • non-traditional propagating practices which have not been used for food production within the EU or the United Kingdom before 15 May 1997, where those practices do not give rise to significant changes in the composition or structure of the food affecting its nutritional value, metabolism or level of undesirable substances; (v) food consisting of, isolated from or produced from animals or their parts, except for animals obtained by traditional breeding practices which have been used for food production within the EU or the United Kingdom n before 15 May 1997 and the food from those animals has a history of safe food use within the Union; (vi) food consisting of, isolated from or produced from cell culture or tissue culture derived from animals, plants, micro-organisms, fungi or algae; (vii) food resulting from a production process not used for food production within the EU or the United Kingdom before 15 May 1997, which gives rise to significant changes in the composition or structure of a food, affecting its nutritional value, metabolism or level of undesirable substances; (viii) food consisting of engineered nanomaterials as defined in point (f) of this paragraph; • vitamins, minerals and other substances used in accordance with Directive 2002/46/EC, Regulation (EC) No 1925/2006 or Regulation (EU) No 609/2013, where: • a production process not used for food production within the EU or the United Kingdom before 15 May 1997 has been applied as referred to in point (a) (vii) of this paragraph; or (ix) they contain or consist of engineered nanomaterials as defined in point (f) of this paragraph;	

Country/ Region	NHPs terms used	NHPs definition	Regulations/ References
		(x) food used exclusively in food supplements within the EU or the United Kingdom before 15 May 1997, where it is intended to be used in foods other than food supplements as defined in point (a) of Article 2 of Directive 2002/46/EC.	
USA	Dietary supplement	Means a product (other than tobacco) intended to supplement the diet that bears or contains one or more of the following dietary ingredients: (A) a vitamin; (B) a mineral; (C) an herb or other botanical; (D) an amino acid; (E) a dietary substance for use by man to supplement the diet by increasing the total dietary intake; or a concentrate, metabolite, constituent, extract, or combination of any ingredient described in clause (A), (B), (C), (D), or (E).	Federal Food, Drug, and Cosmetic Act 1938 Title 21 §321

[a] South Africa's complementary medicine regulation is being reviewed and under consultation.

Disclaimer: This table is intended solely for academic review of regulations and should not be used as a legal reference

Supplementary Table S5. Definition of days for reporting timelines.

Country/region	**Definition of days**
Australia	Calendar days
EU	Calendar days
India	Calendar days
South Africa	Calendar days
Canada	Not specified. Mentioned as “days after the day on which the licensee becomes aware of the reaction”
UK	Not specified. Mentioned as “days beginning on the day following the day on which the holder gained knowledge of the reaction”
Republic of Korea	Not specified. Mentioned as “days from the recognition date”
USA	Business days

Supplementary Table S6. Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON SECTION
TITLE			
Title	1	Identify the report as a scoping review.	Title page
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Abstract
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	Section 1: Background
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	Section 1: Background
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	NA
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	Section 2.2, Table 1
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	Table 1, Table 2
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Table 2- footnotes
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Section 2.3, Table 2
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	Section 2.4
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Section 2.4, Supplementary table S2
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	NA
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Section 2.4

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON SECTION
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Fig. 1
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Supplementary Tables S3 and S4
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	NA
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Supplementary tables S3 and S4
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Section 3: Results, Fig.2, Tables 3 and 4, Supplementary tables S3 and S4
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	Section 4.1 and 4.2
Limitations	20	Discuss the limitations of the scoping review process.	Section 4.3
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	Section 5: Conclusion
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	Funding statement

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi: 10.7326/M18-0850.

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