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Online supplemental table: Variables in the survey data set and response distributions

Variables	Questions/description	Responses (n;%)
Separation between regulatory bodies and professional organisations*	Do you have a regulatory or licensing authority (for example, government-related) for pharmacists, which is separate from other professional leadership bodies/professional associations?	<ul style="list-style-type: none"> • Yes (70; 80%) • No (18; 20%)
Availability of advanced practice definition	Does your country have an agreed definition of advanced practice?	<ul style="list-style-type: none"> • Present (27; 31%) • Not present (61; 69%)
Availability of specialist practice definition	Does your country have an agreed definition of specialisation?	<ul style="list-style-type: none"> • Present (43; 49%) • Not present (45; 51%)
Availability of a competency framework for advanced/specialist practice	Does your country have a Competency Framework to describe "advanced practice" (higher performance) and/or "specialisation" (narrow scope)	<ul style="list-style-type: none"> • Present (25; 28%) • In development (18; 21%) • Not present (45; 51%)
Process for framework development†	What was the process for development?	<ul style="list-style-type: none"> • Developed from scratch (23; 26%) • Adopted (3; 3%) • Adapted (18; 21%) • Missing (44; 50%)
Regulator is responsible for recognition	Is the pharmacy regulator responsible for recognition of advanced practice and/or specialisation?	<ul style="list-style-type: none"> • Present (37; 42%) • Not present (51; 58%)
Availability of professional recognition	Is there professional recognition of advanced practice and/or specialisation in your country (e.g. does a pharmacy professional body award a title in recognition of advanced practice and/or specialisation)?	<ul style="list-style-type: none"> • Present (35; 40%) • Not present (53; 60%)
Availability of legal provision for pharmacy workforce to prescribe*	Is there any legal provision for pharmacists to independently prescribe medicines (other than "over the counter" medicines)	<ul style="list-style-type: none"> • Yes (12; 14%) • No (76; 86%)
The link of prescribing with the recognition of advanced practice and/or specialisation†	Is prescribing linked with recognition of advanced practice and/or specialisation in your country?	<ul style="list-style-type: none"> • Yes (7; 8%) • No (56; 64%) • Missing (25; 28%)
Availability of formal academic pathway to advanced practice and/or specialisation	Is there a formal academic pathway to advanced practice and/or specialisation in your country? (e.g. is there a master's degree which leads to recognition as an advanced practitioner or specialist?)	<ul style="list-style-type: none"> • Present (55; 63%) • Not present (33; 37%)
Availability of support to assist practitioners	Is there any support or programme to assist practitioners in developing specialised and/or advanced practice (beyond that offered for CPD/CE)?	<ul style="list-style-type: none"> • Present (40; 45%) • Not present (48; 55%)
Availability of opportunities for formal recognition after initial registration	In your country, following initial registration and licensing as a pharmacist, are there opportunities to gain a formal recognition (e.g. credentialing/privileging or professional recognition) in advanced practice or specialised areas?	<ul style="list-style-type: none"> • Present (43; 49%) • Not present (45; 51%)
Availability of post nominal for advanced or specialist practitioners	Do pharmacists in your country use abbreviations/post-nominal after or before their name (e.g. post-nominal such as APP for Advanced Practice Pharmacist) to recognise advanced practice and/or specialisation?	<ul style="list-style-type: none"> • Present (23; 26%) • Not present (65; 74%)
Availability of benefits for advanced or specialist practitioners	Are there tangible benefits for pharmacists recognised as specialists or advanced practitioners?	<ul style="list-style-type: none"> • Present (46; 52%) • Not present (42; 48%)
Country's need in developing career pathways‡	Is there an identified need in your country to develop career pathways or recognition of advanced practice and/or specialisation?	<ul style="list-style-type: none"> • Yes (54; 62%) • Unsure (17; 19%) • No (8; 9%) • Missing (9; 10%)
Challenge for professional recognition‡	Is there any challenge you face in the development and professional recognition of advanced practice and/or specialisation?	<ul style="list-style-type: none"> • Unsure (68; 77%) • No (10; 11%) • Missing (10; 11%)

Variables	Questions/description	Responses (n;%)
Country health expenditure in 2017	The data were obtained from the World Bank website: https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS	<ul style="list-style-type: none"> • Low (21; 24%) • Lower-middle (21; 24%) • Upper-middle (22; 25%) • High (21; 24%) • Missing (3; 3%)
Pharmacist density in 2016	The data were obtained from the FIP database (<i>count per 10,000 population</i>).	<ul style="list-style-type: none"> • Low (16; 18%) • Lower-middle (17; 19%) • Upper-middle (17; 19%) • High (17; 19%) • Missing (21; 24%)
Community pharmacist percentage in 2016	The data were obtained from the FIP database. This continuous variable was categorised into 4 groups (high, upper-middle, lower-middle, low) using the sample dispersion characteristics of the continuous variable 'proportion of community pharmacists'.	<ul style="list-style-type: none"> • Low (12; 14%) • Lower-middle (13; 15%) • Upper-middle (14; 16%) • High (11; 13%) • Missing (38; 43%)
Health Access Quality Index (HAQI) in 2016	The data were obtained from the Institute for Health Metrics and Evaluation (IHME): http://ghdx.healthdata.org/record/ihme-data/gbd-2015-healthcare-access-and-quality-index-1990-2015	<ul style="list-style-type: none"> • Low (22; 25%) • Lower-middle (22; 25%) • Upper-middle (22; 25%) • High (22; 25%)
WHO Region [§]	The data were obtained from the WHO region website: https://www.who.int/	<ul style="list-style-type: none"> • Africa (17; 19%) • America (13; 15%) • Eastern Mediterranean (12; 14%) • Europe (28; 32%) • Southeast Asia (4; 4%) • Western Pacific (14; 16%)
World Bank Class in 2019	The data were obtained from the World Bank website: https://data.worldbank.org/income-level/	<ul style="list-style-type: none"> • Low (7; 8%) • Lower-middle (20; 23%) • Upper-middle (23; 26%) • High (38; 43%)

*excluded from the Multiple Correspondence Analysis because of low correlation with one of the dimensions (the discrimination measures mean less than 0.1)

[†]excluded because of subsequent questions of the previous questions, for example the question on the process for framework development was asked if the respondents identified that they have competency frameworks in the country

[‡]excluded because the questions focus on the needs and challenges of the country in developing advancement practice

[§]we did not include this variable in the analysis because of a high influence of the variables in the Multiple Correspondence Analysis (MCA)

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