

Living Evidence Brief

Addressing the Politics of the
Health Human Resources
Crisis in Canada: Appendices

19 & 20 January 2023

Version
2



HEALTH FORUM

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**Living Evidence Brief:
Addressing the Politics of the Health Human Resources Crisis in Canada**

Appendices

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APPENDICES

Appendix tables 1-3 provide detailed information about the evidence syntheses identified as ‘best’ in relation to the policy framework components described in Table 1, which were drawn from the key components and sub-components of the Canadian Academy of Health Sciences framework underpinning their ongoing assessment of health human resources (see: <https://cahs-acss.ca/assessment-on-health-human-resources-hhr/>, which are also covered in a recent analysis undertaken by KPMG on behalf of Health Canada (available upon request)). The approach to identifying and labelling each synthesis ‘best’ is described in Box 3 on page 17 of this brief. Appendix table 4 provides detailed information about the evidence syntheses identified that relate to each of the approach elements. Each row in appendix tables 1-3 corresponds to a particular evidence synthesis and the reviews are organized by framework component. In the first column of the table we list the framework component sub-element, hyperlink to the search strategy used to find potential ‘best’ syntheses within the sub-element, and the total count of syntheses deemed ‘best’, broken down by whether they are high or medium quality. In the second column, we list the hyperlinked titles of identified syntheses, and columns 3-6 list data related to the criteria used to determine ‘best’ for a single category (i.e., living status, quality, last year literature searched and availability of a GRADE profile, which provides insights about the strength of the evidence included in a particular synthesis).

In appendix table 4, we list syntheses by approach element (first column). The focus of the review is described in the second column. Key findings from the review that relate to the option are listed in the third column, while the fourth, fifth, sixth and seventh columns record information about the synthesis that can help inform assessments about which syntheses are ‘best’ for a given element – namely whether the review is ‘living’ (i.e., updated at regular intervals with the latest studies on the topic), the quality of the review (see description below regarding AMSTAR), the last year the literature was searched as part of the review, and whether there is a GRADE profile provided about the strength of the evidence included in the synthesis. The last two columns convey information about the utility of the review in terms of local applicability, applicability concerning prioritized groups, and issue applicability. The second-from-last column notes the proportion of studies that were conducted in Canada, while the second-to-last column shows the proportion of studies included in the review that deal explicitly with one of the prioritized groups. The last column notes the proportion of studies that were included and focused specifically on HHR planning.

As noted above, the fifth column presents a rating of the overall quality of the review. The quality of each review has been assessed using AMSTAR (A MeaSurement Tool to Assess Reviews), which rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to evidence syntheses pertaining to delivery, financial, or governance arrangements within health systems. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered “high scores.” A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8.

Appendix 1: ‘Best’ available evidence syntheses identified for the HHR policy framework component focused on planning and development

Policy framework sub-element (and search strategy used)	‘Best’* available evidence syntheses to inform decision-making about the components	Living status	Quality	Last year literature searched	Availability of GRADE profile	Type of policy question addressed
Population trends (Search 1) <i>Total syntheses: one (medium quality)</i>	<ul style="list-style-type: none"> <u>Predictive models for health human resource planning generally use stock-flow estimates supplemented by a demand component that reflects population health needs; there is a trade-off between the comprehensiveness of models and their accuracy</u> [rapid synthesis with key informant interviews] (1) 	No	4/9	2019	No	<ul style="list-style-type: none"> Understanding a problem and its causes
Diversity of health workforce (Search 1)	<ul style="list-style-type: none"> <i>No evidence syntheses that were of high or medium quality, had searches updated within the last five years, and that were not too specific in focus were identified for this component</i> 	n/a	n/a	n/a	n/a	
Data requirements and infrastructure (Search 1, Search 2)	<ul style="list-style-type: none"> <i>No evidence syntheses that were of high or medium quality, had searches updated within the last five years, and that were not too specific in focus were identified for this component</i> 	n/a	n/a	n/a	n/a	
Current health workforce supply (Search 1) <i>Total syntheses: three (of which one is high and two are medium quality)</i>	<ul style="list-style-type: none"> <u>Common indicators of intensive care unit (ICU) strain include ICU acuity, ICU readmission, after-hours discharge, and ICU census; commonly used indicators of strain also tend to indicate ICU performance</u> [review of mostly high-quality studies] (2) 	No	8/9	2020	No	<ul style="list-style-type: none"> Understanding a problem and its causes
	<ul style="list-style-type: none"> <u>Competence-based human resource management in nursing involves aligning individual competencies with organizational goals through recruitment and selection, training and development, performance appraisal, reward systems, and career planning</u> (3) 	No	5/10	2018	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> <u>Predictive models for health human resource planning generally use stock-flow estimates supplemented by a demand component that reflects population health needs; there is a trade-off between the comprehensiveness of models and their accuracy</u> [rapid synthesis with key informant interviews] (1) 	No	4/9	2019	No	<ul style="list-style-type: none"> Understanding a problem and its causes
Shortages (by profession/geography/care setting) (Search 1)	<ul style="list-style-type: none"> <u>Promising interventions for reducing the turnover and increase the retention of early career nurses tend to address both individual- and organization-level factors; the most promising options include some combination of mentorship, preceptorship, internship programs, and orientation to practice programs</u> (4) 	No	7/10	2020	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem

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<p><i>Total syntheses: two (medium quality)</i></p>	<ul style="list-style-type: none"> • A systematic review identified four important themes relating nursing curriculum to student attrition: pre-enrolment criteria for recruiting students, curriculum content and workload, clinical placement policies, and student support services (5) 	No	5/9	2019	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
<p>Education and training pipelines (Search 1, Search 2, Search 3, Search 4, Search 5, Search 6)</p> <p><i>Total syntheses: 11 (of which two are high and nine are medium quality)</i></p>	<ul style="list-style-type: none"> • A meta-analysis comparing flipped classroom versus traditional lectures for radiology education found that flipped classroom produces better theoretical as well as practical performance and is preferred by students (6) 	No	8/11	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Monitoring and evaluating the impacts
	<ul style="list-style-type: none"> • A meta-analysis of randomized controlled trials found that video-based coaching is more effective than control interventions in improving surgical technical performance, especially when video-based coaching is provided multiple times and as part of a structured coaching framework (7) 	No	8/11	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • A systematic review found that students who complete clinical medical education in rural and underserved areas are more likely to return to practise in these areas and are more likely to practise primary care [limited external validity as only studies from the United States were included] (8) 	No	7/11	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • Evidence suggests that prelicensure simulation-enhanced interprofessional education is effective for interprofessional learning; however, the characteristics of successful interventions as well as the long-term and patient impacts are unknown [review of generally low-quality studies] (9) 	No	6/10	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • Big data have the potential to advance and improve medical education, but the integration of big data into medical education has been limited to date [integrative literature review] (10) 	No	5/9	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • Consumers are involved in the education of nurses, midwives, and other allied health professionals primarily through teaching arrangements, course development, assessment, and recruitment; several strategies for recruiting and retaining consumers for allied health education are identified (11) 	No	5/9	2019	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
	<ul style="list-style-type: none"> • Virtual-reality simulation is generally effective for clinical psychomotor skill acquisition in pre-registration student nurses, though evidence is limited (12) 	No	5/9	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem

	<ul style="list-style-type: none"> • <u>Practising rural primary-care medicine is influenced by five types of characteristics and experiences: individual characteristics, medical school, residency, placement, and retention; a theoretical model for how these factors interact is presented (13)</u> 	No	4/9	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Under-represented minority nurses face several barriers in their undergraduate education including social isolation and stress, caregiving demands, school environments, limited access to mentorship and support, and financial barriers; facilitators of these students' success include resilience, family support, positive school environments, and financial support (14)</u> 	No	4/9	2020	No	<ul style="list-style-type: none"> • Understanding a problem and its causes • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>A range of models for interprofessional education for healthcare students exist, but they can generally be classified as either extra-curricular designs or integrated curriculum designs based on the level of curriculum restructuring needed to enable the model; challenges remain in effectively delivering interprofessional education (15)</u> 	No	4/9	2019	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>High-fidelity simulations in nursing education can be effective for improving a range of learning outcomes, but more research is needed regarding the transference of learning to clinical practice in the long-term (16)</u> 	No	4/9	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
Integration and licensure of internationally educated health professionals (Search 1, Search 2)	<ul style="list-style-type: none"> • <u>There is weak evidence that supports recruitment and retention schemes for rural primary-care doctors such as financial incentives, international recruitment, postgraduate and undergraduate placements in underserved areas, and recruiting rural students [review of low-quality studies] (17)</u> 	No	9/10	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<i>Total syntheses: two (of which one is high and one is medium quality)</i>	<ul style="list-style-type: none"> • <u>Migrant health workers who return to their home country do so for a range of reasons, their returns have impacts on home country health systems, and they face a variety of challenges and opportunities upon their return [scoping review] (18)</u> 	No	5/9	2019	No	<ul style="list-style-type: none"> • Understanding a problem and its causes

Appendix 2: ‘Best’ available evidence syntheses identified for the HHR policy framework component focused on deployment and service delivery

Policy framework sub-element (and search strategy used)	‘Best’* available evidence syntheses to inform decision-making about the components	Living status	Quality	Last year literature searched	Availability of GRADE profile	Type of policy question addressed
Efficient deployment (scope of practice; interprofessional participation) (Search 1, Search 2) <i>Total syntheses: 7 (of which seven are medium quality)</i>	<ul style="list-style-type: none"> There is moderate confidence evidence that task shifting from doctors to nurses in primary care is acceptable, but the success and acceptability of this strategy is influenced by a range of system-level, organizational, and interpersonal factors (19) 	No	7/9	2018	Yes	<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
	<ul style="list-style-type: none"> Using nurse practitioners and physician assistants on surgical/trauma services has been found to decrease patient length of stay, increase staff and patient satisfaction, decrease costs, and have no impact on mortality and morbidity outcomes (20) 	No	7/10	2017	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> The delegation of medication administration from registered nurses to non-registered support workers might improve some aspects of medication administrations (such as timeliness), but requires consideration of regulatory, team, implementation, and patient-safety factors (21) 	No	6/9	2020	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
	<ul style="list-style-type: none"> Nurses transitioning into new clinical areas of practice face several challenges (including a significant emotional impact); they can be assisted through formal and informal supports as well as professional development opportunities (22) 	No	6/10	2018	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
	<ul style="list-style-type: none"> This realist review identifies factors that enable the transition of emergency nurse practitioners into emergency departments, the policies and circumstances that facilitate this process, and the outcomes of emergency nurse practitioner integration (23) 	No	5/9	2020	No	<ul style="list-style-type: none"> Identifying implementation considerations
	<ul style="list-style-type: none"> A range of alternative methods for ethics education in nursing exist; they can be thematically grouped as combined web and lecture interventions, computer-based self-study, simulation, group learning, and analyses of ethical problems (24) 	No	4/9	2020	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem

						<ul style="list-style-type: none"> Identifying implementation considerations
	<ul style="list-style-type: none"> <u>Enablers of advanced practice roles in nursing and midwifery include factors that are intrinsic and external to the practitioner as well as the broader health system context; these roles are constrained by a lack of management and professional development support, unclear roles duties, and prevailing institutional cultures (25)</u> 	No	4/9	2016	No	<ul style="list-style-type: none"> Identifying implementation considerations
<p>Team-based models of care (Search 1)</p> <p><i>Total syntheses: 4 (of which four are medium quality)</i></p>	<ul style="list-style-type: none"> <u>This systematic review of outcome-measurement instruments for evaluating collaborative practice of community-based healthcare and social-care teams found that existing outcome measurement instruments have very little evidence supporting their content validity and internal structure; of the instruments that exist, the Assessment of Interprofessional Team Collaboration Scale (ATICS-II) had the most evidence supporting its use (26)</u> 	No	5/9	2020	Yes	<ul style="list-style-type: none"> Monitoring and evaluating the impacts
	<ul style="list-style-type: none"> <u>Twenty-nine instruments for measuring interprofessional collaboration were identified in this scoping review, most of which measure collaboration between physicians and nurses; these instruments focus on areas such as teamwork, communication, collaboration, and supportive factors (27)</u> 	No	5/9	2018	No	<ul style="list-style-type: none"> Monitoring and evaluating the impacts
	<ul style="list-style-type: none"> <u>A systematic review found that interprofessional shared decision-making in the ICU is associated with improved processes and outcomes; five expert opinion-based recommendations for implementing interprofessional shared decision-making in the ICU are presented [review of low-quality evidence] (28)</u> 	No	5/10	2017	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
	<ul style="list-style-type: none"> <u>This systematic review finds that healthcare professionals contribute to interprofessional collaboration by bridging professional gaps, negotiating overlaps in roles, and creating spaces for collaboration (29)</u> 	No	4/9	2019	No	<ul style="list-style-type: none"> Identifying implementation considerations
<p>Fee models and wage structures (Search 1)</p> <p><i>Total syntheses: 3 (of which one is high and two are medium quality)</i></p>	<ul style="list-style-type: none"> <u>This systematic review studies the use of pay-for-performance, fee-for-service, salary, and capitation payment models in outpatient settings; there is very-low to moderate certainty evidence that different payment models have an impact on the quantity, quality, and patient outcomes of health services (30)</u> 	No	11/11	2020	Yes	<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations

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	<ul style="list-style-type: none"> • <u>Fee-for-service payment models for specialist physicians tend to be associated with increased utilization while salary and capitation models are associated with decreases in some types of utilization; payment reforms targeted at specific utilization, quality, or cost measures may have unintended consequences (31)</u> 	No	7/10	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>This systematic review identifies the following characteristics of provider payment mechanisms that influence provider behaviour: (the sufficiency of) payment rates, timeliness of payments, payment schedules, the bundling of services, and accountability and performance mechanisms (32)</u> 	No	5/9	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
<p>Private-care delivery (Search 1, Search 2)</p> <p><i>Total syntheses: 1 (high quality)</i></p>	<ul style="list-style-type: none"> • <u>There is very low certainty and limited evidence regarding the effect of government regulations for private health insurance on utilization, cost, quality, and health outcomes [review of only U.S. studies which may have limited external validity] (33)</u> 	No	9/9	2019	Yes	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
<p>Virtual care (Search 1)</p> <p><i>Total syntheses: 13 (of which one are high and 12 are medium quality)</i></p>	<ul style="list-style-type: none"> • <u>Delivering chronic disease patient education via telehealth (web-based, telephone, videoconference, or secure television) has been shown to deliver comparable, or slightly improved, outcomes when compared to standard approaches to patient education (34)</u> 	No	9/10	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>This scoping review of healthcare providers' experience and perspectives regarding telemedicine points to the importance of expected improvements in performance and job effort, social/organizational influence, and facilitating conditions when addressing telemedicine utilization concerns in this setting (35)</u> 	No	7/9	2021	No	<ul style="list-style-type: none"> • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>This systematic review finds that patients and caregivers are generally satisfied with telehealth approaches for managing patients' health; the included studies point to the importance of considering system experience, information sharing, and consumer focus (36)</u> 	No	7/9	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>This systematic review found that telehealth consultations either improved outcomes or performed as well as comparators for inpatient, emergency, and outpatient consultations; however, the evidence varies across settings and clinical indications (37)</u> 	No	7/11	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem

						<ul style="list-style-type: none"> Identifying implementation considerations
<ul style="list-style-type: none"> <u>This meta-analysis found that post-discharge virtual wards reduce the risk of mortality and cause-specific hospital readmission in patients with heart failure, but it does not seem to reduce all-cause hospital admissions; virtual wards do not show evidence of impact in patients with undifferentiated high-risk chronic diseases (38)</u> 	No	7/11	2017	No		<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
<ul style="list-style-type: none"> <u>Telehealth consultations for patients from racial/ethnic minority communities are generally effective for a range of conditions, are acceptable to patients, and can improve access to healthcare; barriers to telehealth in this population tend to be technology-related (39)</u> 	No	6/10	2020	No		<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
<ul style="list-style-type: none"> <u>A range of models exist for using telehealth in non-critical emergencies in rural and remote emergency departments; in this context, telehealth has been found to influence patient diagnosis and management, patient transfer rates, and rates of discharge and admission (40)</u> 	No	6/10	2017	No		<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
<ul style="list-style-type: none"> <u>This review identified nine different tools used to evaluate patient motivation and satisfaction during technology-assisted rehabilitation; these tools generally frame motivation and satisfaction as multidimensional concepts (41)</u> 	No	5/9	2019	No		<ul style="list-style-type: none"> Monitoring and evaluating the impacts
<ul style="list-style-type: none"> <u>Electronic, mobile, and telehealth tools for vulnerable patients with chronic disease have been shown to have positive effects on patient self-management; these interventions generally seek to encourage patients to believe that they can self-manage their conditions (42)</u> 	No	5/9	2018	No		<ul style="list-style-type: none"> Selecting an option for addressing the problem
<ul style="list-style-type: none"> <u>Videoconference may have advantages over telephone delivery of healthcare for reducing provider errors and improving diagnostic accuracy; these modalities appear comparable with respect to healthcare utilization and cost as well as patient outcomes, though this may vary by patient population (43)</u> 	No	5/9	2018	No		<ul style="list-style-type: none"> Selecting an option for addressing the problem
<ul style="list-style-type: none"> <u>Telehealth services designed specifically for women can be an effective way to accessibly and flexibly provide gender-specific services; most research conducted in this area has focused on</u> 	No	4/9	2018	No		<ul style="list-style-type: none"> Selecting an option for addressing the problem

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	<u>maternal health, prevention, and disease management, and used telephone as the medium of care delivery</u> (44)					
	<ul style="list-style-type: none"> • <u>Telehealth utilization in pre-hospital emergency care is fairly limited, mostly focused on stroke and cardiovascular care, and usually delivered via real-time videoconferencing or store and forward methods</u> (45) 	No	4/9	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Systematic reviews about alternative models of healthcare service delivery have studied how and when care is delivered, where care is provided, who provides care, coordination of care, IT and communication systems, or have been goal-focused; most systematic reviews about alternative models report on patient outcomes and there is a lack of economic evaluation evidence [scoping review of systematic reviews]</u> (46) 	No	4/9	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<p>Culturally safe and unbiased care (Search 1)</p> <p><i>Total syntheses: 1 (medium quality)</i></p>	<ul style="list-style-type: none"> • <u>Studies of cultural competency interventions during medical school have typically studied interventions that are focused on a specific population or topic, are delivered via lectures or discussions, and are time-limited [scoping review]</u> (47) 	No	4/10	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<p>Workforce mobility (Search 1)</p> <p><i>Total syntheses: 1 (high quality)</i></p>	<ul style="list-style-type: none"> • <u>There is very limited evidence available regarding interventions for equalizing the geographic distribution of dental professionals [review of three studies conducted in Asia]</u> (48) 	No	8/9	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<p>Rural/remote (Search 1)</p> <p><i>Total syntheses: 7 (all of which are medium quality)</i></p>	<ul style="list-style-type: none"> • <u>This systematic review identifies five important themes related to the recruitment and retention of rural pharmacists: geographic and family-related factors, economic and resource factors, scope of practice and skill development factors, practice environment factors, and community and practice support factors</u> (49) 	No	7/10	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>This meta-analysis finds that clinical rotations in rural areas as well as recruiting students with rural backgrounds significantly increase dental graduates' intention to practise in rural areas</u> (50) 	No	7/10	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>A systematic review found that students who complete clinical medical education in rural and underserved areas are more likely to return to practise in these areas and are more likely to practise primary care [limited external validity as only studies from the United States were included]</u> (8) 	No	7/11	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>The global literature regarding rural generalist medicine generally originates from Australia/New Zealand and North America and addresses the following themes: defining rural generalist</u> 	No	5/9	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem

	<u>medicine, pathways and programs, scope of practice and service models, enablers and barriers to recruitment and retention, and reform recommendations [scoping review] (51)</u>					<ul style="list-style-type: none"> Identifying implementation considerations
	<ul style="list-style-type: none"> <u>There is evidence to support the use of educational, policy, financial incentives, and multidimensional strategies for improving the recruitment and retention of rural and remote physicians; rural student recruitment, rural exposure, and comprehensive medical school programs are the most commonly studied interventions [scoping review] (52)</u> 	No	4/9	2022	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> <u>There is a dearth of evidence regarding the supports that may enable greater participation of rural, mature-aged nursing and allied health students (53)</u> 	No	4/9	2021	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> <u>The literature regarding social determinants of rural health-workforce retention points to the importance of the following place-based social processes: rural familiarity and/or interest, social connection and place integration, community participation and satisfaction, and fulfilment of life aspirations [scoping review] (54)</u> 	No	4/9	2019	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem Identifying implementation considerations
<p>Licensure and regulation (Search 1)</p> <p><i>Total syntheses: 1 (medium quality)</i></p>	<ul style="list-style-type: none"> <u>Trade agreements can present several types of risks to the nursing workforce, nursing practice, and public health; nursing and public-health advocates have an important role to play in trade negotiations (55)</u> 	No	4/9	2019	No	<ul style="list-style-type: none"> Understanding a problem and its causes

Appendix 3: ‘Best’ available evidence syntheses identified for the HHR policy framework component focused on support and retention

Policy framework sub-element (and search strategy used)	‘Best’* available evidence syntheses to inform decision-making about the components	Living status	Quality	Last year literature searched	Availability of GRADE profile	Type of policy question addressed
Systemic issues (workplace, violence, racism) (Search 1, Search 2) <i>Total syntheses: 6 (of which three are high and three are medium quality)</i>	<ul style="list-style-type: none"> Evidence shows that <u>organizational interventions during the pre-event and event phases may decrease overall aggression caused by patients and patient advocates to healthcare workers [Review of studies of very-low to low quality] (56)</u> 	No	10/10	2019	Yes	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> Despite the impact that education and training can have on increasing knowledge and attitudes, this intervention combination may not result in any effects on combatting aggression towards healthcare staff [Results of studies of uncertain or low quality] (57) 	No	10/11	2020	Yes	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> The adoption of ‘Safewards’ holds promising trends to support enhanced therapeutic relationships, cohesion, ward atmosphere, patient care, and safety, among staff and clients [Review of studies of variable quality] (58) 	No	9/10	2020	Yes	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> Evidence suggests that relational leadership styles are able to facilitate positive outcomes among the workplace and for nurses, such as increased job satisfaction, retention, environment, and productivity (59) 	No	7/9	2017	No	<ul style="list-style-type: none"> Understanding a problem and its causes
	<ul style="list-style-type: none"> Training interventions that help to improve knowledge, provide responses to uncivil workplace behaviours, and facilitate the promotion of communication skills through activities can help manage nursing workplace incivility [Review of studies of low quality] (60) 	No	6/9	2017	No	<ul style="list-style-type: none"> Selecting an option for addressing the problem
	<ul style="list-style-type: none"> Prominent concerns within surgical workplaces include bullying, undermining behaviour, and harassment; a counter-strategy that may hold potential value is professionalism training [Review of studies of variable quality] (61) 	No	4/10	2017	No	<ul style="list-style-type: none"> Understanding a problem and its causes
Supportive policies and regulations (Search 1)	<i>No evidence syntheses that were of high or medium quality, had searches updated within the last five years, and that were not too specific in focus were identified for this component</i>					
Training, education and support (Search 1) <i>Total syntheses: 13 (of which two are high and 11 are medium quality)</i>	<ul style="list-style-type: none"> The majority of students possess a positive perception of <u>interprofessional education, particularly pertaining to developing teamwork skills, and collaborating and understanding the various roles and responsibilities of different disciplines (62)</u> 	No	8/10	2020	No	<ul style="list-style-type: none"> Understanding a problem and its causes

<ul style="list-style-type: none"> • <u>Evidence shows that physiological empowerment is critical in enhancing job satisfaction within the nursing profession [Review of studies of medium quality] (63)</u> 	No	8/11	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Evidence suggests that capacity-building interventions can help increase knowledge and system-level capacity, develop self-confidence, and bring about practical, policy and behavioural changes; organizations should meticulously select analysis methods that can help to identify the mechanism, target and purpose of the intervention [Review of studies of moderate quality] (64)</u> 	No	7/10	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>In order to effectively implement evidence-based practice within occupational therapy, robust, collaborative, and contextually relevant training approaches are needed by practitioners (65)</u> 	No	6/9	2019	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Prescribers are trained to use electronic prescribing systems through several methods, including clinical scenarios, demonstrations and assessments; the limited number of available studies, however, suggests that further research needs to be undertaken to guide training methods [Review of studies of unknown quality] (66)</u> 	No	6/9	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Evidence shows that clinically based interprofessional activities of a short time period, such as shadowing and conducting patient reviews, can help enhance collaborative skills among healthcare students [Review of studies of low quality] (67)</u> 	No	6/9	2017	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Training medical students and residents on effectively using electronic health records can help to improve patient care and overall population health [Review of studies of variable quality] (68)</u> 	No	6/10	2019	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Evaluations of technology-enhanced learning programs revealed an overall average score of 68% across the following eight domains: preamble, introduction, design, sampling, data collection, ethical matters, results, and discussion; there remains a critical need to continue developing evaluation tools for such programs (69)</u> 	No	6/10	2017	No	<ul style="list-style-type: none"> • Monitoring and evaluating the impacts
<ul style="list-style-type: none"> • <u>Given the heterogeneity among the models and formats employed for pharmaceutical continuing education, there was no ideal activity identified; face-to-face learning and tailored approaches that utilize multiple-format learning are recommended (70)</u> 	No	5/9	2018	No	<ul style="list-style-type: none"> • Identifying implementation considerations

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	<ul style="list-style-type: none"> • <u>Defining characteristics of competence-based human resource management in nursing consist of recruitment and selection, training and development, performance appraisal, reward system, and career planning; its adoption affects employee, organizational and financial outcomes (3)</u> 	No	5/10	2018	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
	<ul style="list-style-type: none"> • <u>Evidence suggests that resident satisfaction is associated with having committed outpatient faculty, and structures that minimize inpatient and outpatient conflicts in the clinic [Review of studies of unknown quality] (71)</u> 	No	5/10	2018	No	<ul style="list-style-type: none"> • Identifying implementation considerations
	<ul style="list-style-type: none"> • <u>Evidence shows that medical billing compliance is not being met and further education is needed among practitioners (72)</u> 	No	4/9	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Facilitators for advocacy curriculum implementation included the American Council for Graduate Medical Education requirements, support from institutions, and existing faculty experience, while barriers constituted of competing priorities of the curriculum, time constraints, and faculty and community partner turnover; advocacy curricula is able to improve the knowledge, attitude and self-efficacy of trainees [Review of studies of unknown quality with substantial heterogeneity among the educational content delivered] (73)</u> 	No	4/9	2017	No	<ul style="list-style-type: none"> • Identifying implementation considerations
<p>Sustainable and safe health workforce staffing (Search 1)</p> <p><i>Total syntheses: 1 (medium quality)</i></p>	<ul style="list-style-type: none"> • <u>A subset of 13 enablers that promote psychological safety within healthcare teams were identified, all of which can be encompassed within the following five themes: patient safety, improvement or learning orientation, support, colleague familiarity, and status, hierarchy, inclusiveness, and individual differences (74)</u> 	No	6/9	2019	No	<ul style="list-style-type: none"> • Identifying implementation considerations
<p>Staff retention (Search 1)</p> <p><i>Total syntheses: 9 (of which two are high and seven are medium quality)</i></p>	<ul style="list-style-type: none"> • <u>Low-certainty evidence shows that the implementation of postgraduate placements in underserved, rural communities can help to support the recruitment and retention of primary-care physicians [Review of studies of low quality with important heterogeneity regarding findings on financial incentives] (17)</u> 	No	9/10	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Evidence suggests that psychological empowerment and employment satisfaction are highly correlated among nurses [Review of studies of medium quality] (63)</u> 	No	8/11	2017	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
	<ul style="list-style-type: none"> • <u>The recruitment and retaining of rural pharmacists require flexible, multi-faceted approaches; geographic, family, economic, support, scope of practice, and workplace factors can influence the workforce (49)</u> 	No	7/10	2021	No	<ul style="list-style-type: none"> • Understanding a problem and its causes

	<ul style="list-style-type: none"> • <u>Heterogeneity exists within the literature with respect to daily huddles in multidisciplinary teams increasing job satisfaction and teamwork among healthcare professionals</u> (75) 	No	7/10	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Features of interventions that are able to minimize nursing turnover rates and help retain more staff include internship and residency programs, with a teaching, preceptor, and mentorship component, and duration of 27-52 weeks</u> (4) 	No	7/10	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Factors contributing to missed care among nurses include heavy workloads, poor job satisfaction, and scarcity of resources; this can be mediated through unit features and diversifying staffing composition</u> (76) 	No	5/11	2019	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
	<ul style="list-style-type: none"> • <u>Educational, financial and multidimensional strategies were shown to be effective in retaining, recruiting, and developing the medical workforce in rural and remote regions</u> (52) 	No	4/9	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Social processes, such as rural familiarity, social connection and integration, community participation, and fulfilment of life aspirations, can affect the retention of rural healthcare workers</u> (54) 	No	4/9	2018	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
	<ul style="list-style-type: none"> • <u>There is weak evidence to suggest that extrinsic influences, such as administrative support and salary, as well as intrinsic factors, including autonomy and finding meaning in work, can significantly affect employment satisfaction for registered nurses</u> (77) 	No	4/9	2017	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
State of mental health and resiliency of the health workforce (Search 1, plus scan of the following rapid evidence profile)	<ul style="list-style-type: none"> • <u>Within the target population of medical students and junior doctors, the benefit of mindfulness interventions improving mental health and well-being remains inconclusive [Review of studies of very-low to low quality]</u> (78) 	No	11/11	2021	Yes	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
Total syntheses: 21 (of which three are high and 18 are medium quality)	<ul style="list-style-type: none"> • <u>Low-certainty evidence suggests that post-intervention, psychological interventions may help to develop resiliency among healthcare professionals</u> (79) 	No	11/11	2019	Yes	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
	<ul style="list-style-type: none"> • <u>Moderate evidence suggests barriers to implementing interventions include a lack of understanding by health professionals on the support they need, and a lack of equipment, time and skills from staff; facilitators to implementing resiliency interventions include adaptable interventions based on local needs, effective communication in formal and social settings, and a safe learning environment</u> (80) 	No	10/10	2020	Yes	<ul style="list-style-type: none"> • Identifying implementation considerations

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<ul style="list-style-type: none"> • <u>There is a lack of evidence regarding the utility of a positive psychology-based conceptual framework guiding burnout and well-being interventions among physicians</u> (81) 	No	7/10	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Evidence shows that interventions focused on peer support and individual meditation can improve resident physicians' well-being; successful interventions had educational theory guide their program development and utilized surveys in their curriculum design [Review of studies of low quality]</u> (82) 	No	6/9	2019	Yes	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Work-related stress and mental health disorders are widespread among health professionals, however, there is an absence of agreement on the most effective measures needed to remedy this [Review of studies of intermediate to high quality]</u> (83) 	No	5/9	2020	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
<ul style="list-style-type: none"> • <u>Nurse managers reported moderate stress levels due to high workloads, financial responsibilities, and a lack of resources; stress levels could be reduced through increasing social support and promoting job control [Review of studies of low quality]</u> (84) 	No	5/9	2018	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
<ul style="list-style-type: none"> • <u>Intensive care nurses' well-being is presently understudied, with further research needed within this area [Review of studies of variable quality, with substantial heterogeneity regarding study characteristics]</u> (85) 	No	5/9	2017	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
<ul style="list-style-type: none"> • <u>Evidence shows that the prevalence of compassion fatigue and burnout are high among nurses, although training in post-secondary education can have a counteracting effect and improve the quality of life of nurses</u> (86) 	No	6/11	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Interventions spanning over one week in length have been shown to help develop resiliency among physicians</u> (87) 	No	6/11	2020	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Evidence shows that debriefing may help to minimize psychological sequelae and post-traumatic distress symptoms to traumatic events; characteristics of an effective debriefing session include reflection, a shared experience, and a peer facilitator</u> (88) 	No	5/10	2021	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Mindfulness interventions were the most commonly reported strategies used to enhance the well-being and satisfaction of general practitioners</u> (89) 	No	5/10	2020	No	<ul style="list-style-type: none"> • Understanding a problem and its causes

<ul style="list-style-type: none"> • <u>Wellness programs for neurosurgery trainees usually consisted of exercise, physical and mental well-being lectures, collaborative activities, and cultural excursions; program barriers included a lack of time, energy and support, and feelings of guilt for prioritizing oneself over patient care (90)</u> 	No	5/10	2020	No	<ul style="list-style-type: none"> • Identifying implementation considerations
<ul style="list-style-type: none"> • <u>Evidence shows that interventions that incorporate elements of mindfulness yielded a positive net effect on reducing burnout, and increasing the empathy and well-being of physicians (91)</u> 	No	5/10	2019	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Mindfulness and cognitive-behavioural therapy-based interventions have been shown to be effective in decreasing stress, anxiety and depression among physicians and nurses; promising effects may be observed from short interventions that focus on deep breathing and gratitude [Review of studies of moderate quality] (92)</u> 	No	5/10	2018	No	<ul style="list-style-type: none"> • Monitoring and evaluating the impacts
<ul style="list-style-type: none"> • <u>Interventions aimed at enhancing the resiliency of health professionals may be promising; longer session length is associated with program effectiveness (93)</u> 	No	5/10	2018	No	<ul style="list-style-type: none"> • Monitoring and evaluating the impacts
<ul style="list-style-type: none"> • <u>Mindfulness interventions focusing on mindfulness training elements and group-based training yielded positive effects on the well-being and performance of physicians (94)</u> 	No	5/10	2018	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem
<ul style="list-style-type: none"> • <u>Evidence shows that organization-directed interventions can have a moderate effect on reducing burnout, as compared to physician-directed interventions, which can have a small effect; organization-directed strategies can help view burnout from issues rooted in the workplace environment and organizational culture (95)</u> 	No	5/11	2018	No	<ul style="list-style-type: none"> • Monitoring and evaluating the impacts
<ul style="list-style-type: none"> • <u>Consistent reports of stress, anxiety and depression were observed among healthcare workers due to the COVID-19 pandemic (96)</u> 	No	4/9	2020	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
<ul style="list-style-type: none"> • <u>Burnout among and quality of care provided by health professionals is affected by staffing levels, turnover rates and workloads (97)</u> 	No	4/9	2019	No	<ul style="list-style-type: none"> • Understanding a problem and its causes
<ul style="list-style-type: none"> • <u>Many skill-based programs assessed in the review noted a reduction in physician burnout; commonly included content within the interventions included stress management, resilience, burnout reduction, and general wellness strategies [Review of studies of variable quality] (98)</u> 	No	4/9	2019	No	<ul style="list-style-type: none"> • Selecting an option for addressing the problem

Appendix 4: Evidence syntheses relevant to Element 1 – Identify the core values that decision-makers across the country and at all levels within health systems must follow to manage health human resources

Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
Developing norms and values	Developing framework for healthcare priorities at the macro and meso levels Setting healthcare priorities at the macro and meso levels: A framework for evaluation (99)	<p>The development of a framework to evaluate priority setting in healthcare can help to improve health system performance.</p> <p>The study found that although there is no widely accepted framework for priority settings in place, consequentialism and proceduralism stand as the most dominant schools of thought. Consequential frameworks focus on outcomes, whereas procedural frameworks focus on procedural aspects. Twenty-four papers encouraged the use of procedural conditions, one proposed the use of consequential frameworks, and six recommended the use of both.</p> <p>Furthermore, allocative efficiency (when resources are allocated in a manner to maximize community welfare) was deemed to be relevant in the distribution of healthcare resources. Cost-effective analysis (CEA) as well as Programmed Budgeting and Marginal Analysis (PBMA) were the primary tools used to allocate resources efficiently. Although focusing on allocative efficiency and equity was found to be important, the study found that only considering these factors was not enough. The authors propose a framework that is successful if efficiency and equity are considered along with the following: satisfaction, stakeholder engagement,</p>	No	2/9	Not available	No	17/33	TBD	0/33

Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
		<p>stakeholder empowerment, transparency, use of evidence, revisions, enforcement, and community values.</p> <p>The authors note that existing literature poorly incorporates evaluation theory, which is reflected in their study as well. They suggest that future studies should consider this, as well as the practical applicability of these situations in priority-setting processes.</p>							
	<p>Health and care guidance in regard to social values</p> <p>Social values related to the development of health and care guidance: Literature review for NICE by its research support unit (100)</p>	<p>Social values act as an important consideration in the allocation of resources for clinical, public health, and social-care services. The National Institute for Health and Care Excellence (NICE) aims to produce evidence-based guidance and advice with this consideration to ultimately improve health and social-care outcomes.</p> <p>The authors conducted a semi-iterative search for information relevant to health and care guidance, and found that the literature raised issues that fell under eight major social-value categories: utility and efficiency (effectiveness and cost effectiveness), justice and equity, autonomy, solidarity, participation, sustainability, transparency and accountability, and appropriate methods of guidance development.</p> <p>From these categories, the study outlines the following overarching issues about the nature of social values that can be implemented in guidance development: the need for increased sophistication; boundaries of evidence; the feasibility of including all</p>	No	3/9	2011	No	Not reported	Not reported	Not reported

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Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
		social values; the balance between utility and equity; considering both corporate/societal values; presence of hidden social values; lack of research evidence; differences in social care; and the guidance development process itself.							
Establishing appropriate processes	<p>Interprofessional and interorganizational collaboration and their effects on healthcare</p> <p>Comparing interprofessional and interorganizational collaboration in healthcare: A systematic review of the qualitative research (101)</p>	<p>Interprofessional and interorganizational collaboration serve as key components of an effective healthcare system. Collaboration within an organization can lead to increased satisfaction for professionals, improve team building and sustainability, improve the work atmosphere, and also reinforce practitioner commitment to the group.</p> <p>Eight of the studies addressed professional collaboration, seven addressed frameworks of interorganizational collaboration, and one study addressed both, serving as a model to illustrate similarities between groups. The authors found some components similar between frameworks for both interprofessional and interorganizational collaboration, including the following: communication, trust, respect, mutual acquaintanceship, power, shared goals and consensus, patient-centredness, task characteristics and environmental factors. However, some differences in the two frameworks stemmed from formalization playing a greater role in interorganizational collaboration, the need for proper role clarification, and differences in leadership and assessment of outcomes.</p>	No	6/9	2014	No	5/15	TBD	0/15

Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
		<p>Furthermore, the study mentions that interprofessional collaboration requires a motivational leader to increase commitment to the values of the organization. The authors recommend that nurses are in the best position to assume this role due to their professional status and close relationship with patients. However, few organizations provide the training needed to adopt this approach.</p> <p>The authors also found that both frameworks had more aspects in similar than different. However, promoting interorganizational collaboration was found to be a greater challenge, including struggles in achieving a sense of belonging among professionals, considerations of geographical distance, the variety of processes, and the available formal lines of communication.</p> <p>The authors note that the components mentioned are not a complete list, but serve as the essentials instead. Additionally, broad keywords were used and there are also some inconsistencies as to what interprofessional collaboration entails in the field.</p>							
	<p>Developing guidelines for nursing stakeholder identification in HHR</p> <p>Nursing stakeholder</p>	<p>The effective involvement of nursing stakeholders through appropriate guidelines could aid in human resources for health planning processes. Involvement of nursing stakeholders in planning human health resources (HHR) is advocated by many global bodies, including the WHO and the International Council of Nurses.</p>	No	6/9	2020	No	0/2	TBD	0/2

Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
	identification guidelines for human resources for health and health workforce development: A scoping review (102)	<p>The authors found certain recommendations for stakeholder identification. The Country Coordination and Facilitation Framework (CCFF) approach encourages the establishment and support of governance structures, aimed planning, and monitoring of HHR through a unified strategy. They recommend that a cohesive plan must reflect the following: training, retention, performance, remuneration, equitable distribution, responsiveness and migration of the workforce. However, the CCFF focuses on all areas of the professional HHR workforce, and considerations on nursing stakeholders specifically are limited.</p> <p>In addition, the authors found that guidelines regarding nursing stakeholder identification are sparse and not very current. Information found was not explicit and recommended for further studies in the field. When nursing stakeholders were referred to, there was often a lack of detail, and they were usually considered as part of a wider project or endeavour. The authors were unable to find any consistency in methods or outcomes related to nursing stakeholder identification in regard to the HHR functional domain. Additionally, no guidelines or detailed procedures were found. The authors suggest that there is a strong need for systematic identification of nursing stakeholders to effectively integrate HHR planning processes.</p>							

Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
	<p>How political skill affects health services change</p> <p>The contribution of political skill to the implementation of health services change: a systematic review and narrative synthesis (103)</p>	<p>Political skills can serve as a means to manage the politics of healthcare organizations and may contribute to health-services change.</p> <p>The authors found four distinct categories that structured health-services research literature: nurse leaders' use of political skills to influence formal policy; political skills used by health service administrators/leaders; political skills used by other areas of the healthcare workforce; and the political skills used in "system leadership" (to manage the competing interests of many stakeholders).</p> <p>Furthermore, the authors highlight that political skill was strongly associated with enhanced personal performance/career development, an understanding of the prevailing political dynamics, and the involvement of inter-personal influence. The authors also suggested that political skills acted as a broader form of stakeholder engagement and network building that can facilitate improvements in formal policy, as well as management processes.</p> <p>The authors state that changes in definitional/conceptual understanding of political skills, variable levels of evidence, and the lack of literature that explores interconnections between different aspects of political skills may have had an impact on the literature reviewed in the paper.</p>	No	5/9	2018	No	Not reported	Not reported	Not reported

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Sub-element	Focus of systematic review	Key findings	Living status	Quality (AMSTAR) rating	Last year literature searched	Availability of GRADE profile	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focus on HHR planning
		However, there is weak evidence on explanatory processes. The researchers suggest that future research should aim to better understand the factors highlighted in the study.							

Appendix 5: Summary of citizens’ views about challenges raised during the first interaction of the ‘living’ citizen panel

Challenge	Description
Patient experiences are suffering due to the crisis	<ul style="list-style-type: none"> ● Panellists talked about their ‘trials and tribulations’ as patients and caregivers, including the lack of timely access to care; long wait times, the lack of continuity of care; the fragmentation of care (and poor data sharing); and the challenge of navigating the system (among other things) ● The crisis is contributing to the depersonalization of care (meaning that care is deprived of a sense of personal identity), and the weakening relationships between patients/caregivers and their care providers
Health workplaces do not seem to be managed responsibly and respectfully	<ul style="list-style-type: none"> ● Health workplaces do not seem to be managed responsibly and respectfully <ul style="list-style-type: none"> ○ Very long shifts are being done by health workers (without the capacity to eat or go to the washroom) and there is often mandatory overtime, which leads to burnout and poor employee/employer relationships ● As one panellist said: “Good healthcare outcomes are impossible without well-rested, happy and healthy employees, from the lowest-paid to the highest-paid [health workers].”
Personal and professional interests seem to be guiding health-system leaders	<ul style="list-style-type: none"> ● Personal and professional interests appear to be guiding health-system leaders, which constitute a major barrier to managing health human resources collaboratively <ul style="list-style-type: none"> ○ Elected officials are obsessed by the four-year election cycle and are thus focused on short-term gains, which encourage the adoption of ‘band-aid solutions,’ as opposed to long-term care planning to address the health human resources crisis ○ Managers and professional groups are often stuck in power struggles and zero-sum thinking (meaning that one group’s gain would be another’s loss)
Health workers seem rarely engaged in policy and organizational decisions	<ul style="list-style-type: none"> ● Health workers are dedicated people who can provide insightful input to address the health human resource crisis, but they seem rarely engaged in policy and organizational decisions
Some health workers are affected differently by the crisis	<ul style="list-style-type: none"> ● The HHR crisis may affect differently certain groups of health workers ● Panellists focused on three groups during the discussion: <ul style="list-style-type: none"> ○ immigrant workers <ul style="list-style-type: none"> ▪ foreign graduates have been facing lengthy and complex processes to be integrated in Canadian health systems (and many are giving up on working in the health sector) ▪ immigrant workers have been provided with time-limited opportunities in the system to address acute crises, but have not been supported to pursue a lifelong career in the system (for example, asylum seekers who provided care in long-term care facilities during the pandemic to obtain permanent residency) ○ health workers in rural and remote communities have been facing unique challenges that can contribute to additional stress and burnout (for example, working in resource-constrained settings) ○ female health workers make up a large proportion of the health workforce, and in particular, make up the majority of the lower-paying health professions (for example, personal-support workers are often women from racialized communities)
There is a decline in trust in health-system leaders (which is fostered in part by their lack of accountability to solve the crisis)	<ul style="list-style-type: none"> ● The last challenge emerging from the discussion is the decline of public trust in health-system leaders ● Panellists pointed out that trust cannot thrive without accountability <ul style="list-style-type: none"> ○ Many felt that they had limited leverage to hold health-system leaders accountable to solve the crisis (with the exception of elected officials)

Appendix 6: Additional actions for operationalizing values raised during the first interaction of the ‘living’ citizen panel

Core values	Examples of actions that could be taken
1. Align with Canadians’ support for universal access to medically necessary care	<p>Federal, provincial and territorial governments</p> <ul style="list-style-type: none"> • Expand public health-insurance plans to cover services provided by all health workers who have the competencies to provide them (e.g., pharmacists and nurses for diagnosing and treating certain conditions that were previously only diagnosed and treated by physicians)
2. Use an equity, diversity and inclusion (EDI) lens	<p>Health workplaces and practice environments</p> <ul style="list-style-type: none"> • Ensuring EDI is embedded into hiring processes <p>Organizations focused on specific categories of health workers</p> <ul style="list-style-type: none"> • Making healthcare training more accessible for low-income individuals or for people from historically disadvantaged or marginalized communities
3. Work towards shared accountability	<p>Health authorities and organizations providing strategic direction and oversight for care delivery</p> <ul style="list-style-type: none"> • Establishing clear standards and indicators to assess performance
4. Engage citizens and patients in policy and organizational decisions	<p>Health authorities and organizations providing strategic direction and oversight for care delivery</p> <ul style="list-style-type: none"> • Creating a patient advisory council to consult with and provide input into strategic decision-making processes
5. Engage health workers in policy and organizational decisions	<p>Federal, provincial and territorial governments</p> <ul style="list-style-type: none"> • Creating new positions in government (e.g., Chief Nursing Officer) and committees that prioritize the engagement of front-line health workers (where they don’t already exist)
6. Leverage technologies to reduce workload	<p>Health workplaces and practice environments</p> <ul style="list-style-type: none"> • Investing in technologies that help to make administrative duties less burdensome for health workers, and hire the right staff to provide support for the use of these technologies
7. Give health workers the freedom to work where they are needed most	<p>Organizations focused on specific categories of health workers</p> <ul style="list-style-type: none"> • Agreeing to recognize professional licensure across PT jurisdictions

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