Mapping Demand Methodologies and Coverage of Health Provider Modelling Across Canada

Health Workforce Canada's Modelling Advisory Group Subcommittee

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Executive Summary

Context

Health workforce modelling and planning in Canada shows uneven development. Physician supply-and-demand models are relatively advanced, while demand modelling for other health care provider groups, remains less mature. Canada's federated health care structure has historically constrained the sharing of modelling methodologies across jurisdictions, leaving gaps that stronger collaboration could fill.

Objective

To advance Health Workforce Canada's goal of strengthening workforce planning through enhanced modelling capacity, this work maps current demand modelling methods and identifies which provider groups are being modelled across Canada.

Approach

In collaboration with Health Workforce Canada's Pan-Canadian Modelling Advisory Group and additional stakeholders, a standardized data-collection tool was developed to capture model type, demand-operationalization components, provider groups, demand units, and data sources. Data contributed by modelling experts from 14 organizations underwent thematic analysis to identify patterns and trends.

Key Findings

- 388 demand models were identified, covering 154 health-care provider groups.
- Two main demand-modelling approaches were used:
  - *Service level maintenance*: maintaining provider-to-population ratios.
  - *Needs-based*: incorporating population-need and service-use factors.
- Provider groups with billing data more often used needs-based models; others relied on service-level maintenance.
- Model inputs included population projections, disease prevalence, workload, vacancies, full-time equivalent conversions, and provider-to-population ratios.
- Most used demand units: headcounts (151), FTEs (81), consult visits (34).
- Beyond physicians, paramedics (11), social workers (9), and respiratory therapists (8) were the most modelled health care provider groups.
- Across 219 HPGs, 569 supply-and-demand models were identified.

Implications

This report provides the foundation for enhanced cross-jurisdictional learning and strengthened modelling capacity for Canada's health workforce.

Background

Effective health workforce planning aims to achieve a sustainable balance between the supply and demand for diverse health workers, both in the short- and long-term. This planning is critical given the considerable time and financial investment required to train health care providers. When health workforce projections miss the mark, they can lead to shortages or surpluses that contribute to inadequate care delivery, increased health care costs, and reduced patient access to services (1).

In October 2024, Health Workforce Canada released an environmental scan of health workforce forecasting models across Canadian jurisdictions and identified systemic challenges that impede effective planning (2). Key barriers include persistent data and methodological limitations, such as inconsistent data-sharing practices, the absence of standardized definitions, and insufficient tracking of workforce dynamics such as attrition and interjurisdictional migration (2). Expert consultations also revealed limited use of needs-based and team-based care models, approaches with highly perceived value and relevance. An imbalance in focus and maturity for demand-side modelling compared to the supply-side complement was also observed.

Demand-side modelling has traditionally been more complex than supply-side due to data gaps and conceptual challenges. Supply estimates gained traction because they draw on readily available data – such as regulated professional registries and education records – whereas demand modelling depends on diverse inputs like epidemiological estimates, demographic trends, service delivery models and/or utilization across care settings (including private delivery), provider scopes of practice, and workforce productivity (3). For physicians, health workforce demand estimation benefits from standardized billing and claims data, enabling relatively robust utilization-based projections. In contrast, demand modelling for many non-physician and unregulated providers is hindered by

Key Definitions:

Demand: Number, distribution, and combination of health care workers required in a given jurisdiction.

Supply: Number, distribution and combination of health care workers contributing to the health workforce in a given jurisdiction.

Modelling: The process of creating a mathematical or conceptual representation of a real-world system, process, or phenomenon.

Forecasting: An attempt to predict outcomes that will happen if models rely on historical data, current conditions, trends, and fair assumptions about the future.

Projections: Predictions about what might happen based on proposed scenarios about what the future could look like.

Reference: (2)

fragmented or missing service data, forcing reliance on indirect proxies rather than direct utilization measures.

In support of Health Workforce Canada's mandate to strengthen pan-Canadian health workforce planning – and its strategic objectives to catalyze modelling and forecasting and convene networks – the pan-Canadian Modelling Advisory Group (MAG) was established, bringing together modelling experts from federal, provincial, territorial and health organizations nationwide. Through a prioritization exercise, the MAG identified two critical needs: (A) documenting the range of demand-side methodologies used to model health care provider groups across jurisdictions, and (B) identifying which provider groups are currently being modelled in Canada. This report responds directly to these priorities by synthesizing the methodologies in use, cataloguing the provider groups being modelled, and offering a practical inventory that jurisdictions can adapt to their local context, reducing duplication and supporting knowledge sharing among modelling teams.

A) Current Landscape of Demand Models

Fourteen provincial, territorial, and health-focused organizations participated in the demand modelling environmental scan: Governments of British Columbia, Saskatchewan, Manitoba, Québec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador, Yukon, as well as Health Canada, the Canadian Institute for Health Information (CIHI), Alberta Health Services, the Ontario Medical Association, and the Institute for Clinical Evaluation Sciences (ICES) - McMaster. A full list of contributors and working group members can be found in Table A: List of Contributors.

To ensure consistent data collection and reporting across jurisdictions, health care provider group terminology was standardized by either adopting the most commonly used term or creating overarching categories. For example, "paramedics" encompasses advanced care paramedics, primary care paramedics, and community paramedics. Similarly, "personal support workers" include roles known by various titles such as continuing care assistants, home support workers, health care aides and home care attendants (3; 4). As a result, some jurisdictions may have multiple models represented under a single provider category.

In several jurisdictions, physician and non-physician health workforce modelling and planning is conducted by separate teams. Therefore, the information presented here more accurately reflects a voluntary Pan-Canadian collaboration rather than a comprehensive inventory of all models in use in Canada. Findings are also largely focused on the modelling activities of federal, provincial and territorial governments.

Model Types

Through this collaboration, 388 health workforce demand models were identified covering 154 health care provider groups across Canada. It is important to note that modelling teams within a jurisdiction often applied a single demand methodology, with few variations, across different health provider groups.

Of the demand models identified, two dominant families emerge: 1) service-level maintenance models, and 2) needs/utilization-based models. *Service-level maintenance models* are straightforward demand-modelling approaches that project future workforce requirements by maintaining historical workforce-to-population ratios, typically with adjustments for demographic change and planned service investments. Demand is operationalized as sustaining these ratios, often converting headcounts to FTEs and applying adjustments for vacancies, attrition, or planned health-care investments (e.g., a new hospital). Non-physician health-care provider groups were primarily modelled with this approach, reflecting a demand focus on sustaining existing or budgeted (current or anticipated) health-care services. An example is Newfoundland's demand methodology for registered nurses:

$$Demand\ (Headcount) = Demand\ Year\ X-1 * Growth\ in\ \#of\ people\ in\ each\ age\ category * Average\ change\ in\ real\ spending\ per\ person * Change\ in\ utilization$$

Another example is Health Canada's demand methodology for nurses, occupational therapists, physiotherapists, and pharmacists (5; 6):

$$Demand\ (Headcount)_{year\ i}\ ‡ = \frac{(Supply_{2022} + Job\ Vacancies_{2022}\ ‡‡)}{Population_{2022}} \times Projected\ Population_{year\ i}$$

‡Demand was calculated as headcounts. FTE demand was estimated by multiplying headcount demand by the ratio of FTE supply to headcount supply.
‡ ‡Job vacancies were used as a proxy for unmet need. For nurse practitioners, unmet need was additionally proxied using primary care unattachment, consistent with the approach used for physician demand (5; 6).

Needs-based models estimate demand by linking population health needs (e.g., disease prevalence, demographics) to service utilization, then adjusting for access gaps or operational realities. An example is the Ontario Medical Association's demand methodology for physicians in each specialty in Ontario, which uses multivariable linear regression to estimate annual number of visits required to meet the population's health care needs. Another example is the Physician Resource Planning Tool (PRPT),

maintained and operated by CIHI, which estimates 20-year projections of the supply, demand, and gap of physician specialties in Canada (7; 8):

$$Demand\ (FTE) = \frac{(Population * Disease\ Prevalence * Physician\ Service\ Utilization)}{Physician\ Workload}$$

Table 1: Broad Categories of Health Workforce Demand Estimation Models

Model Type	Typical Provider Groups of Focus	Example Demand Methodology
Needs/utilization-based	Physicians (Family, specialists), some registered nurses	Population x Utilization ÷ Workload
Service level-maintenance	Licensed practical nurses, occupational therapists, physiotherapists, personal support workers, social workers, pharmacy technicians, paramedics	Demand $_{\text{Headcounts or FTEs}}$ = vacancies + anticipated attrition (e.g., retirements) + capital build requirements + new budget decisions + population growth adjustment

Physicians (and some nursing professions) were more likely to be associated with needs-based modelling, possibly due to methodological feasibility and the availability of billing/procedure data supporting demand estimation algorithms. In contrast, other health care provider groups – such as licensed practical nurses or occupational therapists, etc., – were more commonly modelled using service-level maintenance modelling approaches, largely due to their simplicity, scalability, and the limited quality or availability of comprehensive data for certain health care provider groups (See Table 1 for more details). This latter approach is particularly useful and efficient in jurisdictions that apply a single demand methodology, with limited adjustments, to derive estimates for a range of health care provider groups.

Only one instance of team based care demand modelling was identified; the approach remains largely aspirational across jurisdictions. A broader review of academic and international modelling work could offer useful advice on how to operationalize this type of demand modelling. Nova Scotia was the only contributing jurisdiction reporting the use of a team- and needs-based modelling approach across three health care teams: primary care (including family physicians, nurse practitioners, registered nurses, licensed practical nurses, and medical office administrators), long-term care (including personal support workers, licensed practical nurses, registered nurses, and long-term care aides), and mental health and addictions (including family physicians, psychiatrists, pediatricians, nurse practitioners, registered nurses, occupational therapists,

psychologists, social workers, and pharmacists). To estimate demand for their primary care team, Nova Scotia applies the following equation (9):

$$Demand\ (FTE) = \frac{(Population\ x\ Distribution\ of\ health\ status\ x\ Service\ standards\ by\ health\ status\ x\ Division\ of\ services\ across\ professions)}{Profession-specific\ workload\ per\ FTE}$$

Demand Model Components

Table 2 presents the most observed measurements included in the demand model equations for health care provider groups: population projections, disease prevalence, provider workload, vacancy rates, FTE conversion, and historical provider-to-population ratios. Additionally, many models use scenario analysis to explore how different assumptions – such as higher population growth, increased disease prevalence or changes in provider attachment rates – would impact future workforce requirements.

Table 2: Frequently Used Demand Model Measurements and Data Transformations Across Health care Provider Group

Health care Provider Groups	Population projections	Disease prevalence	Provider workload	Vacancy: Rates or counts	FTE conversion	Provider-to-population ratios
Physicians	✓	✓	✓			
Registered Nurses / Nurse practitioners	✓	✓	✓		✓	
Licensed practical nurses	✓			✓	✓	✓
Occupational therapists, physiotherapists, etc.,	✓			✓	✓	✓
Support roles e.g., personal support workers, paramedics	✓			✓	✓	✓

Demand Measurement Units

The most frequently estimated demand unit was headcounts [149 models], followed by FTEs [81 models], and consultation visits [34 models]. Some jurisdictions calculate multiple demand units and convert estimates across them. For example, Shared Health Manitoba reported calculating demand in various units – vacancies, hours, bed days,

FTEs, headcounts – and converting between these units depending on the analytical requirements, data availability, workforce roles, and use cases.

Health Provider Groups with Associated Demand Models

Demand modelling was conducted on 154 unique health care providers groups across Canada. (See Appendix Table B for a complete list). Table 3 presents the top 20 health care provider groups with the most demand models. Note, differences in profession names and scope of practice across jurisdictions makes the pooling of health provider groups into unique categories challenging. Table B provides all health provider group names to enable recategorization.

Physicians constitute the most modelled provided group when aggregated across specialties (59 of the 154 modelled provider groups). However, because each medical specialty was modelled separately in practice, paramedics emerged as the most frequently modelled non-physician group [11 models], followed by social workers [9 models], and respiratory therapists, nurse practitioners, licensed practical nurses, and pharmacists [8 models each]. However, these provider groups share common characteristics that likely drive modelling activity: rapidly evolving scopes of practice (particularly community paramedicine programs (10), nurse practitioner prescribing authority (11), licensed practical nurse deployment into primary and long-term care, pharmacists' chronic disease management (12)), high visibility during system crises (COVID-19 ICU capacity constraints), and recent policy investments (federal mental health funding expanding social work roles (13)). Unlike physicians – whose established training pipelines have been modelled for years – these groups may represent emerging planning priorities where jurisdictions are developing systematic approaches in response to recognized shortages and changing service delivery models.

While physicians, nurses, and therapists typically come to mind as core health care provider groups, the identified models also predict demand for many non-traditional health care roles, such as cooks, power engineers, health information practitioners, and IT analysts. This highlights the reality that health system capacity evolves in response to the full range of human resources that support it – not only those directly involved in patient care.

Table 3: Top 20 Health Care Provider Groups with Demand Models Across Contributing Canadian Jurisdictions and Organizations	
Health care Provider Groups	**Number of Models**
Paramedics / Advanced Care Paramedic / Primary Care Paramedic / Intermediate Care Paramedic / Community Paramedic / Paramedical Occupations	11
Social Workers	9
Nurse Practitioners	8
Licensed Practical Nurses	8
Respiratory Therapists	8
Pharmacists	8
Medical Laboratory Technologists	7
Occupational Therapists	7
Physicians - Family Medicine	7
Physiotherapists	7
Registered Nurses	7
Nuclear Medicine Technologists	6
Personal Support Workers / Continuing Care Assistant / Home Support Worker / Home Care Aid / Home Care Attendant / Patient Care Attendant / Personal Care Attendant / Resident Care Worker	6
Physicians - Anesthesiology	6
Sonographers	6
Dietitians	5
MRI Technologists	5
Perfusionists	5
Pharmacy Technicians	5
Physicians - Oncology	5

Data Sources

The demand methodologies identified rely on a broad range of administrative and survey data sources. These include billing repositories such as provincial health insurance claims data and payroll records, as well as Statistics Canada surveys and tables – specifically the Labour Force Survey, Job Vacancy and Wage Survey, and population projections. Clinical datasets provide additional insights, such as CIHI's Discharge Abstract Database (DAD) (14; 15) and National Ambulatory Care Reporting System (NACRS) (16; 17). Other data sources include professional regulatory colleges and educational data (typically sourced from a jurisdiction's Ministry/Department of Education). Some jurisdictions also leverage CIHI's Pop Grouper (18; 19) to include disease prevalence in their models, while others use epidemiological estimates of disease prevalence from other sources. Advancing standardization, timeliness, and

privacy-appropriate access to a subset of these commonly used datasets – particularly those already leveraged across multiple jurisdictions – would represent a strategic investment for the modelling community, fostering greater consistency and innovation in forecasting approaches.

Data Limitations

As with all data sources, those leveraged by health workforce modelling teams across the country have inherent limitations. Health insurance claims and payroll data capture service volume but not service complexity, duration, or quality of care delivered. Moreover, billing-based data sources may not fully capture services provided by health care providers operating outside of fee-for-service models, such as salaried physicians and nurse practitioners in team-based care settings. While many jurisdictions provide shadow billing information for physicians who are compensated by various Alternative Payment Programs (APP), there is variability in the completeness of this data.

Additional constraints affect data reliability and completeness. Statistics Canada's Labour Force Survey relies on self-reported data then classified in occupational codes that may lack specificity to distinct care provider grouping/specializations or cannot be released due to privacy requirements. Further, these categories classifications may not fully align with regulatory definitions of health care provider groups. Clinical administrative databases like DAD and NACRS primarily capture acute and ambulatory care encounters, including acute hospital stays, emergency department visits, and day surgeries. In general, there are gaps in the collection, standardization, and reporting of primary care and community-based services. This data is also challenging to associate directly with non-physician provider group counts as there are no standardized person/FTE count to buckets of care services outside physicians. Professional regulatory colleges often lack information on actual practice patterns, including part-time work, leaves of absence, or practitioners maintaining licenses while not actively practicing. Data from the 'Colleges' are typically fragmented across provincial/territorial lines, leaving few options for modellers to account for migration activities in their models. Furthermore, interprovincial variations in data collection standards and definitions can complicate cross-jurisdictional comparisons and national-level analyses.

While jurisdictions recognize the limitations of their current capabilities and data availability to generate projections that inform health workforce planning, they are generally able to produce valuable evidence that supports health workforce planning using the data sources available to them. Across Canada, modelling and policy teams remain committed to continuously improving their modelling capabilities and the accuracy of their models, as evidenced by the number models currently under development.

B) Health care Provider Groups Modelled Across Canada

In addition to identifying health workforce demand models, this report also broadly mapped which health care provider groups were being modelled in any capacity, to estimate supply, demand or both, across Canada. Note, the results below include the demand models identified in the previous section.

569 models (supply, demand, supply & demand) covering 219 health care provider groups were identified. Among these, 297 were both supply and demand models, 194 focused solely on supply, 34 were demand only models, and 44 were models in development.

Table 4 presents the 20 most frequently modelled health care provider groups across Canada. Similarly to the demand models, physicians (all specialties combined) represented 112 of the 219 health care provider groups. Beyond physicians, personal support workers were the most extensively modelled provider groups [12 models], followed by licensed practical nurses, paramedics, social workers [11 models each], nurse practitioners, registered nurses, physicians – anesthesiology, and emergency medicine [10 models each] (See Appendix Table C for the complete list of all modelled health care provider groups).

Personal support workers represent a large and fast-growing segment of Canada's health workforce, driven by population aging and expansion of home and long-term care services. Regulatory fragmentation across provinces – ranging from some registration requirements to practice (e.g., Alberta) to none – creates jurisdiction-specific planning needs, while relatively short training periods make supply interventions theoretically more immediately actionable than professions with long training and educational pipelines. Licensed practical nurses, paramedics, and social workers face similar province-specific modelling demands due to varied scope of practice across provinces, and their evolving role in addressing nursing workforce challenges. Nurse practitioners and registered nurses also reflect recent scope of practice expansions, with nurse practitioners gaining prescribing authorities and primary care billing capabilities (20), while registered nurses remain central to hospital and community care capacity planning. Physician specialties reflect different planning drivers: anesthesiology capacity directly constraints surgical volumes and wait times, while emergency medicine services are a visible proxy indicator of health system strain.

Most models use a 10-year forecast period for both supply and demand projections, with some jurisdictions updating their models annually.

Table 4: Top 20 Modelled Health care Provider Groups Across Canada

Health Care Provider Group	Number of Models
Personal Support Workers / Continuing Care Assistant / Home Support Worker / Home Care Aid / Home Care Attendant / Patient Care Attendant / Personal Care Attendant / Resident Care Worker	12
Licensed Practical Nurses	11
Paramedics / Advanced Care Paramedic / Primary Care Paramedic / Intermediate Care Paramedic / Community Paramedic / Paramedical Occupations	11
Social Workers	11
Nurse Practitioners	10
Physicians - Anesthesiology	10
Physicians - Emergency Medicine	10
Registered Nurses	10
Pharmacists	9
Physicians - Family Medicine	9
Physicians - Pediatrics	9
Respiratory Therapists	9
Medical Laboratory Technologists	8
Occupational Therapists	8
Physiotherapists	8
Dietitians	7
Physicians - Geriatrics	7
Physicians - Respiratory Medicine	7
Nuclear Medicine Technologists	6
Physicians - General Surgery	6

Conclusion

This report represents the culmination of a significant collaborative effort by modelling, forecasting and health workforce planning teams from across Canada. Building on Health Workforce Canada's environmental scan, this overview provides valuable insights into the current state of demand modelling across Canada.

The identification of 388 demand models covering 154 health care provider groups demonstrate substantial modelling activity yet also reveals some variations in methodologies and data utilization across jurisdictions. While service-level maintenance models provide practical solutions for many provider groups, the limited adoption of needs-based and team-based approaches – with Nova Scotia's integrated team modelling being a notable exception – highlights opportunities for methodological advancement.

Moving forward, continued Pan-Canadian collaboration will be essential to share best practices, standardize terminology and methodologies where appropriate, and develop the modelling capabilities required to address Canada's complex health workforce challenges.

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Appendices:

Table A: List of Contributors

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*These contributors were also part of the working group that supported the advancement of this report.	

Table B: Complete List of Health Care Provider Groups with Demand Models across Canadian Jurisdictions

Rank	Health Care Provider Group	Number of Models
1.	Paramedics / Advanced Care Paramedic / Primary Care Paramedic / Intermediate Care Paramedic / Community Paramedic / Paramedical Occupations	11
2.	Social Workers	9
3.	Nurse Practitioners	8
4.	Licensed Practical Nurses	8
5.	Respiratory Therapists	9
6.	Pharmacists	8
7.	Medical Laboratory Technologists	7
8.	Occupational Therapists	7
9.	Physicians - Family Medicine	7
10.	Physiotherapists	7
11.	Registered Nurses	7
12.	Nuclear Medicine Technologists	6
13.	Personal Support Workers / Continuing Care Assistant / Home Support Worker / Home Care Aid / Home Care Attendant / Patient Care Attendant / Personal Care Attendant / Resident Care Worker	6
14.	Physicians - Anesthesiology	6
15.	Sonographers	6
16.	Dietitians	5
17.	MRI Technologists	5
18.	Perfusionists	5
19.	Pharmacy Technicians	5
20.	Physicians - Oncology	5
21.	Physicians - Pediatrics	5
22.	Physicians - Surgery	5
23.	Psychologists	5
24.	Audiologists	4
25.	Medical Laboratory Assistants	4
26.	Medical Radiation Technologists	4
27.	Physicians - Emergency Medicine	4
28.	Physicians - Obstetrics and Gynecology	4
29.	Physicians - Psychiatry	4
30.	Physicians – Respiratory Disease	4
31.	Physicians - Specialists	4
32.	Radiation Therapists	4
33.	Speech Language Pathologists	4
34.	Anesthesia Assistants	3

Rank	Health Care Provider Group	Number of Models
35.	Electro-neurophysiology Technologists	3
36.	Health Information Professional	3
37.	MDR Technologists	3
38.	Midwives	3
39.	Nurses	3
40.	Pharmacy Assistants	3
41.	Physicians	3
42.	Physicians - Cardiac Surgery	3
43.	Physicians - Cardiology	3
44.	Physicians - Dermatology	3
45.	Physicians - Gastroenterology	3
46.	Physicians - Geriatrics	3
47.	Physicians - Hematology	3
48.	Physicians - Infectious Diseases	3
49.	Physicians - Nephrology	3
50.	Physicians - Neurology	3
51.	Physicians - Neurosurgery	3
52.	Physicians - Ophthalmology	3
53.	Physicians - Orthopedic Surgery	3
54.	Physicians - Otolaryngology	3
55.	Physicians - Plastic Surgery	3
56.	Physicians - Radiology	3
57.	Physicians - Rheumatology	3
58.	Physicians - Urology	3
59.	Public Health Inspectors	3
60.	Cardiovascular Technologists	2
61.	Clinical Psychologists	2
62.	Cytotechnologists	2
63.	Dosimetrists	2
64.	EEG Technologists	2
65.	Medical Physicists	2
66.	Orthopedic Technologists	2
67.	Pathologist Assistant	2
68.	Physicians - Endocrinology and Metabolism	2
69.	Physicians - Fm Care of the Elderly	2
70.	Physicians - Nuclear Medicine	2
71.	Physicians - Palliative Medicine	2
72.	Physicians - Pathology	2
73.	Physicians - Physical Medicine and Rehabilitation	2
74.	Physicians - Radiation Oncology	2
75.	Physicians - Thoracic Surgery	2
76.	Physicians - Vascular Surgery	2

Rank	Health Care Provider Group	Number of Models
77.	Recreation Therapists	2
78.	Rehabilitation Assistants	2
79.	Spiritual Care Workers	2
80.	Addiction Services Attendant	1
81.	Addictions Counsellors	1
82.	Administrator	1
83.	Audiology/Speech Therapy Assistants	1
84.	Cardiology Technicians	1
85.	Cardiopulmonary Function Technologists	1
86.	Clinical Assistants	1
87.	Clinical Genetics Technologists	1
88.	Clinical Specialist	1
89.	Combined Lab & X-Ray Technicians	1
90.	Combined X-Ray and Lab Technologists	1
91.	[TEAM-BASED CARE] Continuing Care Assistants, Licensed Practical Nurses, Registered Nurses, Long-Term Care Aides	1
92.	Cooks	1
93.	CT Technologists	1
94.	Diagnostic Imaging Assistants	1
95.	Diagnostic Imaging Technologists	1
96.	Emergency Medical Responder	1
97.	Emergency Room Nurse	1
98.	Forensic Attendant	1
99.	Genetic Counsellor	1
100.	Genomics	1
101.	Health Records Clerks	1
102.	Health Records Technicians	1
103.	Human Resources	1
104.	Human Services Counsellor	1
105.	Indigenous Support Workers	1
106.	IT Analyst	1
107.	IT Technician	1
108.	Lab Assistant	1
109.	Lab Scientists	1
110.	Licensed Counselling Therapist	1
111.	Medical Physicist	1
112.	Medical Secretary	1
113.	Medical Sonography Technologists	1
114.	Medical Technologist	1
115.	Mental Health Therapists	1
116.	Mental Health Workers	1

Rank	Health Care Provider Group	Number of Models
117.	Morgue Attendant	1
118.	Nutritionists	1
119.	Occupational/Physiotherapy Assistants	1
120.	Operating Room Assistants	1
121.	Orthotics Technicians	1
122.	Orthotists	1
123.	Patient Care Attendant	1
124.	Physicians - Clinical Immunology	1
125.	Physicians - Critical Care Medicine	1
126.	Physicians - Endocrinology	1
127.	[TEAM-BASED CARE] Physicians - Family, Nurse Practitioners, Registered Nurses, Licensed Practical Nurses, Medical Office Administrators	1
128.	[TEAM-BASED CARE] Physicians - Family, Physicians - Psychiatrists, Physicians - Pediatricians, Registered Nurses, Occupational Therapists, Psychologists, Social Workers, Pharmacists	1
129.	Physicians - Fm Addiction Medicine	1
130.	Physicians - Fm Community and Primary Care	1
131.	Physicians - Fm Mental Health	1
132.	Physicians - Fm Obstetrical Surgical Skills and Material and Newborn Health	1
133.	Physicians - Fm Sport and Exercise Medicine	1
134.	Physicians - Gastric Medicine	1
135.	Physicians - General Internal Medicine	1
136.	Physicians – Genetics	1
137.	Physicians - Geriatric Psychiatrists	1
138.	Physicians - Internal and Occupational Medicine	1
139.	Physicians - Internal Medicine and Critical Care	1
140.	Physicians - Pediatric Surgery	1
141.	Physicians - Physical Medicine	1
142.	Physicians - Public Health	1
143.	Physicians - Public Health and Preventive Medicine	1
144.	Physicians – Residents	1
145.	Physicians Assistants	1
146.	Power Engineers	1
147.	Prosthetists	1
148.	Psychiatric Attendant	1
149.	Radiological Technologists	1
150.	Respiratory Therapy Assistants	1
151.	Special Education Technician	1
152.	Uncertified Health Care Aides	1

Rank	Health Care Provider Group	Number of Models
153.	Unregistered Nurse Employees	1
154.	X-Ray Technologists	1

Table C: Complete List of Modelled Health Care Provider Groups across Canadian Jurisdictions

Rank	Health Care Provider Group	Number of Models
1.	Personal Support Workers / Continuing Care Assistant / Home Support Worker / Home Care Aid / Home Care Attendant / Patient Care Attendant / Personal Care Attendant / Resident Care Worker	12
2.	Licensed Practical Nurses	11
3.	Paramedics / Advanced Care Paramedic / Primary Care Paramedic / Intermediate Care Paramedic / Community Paramedic / Paramedical Occupations	11
4.	Social Workers	11
5.	Nurse Practitioners	10
6.	Physicians - Anesthesiology	10
7.	Physicians - Emergency Medicine	10
8.	Registered Nurses	10
9.	Pharmacists	9
10.	Physicians - Family Medicine	9
11.	Physicians - Pediatrics	9
12.	Respiratory Therapists	9
13.	Medical Laboratory Technologists	8
14.	Occupational Therapists	8
15.	Physiotherapists	8
16.	Dietitians	7
17.	Physicians - Geriatrics	7
18.	Physicians - Respiratory Medicine	7
19.	Nuclear Medicine Technologists	6
20.	Physicians - General Surgery	6
21.	Physicians - Obstetrics & Gynecology	6
22.	Physicians - Psychiatry	6
23.	Psychologists	6
24.	Sonographers	6
25.	Speech Language Pathologists	6
26.	Audiologists	5
27.	Medical Laboratory Assistants	5
28.	Medical Radiation Technologists	5

Rank	Health Care Provider Group	Number of Models
29.	MRI Technologists	5
30.	Perfusionists	5
31.	Pharmacy Technicians	5
32.	Physicians - Cardiology	5
33.	Physicians - Dermatology	5
34.	Physicians - Gastroenterology	5
35.	Physicians - Hematology	5
36.	Physicians - Infectious Disease	5
37.	Physicians - Nephrology	5
38.	Physicians - Neurology	5
39.	Physicians - Neurosurgery	5
40.	Physicians - Ophthalmology	5
41.	Physicians - Orthopedic Surgery	5
42.	Physicians - Otolaryngology Head and Neck Surgery	5
43.	Physicians - Plastic Surgery	5
44.	Physicians - Rheumatology	5
45.	Physicians - Urology	5
46.	Midwives	4
47.	Physicians - Cardiac Surgery	4
48.	Physicians - Critical Care Medicine	4
49.	Physicians - Medical Oncology	4
50.	Physicians - Nuclear Medicine	4
51.	Physicians - Oncology	4
52.	Physicians - Physical Medicine & Rehabilitation	4
53.	Physicians - Public Health and Preventive Medicine	4
54.	Physicians - Radiation Oncology	4
55.	Physicians - Specialists	4
56.	Physicians - Vascular Surgery	4
57.	Radiation Therapists	4
58.	Anesthesia Assistants	3
59.	Cardiovascular Technologists	3
60.	Electroneurophysiology Technologists	3
61.	Health Information Professional	3
62.	Medical Physicists	3
63.	Physicians - Diagnostic Radiology	3
64.	Physicians - Endocrinology & Metabolism	3
65.	Physicians - General Internal Medicine	3
66.	Physicians - Occupational Medicine	3
67.	Physicians - Palliative Care	3
68.	Physicians - Thoracic Surgery	3
69.	Public Health Inspectors	3
70.	Clinical Psychologists	2

Rank	Health Care Provider Group	Number of Models
71.	Cytotechnologists	2
72.	Dental Assistant	2
73.	Dental Hygienists	2
74.	Dosimetrists	2
75.	EEG Technologists	2
76.	MDR Technologists	2
77.	Orthopedic Technologists	2
78.	Pathologist Assistant	2
79.	Pharmacy Assistants	2
80.	Physicians	2
81.	Physicians - Clinical Immunology and Allergy	2
82.	Physicians - Endocrinology	2
83.	Physicians - Geriatric Psychiatry	2
84.	Physicians - Internal Medicine	2
85.	Physicians - Lab Medicine and Pathology	2
86.	Physicians - Medical Genetics	2
87.	Physicians - Medical Microbiology	2
88.	Physicians - Pediatric Surgery	2
89.	Physicians - Radiology	2
90.	Physicians - Sports and Exercise Medicine	2
91.	Radiological Technologists	2
92.	Recreation Therapists	2
93.	Registered Psychiatric Nurses	2
94.	Rehabilitation Assistants	2
95.	Spiritual Care Workers	2
96.	Addiction Services Attendant	1
97.	Addictions Counsellors	1
98.	Administrator	1
99.	Audiology/Speech Therapy Assistants	1
100.	Cardiology Technicians	1
101.	Cardiopulmonary Function Technologists	1
102.	Career Development Practitioners and Career Counsellors (Except Education)	1
103.	Clinical Assistants	1
104.	Clinical Genetics Technologists	1
105.	Clinical Specialist	1
106.	Combined Lab & X-Ray Technicians	1
107.	Combined X-Ray and Lab Technologists	1
108.	Cooks	1
109.	CT Technologists	1
110.	Dentists	1
111.	Diagnostic Imaging Assistants	1

Rank	Health Care Provider Group	Number of Models
112.	Diagnostic Imaging Technologists	1
113.	Early Childhood Educators and Assistants	1
114.	Emergency Medical Responder	1
115.	Emergency Preparation - Communicable Diseases	1
116.	EMR Nurse	1
117.	Environmental Health Officer	1
118.	Epidemiologist	1
119.	Forensic Attendant	1
120.	Genetic Counsellor	1
121.	Genomics (Various)	1
122.	Health Promotion	1
123.	Health Records Clerks	1
124.	Health Records Technicians	1
125.	Human Resources	1
126.	Human Services Counsellor	1
127.	Indigenous Support Workers	1
128.	IT Analyst	1
129.	IT Technician	1
130.	Lab Assistant	1
131.	Lab Scientists	1
132.	Licensed Counselling Therapist	1
133.	Managers in Health Care	1
134.	MDR Technicians	1
135.	Medical Secretary	1
136.	Medical Sonography Technologists	1
137.	Medical Technologist	1
138.	Mental Health Therapists	1
139.	Mental Health Workers	1
140.	Morgue Attendant	1
141.	Nurses	1
142.	Nurses Aids, Orderlies and Patient Service Associates	1
143.	Nutritionists	1
144.	Occupational/Physiotherapy Assistants	1
145.	Operating Room Assistants	1
146.	Orthotics Technicians	1
147.	Orthotists	1
148.	Other Assisting Occupations in Support of Health Services	1
149.	Pharmacy Assistant	1
150.	Physicians - Anatomical Pathology	1
151.	Physicians - CAC Addiction Medicine	1
152.	Physicians - Child and Adolescent Psychiatry	1
153.	Physicians - Clinical Immunology	1

Rank	Health Care Provider Group	Number of Models
154.	Physicians - Clinical Pharmacology and Toxicology	1
155.	Physicians - Colorectal Surgery	1
156.	Physicians - Development Pediatrics	1
157.	Physicians - Enhanced Skills Surgery	1
158.	Physicians - Fm Addiction Medicine	1
159.	Physicians - Fm Care of the Elderly	1
160.	Physicians - Fm Community and Primary Care	1
161.	Physicians - Fm Enhanced Surgical Skills	1
162.	Physicians - Fm Hospital Medicine	1
163.	Physicians - Fm Mental Health	1
164.	Physicians - Fm Obstetrical Surgical Skills and Material and Newborn Health	1
165.	Physicians - Forensic Pathology	1
166.	Physicians - Forensic Psychiatry	1
167.	Physicians - Gastric Medicine	1
168.	Physicians - General Pathology	1
169.	Physicians - General Surgical Oncology	1
170.	Physicians - General Thoracic Surgery	1
171.	Physicians - Genetics	1
172.	Physicians - Global Health	1
173.	Physicians - Gynecological Oncology	1
174.	Physicians - Gynecological Reproductive Endocrinology and Infertility	1
175.	Physicians - Hematological Pathology	1
176.	Physicians - Hospitalist Medicine	1
177.	Physicians - Internal and Occupational Medicine	1
178.	Physicians - Internal Medicine and Critical Care	1
179.	Physicians - Interventional Radiology	1
180.	Physicians - Maternal Fetal Medicine	1
181.	Physicians - Medical Biochemistry	1
182.	Physicians - Mental Health	1
183.	Physicians - Neonatal Perinatal Medicine	1
184.	Physicians - Neuropathology	1
185.	Physicians - Neuroradiology	1
186.	Physicians - Obstetrical Surgical Skills	1
187.	Physicians - Pediatric Anesthesiology	1
188.	Physicians - Pediatric Cardiac Surgery	1
189.	Physicians - Pediatric Cardiology	1
190.	Physicians - Pediatric Clinical Immunology and Allergy	1
191.	Physicians - Pediatric Critical Care Medicine	1
192.	Physicians - Pediatric Emergency Medicine	1
193.	Physicians - Pediatric Endocrinology and Metabolism	1

Rank	Health Care Provider Group	Number of Models
194.	Physicians - Pediatric Gastroenterology	1
195.	Physicians - Pediatric Hematology and Oncology	1
196.	Physicians - Pediatric Infectious Diseases	1
197.	Physicians - Pediatric Nephrology	1
198.	Physicians - Pediatric Orthopedic Surgery	1
199.	Physicians - Pediatric Radiology	1
200.	Physicians - Pediatric Rheumatology	1
201.	Physicians - Pain Medicine	1
202.	Physicians - Pathology	1
203.	Physicians - Physical Medicine	1
204.	Physicians - Prison Health	1
205.	Physicians - Residents	1
206.	Physicians - Thoracic and Cardiovascular Surgery	1
207.	Physicians - Transfusion Medicine	1
208.	Physicians Assistants	1
209.	Power Engineers	1
210.	Prosthetists	1
211.	Psychiatric Attendant	1
212.	Psychiatrists	1
213.	Respiratory Therapy Assistants	1
214.	Social Policy Researchers, Consultants, and Program Officers	1
215.	Special Education Technician	1
216.	Therapists in Counselling and Related Specialized Therapies	1
217.	Uncertified Health Care Aides	1
218.	Unregistered Nurse Employees	1
219.	X-Ray Technologists	1