HealthForceOntario

Ontario’s Health Human Resources Strategy

Recruit and Retain Conference
Thunder Bay, Ontario
January, 16, 2014

Jeff Goodyear, Health Workforce Planning Branch
Ministry of Health and Long-Term Care
HealthForceOntario: The Strategy

- HealthForceOntario (HFO) is Ontario’s strategy to ensure that Ontarians have access to the right number and mix of qualified healthcare providers, now and in the future.
- The HealthForceOntario Strategy has been a success for Ontario and has positioned it to effectively respond to population health needs.
- By 2013 Ontario has eliminated the risk of patient service gaps due to provincial human resource shortages and has the ability to more effectively plan, train and support health labour market needs.
- Ontario’s investments resulted in:
  - Security of supply for health professions through new training places and retention (e.g. physicians, nurses, NPs, midwives, pharmacy, diagnostic professionals)
  - Enhanced mix of health providers available, including new roles, and ensured they are available to effectively meet patient needs across Ontario
  - Infrastructure to better deliver need supports to individuals, employers and communities participating the labour market, e.g. HFO Marketing and Recruitment Agency
  - Strong evidence for present and future decision making, including foundational data bases and leading edge forecasting tools
- Increased numbers of providers, shorter wait times and fewer patients lacking access to care are all evidence of achievement.
- Health human resources challenges have evolved from provincial supply challenges to mix and distribution challenges
HealthForceOntario: The Strategy

Planning
- HHR Data Collection
- Labour market strategies
- HHR Distribution

Education
- IMG education
- Education reform
- Education diversity

Practice
- HFO MRA
- Competitive, Healthy Workforce
- Nursing Graduate Guarantee
- New healthcare roles
HealthForceOntario: Evidence Informed Planning

- Strategy developed for conditions in 2005/06 when the dominant issue was the provincial shortage of critical health care providers that impacted on access to care

  HHR Planning
  Identify and address HHR needs

  - Foster a culture of evidence-informed planning
  - Enhance data, analytical and research capacity

- Successes in addressing provincial challenges opens new expectations

- Growing provider population raises challenges of managing several competing pressures to ensure security of supply into future and prevent the prior boom and bust cycle

**History of Physician Supply**

- Early 1990s
- Early 2000s
- Early 2010s
- 2020+?
- 2020+?
Evidence Step #1: Getting Clear Basic Data

The Health Professions Database (HPDB)

- Supply-side database: Collects standard, consistent and comparable data across regulated health professions in Ontario
- Tells us the demographic, geographic, educational, and employment characteristics of regulated health professionals in Ontario
- Ministry of Health and Long-Term Care and the health regulatory Colleges collaborated to develop the HPDB
Evidence Results #1: Ontario’s Health Workforce

**Examples of Un-Regulated Health Professions**
- Personal Support Workers
- Physician Assistants
- Ultrasound Technologists
- Addiction Workers
- Rehabilitation Assistants
- Many, many more...

**Sources:**
- Health Professions Database, Ministry of Health and Long-Term Care, 2011
- Physicians in Ontario, Ontario Physician Human Resources Data Centre, 2011

---

**All Health Care Providers in Ontario 500,000+**
- Registered Nurses 111,805 (41.3%)
- Registered Practical Nurses 37,560 (13.9%)
- Nurse Practitioners 2,017 (0.7%)
- Nurses 151,392 (58.8%)
- Pharmacists 12,891 (4.8%)
- Dental Hygienists 11,871 (4.3%)
- Dentists 8,660 (3.2%)
- Medical Laboratory Technologists 7,799 (2.9%)
- Medical Radiation Technologists 6,707 (2.5%)
- Occupational Therapists 4,849 (1.8%)
- Physiotherapists 7,309 (2.7%)
- Speech-Language Pathologists 2,710 (1.0%)
- Respiratory Therapists 2,787 (1.0%)
- Chiropractors 4,015 (1.5%)
- Dietitians 3,332 (1.2%)
- Psychologists 3,123 (1.2%)

**Regulated Health Professions 2011**
- 270,940
Evidence Result #1: Distribution etc

Distribution of 'Other Regulated Health Professionals' in Ontario and Ontario Population by LHIN, 2011

(excludes physicians & nurses)

Sources: 'Other Regulated Health Professional' Data: Health Professions Database, Ministry of Health and Long-Term Care, 2011 Submission

Note: 1. Practice site by LHIN information refers to the first practice site listed in the HPDB. Not all providers who hold an active license listed a valid practice site in Ontario, or were working in their profession. As such numbers quoted above may not sum to 2011 totals.
2. 'Other Regulated Health Professional' excludes physicians and nurses.
Evidence Step #2: Modelling

Supply-Based HHR Modelling (2005-)
- A stock-flow model which tracks the progression of a physician from their entrance to medical school, through post-graduate training, to practise and then retirement.
- Used to project the provincial supply of physicians by specialty and to test the potential effects of altering the allocation of post-graduate (PG) residency positions on future supply.

Needs-Based HHR Modelling (2010-)
- Collaboration with the Ontario Medical Association to develop a population needs-based physician simulation model for Ontario.
- Converts the future health needs of the population into need for physician services, compares it with the future supply of physician services and calculates a gap by specialty and Local Health Integration Network (i.e. region).

- Useful, but only one piece of evidence. It’s a model not a forecast.
Utilization Based Physician Modeling

- The model uses OHIP claims data to determine current utilization by age and specialty.
- Current utilization is then applied to future population forecasts to estimate future utilization.
- Estimated future utilization is converted to project the number of physicians needed based on current patient/physician volumes.
- The projected number of physicians needed is compared to the projected supply of physicians to determine the projected gap of physicians.
Comparison of Results – Total Physicians

The graph shows the total number of physicians over the years from 2009 to 2023. The categories include:

- Supply
- Needs-Based
- Utilization

The total number of physicians is expected to increase over time, with the Supply line showing a steady rise, the Needs-Based line slightly below Supply, and the Utilization line below both Supply and Needs-Based, indicating a gap that may need addressing to ensure adequate coverage.
Comparison of Results – Family Physicians

Total Number of Family Physicians

- Supply
- Needs-Based
- Utilization

Years: 2009 to 2023
What About Distribution?

Source: Ontario Needs-Based Physician Simulation Model, Ministry Base Case 2009
How do we use evidence?

Reporting:
- Projected physician supply by specialty, ages, sex
- Estimated number of residents ready to enter practice
- Future geographical and specialty-specific gaps

Policy – Conduct Simulations to:
- Inform medical school distribution of residency positions
- Test effects of potential change in productivity and migration
- Support negotiations with system stakeholders
Going Forward

- **Addressing key policy issues:**
  - Distribution
  - Mix
  - Pan-Canadian physician HR planning

- **Enhanced information utilization and sharing**
  - Sharing information and promoting local and regional planning

- **Enhanced nursing workforce evidence/tools:**
  - Supply-side model
  - N4T: collection of employer-based information to understand short-term nursing demand
Appendix
Ontario

- Most populous jurisdiction in Canada (13.5M as of July 2012)
  - 39% of Canadian population, with average annual growth of 1.1% since 2002
- Second largest province in total area (total area = 1.1M sq. kms.)
- 24 hours non-stop drive from border to border. Quicker to drive to Jacksonville, FL than to Kenora, ON.
- Majority of Ontario population in south, and a very large and sparsely populated northern area
  - Greater Toronto Area (GTA) census metropolitan area almost 6M (44% of provincial total)
  - Over 85% in urban centres, largely on/around shores of the great lakes
- Population growth largely from immigration. ~40% of people who immigrate to Canada each year settle in Ontario (according to the 2006 census 29.2% of Ontario population was foreign born)
Healthcare in Ontario

- Healthcare consumes 42% of provincial programs, will be 70% within 12 years without changing course

- Action Plan for Health Care 3 Pillars:
  1. Keeping Ontario Healthy
  2. Faster Access to Stronger Primary Care
  3. Providing the Right Care, Right Times, Right Place

- 14 Local Health Integration Networks (LHINs) were created in 2006 to allow more local/community responsibility for health services
  - Plan, integrate and fund local services including: Hospitals, Community Care Access Centres, Community Support Services, Long-term Care, Mental Health and Addictions Services, and Comm. Health Centres

- 2013/14 Budget Expenses Plan $128 Billion, $49 Billion (MOHLTC Plan)
  - ~$11 billion physician payments (23%)
Who is Participating in the HPDB?

<table>
<thead>
<tr>
<th>Health Professions Who Began Submitting Data To The HPDB in 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiologists</td>
</tr>
<tr>
<td>Chiropodists</td>
</tr>
<tr>
<td>Chiropractors</td>
</tr>
<tr>
<td>Dental Hygienists</td>
</tr>
<tr>
<td>Dentists</td>
</tr>
<tr>
<td>Dental Technologists</td>
</tr>
<tr>
<td>Denturists</td>
</tr>
<tr>
<td>Dietitians</td>
</tr>
<tr>
<td>Massage Therapists</td>
</tr>
<tr>
<td>Medical Laboratory Technologists</td>
</tr>
<tr>
<td>Medical Radiation Technologists</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Professions Added or To-Be Added to the HPDB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homeopaths*</td>
</tr>
<tr>
<td>Kinesiologists*</td>
</tr>
<tr>
<td>Naturopaths*</td>
</tr>
</tbody>
</table>

* Newly Regulated Health Profession
HPDB Minimum Data Set

**Identifiers, Registration and Demographics**
1. Unique Identifier Number (de-identified)
2. Registration Status
3. Registration Inactive Status Reason
4. Class of Registration
5. Sex
6. Year of Birth
7. Languages of Care

**Geography and Related**
8. Primary Postal Code of Residence
9. Primary Province or Territory or State of Residence
10. Primary Country of Residence
11. Province or Territory of Registration (Default Value)
12. Year of Initial Registration to Practise in Ontario
13. Concurrent Province or Territory or State of Registration
14. Concurrent Country of Registration
15. Most Recent Previous Province or Territory or State of Practice
16. Most Recent Previous Country of Practice
17. Last Year of Practice in Previous Province or Territory or State or Country
18. Specialty Certification
19. Year of Specialty Certification

**Education**
20. Bridging Program Completion
21. Year of Completion Bridging Program
22. Level of Education in Profession
23. Year of Graduation from Education in Profession
24. Canadian Educational Institution of Education in Profession at Graduation
25. Province or Territory or State at Graduation from Education in Profession
26. Country of Graduation from Education in Profession
27. Highest Level of Education Outside of the Profession
28. Field of Study for Highest Education Outside of the Profession
29. Year of Graduation from Education Outside of the Profession
30. Province or Territory or State of Graduation from Education Outside of Profession
31. Country of Graduation from Education Outside of Profession

**Employment - Historical**
32. Country of First Time Practising in Profession
33. Province or Territory or State of First Time Practising in Profession
34. First Year of Practising in Profession
35. First Canadian Location of Practice in Profession
36. Year of First Canadian Practice in Profession

**Current Employment - Individual Based**
37. Practice Status
38. Full Time/Part Time/Casual Work Preference
39. Agency Nurse
40. Total Number of Practice Weeks in the Past 12 Months
41. Average Number of Weekly Practice Hours in the Past 12 Months
42. Average Number of Weekly On-Call Hours in the Past 12 Months
43. Proportion of Average Weekly Practice Hours on Direct Professional Services
44. Proportion of Average Weekly Practice Hours on Teaching
45. Proportion of Average Weekly Practice Hours on Clinical Education
46. Proportion of Average Weekly Practice Hours on Research
47. Proportion of Average Weekly Practice Hours on Administration
48. Proportion of Average Weekly Practice Hours on All Other Activities

**Current Employment - Site Based**
49. More Than Three Practice Sites
50. Employment Category
51. Full-Time/Part-Time/Casual Status
52. Practice Setting
53. Postal Code of Practice Site
54. Province or Territory or State of Practice Site
55. Country of Practice Site
56. Primary Role
57. Area of Practice Activity
58. Practice Specialty
59. Client Age Range
Needs-Based Physician HR Modeling

- The physician time spent treating the ICD-10 categories/sub-categories is applied to the projected supply of physicians to calculate the amount of time available for physicians to treat these conditions/diseases. This is called the ‘Projected Future Supply of Physician Services’

- The ‘productivity’ factors can also be adjusted to increase/decrease a physicians’ time available to treat conditions/diseases
  - e.g. increased productivity for FM docs by incorporating NPs
Needs-Based Physician HR Modeling

- To estimate the health needs of the population, we start with socio-economic and lifestyle risk factors from the Canadian Community Health Survey (CCHS) conducted by Statistics Canada:

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Obesity</td>
</tr>
<tr>
<td>Sex</td>
<td>Smoking</td>
</tr>
<tr>
<td>Alcohol Consumption</td>
<td>Second Hand Smoke Exposure</td>
</tr>
<tr>
<td>Consumption of Fruits and Vegetables</td>
<td>Income</td>
</tr>
<tr>
<td>Stress</td>
<td>Physical Inactivity</td>
</tr>
<tr>
<td>Lack of Sense of Belonging in the Community</td>
<td>Employment in the Mining Industry</td>
</tr>
</tbody>
</table>

- We used the CCHS data to capture the current prevalence of each one in Ontario by age, sex and LHIN

- We apply the current prevalence to the projected future population to estimate the future prevalence of each risk factor.

- Next we estimated how each factor contributes to the top 10 treated diseases reported in the OMA survey
Needs-Based Physician HR Modeling: Calculating the Gap

Projected Future *SUPPLY OF* Physician Service Hours

- Projected Future *NEED FOR* Physician Services Hours

Projected Future *GAP OF* Physician Service Hours

\[
\frac{\text{Projected Future GAP OF Physician Service Hours}}{\text{Time Spent Treating ICD-10}}
\]

Projected Future *GAP OF PHYSICIANS*