

# Evidence for Health Human Resources Planning in Ontario

## HealthForceOntario

**HFO Symposium:** *Stronger Together, Collaboration in Health Human Resources*  
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Ministry of Health and Long-Term Care

June 17, 2010

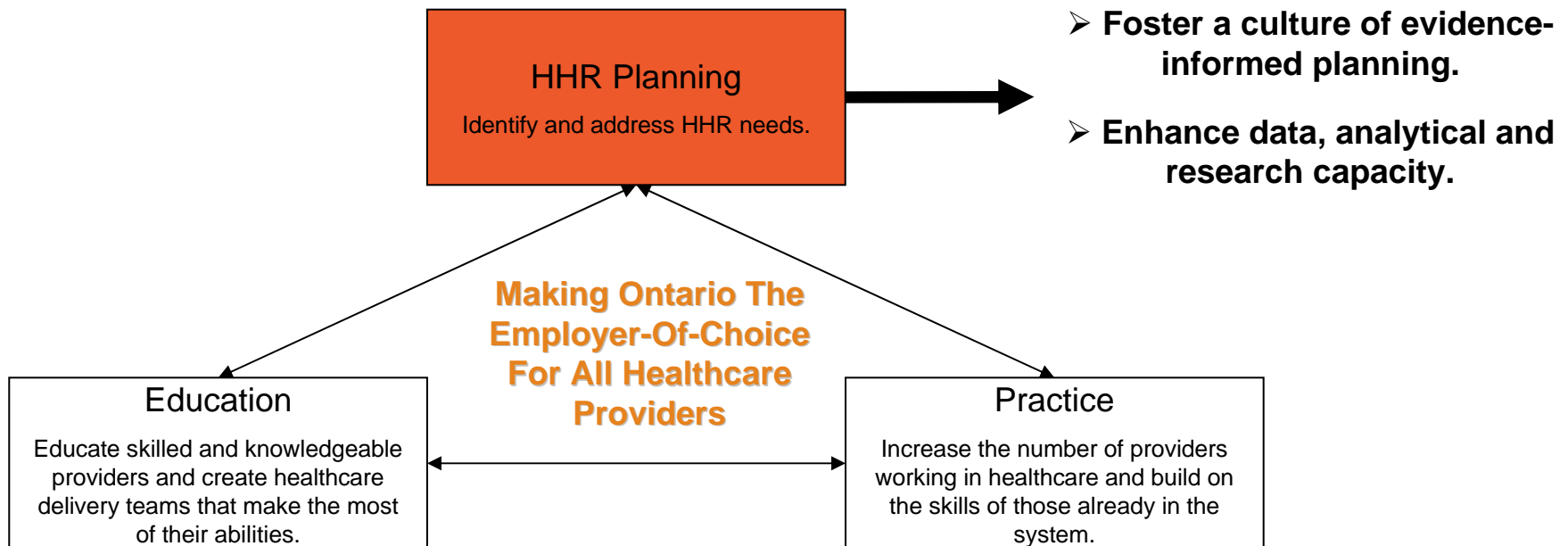
## Overview

- 1. What is the HHR Forecasting and Modelling Unit's Role in HealthForceOntario?**
- 2. Examples of Current Evidence Building Activities:**
  - A. Ontario Population Needs-Based Physician Simulation Model
  - B. Health Professions Database
  - C. HHR Research Capacity
- 3. HHR Evidence Resources**



# HealthForceOntario and the HHR Forecasting and Modelling Unit

- HealthForceOntario (HFO) is the branding of a **strategy**.
- It 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 HHR Forecasting and Modelling Unit

- Enhances evidence capacity to engage in better HHR planning in Ontario.
- Evidence = data, research and analytical tools.

### Priority Areas

1. Develop simulation models to support HHR planning.
2. Identify and develop new resources to fill gaps in HHR evidence.
3. Develop HHR research capacity and build awareness of HHR research.
4. Investigate HHR issues and trends to support policy development.

**Priority Areas**

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## Filling An Evidence Gap

# The Ontario Population Needs-Based Physician Simulation Model

# Project Overview

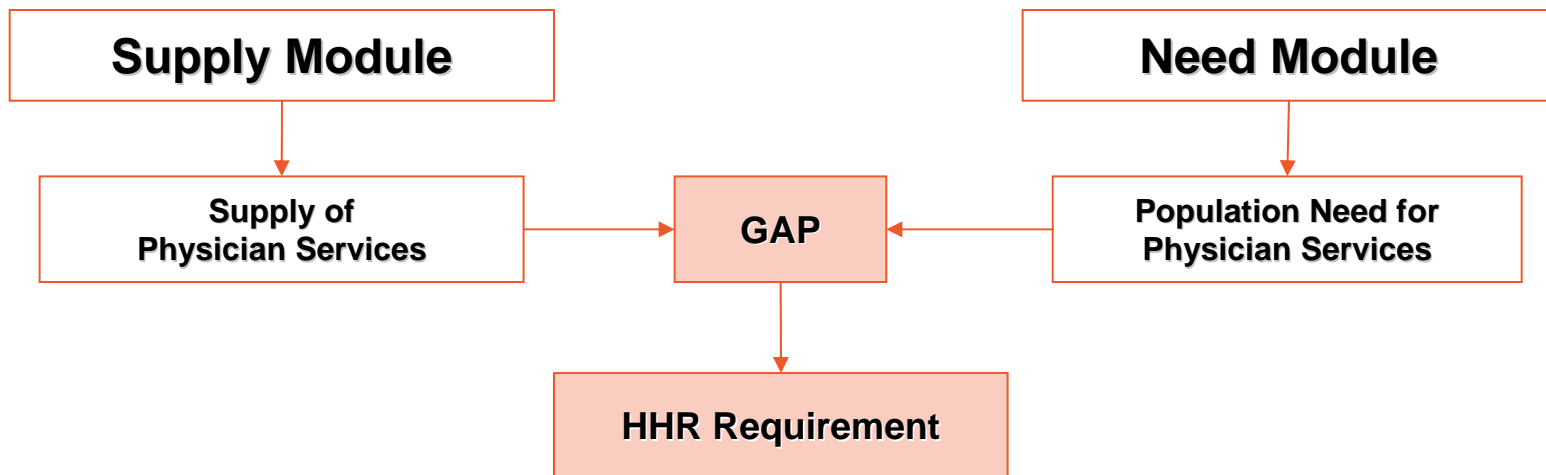
- Model development co-sponsored by the Ontario Ministry of Health and Long-Term Care and the Ontario Medical Association.
- Conference Board of Canada (CBoC) hired to develop the model after going through a competitive RFP process.
- Several organizations and experts consulted throughout various phases of the work.
- The end goal for the model is to be able to simulate a variety of scenarios that can help understand the potential impact on the gap between future physician supply and need in Ontario.

## Context and Limitations

- The model is a planning tool – not a crystal ball. The future numbers will never be exactly right. *“All models are wrong, but some are useful.”*
- Real value is an indication of potential future trends and simulation of the possible impact of policy changes.
- There are many important variables to consider in physician HR planning, but the model can't quantify and include all of them. That's why it's important to note that....
- The simulation model will just be one more piece of evidence amongst many others, both qualitative and quantitative, that will help support physician HR planning (e.g. the Ontario Primary Care Access Survey, Health Care Connect, etc.).
- The model is constructed at a 'macro' level and can help identify areas which require more detailed examination and research.

## Model Structure - Overview

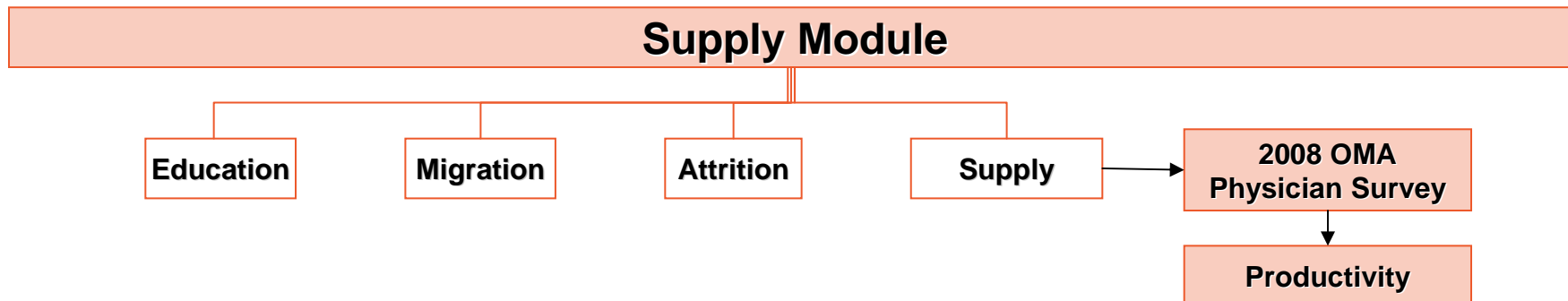
- The model translates various health needs of the population into need for physician services and compares this to the supply of the physician services. A gap is quantified and then converted into a physician requirement.
- Simulations are generated at the specialty and Local Health Integration Network (LHIN) levels.



# Model Structure - Supply Module

- The Ministry currently operates and updates a successful supply-based physician simulation model called the 'Assessing Doctor Inventories and Net-Flows (ADIN) model.
- ADIN tracks the progression of a physician from entrance to medical school, through post-graduate training, to practise and then retirement while applying various migration and attrition rates. Requires data inputs from multiple sources.
- Historical success of ADIN:

TOTAL NUMBER OF PHYSICIANS IN ONTARIO			
Year	Project	Actual	Variance
2005	22,272	22,277	0.02%
2006	22,740	22,725	0.07%
2007	23,206	23,266	0.26%
2008	23,826	23,767	0.25%



# Model Development – 2008 OMA Physician Survey

- All physicians in Ontario were surveyed. Two surveys were developed: one for family medicine (FM) physicians and one for specialists.
- Survey asked for information on: total pt. encounters, total hours of patient care, time spent and # of encounters for all 22 major ICD-10 diagnostic categories and sub-categories, geographic location of pts, and total weeks of work in a typical year.
- The survey was conducted in May 2008. 2,887 responses were received representing approximately 14% of Ontario physicians.
- Response rates were fairly representative based on age, sex, specialty and location of practise. Where there were gaps, targeted re-surveying was completed.
- The survey determined the top 10 conditions/diseases that are treated in Ontario. These 10 are the basis for needs side of the model.
- The top 10 in order of most physician time spent are:

<b>1. Mental and behavioral disorders</b>	<b>6. Diseases of the digestive system</b>
<b>2. Diseases of the circulatory system</b>	<b>7. Endocrine, nutritional and metabolic diseases</b>
<b>3. Diseases of the musculoskeletal system and connective tissue</b>	<b>8. Diseases of the genitourinary system</b>
<b>4. Neoplasms</b>	<b>9. Diseases of the nervous system</b>
<b>5. Diseases of the respiratory system</b>	<b>10. Diseases of the skin and subcutaneous tissue</b>

## MDx: Forecasting Physician Supply and Need in Ontario

HealthForceOntario



The Conference Board of Canada  
Insights You Can Count On

Your participation in this study is critical to building a stronger health-care system in Ontario. We anticipate the questionnaire should only take between 10 and 12 minutes.

If you would like to complete the survey online, please go to this URL:  
<http://www.conferenceboard.ca/surveys/mdx/pt.asp>

To begin the survey, you will be required to provide your randomly assigned respondent number. Please enter the number that appears in this box:

Please note that all the responses you share are confidential. All information will be handled in accordance with Canada's privacy legislation. At no time will the individual results be shared.

If you have any difficulty accessing the online version of the survey, please contact Kristin Honshorst at [Honshorst@conferenceboard.ca](mailto:Honshorst@conferenceboard.ca).

This survey is brought to you by The Conference Board of Canada in cooperation with the Ministry of Health and Long-Term Care and the Ontario Medical Association. We would like to acknowledge the limited use of questions from the National Physician Survey and would like to thank the CFPC, CMA, and RCPSC.

This survey is being administered independently by The Conference Board of Canada.

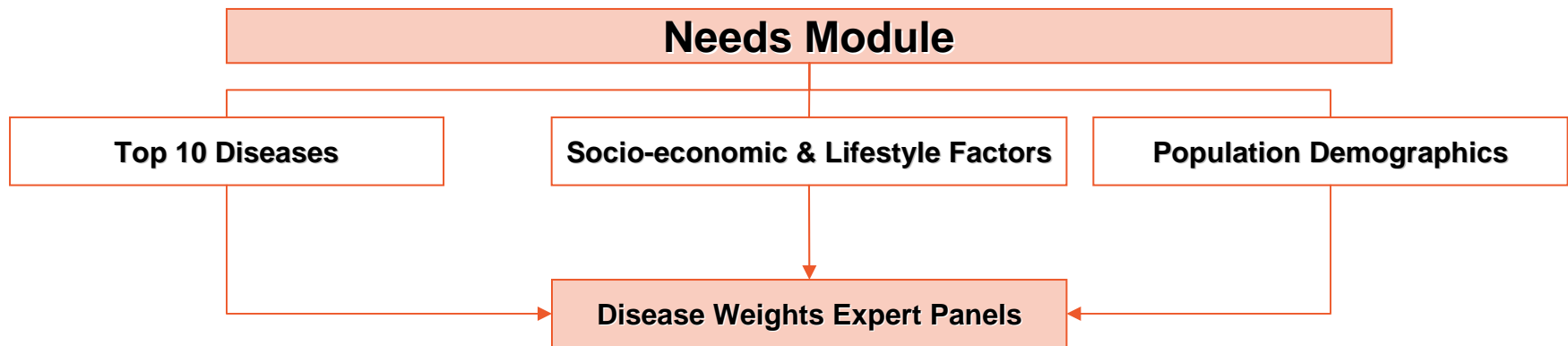
# Model Development – Productivity Panels

- For purposes of model development, productivity is defined as: **the number of patients seen by the physician’s practice for a given amount of time.**
- Four expert panels were convened in May 2008 to examine the impacts of four major categories on physician productivity.
  1. **Information and Communication Technology:** to determine the impact of advancements such as electronic health record, etc.
  2. **Non-Physician Clinicians:** to determine the impact of other health professions (e.g. NPs, PAs, etc.) through inter-disciplinary collaboration & team-based care.
  3. **Health System Change:** to determine the impact of policy interventions such as the implementation of Family Health Teams and Ontario Wait Times Strategy.
  4. **Funding:** to determine the impact of various physician compensation models such as fee-for-service, alternative payment programs and other blended models.
- An extensive literature review was completed for each category’s impact on physician productivity. A background paper was prepared for each panel participant’s advance review.
- A ‘scoring workbook’ was also prepared for panel participants to record how they thought each category affected physician productivity.
- The panels did not yield definitive evidence regarding productivity for every single category. Some evidence suggests a productivity enhancement in certain areas (e.g. team-based care).
- However, the model contains all productivity data fields which can be populated in the future as better data and evidence becomes available.



# Model Structure – Needs Module

- The key component to this project is capturing and incorporating various population health needs into the forecasting model.
- Stats Can and the Canadian Community Health Survey are the major sources used to obtain quantifiable data for population demography and socio-economic & lifestyle risk factors.
- These wide range of risk factors are examined to determine their impact on the future incidence and prevalence of the top 10 diseases.
- Expert Panels were convened to determine how much each factor contributed to each disease.

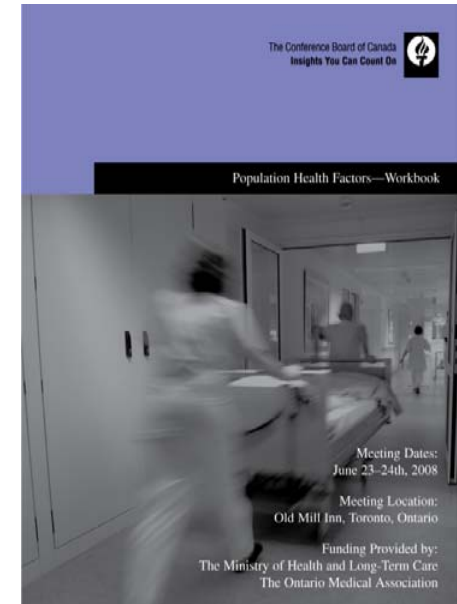


# Model Development – Disease Weights Expert Panels

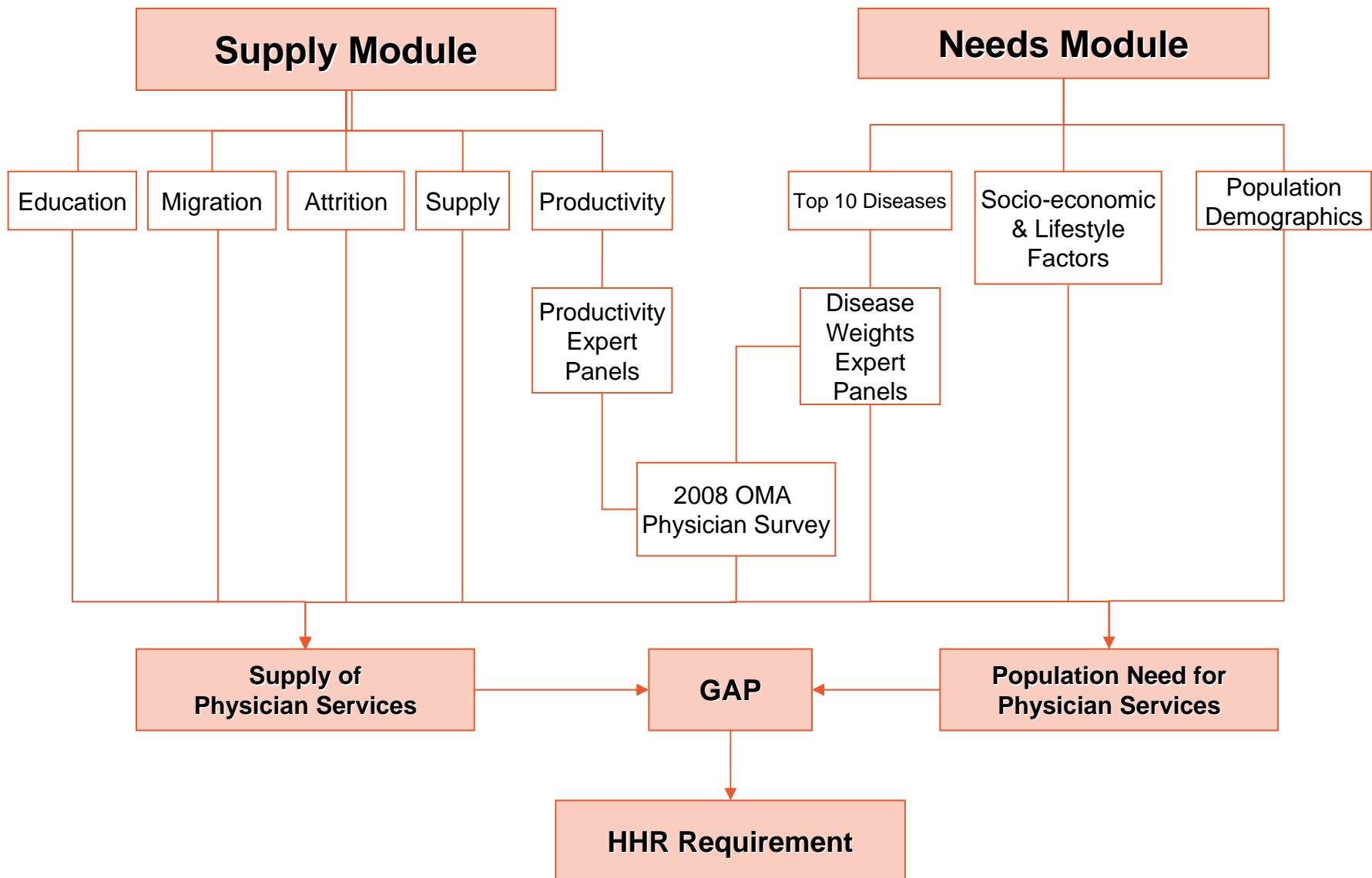
- In June 2008, a 2-day Expert Panel was convened to determine how each demographic, socio-economic and lifestyle risk factor contributed to the future incidence and prevalence of the top 10 diseases.
- Participants included physicians, researchers, epidemiologists, representatives from disease associations and policy makers.
- A subsequent panel was held in September 2008 with participation from the OMA section chairs (i.e. physician reps of various specialties) to further refine and validate the results of the June expert panel.
- The demographic, socio-economic and lifestyle risk factors examined are:

<b>Age</b>	<b>Obesity</b>
<b>Sex</b>	<b>Smoking</b>
<b>Alcohol Consumption</b>	<b>Second Hand Smoke Exposure</b>
<b>Consumption of Fruits and Vegetables</b>	<b>Income</b>
<b>Stress</b>	<b>Physical Inactivity</b>
<b>Lack of Sense of Belonging in the Community</b>	<b>Employment in the Mining Industry</b>

- Also considered but removed due to lack of data were environmental and genetic factors.



# Model Structure – How It All Fits Together



# Provincial and LHIN Level Results

## Base Case Simulation

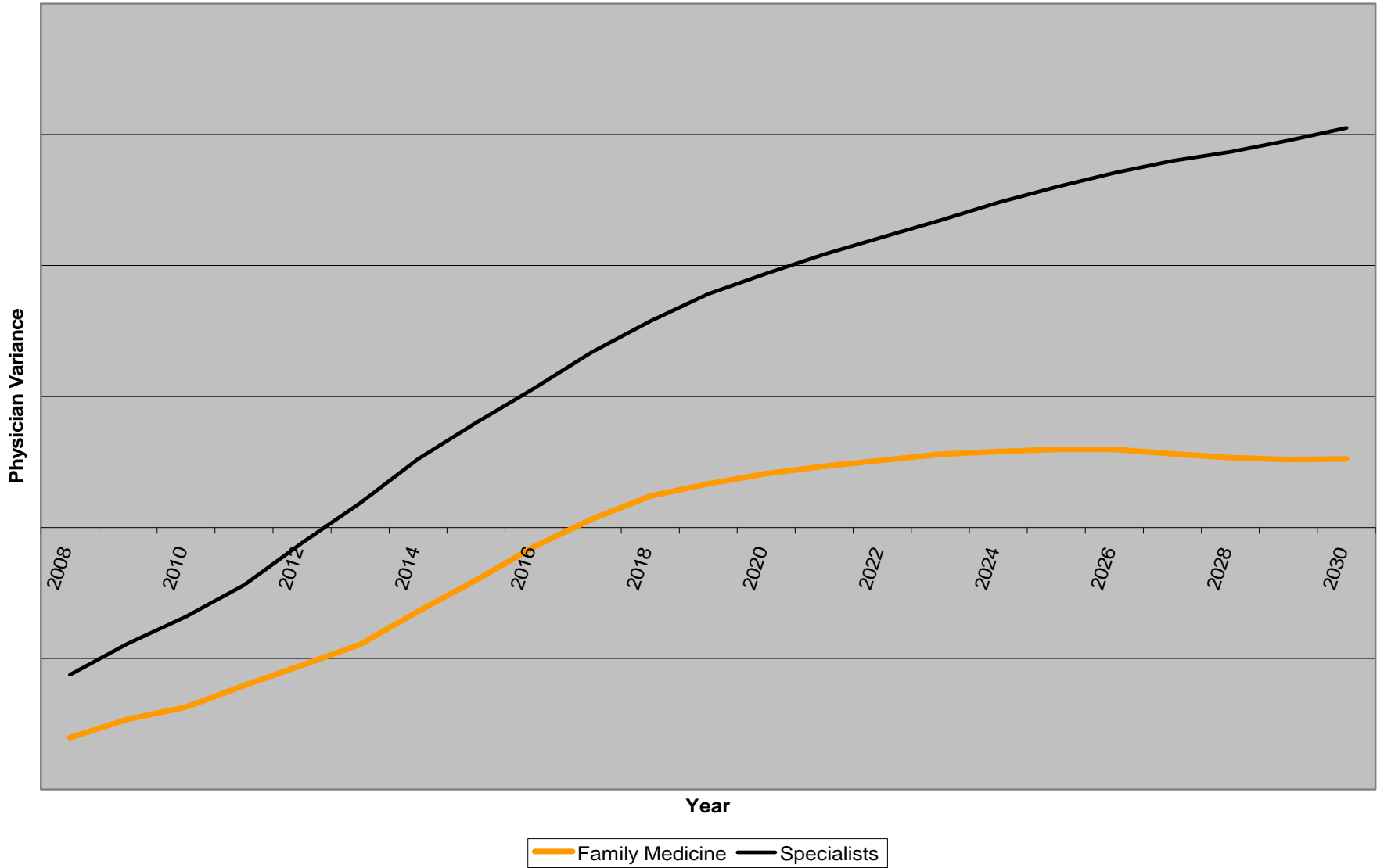
# Highlights of Key Inputs and Assumptions for Base Case Simulation

<b>Med School</b>	<ul style="list-style-type: none"> <li>952 students entering med school by 2011; 57% male; 43% female</li> </ul>
<b>Post-Graduate Residency Training</b>	<ul style="list-style-type: none"> <li>1,247 ministry-funded residents entering training by 2014; 43% FM; 57% SP</li> <li>Resident specialization rates based on previous 3-year observed average.</li> <li>Min 15% of internal medicine residents must train in general internal med in 4<sup>th</sup> year.</li> <li>Max 30% of PGY2 family med trainees may train in PGY3, FM-EM positions are hard capped at 36.</li> <li>200 IMGs enter training annually based on historical specialty distribution. All advanced trainees start at PGY2.</li> <li>14 practicing docs re-enter training based on historical specialty distribution and training length.</li> </ul>
<b>Fellowship</b>	<ul style="list-style-type: none"> <li>Assumption that trainees entering fellowship equal the number exiting fellowship, so this module is turned off. Post-grad data from OPHRDC shows a stable number of Pool D fellowship trainees each of the last several years.</li> </ul>
<b>PG Migration</b>	<ul style="list-style-type: none"> <li>Avg 3-year net PG migration out of Ontario after training: TOT: -78; FM: +3; SP: -81</li> </ul>
<b>Practise Entry</b>	<ul style="list-style-type: none"> <li>Median 3-year age of PG trainee entry into practise: TOT: 32; FM: 30; SP: 33; CMG: 31; IMG: 39</li> </ul>
<b>Practise Migration</b>	<ul style="list-style-type: none"> <li>Annual net migration of practising physicians: TOT: &lt;0.1%; FM: &lt;0.1%; SP: &lt;0.1%</li> </ul>
<b>Retirement</b>	<ul style="list-style-type: none"> <li>3-year avg retirement rate: TOT: 0.9%; FM: 0.7%; SP: 1.1%; age 50-65: 0.7%; age 65+: 5.7%</li> </ul>
<b>Other Attrition</b>	<ul style="list-style-type: none"> <li>Attrition not covered above: TOT: 1.0%; FM: 1.0%; SP: 1.1%; age &lt;65: 0.7%; age 65+: 3.1%</li> </ul>
<b>OMA Survey</b>	<ul style="list-style-type: none"> <li>Avg clinical hours per week: TOT: 42.6; FM: 42.0; SP: 43.3; Male: 44.1; Female: 39.7</li> <li>Avg weeks worked per year: TOT: 45.7; FM: 45.8; SP: 44.8; Male: 45.1; Female: 45.4</li> <li>Avg pts seen per week: TOT: 98; FM: 123; SP: 79; Male: 105; Female: 82</li> </ul>
<b>Productivity</b>	<ul style="list-style-type: none"> <li>NPCs: projected # of future nurse practitioners enhance family medicine productivity by 40%</li> <li>ICT, HSC, FUN: no enhancement of physician productivity</li> </ul>
<b>Population Demographics</b>	<ul style="list-style-type: none"> <li>ON population to grow 13% by 2020: 13.2M to 14.9M; CW LHIN: 26%; NW LHIN: -1%</li> <li>ON population 65+ to grow 44% by 2020: 1.8M to 2.6M; CW LHIN: 63%; TC LHIN: 18%</li> </ul>

# Highlights of Key Inputs and Assumptions for Base Case Simulation (cont'd)

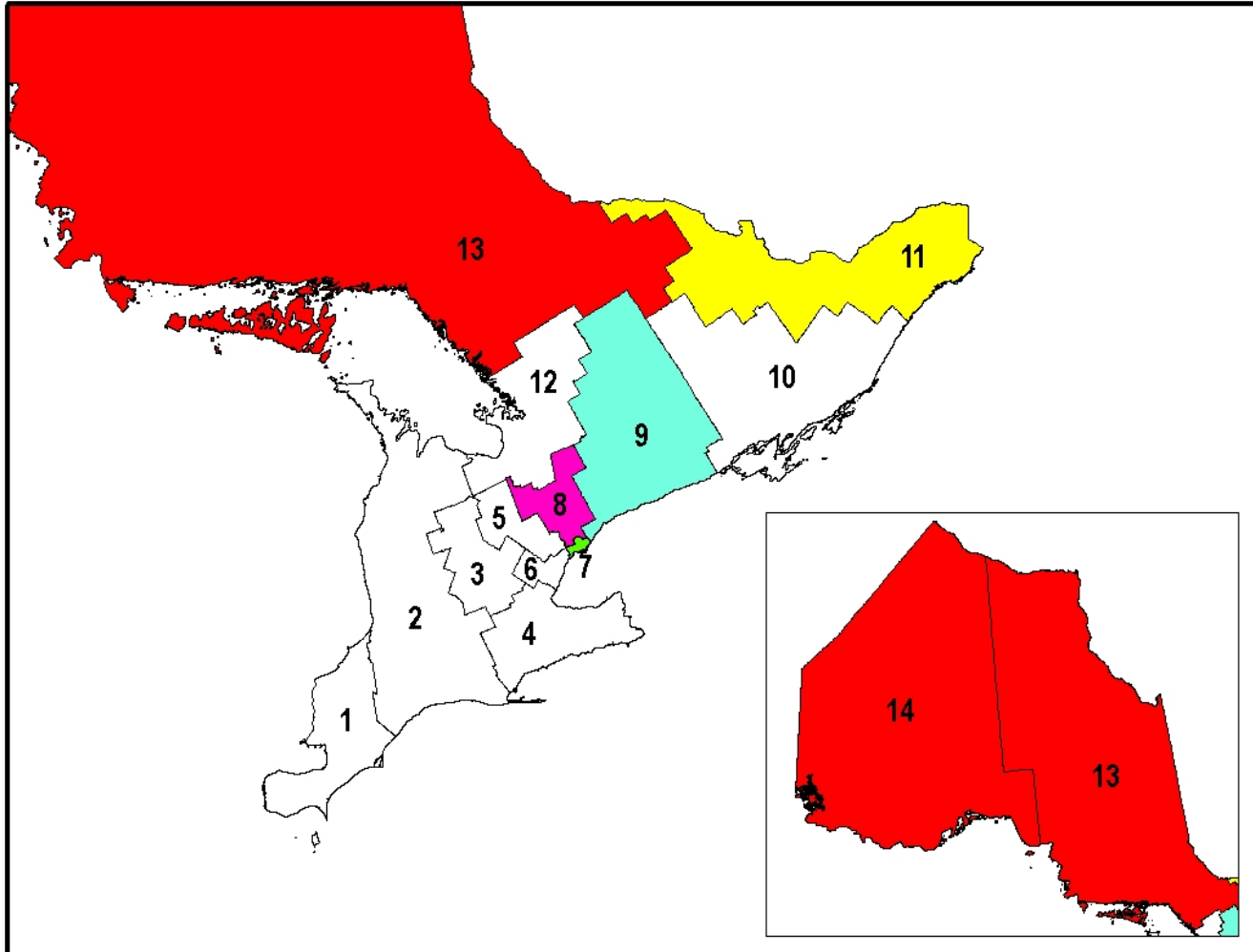
<b>Socio-Economic &amp; Lifestyle Risk Factors</b>	<p><u>Population Prevalence:</u></p> <ul style="list-style-type: none"> <li>▪ Second-hand smoke exposure: ♂: 12% ♀: 11%</li> <li>▪ Lack of fruits &amp; vegetables: ♂: 59% ♀: 48%</li> <li>▪ Lack of sense of belonging: ♂: 9% ♀: 10%</li> <li>▪ Excessive alcohol intake: ♂: 3% ♀: 1%</li> <li>▪ Mining Industry Employment: ♂: &lt;1% ♀: &lt;1%</li> <li>▪ Physical Inactivity: ♂: 41% ♀: 47%</li> <li>▪ Perceived Stress: ♂: 4% ♀: 4%</li> <li>▪ Low Income: ♂: 3% ♀: 5%</li> <li>▪ Smoking: ♂: 17% ♀: 13%</li> <li>▪ Obesity: ♂: 15% ♀: 13%</li> </ul>
<b>Top ICD-10 Diseases</b>	<p><u>Increase in Prevalence from 2009 to 2030:</u></p> <ul style="list-style-type: none"> <li>▪ Mental Health &amp; Behavioural: 6.9%</li> <li>▪ Circulatory: 7.4%</li> <li>▪ Musculoskeletal: 9.3%</li> <li>▪ Neoplasms: 12.5%</li> <li>▪ Respiratory: 6.9%</li> <li>▪ Digestive: 1.7%</li> <li>▪ Endocrine, Nutritional &amp; Metabolic: 5.0%</li> <li>▪ Genitourinary: 1.8%</li> <li>▪ Nervous System: 1.8%</li> <li>▪ Skin and Subcutaneous Tissue: 1.6%</li> </ul>
<b>Disease Weights</b>	<p>The top ten ICD-10 categories were further divided into sub-disease categories. An example is provided for each:</p> <ul style="list-style-type: none"> <li>▪ MH&amp;B: <b>Depression</b>: stress: 27%; sense of belonging: 36%; low income: 14% excessive drinking: 9%; other: 14%</li> <li>▪ Circ: <b>Hypertension</b>: excessive drinking: 30%; obesity: 30%; physical inactivity: 20%; smoking: 9%; other: 11%</li> <li>▪ Musc: <b>Low Back Pain</b>: obesity: 5%; physical inactivity: 25%; other: 70%</li> <li>▪ Neoplasms: <b>Lung Cancer</b>: smoking: 75%; second hand smoke exposure: 10%; lack of fruits and vegetables: 3%; other: 12%</li> <li>▪ Respiratory: <b>COPD</b>: smoking: 80%; other: 20%</li> <li>▪ Digestive: <b>IBD</b>: genetics: 50%; age: 20%; stress: 5%; environmental: 10%; other: 15%</li> <li>▪ Endo: <b>Diabetes</b>: obesity: 50%; age 25%; genetics: 10%; hypertension: 10%; other: 5%</li> <li>▪ Genitourinary: none</li> <li>▪ NS: <b>Epilepsy</b>: age: 30%; sex: 5%; neuro develop: 15%; excessive drinking: 15%; stress: 20%; neoplasm: 5%; other: 10%</li> <li>▪ Skin: <b>Psoriasis</b>: age: 20%; genetics: 30%; stress: 10%; infection: 15%; trauma: 10%; other: 15%</li> </ul>

# Base Case Simulation – Physician Variance - 2008-2030



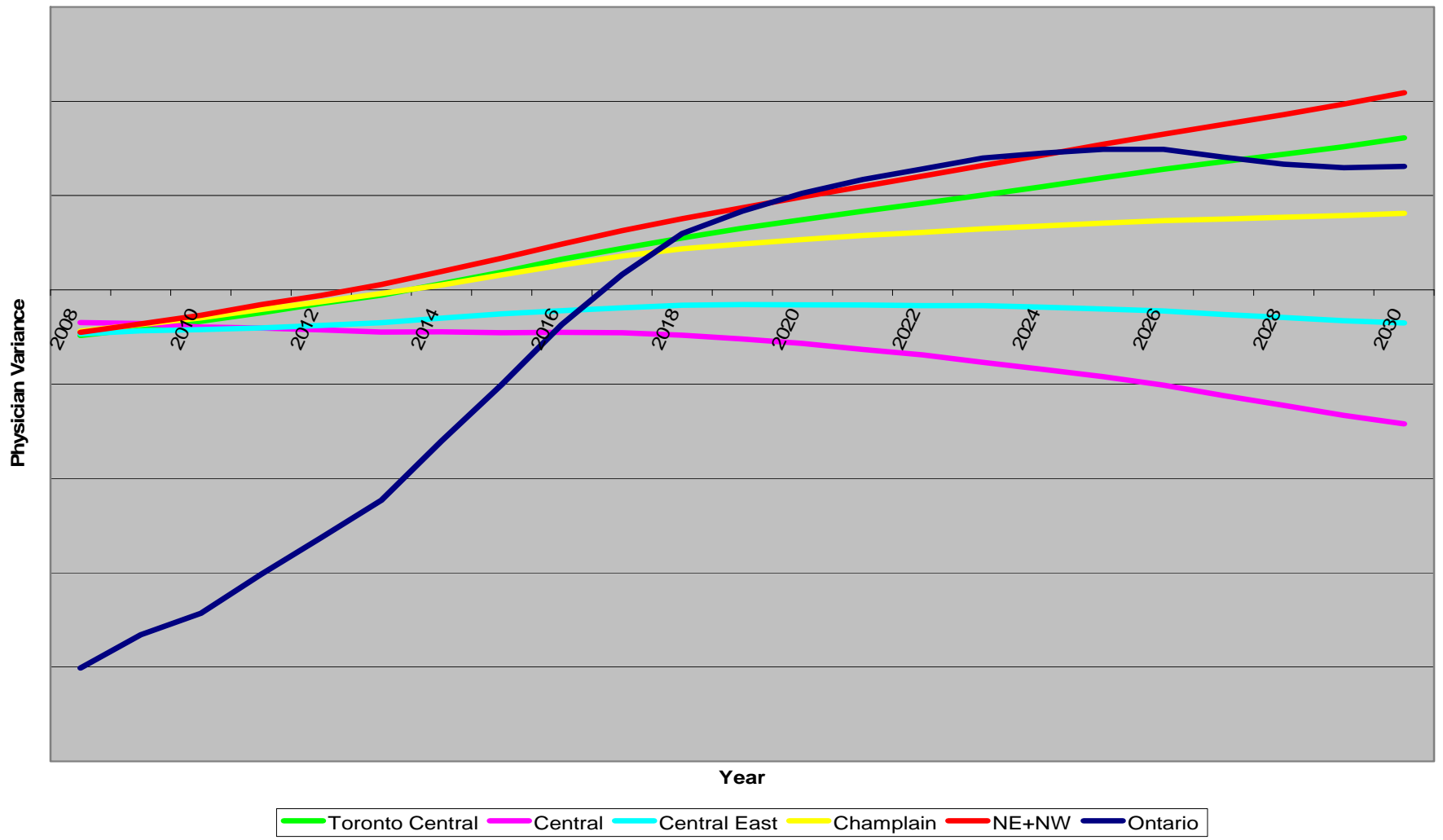


# Map of Ontario Local Health Integration Networks (LHINs)

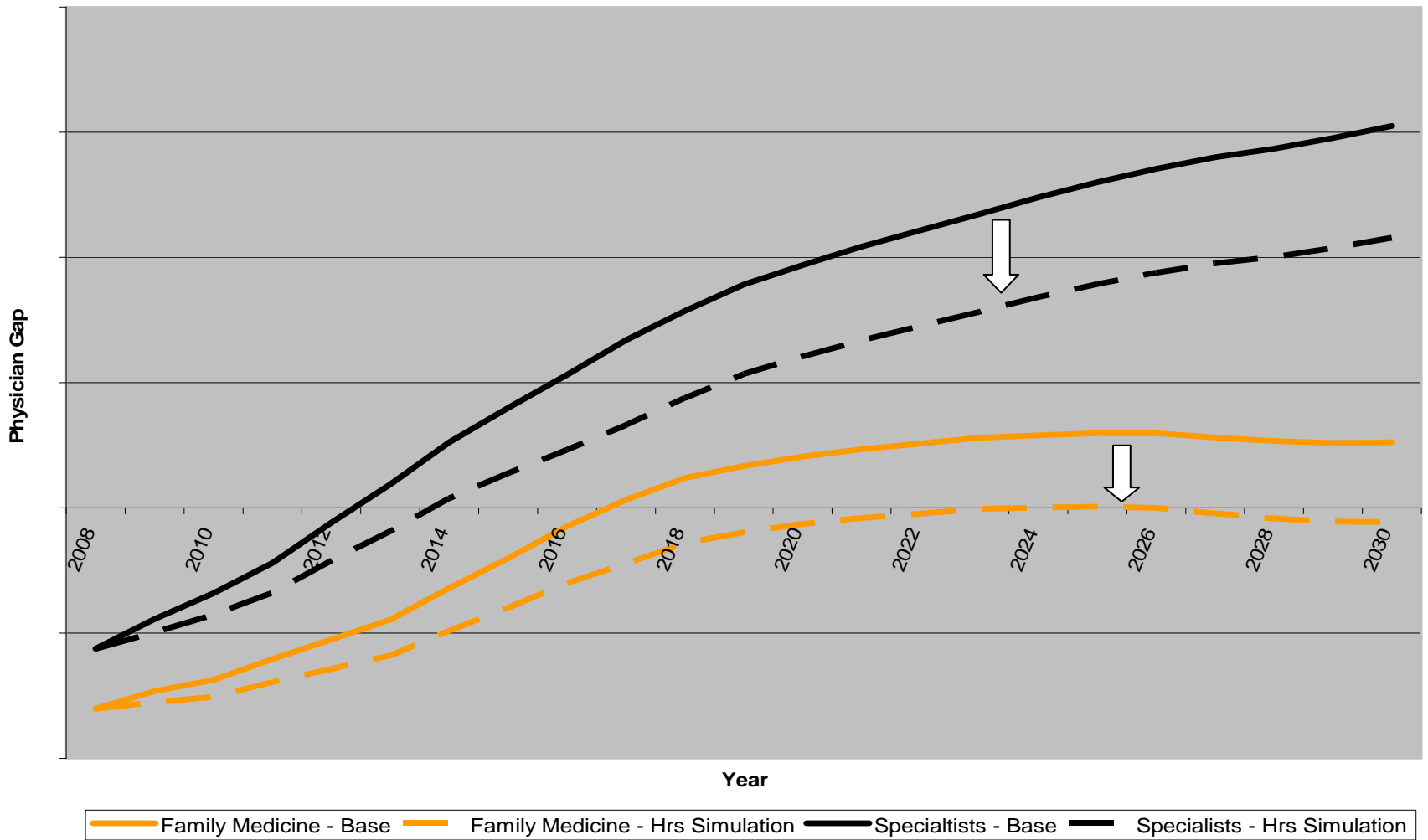


1. Erie St. Clair
2. South West
3. Waterloo Wellington
4. Hamilton Niagara Haldimand Brant
5. Central West
6. Mississauga Halton
7. Toronto Central
8. Central
9. Central East
10. South East
11. Champlain
12. North Simcoe Muskoka
13. North East
14. North West

# Base Case Simulation – Family Physician Gap for Select LHINs - 2008-2030



# WHAT IF SCENARIO: All Physicians in Ontario Reduce Their Avg Clinical Hours Worked by 2% Over 10 Years



## Next Steps

- **Communication:** materials under development for distribution.
- **Model Use & Further Investigation:** develop alternate simulations and work with health system experts to further understand results and implications for workforce planning (e.g. psychiatry).
- **Model Enhancements:** streamline certain parts of the model.
- **Model Update:** CBoC under contract for one year to provide support and assist with the first full data update of the model.

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## Filling An Evidence Gap

# The Health Professions Database (HPDB)

what  
you do  counts

Better Information.  
Better Decisions.  
**Better Health.**

# What Is The Health Professions Database (HPDB)?

- The Ministry of Health and Long-Term Care and the health regulatory Colleges collaboratively developed the HPDB.
- Supply-side database that collects standard, consistent and comparable data across regulated health professions in Ontario.
- Information will tell us about the demographic, geographic, educational, and employment characteristics of regulated health professionals in Ontario.
- Data collected on an annual basis. “Snapshot” point-in-time collection as of December 31<sup>st</sup> of each year. Very important for consistent trending over time.

# Health Professions and the HPDB

<b>Health Professions Who Began Submitting Data To The HPDB in 2008</b>	
Audiologists	Medical Radiation Technologists
Chiropodists	Midwives
Chiropractors	Occupational Therapists
Dental Hygienists	Opticians
Dentists	Optometrists
Dental Technologists	Pharmacists
Denturists	Physiotherapists
Dietitians	Psychologists
Massage Therapists	Respiratory Therapists
Medical Laboratory Technologists	Speech-Language Pathologists
<b>Health Professions To Be Included in the HPDB</b>	
Nurses – Submitting HPDB Data in 2011	Physicians
Homeopaths*	Naturopaths*
Kinesiologists*	Traditional Chinese Medicine Practitioners & Acupuncturists*
Psychotherapists & Registered Mental Health Therapists*	

\*Newly Regulated Health Profession

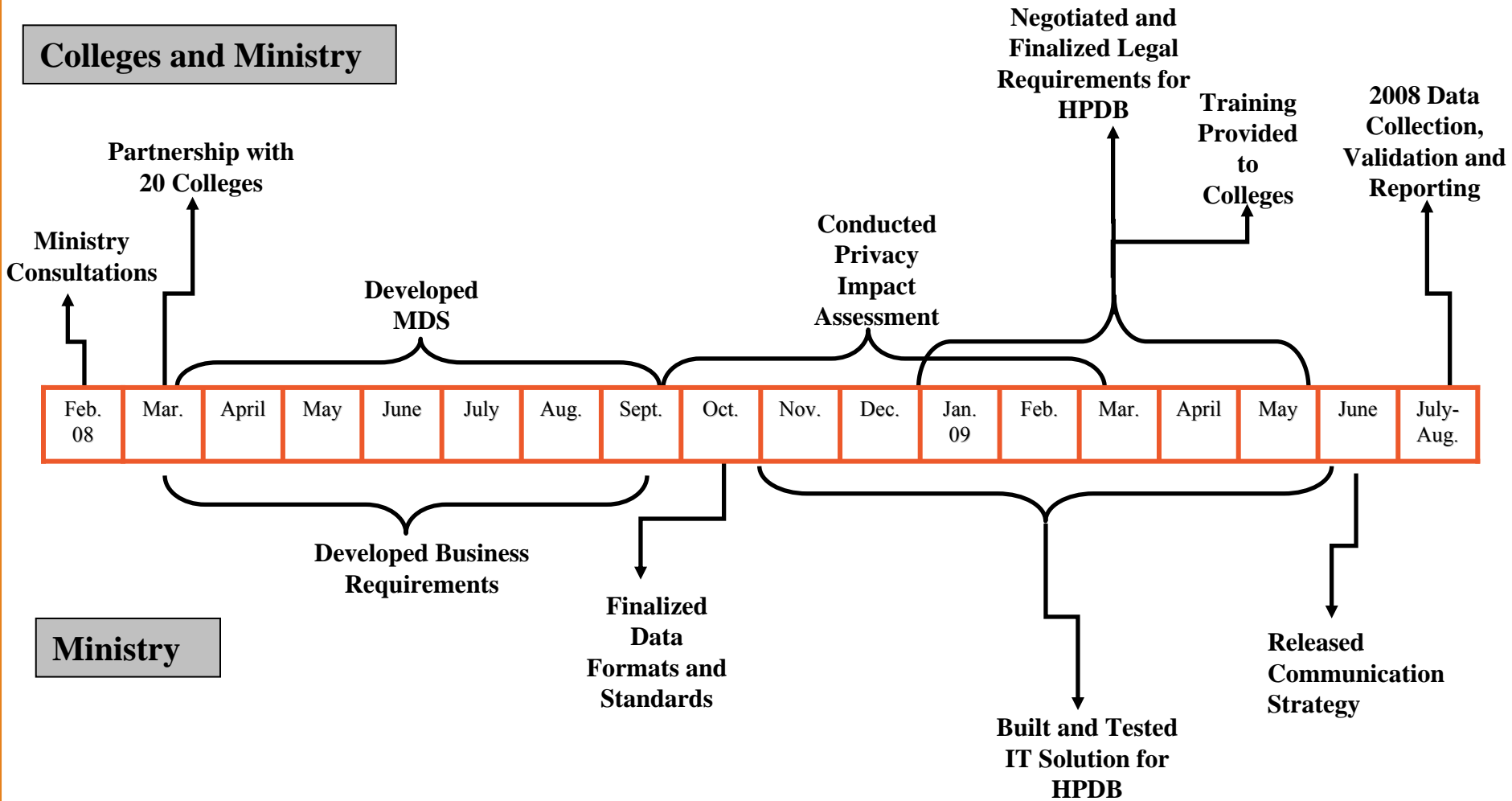
# Why Do We Need the Health Professions Database?

The HPDB will support better HHR planning in Ontario:

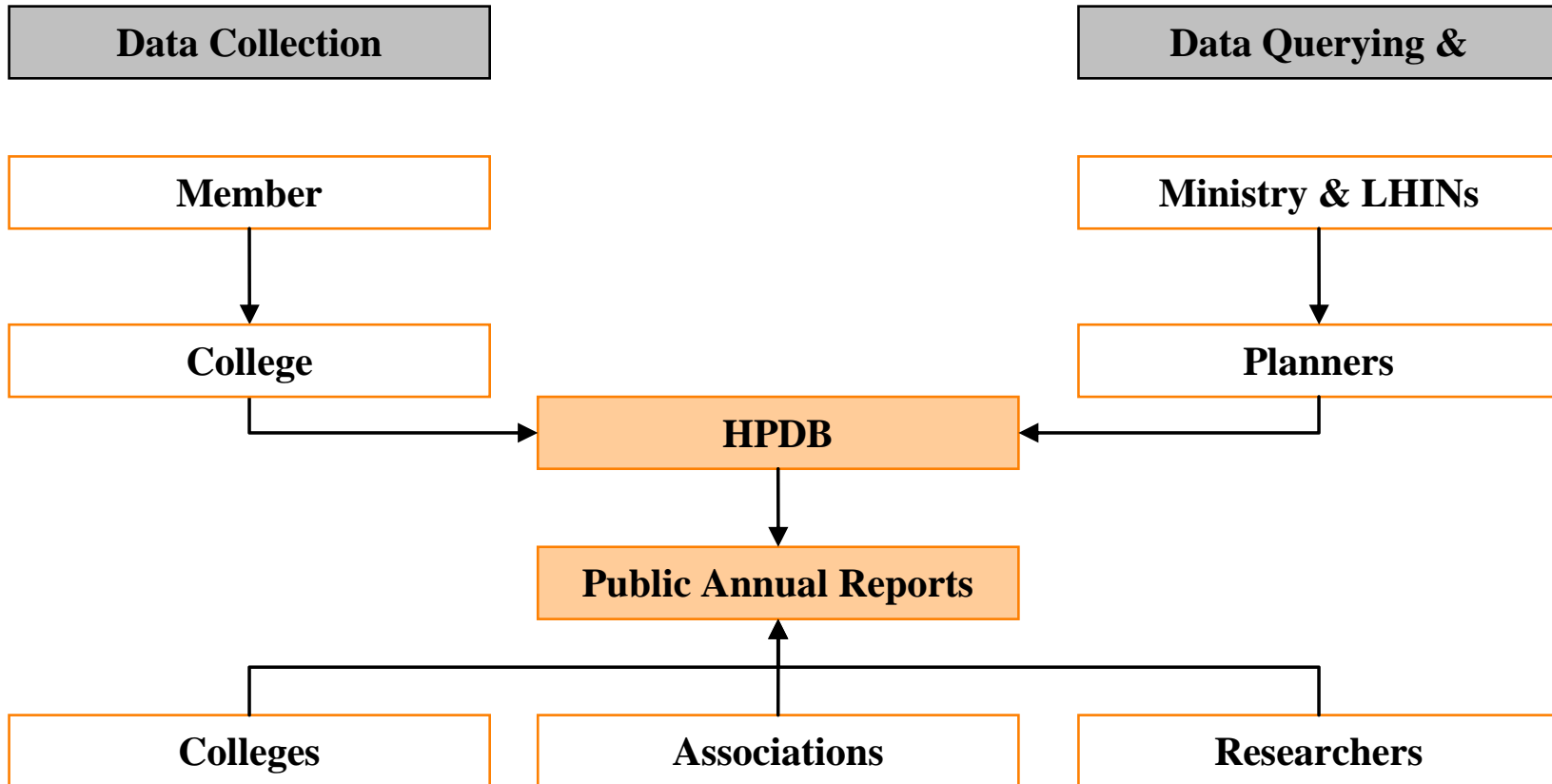
- Traditionally, the Ministry has had a lack of sufficient data on the regulated health workforce in Ontario – especially for professions outside of medicine and nursing.
- Had to rely on limited evidence such as membership counts from each College collected on an ad hoc basis with little consistency or comparability.
- Some anecdotal evidence suggests that shortages of health care providers is leading to longer wait-times for tests and services leading to limited access to care for Ontarians.
- Many organizations and groups have noted that **effective HHR planning requires timely and accurate information**. Nationally, an F/P/T HHR Planning Committee has noted that a key objective should be **“to build an approach to collect comparable HHR data.”**

# Key HPDB Achievements - Timeline

## Colleges and Ministry



# The HPDB Structure



# 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 Hourse 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

# Total Number of Ontario Regulated Health Professionals, 2008

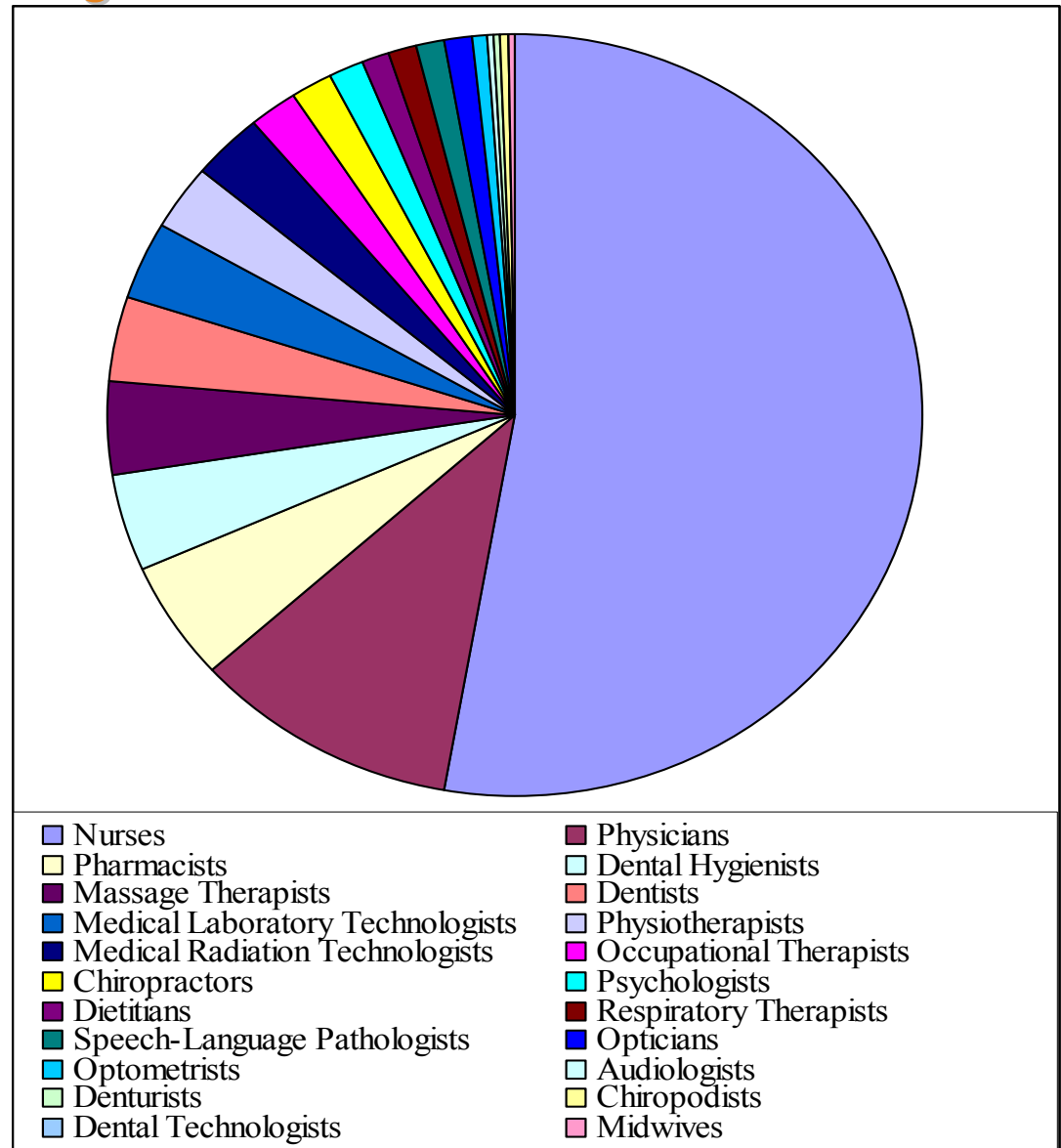
Profession	Headcount
Nurses <sup>A</sup>	120,265
Physicians <sup>B</sup>	23,767
Pharmacists <sup>C</sup>	11,426
Dental Hygienists <sup>C</sup>	9,204
Massage Therapists <sup>C</sup>	8,910
Dentists <sup>C</sup>	8,339
Medical Laboratory Technologists <sup>C</sup>	7,702
Physiotherapists <sup>C</sup>	6,374
Medical Radiation Technologists <sup>C</sup>	6,324
Occupational Therapists <sup>C</sup>	4,432
Chiropractors <sup>C</sup>	3,542
Psychologists <sup>C</sup>	3,072
Dietitians <sup>C</sup>	2,906
Respiratory Therapists <sup>C</sup>	2,510
Speech-Language Pathologists <sup>C</sup>	2,463
Opticians <sup>C</sup>	2,256
Optometrists <sup>C</sup>	1,579
Audiologists <sup>C</sup>	541
Denturists <sup>C</sup>	530
Chiropodists <sup>C</sup>	504
Dental Technologists <sup>C</sup>	480
Midwives <sup>C</sup>	403
<b>Total</b>	<b>227,529</b>

## Sources:

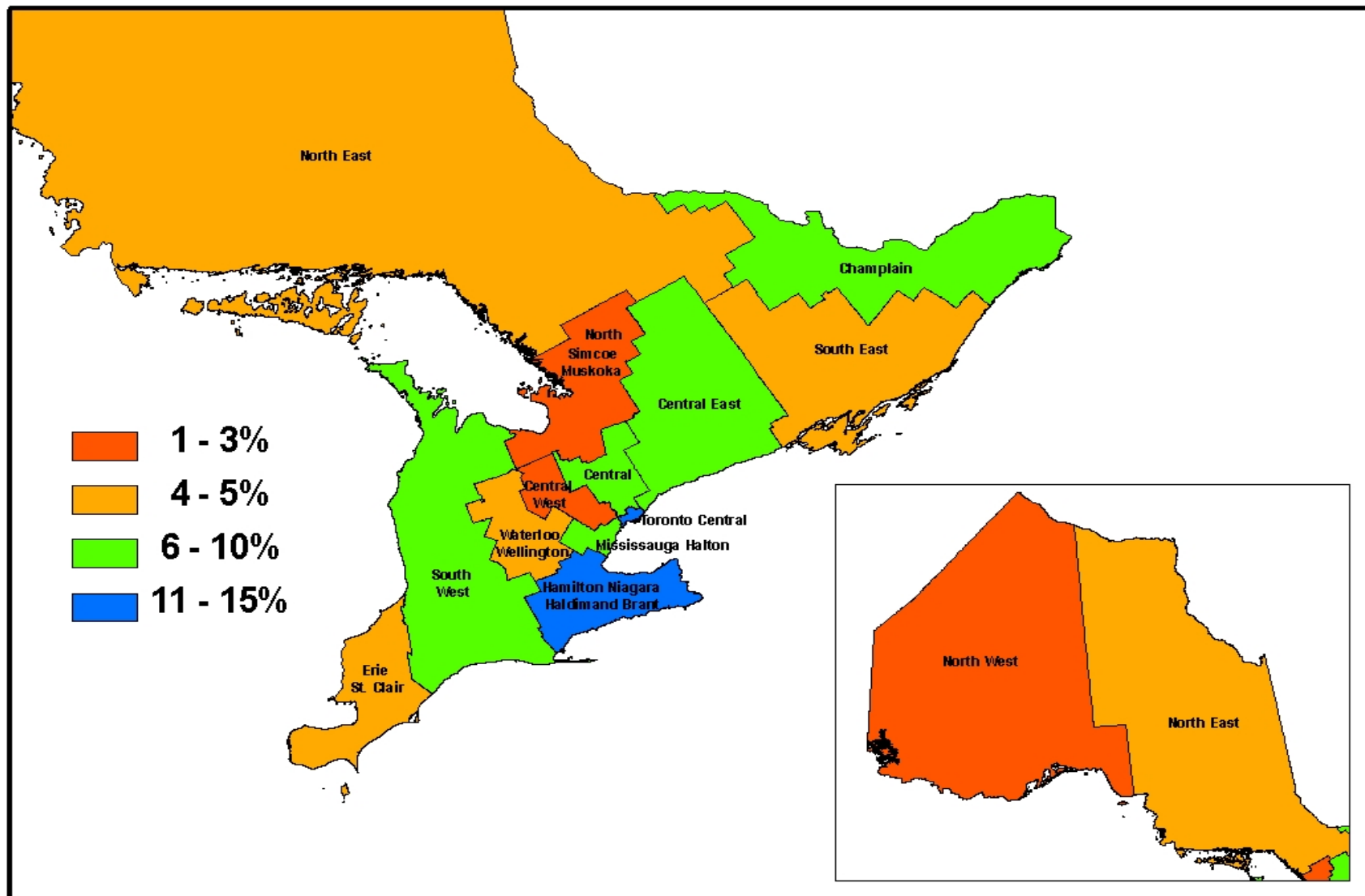
A. College of Nurses of Ontario, Data Query Tool, 2008

B. OPHRDC, Physicians in Ontario, 2008

C. Health Professions Database, December 2008



# Ontario Regulated Health Professionals – Employment by LHIN 2008



## Sources:

A. College of Nurses of Ontario, Data Query Tool, 2008

B. OPHRDC, Physicians in Ontario, 2008

C. Health Professions Database, December 2008 Submission

*Note: Map Excludes Denturists and Dietitians (Data Not Available in 2008)*

## HPDB Next Steps

- Launch the HPDB Advisory Committee with regulatory Colleges to guide and enhance HPDB policy and operations.
- Continue working with the HPDB Data Quality Working Group to assess the data quality of the HPDB and guide the data quality standards on an ongoing basis.
- Release the HPDB “ 2008 Stat Book” in Summer 2010.
- Develop a dynamic reporting module to allow streamlined access to HPDB data.
- Continue working with the College of Nurses to ensure smooth transition of their 150,000 member records into the HPDB in 2011.
- Open the HPDB to Ministry-wide users and LHINs to allow querying and reporting access.
- Build a web-portal to allow for public and researcher access to canned reports.

**Priority Areas**

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# Developing HHR Research Capacity

# HHR Research Capacity in Ontario

- A goal of the HFO Strategy is to support the development of HHR research capacity in Ontario.
- Many different aims:
  - Create specialized and dedicated new capacity in HHR research.
  - Encourage students interested in research careers to consider the HHR research field.
  - Encourage greater province-wide coordination and collaboration of established researchers to address HHR priorities.
  - Support early career HHR researchers.
  - Support knowledge exchange between researchers and HHR planners.

## HHR Research Chair

- To establish Ontario as a leader in HHR research and modelling, the Ministry provided a \$3M endowment fund for a permanent Research Chair in Health Human Resources at an Ontario university to:
  - create research and capacity to build HHR evidence and tools for all health professionals, specifically simulations and models, and
  - be responsive to contemporary HHR issues and priorities in Ontario
- The Council of Ontario Universities was asked to independently and impartially run the competition through their Ontario Research Chair Selection Panel.
- The Selection Panel chose McMaster University to receive the Chair. McMaster recruited Dr. Arthur Sweetman for the Chair, who will officially begin his role on July 1, 2010.

## Ontario HHR Research Network (OHHRN)

- A province-wide network linking HHR researchers and community decision-makers and partners.
  - Part of the **Applied Health Research Network Initiative**: a Ministry-funded program to support coordinated and policy relevant research in Ontario.
- The Ministry is providing OHHRN \$250K annually for five years pending a successful evaluation after three years.
- OHHRN will devote 60% of its time and budget to applied health research informed by Ministry priorities.
- Dr. Ivy Bourgeault is Scientific Director of OHHRN, based out of the University of Ottawa.

# Research Grants

## Career Scientist

- The Ministry awards Career Scientist grants to provide salary support of \$70K per year for five years to early career researchers in health services.
- Health human resources research is a priority area for the Career Scientist award.
- Current HHR career scientist work underway to develop a rehabilitation workforce supply/demand model.

## Nursing Research Fund

- The Ministry allocates \$5M annually to fund nursing research through the Nursing Research Fund (NRF).
  - To support research projects that focus on the management, organization and effectiveness of nursing human resources and services to support policy and program development.
  - To support nursing researchers at various stages of their career by protecting time to conduct research that will advance nursing policy and practice.
  - Financial support of between \$55K and \$100K per year for three years is provided.

# The Nursing Health Services Research Unit (NHSRU)

- The Ministry funds the NHSRU for nursing research.
  - Conducts research to support evidence-based decisions about the effectiveness, quality, equity, utilization, and efficiency of health care and health services in Ontario with a particular focus on nursing services.
  - Knowledge transfer between the MOHLTC and the NHSRU to support evidence-based policy and management decision making.
- Is collaboratively operated by Dr. Diane Doran at the University of Toronto, Lawrence S. Bloomberg, Faculty of Nursing and Dr. Andrea Baumann at the McMaster University, School of Nursing.

**Priority Areas**

1. Develop simulation models to support HHR planning.
2. Identify and develop new resources to fill gaps in HHR evidence.
3. Develop HHR research capacity and build awareness of HHR research.
- 4. Investigate HHR issues and trends to support policy development.**

# Investigating HHR Issues and Trends

# Investigating HHR Issues and Trends

## Examples of Work:

- Providing analytical support to the MRI Expert Panel to determine future supply/demand of MRI technologists and diagnostic radiologists.
- Analyzing historical HHR supply patterns of emergency department health care providers.
- Implementation of an HHR Expert Advisory Group to provide evidence-informed advice to Ontario's health system stakeholders and organizations to optimize supply, distribution and mix of healthcare providers in Ontario.
- Working with other provincial and territorial governments to potentially implement a national unique identifier for health professions.

## Want to Know More?

### HHR Evidence Resources:

[http://www.healthforceontario.ca/WhatIsHFO/evidence\\_hhr.aspx](http://www.healthforceontario.ca/WhatIsHFO/evidence_hhr.aspx)

- HFO RADIUS – quarterly e-bulletin highlighting HHR **R**esearch, **A**nalytics, **D**ata, **I**nformation and **U**seful **S**tatistics.
- Evidence Planning Bulletin – noting various HHR data sources.
- HHR Toolkit – description of the HHR landscape in Ontario and statistical profiles of various professions.
- Project Specific Information – e.g. HPDB, Physician Simulation Model, etc.

Thank You!

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