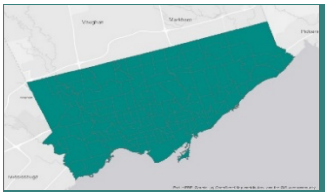

Primary Care Workforce Planning

Neighbourhood Profile: L'Amoreaux

Ontario Health Toronto

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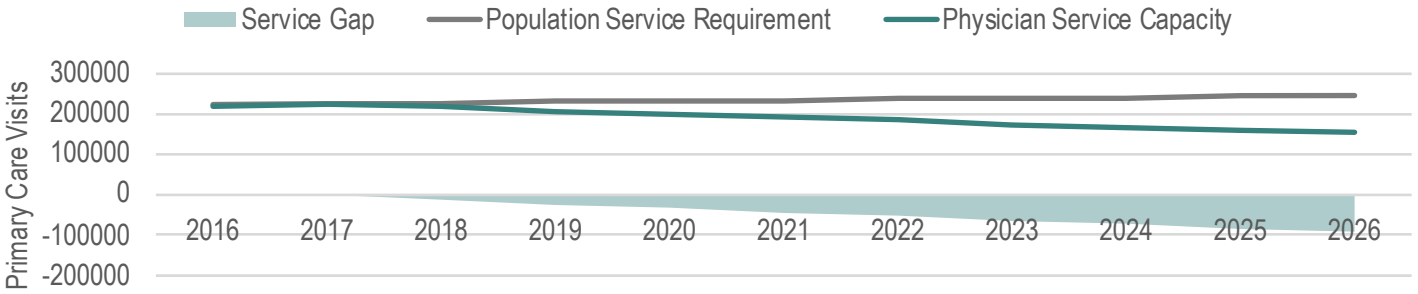


Need (2021) 235,032 Visits

Current State Gap (2021) -42,768 Visits

Capacity (2021) 192,264 Visits

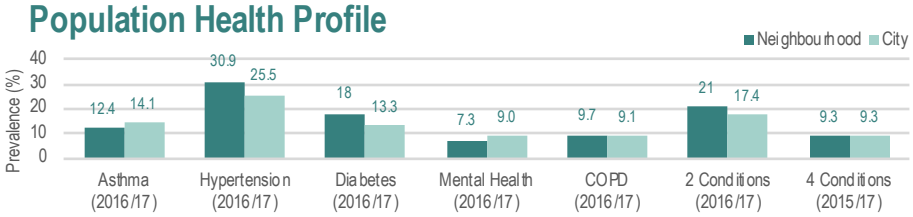
Need (2026) 246,145 Visits

Future State Gap (2026) -91,034 Visits

Capacity (2026) 155,111 Visits

Population Health Profile

Population (2016)			
Children	Youth	Working Age	Seniors
6,120	5,730	23,100	8,975
13.9 %	13.0 %	52.6 %	20.4 %



Population Growth

Year	Population Estimates (Low-High)	Estimated Yearly Growth
2016	43,993	*Neigh:* 0.39 % - 0.59 %
2021	45,179 - 45,299	*City:* 1.60 % - 2.50 %
2026	46,366 - 46,605	

Ontario Marginalization Index (2016)

Indicator	Neigh. Quintile	City Quintile
Material Deprivation	4	4
Residential Instability	2	5
Dependency	5	1
Ethnic Concentration	5	5

Spatial Patterns of Utilization

Yearly Incoming Demand: 193,368 Non-Resident Visits

Yearly Outgoing Demand: 127,835 Resident Visits

Unmet Need for Primary Care

Indicator	Neigh.	City
PEM Attachment (%)	76.7	71.6
ACSC Hospitalization / 100,000	251.1	244.4
Low Urgency ED (%)	65.0	81.5

Primary Care Workforce Profile

Number of Comprehensive Primary Care Physicians	
2016	36
2017	32

Average Weekly Hours Available

Year	Chiropodists	Dieticians	Midwives	NPs	OTs	Optometrists	Pharmacists	PTs	Psychologists	RNs	RPNs	RTs	SLPs
2016	17	12	0	0	36	0	922	57	0	59	48	0	0
2017	16	27	0	0	52	166	959	118	0	28	103	0	0
2018	6	0	0	0	51	141	533	42	0	53	93	0	0

Primary Care Workforce Planning

Service Requirements Module: L'Amoreaux

Ontario Health

uOttawa

Examine the Sources of Service Requirements at a Neighbourhood Level

Total Service Requirements =

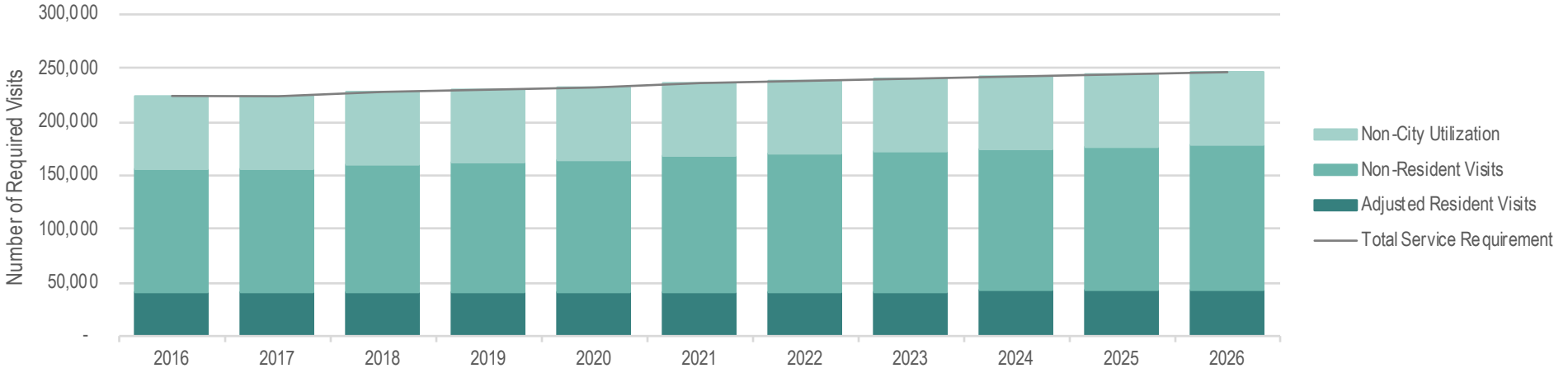
1 - Resident Visits: Number of resident visits expected to be accessed in their neighbourhood of residence based on baseline spatial patterns of utilization

+

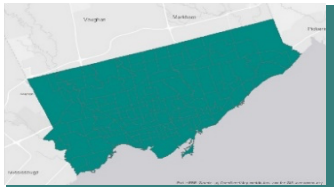
2 - Non-Resident Visits: Number of non-resident visits expected to be accessed in the neighbourhood based on baseline spatial patterns of utilization

+

3 - Non-City Utilization: Number of visits expected to be utilized by non-city residents in the neighbourhood based on baseline spatial patterns of utilization



	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Number of Residents	45,836	46,095	46,353	46,612	46,871	47,130	47,388	47,647	47,906	48,164	48,423
Resident Visits	164,805	164,213	166,666	167,596	168,526	169,456	170,386	171,317	172,247	173,177	174,107
Proportion of Care Accessed Within Home Neighbourhood	24.5%										
Resident Visits Adjusted for Spatial Patterns of Utilization	40,377	40,232	40,833	41,061	41,289	41,517	41,745	41,973	42,200	42,428	42,656
Non-Resident Visits	115,707	116,085	119,696	121,691	123,686	125,680	127,675	129,670	131,664	133,659	135,654
Non-City Utilization	67,835										
Total Service Requirement	**223,919**	**224,152**	**228,365**	**230,587**	**232,810**	**235,032**	**237,255**	**239,477**	**241,700**	**243,922**	**246,145**



Primary Care Workforce Planning

Service Capacity Module: L'Amoreaux

Ontario Health

uOttawa

Examine the Sources of Service Capacity at a Neighbourhood Level

Total Service Capacity =

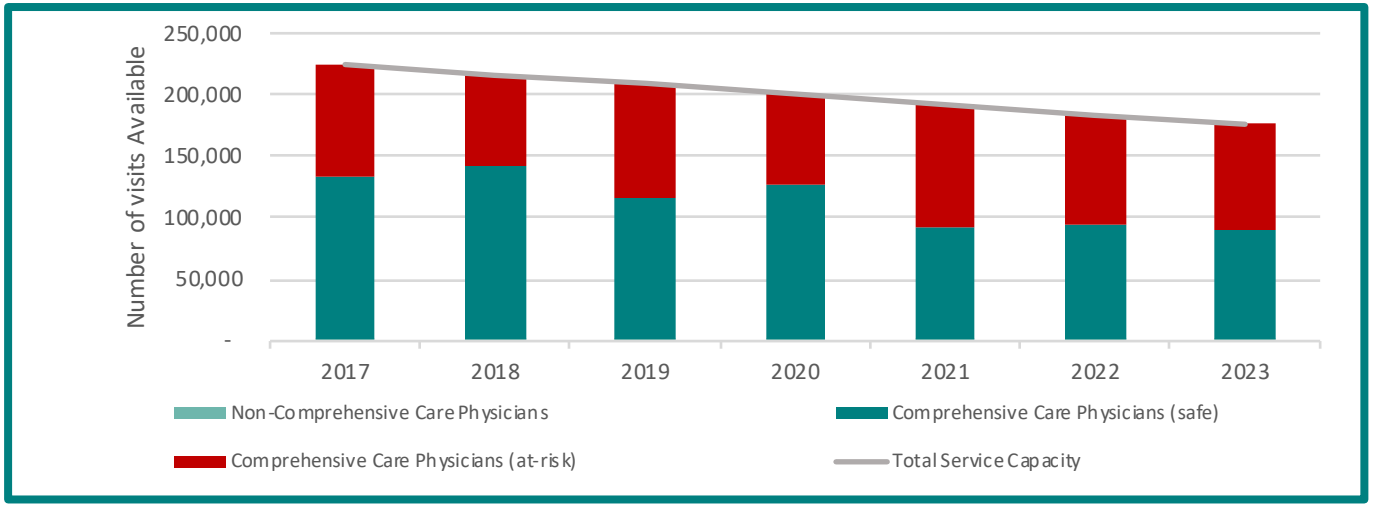
Comprehensive Care Physicians' Safe Service Capacity: Estimated number of services provided by comprehensive care physicians who are not expected to be at risk of exit from the workforce

+

Comprehensive Care Physicians' At-Risk Service Capacity: Estimated number of services provided by comprehensive care physicians who are considered to be at risk of exit from the workforce

+

Service Capacity Generated by Non-Comprehensive Care Physicians: Estimated number of services provided by non-comprehensive care physicians



Allied Health Professionals *Average Weekly Hours Available*			
Profession	**2016**	**2017**	**2018**
Chiropodists	17	16	6
Dieticians	12	27	0
Midwives	0	0	0
NPs	0	0	0
OTs	36	52	51
Optometrists	0	166	141
Pharmacists	922	959	533
PTs	57	118	42
Psychologists	0	0	0
RNs	59	28	53
RPNs	48	103	93
RTs	0	0	0
SLPs	0	0	0

Number of Comprehensive Primary Care Physicians	
2016	36
2017	32

	2017	2018	2019	2020	2021	2022	2023
Comprehensive Care Physicians' Safe Service Capacity	133,094	141,514	115,323	126,644	91,927	92,087	88,837
Comprehensive Care Physicians' At-Risk Service Capacity	90,046	73,542	91,649	72,244	98,877	90,633	85,799
Non-Comprehensive Care Physicians' Service Capacity	1,460						
Total Service Capacity	224,600	216,516	208,432	200,348	192,264	184,180	176,096

Toronto Region Primary Care Workforce Planning Toolkit

Technical Notes – Neighbourhood & Subregion Packages

Project Description

The Toronto Region Primary Care Workforce Planning Toolkit is a fit-for-purpose toolkit to support integrated primary care workforce planning in the Toronto Region. The toolkit is the result of a collaboration between the Health Analytics team at Ontario Health Toronto and consultants from the Canadian Health Workforce Network. A partnership with the City of Toronto, as well as extensive consultation with stakeholders, decision-makers, leaders, and frontline workers in Toronto, informed the development of the toolkit.

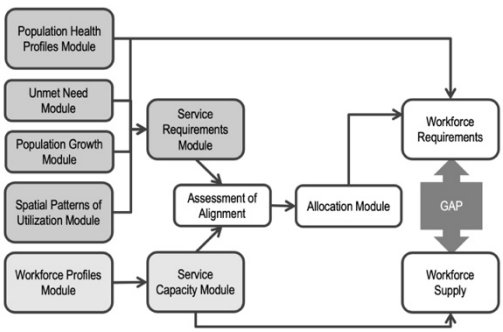
The toolkit provides a body of evidence around the current (and projected future) states of population health needs and primary care service provision at a neighbourhood level within the City of Toronto. The goal of the toolkit is to support evidence-based decision-making, particularly with regards to deployment of the primary care workforce and other health system resources. The toolkit looks at population needs and workforce capacity at the neighbourhood, sub-region, and whole city levels. It takes into account variations in population needs, workforce service capacity, and existing assets, and also addresses challenges specific to Toronto, such as patient mobility, anticipated rapid population growth, and physician retirement.

Methodology

The toolkit is composed of a series of modules that assemble information about primary care in the City of Toronto:

- The **Population Health Profiles Module** captures characteristics of the population that impact the need for primary care services.
- The **Population Growth Module** captures neighbourhood-level population growth projections generated by the City of Toronto, allowing us to adjust service requirements to account for anticipated population growth.
- The **Spatial Patterns of Utilization Module** captures a snapshot of primary care utilization patterns and allows us to adjust service requirements to account for patients' care-seeking behaviours.
- The **Unmet Need Module** captures information related to neighbourhood-level unmet healthcare need, which can contribute to an adjustment of service requirements.
- The **Service Requirements Module** estimates primary care service requirements using the CIHI Population Grouping Methodology.
- The **Workforce Profiles Module** captures information about the primary care workforce – including physicians and chiropodists, dieticians, midwives, nurse practitioners, optometrists, occupational therapists, pharmacists, psychologists, physiotherapists, registered nurses, registered practical nurses, respiratory therapists, and speech-language pathologists – practicing in each neighbourhood.
- The **Service Capacity Module** estimates the capacity of the workforce to provide primary care services.

Outputs from these modules are synthesized and summarized in the three static dashboards – Neighbourhood Profiles, Service Requirements, and Service Capacity – that are included in the neighbourhood and subregion packages.



This information is a starting point for local stakeholders wishing to better understand the primary care landscape in their communities. Interpretation of these outputs should consider the local context (factors related to both the community and the local workforce). Engagement and consultation with local stakeholders and frontline healthcare providers are essential parts of the planning process.

Definitions

Sub-Regions: Smaller geographic planning regions within Ontario Regions, developed to help better understand and address patient and population needs at the local level. There are 5 central and 6 peripheral sub-regions in the City of Toronto. One sub-region overlaps with a neighbouring Region and only the part of this sub-region located in Toronto has been included in these analyses. More information about sub-regions is available at http://www.torontocentrallhin.on.ca/forhsps/subregions.aspx.

Neighbourhoods: The 140 City of Toronto neighbourhoods were built by the Social Development, Finance & Administration department at the City of Toronto using Statistics Canada Census Tracts. More information about neighbourhoods is available at https://www.toronto.ca/city-government/data-research-maps/neighbourhoods-communities/neighbourhood-profiles/.

Comprehensive care physician: Primary care physicians who provide comprehensive care according to the algorithm developed at ICES (https://www.cmajopen.ca/content/5/4/E856).

Non-comprehensive care physician: Primary care physicians who practice less than 44 days per year or who otherwise do not meet the criteria to be characterized as providing comprehensive primary care according to the algorithm developed at ICES (https://www.cmajopen.ca/content/5/4/E856).

Individual-level Service Requirements: Predicted number of visits to a primary care physician based on clinical and demographic profiles generated by the CIHI Population Grouping Methodology (https://www.cihi.ca/sites/default/files/document/infosheet_popgroupmethod_en_web_0.pdf).

Neighbourhood-level Service Requirements: Neighbourhood-level service requirements are a function of the number of visits to a primary care physician required by neighbourhood residents and by residents of other neighbourhoods in the City, adjusted for spatial patterns of utilization, along with the number of visits required by patients from outside the City of Toronto and an estimate of unmet need.

Total Service Capacity: Neighbourhood-level service capacity is a function of the estimated number of visits provided by comprehensive care physicians who are not expected to exit the workforce, plus the estimated number of visits provided by comprehensive care physicians who are considered to be at risk of retirement, plus the estimated number of visits provided by non-comprehensive care physicians.

Physician Service Capacity: Physician service capacity is estimated on an individual level (based on the total number of visits provided in 2017 (from IPDB)) with adjustment for age-based changes in workload (from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6516703/) and aggregated to the neighbourhood level.

At-risk Service Capacity: Visits associated with physicians whose age-based risk of retirement is at least 20%.

Allied Health Provider: Allied health providers include Chiropodists, Dieticians, Midwives, Nurse Practitioners, Optometrists, Occupational Therapists, Pharmacists, Psychologists, Physiotherapists, Registered Nurses, Registered Practical Nurses, Respiratory Therapists, and Speech-Language Pathologists.

Primary Care Activities: Activities relating directly to primary care include General Service Provision, Continuing Care, Comprehensive Primary Care, Chronic Disease Prevention and Management, Public Health, Mental Health and Addiction, Primary Maternity Care, Geriatric Care, Infectious Disease Prevention and Control, and Palliative Care.

Average Weekly Hours Available: The average weekly hours of direct professional services in activities identified as relating directly to primary care, estimated based on past hours worked. Note that this estimate represents normal hours of service that the workforce undertook, not "potential" or "extra" available hours. These are descriptive estimates, not projections, and may not represent future workforce service capacity.

Sources of Data

- **Population Health Profiles:** Ontario Community Health Profiles Partnership (OCHPP)
- **Ontario Marginalization Index:** OCHPP
- **Population Growth:** City of Toronto Planning Department
- **Unmet Need:** OCHPP
- **Spatial Patterns of Utilization:** Utilization Matrix generated using data from ICES through an AHRQ request
- **Service Requirements:** CIHI Population Grouping Methodology outputs provided by the Ontario Ministry of Health
- **Primary Care Workforce Profile & Service Capacity (Physicians):** ICES Physician Database (IPDB) accessed through OCHPP
- **Primary Care Workforce Profile & Service Capacity (Other Health Professionals):** Health Professions Database (HPDB) outputs provided by the Ontario Ministry of Health

Assumptions

Service requirements are estimated assuming a Medium population growth scenario and a 10-year horizon.

We assume linear residential development and population growth between the base year and the horizon year.

In our baseline scenario, we assume that new residents of a neighbourhood will have a similar profile and service requirements to those currently residing within the neighbourhood.

We adjust for population mobility using a snapshot of spatial patterns of utilization observed in FY 2017/18.

We assume that providers' age-based changes in workload and retirement probabilities will be consistent with those observed in comprehensive primary care physicians practicing in Ontario between 1992 and 2013 (from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6516703/).

Limitations

Neighbourhood geographies are not specifically designed for primary care health workforce planning.

Some neighbourhoods are split between subregions. In these cases, neighbourhoods have been assigned to a single subregion as follows:

Neighbourhood Name (Number)	Split Between Sub-Regions	Assigned To
Kingsview Village-The Westway (6)	North Etobicoke Malton West Woodbridge & North York West	North Etobicoke Malton West Woodbridge
Willowridge-Martingrove-Richview (7)	North Etobicoke Malton West Woodbridge & North York West	North Etobicoke Malton West Woodbridge
Islington-City Centre West (14)	South Etobicoke & West Toronto	South Etobicoke
Victoria Village (43)	North York Central & East Toronto	East Toronto
Leaside-Bennington (56)	North Toronto & Mid-East Toronto	North Toronto
South Riverdale (70)	Mid-East Toronto & East Toronto	East Toronto
Waterfront Communities-The Island (77)	Mid-West Toronto & Mid-East Toronto	Mid-East Toronto
Yonge-St.Clair (97)	Mid-West Toronto & North Toronto	North Toronto
Clairlea-Birchmount (120)	East Toronto & Scarborough South	East Toronto
Birchcliffe-Cliffside (122)	East Toronto & Scarborough South	East Toronto

Sub-Region boundaries do not equate to Ontario Health Team (OHT) boundaries, but are used as a proxy to show the approximate catchment area served by OHTs.

Unmet need is currently not accounted for in the estimate of Service Requirements. A process to define quantitative estimates of unmet need through engagement with local stakeholders is in development for operationalization during the next phase of planning.

Estimates of service capacity for physicians are in *visits*, while estimates of service capacity for allied health providers are in *hours per week*.

The information in the HPDB was provided on an "as-is" basis. The data were originally obtained by the Ministry of Health directly from health regulatory Colleges. The Ministry therefore cannot and does not warrant or represent that the information is accurate, complete, reliable or current.

Spatial patterns of utilization and the primary care workforce are not independent; there is an interaction and observed patterns can change over time. For more information about the neighbourhood- and sub-region-level spatial patterns of utilization methodology, results, and visualizations, please contact Ontario Health Toronto.

Due to the data lags associated with the use of administrative data for planning, the most recent year of data input into this planning exercise is for FY 2018/19 and trends that have since emerged are not reflected in our analysis.

Our workforce model projects forward current capacity available within the system and does not model the impact of entry of new health care providers into the workforce. The neighbourhood-level gaps between service capacity and service requirements illustrated in our outputs can be used to identify neighbourhoods where additional resources are required to meet primary care needs.

Abbreviations

ACSC – Ambulatory Care Sensitive Condition
AHRQ – Applied Health Research Question
CIHI – Canadian Institute for Health Information
COPD – Chronic Obstructive Pulmonary Disease
ED – Emergency Department
FY – Fiscal Year
NP – Nurse Practitioner
OCHPP – Ontario Community Health Profiles Partnership
OHT – Ontario Health Teams
OT – Occupational Therapist
PEM – Patient Enrolment Model
PT – Physiotherapist
RN – Registered Nurse
RPN – Registered Practical Nurse
RT – Respiratory Therapist
SLP – Speech & Language Pathologist

Contact

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V1 May 2022