A conceptual proposal for the future York University School of Medicine

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Submitted to the Government of Ontario

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EXECUTIVE SUMMARY

The health and well-being of individual Ontarians is deeply connected with that of their communities and our shared environment. As a university committed to creating positive change for our students, communities, and the world around us, this immutable truth is embedded in York University's values; approach to teaching, learning and research; and in our people. York University is pursuing an opportunity to help transform the health and well-being of our communities through an innovative medical-training model.

Despite individual and collective investments in health and well-being, significant challenges remain in providing equitable access to high-quality medical care exacerbated by the COVID-19 pandemic. The future of health care in Ontario, Canada, and around the world, will be radically different than it is today. The Government of Ontario has already begun to respond to the need for more effective, integrated and affordable care by establishing Ontario Health Teams poised to leverage data, technology and partnerships to yield insights, efficiencies and sustained health outcomes. We must prepare the next generation of doctors – especially primary care physicians – to not only thrive in this new health care environment but to contribute to it. Backed by our diverse group of students, faculty, staff, alumni and partners, York University is uniquely positioned to meet this challenge. We bring a global perspective to help solve societal challenges and right the future.

Chapter one provides an overview of the conceptual proposal being presented to the Government of Ontario for the York University School of Medicine, a new kind of School of Medicine designed to address Ontario's 21st century health and wellness needs through innovative curriculum, technology, and collaboration.

Chapter two outlines why a new type of medical school is needed not only to increase capacity but to fundamentally rethink, reform and redesign medical education in ways that will drive the changes needed in health care. Today health care is not best or exclusively given in hospitals. We need primary care physicians trained in value-based medicine with an understanding of population health and the skills to work in a distributed system with other integrated health teams if we are to provide equitable and sustainable healthcare.

York University's decision to invest in the development of a new School of Medicine has been decades in the making. Chapter three describes how York University's compelling history, location and deep network of relationships with more than 200 regional and provincial health-related organizations will meet the care needs of the community as well as the experiential learning, research, training and employment needs of students. York is an internationally recognized and progressive teaching and research University. Our interdisciplinary, evidence-based health programs are ranked among the best in the world and provide a rich foundation for a School of Medicine, in combination with a proven history in health research, innovation and entrepreneurship. We have an established coalition of lead partners with York Region, the City of Vaughan and Mackenzie Health to establish a Vaughan Healthcare Centre Precinct including a new School of Medicine and plans to explore further possibilities for training



experiences with relevant Ontario Health Teams overlapping with our catchment of North Toronto, York Region, Simcoe County and Muskoka.

The rationale for the York University School of Medicine is to keep more people healthier and for longer in their communities. Four design imperatives have shaped this conceptual proposal in order to achieve that goal – the School will be community-based, committed to global impact, powered by design and connected to all of life. In chapter four, we outline how these imperatives give rise to five guiding principles that will help ensure Ontario stays healthy by training medical students to work in integrated health teams, to consider the full spectrum of community and individual health across the life course, and to be critical problem-solving designers as they address problems in real time, leveraging new digital tools and approaches to care.

While the full curriculum is under development, chapter five highlights central features that have emerged from our guiding principles. York will be offering an optional two-year pre-med program to provide a pipeline for enhancing access to medical school. The School of Medicine program is based on a three-year primary care and population health-focussed curriculum. A unique preceptor delivery model will ensure that throughout the pre-clerkship and clerkship years, students are exposed to a rich diversity of care facilities and trained using a value-based health care approach that fully realizes the digitally-enabled, data-informed, and culturally-affirming health care Ontario needs now. Our graduates will be equipped with the capacities and tools to make informed decisions about the best health care options both at home and in health care settings.

The York University School of Medicine will attract talented students representing the diversity of the communities in which they live. Chapter six outlines the current composition of medical school students in Ontario and explains how the School will build on York University's long-standing tradition of achieving equitable student access and geographic reach to meet both student and community needs. This chapter proposes an inclusive admissions process that ensures Ontario attracts and retains talented primary care physicians equipped, both through their lived experience and training, to design for an intentional continuum of care.

York University has worked effectively with all levels of government, public and private sector partners, and the communities we serve to successfully deliver transformational projects in the most affordable and cost-effective manner possible. The business plan for the School of Medicine builds upon this proven track record. Chapter seven outlines the proposed enrolment plan and business model principles that will achieve an initial cohort of 60 students in year one, growing to an entry cohort of 120 by year five and a full "steady state" enrolment of 360 students by year seven. York University offers an extensive asset base of strong health and technology programs and infrastructure that currently exists on York University's Keele Campus as well as that which is currently under construction at our new Markham Campus. By leveraging the extensive teaching, laboratory, administrative and other support infrastructure (including student housing) that currently exists both at York University and through the



Vaughan Healthcare Centre Precinct, any incremental capital investment can be minimized to focus on building only what is needed.

Our new School of Medicine will build healthier, thriving communities by alleviating significant pressures facing the regional health care system and contributing to the economic and social development of the region it serves. Chapter eight of the conceptual proposal outlines the 20-year impact of the School's graduating classes as well as the dramatic range of socioeconomic impacts to Toronto, York Region, Ontario, and Canada across project development, construction and particularly upon operations into the long-term.

The York University School of Medicine is tailor-made for the unique health care challenges facing Ontario and responsive to the future of health care. Together, we can make things right for our communities, our planet, and our future.

We look forward to working with our partners in the community and all levels of government to make this vision an exciting reality.



Chapter 1. Introduction

Concerns about the effectiveness and sustainability of the Ontario Health Care System have been debated for decades. COVID-19 has only served to exacerbate the systemic issues we face¹. In Ontario, health system costs are increasing by roughly 3 per cent annually,² with approximately 47 per cent of each Ontario provincial tax dollar going to support the health care system.³ Yet about 10 per cent of Ontarians do not have a family doctor.⁴ Lack of access to family doctors and other primary care practitioners sends too many Ontarians to hospital for conditions that could be treated far earlier, more effectively and at lesser cost through integrated, community-based care. Ontario's demographic profile is growing and changing, current and future needs in areas such as paediatrics, geriatric care, and mental health and addiction, can be better met by better-trained and more community-based primary health care providers.

Doing more of the same in our approach to health care and medical education is not an option. The deficit in front-line health care is growing because medical school graduates are being trained primarily for specialties. While 69 per cent of medical specialties are "oversupplied" Ontario faces a 43 per cent shortfall in the supply of primary care physicians.

Radical changes are needed. We need to be preparing the next generation of doctors – especially primary care physicians – to not only thrive in this environment but to contribute to it. York University has always approached health and well-being from the lens of how to keep more people healthier and living longer in their communities. We know that hospital stays are expensive and come with certain risks, including additional stress and the presence of antibiotic-resistant microbes. Health care is shifting to a value-based model where emergency and in-patient treatment is limited to those cases that are absolutely necessary and where there is seamless integration with community health centres and social services. Major digital innovations in, for example, telehealth are changing how medicine is practiced and where care is delivered. This has been accelerated by adaptations to the COVID-19 pandemic, which has led to a highly effective increase in, and satisfaction with, the "hospital-at-home" model where physicians and integrated health teams merge in-person and virtual care using digital health tools.⁵

 $¹ See: https://www.health.gov.on.ca/en/public/publications/premiers_council/docs/premiers_council_report.pdf$

² https://www.fao-on.org/en/Blog/Publications/2021-health-estimates

³ While the data is sometimes debated, the government is projecting \$156.9 billion in tax revenue, of which \$74.1 billion is to be spent on health care services for 2021-2022. Source: https://www.ontario.ca/page/2021-22-first-quarter-finances

⁴ Source for 10%: https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm

⁵ KPMG Report and https://www.healthing.ca/diseases-and-conditions/coronavirus/most-canadians-havent-seen-family-doctor-much-since-pandemic/

The York University School of Medicine is a new kind of school of medicine. It is designed to address Ontario's 21st century health and wellness needs using 21st century curriculum, technology and tools. In this design, "health-disease-wellness" is an ever-improving continuous loop where the community is our campus.

We are building:

- A School committed to amplifying preventative and primary care and ending hallway medicine.
- A School that forwards a wholly disruptive approach to global population health and community-based medicine by centering learning and research in and around the communities we serve.
- > A School that is digitally-enabled, data-informed and driven by design.
- > At its core, the York University School of Medicine supports a holistic, ecological and spiritual approach to culturally-affirming health care, and teaches a local-to-global philosophy that allows our graduates to deliver equitable health care through the region, Ontario and the world.

Located in the Vaughan Healthcare Centre Precinct, the York University School of Medicine stands to produce homegrown doctors working and learning together with integrated health teams to innovate and improve the human condition along the continuum of care. **Our School is a modern medical school, designed to build healthier, thriving communities.**

The following chapters provide additional detail regarding the significant contributions that the School will bring to Ontario and elaborates on the guiding principles informing its design.



Chapter 2. The Need for a New Type of School of Medicine

- 1. Local and global challenges and opportunities demand a redesigned approach to medical education.
- 2. Medical education in Ontario and Canada does not promote the entry to practice of sufficient numbers of practice-ready primary care physicians.
- 3. Examining demand versus supply of practice-ready physicians in Ontario shows that there is a 43 per cent shortfall in the supply of primary care physicians.
- 4. The area surrounding York University sits within the Central Ontario Health Region. The region has significant population health challenges with important and growing chronic morbidities, as well as growing gaps in health human resources, notably in numbers of and access to primary care providers.
- 5. The underperformance of Canada's health system compared to 11 other high-income countries stems from the lack of family physicians and the less than optimum integration of health services.

Medical education does not exist in a vacuum, and as Ontario and the world changes, so too must our approach to medical education. The COVID-19 pandemic, extreme weather events, and the global phenomenon of rising antimicrobial drug resistance are just three examples of how global forces can, and are, shaping our local health-disease-and-wellness realities, and vice versa.

As our province grows, we are more diverse, with shifting and aging demographics and patterns of population urbanization and movement. This means changes to the types and patterns of illnesses and diseases. Meanwhile, new innovations in health technologies and in digital health platforms are rising up to offer better health care approaches and strategies.

Today, health care is not best or exclusively provided in hospitals. While acute care may require hospitalization, it is not without risks. Alternative community-based care can be a far better option for care of chronic conditions. Value-based health care recognizes that, with the appropriate capacities and tools, health needs can often be best met at home or in rehabilitation centres, long-term care settings, hospice or community health centres: in short, in the community. Indeed, the complex systems of the 21st century that now define health, disease and wellness demand that health care be viewed as an integrated and continuous system melding population, public and environmental health as part of a primary health care approach to keeping people healthy.

This demands new critical problem-solving approaches that adapt and design 21st century solutions, and most especially a refocused and fresh approach to community-based primary health care. Local and global challenges present opportunities for new leadership and a new approach to medical education. Committed to excellence through more effective and more equitable community-based primary health care.



Primary care physicians trained with new critical problem-solving approaches that adapt and design 21st century solutions are the key to making our health system more effective and integrated. They are the first trusted resource that people seek for health advice, diagnosis and treatment. They play central role in managing the health and well-being of their patients once they leave acute care or enter long-term and community-based care.

The evidence points to a significant shortfall in the number of primary care physicians

trained by Ontario medical schools (see Table 2.1).⁶ Approximately 10 per cent of Ontario citizens and 14.5 per cent of Canadians are without a family doctor, and there is a 43 per cent shortfall in the supply of practice-ready primary care physicians in Ontario compared to a 69 per cent oversupply of medical specialists. Unless we create additional capacity, the situation will become worse.

Prior to the COVID-19 pandemic, there was already a shortage of primary care physicians in urban settings and especially in growing peri-urban, rural and remote settings. This number is expected to grow as practice patterns change among physicians seeking better work-life balance, as more practitioners reach the age of 60+ and as about 25 per cent of general practitioners and family physicians reduce their clinical practice hours in the three or more years leading up to retirement.⁷

| | Ottawa | Queen's | Toronto | McMaster | Western | NOSM | TOTAL |
|-------------------|--------|---------|---------|----------|---------|------|-------|
| Family Medicine | 78 | 66 | 173 | 93 | 79 | 31 | 520 |
| Medicine | 103 | 43 | 374 | 107 | 80 | 6 | 713 |
| Lab | 2 | 2 | 15 | 4 | 3 | - | 26 |
| Surgery | 40 | 6 | 120 | 36 | 25 | - | 227 |
| % Family Medicine | 35.0 | 56.4 | 25.4 | 38.8 | 42.2 | 83.8 | 33.8 |

Table 2.1. Number of practice entry physicians produced by Ontario's six medical schools on an annual basis.



⁶ See the 2017 Canadian Medical Association Physician Workforce Survey at https://surveys.cma.ca/; and the 2021 National Physician Database by the Canadian Institute for Health Information.

⁷ Simkin S, Dahriuge S, Bourgeault IL (2019), End-of-career practice patterns of primary care physicians in Ontario. <u>Canadian Family Physician 65 (May)</u>, e221-e230; Wyonch R. (2021). Help Wanted: How to Address Labour Shortages in Healthcare and Improve Patient Access. <u>C.D. Howe Institute, Commentary no. 590</u>; Bailey JG, Wong M, Bailey K et al. (2021). Pandemic-related factors predicting physician burnout beyond established organizational factors: cross-sectional results from the COPING survey. <u>Psychology, Health and Medicine</u>.

Along with family medicine practitioners, primary care physicians in short supply include general internists, hospitalists, geriatricians, paediatricians, obstetrician-gynecologists, and psychiatrists.⁸ Annually, over one million Ontarians report experiencing a mental health or addiction problem. Their conditions are exacerbated by waiting lists that are months long. Prior to COVID-19, chronic diseases were responsible for 75 per cent of deaths in Ontario. Nearly 300,000 new cases of cardiovascular disease are diagnosed each year. Almost two million Ontarians live with chronic respiratory disease, 1.3 million have diabetes, while the number with dementia, addiction or mental illness grows rapidly.

As our population grows and ages, the burden of chronic conditions will also grow. Without proper access to a primary care provider to diagnose and manage their conditions, and the appropriate digital infrastructure, patients end up in hospital emergency rooms and experience longer-than-necessary stays in acute care. Our acute care system desperately needs help to prevent and improve the management of chronic conditions through better integration with the primary health care system and community partners such as long-term care, home care, rehabilitation, and public health. **Treating people too late and in the wrong place worsens health outcomes and drives health care costs up.**

It is not enough to simply increase capacity. It is time to fundamentally rethink, reform and redesign medical education in ways that will drive systemic change. A new breed of primary care physicians, working collaboratively with integrated health teams in the community, can help lead the way.

That is why we are building the York University School of Medicine.



⁸ See CMA data centre; CAPER.

ADDRESSING THE PRIMARY CARE PHYSICIAN GAP

At the end of undergraduate education, all Canadian medical students enter the Canadian Residency Matching Service (CaRMS) for Post Graduate Residency training.⁹ While students are matched to residency programs throughout Canada, graduates of Ontario medical schools tend to pursue their postgraduate training in Ontario, either in their own institution or in another medical school residency program.¹⁰ Forty-one per cent (range 24 per cent to 45 per cent) of Ontario medical school graduates were matched to their own school in the first iteration of the match, 35 per cent (range 24 per cent to 49 per cent) were matched to another Ontario medical school and 23 per cent (range 18 per cent to 31 per cent) were matched to residency training programs outside the province (see Table 2.2).¹¹ There is a significant redistribution of physician trainees within and across provinces as they move from undergraduate medical education to postgraduate or specialty training programs.

| | Ottawa | Queen's | Toronto | McMaster | Western | NOSM | Average |
|------------------|----------|----------|----------|----------|----------|----------|---------|
| Home school | 39.6 (4) | 24.5 (6) | 57.3 (1) | 43.3 (3) | 38.8 (5) | 44.8 (2) | 41.4 |
| Other Ontario | 36.5 (3) | 49.0 (1) | 23.6 (6) | 38.9 (2) | 32.9 (4) | 23.9 (5) | 34.1 |
| ROC | 23.9 (3) | 26.5 (2) | 19.1 (5) | 17.7 (6) | 21.7 (4) | 31.3 (1) | 23.4 |

Table 2.2. Per cent distribution of graduates of Ontario medical schools to residency programs in their own school, to programs in other Ontario schools and to training programs in other provinces (ROC). Numbers in parenthesis indicate rank order.

Several postgraduate disciplines, notably internal medicine, serve as intermediary disciplines for entry into subspecialties. This frequently results in a second redistribution of postgraduate students who wish to sub-specialize. In Ontario, this path frequently results in a migration to the University of Toronto which offers significantly more subspecialty training programs than others, and an imbalance of postgraduate training programs compared to undergraduate students across Canadian medical schools. Northern Ontario School od Medicine (NOSM) has demonstrated success in attracting and retaining medical school graduates *in place* with a clear emphasis on local students interested in ultimately practicing family medicine in

⁹ Over 4,800 students and 30 programs participate in the match each year. The student rank orders their first choice of discipline and program; each residency training program similarly rank orders students who have selected their program. The matching algorithm proceeds to match the student and the program to their preferred choice. In 2021, 93.2 per cent of current year Canadian medical graduates were matched to their first choice of discipline, and 57.3 per cent were matched to their specific first choice program.

¹⁰ 2021 R-1 Main Residency Match — first iteration. Table 42: Distribution of matched CMGs from school of graduation to school of residency. CARMS.

¹¹ The largest number of Ontario graduates matched to residency programs outside the Province go to the University of British Columbia, 71 (7.8%) in total.

Northern Ontario. The key is selection and appropriate training. The York University School of Medicine will rigorously apply this learning to its programming.

Based on an analysis of underserved and growing areas, it is evident that North Toronto, York Region and Simcoe/Muskoka represent a critical area of focus. As indicated in Table 2.3, available data for York Region (including South Simcoe) and North Simcoe/Muskoka shows significant population health challenges with important chronic morbidities, and significant gaps in health human resources, notably in numbers of, and access to, primary care providers.¹² Physician density (number of physicians per 100,000 population) is below the Ontario average for all disciplines ranking ninth overall. Notably, most other Ontario Health Regions (OHRs) with higher physician coverage are home to existing medical schools or medical school campuses. As discussed in the next chapter, York University is ideally situated to service this catchment area with a School of Medicine located at the Vaughan Healthcare Centre Precinct in York Region.



¹² A comprehensive mapping system of primary care physician distribution on Ontario's LHIN's and census subdivisions was carried out by ICES and published in 2017. The map used a Geographic Information System analysis to determine physician numbers and accessibility to care by the population as a function of numbers and needs. Data were collected for the regions previously organized by LHINs and census subdivisions in Ontario. Source: Green ME, Gozdrya P, Frymire E, Glazier RH Geographic variation in the distribution and supply comprehensive family physicians in Ontario, 2014/15. Toronto, ON: Institute of Clinical and Evaluative Sciences; 2017.

| Program | York & North Simcoe/Muskoka (MDs/100,000 pop'n) | Ontario (MDs/100,000 pop'n) | | | |
|-------------------|---|--------------------------------|--|--|--|
| FAMILY MEDICINE | 100.19 (7) | 101.89 | | | |
| Other specialties | 27.6 (8) | 41.60 | | | |
| Internal medicine | 23.96 (7) | 33.41 | | | |
| Paediatrics | 7.93 (5) | 11.47 | | | |
| Surgery | 22.09 (8) | 26.64 | | | |
| Lab medicine | 3.00 (9) | 4.34 | | | |
| TOTAL SPECIALTIES | 84.64 (8) | 117.46 | | | |
| TOTAL | 184.83 (9) | 219.35 | | | |

Table 2.3. Physician density in the York and North Simcoe/Muskoka regions compared to Ontario. The data represent physician numbers/100,000 population in each of the former 14 Local Health Integration Networks (LHIN). In this table, the data for the Central LHIN (York region including South Simcoe) and North Simcoe/Muskoka have been combined and rank ordered (in parenthesis) against the remaining 12 LHINs. Data source: https://www.ophrdc.org/ Ontario Physician Health Resources Data Centre. Table 5a. Population per physician in Ontario by LHIN and specialty of practice in 2020. (https://www.ophrdc.org/).



OPTIMIZING POPULATION HEALTH AND HEALTH OUTCOMES

Reviewing health challenges and outcomes shows that the lack of primary care physicians and limitations in the integration of health services play a significant role in the underperformance of our current system in terms of population health and health outcomes.

Our health care system can adapt to achieve better access, improved quality, greater efficiency, and greater equity for society's most vulnerable, including low-income people, the uninsured, Indigenous, and racialized persons.¹³

For several years, the Commonwealth Fund has carried out international studies to identify best-practices about access to care, cost, administrative efficiency and effectiveness, equity, and health care outcomes. In comparisons between 11 different countries (Canada, Australia, France, Germany, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States) Canada and the United States consistently ranked lowest.¹⁴

Issues that account for Canada's poor performance include inequitable access to care. Significant discrepancies were noted in access to care for Indigenous and racialized individuals in Canada compared to the top three ranked countries (Austria, Germany, and Switzerland), and for access to care for lower income patients compared to France, Norway and the United Kingdom.

Respondents from countries with higher rankings report little difficulty in gaining timely access to their primary physician for care, tests or information and advice. Consequently, they have low rates of emergency visits. In Canada, patients cannot easily reach their primary care provider and high numbers of people go to emergency for issues that could be handled by primary care providers, if they were available.

The only substantial area where Canada does comparatively well is in preventive care, ranking fourth behind Sweden, the United States, and the United Kingdom. In health care outcomes, Canada ranks tenth out of the 11 countries, ahead of only the United States. When considering the 11 comparator countries examined by the Commonwealth Fund, all have physician numbers that are well in excess of Canada, and by extension, Ontario. All, except the United States, emphasize family medicine or primary care.

The North Toronto/York Region/South Simcoe and North Simcoe/Muskoka region, represent two very distinct regions of the Province of Ontario and encompass densely urban, suburban and rural; one that has diversity with a significant proportion of the population whose language at home is neither English nor French and the other being predominantly Anglophone with a significant Indigenous and Francophone presence. However, the entire catchment area has

¹³ The Commonwealth Fund. Mission Statement. (https://www.commonwealthfund.org/about-us)

¹⁴ Schneider EC et al Mirror, mirror 2021 Reflecting poorly. Health care in the US compared to other high-income countries. The Commonwealth Fund, August 2021. (https://www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021-reflecting-poorly)

significant population health challenges with important chronic morbidities as well as significant gaps in health human resources, notably in numbers of and access to primary care providers. Table 2.4 provides available data for York Region/South Simcoe. In the case of North Simcoe/Muskoka, about 19% of the population is over 65 years of age and about one third live in a rural area rating 2nd in the province for chronic diseases with 43.5% reporting a chronic condition and 18.3% reporting multiple chronic conditions — obesity, COPD, hypertension, arthritis, asthma and mental health issues. Importantly, the rurality of the region contributes significantly to a higher mortality.

| | North York West | North York Central | Western York | Eastern York | Northern York | South Simcoe | LHIN |
|--|-----------------------|--------------------------|-----------------|-----------------|------------------|-----------------|------|
| Asthma | 16.4 | 11.2 | 15.4 | 14.7 | 17.8 | 17.6 | 14.9 |
| COPD (age 35+) | 10.3 | 7.8 | 6.9 | 6.2 | 11.6 | 9.8 | 8.0 |
| Diabetes (age 30+) | 16.9 | 12.2 | 13.5 | 14.6 | 11.7 | 11.4 | 13.6 |
| High Blood Pressure (age 20+) | 30.5 | 25.3 | 25.7 | 27.1 | 27.1 | 26.3 | 26.8 |
| Mental health & addictions | 9.4 | 7.9 | 8.8 | 6.7 | 9.5 | 10.2 | 8.5 |

Table 2.4. Prevalence of several chronic diseases in areas within our catchment area. Blue fields indicate areas where the prevalence is significantly higher than the prevalence in the LHIN/Health Region as a whole. Data source: Central LHIN Annual Report 2016-2017. Strengthening our Local Health Care System through Collaboration.

Fortunately, the area has a wealth of health care service opportunities that could provide rich supports for the education of future primary care physicians. With an already established and extensive network of partners throughout the area, the York University School of Medicine is poised to make major contributions to improving population health and gains in well-being and health (see Chapter 3).

Chapter 3. Why York University

- 1. York University is an internationally recognized and progressive teaching and research university with a strong foundation in health and health-related programs.
- 2. York is known for its interdisciplinary and interprofessional strength that will underpin the School of Medicine curriculum.
- 3. York has well-established organized research units that will drive evidence-based and innovative curriculum and practices.
- 4. York has an extensive network of partners who are keen to support the York University Medical School including lead partners collaborating on the Vaughan Healthcare Precinct – York Region, City of Vaughan, and Mackenzie Health.
- 5. York can deliver on a high- quality, unique medical curriculum grounded in a community-based, population- health perspective that will facilitate an integrated and distributed approach to health care.

York University is an internationally recognized and progressive teaching and research university, committed to driving positive change. Empowered by a welcoming and diverse community with a uniquely global perspective, we are preparing our students for their longterm careers and personal success. Together, we can make things right for our communities, our planet, and our future.

Innovating education in this way—in service of social responsibility and a more equitable future—has been our mission since day one. We take pride in this job. We are emboldened by it. We also have an extensive foundation of strengths in academic programs, research and innovation, and partnerships upon which to build.

INTERDISCIPLINARY EVIDENCE-DRIVEN HEALTH PROGRAMMING

York University ranks among the top institutions in the world in several health-related **programs** that will provide a foundation for the School of Medicine and create opportunities for relevant shared curriculum across nursing and other health programs, facilitating an **interdisciplinary and interprofessional education** from year one.

York University's strengths in health programs and policy, coupled with our proven history in research, innovation and entrepreneurship include nursing, nursing practitioners, social work, health technology, kinesiology, health policy and management, clinical psychology, disease modelling and health informatics, and neuroscience as well as our strengths in fundamental arts and sciences, business, and law. Plans are also well underway to add rehabilitation sciences.

These extensive resources have all been brought to bear in the development of the York University School of Medicine. With a curriculum devoted to the growth of primary care physicians and an emphasis on the broad determinants of health, population health and meeting people's health needs. York University School of Medicine graduates will work with



graduates of other health disciplines to cultivate an *integrated health team approach* to excellence in patient care.

PROVEN HISTORY IN RESEARCH AND INNOVATION

Implementing a School of Medicine will benefit immensely from York University's world-class health research that spans all 11 Faculties and develops innovative approaches to solving some of the most pressing questions in health care, disease and injury prevention, and the digital delivery of health care. York University hosts six health-specific Organized Research Units (ORUs, also known as centres of excellence) that will inform high-quality, evidencebased medical education at the York University School of Medicine and offer the most recent information technology applications to improve health care delivery and outcomes. Through a project-based curriculum and experiential learning opportunities with York ORUs, our medical students will understand how technology, people, health, and the health care system can interrelate to improve efficiency, quality, and care coordination.

Led by our 37 research Chairs in Health, York University has seen strong growth in knowledgemobilization and technology-transfer in health-related areas with early- and late-stage innovations in mobility technology, including:

- > a virtual reality vestibular related-disease evaluation and rehabilitation tool;
- mobility assessment technology tools to replace clinician manual assessments;
- virtual health communities and e-collaboration tools, particularly in the domain of mental health, chronic disease management, health promotion and health services; and
- Screening and diagnostic tools involving the development of rapid testing technology for detection and analysis of substances in saliva specimens, to name a few.

In the last five years, York Canadian Institutes of Health Research funding alone has doubled to exceed \$11 million in 2020/2021. Furthermore, York University has shown national leadership in research publications on COVID-19 mathematical modelling, with York University researchers ranking first, second and third in the country. When measured by impact, the University's research outputs in the subject areas of nursing and health professions are cited more than any of the top research-intensive universities in Canada including the U15 group of universities with a medical school. Together our health researchers, instructors and School of Medicine students will contribute to a dynamic academic environment in the proposed York University School of Medicine, ensuring that medical education and practice informs research and health research informs medical education and practice.

DEEP NETWORK OF PARTNERS

York University has established collaborative relationships with more than 200 regional and provincial health-related organizations and providers who collaborate with us on research, innovation, public services and who generously provide experiential learning and internships for our students. This includes virtually all acute-care hospitals in the Greater Toronto Area (GTA) as well as a few outside of the GTA.



Hospitals within the general catchment area where we would recruit most heavily include Oak Valley Health (formerly Markham Stouffville Hospital), Mackenzie Health, Southlake Regional Hospital in Newmarket, Royal Victoria Regional Health Centre, Humber River Hospital, North York General Hospital, Sunnybrook, the Centre for Addiction and Mental Health, the University Health Network, and the Scarborough Health Network as well as Muskoka Algonquin Healthcare, Georgian Bay General Hospital and Orillia Soldiers' Memorial Hospital. We also have relationships with a dozen primary care and community health agencies, rehabilitation centres, women's shelters, non-profit care providers and services in the GTA, and multiple long-term care facilities including major providers such as Baycrest Hospital and the long-term care centre operated by Mackenzie Health. Our students also gain experience through local schools.

In addition to collaborating on research projects and lifelong learning initiatives for health professionals, these facilities provide clinical placements for our students in one or more of the following programs: nursing, nurse practitioner, clinical psychology, kinesiology, social work, and health policy and management.

We have long-established relationships with community health centres, including a particularly strong relationship with Black Creek Community Health Centre located immediately adjacent to our Keele Campus. We have partnered on research and community health projects with United Way, the Alzheimer's Society of York Region (ASYR), the Sweet Grass Roots Collective, local schools, York Region Children's Aid Society, Simcoe Muskoka Child Youth and Family Services, and Dnaagdawenmag Binnoojiiyag Child and Family Services, Canadian Tire Jumpstart Charities, Right to Play, Commonwealth Games Canada and communities and agencies in Nunavut, to name a few.

We also have dozens of provincial, national and international partnerships established with government agencies, universities, research leaders, non-profit agencies and businesses across Canada and around the world that will be leveraged to support our new School of Medicine.

We plan to explore the possibility for integrated learning and training experiences for medical students with the full spectrum of health care providers with the Ontario Health Teams that overlap with our area of focus.¹⁵ A School of Medicine in our community will allow us to help train the next generation of health care providers to better understand and address these holistic needs, leading to better health of communities.

¹⁵ For example, Barrie & Area; East York Region & N. Durham, NW Toronto, North York Toronto, Southlake and Western York Region.

LEAD PARTNER AT THE VAUGHAN HEALTHCARE CENTRE PRECINCT

For the past two years, we have worked closely with the City of Vaughan and Mackenzie Health to design a Vaughan Healthcare Centre Precinct, located beside Mackenzie Health's Cortellucci Hospital, that would house relevant programs including the new School of Medicine. Being only 20 minutes away from York University's Keele Campus, on a shared subway line, allows us to leverage the existing Vaughan infrastructure with proximity to a world-leading smart hospital while still being close enough to benefit from all the resources provided by the Keele Campus. The Vaughan Healthcare Centre Precinct will also be connected to a purpose-built York Region Transit bus terminal opening in 2023 to create greater transit linkages across York Region.

Co-locating the School of Medicine at the Vaughan Healthcare Centre Precinct offers a unique opportunity to support an integrated and distributed approach to health where students in various programs share curriculum and are able to work in teams of diverse health care professionals. York Region, the City of Vaughan and Mackenzie Health all support this conceptual proposal as lead partners (see Appendix for Letters of Support):

- The City of Vaughan is a vibrant and prosperous community. Home to nearly 341,000 people, its globally competitive economy includes more than 19,000 businesses, employing approximately 227,000 individuals. As one of the fastest-growing communities in Canada, the City identified a need more than a decade ago to establish a hospital and healthcare district. This led to the establishment of Cortellucci Vaughan Hospital and the surrounding Vaughan Healthcare Centre Precinct lands. The vision for the Vaughan Healthcare Centre Precinct is to be a health innovation destination enhancing the social and economic vitality of Vaughan, while also producing regional and extra-regional economic impact. The Vaughan Healthcare Centre Precinct will drive excellence in health education, research, commercialization and innovation. Collectively, the expertise and physical co-location of York University and Mackenzie Health as well as ventureLAB as a leading innovation hub in the Precinct provides an opportunity to leverage cross-disciplinary expertise and have the Vaughan Healthcare Centre Precinct emerge as a leading medical-innovation node. Not only is there a need for health innovation in the community, Vaughan has access to networks of world-class talent that would support the success of the York University School of Medicine and the Vaughan Healthcare Centre Precinct. Further, Vaughan is in Canada's largest industrial market and is the largest economy in York Region, accounting for 42 per cent of the region's economic output in 2020.
- Mackenzie Health is a dynamic regional health care provider with two hospitals, Cortellucci Vaughan Hospital and Mackenzie Richmond Hill Hospital. Mackenzie Health has 682 beds, in addition to 112 beds at its Reactivation Care Centre location and 170 beds at its long-term care home. It also provides a number of clinical and social service programs at its six community-based locations. Mackenzie Health serves a population of more than half a million people across Vaughan, Richmond Hill and King which are high growth



communities.¹⁶ A School of Medicine co-located in the Vaughan Healthcare Centre Precinct, adjacent to Cortellucci Vaughan Hospital—a community hospital—would offer medical students early exposure to sophisticated technology and hands-on training in state-of-theart, modern facilities. Students would have access to Mackenzie Health's clinical teaching laboratory which is used by physicians, nurses, and other integrated health team members to receive instructional and hands-on training in new clinical and technical skills, such as how to use cardiac, telemetry and neurologic equipment. The clinical teaching laboratory also includes videoconferencing and digital file sharing capabilities to allow clinicians to consult on complex cases across our two hospital sites, at our community-based locations and with specialists at other health care centres. Students would have access to two simulation laboratories which are available at Cortellucci Vaughan Hospital and used for mock procedures and skills training sessions such as rehearsing team responses to a cardiac arrest or how to intubate a newborn. The laboratories are connected by a control room that doubles as an observatory, the labs offer a simulated hospital environment where clinicians can safely practice their diagnostic, surgical and problem-solving techniques, and procedures on high-tech mannequins before applying them in a live hospital setting. Mackenzie Health is one of the co-chairs for the Western York Region Ontario Health Team and their first area of focus is developing integrated care programming for medically and socially complex seniors with cognitive, physical and/or functional limitations, and mental health and addiction issues.

The Regional Municipality of York stretches north from Toronto to Lake Simcoe. York Region's diversity is evident in our nine local municipalities, geography, economic development and population of over 1.2 million. It is one of Canada's fastest growing regions. The Region is home to over 300 life sciences and health tech companies, four world-class hospitals and several hospital-affiliated innovation programs. The York University School of Medicine will be the vehicle that enables researchers, students, entrepreneurs and business leaders to collaborate on innovative solutions. Having the School embedded in the Vaughan Healthcare Centre Precinct, in close proximity to Canada's first "smart hospital", Cortellucci Vaughan, will also provide an anchor to attract more life sciences-oriented businesss to the Region and the Greater Toronto Hamilton Area.



¹⁶ Mackenzie Health is world renowned for its health care technology and its application to improve patient outcomes and deliver a positive patient experience as corroborated by the 2020 College of Healthcare Information Management Executives (CHIME) Digital Health Most Wired recognition (the only Canadian recipient to be recognized that year).

Chapter 4. The York University School of Medicine Strategic Design Imperatives

- 1. The growing challenges and ever-changing demands of health care need a new strategic design synthesis.
- 2. That is why we are creating a School of Medicine that is:
 - Community-Based
 - Committed to global impact
 - Powered by design
 - Connected to all of life
- 3. To accomplish these ambitious goals, we have drafted five guiding principles.

A fundamentally unique and impactful medical educational institution is needed to provide the curricular, technological, social, and experiential design skills in primary care to address the increasing complexities of health care. York University's School of Medicine is being created with four design imperatives that give rise to five guiding principles that will help Ontario stay healthy.

WE ARE DESIGNING A COMMUNITY-BASED MEDICAL SCHOOL

The York University School of Medicine will take responsibility for improving the health of our communities. It is a School that will live in the community, with a curricular experience and culture intentionally designed to produce primary care physicians who are highly compassionate and competent in meeting the health, disease and wellness needs of people where they live.

The School will center learning, practical preparation, and research in service of the communities around it. We will prioritize care in the context of family, community, and social infrastructure.

Our students will build their clinical knowledge and understanding by learning experientially in community acute and primary health care settings, including hospitals, in-home visits, community centers, social service agencies, paramedic services, long-term care facilities and other healthcare hubs. They will learn to be team-based physicians learning alongside and contributing to an integrated health team of physicians, nurses, nurse practitioners, psychologists, health information specialists and community partners. As a team, they will leverage data and community assets to deliver a shared agenda that improves quality of life for the patient, and controls costs for the community.

York University has a proven track record with team-based and integrated health care — in fact, our researchers are cited on this topic more than any other of the top research-intensive universities in Canada, including the U15 group of universities with a medical school. This expertise applied to our curriculum will favourably position our graduates to contribute to, and help expand the impact of, Ontario Health Teams.

The Future York University School of Medicine

WE ARE DESIGNING A MEDICAL SCHOOL COMMITTED TO GLOBAL IMPACT

The York University School of Medicine is committed to understanding how global forces can shape our local realities, and vice versa. We will produce physicians who are leaders in population health, with a global mindset and know-how that enables them to provide culturally competent care to newcomers from around the world, and to make the connections between local and global health improvement.

By designing a networked curriculum to teach the applied health expertise being developed around the world, our School will produce the primary care physicians we need for our geographic catchment area, especially those underserved communities lacking proximate access to a full-scale hospital. Simultaneously, our School will inspire a new generation of students, donors, collaborators, and international partners to join forces and work together across borders and boundaries to solve major challenges including the global shortage of health care human resources.

Applying this global mindset to the York University School of Medicine, coupled with incommunity learning labs that serve the many different diasporic communities of the region, adds a robust understanding of population health to our physicians' toolbox. It will teach them how to navigate social and cultural differences in clinical practice, and to see opportunities for social innovations that can produce better and more equitable health outcomes.

WE ARE CREATING A MEDICAL SCHOOL POWERED BY DESIGN

The York University School of Medicine will produce physicians that think like designers, whose clinical mastery is matched with mastery of the complex technologies, digital platforms, products, and innovations that form the practice of 21st century health care.

The future of health care will be an expert practice of synthesis—of new knowledge, processes, technologies, and products—and of design. A practice demanding a new kind of generalist, a designer of preventive and primary care, the single most important medical specialist, bringing to bear an expert ability to see and navigate all the possibilities and resources in a way that was not possible before.

Accordingly, our curriculum will be both inter- and multi-disciplinary. It will integrate contextualized knowledge from relevant programs from across York University, from the Schools of Nursing, Kinesiology, and Health Policy and Management, to the Schools of Science, Engineering and the Arts. Our students will develop the skills to be whole-brain, systems thinkers. They will be motivated by making things work and will have the courage to do things differently.

The unique structure of our program is a mirror reflection of their potential as primary care physicians of the future. A clinician who can navigate the processes, policies and underlying determinants of health is far more valuable and effective in driving positive health outcomes, than one who can simply diagnose and refer to specialists.



WE ARE DESIGNING A SCHOOL OF MEDICINE CONNECTED TO ALL OF LIFE

The York University School of Medicine will produce primary care physicians that fully embrace the connection between human and environmental health in the delivery of everyday primary care.

In a time of growing awareness of climate change and the importance of the environment, everything we do must be designed as a dynamic, living system. At the York University School of Medicine, our curriculum will draw on principles of seven generation stewardship practiced in many Indigenous communities. Specifically, our students will see the health of the individual in the context of the community and in the context of a healthy environment and the ecological flourishing of all of life. This holistic perspective of health and its complex flows and interconnectedness will be instrumental to student learning and form the basis of their practice.

Stewardship starts with building dynamic, conscious clinicians who practice what they preach. Accordingly, we will ensure the culture of our medical school prioritizes the health of our healthcare professionals, including integration of resources such as wellness coaches to help address and prevent mental health issues among our students. Simply put, our program teaches our students to be both practitioners and teachers of health — so that they in turn can empower and inspire patients and communities to build a healthier world from the inside out.



OUR GUIDING PRINCIPLES

To accomplish these ambitious goals, to produce a new mindset and a new approach to the challenges of health, requires educational innovation. Accordingly, we are developing the York University School of Medicine on five guiding principles:

- 1. We will integrate seamless care and movement of patients in community from home to hospital, hospice, respite and recovery and rehabilitation care—and back to home with appropriate home-based care and support for better health and wellness as needed.
- 2. We will train primary health care doctors as part of a network of integrated health teams that focus on patient health, wellness and disease care across ages and vulnerabilities, leveraging existing community health hubs throughout the region including the Ontario Health Teams.
- 3. We will innovate and maximize digital platforms and tools (including mobile and integrated health management and informatics systems, the Internet of Things and SMART Technology).
- 4. We will use a critical problem-solving approach to ever-greater effectiveness and equity in all aspects of clinical public health and wellness, and disease and emergency care and support.
- 5. We will actively seek to improve the health functionality of our cities and communities, the health of our environment and the integrated effectiveness of our health and wellness system.

Graduates of the York University School of Medicine will take responsibility for the delivery of wrap-around primary care in the communities they serve. They will be:

- > Trained to work in integrated health teams, optimizing resources, improving the experience and outcomes for patients, and reducing costs.
- > Trained to consider the patient, the family, the community, and the environment we live, work and play in.
- Trained to think as critical problem-solving designers, addressing problems in real time, leveraging new digital tools and approaches to care.



Chapter 5. The Undergraduate Medical Curriculum

The conceptual model upon which the curriculum will be developed includes the following features:

- > An optional two-year pre-med program to provide a pipeline for enhancing access to the School of Medicine.
- > A three-year primary care and population health focused curriculum.
- Supporting an integrated, value-based and team-based health care approach supported by distributed clinical learning sites across our community based learning network

York University's vision is to provide a broad sociodemographic of students with access to a high-quality education at a research-intensive university that is committed to enhancing the well-being of the communities we serve. This vision informs everything we do, and the School of Medicine will be no exception. A comprehensive curriculum for our medical program is in development with support from our Advisory Group and input from our community stakeholders. This chapter highlights key features of the conceptual model informing that curriculum.

AN OPTIONAL TWO-YEAR PRE-MED PROGRAM TO ENHANCE ACCESS TO THE SCHOOL OF MEDICINE

Approximately one quarter of York University students are the first in their family to attend university. To enhance access to our School of Medicine especially for students who may have not anticipated this career path, York University will be offering a two-year pre-med pipeline program from which students will be able to apply directly to our School of Medicine (rather than the typical four-years required by most medical schools). While students may apply from any relevant program after two years, the York Pre-Med program is designed to provide students with relevant background in the biological sciences, population health (including the social determinants of health, public and environmental health), social sciences, and clinical and population epidemiology. Students interested in other health programs such as nursing and rehabilitation sciences may also elect to enroll so the two-year program will act as a pathway to multiple health-related degrees.



THE SCHOOL OF MEDICINE CURRICULUM

The York University School of Medicine program is designed to produce graduates who will pursue postgraduate clinical training in primary care and who will have the foundational skills needed for 21st century health care. Key features of the program are outlined below:

- 1. York University School of Medicine's mission is to prepare and graduate generalist primary care doctors, who meet the health needs of their patients at the highest level of clinical competence, while understanding and participating in efforts to improve population health.
- 2. York University's School of Medicine will adopt a three-year primary care and population heath focused curriculum preparing students to enter their post-graduate residency as early as five years after entering university.
- 3. As well as excellence in clinical, patient-centered primary health care, the principles of population health—including the societal determinants of health across the life cycle, public and environmental health—will be a cornerstone of the undergraduate experience, as will inter-professional education. This will provide students with a broader understanding of the social and economic determinants of health and well-being culminating in a synergy of critical problem-solving knowledge, judgement and skills that will keep people healthier, living in their homes, remaining active in the economy, reducing the need for emergency and acute care in hospitals and, over time, improving control of chronic disorders.
- 4. The York University School of Medicine will use a network of clinical learning sites across the community, that will include the Vaughan Healthcare Centre Precinct and other learning centres embedded in or adjacent to clinical service centres, (i.e. regional hospitals and their ambulant and in-patient services, as well as primary care settings, community healthcare centres and social services).¹⁷ These learning centres will host students from a number of York University's professional health disciplines (e.g. medicine, nursing, nurse practitioner, clinical psychology) facilitating interprofessional and interdisciplinary learning.
- 5. The patient-centric network of integrated health teams will be supported using highperforming digital technology that enables deep learning, efficient and effective communication of health information among providers, patient access and health analytics.



¹⁷ Over the last 15 years, various health care systems across the world have embraced the Value Based Health Care (VBHC) agenda with significant benefit and lessons learned. We will undertake a rigorous review of learnings to-date to facilitate a VBHC strategy for our decentralized community-based network of partners. For example, a patient-focused, value-based care delivery environment requires setting the right conditions (e.g. for health system and patient care integration; data access and privacy, etc.). Continuous IT improvements to ensure the availability of patient care and outcome data across the full care cycle and instituting a value-based culture among providers are keys to driving value-based health care implementation.

PRE-CLERKSHIP

In the pre-clerkship phase of the program, students learn in an integrated, small-group problem case-based learning format that combines relevant structured, laboratory and simulated clinical learning with exposure to real-life community health, disease and wellness settings. The curriculum will provide a deep understanding of health, disease and wellness as well as a longitudinal population health perspective. In addition to the profession-specific curriculum, it will actively enable inter-professional and interdisciplinary learning among integrated health teams.

Students will be exposed to hospital and community-based clinical environments with supervision by preceptors from the York University School of Medicine and other health professionals. Through problem and case-based learning, they will apply basic principles of evidence-based clinical medicine and will actively participate in at least one relevant supervised clinical research-based analysis for publication.

CLERKSHIP

As students gain more competencies, they shift to the clinical clerkship phase of the undergraduate curriculum (i.e. approximately years two and three) where they will continue to gain greater competencies in family medicine, internal medicine and geriatrics, paediatrics, psychiatry, obstetrics and gynecology, and surgery. Importantly, students in our program will have core and elective rotations both at hospitals and in community learning hubs.

This competency-based learning approach allows the students to develop the knowledge and clinical skills they need to enter postgraduate training upon graduation. A critical feature of the clinical learning phase is the continued and growing competence in working as a core member in an integrated and distributed model with other health professionals committed to community based primary health care and population health.

COMPREHENSIVE PRIMARY CARE

Comprehensive primary care provides whole care and continuous care — as opposed to episodic care — to keep people, their families and their community, healthy and productive.¹⁸ Examples of comprehensive care such as Intermountain Care and PACE, the Program for All-inclusive Elderly Care, have shown proof of concept with lower acute care costs and improved attainment of markers of chronic disease.¹⁹ An effective comprehensive primary care team would include primary care physicians, nurses, nurse practitioners and managers. An extended team would add community health workers or navigators, clinical psychologists, pharmacists,

¹⁸ National Academy of Science, Engineering, and Medicine, 2021. Implementing high-quality primary care: rebuilding the foundation of health care. Washington, DC: The National Academies Press. (https://doi.org/10.17226/25983).

¹⁹ Mjåset C et al (2020). Value-based health care (VBHC) in four different health care systems. https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0530. Value-based healthcare: a global assessment. The Economist Intelligence Unit Ltd. Porter ME, Teisberg EO (2006).Redefining health care: creating value-based competition on results. Boston: Harvard Business School Press; 2006. (https://vbhcglobalassessment.ein.com).

dental hygienists and social workers.²⁰ The Vaughan Healthcare Centre Precinct will facilitate the development of a pan-professional health education initiative graduating primary care practitioners and other healthcare professionals focused on improving the health and well-being of the population wellness and improve population health.

COMMUNITY-BASED LEARNING NETWORK

Because the community is our campus, a decentralized community-based medical education model will be used in the York University School of Medicine. This sees the community as a network wherein the student is appropriately supported in their highly-focused curricular learning throughout their undergraduate pre-clerkship and clerkship clinical placements in real-world community (see Figure 4.1).

The recently developed Ontario Health Teams (OHTs) who support regional systems of care and incorporate components of the geography of care provide an opportunity to connect with the broader health care system centred around patients, facilities and caregivers. Their objective is to facilitate patient's navigation of the system and transition between providers. The providers include hospitals, care givers, and home and community care providers, all of which work as one coordinated patient-centered team.²¹ These hospital-Ontario Health Team partnerships represent an ideal opportunity for placement of York University School of Medicine students and those from other health disciplines. Discussions are underway with the relevant Ontario Health Teams and regional community hospitals including Mackenzie Health, as a lead partner in the Vaughan Healthcare Centre Precinct, to support an integrated, distributed network of comprehensive primary care learning sites throughout the catchment area.

HIGH FUNCTIONING DIGITAL HEALTH STRATEGIES

The future distributed health care system will depend increasingly on high functioning digital health strategies for information sharing, patient scheduling, and the capacity to capture and analyze system wide health information data. Additionally, digital technology will enhance deep learning on the part of students as they access bibliometrics and research information, and for patients as they access their own health information and health providers. Technology also allows for improved development of clinical skills through simulations.

The impact is already evident in "smart" hospitals such as Cortellucci Vaughan. Digital technologies are fundamentally altering not only the tools used by physicians but the location of care. Some specific examples include the assessment of patient and population need, and in-reach information capture; how patients can access their files and communicate directly



²⁰ Meyers D et al J Gen Intern Med 2018,33:1774-1779.

²¹ Primary care, secondary care (including inpatient and ambulatory medical and surgical services, home care, community support services, mental health and addiction services, health promotion and disease prevention services, rehabilitation and complex care, palliative care (including hospice care), residential care and short-term transitional care, long-term care, emergency health services, laboratory and diagnostic services, midwifery, and other community and social services as required.

with their providers; the management of information capture or data for quality measurement and improvement. While it is critical to collect data for health analytics and quality improvement purposes to improve outcomes, it is more important to develop equity between people and the care team by allowing them to access their own data, on an ongoing basis and to communicate directly with the care team using tools such as email, text, and telehealth, etc. This knowledge and skills set will be a fundamental component of the York University School of Medicine curriculum.



Figure 4.1. The decentralized model of community based medical education in the York University School of Medicine (York University; represented by York U logo). York University community-based learning hubs (YLH: red ovals) are placed in the community aligned with hospitals (H: blue squares) and community centres (CC: blue circles) that are attached to hospitals or are freestanding. Primary health care service sites (PHCSS: grey circles) represent local communities of practice, long term care centres, community health centres, crisis centres, rehabilitation centres, or social services as used in, for example, Ontario Health Teams. All sites are linked to each other via high-speed telecommunication linkages and will maximize digital platforms, tools and health informatics that optimize clinical, social and other relevant services for integrated patient care and support.



INTERDISCIPLINARY AND INTER-PROFESSIONAL LEARNING

An important distinguishing feature of the York University School of Medicine curriculum is our design for integrating interdisciplinary and inter-professional learning opportunities. This experience will begin before formal entry to the first year of the curriculum when students will spend six weeks in the community under the guidance of regional Community Care Access personnel.

Medical students will come together with students in other health programs such as nursing and nurse practitioner programs to participate in shared curriculum. They will begin these learning interactions during their exposure to the component of population health courses and in small group and simulation learning sessions in the pre-clerkship phase. As an example, the curriculum might offer a longitudinal lecture series that will feature York University experts and invited national and international lecturers to consider issues central to wellness and population health. Topics might include the impact of climate change on health, factors that influence mobility of populations under stress, global health challenges and obligations, Indigenous health, reconciliation and health, the impact of error in healthcare, inequities in health and healthcare outcomes, health and healthcare in vulnerable populations, refugee health issues, disabilities, and optimal health.

During the clerkship years, students will have the opportunity to work in interdisciplinary and inter-professional teams in clinical settings. These will occur in community- and institutional-based clinical environments under the supervision of School of Medicine and other community-based preceptors.

POPULATION-HEALTH CURRICULUM

In recent years, population health has shifted to understand how the determinants of health form a complex system which requires systems-thinking to fully understand causes, effects, and opportunities for intervention. The health of a population, and the individuals within it, are a product of economic and environmental conditions as well as interactions or lack of interactions between the individuals, agencies, organizations, and networks within the population. In short, it is about how all these factors are connected (or not connected) and how they interact (or not). For example, how connected an individual feels to their community and who they are connected with can impact their likelihood of smoking (and quitting), becoming obese (or losing weight), etc. The effect of connection has been demonstrated to occur over three degrees of connections (the friends of your friends' friends can influence various health-related choices and behaviours).²² This is why it is imperative that students have more immersive experiences in the context within which their patients live when assessing risks, diagnosing conditions, selecting combinations of treatments, and managing follow up. To be

²² c.f., Christaskis, N.A., Fowler, JH. (2009) Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives. NY: Little, Brown and Company.

truly contemporary, medical education needs to include an understanding of social systems and systems biology.

The impact of this overall education approach—learning and experiential--will culminate in a synergy in the development of knowledge, critical thinking, judgement, and clinical skills that will keep people healthier, living in their homes, remaining active in the economy, reducing the need for emergency and acute care in hospitals and, over time, improving control of chronic disorders.



Chapter 6. Our Students

- 1. We will recruit heavily from our local catchment area throughout North Toronto, York Region, and Simcoe/Muskoka.
- 2. Our students will be diverse reflecting York University and our catchment area.
- 3. Our students will be committed to driving positive change.

Enrolment in medical schools in North America is highly competitive. In the U.S., enrolment is heavily guided by quantitative and validated assessments of scholarship, e.g. MCATs and GPAs. Both applicants and matriculants have high MCAT and GPA scores with matriculants having slightly higher scores than applicants.

Between 2012-2013 and 2021-2022, 40.6 per cent of applicants were admitted to medical schools in the U.S.²³ In Canada, by contrast, only 12 per cent of applicants were successful in gaining admission to Ontario medical schools in 2019-2020²⁴. The success rate for admission to Ontario medical schools is very low, varying from 2.1 per cent at Queen's to 8.1 per cent at Toronto²⁵.

Evidence of scholarship is clear among entrants to Ontario medical schools; the average GPA is 3.86 out of 4.0. In contrast, the average GPA for matriculants in U.S. medical schools was 3.74 in 2021-22.²⁶

In sum, the evidence for admission to Ontario medical schools points to two issues. Firstly, the applicant pool is extremely strong as judged by average GPAs of those who succeed in gaining entry. And secondly, the success rate for entry is very low, compared to the success rate in the U.S. Taken together, these factors suggest limited access to medical education in Ontario, i.e. insufficient numbers of training spots for highly qualified applicants.

²³ AAMC 2021 Facts: Applicants and matriculants Data. Table A-16. MCAT Scores and GPAs for applicants and matriculants to US medical schools, 2018-2019 through 2021-2022. (https://www.aamc.org/data-reports/students-residents/interactive-data/2021-facts-applicants-and-matriculants-data).

²⁴ Admission requirements of Canadian Faculties of Medicine. Application in 2021 for admission in 2022. Association of Faculties of Medicine (https://afmc.ca/news-publications/admission-requirements? ga=2.95594140.186946202.1639444676-1838459183.1639444676).

²⁵ Specific admission success rates for Ontario's six medical schools are: Queen's University 2.1%; NOSM 3.1%; Ottawa 3.6%; McMaster 4.6%% Western 7.0%; Toronto 8.1%. Data source

²⁶ AAMC 2021 Facts: Applicants and matriculants Data. Table A-22. MCAT Scores and GPAs for Matriculants to U.S. MD-Granting Medical Schools by Sex, 2018-2020 through 2021-2022. (https://www.aamc.org/data-reports/students-residents/interactive-data/2021-facts-applicants-and-matriculants-data).

WHERE DO ONTARIO MEDICAL STUDENTS COME FROM?

The majority (88.4 per cent) of students entering medical school in Ontario are residents of Ontario.²⁷ British Columbia, Alberta and Quebec account for 3.8 per cent, 3.1 per cent and 2.5 per cent of admissions, respectively. This picture is mirrored across the country where fully 87.7 per cent of students entering medical school come from the province in which the medical school is located. The majority of undergraduate students in Ontario medical schools are women.²⁸

| | 1st year of study (% women) | Total over four years (% women) |
|----------|-----------------------------|---------------------------------|
| Ottawa | 59.0 | 56.0 |
| Queen's | 67.3 | 59.4 |
| Toronto | 58.2 | 55.8 |
| McMaster | 53.0 | 47.7 |
| Western | 50.3 | 42.1 |
| NOSM | 71.2 | 65.9 |
| Mean | 57.8 | 53.1 |

Table 6.1. Distribution of gender of medical students admitted to Ontario medical schools in 2020/21. Data source AFMC.

All Ontario medical schools have admissions policies that prioritize students with specific backgrounds. For example, all Ontario schools have entry programs that promote the admission of Indigenous, Métis and Inuit peoples. The University of Toronto has a specific program that prioritizes students who self-identify as Black — Black African, Black Caribbean, Black North American. Two medical schools, Western and NOSM specifically promote the admission of students from rural backgrounds (Western) and into rural generalist education streams (NOSM). Four of the six schools have specific programs for the admission of students from the Canadian Forces. Ottawa, in addition, has a specific admissions stream and education program for training in the French language during the four undergraduate medical years, together with residency training programs in generalist disciplines. Ottawa also has an above

²⁷ Table G-17. Enrolment in year one for the first time in Canadian Faculties of Medicine by residence of province. 2020/21. Canadian Medical Education Statistics.

²⁸ Per cent distribution by sex of total enrolment in Canadian Faculties of Medicine by year of study and sex 2020/21. AFMC undergraduate medical education enrolment (MD Program) study CMES2020-SectionG_EN.pdf (https://afmc.ca/news-publications/cmes?_ga=2.2532464.1102305227.1639865297-1866555324.1639865297)

provincial quota for the education of francophone students from other provinces living in minority language situation.

The specific details of the admissions procedures and requirements of all Ontario medical schools are available at the Ontario Medical School Application Service²⁹ and the Association of Faculties of Medicine of Canada websites¹.

| School | GPA | MCAT | Interview | CASPer |
|----------|------|--------------------|-------------|--------|
| Ottawa | 3.85 | no | MMI + panel | yes |
| Queen's | 3.81 | yes | MMI + panel | yes |
| Toronto | 3.96 | yes | MMI + panel | no |
| McMaster | 3.87 | critical reasoning | MMI | yes |
| NOSM | 3.8 | no | MMI + panel | no |
| Western | 3.87 | yes | MMI + panel | no |

The admission requirements are summarized in Table 6.2 below:

Table 6.2. Admission requirements of Ontario medical schools in 2020/21. Data source: Ontario Medical School Application Service.

MCATs are used by only three schools -- McMaster uses only the section on critical analysis and reasoning skills (CARS). All Ontario skills use the MMI, a standardized innovation pioneered at McMaster and used by most Canadian medical schools. Three schools - Ottawa, Queen's and McMaster - use CASPer, a pre-admissions computer based assessment of noncognitive skills such as empathy, motivation, communication, and ethics. Scholastic achievement and panel interviews are important tools for determining admission ranking.

²⁹ https://www.ouac.on.ca/omsas/

ADMISSION TO THE YORK UNIVERSITY SCHOOL OF MEDICINE

Especially given the aim of addressing the demand for family medical doctors and other primary care practitioners in our catchment area, the York University School of Medicine will take steps to attract local applicants. The unique curriculum offered at the Vaughan Healthcare Centre Precinct beside Mackenzie Health will serve as a magnet for producing homegrown primary care physicians learning and working with integrated health teams in their communities, driving innovation and improving the human condition along the continuum of care.

Students will be recruited through specific pipeline programs and a rigorous community supported selection process that identifies students who reflect and are committed to serving the population in the catchment area served by the York University School of Medicine.

York University will develop pre-admission pipeline admissions procedures to offer the opportunity to study medicine—and other health disciplines—based on opportunity, their likelihood of success, and their potential to make a significant difference to the lives of people they will serve as physicians and members of clinical teams.

Students are attracted to York University because of the commitment to drive positive change, which is at the core of everything we do, including our new School of Medicine. Our students will have demonstrated community service. They will be creative and innovative thinkers and hard workers with an entrepreneurial spark. They are reliable, resourceful and resilient. And above all, their personal integrity is their North Star.



Chapter 7. An Affordable Plan that Delivers Results for the Province

The business plan for the York University School of Medicine will be developed to demonstrate an affordable solution that addresses the compelling need for a new kind of medical school for Ontario. The key hallmarks underpinning York's business plan for the new School of Medicine include:

- Adopting an innovative approach to the design and delivery of our academic program.
- Leveraging existing assets, partnerships, and relationships to support this unique, once in a generation opportunity.
- Applying best practices learned from York University's past successful delivery of transformational projects that support the communities we serve.

THE ENROLMENT PLAN

The key starting point for the business plan is the proposed enrolment plan for the new School. The table below provides a summary of the enrolment plan, which is based on a three-year program. It shows an initial cohort of 60 students in year one, growing to an entry cohort of 120 by year five and a full "steady state" enrolment of 360 students by year seven.

| | | | | - | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Fall Head Counts | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
| 1st Year (Intake) | 60 | 60 | 60 | 60 | 120 | 120 | 120 | 120 | 120 | 120 |
| 2nd Year Students | | 60 | 60 | 60 | 60 | 120 | 120 | 120 | 120 | 120 |
| 3rd Year Students | | | 60 | 60 | 60 | 60 | 120 | 120 | 120 | 120 |
| Total | 60 | 120 | 180 | 180 | 240 | 300 | 360 | 360 | 360 | 360 |

York University School of Medicine - MD Program

Table 7.1 York University School of Medicine Enrolment Plan

The most important aspect of this proposed plan is the resulting stream of graduates it will produce and the impact they will have. Figure 7.1 above shows the anticipated number of practice-ready physicians, including both the number of family physicians, as well as other generalist specialties. By year 20, the York University School of Medicine will produce 1,548 practice-ready physicians to respond to the critical shortfall that already exists and that will continue to grow if not addressed. Expressed in terms of community outcomes–840 of these graduates would be family physicians with two years post-graduate training, providing much-needed care for about 1.6 million people.



Figure 7.1 Cumulative Number of Practice-Ready Physicians

FUNDING MODEL PRINCIPLES FOR THE BUSINESS PLAN

The business plan for the School of Medicine will be developed to work within the funding levels and resources that currently are in place for medical schools in Ontario. This commitment will be achieved through innovative program design and delivery, effectively leveraging our existing programs and resources, and working collaboratively with community partners and all levels of government.

The business plan will also recognize and work within the parameters outlined in the July 2020 Major Capacity Expansion Framework. York University has a clear understanding of that framework, and indeed is currently delivering its Markham Campus project, the first capacity expansion program to be approved under that framework, and which provides almost \$400 million in value to Ontario and its future students while managing cost contributions from the Province. The same focus on innovation, leveraging assets and partnerships, and creating cost efficiencies--which were the compelling elements of the Markham Campus initiative--is being applied to the development of the business plan for the York University School of Medicine

The Future York University School of Medicine

INNOVATION AND LEVERAGE IN PROGRAM DESIGN AND DELIVERY

Innovation in the design and delivery of the program will be a distinguishing element of the School of Medicine that will drive cost effectiveness while focusing on delivering the outcomes that are necessary to address the critical health and health care needs of the communities we serve, now and into the future.

A number of the important areas of innovation and leverage in program design and delivery include:

- Leveraging strong health and technology programs that York University can readily incorporate into the design of the innovative new School of Medicine curriculum, and within existing resource levels will keep our business model cost-effective while maintaining high quality.
- > Working with Mackenzie Health/Cortellucci Vaughan Hospital to leverage their industryleading IT infrastructure, as well as with other strategic partners, enhances our ability to develop a system-wide education delivery using novel platforms for deep learning and data capture.
- Using technology in conjunction with the rich data that exists in the design, delivery and evaluation of the curriculum allows for cost effective synchronous and asynchronous access to learning materials in a distributed and primary care model of health care delivery. By focusing on distributed learning, we can leverage existing space and reduce new space requirements.
- Sharing resources, space infrastructure and human capital with our extended network of partners, including the Ontario Health Teams, will facilitate robust experiential learning and clinical placements in hospitals and the community offering novel, world-leading comprehensive care in areas of greatest need.
- Leveraging existing clinical and interprofessional leaders in a preceptor model to educate future primary care and other generalist physicians who will understand the health and social needs of the population and improve health outcomes across the region.



INNOVATION AND LEVERAGE IN INFRASTRUCTURE DESIGN AND DELIVERY

As noted earlier, a critical area of focus in the School of Medicine will be leveraging our strong government, community, and private sector partners in delivering the required capital infrastructure necessary to support our business plan. The business plan will be able to take advantage of a number of important elements, including:

a. <u>A compelling location</u>

The Vaughan Healthcare Centre Precinct is being developed through a partnership between the City of Vaughan, Mackenzie Health, ventureLAB, and York University, with the goal of improving the health and health care of citizens in our catchment area, as well as Ontario more broadly, by graduating the next generation of primary care physicians and other healthcare professionals who have been trained to work in teams in an integrated and distributed healthcare system.

The Vaughan Healthcare Centre Precinct is already identified by the Province as a regional health care hub, and this 82 acre site, anchored by the \$1.7 billion Cortellucci Vaughan Hospital, provides an ideal site for the York University School of Medicine. The Vaughan Healthcare Centre Precinct location also creates a significant opportunity to leverage shared infrastructure needs and ancillary support services with public and private sector partners considerably reducing the capital costs associated with establishing the School of Medicine.

b. An extensive asset base

In addition to leveraging the strong health and technology programs that exist at York University in designing and delivering the curriculum of the School of Medicine, the business plan will leverage the extensive infrastructure that currently exists on York University's Keele Campus, and which is currently under construction at the Markham Campus. By leveraging the extensive teaching, laboratory, administrative and other support infrastructure (including student housing) that currently exists, any incremental capital investment can be minimized to focus on building only what is needed.

Building on the compelling location of the School in the Vaughan Healthcare Centre Precinct, the recent approval by York University of a new Campus Vision and Strategy for its Keele Campus also creates an unprecedented opportunity to advance its teaching and research mission through the strategic development of its lands in the coming decades. A significant element of this vision is the emergence of a new "innovation district" wherein we will work with public and private sector partners to collaborate on innovation, research, commercialization, and entrepreneurship developments. The new School of Medicine would provide the critical mass and impetus needed to trigger such collaborations, and in turn would benefit and be enhanced from these opportunities.

The Future York University School of Medicine



c. <u>A successful track record in innovative project delivery</u>

The business plan will also leverage York University's experience in working effectively with all levels of government, public and private sector partners, and the communities we serve to successfully deliver transformational projects in the most affordable and cost-effective manner possible.

Over the past 15 years, we have been directly involved in the delivery of many projects of provincial significance, including:

- The Archives of Ontario facility (2006);
- The Pan-Am Games Athletics facility (2015);
- The Toronto-York-Spadina Subway Expansion (2017);
- The York University Markham Campus (2023)

These collaborations set York University apart – as an institution that is prepared to and capable of working effectively with a broad range of partners to successfully deliver projects in innovative and cost-effective ways.



Chapter 8. Measuring the Impact of the York University School of Medicine

The York University School of Medicine will:

- 1. Address the urgent need for primary care physicians in Ontario, especially in our underserved catchment area.
- 2. Provide a unique curriculum producing graduates trained in a community-based, integrated, and distributed healthcare model.
- 3. Enhance career opportunities for talented people in the catchment area, while diversifying the medical profession so that it better reflects the community it serves.
- 4. Contribute significantly to the socioeconomic well-being of the Province of Ontario.

York University's decision to invest in the development of a new medical school has been decades in the making. This current conceptual proposal goes well beyond the original thinking as we have continued to grow in the meantime, and the new School of Medicine represents our ability to coalesce our many strengths around a new vision and a new strategy to improve health and health care that meet York University's high bar for social accountability.

The Province and people of Ontario face a shortage of physicians who can effectively deliver primary care that meets people and patients where they are and when they need it, physicians who are at the ready to practice as part of an integrated, interprofessional team, who will take the lead in advancing chronic disease management and prevention, and improve population health for all.

Our program has been designed to align specifically with the current and projected health care and medical talent needs of Ontario. We will be actively recruiting a diverse group of students who are interested in primary care. The curriculum and residency program will provide enhanced exposure to primary care and generalist specialty disciplines to better prepare students in these areas. It is expected that graduates will move on to postgraduate residency studies in the ratio of 50 per cent two-year family medicine, 20 per cent three-year family medicine, e.g. palliative care and care of the elderly and 30 per cent four to five year generalist specialty disciplines, e.g. general internal medicine, hospitalists, paediatrics, psychiatry and obstetrics and gynecology, by virtue of their educational and clinical exposure to primary care and generalist specialty disciplines.

The York University School of Medicine will make every effort to recruit these newly trained physicians back to serve in the catchment area and to add to the School's leadership, educational and knowledge creation portfolios. As a result, after 20 years from the entry of the charter class, there will be 1,548 practice-ready physicians, including 840 family physicians with two years post-graduate training, another 312 family physicians with three years of post-



graduate training and 396 generalist specialist physicians with five years of post-graduate training.

As of 2020, the latest date of available data, there were 1,879 family physicians (both two year and three-year trained family physicians) in practice in the former North York LHIN. The contribution of the York University School of Medicine after 20 years of training medical students and residents will be equivalent to an additional 64 per cent of the current family physician stock in the region.

When one considers only two-year family physicians, those most likely to be delivering comprehensive primary care on a regular basis, the impact of the York University School of Medicine primary care graduates on direct patient care is highly significant. It has been estimated that a practicing family medicine physician in Ontario has an average practice size of 1,888 patients who are seen 2.6 times per year on average.³⁰ The contribution to patient care in the catchment area is the capacity to care for an additional 1.6 million patients per year (see Figure 8.1).

The unique integrated and distributed approach in the curriculum and the associated clinical placements throughout the community will both utilize and support the Ontario Health Teams. The strategic location at the Vaughan Healthcare Centre Precinct will also result in a spillover effect by leveraging the space to expand our nursing and nurse practitioner programs as well as to launch new programs in rehabilitation sciences.

The vision for the York University School of Medicine builds on our commitment to social responsibility and the advancement of equity. It is innovation in education at our best and a natural extension of York's push to find a better way to strengthen health.

Though the creation of a School of this magnitude requires significant capital and an ongoing commitment of funds, the decision to develop it-a medical school committed to delivering a healthier Ontario through an integrated, community-based approach to primary care supported by digital platforms-represents an investment that will help bring about the more accessible, equitable, and sustainable healthcare system that Ontario needs for its future.



³⁰ Buckley G et al A Statistical Anatomy of Ontario Family Physicians' Practices. January 15, 2016. https://www.canadiancentreforhealtheconomics.ca/wp-content/uploads/2016/01/A-Statistical-Anatomy-of-Ontario-Family-Physicians%E2%80%99-Practices.pdf



Figure 8.1. Number of new in-practice York University School of Medicine two-year trained family physicians over York University's catchment area from 2025 to 2044. Data presented as new family physicians/100,000 population in York Region census divisions (red dotted line). The solid blue line represents the population receiving care. Data sources: Ontario Ministry of Finance population projections by census divisions 2020-2046.



SOCIOECONOMIC IMPACTS

The School will also generate a dramatic range of socio-economic impacts to York Region, Toronto, Ontario, and Canada across project development, construction and particularly upon operations and into the long-term. It will be responsive to high-needs areas, including the Jane/Keele corridor around the York University Keele Campus.

A comprehensive assessment of the quantitative and qualitative socioeconomic impacts is currently being undertaken and will be provided in our full upcoming business case including to the national, provincial, and regional gross domestic product (GDP), job creation, labour income as well as taxation impacts at various levels.

Further to these estimated quantifiable benefits, the various critical socioeconomic contributions and benefits will be fully articulated through a range of secondary research, stakeholder consultations, and additional data analysis including:

- > Addressing student demand as well as labour market demand.
- Alignment with current and projected healthcare and medical talent needs in the catchment area.
- > Attracting and retaining top health care talent to York Region, Toronto, and Ontario.
- Supporting advancements in health care and physician training, including technologyenabled practices and training models.
- > Alleviating significant current pressures facing the regional health care system.

Our upcoming impact assessment will effectively communicate the extensive value that will be generated by the proposed new School of Medicine to a very broad range of important stakeholders, including the Government of Ontario.

We have developed a powerful opportunity to advance the agenda of quality, cost-effective health care in the province of Ontario. An opportunity to tell a story that will change the conversation from crisis to capacity, from dysfunction to design, from the limitations of the past to the possibilities of the future.

We look forward to discussing how we might work together on the York University School of Medicine.

The Future York University School of Medicine



Wayne Emmerson

Chairman and CEO



The Regional Municipality of York 17250 Yonge Street Newmarket, Ontario L3Y 6Z1 Tel: 905-895-1231

email: wayne.emmerson@york.ca

January 26, 2022

The Hon. Jill Dunlop Minister of Colleges and Universities 438 University Avenue, 5th Floor Toronto, ON M7A 1N3

RE: York University proposal for a new school of medicine in York Region

Dear Minister Dunlop,

The Regional Municipality of York is among the country's largest, fastest growing and most diverse communities. Along with our nine cities and towns, we are proud to work together with partners like York University to meet the changing needs of our thriving communities.

Together we strongly endorse York University's proposal for a new medical school in the City of Vaughan, and their vision for the future of medical education that closely aligns with York Region's vision of strong, caring, safe communities.

More than 1.2 million residents call York Region home, and that number is forecasted to grow to over 2 million by 2051. As one of the most diverse communities in Canada, more than 120 different languages are spoken in our communities and our residents come from over 230 distinct ethnic origins, with one in two identifying as a visible minority and nearly one in two born outside Canada.

While large and dynamic, our population is also aging. By 2031, one in five residents will be 65 or older. Compared to previous generations, they are healthier, living longer and continue to work past retirement, but there is also a growing number who tend to be more vulnerable and have more complex and costly needs. Overwhelmingly, our residents want to age safely in their communities and require access to community care that includes innovative models of service that support prevention and early intervention, reducing the need for more costlier health care.

Many residents of York Region, and in particular those in more rural areas, are not well serviced by the current number of doctors in our communities. In 2020, the number of active physicians in York Region was 1.7 per 1,000 residents. In comparison, this number is 2.2 across Ontario. With the Region having 8% of Ontario's population and only 6% of the total active physicians in the province, we anticipate access to primary care will worsen with our rapidly growing and aging population.

As our communities continue to grow and change, the complex human services needs of residents will also grow. We continue to see a growing number of people experiencing homelessness, increased opioid use, escalated mental well-being concerns and forecasted increase in reliance on social assistance.

Collaboration with community partners will be critical in developing and delivering services that meet the needs of all our residents at all ages and stages of life, now and into future. Upstream investments that ensure sufficient and appropriate primary care will reduce the need for costly acute care. Integrated, responsive and inclusive health and human services will be vital to a just and equitable post-pandemic recovery.

York University's interdisciplinary approach to teaching and learning, wide breadth of academic programming and long-standing reputation for research excellence broadly align with the innovation we need to tackle the most pressing issues of our time. The addition of a new medical school in York Region is grounded in this framework of delivering curriculum with an understanding of the complexities of social and economic determinants of health, ability to leverage community assets to augment and reduce health care costs and produce community-minded doctors ready to engage and support our local realities. We welcome this critical addition to the social and health infrastructure York Region residents rely on.

From an economic development and human capital perspective, the school will add significant value to the regional ecosystem. It will be the place to develop the next generation of talent in the medical field, building much needed capacity to tackle future health challenges. This builds on York Region's history of working closely with York University to build strong relationships with the business community and enabling experiential learning opportunities for students.

With over 300 life sciences and health-tech companies, four world-class hospitals and several hospital-affiliated innovation programs already in York Region, the school of medicine will be the vehicle that enables researchers, students, entrepreneurs and business leaders to collaborate on innovative solutions. Having the medical school embedded in the Vaughan Healthcare Precinct, in close proximity to Canada's first "Smart Hospital" (Cortellucci Vaughan Hospital), will also provide an anchor for more life sciences-oriented businesses, further leveraging investments by the province in this hospital.

The school will leverage benefits from existing transit infrastructure to connect with the City of Vaughan and communities across York Region and the northern GTA, as well as the existing and planned subway connections. It will further leverage York Region's new precinct that brings health care, innovation and jobs to the lands surrounding the Cortellucci Vaughan Hospital to bring positive change to the delivery of health care in our communities.

Region-based organizations and services could provide opportunities, including placements, internships and collaborative forums to support and enhance experiential learning, while at the same time helping orient future physicians to the social and economic realities of the residents and communities they serve.

The school can also count on our support to contribute to its success. Our Regional and Municipal governments deliver and collaborate on a range of integrated health and human services, including public health, seniors, housing and homelessness, social assistance, recreation and culture, as well as first responders, including paramedics, fire and police, and direct operations of two long term care homes. We are a participant on design of the planned Mental Health and Addictions Hub to be delivered by CMHA and a partner on all three Ontario Health Teams covering York Region, including Western York OHT. We will use these connections to support York University to deliver on its mission.

In closing, we reiterate our strong support for a new medical school in York Region. An investment in the school is a forward-looking investment in the health, well-being and success of more than 1.2 million residents who live, work and play in our dynamic, growing and diverse communities.

Sincerely,

Wayne Emmerson York Region Chairman and CEO

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Mayor Frank Scarpitti City of Markham

Mayor Tom Mrakas Town of Aurora

Virginia Hackes

Mayor Virginia Hackson Town of East Gwillimbury

Margaret Wind

Mayor Margaret Quirk Town of Georgina

Aprilles

Mayor Steve Pellegrini Township of King

JOHN TAYLOR

Mayor John Taylor Town of Newmarket

a.

Mayor David West City of Richmond Hill

Many's Beil

Mayor Maurizio Bevilacqua City of Vaughan

Mayor Iain Lovatt Town of Whitchurch-Stouffville



January 24, 2022

Hon. Jill Dunlop Minister of Colleges and Universities 438 University Ave. 5th Floor Toronto, ON M7A 1N3

Re: York University's Proposal for a School of Medicine in the City of Vaughan

Minister Dunlop,

The City of Vaughan is committed to improving access to healthcare and education for the people of our City, Region, Province, and Country. In partnership with York University, we have demonstrated an ongoing commitment to enhancing healthcare services through research, education, and innovation to support the healthcare needs of our residents.

On behalf of Council, I endorse York University's proposal for a new school of medicine in the strongest possible terms. York's interdisciplinary approach to teaching and learning, and its reputation for excellence in research are at the centre of Vaughan's ongoing work to make the land adjacent to the Cortellucci Vaughan Hospital – Canada's first Smart Hospital – a world-class health innovation district which will shape the next generation of health and healthcare research, delivery, and teaching in Canada.

Shaping the future of healthcare research, delivery, and teaching has been at the core of York University's efforts with the City of Vaughan. From the beginning of our work, it has been clear that York University is focused on creating a new model for medical training that will end hallway medicine by putting preventative and integrated care at the core of its programs. York has consistently demonstrated that it is committed to centering its learning and research on the communities it serves.

The City of Vaughan is working with York University to seize this opportunity to end hallway medicine and keep our residents healthy through York's innovative approach. To support the establishment of a York University School of Medicine alongside the Cortellucci Vaughan Hospital within a world-class Vaughan Healthcare Centre Precinct, the City of Vaughan has identified a portion of a 15-acre site along Highway 400 at Major Mackenzie Dr on which to host Ontario's newest Medical School. This site was identified as ideal for a York University health research and teaching facility in York Region by the Vaughan Healthcare Centre Precinct Feasibility study. In partnership with Mackenzie Health, ventureLAB, and York University, the City of Vaughan has further vetted these findings in a Council-led Task Force that has recommended the City enter negotiations for the land fronting Highway 400.

The work leading to the recommendation to negotiate with York University for land adjacent to the Cortellucci Vaughan Hospital is backed by a series of milestones achieved since 2019. These include:

- October 2019: Memorandum of Understanding signed, formalizing collaboration between the City of Vaughan, Mackenzie Health, York University and ventureLAB to complete a feasibility study to maximize the social and economic use of the lands adjacent to the Cortellucci Vaughan Hospital
- November 2019: a Council-led trade delegation to Israel which included representatives from York University met with leaders of the world-class Rambam Medical Centre to identify best practices and opportunities in integrated health care education and delivery
- June 2020: Despite the Global COVID-19 pandemic, the partnership delivered the first phase of the Vaughan Healthcare Centre Precinct Feasibility study
- June 2021: Council endorsed York University's vision for a School of Medicine in Vaughan
- September 2021: a Vaughan Healthcare Centre Precinct Advisory Task Force was established to set the direction for the realization of the Vaughan Healthcare Centre Precinct inclusive of a York University Health research, innovation, and teaching facility
- October 2021: Vaughan Healthcare Centre Precinct Feasibility study published and approved by City of Vaughan Council
- December 2021: the Vaughan Healthcare Centre Precinct Advisory Task Force recommended that the City enter negotiations with York University for land at the Healthcare Precinct. Staff will bring a report to Council in February 2022 to receive Council endorsement to secure City-owned lands for York University adjacent to the Cortellucci Vaughan Hospital

These achievements are possible because of Vaughan's growing and talented population and its vibrant economy. From 2011 to 2016, Vaughan's population grew by 6.2%, outpacing national and provincial growth. Today, Vaughan is home to more than 330,000 people with nearly 70% of adults having attained a post-secondary accreditation. Vaughan continues to be a city of choice for residents. In Vaughan's emerging downtown, for example, residential development will house 288% of the area's 2031 targets. A School of Medicine would help meet the healthcare needs of Vaughan's growing community, and leverage our talented workforce to advance healthcare innovation, supporting the delivery of modern healthcare services.

The health, life sciences, and social assistance sector are drivers of our local economy and provide a welcome environment for a School of Medicine. The sector will present opportunities for York University's graduates, and placements for research in integrated health and healthcare delivery. In 2019, the sectors had made up nearly 6% of firms in Vaughan with an estimated 160 businesses in the life sciences sector, and 947 businesses in the healthcare and social assistance sector in Vaughan. Vaughan also has a higher-than-average concentration of STEM workers with 42% of the City's employment coming from natural and applied sciences, management occupations, and business, finance and administration occupations.

York University's proposal for a school of medicine will support our vision for Vaughan as a worldclass health and healthcare destination to end hallway medicine. When realized, a York University School of Medicine will help the Vaughan Healthcare Centre Precinct generate significant one-time and recurring economic benefits of local, regional, and national significance including:

- One-time impacts of more than \$755 million in value added to the Canadian economy with opportunities for some 6,300 full-time equivalent employment positions and upwards of \$276 million in government revenues
- Annual recurring benefits providing a permanent on-site employment base of 1,800 jobs yielding more than \$350 million in operational output each year

I am confident that the social and economic benefits for the Region, Ontario, and Canada of a York University School of Medicine in the City of Vaughan will improve healthcare, education, and opportunity for our residents. A York University School of Medicine is an opportunity for Ontario to advance efforts to create an integrated healthcare system focused on the needs of patients and end hallway medicine. That is why the City of Vaughan is working to provide York University with land adjacent to the Cortellucci Vaughan Hospital, to support York University through its talented and growing resident base, and to connect York University to industry opportunities to advance research and education.

Sincerely,

ro Beil Hon. Maurizio Bevilacqua, P.C.

Mayor



Mackenzie Richmond Hill Hospital 10 Trench Street, Richmond Hill ON L4C 4Z3 905-883-1212 Cortellucci Vaughan Hospital 3200 Major Mackenzie Drive West, Vaughan ON L6A 4Z3 905-417-2000

February 1, 2022

Rhonda L. Lenton, PhD President & Vice-Chancellor York University 4700 Keele Street Toronto, Ontario M3J 1P3

Dear Dr. Lenton,

On behalf of Mackenzie Health, I am pleased to support York University's proposal to build the York School of Medicine in the City of Vaughan as part of The Vaughan Healthcare Precinct Plan.

At Mackenzie Health our mission is to relentlessly improve care to create healthier communities. Across our two hospitals – Cortellucci Vaughan Hospital and Mackenzie Richmond Hill Hospital – we have 682 beds, in addition to 112 beds at our Reactivation Care Centre location and 170 beds at our long-term care home. We also provide a number of clinical and social service programs at our six community-based locations. We serve a population of more than half a million people across Vaughan, Richmond Hill and King – which are high growth communities. York Region's population is expected to grow by 35 per cent by 2041 – a faster rate of growth compared to all of Ontario. We expect to see a corresponding increase in demand for primary care and health services in our community.

We have joined forces with York University, the City of Vaughan and York Region to continue our innovative community-focused health collaboration. Our partnership aims to enhance health services, training of highly qualified personnel, research and innovation and health outcomes for York Region residents and beyond.

We have a shared vision with York University in building an integrated health care system centred on the needs of patients closer to home. A school of medicine co-located in the health care precinct in Vaughan and adjacent to Cortellucci Vaughan Hospital will offer medical students early exposure to sophisticated technology and hands-on training in state-of-the-art, modern facilities. Mackenzie Health will be able to offer clinical placements and experiential learning opportunities in nursing, clinical psychology, social work, kinesiology and more. Learners will have access to our clinical teaching laboratory which is used by physicians, nurses and other allied health professionals to receive instructional and hands-on training in new clinical and technical skills. In addition, learners will have access to two simulation laboratories which are available at Cortellucci Vaughan Hospital and used for mock procedures and skills training sessions such as rehearsing team responses to a cardiac arrest or how to intubate a newborn.

Mackenzie Health can offer exposure to a team-based learning environment early in the learners' medical education journey and, as Canada's first smart hospital, Cortellucci Vaughan Hospital is uniquely positioned to provide robust experience with various health technologies. Our collaborative partnership will explore opportunities around health informatics, analytics and data visualization along with the use

of health technology to continue to build an integrated health care system centred on the needs of patients.

There is also tremendous value in establishing partnerships that integrate the health care system with community partners such as long-term care, home care, rehabilitation, public health and primary care – an opportunity available through the Western York Region Ontario Health Team. The Western York Region Ontario Health Team's first area of focus is on developing integrated care programming for medically and socially complex seniors with cognitive, physical and/or functional limitations and mental health and addictions. A school of medicine in our community will allow us to help train the next generation of health care providers to better understand and address these holistic needs leading to better health of communities. As co-chairs of the Western York Region Ontario Health Team, Bryan Keshen, who is also President and CEO of Reena, and I support the opportunity to explore the possibilities for integrated learning and training experiences for medical students with the full spectrum of health care providers in the local western York Region community as part of the Ontario Health Team framework.

At Mackenzie Health we believe investments that bring more health care workers to our community and optimize the provision of health care services are necessary and will help meet the future demand, maintain a high standard for quality of care and mitigate cost escalation for the health care system. The collaborative partnership between Mackenzie Health, York University, the City of Vaughan and York Region will improve the health and well-being of individuals, communities and populations in York Region and beyond. We are committed to an integrated and preventive health care approach that supports the unique health care needs of the growing and aging population in the communities we serve.

Together with York University we have an excellent opportunity to train the primary care physicians of tomorrow to increase much-needed access to primary care for our community, leading to better outcomes for patients and greater efficacy and value in the delivery of health care in the province.

Sincerely,

Altaf Stationwala President and CEO

