

The Regional Municipality of York

Committee of the Whole
Planning and Economic Development
October 8, 2020

Report of the Commissioner of Corporate Services and Chief Planner

Emerging COVID-19 Trends and Impacts on Land Use Planning and Community Design

1. Recommendation

Council receive this report for information.

2. Summary

This report summarizes preliminary research findings and early evolving trends related to the impacts of COVID-19 on land use planning and community design. It further identifies factors and implications to consider when planning for healthy, resilient and complete communities.

Key Points:

- The COVID-19 pandemic provides opportunities and observations that lead to designing complete communities that are more resilient to change, disruption and crises
- Increased risk of COVID-19 infection is associated with overcrowding (i.e. multiple individuals within a small confined space such as a dwelling unit or congregate living setting) and socio-economic disparities. Research suggests density, such as more compact built form in a neighbourhood or community setting, is not associated with increased COVID-19 infection and mortality rates
- Walkable communities with a mix of uses, services, amenities and greenspace located in proximity, and a range of mobility options can support better health, social, economic and environmental outcomes
- Early observations suggest trends such as shifts to telework and accelerated e-commerce activities may impact commute patterns, demand for larger and more flexible living spaces, access to open and green spaces, change in retail, office and employment space and land demand, and infrastructure and initiatives to expand mobility options

- Longer term data and evidence are needed to validate evolving trends and to fully assess COVID-19 impacts on land use planning and the design of liveable, complete and resilient communities

3. Background

Land use planning and community design play a role in addressing past and current public health issues and challenges

Modern land use planning in North America began in the 19th century with the goal to improve and protect the health of communities. Cholera and typhoid fever epidemics caused by unsanitary sewage disposal and contaminated drinking water resulted in the introduction of municipal wastewater and drinking water distribution systems. Unsanitary and overcrowded conditions facilitated the transmission of other infectious diseases such as tuberculosis. Community planning solutions that focused on improving housing conditions, introducing public parks and open space, and creating living spaces and streets with increased air circulation and sunlight exposure contributed to better health outcomes.

Starting in the late 19th century, improved sanitation infrastructure and living conditions along with the introduction of effective vaccines and antibiotics decreased the incidence of illness and death from infectious diseases dramatically. Rise in car ownership has dispersed communities and increased reliance on automobile travel. These changes, and the associated decline in physical activity and growing exposure to traffic-related air pollution, have augmented health impacts. Chronic illnesses such as cancer, cardiovascular diseases and diabetes have become leading health threats. Today, we are faced with the challenge of chronic and infectious diseases, and climate change impacts that require the planning and design of resilient communities in times of change, disruption and uncertainty.

4. Analysis

Overcrowding and socioeconomic disparities increase the risk of COVID-19 exposure and infection

The COVID-19 pandemic accentuates existing inequalities. The incidence of COVID-19 is higher among vulnerable populations, many of whom have underlying medical conditions. Spatial analyses of COVID-19 incidences and mortalities in the United States, the United Kingdom, Toronto and Montreal suggest the impact of COVID-19 is highest among economically disadvantaged populations and racial and ethnic minorities. York Region is assessing similar data to understand COVID's impact on vulnerable population.

Social inequities and conditions such as low income, inadequate housing, precarious employment, occupational conditions, and other social determinants can increase a person's exposure to COVID-19 and severity of outcomes. The ability to maintain physical distancing from infected family members in crowded housing, and access to personal protective equipment, health care and COVID-19 tests are factors increasing risk of exposure and infection.

COVID-19 incidence is higher for those who live or work in crowded or congregate settings including long-term care and other supportive living arrangements. Overcrowding can often occur in residence, workplace and other private or public settings with multiple individuals in a small confined space posing safety and health concerns. Purposeful design of our communities to include affordable, suitable and safe housing that meet the needs of families and individuals, and measures to limit overcrowding in other tightly shared spaces can reduce the spread of infectious diseases.

Research suggests community density is not associated with increased COVID-19 infection and mortalities

A number of published articles have raised questions regarding the density of communities and COVID-19 infection rates and mortalities. Density is generally defined as the number of residents or workers who live or work within a given land area (i.e. a hectare or square kilometre). Amid varying perspectives, evidence suggests density is not associated with COVID-19 transmissions. The Journal of American Planning Association and Journal of Cities and Health presented research examining the effects of COVID-19 on American communities and global cities. Findings suggest community density is not associated with increased COVID-19 infection and deaths. Public health measures introduced in densely populated cities such as Seoul, Singapore and Tokyo helped contain virus outbreak and lowered the risk of infection. Coordinated management of COVID-19 preparedness and response, availability of testing, public engagement, and provision of accurate information can also influence the rate of infection and transmission.

Neighbourhood design can reduce the risk of infectious and chronic diseases

People with chronic conditions or compromised immune systems are at greater risk of more serious illness if they are infected with COVID-19. The Journal of American Medical Association study investigated 70,000 COVID-19 cases. It found individuals with pre-existing cardiovascular and respiratory conditions are more likely to experience serious COVID-19 related complications, hospitalization or premature death.

Decades of research on community design and health outcome shows denser, walkable neighbourhoods with services and amenities nearby allow people to more easily incorporate physical activity into their daily activities. An active lifestyle is related to lower risks of chronic diseases such as obesity, diabetes and heart disease, and can strengthen immune system against viral respiration infections such as COVID-19. Low-density neighbourhoods where services and amenities are located far from housing increase reliance on the automobile. Private motor vehicle use contributes to an increase in emissions, and raises the risk of respiratory illnesses due to air pollution and the risk of cancer and chronic diseases from inactivity according to clinical research. Designing communities to promote physical activities and reduce traffic-related air pollution can help lower the risk of chronic and infectious illnesses, improving the health and wellbeing of residents.

Experience with COVID-19 reinforces the value of accessible public greenspaces in promoting physical and mental health and social well-being

During the pandemic, the closure of indoor spaces and amenities encouraged people to rediscover the benefits of outdoor spaces including greenspace, trails and sidewalks. Studies have found that outdoor spaces have provided opportunity for physical activity, outdoor play, and social interactions while respecting physical distancing requirements. This can reduce risk of transmission, alleviate stress and reduce social isolation supporting improved physical and mental health outcomes.

Equitable and convenient access to outdoor public and amenity spaces is seen as a valuable asset during COVID-19. Public gathering spaces have been re-configured to accommodate different uses and physical distancing requirements. Community gardens are beneficial particularly in multi-residential development and congregate settings, improving physical and mental health and well-being of individuals. They promote social interaction, community cohesion, improve local food security, and support physical activity for people of all ages and abilities, while adhering to physical distancing measures.

Regional plans, policies and initiatives support mixed-use, walkable neighbourhoods with amenities and services nearby to meet daily needs

Communities where housing, jobs, shops and services, schools, safe travel routes and greenspaces/parks are located within a 15 to 20 minute walk are more resilient during the pandemic. According to the United Nations Healthy Pandemic Resilient Cities research, these communities offer more choices, options and better connections to access local services, amenities and health care to maintain self-sufficiency. They also permit more localized lockdowns when necessary. A concentration of uses within a smaller geography would also facilitate walking and cycling which minimize the need for auto-oriented travel to meet daily needs.

York Region's Official Plan, infrastructure master plans, and initiatives such as the [Regional Centres and Corridors program](#), and [office attraction and rental housing incentives programs](#) continue to support the delivery of mixed-use, walkable communities. A number of Ontario municipalities including Ottawa and Brampton are developing policies and implementation tools to create 15 or 20 minute neighborhoods to meet intensification targets and aspirations for walkable communities.

York Region's diverse labour force allows increased remote work opportunities

Statistics Canada reported 40% of Canadians can perform their jobs in remote settings. Telework capacity varies across industries, with those working in finance, insurance, education and professional services sectors more likely to have remote work options. York Region's diverse economic base and labour force composition can facilitate telework opportunities. At this time, the Conference Board of Canada expects 5% to 10% of all businesses in York Region will shift to permanent telework arrangements. Additional data on remote work trends and reported practices can help inform longer term impacts and implications.

Remote work arrangements have altered commute patterns

Since the start of the pandemic, telework arrangements have altered commute patterns. In York Region, traffic data as reported to Council in [June 2020](#) and October 2020 showed reduced automobile trips in our communities compared to pre-pandemic volumes. As the Region gradually re-opens, there have been more cars on the road. However, traffic volumes during rush hours continue to remain 15% to 30% lower than pre-pandemic levels, particularly during the morning peak period as remote work continues. Ridership on York Region Transit and VIVA bus rapid transit services in August 2020 was 57% lower than the same time last year, impacted in part by telecommuting and physical distancing practices. A Greater Toronto Area travel survey will be administered by the University of Toronto in the fall of 2020 and spring of 2021. Results from survey will provide empirical evidence for staff to assess longer term trends on region-wide travel patterns.

The pandemic has amplified the need to offer mobility options

Physical distancing measures to mitigate the spread of COVID-19 and telework arrangements have been in place since March 2020. While York Region Transit and VIVA ridership recorded an unprecedented decline and there is less traffic volume during certain times of the day, more people are observed to be walking and cycling in our communities.

Cities around the world including Toronto, Paris, Rome, Milan and Barcelona have introduced temporary measures to support safe distancing while walking and cycling. The City of Markham is promoting active transportation with closures and restrictions to vehicular traffic along Enterprise Boulevard to encourage local walking and cycling activities. An early lesson of COVID-19 is the importance of planning for accessible trail networks and designing complete streets to balance the needs of pedestrians, cyclists, transit users and drivers. These mobility options, also promoted through funding from senior levels of government, can encourage and enable people to safely walk and cycle to access local shops, amenities and services.

Interest in larger and more flexible living spaces is emerging

The pandemic has elevated interest in the design of flexible, adaptable and health-enhancing indoor space to include more natural lighting, improved ventilation and filtration systems, the use of non-toxic, natural and anti-microbial materials, outdoor balconies, rooftop terraces and courtyards, etc.

Statistics Canada's July 2020 housing market outlook anticipates an increase demand for larger units to provide more space to live and work if telework becomes more prevalent. While York Region's housing supply may offer a range of suitably-sized dwelling units, housing affordability continues to be a challenge for mid-range and low income households looking to relocate within or move to York Region. More data is needed to understand emerging housing preference and trends for staff to assess their impacts on short and longer term housing demand.

Change in live-work arrangements may impact demand for office space

Commercial real estate analysts are assessing the impact of telework on office space demand. Commercial real estate agency CoStar forecasts a short-term rise in York Region's office space vacancy, from 3.31% to 5% in 2021. Commercial real estate brokerage firm Collier estimates an 8.5% decline in office space demand Canada-wide as leases expire, with the largest drop occurring between 2022 and 2023.

Since commercial properties typically have longer term leases, the sublease/sublet market would likely be more reactive and volatile to shorter term COVID-19 impacts. Short term office space demand will also be influenced by companies' decisions to balance additional floor area needed to accommodate physical distancing for in-office workers with reduced space resulting from telework. More data is required to better understand the medium and longer term trends and their aggregate level impact on office demand.

Real estate analysts including Avison Young, Colliers and JLL suggest suburban and 905 office markets (including York Region) can benefit from the relocation of downtown offices. Some of the reasons for relocation include lower rents and proximity to talent. Digital connectivity is fundamental to remote work. York Region's investment in fibre internet network will expand high-speed broadband services across our communities to support telework, and help attract highly-skilled and diverse labour force and employers.

Retail space and employment land needs may be shaped by evolving telework trends, e-commerce and manufacturing activities

The pandemic has significantly accelerated e-commerce activities. Physical distancing requirements and facility closures have prompted many consumers to purchase goods online. In York Region, growth in e-commerce will likely increase employment land demand for warehouse and distribution space. York Region's employment lands have convenient access to major goods movement corridors such as 400-series highways and are prime locations for distribution centres that receive, process and ship online purchases in a timely manner, as they are centrally located to consumers.

The Conference Board of Canada anticipates a short term decline in manufacturing demand and output in York Region, with recovery to 2019 levels in 2022. While the COVID-19 pandemic may have exposed local supply chain vulnerabilities, resurgence in local manufacturing interests remains uncertain at this time.

Mandatory closures and physical distancing measures have impacted retail operations nation-wide with retail sales plummeting in March and April. Sales in June had returned to pre-COVID-19 levels nation-wide according to Statistics Canada, as more regions re-opened. The duration of this upward trend will depend on consumer confidence, influenced by job security and financial well-being. As some retailers transition to or expand their e-commerce operations, the future of shopping mall and main street retail activities, and demand for retail space remain uncertain.

COVID-19 has reinforced the need to plan and deliver liveable, resilient, inclusive and complete communities

It has been seven months since the start of the COVID-19 pandemic. Extended lockdowns and physical distancing requirements have fundamentally changed the way we live, work, commute, shop, and socially engage with one another. The pandemic has resulted in temporary or permanent business closures, accelerated telework adoption where feasible, public event cancellations, and increased use of outdoor spaces. It is important to consider shifting preferences, learnings and opportunities presented by the pandemic in planning for complete communities.

The COVID-19 experience has amplified the role urban planning and community design can play in minimizing health inequalities, and providing equitable and safe access to outdoor space, services and amenities to enhance resilience and facilitate physical distancing. While the impacts of COVID-19 on land use planning and community design have yet to be fully realized and understood, the pandemic accentuates the need to deliver liveable, resilient and complete communities.

Further evidence is required to validate emerging trends and assess planning implications

As the COVID-19 pandemic continues to shift preferences, social interactions and market dynamics, further evidence is needed to validate emerging trends and fully assess implications for designing liveable, complete and resilient communities. Staff will continue to monitor, analyze, and update Council on planning impacts and implications as necessary.

5. Financial

Research conducted to understand how trends from the pandemic may impact land use planning does not present financial impacts at this time. If the planning and development of York Region communities do not respond to opportunities and lessons from COVID-19, there may be financial implications resulting from misalignment between growth and infrastructure and service delivery.

6. Local Impact

Land use planning implications emerging from the COVID-19 experience can help the Region and local municipalities identify opportunities to design inclusive and complete communities resilient to change and disruption. As evidence on planning trends continue to emerge, Regional staff will work with local municipal staff to understand longer term trends, impacts and implications, and use learnings to inform community design and local infrastructure and service planning and delivery.

7. Conclusion

COVID-19 offers opportunities to consider lessons and apply our learnings in the design of complete communities. Study findings suggest walkable, mixed-use communities can enhance the health and well-being of residents while contributing to the social, environmental and economic resilience of communities. The pandemic has amplified the need to consider social and environmental inequalities, and the role of suitable and quality affordable housing, mobility options, and outdoor public and green spaces in shaping future communities.

While this report highlights some emerging trends on the impact of COVID-19 on land use planning, more time is required to understand their evolution and assess longer term implications. As the pandemic evolves, staff will continue to monitor emerging evidence and analyze longer term impacts on land use policies, infrastructure and financial plans critical to building inclusive and complete communities. Staff will report back to Council when evidence-based policy recommendations are available.

For more information on this report, please contact Paul Bottomley, Manager, Policy, Research and Forecasting at 1-877-464-9675 ext. 71530. Accessible formats or communication supports are available upon request.

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