
SPECIAL REPORT

TD Economics



April 16, 2015

WORKING TOWARDS AN IMPROVED GREATER TORONTO/HAMILTON AREA

Highlights

- CivicAction will hold a summit in Toronto on April 28, 2015. In support of this summit, this report discusses the five key summit themes.
- Housing affordability is declining in the Greater Toronto and Hamilton Area (GTHA), and the housing mix has become increasingly skewed towards condos. The senior population is increasing and expected to triple by 2040, creating pressure for affordable housing and health care services.
- Mental health has for many years resulted in 'invisible suffering'. The cost of this suffering to the economy is significant, at nearly \$51 billion per year nationally. While there is increasing awareness of the importance of mental health, more needs to be done to support those suffering from these conditions, particularly in the workplace.
- The first 1000 days of a child's life are a determinant of lifelong outcomes. Ensuring that parents have access to credible information and children have access to quality early childhood education, healthy food and a healthy overall developmental environment will lead to better life outcomes, and reduce the future strain on our health system.
- As the GTHA becomes increasingly dense and living/office space shrinks in size, public spaces will play an increasingly important role in people's lives. Public spaces have many potential benefits for individuals and communities, but unfortunately green spaces are not always near population centres or optimized to the extent they could be. A renewed focus on the quality and quantity of these spaces would bring a multitude of benefits to our region.
- As extreme weather events become increasingly common, the strain on city infrastructure is likely to increase. The GTHA currently has a major infrastructure maintenance backlog, increasing the risk of 'knock on' effects resulting from severe weather events. Renewing the focus on not just maintenance, but upgrading of city infrastructure has the potential to both benefit community health and reduce the impact of future weather events.

At the upcoming [CivicAction](#) Summit, to be held in Toronto on April 28, 2015, five themes focused on improving the health of the region will be discussed: Housing affordability in the Greater Toronto and Hamilton Area (GTHA) and the need for senior housing and healthcare supports, mental health supports in the workplace, childhood health and the importance of the 'first 1000 days', public spaces, physical activity, and health, and the infrastructure needs of tomorrow. This report was undertaken at the request of, and in support of CivicAction, to help frame and support the summit discussion. Each of these topics will be covered in turn in the subsequent sections of this report. TD has been a supporter of CivicAction for some time, and as such, this report builds on past work, particularly a comprehensive report released concurrently with the April 2013 CivicAction Forum (available [here](#)), which remains relevant. Our focus in this backgrounder is summarizing the key challenges and opportunities related to each of the summit themes rather than advocating specific solutions. However, we hope that by informing the discussion, we can help contribute to positive outcomes for the GTHA.

Housing affordability: matching senior health care to housing options

It is a known fact that the Canadian population, and by extension the population of the GTHA, is aging. The baby boomer generation is increasingly reaching retirement age, and this trend will continue over the coming decades. The result will be an even larger share of the population that is aged 65+ and 75+. This will create potential issues related to housing, healthcare needs, and the costs thereof. Many seniors, in particular those more than 75 years old, will at some point require additional assistance with their day to day needs, whether for health or other reasons. This will generate increased pressure on resources such as assisted living facilities, in-home care workers, and others. Second, many seniors live on fixed incomes, which presents issues around housing affordability. Finally, older members of the population are responsible for a majority of public healthcare costs – as this population grows in size, healthcare costs will increase as well, absent mitigating strategies.

Senior assisted-living housing space (such as nursing homes and similar facilities) in the GTHA has been rising, reaching a total of more than 18,000 spaces in 2014. However, with roughly 420,000 people currently aged 75+ this covers only about 5% of this population, though it is important to note that many seniors do not require the kind of specialized services that these facilities provide, and often choose to remain in their homes, retrofitting them and/or taking advantage of home care services. Many seniors end up in acute care hospital beds as they wait for other types of care to become available. 14.8% of all hospital acute care beds in Ontario are occupied by individuals who could be discharged if there was an appropriate discharge destination available.

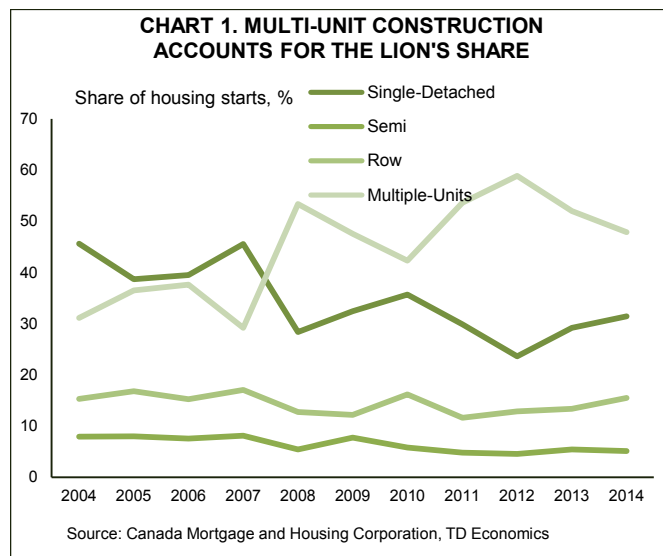
The number of people aged 75+ in the GTHA is expected to reach more than 1.2 million by 2040, which, assuming that the number of facilities spaces relative to the population remains at 5%, would require the creation of an additional 60,000 senior housing spaces over the next 25 years. To meet these needs, the growth rate of these spaces will need to more than double to 2400 spaces per year, from the current pace of about 1100. As the GTHA's density continues to increase, available construction land will be at a premium, and these facilities will need to compete with other developers for land space, creating additional cost pressures. Easing this burden however, is an increasing trend towards later retirement. Many Canadians no longer take it for granted that they will

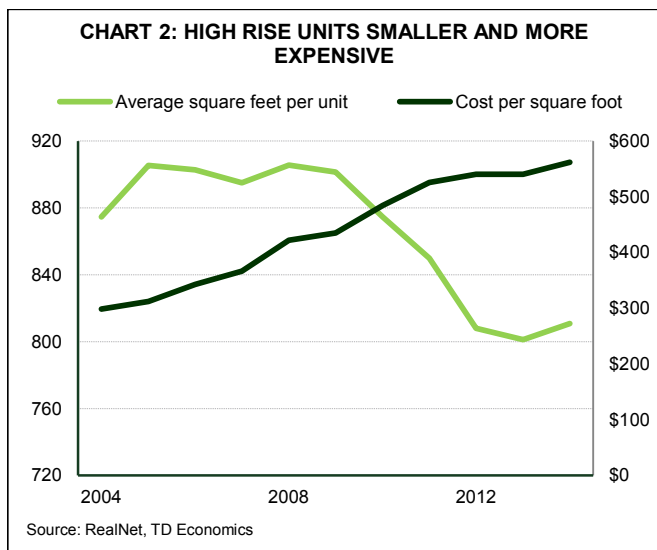
stop work at the traditional retirement age. These seniors may work well past age 65, and will be looking for housing arrangements that allow working from home, or are located near employment opportunities.

In recent years, housing affordability within the region has been deteriorating (See our [report](#)). Even with the anticipated slowing in the regional housing market, affordability is likely to remain a challenge for many. Compounding the affordability issue, housing choice is shrinking, particularly in urban centres. As Chart 1 shows, since 2008, the majority of new construction projects have been of multiple-unit buildings, such as condominiums.

The majority of condo projects to date in the GTHA have seen healthy demand, and have proven popular with young professionals, investors, and students. The trend within this market has been towards smaller units (Chart 2), with the average unit size falling more than 100 square feet since 2008, while the price per square foot has continued to rise, bringing the cost of entry to the housing market increasingly out of reach for low income residents of the GTHA.

At the same time, few purpose-built rental units have been constructed, leading to an aging stock. An increasing number of older seniors may want to downsize from existing housing units. This may be driven in part by a desire to extract the value embedded in the larger housing unit, as the price gap between detached/semi-detached homes and other housing types has surged. However, a mismatch between the needs of residents with regards to the size, configuration, and location of housing and the available stock may be preventing older residents from taking advantage of their opportunity.





Offsetting this trend, a number of funding programs exist to help seniors remain in their homes, such as the Healthy Homes Renovation Tax Credit. With interest rates at very low levels, many seniors who are relying on their savings face income constraints. Moreover, seniors are increasingly carrying debt into retirement, with one third of retirees still carrying debt. Among those near retirement (aged 55 and over), around two-thirds are currently in debt. Growing debt levels among older Canadians will place additional constraints on retirement incomes, particularly among those who haven't benefitted from rising housing wealth.

Beyond the typical retirement age, the share of individuals that own their homes begins to decrease and the number of renter households increases. At this age, the number of people in core housing need (where current housing is inadequate, and suitable housing would consume more than 30% of income) tends to rise. Among those in pre-retirement (age 45 to 64), about 11.2% of households are in core housing need. The rate rises to 13.7% among retirees, with the highest share among those aged 75+. With rents continuing to rise (Chart 3), this will remain an issue for retirees. Even in the purpose built market, the current shortage of units has resulted in rent growth outstripping increases in incomes. The cost of purpose-built senior housing (such as retirement homes) is rising even faster, growing an average of 2.9% per year over the past five years, well above the headline Canadian inflation rate of 1.5%. This means that even those seniors who receive inflation-indexed incomes still need to dedicate an increasing share of that income to rent. Supports for low income seniors exist, such as subsidized housing with the Toronto Community Housing Corporation

(TCHC) and other regional housing authorities. However, increasing demands on their services has resulted in significant backlogs. For example, the TCHC currently supports around 164,000 tenants, but has nearly 90,000 households on its waiting list. The result is that seniors face an average wait time of 5.5 years to receive a subsidized housing unit. The situation is similar in other urban centres in the region. Clearly more needs to be done to address both current and future housing needs of the senior population.

While seniors and their families often bear the costs of increasingly expensive rental units and senior-specific housing, GTHA residents support the health system through their tax dollars. Growing healthcare cost pressure is a major challenge facing all levels of government. As one might expect, concomitant with age-related health issues, the senior population currently utilizes a disproportionate share of total healthcare spending in Canada. As Chart 4 highlights, despite accounting for just 15% of the Canadian population, those aged 65 and over account for more than 31% of total healthcare costs in Canada. Within certain cost types, the share is even larger – for example, seniors account for more than 45% of total hospital care costs. With the share of seniors in the overall population set to nearly double over the next 25 years, additional pressure will be brought to bear on the healthcare system.

There is the potential for solutions that address both seniors housing needs and rising healthcare costs. By ensuring that seniors receive the healthcare they need before illnesses become a serious strain on the health system, we should be able to reduce the hospitalization rate among seniors. This can include increased in-home care, more (and

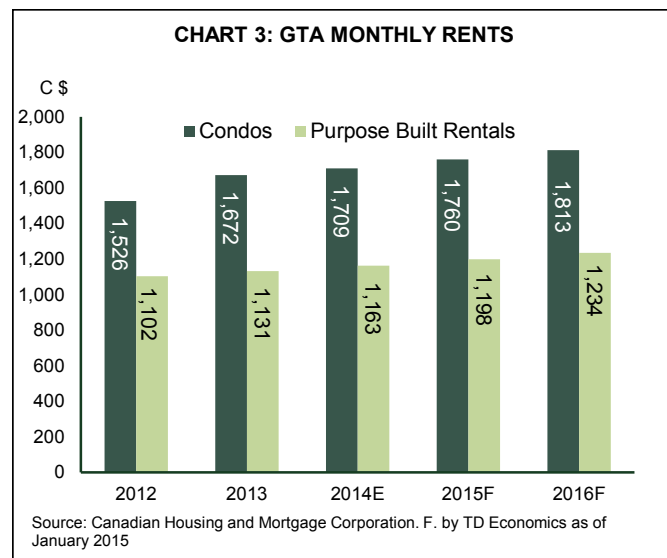
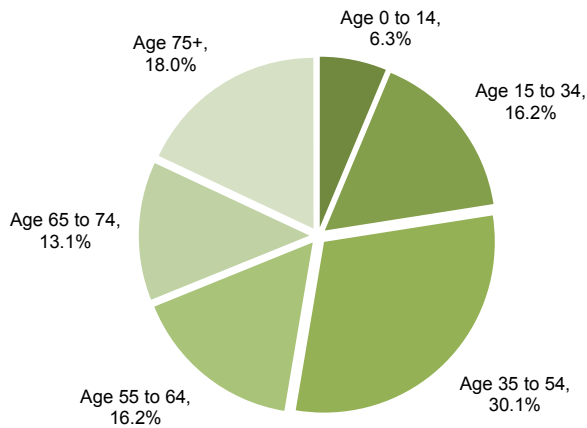


CHART 4. SENIORS ACCOUNT FOR A LARGE SHARE OF CANADIAN HEALTHCARE COSTS



Source: Public Health Agency of Canada, TD Economics. 2008 Canada-wide data.

potentially subsidized) spaces in senior housing facilities, as well as other emerging solutions, such as cooperative, codependent living facilities where seniors can continue to live the lifestyle they are used to, knowing that care supports are available within their local community. Collectively, we need to identify and encourage supportive living arrangements, integrate supports within communities, and finance care options that allow seniors to maintain their independence. Regardless of the mix of solutions, getting ahead of the curve now will help tomorrow’s seniors maintain a high quality of life without overburdening government systems.

Mental health and the workplace

According to the most recent data, 13.7% of Canadians aged 15 and over had a disability of some kind. Of these disabilities, mental and psychological disabilities were the fourth most common. Mental health issues can be particularly concerning, as they often involve “invisible” suffering, making it more difficult for others to identify those who are suffering. Statistics Canada reports that of adults with a mental-health related disability, nearly a third indicated that their employer was unaware of their condition. Indeed, getting a handle on the population suffering from mental health issues can be difficult. Toronto’s Centre for Addiction and Mental health found that in 2013, between 11% and 21% of Torontonians reported “Elevated Psychological Distress”. In contrast, Toronto Public Health found that in 2012, about 6.8% of residents reported ‘fair’ or ‘poor’ mental health. Both of these figures are likely to understate the true prevalence of mental health issues, as social stigmas around mental health still remain, and vulnerable parts of

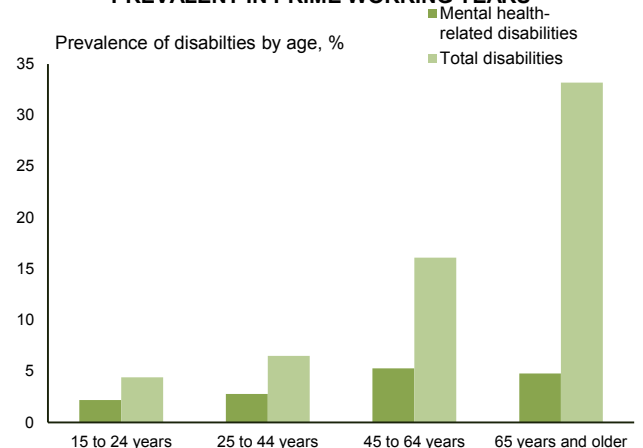
the population are prone to under-representation in surveys.

The impacts of mental health issues can be significant. The Mental Health Commission estimates that the economic burden to the Canadian economy of mental illness is \$51 billion annually – more than the entire annual output of Canada’s accommodation and food services industries. The lifetime impacts can be significant; relative to individuals with physical disabilities, those with mental disabilities have worse educational and employment outcomes, with the gap beginning in childhood.

Mental health issues are most prevalent among those aged 45 to 64, the typical prime earning age and career peak (Chart 5). Mental health issues at this age, if not addressed, will thus have an outsized impact on earnings and output compared to other age groups.

The burdens created by mental health issues are multi-fold: more than 30% of disability claims and 70% of costs in Canada are due to mental illness. More than half of working age adults with mental health related disabilities are not in the labour force, creating an additional and potentially unnecessary strain on public support systems. Perhaps most concerning is the impact that mental health issues can have on future generations. Mental health issues have been referred to as “the new second-hand smoke”, and with good cause. A large body of literature has established the links between parental mental health, and the future mental health of their children. Thus, by not addressing mental health issues, there are both immediate impacts in terms of economic output and strains on social resources, as well as potential future health issues.

CHART 5. MENTAL HEALTH ISSUES MOST PREVALENT IN PRIME WORKING YEARS



Source: Statistics Canada, TD Economics. 2012 data.

Employers have begun to recognize mental health as a major issue, and a number of initiatives are underway both within the GTHA and at the national level to raise awareness of, and reduce the stigma of mental health. However, there remains work to do. Individuals with mental health issues sometimes need special accommodation in the work place, such as modified hours or duties. Unfortunately, less than half of those employed reported having all their needs met (Chart 6). More concerning, more than a quarter reported that none of their needs were being met in the workplace. Without accommodation, it is likely that these individuals are not as productive as they otherwise would be.

Beyond workplace accommodation, other barriers exist for those with mental health related disabilities. Many of these individuals report difficulties in finding employment. Issues include a lack of training or experience, lack of jobs, and concerns about losing additional supports, such as government drug plans or subsidized housing.

It is clear that mental health is not an individual issue, but affects society as a whole. Ensuring that supports and accommodations are available to those suffering, particularly in the workplace, doesn't just benefit them, it also benefits society more generally, including governments, employers, and children. Collectively, we need to encourage employers to play an active role in fostering workplaces that are supportive of mental health – reducing stigma and ensuring that individuals get the help they need. Supporting mental health will help ensure a brighter future both for residents of the GTHA, and Canadians more broadly.

The importance of the 'first 1000 days' of life

There is growing recognition that the first thousand days of a child's life – from pregnancy past the second birthday – have a critical impact on childhood development, and by extension, adult life. Economists often refer to “human capital”, that is, the skills, education, flexibility, and other characteristics of an individual that help determine his/her productive potential. The benefits of increasing society's collective human capital are multifold: more innovation, more productivity, and higher wages are just a few. A growing body of literature has linked developments in very early childhood and the health of a child's mother to lifelong human capital outcomes. Beyond education, reaching our full potential also depends on maintaining our health. Just as the first 1000 days impact education outcomes, they can also affect our future health. Social determinants of health experienced during this time, including environmental stressors such as smoking, poor nutrition and/or food insecurity, and other factors can lead to poor health outcomes throughout life.

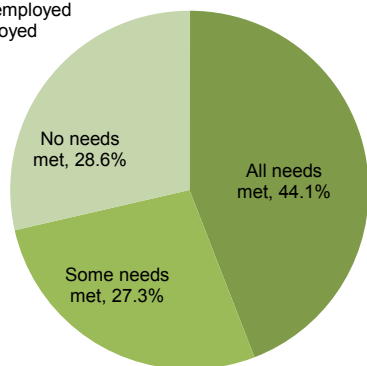
Income can also play a role in childhood development. The Early Development Instrument (EDI), a tool used to assess early child development, can illustrate this. Across Canada, 1 in 4 children are considered vulnerable in one or more areas of development assessed by the EDI at age 5, meaning that as a result of factors early in childhood, they may not be fully prepared for the challenges of the school system. The ratio of vulnerable children is higher for those living in low-income neighbourhoods: 34.9% of children in low income neighborhoods are considered vulnerable, while for high-income neighbourhoods, less than 20% of children are considered vulnerable.

For those parents who need or choose to work during the first 1000 days of a child's life, access to high quality daycare can prove challenging. Costs for daycare within the GTHA can be very high – indeed, Torontonians pay the highest amount for daycare programs among major Canadian cities, with a median cost for an infant of \$1675/month (Chart 7).

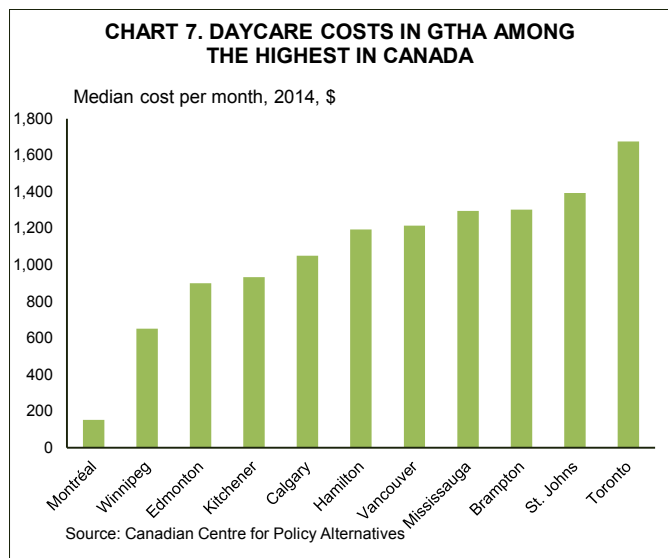
The role of parents, particularly the mother, in determining childhood health and development, cannot be understated. Research by Mothercraft has shown that even for children who were exposed to substance abuse while in utero can benefit from early interventions that help provide the support that they and their mothers need. Indeed, absent mitigating influences, the challenges faced by children in stressed environments (whether due to substance abuse,

CHART 6. LESS THAN HALF OF THOSE WITH MENTAL HEALTH ISSUES ARE HAVING WORKPLACE NEEDS MET

Share of those employed or recently employed



Source: Statistics Canada, TD Economics. 2012 data.



low income/food insecurity, or other reasons) can grow more pervasive and impairing as the child develops. This underscores the need for programs that support and address the needs of at risk children and their families as early in life as possible.

Beyond the serious issue of substance abuse, maternal educational achievement can also have a significant impact on child health outcomes. Many postpartum health interventions appear to be focused on women with higher educational attainment. Specifically, late initiation or the absence of prenatal care has disproportionately negative effects for mothers with less than a high school education. There is a clear need to ensure that health education and intervention is available and accessible for mothers of lower socioeconomic status.

Indeed, for all children regardless of background, health plays a significant role in determining our overall quality of life. Much like education, many health outcomes are determined in the first 1000 days of life. Environmental stressors can result in a greater susceptibility to non-communicable diseases including obesity, diabetes, and heart disease both in childhood and later in life. The impact of these conditions is significant: the annual costs of physical inactivity and obesity can include lost work hours and direct costs to the medical system, as well as a lower quality of life for the individual.

A link exists between health in early childhood and later in life: a twelve year old child is five times more likely to be overweight if they were overweight between ages 2 and 4. To solve this issue, a number of solutions can be utilized. A longer duration of breast-feeding, followed by healthy eating and attention to children's hunger and satiety cues are

all associated with reduced likelihood of obesity. Another solution, perhaps obvious, is increased physical activity. As the next section explores in further detail, just 5% of Canadian youth are getting the daily activity that they need. Reducing time in front of the TV (which has been associated with increased probability of obesity) and increasing physical activity helps ensure that children remain healthy.

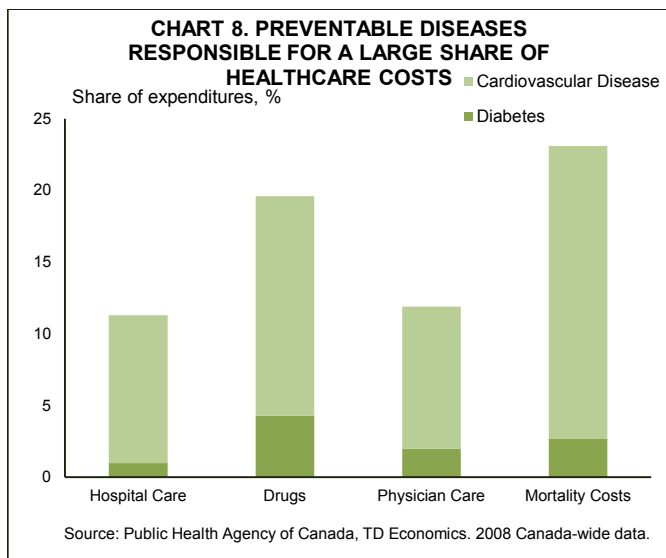
A productive, prosperous society depends on a productive, well-educated workforce. Ensuring continued prosperity thus depends on the next generation receiving all educational opportunities possible to reach their full potential. However, this potential is in large part formed well before children enter the formal education system. The first 1000 days of a child's life have a significant impact on educational outcomes later in life. For example, Quebec-based research found that childhood exposure to second hand smoke is associated with aggression later in childhood, a behaviour associated with lower education attainment.

There is of course no "silver bullet" to ensuring a healthy and successful life. That said, proper activity, nutrition, and socialization can have a life-changing impact on a child's future health, cognitive ability, and physical development for the rest of their lives. This requires us to develop more robust support for expecting parents and young families, including access to credible information and resources to support them on their journey.

Public spaces, physical activity, and health

Over recent years, many parts of the region have become denser, particularly in city cores. This densification is expected to continue as multiple unit housing construction outpaces other types (Chart 1). A side effect of this densification is an increased reliance on public space. As backyards give way to balconies, opportunities for physical activity within the home decline. Physical inactivity has a number of well-known negative impacts, including increased prevalence of diabetes, heart disease, and other medical conditions.

With more and more GTHA residents living in multi-unit buildings, access to public space and the opportunity for physical activity will become increasingly important, both from a current health perspective, and for the future of children within the GTHA. For adults, regular physical activity has a number of benefits. When individuals eat healthily, abstain from smoking, and exercise regularly, 90% of type 2 diabetes cases, 80% of coronary heart diseases, and 33%



of cancers can be avoided. A positive relationship has also been shown between exercise and mental health outcomes.

There are significant costs associated with these health issues. The Canadian Diabetes Association has described diabetes as an “economic tsunami”, and reports that it is expected to have cost Ontario nearly \$5.5 billion in 2014. As Chart 8 shows, diabetes and cardiovascular diseases are responsible for more than 10% of total hospital care, drug, and physician care expenditures in Canada. These are costs that could be significantly reduced through greater physical activity among adults. The true share of healthcare expenditures is likely higher, as many diseases associated with inactivity have high levels of co-morbidity. For instance, those with diabetes account for 32% of heart attacks, 43% of heart failures and 30% of strokes within Ontario.

The impact of physical inactivity among children can be even more severe, as it reverberates through the lifetime of the child. Physical activity during childhood, through organized sports, or other activities, has a number of benefits, including improved health (lower body fat, stronger bones and higher metabolic health relative to inactive children). Health benefits aren’t limited to childhood, but extend into adult life, and include:

- Lower likelihood of starting smoking, while those that do start to smoke tend to smoke fewer cigarettes.
- Reduced risk of developing numerous diseases, including heart disease, cancer, and Alzheimer’s.
- Increased probability of remaining active as an adult, itself associated with better health outcomes, including longer life.

Physical health is just one positive outcome of childhood physical activity. Other benefits include higher grades, better self-esteem, and less risky behavior. Children who participate in youth sports are also more likely to become involved in volunteer work. Ensuring that children are receiving adequate physical activity matters not just for today, but for the future of our region as well.

Unfortunately, very few of us are getting the kind of daily physical activity we need. Just 15% of adults get enough physical activity each day, while the rate among children is alarmingly low, with just 5% of Canadian youth getting the activity they need. Without increased physical activity, trends in deteriorating health are likely to continue, placing greater strain on both provincial and regional resources.

Research has shown that accessible community space, including green space, is a basic prerequisite to building strong neighbourhoods. Without this space, neighbourhoods struggle to provide the programs, and initiatives to meet their needs. However, governments and public sector institutions have been disposing of facilities and real estate in recent years. If these lands are not purchased by other public agencies, there is a continued depletion of valuable community assets. Indeed, the Toronto Region Conservation Authority recommends 20 hectares of green space per 1,000 residents as an optimum standard for public space. Despite this recommendation, as of 2011 the Toronto Region Conservation Authorities’ jurisdiction had achieved 8.4 hectares per 1,000 residents.

There is also an income aspect to the importance of green space. For low-income families, public parks and green spaces provide the opportunity for physical activity without the need to enrol children in oftentimes expensive structured sports activities (although structured sports also have significant benefits for participants). Without easy access to this space, as well as subsidized fitness and activity facilities, many low-income families would be unable to meet their need for physical activity.

With increased population density across the GTHA, and the known positive effects of physical activity, remaining resources for activity are crucial. These resources can include urban parks and green spaces, sports fields and arenas, splash-pads and pools, and other types of space. Within Toronto, 12.3% of the municipal area is dedicated to parkland, while in Hamilton the figure is just 2.3%. Other municipalities in the GTHA report similar shares. Worryingly, much of this space is in the form of undeveloped lands and parks

surrounding natural features that are typically located away from urban centres and high density areas. Urban green space is at a premium in many of the high growth, high density zones within the GTHA – where it is needed most.

The trend has been towards a further reduction of these spaces. For instance, since 2008, the Toronto District School Board (TDSB) has sold 66 sites that were declared surplus (generating in excess of \$400 million) in order to reinvest in the capital needs of the Board. Earlier this year the TDSB released a list of 130 schools currently at 65% or less capacity. Consultations will soon begin regarding school consolidations and the reduction of surplus space. The outcome of these reviews will likely result in further closing of schools, which may impact the maintenance of the associated green space, further reducing the number of areas available for adults and children alike. With nearly every resident of Toronto within one kilometer of a school, and most Peel Region residents within 500 meters of a park or school, any broader community space policy should take advantage of these valuable assets.

There are existing avenues for expanding green space. To take one example, condo developers often agree to provide city infrastructure, such as schools or libraries, in exchange for the ability to build taller, denser structures. While there is already a mandate for developers to include park space in the Ontario Planning Act, the continued development of public spaces is a potential win-win, as these new spaces will be located precisely in areas of increasing density, while developers can continue to build the denser/taller structures that they prefer.

Regardless of how it is achieved, increasing the size and number of easily accessible green spaces benefits not just our health and well-being, but the future health of our children as well. To facilitate this work, we collectively need to find ways for different sectors, including residents and the private sector, to contribute to the optimal use and accessibility of public space.

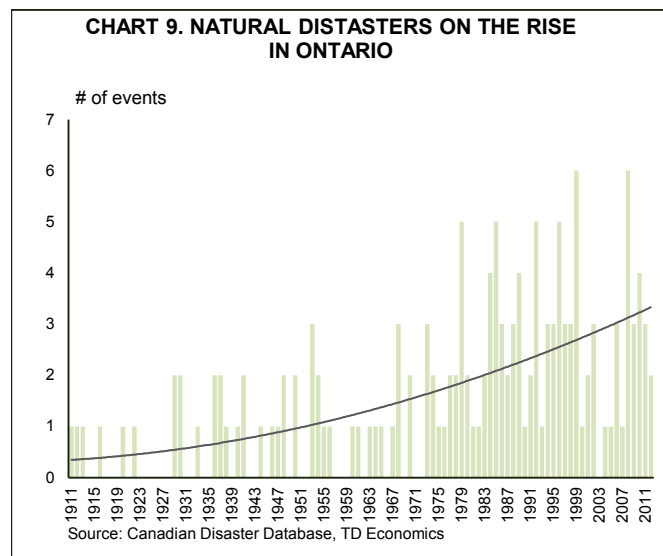
Increased density and weather intensity and the infrastructure needs of tomorrow

As the density of the GTHA continues to rise, there is a matching increase in the demands placed on its infrastructure. As we have discussed in past [reports](#), one of the key areas of future need is transportation infrastructure to support the increased population. Beyond transportation needs however, the increased prevalence of extreme weather events creates additional strains on infrastructure.

Indeed, from the December 2013 winter storm, to the tornado that touched down in Goderich, ON in 2012, it often feels as though extreme weather events are occurring more frequently. This common suspicion is in fact borne out in the data. As Chart 9 shows, although the data is somewhat choppy, there is a clear upwards trend in the number of extreme weather events occurring in Ontario (This is also a Canada-wide trend – see our [report](#)).

These events are more than just a strong storm; they often displace families from their homes, and potentially involve fatalities. The costs of these storms can be significant. In 2013, extreme weather events lead to record high insurance claims of \$3.2 billion Canada-wide. Dealing with the aftermath of these events falls on often cash-strapped municipal governments. Toronto illustrates the significance of these costs: although the City of Toronto has a \$30 million budget reserve earmarked for extreme events, the costs are often much higher. The December 2013 ice storm resulted in \$106 million in clean-up costs for the city (the broader costs were much higher). Earlier that year, a massive rain storm cost the city \$65 million to clear its aftermath, more than double the entire year’s budget reserve. Compounding the impacts, the full costs of the July rain storms were an order of magnitude larger than the clean-up costs, as the resulting physical infrastructure damage totalled nearly \$950 million, placing strains on future city budgets.

For the individual homeowner, the costs of extreme weather events will be felt in their pocketbooks. In the GTA, the average sewer-backup coverage adds \$73 to a typical homeowner premium of \$1,053. Between 2002 and 2012, the average cost of water damage claims rose 117%

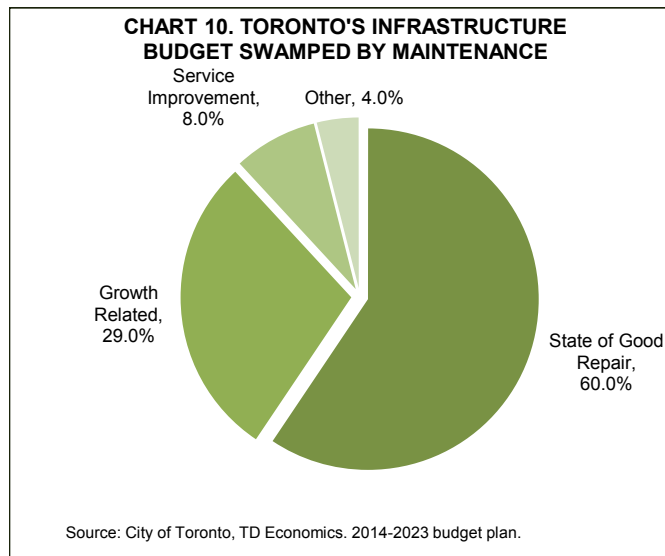


to more than \$15,500. Some municipalities, such as the City of Toronto, offer incentives to homeowners for the installation of a sump pump or backwater valve – Torontonians can receive up to \$3,400.

There is currently no national or provincial standard for what effective disaster mitigation should look like. That said, quality infrastructure, in good repair, can help mitigate many of the impacts of extreme weather events. Conversely, poor quality infrastructure has an increased risk of failure during these events, potentially exacerbating their impact. Cities, including Toronto, strive to keep their physical infrastructure in “a state of good repair” via annual maintenance and planned upgrades/replacements. Unfortunately, Toronto currently has a state of good repair backlog of \$1.7 billion, meaning that a sizeable portion of Toronto’s infrastructure is not in ideal condition. For Hamilton, the state of good repair backlog is even larger, at \$3.3 billion. Given Hamilton’s smaller size, this is a particularly troubling figure. This repair gap suggests that parts of both cities’ infrastructure may be more susceptible to failure under extreme weather conditions.

Looking beyond just keeping infrastructure in good repair, the increased incidence of extreme weather events makes the case for a renewed focus on infrastructure in the most general sense, including upgrades. Unfortunately, the 2014-2023 City of Toronto capital budget does not foresee major upgrades, as the majority of the capital budget is eaten up by state of good repair costs (Chart 10). After dealing with maintenance, and the expanded needs that the growth of the city brings, just 8% of the capital budget remains for improving the quality of Toronto’s infrastructure. Many other cities within the GTHA, such as Mississauga and Brampton face similar pressures despite their relatively newer infrastructure. Municipalities can apply to the federal government for funding to improve disaster mitigation, however, applications for more visible infrastructure such as arenas and libraries have tended to take priority.

The need for increased infrastructure investment goes beyond increased extreme weather events. Increasing density across the GTHA also requires further investment in infrastructure. The increase in density has been rapid: within the City of Toronto, requests for electrical connections grew by 58% between 2009 and 2012. The costs involved can be significant. According to Toronto Hydro, infrastructure costs grow rapidly as development density grows. Infrastructure costs per square kilometer can be as low as \$233K in rural



areas, but grow rapidly with density, reaching \$12.7 million for urban residential areas, and as high as \$372.8 million per square kilometer in the urban core. Difficulty in construction and operation in high density environments leads to these significant costs, and will create further strain on city budgets as urban density continues to rise.

While often expensive, the benefits from infrastructure spending can be significant: the Parliamentary Budget Office found that this spending has a 2 year multiplier of about 1.9. That means that for each dollar spent on infrastructure, the economy grows by \$1.90 – one of the highest returns across all major spending categories. Currently, municipalities own around 60% of infrastructure, but only six cents of each federal tax dollar goes to infrastructure. Much of the responsibility for infrastructure funding currently lies with Infrastructure Canada, a federal agency, although funding is also raised at both the provincial and municipal level. While the federal government is and will remain a major source of infrastructure funding, there is still an onus on cities to take advantage of the tools and powers available to them. Property taxes are a major revenue source, but tend not to grow in line with demands. Making more use of user-pay and other arrangements, alongside better infrastructure management can help close funding gaps.

While it is unquestionably important to maintain existing infrastructure, ensuring the GTHA is prepared for potential future weather events should also be a priority. Given the current low interest rate climate, investing in infrastructure now will help the region prepare for the future, with lower financing costs than in the past.

The word infrastructure typically brings to mind massive

projects, such as expressways, sewer projects, or other large, concrete-intensive endeavours. However, it is important to remember that infrastructure is more than just construction projects – it includes all systems needed to ensure the functioning of a city. There are potential synergies between the solutions to future weather events, and other areas of focus identified in this report. The most obvious is through urban green space. Not only are these areas public spaces where adults and children can enjoy both nature and physical activity, they are also a valuable part of a city's infrastructure.

As past [TD reports](#) have shown, Toronto's urban forests deliver more than \$80 million in services each year to residents of the city, well in excess of their maintenance costs. These benefits have direct application to extreme weather events, as urban forests reduce the impacts of high temperatures, and help control runoff during and after storms, reducing the strain on the city's water diversion and treatment facilities. Although, as the results of the 2013 ice storm show, urban trees can have unexpected costs, intelligent management of this resource should help reduce these impacts. Beyond trees, urban green spaces, including parks and fields, also help manage water flow and reduce infrastructure needs, with a very favourable benefit-cost ratio.

Green spaces are just one of a number of cost-effective infrastructure solutions that can help address cities' future needs. Other features, such as bioswales (small planted areas adjacent to sewer entrances which reduce waterflow) have shown promise during testing in other cities, including New York. In addition to easing the burden on infrastructure, these types of solutions can also help reduce "heat island" effects, and have the added benefit of beautifying the urban environment.

Regardless of one's preferred solution, it is clear that most major cities need a re-evaluation of infrastructure needs and plans in the context of increasing extreme weather events. Intelligent solutions to these needs will not just ad-

dress the pressing issues, but provide additional benefits to all city residents. Arriving at these solutions will require some creative thinking around infrastructure priorities, support from residents and businesses for increased investments, planning for future demand, and supporting decision making with the right data.

Bottom line: bringing the themes together

CivicAction has set an ambitious agenda for its 2015 Summit. All five areas covered in this report have an important role to play in ensuring a prosperous, healthy future for all GTHA residents. It is critical that we understand and examine the threads which link each of these themes. The health of the population is one such thread: ensuring that seniors can receive the support they need when they need it will help reduce the strain on hospitals. Similarly, mental health issues remain in many ways an 'unseen burden', with significant costs for both the economy and the healthcare system. Looking forward, ensuring childhood health, including via green spaces (which can simultaneously help solve infrastructure problems) will help keep future healthcare costs down, while enabling a higher quality of life.

As a region, we need to build our resiliency – both on a personal level through enhanced support for positive mental health and on a regional level through proper investment in our infrastructure. Ensuring that support systems are in place for the vulnerable in society, such the young, the old, and those with mental health issues stands in equal importance to providing physical infrastructure, including green spaces, in reaching these goals. Addressing these themes will foster a more resilient foundation for the GTHA's residents. While the scope of the issues is large, as CivicAction and other groups have shown in the past, bringing a large group of interested/affected parties together towards a common cause often yields significant results. An informed discussion at the CivicAction Summit will help to identify next steps for taking action on these important issues.

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