



Growing Healthier: A Health Equity Impact Assessment for Saskatoon's Growth Plan

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Prepared by:

Tanya Dunn-Pierce, Saskatoon Health Region

Cora Janzen, Saskatoon Health Region

Cory Neudorf, Saskatoon Health Region

Michael Schwandt, Saskatoon Health Region

Ryan Meili, Upstream

Cody Sharpe, Upstream



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Executive Summary

Developed jointly by the Saskatoon Health Region and Upstream, this report applies a health equity lens to the City of Saskatoon's Growth Plan to Half a Million [i.e. the Growth Plan from hereon]. Health equity exists when people can reach their full health potential, without being disadvantaged by where they live, how much money they make, or other personal circumstances, including gender, age, ability or cultural identity. By applying this lens, our report highlights the relationship between community health and well-being with the municipal sector's responsibilities – including land use planning, public transit, and active transportation – with a special emphasis on how the community health and well-being of particular populations can be most improved by interventions in such areas.

We developed this report because Saskatoon is at a critical juncture. The Growth Plan establishes a vision and an agenda for action which will guide the city for the next 30 to 40 years. The plan presents an opportunity to educate the public on how growth can improve their health and well-being, and provide clear recommendations to policy makers on how to capture these benefits while implementing the Growth Plan.

We have developed thirteen recommendations, all of which are compatible with the core initiatives of the Growth Plan. Our overarching recommendation is that the City of Saskatoon ought to incorporate a focus on community health and well-being when implementing this plan, specifically by drawing on the Saskatoon Health Region – Population and Public Health as a resource and ally when making decisions around growth. By doing so, the City can achieve its objectives while simultaneously improving health equity in Saskatoon, making for a stronger, safer, and more productive community.

Collected Recommendations

Corridor Growth

- Ensure that infill due to corridor growth contains a mix of housing types, with a deliberate emphasis on affordable owner-occupied and rental units
- Reduce policy barriers to developing affordable infill housing, and incentivize developers into providing safe, affordable, and quality housing in corridor growth areas
- Consult with affected communities to determine how heavily existing public services and amenities – such as green spaces – are used, and project how this load will change as corridor growth progresses
- Use the results of these consultations to guide plans for the provision of public services and incentives for private ones, such as grocery stores
- Increase neighbourhood green cover as corridor growth occurs in order to mitigate the urban heat island effect and improve mental health and air quality

Public Transportation

- Revise Saskatoon Transit's low income bus pass to follow Calgary's example, which provides a discount of between 50 and 95%, depending on income
- Use the fleet replacement process to transition to lower emitting vehicles and improve local air quality
- Focus the shift to an intensity model of service on neighbourhoods with lower socio-economic status, thus improving their access to transportation
- Encourage development along bus rapid transit routes that improves the availability of services like grocery stores, community gathering places, and employment centers

Active Transportation

- Direct early investments in new and rebuilt active transportation infrastructure to lower income neighbourhoods, and remove physical barriers to active transportation in these areas
- Ensure active transportation infrastructure is well integrated with public transit and facilitates connectivity between neighbourhoods, employment areas, and services such as grocery stores
- Develop a maintenance plan that ensures active transportation infrastructure is accessible year-round
- Involve local communities in the development of active transportation infrastructure by consulting them on needs and usage habits

Introduction

The City of Saskatoon has been developing a new integrated growth plan over the past several years, one that will shape the city's development in the coming decades. The Growth Plan initiatives identify priority actions in numerous fields, including public transit, infill development, and active transportation [City of Saskatoon, April 2016; City of Saskatoon, June 2016]. These ambitious plans have been the result of an extended process of public consultation, and are in line with the community vision adopted by the City in 2011 [City of Saskatoon, 2011]. In general, decisions made at the municipal level carry the potential to improve or worsen the health and well-being of Saskatoon residents. For example, changing how public transit operates can make it easier for citizens without personal transit to access grocery stores and places of employment. Increasing the amount of green space and tree cover in a neighbourhood can improve local air quality and mental health. These are examples of the social determinants of health (SDoH), which include factors like housing status, employment, food security, and social isolation. Together, the SDoH make a significant contribution to an individual's wellbeing and the health of a community, with health understood as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity" [World Health Organization, 1948].

The determinants of health are not experienced equally by all people. There is evidence that shows uneven access to the SDoH, with wealthier individuals typically enjoying more and poorer people less, a situation which has consequences for population health [Marmot, 2015; Raphael, 2016]. Uneven access to the SDoH in Saskatoon, and the way this prevents residents from achieving good health and well-being, has been well documented [Lemstra et al., 2006; Lemstra & Neudorf, 2008].

The World Health Organization's Healthy Cities project aims to integrate health in the social, economic and political agendas of Cities. There is increasingly more cities in North America that are incorporating a concern with community health and health equity into their city growth plans [Collins & Hayes, 2013; Dannenberg et al., 2008; Kemm et al., 2004]. Cities of various sizes have begun conducting Health Equity Impact Assessments (HEIA) to determine how their objectives on infill development and transportation planning can be modified to improve health and wellbeing, mitigate any unintended negative impacts and in doing so provide a higher quality of life for their residents.

This brief report, developed in partnership by Upstream and the Saskatoon Health Region, brings a focus on community health and health equity to some of the actions outlined in the Growth Plan. It will be of interest to policymakers and members of the public who want to understand how our built environments shape our health, and what we can do to ensure that growth does not come at the expense of wellbeing. In each section, a concise and general overview of the relationship between municipal responsibilities and community health and well-being is provided, as well as a set of recommendations on how the City could shape the related Growth Plan initiatives in order to create the preconditions of good health and well-being.

As the Growth Plan shifts from the design to the implementation phases, we hope that the City will draw on the resources available at the Saskatoon Health Region – Population and Public Health to help incorporate community health and health equity into municipal plans, and to monitor the impact on health of these plans.

Method

The method of HEIA relied on in this report is based on a model developed by the Ontario Ministry of Health and Long-Term Care. It was designed to produce an assessment focused on “practical, actionable solutions on current policies, programs, or initiatives impacting health outcomes” (2008: p. 7). Aspects of the HEIA model produced by the Wellesley Institute were also incorporated, specifically the systematic method of questioning the potential health equity impacts of a project proposal [Barnes, 2011].

Reviews of academic literature, organizational reports and personal interviews were done to establish the link between city planning and community health, and to develop recommendations on how Growth Plan can achieve its goals while improving health equity. Our desire to produce a timely and relevant report led us to focus on the actions that will be taken in the next four years, specifically in the areas of corridor growth, public transit, and active transportation [City of Saskatoon, April 2016; City of Saskatoon, June 2016].

Ideally, a HEIA includes a plan for monitoring shifts in health status as a program is implemented, as well as a pre-implementation community consultation phase [Province of Ontario, 2008]. The latter is useful in generating recommendations, but also in helping the public to understand the role the SDoH play in their health and how municipal governments can influence their availability [Mittelmark, 2001]. As the Growth Plan is rolled out, additional HEIAs can be produced which cover upcoming actions and, if resources are available, expand the scope of the assessment to include community engagement and monitoring components.

Corridor Growth

Plans & Goals

According to the Growth Plan, over the next 30 to 40 years Saskatoon's population is expected to double to 500,000 people. In general, growth can pose a challenge to quality of life. At the same time, there are many ways to take action on mitigating the negative health impacts of growth while amplifying the positive. By shifting to a focus on corridor development that encourages higher density and mixed uses, improvements to public transit will be more affordable and public spaces will become more attractive.

The Growth Plan has identified high, medium, and low priority corridors, with most of the high priority areas also being early targets for bus rapid transit. Over the next five years, the priority focus areas include 22nd Street West between Avenue P and Idylwyld Drive, 8th Street East from Preston Avenue to McKercher Drive, and the planned Holmwood Suburban Centre, which will be located on Saskatoon's eastern edge at the end of 8th Street East. Each area will have a Corridor Area Plan, a document that will set out design guidelines to direct growth and redevelopment within the area. Through a focus on thoughtful corridor growth, the Growth Plan aims to achieve a balance of 50% suburban growth and 50% infill development over the long term [City of Saskatoon, April 2016: p. 18].

Health & Corridor Growth

By focusing on neighbourhood infill and redevelopment of underused lands, the Growth Plan presents an opportunity to improve housing quality and its related community health outcomes. Housing quality is determined by whether or not a unit contains critical features like hot and cold running water, indoor plumbing, an adequate heating system, and other amenities, but also that it lacks various risk factors, such as lead paint, asbestos-based insulation, and indoor mould [Matte & Jacobs, 2000]. Poor housing quality can contribute to the presence and severity of various health conditions, such as asthma and cardiovascular disease; in addition, poor housing quality is associated with low housing stability, which in turn is associated with poor school outcomes in children [Adair et al., 2016; Mueller & Tighe, 2007]. Housing instability has been directly associated with increased drug use, emergency room visits, and unmet health care needs [Jaworsky et al., 2016; Palepu, et al., 1999]. Finally, inadequate housing and food insecurity are also related, "suggesting that families in desperate straits are forced to make multiple serious compromises in basic needs" and thus increasing the likelihood of poor health outcomes [Kirkpatrick & Tarasuk, 2011: p. 291]. By ensuring that new, high-quality, and affordable housing is a part of corridor growth, the Growth Plan can be a net benefit to community health and well-being.

Neighbourhood infill means increasing population density and greater opportunity for the public services and amenities that improve community health and well-being. For example, there are "strong public-health arguments for the incorporation of amenities such as greenery, natural light, and visual and physical access to open spaces" [Jackson, 2003: p. 198]. Improving neighbourhood access to green space also encourages residents to stay within the neighbourhood for recreation, serving to keep vehicle traffic under control and the air quality high. Notably, improving access to green space is a tremendous health benefit to populations with less mobility, such as those without personal transportation and seniors [Arneberger, 2012; Guite et al., 2006; Melis et al., 2015].

Corridor growth also presents an opportunity to reduce road traffic injuries, increase physical activity, and improve air quality by developing the infrastructure required for non-automobile transportation. Combined with the policy changes required to encourage their use, such infrastructure improves the opportunities for employment and access to healthy food, important social determinants of health [Aytur et al., 2008; Esliger et al., 2012].

Finally, increasing urban density without simultaneously increasing the amount of green cover may increase the effect of urban heat islands, local climates that are generated by vehicle emissions and the retention of heat from the sun by buildings. When coupled with heat waves or extreme temperature events, urban heat islands can have a direct impact on health and well-being, impacts that are carried more heavily by populations without access to temperature controlled environments [Coutts et al., 2007].

Recommendations

- Ensure that infill due to corridor growth contains a mix of housing types, with a deliberate emphasis on affordable owner-occupied and rental units
- Reduce policy barriers to developing affordable infill housing, and incentivize developers into providing safe, affordable, and quality housing in corridor growth areas
- Consult with affected communities to determine how heavily existing public services and amenities – such as green spaces – are used, and project how this load will change as corridor growth progresses
- Use the results of these consultations to guide plans for the provision of public services and incentives for private ones, such as grocery stores
- Increase neighbourhood green cover as corridor growth occurs in order to mitigate the urban heat island effect and improve mental health and air quality

Public Transit

Plans & Goals

The Growth Plan's intended actions on public transit can be grouped under two broad headings: designing and building new infrastructure, and implementing changes to existing services in response to user feedback.

Currently, the City is piloting greater frequency of conventional bus service along the 8th Street route and depending on federal funding, the City will be constructing facilities for two bus rapid transit lines as funding allows. The Red Line will run between 3rd Avenue North and College Drive, while the Blue Line will offer service between 8th Street and Broadway Avenue. These projects will require features such as dedicated bus lanes, boarding platforms and park-and-ride lots at key locations along the routes. Frequent transit services and enhancing the customer experience can encourage residents to change modes of transportation, and deliver health benefits to all citizens.

The Growth Plan includes plans around fleet renewal and expansion, specifically by retiring and replacing Saskatoon Transit buses, increasing the number of service hours dedicated to high ridership areas, and instituting annual reviews of route ridership so that service hours can be reallocated as usage patterns shift. A repeated theme in the Growth Plan is the intention to shift transit service away from a coverage model – where route reach is prioritized, and the goal is to ensure every household is within walking distance of a transit stop – to an intensity model, where route plans are driven primarily by a focus on maximizing ridership and reducing travel time for as many riders as possible.

Health & Public Transit

Members of lower socio-economic groups are often reliant on public transit for one of two reasons. First, they may be individuals living with a disability or low-mobility seniors who lack the ability or means to operate a personal vehicle. Second, they may lack the financial resources required to own private transportation. Frequently, there are transportation services available for individuals in the first category that are not open to those in the second. For people with lower socio-economic status, a reduction in transit fares or expansion in service hours present an opportunity to improve their access to transportation, and in turn positively impact the SDoH [Coveney & O'Dwyer, 2009; Litman, 2016].

In particular, improving the accessibility of transit can ease the capacity of citizens with lower socio-economic status to access nutritious food, public services and healthcare services, which in turn reduces the rate of chronic health conditions. High transportation accessibility also improves an individual's employment opportunities [Ferguson et al., 2012; James et al., 2014]. By reducing commuting times, improving service reliability, and reducing crowding by increasing frequency, the Growth Plan can reduce negative health outcomes across the population [Hansson et al., 2011]. Additionally, transit improvements such as the ones mentioned, can improve workplace productivity and reduce workplace absenteeism, making for a more productive and reliable labour force [Hammig et al., 2009; Stutzer, 2008; Karlstrom & Isacson, 2009].

Chronic exposure to vehicle emissions is a well-documented health risk, even at low levels, and there is a positive association between living next to a major road and cardiovascular mortality [Beck et al., 2013; Chen et al., 2013; James et al., 2014]. Lower income populations frequently reside in such areas, making investments in public transit an opportunity to improve air quality and reduce injuries by reducing the number of personal automobiles on the road. By ensuring that existing residents are not pushed out as transit services improve and infill occurs – in particular, by ensuring that housing is mixed-use with a good proportion of affordable rental units – the Growth Plan can be of benefit to mental health, physical activity, and community cohesion [Edwards et al., 2013; Farmer, 2011; McClure et al., 2015].

Recommendations

- Revise Saskatoon Transit’s low income bus pass to follow Calgary’s example, which provides a discount of between 50 and 95%, depending on income
- Use the fleet replacement process to transition to lower emitting vehicles and improve local air quality
- Focus the shift to an intensity model of service on neighbourhoods with lower socio-economic status, thus improving their access to transportation
- Encourage development along bus rapid transit routes that improves the availability of services like grocery stores, community gathering places, and employment centers

Active Transportation

Plans & Goals

The Active Transportation Plan is related initiative of the Growth Plan. This plan contains an ambitious agenda for the City on active transportation, with nearly two dozen actions to be taken in the first two years of the plan. At a high level, the plan sets out five goals:

- More walking and cycling
- Safer walking and cycling
- More places for walking and cycling
- Build a culture for active transportation
- Encourage other forms of active transportation

Building new infrastructure, removing physical barriers, and improving connections to transit are included in the list of near-term actions. Also included are plans to develop guidelines on how to prioritize investments, revising sidewalk and bicycle facility snow removal requirements, and using the Protected Bike Lane Demonstration Project to inform the development of similar infrastructure around the city.

Health & Active Transportation

The health benefits of active transportation are diverse and well-documented, and can be collected under several headings: societal; economic; environmental; and safety. At the societal level, benefits include reduced mortality rates, increased incidental contact between individuals and increased social capital, and reduced transportation poverty among the population's most isolated (Giles-Corti et al., 2010). The economic benefits include increased support for small local businesses, such as neighbourhood cafés and corner stores, as destinations that are more accessible and attractive for active transportation attract more visitors and patrons. In addition, increases in physical activity attributable to active transportation can have large impacts on healthcare costs and workplace productivity (Bounajm et al., 2014; Giles-Corti et al., 2010). The local environment benefits from active transportation as modal share shifts away from personal autos and air pollution decreases. Investments in active transportation also contribute to a fall in greenhouse gas emissions and a reduced reliance on fossil fuels (Dora and Hosking, 2012; Giles-Corti, et al., 2010). Finally, the safety benefits of active transportation come in the form of reduced injuries due to traffic incidents, as well as increased neighbourhood-level surveillance and perceptions of security (Dora and Hosking, 2012).

For residents who do not to drive a car due to reasons of means, access or preference, a comprehensive active transportation system is critically important on several levels. Such transportation systems provide access to employment, education, healthcare services, healthy food, and recreational and social activities, thus improving health equity across populations (Active Living by Design, 2012; Dora and Hosking, 2012; Sandt et al., 2016). In Saskatoon as in other cities, it has been found that people with low incomes also have the lowest levels of physical activity; increased investment in active transportation infrastructure, if

properly designed and sited in neighbourhoods of concern, is an effective way of raising activity levels and providing access to all the goods named above [Saskatoon Health Region, 2015; Panter et al., 2016]. Crucially, neighbourhoods where the population is predominantly lower income tend to be less traversable via active transportation, partly owing to the presence of physical barriers installed to facilitate car travel [Sandt et al., 2016; Smit et al., 2011]. In addition, the active transportation infrastructure present in these neighbourhoods is often poorly maintained or not updated as accessibility and use standards have changed over time [Center for Disease Control, 2013].

Recommendations

- Direct early investments in new and rebuilt active transportation infrastructure to lower income neighbourhoods, and remove physical barriers to active transportation in these areas
- Ensure active transportation infrastructure is well integrated with public transit and facilitates connectivity between neighbourhoods, employment areas, and services such as grocery stores
- Develop a maintenance plan that ensures active transportation infrastructure is accessible year-round
- Involve local communities in the development of active transportation infrastructure by consulting them on needs and usage habits

Closing Remarks

The Growth Plan is a tremendous opportunity for Saskatoon. Its intentions around infrastructure investment and policy change could provide significant improvements in health and health equity across the city, especially if the thirteen recommendations made here are adopted. While this report has focused solely on corridor growth, public transit, and active transportation, there will be opportunities to improve community health and well-being across the range of activities set out in the Growth Plan. Capturing these benefits will require adopting a health lens while implementing the plan, a need that the Saskatoon Health Region – Population and Public Health is ready to help fill. A collaborative approach between public health departments and municipalities is a model that has worked in many other jurisdictions and Saskatoon Health Region – Population and Public Health appreciates the opportunity to work collaboratively with our municipal partners in making the city a healthier and safer place to live, work and play.

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