THE SCHOOL OF PUBLIC POLICY

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CAPSTONE PROJECT

Edmonton's Aging-Friendly Strategy: The Need for Measurable Outcomes

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Capstone Executive Summary

As the global population ages, ensuring cities adopt aging-friendly strategies is becoming a global public health priority. One response has been the World Health Organization's (WHO) Aging-Friendly strategy which aims to create a framework for municipalities to adopt best practices to their local context. The global strategy has been developed to maintain a flexible approach that allows for local adaptation. Program evaluation – a key component for the successful implementation of municipal level aging strategies – is proving to be a challenge. In an effort to maintain flexibility for jurisdictions around the world, the WHO strategy faces unintended consequences resulting from a multiplicity of interpretations. This paper explores the challenges and best practices of developing locally adapted indicators based on the extensive list of indicators and strategies that have been developed globally.

Evaluation is an essential component for aging-friendly initiatives as it allows jurisdictions to have concrete measures of progress and to better allocate resources. Key performance indicators are essential as they measure progress on the main goals of the strategy. However, given the flexible nature of the global age-friendly strategy, it becomes difficult for municipalities to find ideal performance indicators. As a result, municipalities have to overcome the challenge of finding suitable data sources for effective evaluation. This paper aims to provide comparable measures to WHO suggestions for indicators.

Through cross-jurisdictional comparisons of global strategies and implementation of best practices at local levels, this capstone highlights the unintended consequences that result from flexible strategies. It uses Edmonton, Alberta as a case study, but draws out indicator selection lessons for other municipalities. Edmonton is an ideal example as the City is currently modifying the existing age-friendly strategy. This new strategy aims to better reflect the changes and needs of the aging population in Edmonton. Diverging from the existing WHO's recommended strategy creates more challenges for Edmonton as they look for comparable measures. However, this capstone aims to use this case study to recommend data sets and indicators based on best practices established by the WHO and other established age-friendly jurisdictions.

Introduction

The Government of Alberta projects that "in the next 10 years, the number of seniors is going to increase by more than 50%."[1] This will have profound social and economic impacts on society generally, and the living of life and delivery of services in cities specifically. Ensuring cities adapt to the changing needs of aging populations is important in maintaining the health and well-being of seniors. "Making communities 'age-friendly' is believed to be one of the best ways to do this."[2] In order to create meaningful change within cities, it is important to have both measurable and relevant outcomes that track efforts to become more age-friendly.

"All too often, evaluation receives little attention in the development of community programs, usually because of a lack of resources or capacity to evaluate."[3] As a result, evaluation is usually not considered until the implementation stage is under way. This capstone reviews the best practices of implementing and evaluating age-friendly strategies and uses these to analyze and make specific recommendations for Edmonton, Alberta. Although the City of Edmonton has been formally engaged in the WHO's age-friendly community initiative since 2013, they recently announced changes to their initial strategy as a result of public engagements. Based on input received from the community, Edmonton's 2017 Public Engagement document highlights a gap in adopting metrics to evaluate aging-friendly efforts.[4]

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[1] "Age-Friendly Alberta," Government of Alberta, Accessed on February 20, 2018, Retrieved from http://www.seniors-housing.alberta.ca/seniors/age-friendly-alberta.html

[2] "Age-Friendly Communities," Government of Canada, March 29, 2016, Retrieved from https://www.canada.ca/en/public-health/services/health-promotion/aging-seniors/friendly-communities.html

[3] Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," Public Health Agency of Canada, December 2015, p. 10, Retrieved from http://www.phac-aspc.gc.ca/seniors-aines/alt-formats/pdf/indicators-indicateurs-v2-eng.pdf

[4] "Advancing Age Friendly Edmonton - What We Heard," City of Edmonton, September 2017, Retrieved from https://www.edmonton.ca/city_government/documents/PDF/WhatWeHeard-AgeFriendlyEdmonton.pdf

Going forward, the City has committed to making changes to the original aging-friendly strategy to fill gaps identified through public engagements.

This paper will look at how the City of Edmonton can incorporate more measurable evaluation indicators, which have been developed and recommended by other organizations, as Edmonton implements its new Aging-Friendly strategy. Incorporating evaluation indicators at the beginning stages of the aging-friendly strategy development will allow steps to be put in place for long term evaluation. Evaluation will allow the City to determine whether the feedback identified through public engagements has been met.

The goal of this paper is not to develop a new evaluation strategy for the City, but instead, to make recommendations from existing frameworks and methodologies. These frameworks have established best practices that are a result of diverse input from academic research and stakeholder consultations. The capstone will also address the challenges that arise when trying to evaluate global level strategies as they are implemented at the local level. It provides an analysis of the unintended consequences of how global strategies are designed, and of the challenges associated with an oversupply of indicator options.

World Health Organization's Approach:

To better understand friendly aging strategies at the community level, it is important to address where the topic originates from. The friendly-aging initiative was originally championed by the World Health Organization. This was a result of emerging research surrounding the challenges associated with the growth in aging populations coupled with a gap in policy guidance on the subject. "In 2006, the World Health Organization (WHO) developed the Global

Age-Friendly Cities Project," where cities from around the world provided input into a framework for creating age-friendly cities.[5] Saanich (BC), Portage la Prairie (MB), Sherbrooke (QC), and Halifax (NS) were the four Canadian cities who undertook stakeholder consultations for the project to establish eight key domains considered essential in making cities age-friendly.

These eight domains have been developed on a global scale and have become the core of aging friendly strategies. The WHO framework is publicly available to any jurisdictions looking to participate in the friendly-aging initiative. As a result of its prevalence, all Canadian WHO aging-friendly members are encouraged to implement the recommended eight domains in their local strategies. These eight domains include:

- outdoor spaces and buildings;
- transportation;
- housing;
- social participation;
- respect and social inclusion;
- civic participation and employment;
- communication and information; and
- community support and health services.[6]

Additionally, the WHO endorsed the creation of Age-Friendly communities by supporting a Global Network of Age-friendly Cities and Communities (GNAFCC).[7] The GNAFCC has developed strategies and indicators to help cities and communities achieve Age-friendly targets. Tools and resources are shared within the network to aid other communities in

[5] "Age Friendly Communities."
[6] Ibid.
[7] "Age-friendly Environments," World Health Organization, Accessed on March 3, 2018, Retrieved from http://www.who.int/ageing/age-friendly-environments/en/

reaching their age-friendly goals. “Key principles which are reflected in the core indicators are equity, accessibility and inclusiveness,” defining these indicators and applying them in practice can vary across communities based on local conditions.[8]

A challenge surrounding these indicators is the differences in the availability of data across jurisdictions. Lack of resources and “differences in the way that each community will implement the same measurement approach,” can limit the comparability of jurisdictions.[9] This can make it difficult to conduct cross-comparisons of age-friendly policies. The WHO suggests that “using the same structured approach to selecting indicators, including the adoption of a core set of indicators, will facilitate comparisons across time and place.”[10] As a result, age-friendly policies and indicators are presented as suggestions, instead of requirements to becoming GNAFCC members, to allow for flexibility in addressing more localized contexts. However, this flexibility at the community level also creates challenges for the way indicators are implemented which can make it difficult to compare across jurisdictions.

Figure 1 below, provided in the WHO’s Report, highlights one of many suggestions put forth in selecting age-friendly indicators.[11] This framework highlights the multiple options available when a municipality considers selecting an indicator. For example, indicators can be chosen based on time frames depending on the short or long term aims of a strategy. Additionally, indicators can change depending on whether an input or output is being measured. Jurisdictions may choose to focus on one section of the WHO framework when

[8] “Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators,” World Health Organization, 2015, p. 27, Retrieved from http://apps.who.int/iris/bitstream/10665/203830/1/9789241509695_eng.pdf
[9] “Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress,” 17.
[10] Ibid, 8.
[11] Ibid, 13.

choosing indicators or choose indicators from multiple sections. The variation introduced by this flexibility creates another layer of difficulty in evaluating strategies across jurisdictions.

FIGURE 1. A FRAMEWORK FOR SELECTING AN AGE-FRIENDLY CITY INDICATOR SET

Current Status in Canada

Since 2011, more than 560 communities in Canada have committed to the age-friendly initiative.[12] While "national governments are largely responsible for creating policies and

[12] "Age-friendly Communities in Canada: Community Implementation Guide," Public Health Agency of Canada, 2012 (Modified 2016), p. 5, Retrieved from https://www.canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/publications/healthy-living-vie-saine/age-friendly-communities-guide-2012-collectivites-amies-aines/alt/pub-eng.pdf

strategies for healthy and active ageing," the delivery of those services tends to fall upon local governments.[13] This model is especially true in Canada where the Federal government outlines an age-friendly policy, but the actual implementation of that policy falls to municipalities through provincial funding and strategies.

Within Canada, the Public Health Agency of Canada (PHAC), a federal health agency, has played an instrumental role in providing guidance to provinces and communities by developing resources and toolkits to aid in their age-friendly initiatives. Similar to the WHO's GNAFCC resources, PHAC provides an Evaluation Guide which provides suggestions to Canadian jurisdictions who are looking to evaluate their progress.[14] This Evaluation Guide provides 43 indicators that can be adopted by communities throughout the country. The Guide builds upon the research undertaken by the WHO in developing indicators by making the indicators relevant to the Canadian context.

Similar to the WHO approach, the indicators are presented with multiple options under each domain to be utilized in evaluating age-friendly strategies instead. Additionally, they are presented as recommendations, instead of being presented as requirements of an effective evaluation program. As a result, it is at the complete discretion of each jurisdiction to create an evaluation strategy that meets the needs of its locality.

Based on the recommendations put forth in the guides by the WHO and PHAC, indicators will be recommended for Edmonton based on the four new domains selected by the City. To assess the implementation of a global strategy at the community level, this capstone

[13] "Membership in the Global Network of Age-friendly Cities and Communities (GNAFCC)," World Health Organization, March 2017, Retrieved from http://www.who.int/ageing/age-friendly-environments/GNAFCC-membership-en.pdf

[14] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 9.

will address not just the challenges in more detail, but, through a cross jurisdictional comparison, develop the most effective, locally adapted indicators out of the large and confusing range of options available. Although Edmonton will act as a case study, the capstone will also aim to draw out indicator selection lessons for other municipalities.

Edmonton is an ideal case study because it is on the cusp of implementing a new age-friendly strategy and can both profit from this analysis and provide a helpful example for others. Currently, Age Friendly Edmonton (AFE) 2.0 is in the process of establishing a "leadership table," which will be comprised of individuals who help establish the direction of the renewed strategy.[15] As a result, Edmonton is at the beginning stages of determining what indicators and evaluation criteria will be used to determine the progress of the new strategy. An opportunity exists for this research to influence the direction Edmonton takes by using examples provided by other organizations.

Key Performance Indicators:

Indicators, broadly speaking, are "succinct measures which describe a complex phenomenon, typically produced by processing and simplifying a large amount of raw data."[16] Key performance indicators (KPI's), are a small set of indicators chosen particularly based on the main objectives of a policy. KPI's, also referred to as "core indicators" in many reports, are an important tool to determine the effectiveness of policies and provide accountability. They focus on "a specific, observable and measurable (quantitatively or qualitatively) characteristic

[15] "ESCC Updates," Edmonton Seniors Coordinating Council, May 2018, Retrieved from https://mailchi.mp/77eead8e6a3a/escc-updates-may-2018

[16] Ibid, 15.

or change that represents progress towards a goal."[17] However, "careful consideration must be given to the selection of indicators as they have great potential to influence, for better or for worse, how a problem is framed as well as what actions are triggered as a result."[18]

Arguing there is a need for an "outcomes-oriented accountability system for age-friendly city initiatives," the WHO has created A Guide to Using Core Indicators to help communities around the world reach measurable policy outcomes.[19] These KPIs were developed with significant stakeholder engagement in the form of focus groups targeting older populations and service providers in multiple countries.[20] The KPIs put forth as suggestions by the WHO align, unsurprisingly, with the framework presented above in Figure 1. However, as a response to the diversity of implementation sites around the world, the KPIs focus on outcomes and impact assessment, rather than on creating concrete processes used to achieve those outcomes.[21] Figure 2, below, highlights the KPIs put forth by the WHO that focus specifically on outcomes and impact assessments of those outcomes.

[17] Ibid, 14.
[18] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 23.
[19] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 5.
[20] "Global Age-friendly Cities: A Guide," World Health Organization, 2007, pg. 1, Retrieved from http://apps.who.int/iris/bitstream/handle/10665/43755/9789241547307_eng.pdf;jsessionid=90D7834FCDF3614C4200A69CE529D104?sequence=1
[21] Ibid, 27.

FIGURE 2. CORE INDICATORS OF AGE-FRIENDLY CITIES

These equity measures and their outcomes on the age-friendly environment overlap and address many of the goals within the eight aging-friendly domains identified by the WHO. In addition to the fifteen core indicators listed above, the WHO report provides other general indicators which can be used in supplement to the aforementioned. The report highlights indicators, specific actions, and their expected outcomes, which can be used by cities to achieve aging-friendly goals. From this expansive list of indicators and potential outcomes resulting measured by them, it becomes evident that the process of selecting and implementing indicators into the evaluation strategy of an aging-friendly policy can become difficult.

Case Study

Edmonton

In 2011, the City of Edmonton created a "Vision for an Age-Friendly Edmonton Action Plan" in partnership with local organizations dedicated to making the city more age-friendly.[22] The City of Edmonton employed focus groups and interviews with stakeholders to determine the direction of the AFE strategies. While focus groups are less resource intensive, the "information does not provide a representation of the community as a whole and does not claim to provide a comprehensive or generalizable cross-section of the population of older adults."[23] Focus groups are limiting as they miss out on valuable feedback from a large portion of the target population. This can impact how WHO and PHAC established policies on aging-friendly filter down at the municipal level.

Having undertaken stakeholder engagements and community consultations, Edmonton began implementing locally adapted Age Friendly Edmonton (AFE) projects in 2013.[24] Although local adaptability is recommended, many jurisdictions accept the eight WHO domains as they are with little variation. Compared to the other GNAFCC members, Edmonton chose domains that slightly differed from the 8 domains recommended by the WHO. However, most of the domains chosen by Edmonton reflected the eight WHO domains.

[22] "Vision for an Age-Friendly Edmonton – Action Plan," Edmonton Seniors Coordinating Council, 2011, Retrieved from https://www.edmonton.ca/city_government/documents/PDF/Final-Final_Seniors_council_plan_May26.pdf

[23] Ibid.

[24] "Age Friendly History," City of Edmonton, Accessed on July 14, 2018, Retrieved from https://www.edmonton.ca/city_government/initiatives_innovation/age-friendly-edmonton.aspx

As shown in the matrix below, Edmonton added “volunteerism” to the title of the first domain. This seems to express volunteerism as a concept valued by the local population in terms of active participation for seniors in society. This reflects the flexibility of the WHO aging friendly strategy to meet local needs. Additionally, the City chose to separate the WHO’s third domain into two separate categories. This means that Edmonton’s Age-Friendly strategy has one more domain than the other jurisdictions, even though it essentially covers the same topics that were recommended by the WHO. Although jurisdictions have flexibility in how they implement local strategies, most stick closely to the global strategy. As demonstrated by Edmonton, the changes still reflect the essence of the global strategy. Lastly, Edmonton added “recreational” to the title of the second last domain. Again, this extends the WHO strategy to reflect that locals value recreation. However, as a whole, the scope of the AFE strategy in comparison to the WHO’s recommendations remains quite similar. This shows that although adaptability is an option, global strategies tend to remain the same, or minutely altered, for the local context

WHO	**Edmonton**
Civic participation and employment	*Civic participation, volunteerism, and employment*
Communication and information	*Communication and information*
Community support services and health services	*Community support services*
Housing	*Health Services*
Outdoor spaces and buildings	*Housing*
Respect and social inclusion	*Outdoor spaces and buildings*
Social participation	*Respect and social inclusion*
Transportation	*Social and recreational participation*
	Transportation

Recently after undertaking a 5-year review, the AFE team announced that it will be refining its strategy and launching AFE 2.0.[25] The new "Advancing Age Friendly Edmonton project is an update to the Age Friendly Edmonton 5-year work plan," with an aim to improve the City's progress in the new chosen domains.[26] Going forward, the previous 9 domains have been replaced by four domains. Unlike the original AFE strategy, the new strategy diverges drastically from the domains presented by the WHO. These domains are comprised of:

WHO	**AFE 2.0**
Civic participation and employment	*Diversity*
Communication and information	*Intergenerational Relationships*
Community support services and health services	*Aging in Place*
Housing	*Ageism*
Outdoor spaces and buildings	
Respect and social inclusion	
Social participation	
Transportation	

In comparison to the WHO's suggested eight domains, the four chosen in the AFE 2.0 strategy are much broader domains. The objective of the new domains is to reprioritize the efforts of the community to better reflect the areas which require further work in making Edmonton more age-friendly. Additionally, these domains are completely different titles than those originally recommended by the WHO. AFE 2.0 seems to be shifting away from the traditional approach to aging-friendly strategies as recommended by the WHO's eight-domains.

[25] "Age Friendly Edmonton Community Newsletter," City of Edmonton, July 2018, Retrieved from https://mailchi.mp/c5538ff45ccc/afe-july-2018

[26] "What We Are Doing," City of Edmonton, Accessed on July 14, 2018, https://www.edmonton.ca/city_government/initiatives_innovation/age_friendly/what-we-re-doing.aspx

Using domains that are completely unlike those suggested by the WHO creates challenges as there may not be as many resources in existence to help guide Edmonton in selecting indicators for the new domains. This is true when looking at other Canadian GNAFCC members, as none have chosen domains with such different titles. Instead of looking towards other jurisdictions that follow the original eight domains, Edmonton can learn best practices in evaluation from other organizations by looking at indicators from the original eight domains that closely match the definition of the new domains.

In order to determine which original WHO indicators may still apply to the new domains, it is important to address the scope of each domain as per the new AFE 2.0 strategy. The new strategy divides each domain into further focus areas as shown below.[27]

AFE 2.0 Domain	**Focus Areas:**
Diversity	Address senior's poverty
	Enhance supports
	Partnerships with ethnocultural groups
	Reduce age and ability related barriers
Intergenerational Relationships	Public space design
	Opportunities for programming
	Partnerships with organizations
Aging in Place	Diverse housing options
	Core support services
	Education & Neighbour connections
Ageism	Promote positive perceptions of aging
	Educate on the impact of ageist attitude and behaviour
	Celebrate contribution of seniors

[27] "Age Friendly Edmonton 2.0," City of Edmonton (brochure, Age Friendly Edmonton 2.0 Celebration: Aging Better Together, Edmonton, Alberta, June 22, 2018).

Diversity

Senior's Poverty

This section explores measuring one of the components in the Diversity domain. It will examine Statistics Canada and WHO data models, as part of presenting options for municipalities looking for consistent and accessible data. The City of Edmonton needs to monitor initiatives focussed on reducing poverty experienced by seniors in order to measure their effectiveness. The WHO suggests using the "proportion of older people living in a household with a disposable income above the risk-of-poverty threshold," as an indicator to measure changes in poverty.[28] Labour statistics and economic data collected by government are proposed by the WHO as reliable sources of information to detect changes.

Statistics Canada provides Census data with a yearly breakdown of low-income status individuals which can further be filtered down by location and age-groups.[29] For example, a dataset specific to seniors in Edmonton can be populated. This data utilizes Low Income Measures (LIM) as the chosen indicator for income disparities, which is the most widely used indicator internationally.[30] This can be beneficial for long-term comparisons of data across jurisdictions under AFE 2.0. LIM is a relative measure of the variation in low income in comparison to national measures of low income.[31] The data is gathered through the Federal

[28] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 57.

[29] Statistics Canada, *After-tax low income status of tax filers and dependants based on Census Family Low Income Measure (CFLIM-AT), by family type and family type composition*, Table no. 11-10-0018-01 (Ottawa, ON: Statistics Canada, 2018). Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110001801&pickMembers%5B0%5D=1.147&pickMembers%5B1%5D=3.1&pickMembers%5B2%5D=4.4

[30] Statistics Canada, *Methodology Changes: Census Family Low Income Measure Based on the T1 Family File*, by Dominique Pinard, (Ottawa, ON: Statistics Canada, 2018), Retrieved from https://www150.statcan.gc.ca/n1/pub/75f0002m/75f0002m2018001-eng.htm

[31] Bonnie-Jeanne MacDonald et al., "The Canadian Elder Standard – Pricing the Cost of Basic Needs for the Canadian Elderly ," *Canadian Journal on Aging / La Revue Canadienne Du Vieillissement* 29, no. 1 (2010): 40.

Government's administrative systems and is made publicly available. As a result, the information provided allows for ease of access.

It is also important to address that evaluation can be limited by this data since the Census is conducted periodically every 5 years.[32] As a result, long-term evaluation is a viable option, however this Census data will not be useful for short-term evaluation. Furthermore, it is important for individuals accessing this data to be aware of differences in data units. For example, LIM values can vary depending on whether the indicator is defined as a measure of household income or family income. How variables are defined can impact evaluation efforts over a period of time. As a result of changing Statistics Canada definitions, municipalities can face larger burdens to access comparable information. Therefore, it is important to identify such discrepancies prior to undertaking any analysis.

In addition to Statistics Canada as a viable source of information for indicators, the WHO references the European Union's (EU) People at Risk of Poverty or Social Exclusion as an example for establishing indicators.[33] The EU Statistics on Income and Living Conditions (SILC) is a measure which looks at aspects of income distribution and social inclusion.[34] This measurement tool is similar to the LIM as it looks at income and poverty. However, in its calculation, SILC goes beyond income levels by incorporating other socioeconomic dimensions such as social exclusion, housing, labour, education, and health. The major difference is that the

Retrieved from https://www-cambridge-org.ezproxy.lib.ucalgary.ca/core/journals/canadian-journal-on-aging-la-revue-canadienne-du-vieillissement/article/canadian-elder-standard-pricing-the-cost-of-basic-needs-for-the-canadian-elderly/4486C53D71DDAB814E8AB43D39E5926D

[32] Statistics Canada, *Low Income Measure: Comparison of Two Data Sources T1 Family File and 2016 Census of Population*, by Dominique Pinard and François Page, (Ottawa, ON: Statistics Canada, 2018), Retrieved from https://www150.statcan.gc.ca/n1/pub/75f0002m/75f0002m2018002-eng.htm

[33] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 50.

[34] Eurostat, "Income and Living Conditions – Overview," European Commission, Accessed on July 18, 2018, Retrieved from http://ec.europa.eu/eurostat/web/income-and-living-conditions/overview

data combines a self-reported survey along with government data, which means the data can be a mix of subjective and objective measures. Additionally, the survey can be administered at time intervals that suit each jurisdiction, which means that comparisons between jurisdictions have to consider time discrepancies between data sets. Furthermore, flexibility in the variety of data collected by different jurisdictions in the EU means reports can vary between jurisdictions while providing some measure of SILC.

Using Statistics Canada's LIM is a more feasible way for AFE 2.0 to begin incorporating an evaluation tool into the overall AFE strategy in its beginning stages. It requires no additional resources from the City to engage in evaluation as the data is publicly available and is easy to access. Specifically, LIM will allow Edmonton to track statistical changes in income for the target demographic in comparison to national benchmarks. Once AFE 2.0 is more established and able to allocate resources towards evaluation strategies, then Edmonton can consider administering more frequent stakeholder surveys using diverse themes to better monitor progress in addressing poverty faced by seniors. These additional surveys can be used in conjunction with existing LIM data to provide a comprehensive view similar to the EU-SILC measures.

Supports and Ethnocultural Partnerships

Enhancing partnerships with support services and with ethnocultural organizations are some of the goals highlighted under this domain which were determined through stakeholder engagements.[35] Whether support services and ethnocultural organizations meet the needs of

[35] "Advancing Age Friendly Edmonton – What We Heard," 18.

the target demographic can be assessed through "existing data and program inventories."[36] PHAC suggests inventories are an effective indicator of progress under these categories as it allows you to track growth of supports and organizations where there may previously have been gaps.

When measuring enhanced supports, WHO recommends that the "proportion of older people who report having their personal care or assistance needs met in their home or community through the use of formal (public or private) services" should be accounted for.[37] The WHO recommends using a survey of older residents as an indicator. This is something Edmonton can incorporate into the EU-SILC measure addressed under the poverty section. Once Edmonton is able to dedicate resources to evaluation, it can aim to establish a metric similar to the EU-SILC mentioned above. Since the SILC tool uses data surrounding transportation and housing, along with other factors, it can provide indicators for evaluating multiple aspects of the 4 domains in the AFE 2.0 strategy.

In the meantime, AFE 2.0 can create inventories of services and "programs that are of high relevance to seniors" based on stakeholder engagements.[38] Since AFE already undertook stakeholder engagements during the process of evaluating the 5-year strategy, data already exist on programs that are of high relevance or missing, as presented in the stakeholder engagement reports. Baseline inventory data on existing support services can then be further assessed against which senior's priority program areas are not being met. Once this baseline

[36] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 37.
[37] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 49.
[38] Ibid, 38.

measure is established, AFE 2.0 can continue to track when new programs are added to the inventory in order to fill the gaps faced by seniors initially.

A baseline resource list already exists with the work done by the Family and Community Support Services Association of Alberta's (FCSSAA) partnership with the City.[39] As mentioned on the website, this list is updated frequently by the FCSSAA throughout the year to reflect the supports and services available to individuals. Building on this existing inventory, data can be filtered to identify whether it is considered support services or ethnocultural programming. This will allow evaluation to identify exactly which priority area is being met or lacking under this first domain. Additionally, by leveraging resources existing within the current capacity of the City will allow AFE 2.0 to undertake evaluation with minimal cost implications.

Reduced Barriers

Through municipal engagements, stakeholders indicated the need for "financial supports for seniors to engage in recreational and social activities" and improvement in mental health supports.[40] Since there are only four domains in the new AFE strategy, the definition of reduced barriers encompasses topics related to financial aid along with mental health supports. However, it is important to note that barriers may arise from sources other than financial or mental health factors. Given the adaptation to the eight domains, barriers may be addressed under other domains in the new AFE strategy. Since Edmonton has chosen to address the two

[39] "Family and Community Support Services Program," City of Edmonton, 2014, Retrieved from https://www.edmonton.ca/programs_services/for_communities/family-community-support-services-program.aspx

[40] "Advancing Age Friendly Edmonton – What We Heard," 18.

issues identified, the indicators under this section will focus on financial and mental health barriers.

Similar to the support services category, an inventory of financial and mental health supports can be created to measure progress in the number of services available. In order to understand the extent of supports and services required to reduce barriers, baseline data of existing circumstances needs to be established. To help establish this baseline data, AFE 2.0 can use Census data published by Statistics Canada focussed primarily on the Edmonton region. For example, data estimates are provided for the perceived level of mental health for individuals over the age of 65 residing in Edmonton.[41] This can be used to create baseline standards which Edmonton can measure its progress against. As for financial supports, Edmonton can access data used to calculate poverty thresholds, discussed above, in order to determine the level of financial support required to encourage engagement in recreational and social activities.

In addition to an inventory of available services, Edmonton can measure participation levels to evaluate progress under this domain. PHAC suggests that participation levels can be calculated through self-identification using surveys or through administrative functions. The City of Edmonton provides recreation options for seniors that meet diverse financial requirements.[42] Monitoring engagement levels will allow the City to evaluate effectiveness of initiatives in trying to reduce barriers when accessing these recreational and social activities. Administratively, Edmonton can ask organizations that deliver recreational and social activities

[41] Statistics Canada, *Canadian health characteristics*, *two-year period estimates*, Table no. 13-10-0113-01(Ottawa, ON: Statistics Canada, 2018). Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310011301&pickMembers%5B0%5D=1.98&pickMembers%5B1%5D=2.6&pickMembers%5B2%5D=3.1&pickMembers%5B3%5D=5.1

[42] "Recreation for seniors," City of Edmonton, Accessed on July 2018, Retrieved from https://www.edmonton.ca/programs_services/for_seniors/recreation.aspx

to monitor participation rates. While this could potentially create administrative burdens on organizations, monitoring participation rates may already be part of their recordkeeping process. For example, the City already provides open data on the level of "Edmonton Public Library Usage," amongst many other data sets.[43] This particular data set provides filters based on age and income levels to determine the level of usage and of public libraries based on primary data collected through telephone surveys. Self-identification of participation levels from seniors requires more resources as surveys need to be administered, however it can be seen these data sets may already exist. This can be incorporated into municipal surveys, such as a variation of EU-SILC survey proposed throughout this research. While this is an option it will require time and resources to create and administer. Partnering with organizations for data will require less time and resources and can help create more interest in causes related to reducing barriers. If organizations are more aware of the impacts their programs have at the municipal level, they may be more inclined to create better strategies to reduce barriers and create higher participation levels within their programs.

Intergenerational Relationships

Public Space Design

"Accessible infrastructure such as paved paths, benches, and good transit service to encourage socialization and interaction for all ages" is listed as a potential indicator under this

[43] Office of Public Engagement, "Edmonton Public Library Usage," City of Edmonton, October 2015, Retrieved from https://data.edmonton.ca/Surveys/Edmonton-Public-Library-Usage-Edmonton-Insight-Com/ma8q-mjck

domain.[44] PHAC states that "urban and rural landscapes, streets, sidewalks, parks and buildings—[have] a major role to play in the mobility, independence and quality of life of older adults."[45] Specific indicators here might focus on actual aspects of accessibility such as rest places, number of washrooms, sidewalks, crosswalks, and visibility.[46]

An inventory of these indicators already exists within City of Edmonton databases. For example, the Measuring Up Edmonton initiative provides reports on the accessibility of key attractions within the city along with public parks.[47] Accessibility in this report refers to "access and inclusion beyond physical requirements, to include a broader range of needs such as sight or hearing impairments, developmental disabilities and the impacts of aging."[48] The Community Facilities & Parks Accessibility Guide provides further details on how accessibility is defined and measured for diverse locations throughout the City.[49] Using this guide, Edmonton can determine areas where accessibility is lacking and then evaluate progress in those areas through future assessments. Using these existing inventories can reduce the evaluation costs of creating baseline assessments.

For future evaluation, another accessible assessment tool Edmonton can use for tracking changes is Walk Score. This website provides data on factors such as walkability and transit accessibility within cities.[50] This tool goes beyond looking at specific attractions by

[44] "Advancing Age Friendly Edmonton – What We Heard," 17.
[45] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 19.
[46] Ibid, 20.
[47] "Measuring Up Edmonton," City of Edmonton, Accessed on July 21, 2018, Retrieved from https://www.edmonton.ca/programs_services/for_people_with_special_needs/measuring-up-edmonton.aspx
[48] "Introduction - Measuring Up Edmonton," City of Edmonton, Accessed on July 21, 2018, Retrieved from https://www.edmonton.ca/programs_services/documents/PDF/Measuring-Up-Intro-Booklet.pdf
[49] "Community Facilities & Parks Accessibility Guide," City of Edmonton, 2014, Retrieved from https://www.edmonton.ca/programs_services/documents/CommunityFacilitiesAccessibilityGuide.pdf
[50] "Living in Edmonton," Walk Score, Accessed on July 21, 2018, Retrieved from https://www.walkscore.com/CA-AB/Edmonton

looking at the broader municipality and as a result can be used in addition to the inventories mentioned above. Furthermore, there are options to narrow down the data to evaluate specific neighbourhoods within the City. While all this information is available on the website for free, the City can purchase additional statistics and data if needed for specific indicators such as pedestrian friendliness and frequency of usage of public transit data.[51] Once baseline indicators are established, data from this website can focus on areas where accessibility is lacking and use these indicators to measure changes and success of AFE 2.0 strategies. One challenge Edmonton may experience is the discrepancy in how terms are defined. It will be important to acknowledge how accessibility is defined by Walk Score in comparison to City's own measures.

Although the City can measure accessibility of the community and spaces through the measures mentioned above, they may not necessarily align with seniors' preferences of accessibility. How accessibility is defined by the City may differentiate from what seniors perceive accessibility to be. In order to make policies align better to the needs of the target stakeholders it is important to assess definitions of concepts such as accessibility from the point of view of both the municipality and the stakeholders. To evaluate perceived accessibility, PHAC suggests using surveys to gather data directly from stakeholders. For example, AFE 2.0 can use a "self-report survey of perceived accessibility of the aspects of the environment that promote or restrict participation by people with mobility impairments."[52] Examples of types of survey questions are provided by PHAC to evaluate perceived accessibility. These can be incorporated into municipal surveys if resources are available. This way Edmonton can evaluate perceived

[51] "Walkability, Real Estate, and Public Health Data," Walk Score, Accessed on July 21, 2018, Retrieved from https://www.walkscore.com/professional/research.php

[52] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 21.

accessibility in comparison with existing data on actual accessibility. Gaps between perceived and actual accessibility can then be used as indicators on guiding AFE 2.0 strategies.

Programming & Partnerships with Organizations

Increasing intergenerational programming and partnerships with organizations such as community leagues and senior centres is another goal under this domain.[53] This is in efforts to create meaningful engagements between individuals of diverse age groups. Stakeholders proposed that these interactions can take on many forms such as mentorships, educational and learning opportunities, and recreational engagements. PHAC suggests inventories and surveys are useful indicators in determining access to and availability of intergenerational opportunities.[54]

Inventories of existing intergenerational programming opportunities can be created to understand where gaps exist. This can be done by looking at descriptions of the types of opportunities available and also measuring the frequency or quality of programming. It will be important to ensure that opportunities are readily available and easy to access. Given the needs identified by stakeholders, AFE 2.0 can determine whether diverse opportunities exist for mentorships, education and learning, and recreational engagements. Furthermore, AFE can look into what types of organizations provide opportunities for intergenerational programming. This can help create a clear picture of organizations that may be missing out on creating

[53] "Advancing Age Friendly Edmonton – What We Heard," 17.
[54] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 28.

opportunities. Based on this assessment, Edmonton can look to create partnerships with organizations where opportunities for programming may exist.

In addition to inventories, surveys can focus on asking stakeholders to self-identify the types of intergenerational activities they have encountered and the frequency of those engagements. These questions can be incorporated into municipal surveys or other stakeholder surveys such as the EU-SILC proposed above. Surveys can help identify whether the target audiences are aware of opportunities and whether intergenerational programming is accessible. Again, this requires time and financial resources to administer. Similar to evaluating goals in other domains, the responses to survey questions can be assessed against data on existing inventories to determine where there may be shortcomings. Assessing both actual availability of services against perceived levels of engagement can provide insight into effectiveness of programs focussed on creating intergenerational programming.

Aging in Place

Diverse Housing

Stakeholders identified a need for diverse housing options to promote aging in place which includes increasing "density."[55] PHAC suggest using "existing data, program inventories and surveys" as indicators to measure diverse housing options.[56] Using these indicators, various aspects of housing can be measured such as availability, perceived availability and accessibility.

[55] "Advancing Age Friendly Edmonton – What We Heard," 16.
[56] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 25.

Many organizations provide existing data for AFE 2.0 to create baseline measures for the existing seniors housing environment in Edmonton. The Canada Mortgage and Housing Corporation (CMHC) provides a yearly report on housing conditions for seniors in specific jurisdictions.[57] This report can provide Edmonton statistics on the types of spaces available for seniors, costs range for those spaces, and extra amenities provided. For example, statistics are available for seniors' accommodations that provide high level of care, transportation services, meal services, and other support services. Even though CMHC's report may not provide data for all aspects being evaluated in the domain, PHAC still recommends using this report because the data is "both available and comparable."[58] This highlights another challenge that results from flexible policies developed in a global context. Indicators and data sets have to be pieced together to fit the altered policies at the municipal level as they don't fully meet the variation in policies.

In addition to existing data, organizations provide inventories on options for housing and support services available to seniors within Edmonton. For example, the Edmonton Seniors Coordinating Council (ESCC) provides links to inventories on availability specifically for seniors housing options.[59] These include inventories on the types of housing spaces for seniors looking for accommodations with specific amenities. In addition to accommodations, ESCC also provides inventories for senior's home supports programs. In combination, these inventories

[57] "Seniors' Housing Report Alberta," Canada Mortgage and Housing Corporation, 2018, Retrieved from https://eppdscrmssa01.blob.core.windows.net/cmhcprodcontainer/sf/project/cmhc/pubsandreports/seniors-housing-report/2018/seniors-housing-report-ab-66235-2018-en.pdf?sv=2017-07-29&ss=b&srt=sco&sp=r&se=2019-05-09T06:10:51Z&st=2018-03-11T22:10:51Z&spr=https,http&sig=0Ketq0sPGtnokWOe66BpqguDljVgBRH9wLOCg8HfE3w%3D

[58] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 63.

[59] "Housing Information for Seniors," Edmonton Seniors Coordinating Council, Accessed on July 23, 2018, Retrieved from http://www.seniorscouncil.net/housing

would allow the City to determine the types of housing and housing support services available to help seniors age in place. Furthermore, these inventories can be used to determine the density of support services available in various neighbourhoods, which was identified as a goal in the consultation phase. The City can use inventories to identify the number of support services provided in a given neighborhood as a measure of density. This can help ensure that individuals living in areas with lower density of support services are given more access to available support services.

While accounting for the availability of services is important, it doesn't provide insight into whether stakeholders perceive services to be useful. Surveys on the other hand, would allow the city to understand whether those support services are perceived as being accessible and available. Administering a survey to the senior population will allow Edmonton to determine perceived accessibility against availability of diverse accommodations. This could be incorporated into a survey similar to the EU-SILC survey discussed before. PHAC suggests incorporating questions surrounding awareness of diverse housing options, accessibility of affordable housing options, and the ability to age in place confidently in existing housing conditions.[60] Responses to the survey can then be assessed against the existing baseline data and actual count of housing options available. This will allow AFE 2.0 to understand where the gaps in housing and housing supports exist for seniors wishing to age in place.

[60] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 26.

Core Support Services

In addition to diverse and secure housing options, support services in close proximity to housing options are required to promote aging in place for seniors. Availability of supports was already discussed under the Diversity domain. Under this third domain, stakeholders discussed the need to increase support services surrounding safe public transportation as a core support.[61] The WHO recommends looking at the "proportion of public transport vehicles with designated places for older people or people who have disabilities."[62] PHAC suggests using existing data and inventories to evaluate strategies focussed on core support services such as transportation.

Edmonton Transit Services (ETS) are public transportation services provided by the City of Edmonton. ETS provides senior specific services in order to help the City meet its age-friendly initiatives. Through the City's Open Data Portal, data sets can be requested or recommended. For example, a data set "based on ridership per bus route over time" was requested from the City and approved.[63] AFE 2.0 can use existing data on the specific accommodations provided to seniors and individuals with disabilities when it comes to accessing transportation services. If it does not already exist, data could be requested based on services for individuals with disabilities or special needs through the open data portal. This may prove to be a challenge if the request for particular data is denied. However, if it is available, the data can provide insight into the availability of transportation services and details into the types of services provided.

[61] "Advancing Age Friendly Edmonton – What We Heard," 16.
[62] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 38.
[63] "ETS ridership," City of Edmonton, Accessed on August 25, 2018, Retrieved from https://data.edmonton.ca/nominate/7715

This can help create a baseline inventory for supports that already exist within the City and the level of access seniors have to core support services.

Additionally, insights into the availability of transportation can be used in conjunction with other domains. Since transportation plays a vital role in accessing services and connectedness to community, Edmonton can evaluate whether adequate levels of transportation services are available readily throughout the city. Bus routes and stop schedules can help develop inventories using the publicly available ETS information. Inventories can help identify which areas of the city may experience gaps in transportation services. Efforts can then be focussed to ensure seniors in those parts of the city are provided access to better core support services. Over time, changes to inventory levels on the number of services and types of services available can help determine whether safe transportation services are available in close proximity to seniors throughout the city.

Education & Neighbour Connections

Within the Aging in Place domain, a final category seeks to quantify the extent of general public and senior education on the topic and connection with neighbours. Education here is targeted at helping individuals understand the importance of aging in place and the resources and supports required to help seniors achieve this. Indicators in this category tend to focus on the existence and scope of education and communication materials. Based on stakeholder consultations, "Aging in Place is one's ability to live in the home and community of their choice, as independently and safely as possible."[64] The availability and accessibility of

[64] "Advancing Age Friendly Edmonton – What We Heard," 16.

information and education supports to community members and seniors are not just measures of knowledge in the area, but also increase connections between community members. In order to educate individuals and to promote neighbour-to-neighbour connections, "communication messages, products and approaches can be developed to ensure that seniors, and all community members, have access to materials and messages intended to support them."[65] PHAC suggest using assessment tools and inventories to indicate whether effective education and communication strategies exist in order to foster understanding and connections between diverse age groups.

Inventories can be used to determine whether educational and support materials for both seniors and community members exist. This indicator tends to focus solely on the existence and availability of materials. Inventories can consider different mediums of communication available such as print, digital or audio forms, to name a few. Furthermore, inventories can track the creators and providers of support materials. For example, besides governments, non-profit organizations also provide materials to help the community. Although inventories are important in tracking availability of supports, they are limited in determining whether supports are accessible.

Assessment tools, on the other hand, can determine whether materials are useable and accessible to diverse audiences. For example, PHAC suggests using the "Simply Put Guide" to create effective communications for community members.[66] The Centre for Disease Control and Prevention (CDC) created this Guide to make it easier to provide effective

[65] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 34.
[66] Ibid, 35.

communications.[67] Specifically, this guide looks into tailoring messages to the requirements of intended audiences. "As more and more publications are available on line, assessing the age-friendliness of on-line information is increasingly important." For example, providing alternate formats of information is important when dealing with audiences who may have different levels of access to technology. Edmonton can assess whether existing communications materials across all domains under the new strategy are available to audiences of diverse needs in order to meet the goals of AFE 2.0. Having supports available and accessible by community members and seniors will help create a better sense of understanding between the communities.

Ageism

Positive Perceptions of Aging & Education

According to the WHO, "ageism is discrimination or unfair treatment based on a person's age, specifically discrimination against older people."[68] Communicating the value that seniors bring to society in order to create positive perceptions of them is one of the goals listed under the domain of Ageism. Stakeholders identified using media to depict the leadership roles seniors occupy as well as their active participation in communities as priorities.[69] As a result, "media portrayal of older adults, or the attitudes of employers and service providers toward older people, can be important measures of social attitude, though their measurement remains a challenge."

[67] "Simply Put – A Guide for Creating Easy-to-Understand Materials," Centre for Disease Control and Prevention, April 2009, Retrieved from https://www.cdc.gov/healthliteracy/pdf/simply_put.pdf
[68] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 42.
[69] "Advancing Age Friendly Edmonton – What We Heard," 19.

The WHO recommends using the "proportion of older people who report feeling respected and socially included in their community" as indicators.[70] For this measure, self-reported surveys of seniors can be administered. Similar to surveys discussed throughout the other domains, this can provide subjective measures of how seniors perceive their inclusion in society. This will allow the AFE 2.0 strategy to better reflect areas in particular where ageism is perceived to be the strongest. For example, strategies can be altered to reflect the different ways ageism can transpire in the workplace versus in the community. Once there is better indication of where seniors feel discriminated, Edmonton can work to improve the service delivery under this domain.

In addition, the WHO recommends "undertaking communication campaigns to increase knowledge about and understanding of ageing among the media, general public, policy-makers, employers and service providers."[71] This includes ensuring aging is represented fairly in the public media. To do so, the City can take inventory of ways that balanced views of aging are represented. This inventory can focus on particular organizations that serve the target demographic, or organizations such as media and communication companies. By measuring the frequency of positive messages on aging, the City can determine where gaps in positive messaging exist and address those gaps with the appropriate organizations. The inventory can be assessed against the self-reported measures to determine how actual representation in the media compares to the perceived representation by seniors. Through this, AFE 2.0 can increase the level of education and communication required to better engage with audiences.

[70] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 42.

[71] "Frequently Asked Questions: Ageism," World Health Organization, Accessed on July 27, 2018, Retrieved from http://www.who.int/ageing/features/faq-ageism/en/

Seniors Contributions

As part of combating ageism, stakeholders emphasized the need to "celebrate and acknowledge the contributions of seniors."[72] This refers not only to creating awards for contributions, but also to the creation of opportunities for community gathering and engagement to celebrate seniors. PHAC suggests that seniors' contributions from "participation in activities such as volunteering and the political process," can be evaluated through program inventories. In particular, inventories focussed on recognition can be created to recognize where gaps may exist.

While the provincial and municipal governments have established recognition for communities for their contributions in creating aging friendly environments, inventories on seniors' contributions to and engagement in communities do not exist. This will require engagement of organizations and individuals where seniors are contributing their efforts. The City of Edmonton can engage partners that already provide support to seniors and other organizations in creating recognition in order to build this inventory. To engage organizations, the City can highlight both the organization that nominates seniors and the senior themselves. This allows organizations to showcase their age-friendly recognition initiatives while also allowing the City to build an inventory to be used as an indicator.

Furthermore, inventories can help determine whether enough recognition events are occurring and the frequency with which they occur. The inventory list can also provide insight into the types of activities that lead to recognition. City of Edmonton can analyze whether

[72] "Advancing Age Friendly Edmonton – What We Heard," 19.

certain activities favour more recognition than others and use this information to create strategies to recognize efforts that may not presently be recognized. Inventories can also highlight if particular communities recognize seniors more than other communities. These gaps can create different outcomes for seniors based on where they are located or which communities they contribute to. Inventories can also help Edmonton understand whether the awards are inclusive of diverse groups of people. Under this domain, it is important to host recognition events that target audiences other than seniors. Recognition needs to include individuals of diverse backgrounds and ages in order to meet the goal of diverse community gatherings. This not only addresses the goals under ageism, but also overlaps with the goal of creating neighbour to neighbour connection by raising awareness of senior's contributions.

Recommendation

As Edmonton develops the new AFE 2.0 strategy it will be important for the City to leverage the work done by other organizations, such as the WHO and PHAC. Utilizing existing resources and the data available will allow the City to minimize costs while establishing concrete indicators to evaluate strategies going forward.[73] The WHO and PHAC indicator reports that have been referenced throughout this paper have been developed based on substantial research and stakeholder engagement. As a result, they "consist of the most critical and minimal set of indicators that could be used in monitoring and evaluating age-friendly urban environments."[74] Based on this research, it is recommended that AFE 2.0 incorporate

[73] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 17.
[74] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 25.

existing data sets, inventories, and surveys into the appropriate domains when evaluating age-friendly strategies.

Existing Data

Using existing data sets is a great opportunity for Edmonton to establish baseline measures. Baseline measures will help determine the existing conditions surrounding the goals of the domains in relation to future measures. It will also allow the City to address the level of services that are currently offered or to understand where gaps may exist. Existing data sets were referenced throughout this paper in the process of establishing indicators for various domains. For example, Statistics Canada and the Canada Mortgage and Housing Corporation are some of the many organizations that provide open data for Canadian jurisdictions. Data sets provided by these organizations ensure that "questions and scales have been carefully tested to ensure that they are valid and reliable."[75] As a result, the information can be trusted and used throughout the analysis process. Nevertheless, the City does not have to limit itself to these data sets. Instead, they serve as examples of the type of data that is available for developing baseline evaluations. Using this publicly available data will allow Edmonton to avoid resource constraints.

It is important to acknowledge the limiting factor of existing data sets created by other organizations. One drawback of using existing data is that they cannot be tailored to meet the specific criteria you may be evaluating.[76] In certain cases, data can be tailored to address

[75] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 17.
[76] Ibid.

certain indicators at additional cost to organizations. AFE 2.0 will have to be aware of how each existing data set was established as each organization gathers information and defines measures differently. For example, many Statistics Canada data sets provide region specific information. Shifts in populations and geographical expansions can impact which communities the data is collected from. Geographical boundaries established by Statistics Canada will need to be considered if Edmonton wishes to use the same indicator for future years. Even how the term senior is defined can alter the data gathered. Some organizations consider any individual over the age off 55 in their calculations, while others consider individuals over the age of 65. When looking at Statistics Canada data, there are options to narrow down the data sets to specific age groups. Following similar definitions of each term will allow for proper comparisons over time and domains.

Inventories

In addition to existing data sets, inventories are another key tool highlighted throughout the four domains to gather data for evaluation. They are the "first step in identifying, and acting on, gaps in your community."[77] Inventories are versatile indicators as they can be tailored to gather data under multiple domains. For example, inventories can provide insight into whether programs or services provided by the City are meeting criteria such as intergenerational programming, affordability, and accessibility.[78] The level of detail that results from inventories depends on the scope of the inventory set out by AFE 2.0.[79] Scope refers to the defining exactly

[77] Ibid, 62.
[78] Ibid, 30.
[79] Ibid, 35.

what will be measured within an inventory and what will not be considered a part of it. For example, when measuring specific services, all service providers can be included in the scope of the inventory or it can be limited to government provided services only. Additionally, filters such as geographical locations and the stakeholders impacted can be used to narrow down or broaden the scope of the inventory.

Depending on the scope identified, a challenge for developing indicators is that inventories can become labour intensive. The size of the area and topic being inventoried can increase the burden on organizations conducting inventories. The smaller the area of an inventory the easier it is for organizations to ensure they have covered everything within that area that meets the criteria of the scope.[80] When areas and topics get larger, it can become harder to identify whether all aspects were covered within the inventory. An advantage for Edmonton is that PHAC has outlined how to conduct inventories. This report identifies specific questions that can be addressed within inventories and provides examples on how to broaden or narrow the scope of an inventory. Furthermore, the report provides templates that organizations can use and modify in the process of setting up their inventories. Edmonton can leverage these existing resources to develop inventories to address multiple domains. The City can minimize the number of inventories it needs to undertake by overlapping domains within the scope of the inventory. Addressing various aspects identified such as accessibility, types of programming, and intergenerational factors through comprehensive inventories will allow Edmonton to measure multiple indicators. Undertaking a comprehensive inventory however, can have administrative and resource implications.

[80] Ibid, 62.

Surveys

Another popular tool for establishing indicators that has been recommended by the WHO and PHAC is surveying stakeholder populations. "Advantages of using a survey or questionnaire include the ability to obtain a more representative sample of the target population, the opportunity to gather responses on a broad range of topics, and the ability to measure change over time."[81] This can be an important tool for AFE 2.0 as they can leverage one survey to evaluate indicators over multiple domains. Carefully developed surveys administered in an accessible format can overcome the challenges focus groups and interviews are not able to.

Using best practices identified in other age-friendly jurisdictions, Edmonton can develop strategies to integrate a range of indicators into existing surveys to measure various domains over the long run. One tool referenced throughout the paper was the EU-SILC tool. Since this survey has been established and utilized many times, Edmonton can use learnings from abroad to ensure the survey is modified to meet local needs. Furthermore, EU-SILC was referenced throughout the WHO Indicator report as a measure for multiple domains. This helps identify the validity of the tool on a global scale. Since the WHO approves how indicators are measured through this tool, Edmonton can build upon the tool to measure the four domains. This can help create synergies in data gathering across the four domains in better evaluating the strategy as a whole.

[81] Michelle C. Dellamora et al., "Review of assessment tools for baseline and follow-up measurement of age-friendliness," *Ageing International* 40, no. 2 (2015): 151.

Careful consideration must be applied to the development of surveys as effective surveys should be subjected to rigorous methodology in the development process. However, given "constraints of time, resources, and funding that dictated the parameters of Age-Friendly projects in communities," most surveys lack reliability and validity.[82] Research found that most jurisdictions tend to expend resources creating new surveys to address aging-friendly strategies. Instead, they can utilize and expand on "instruments already in existence elsewhere."[83] Using established tools will ensure surveys meet the requirement of rigorous methodology to ensure accuracy in the results. Furthermore, collaborating with the expertise of other jurisdictions can add to resource savings while allowing Edmonton to learn from best practices that have been previously tried and tested.

Challenges

While many frameworks and reports exist to help jurisdictions become more age-friendly, 'age friendliness' is not a static concept. The requirements of aging-friendly societies continue to shift based on progression of academic understanding and the social environments in which these policies exist. Measuring this moving target is an acknowledged challenge, with the WHO noting that the "core indicators presented in [their] guide do not perfectly match or correspond to the eight domains of an Age- Friendly City previously described by WHO."[84] Similarly, although the Age-Friendly Communities initiative aims to provide "a practical model

[82] Ibid, 59.
[83] Ibid, 159.
[84] "Measuring the Age-Friendliness of Cities – A Guide to Using Core Indicators," 66.

to guide action," this practicality can be less apparent at the local implementation stage.[85] On the one hand indicators ought to reflect the objectives of age-friendly strategies, and on the other they ought to change in order to match the needs of evolving aging societies.

Edmonton will need to ensure that best practices and stakeholder engagement continues to inform both aging-friendly strategies and the indicators of those strategies' success. However, as global and national guidelines for aging-friendly practices also shift, it will become difficult for jurisdictions to reflect these changes as well as local preferences in their strategies. While standardization is ideal to measure progress over time, "age-friendliness is a moving target. Thus, it does not easily lend itself to standardization of measurement."[86] This creates limitations in setting standards for local aging-friendly indicators. Resource constraints make it difficult to take a consultative approach in order to ensure policies reflect needs of changing societies. Additionally, standardization requires commitment to a policy over a length of time. This means to achieve standardization, policies become less flexible. Or vice versa, in the attempts to achieve flexibility in policies to meet changing demands, there is lack of standardization over the long run.

Edmonton will need to consider these implications for the effective implementation of the AFE 2.0 strategy. Standardization, although ideal, should not be the focus of aging-friendly strategies. Instead, using flexible approaches to make progress at the local level is needed to address the concerns of a globally aging population. However, research has shown that most jurisdictions tend to use the standard eight domains which limits flexibility. Global organizations

[85] Louise Plouffe et al., "Advancing Age-Friendly Communities in Canada." *Canadian Review of Social Policy*, no. 68/69 (2012): 36. Retrieved from https://search-proquest-com.ezproxy.lib.ucalgary.ca/docview/1370183814?accountid=9838&rfr_id=info%3Axri%2Fsid%3Aprimo

[86] Ibid, 65.

should continue to provide supports to local jurisdictions to help achieve progress through flexible approaches. Standardization can be included in the next phase of aging-friendly strategies once jurisdictions make concrete progress in the field of aging-friendly initiatives.

Conclusions

In conclusion, many frameworks are available to help communities establish their own age-friendly strategies. Although Edmonton's new AFE strategy uses a set of domains that deviate from the original eight domains proposed by the WHO, the city still has the opportunity to use existing indicator resources originating from municipal, provincial, and federal organizations. This paper highlighted indicators that have been proposed by WHO and PHAC as best practices based on rigorous academic research and stakeholder engagement.

Although these indicators are recommended as part of aging-friendly frameworks by multiple organizations, they are presented as options, not requirements. This highlights the flexible nature of aging-friendly policies at the implementation stage. Policies and evaluative indicators need to be adjusted to meet the demands of the community in which they are being implemented. The WHO and PHAC recommend using existing data, surveys, and inventories as effective indicators to evaluate aging-friendly. However, limitations and tradeoffs of these indicators must be considered before implementing them. Resource constraints and the evolving nature of aging-friendly strategies are key factors here.

Irrespective of the challenges associated with implementing indicators and strategies, evaluation is still an important aspect of any aging-friendly initiative. It allows cities to evaluate

whether their strategies and resource allocation are achieving the expected outcomes.[87] By presenting the challenges and limitations of the best practices associated with each indicator, this paper presents option for Edmonton. The AFE initiative can choose to adopt the indicators that are viable and applicable in the local context. Indicators that may be implemented in this phase of the strategy will reflect the local context at this moment in time. These strategies may be re-evaluated further along in the AFE 2.0 implementation timeline.

[87] "Age-Friendly Communities Evaluation Guide – Using Indicators to Measure Progress," 10.

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