

## **Opportunities and Issues in Using Disaggregated Population Data**

**Date:** March 30, 2017  
**To:** Community Development and Recreation Committee  
**From:** Executive Director, Social Development, Finance & Administration and Director, Equity, Diversity, and Human Rights  
**Wards:** All

### **SUMMARY**

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This report provides a brief primer on the uses, benefits and limitations of disaggregated data. It addresses the potential use of disaggregated data as a tool to improve social equity in the delivery and assessment of the City of Toronto's services, programs and policies.

### **RECOMMENDATIONS**

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The Executive Director, Social Development, Finance & Administration and the Director, Equity, Diversity, and Human Rights division recommend that:

1. City Council receive this report for information.

### **FINANCIAL IMPACT**

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There is no financial impact from the adoption of the recommendations included in this report.

### **EQUITY IMPACT**

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This report discusses opportunities and issues in the collection, use, and reporting of disaggregated data. The use of disaggregated data is an important tool to improve equity in the delivery and assessment of the City of Toronto's services, programs and policies.

The availability and application of disaggregated data supports decisions affecting vulnerable people including, but not limited to, members of the equity-seeking groups identified by the City of Toronto. It is part of a broader need to more effectively use data to inform evidence-based decision-making and improve service and operational efficiencies as part of the City's equity performance.

## DECISION HISTORY

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In its 2017 budget process, Council passed a motion requesting specific actions of staff to advance gender equity in its budgeting decisions, including:

### **2017 Capital and Operating Budgets**

<http://app.toronto.ca/tmmis/viewPublishedReport.do?function=getCouncilMinutesReport&meetingId=11852>

321. City Council request the Director, Equity, Diversity and Human Rights, in consultation with the City Manager, the Deputy City Manager and Chief Financial Officer and the Executive Director, Social Development Finance and Administration to:

3. work with City Divisions to develop a disaggregated data collection strategy for the City that will assist in, among other things, assessing the gendered impacts of City budgetary and policy decisions and report back to the November 29, 2017 meeting of the Executive Committee on the strategy and implementation plan.

In addition, a number of Council decisions relating to major social strategies have directed staff to report on results and outcomes in a disaggregated way, including:

### **Toronto Newcomer Strategy**

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.CD29.10>

### **Toronto Youth Equity Strategy**

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.CD26.2>

### **Toronto Strong Neighbourhoods Strategy 2020**

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.CD27.5>

Other Council and board decisions with relevance for the collection of demographic data for the purpose of disaggregation include:

### **Community Investment Funding Programs**

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.CD18.5>

If approved March 28 meeting

### **Access to City services for undocumented Torontonians**

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.CD8.4>

## COMMENTS

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Recently, there has been growing interest of in the use of disaggregated data to inform public policy. Public institutions in Toronto and across the country have been recognizing the importance of taking an evidence-based approach to the different impacts of their policies and services on vulnerable or historically marginalized groups. Disaggregated data can provide an evidence base from which to understand the needs of different populations and the quality of access and outcomes population groups experience from City programs and policies.

City Council has also supported an evidence-based approach to equity. One way this support has been expressed is in directions to staff requesting disaggregated data when reporting on broad social strategies, specific city programs, and to support a gender lens on budgeting and policy decisions. The practice of disaggregated data collection is not new to the City. Many City programs use data which helps them to understand how effectively they serve different populations and areas of the city.

However, when using disaggregated data to assess broad social and fiscal policy goals and initiatives, there needs to be an understanding of this approach's opportunities, merits and challenges. This report provides a brief primer on the potential uses, benefits and limitations of disaggregated data collection. It addresses the use of disaggregated data as a tool to improve social equity in the delivery and assessment of the City of Toronto's services, programs and policies.

### **What is disaggregated data?**

Disaggregated data refers to the practice of examining smaller units of data within a larger, aggregated data set. Data is aggregated when all the individual data points in a data set are rolled up to provide an overall picture. Sometimes, it is also desirable to have a picture of specific subsets within that larger data set.

Data can be a powerful tool to understand and explain the living conditions experienced by people across the city. Information about the lives and experiences of Torontonians is essential for the City of Toronto to develop evidence-based policies and strategies. However, when data is reported or considered only for the city's population as a whole, that data can hide important differences in the experiences of particular groups within that population. This is why it is important to disaggregate data, so that the data can also be examined for differences between groups within larger populations.

### **How can disaggregated data be used?**

Disaggregating data can reveal differences between groups within the wider population. This section provides an example of the use of disaggregated data, and then discusses two main data can be disaggregated: by population groups and by geography.

### **Example of disaggregated data use**

Figure 1 displays data from the Statistics Canada Taxfiler T1 Family File for the last 5 years of data currently available, 2010 to 2014. The chart shows the average individual employment income of people residing in Toronto. We can see in the chart that average (mean) employment income has been rising every year, with the average amount of income earned from employment by Toronto residents in 2014 at slightly over \$50,000. We know, however, that many people in Toronto earned much more or significantly less than that average income amount. The average is just an aggregation of all the incomes of all Toronto residents. So, then, how might mean annual employment income vary between different groups of Torontonians?

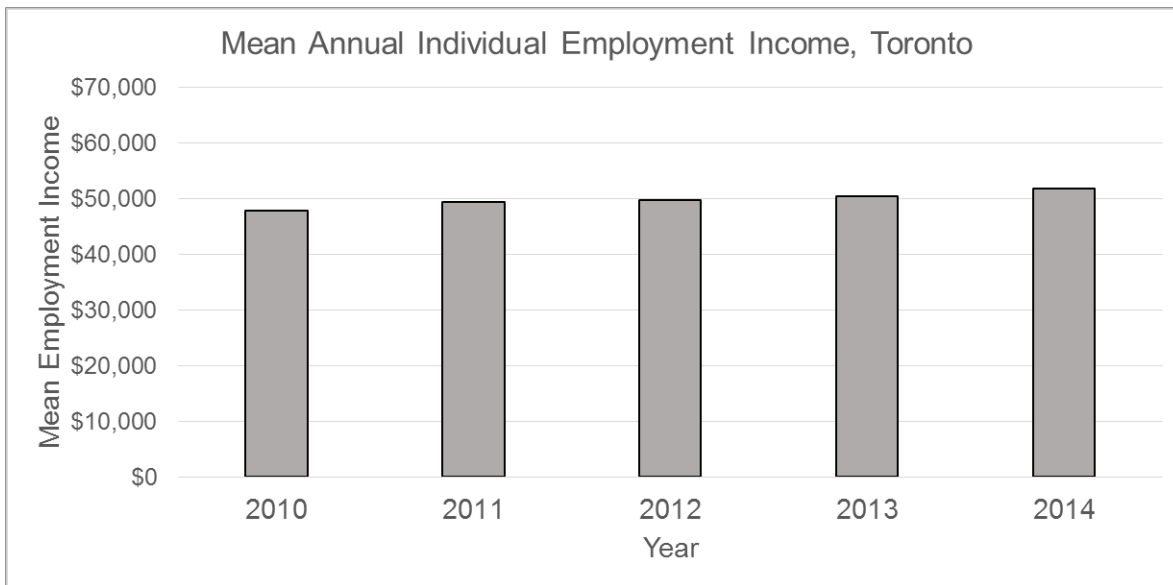


Figure 1: Mean Annual Individual Employment Income, Toronto (Source: Statistics Canada, T1 Family File, 2010-2014)

The Taxfiler data also disaggregates its employment income data by the sex of each tax filer. So, Figure 2 uses that disaggregated data to display the average individual incomes of males and females separately. Here, the difference is clear to see. The mean employment income of female tax filers was between 67.5% and 69.1% of the employment income of male tax filers for all 5 of these years of data.

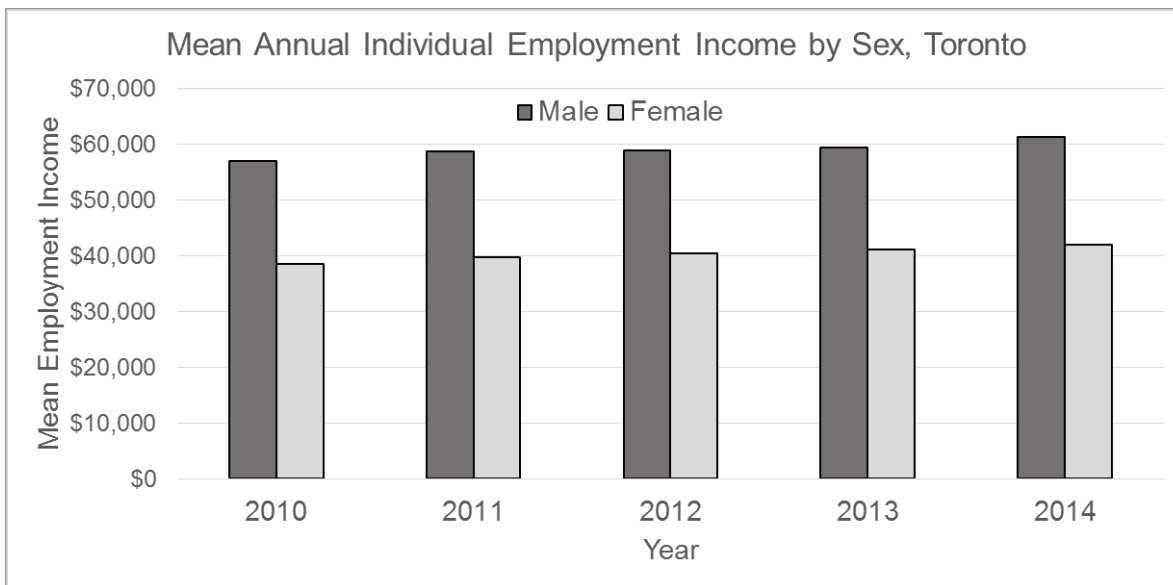


Figure 2: Mean Annual Individual Employment Income by Sex, Toronto (Source: Statistics Canada, T1 Family File, 2010-2014)

For a service or policy in which an individual's employment income is an important factor, the income differences between men and women should be a consideration. How might this information be used in practice? One example is the City of Toronto's Social Procurement Program. The program's aim is to drive inclusive economic growth by improving access to the City's supply chain for diverse suppliers and leveraging meaningful training and employment opportunities for people experiencing economic

disadvantage. While income is only one of the factors to determine which equity-seeking groups should be included in the program, the disaggregated data for employment earnings supports the inclusion of women in the program. This is an example of how disaggregated data can be used to better inform the development of City programs.

To assess the impact of this program, however, it is necessary to understand how well the program serves its intended beneficiaries. The Toronto-wide employment income data helps us to understand the overall situation in Toronto, but is too high level to be able to see the impact of an individual program like the Social Procurement Program. Information from the operation of the program itself is needed to assess whether it is helping to drive inclusive economic growth, and since women are not the only population group served by this program, program data also needs to be disaggregated to assess how effectively the program is reaching and serving women specifically.

To be able to disaggregate data, it is necessary to collect information which identifies the particular groups for which we want to disaggregate alongside any other information being collected. Information about the relative incomes of men and women are possible in this example because tax records include data on the sex of the tax filer. However, there are many other population groups who would not be identifiable from the demographic data associated with tax records.

It is also important to disaggregate the correct data. It can be tempting to use data that may not be the best fit for a program simply because it is available in a disaggregated format. For example, the tax filer data in the example above is not available for households because these cannot be properly identified from income tax records. So, consider an intervention that is interested in housing affordability. Here, income and housing costs would need to be measured at the level of the household. Any disaggregated data would need to use a source which measures and can be disaggregated at the household level. The Census of Population, although it is only conducted every 5 years, would be a more appropriate data source in this case because it is collected in a way that allows for reporting of household-level information.

The use of secondary data (data which is gathered by others, such as Statistics Canada), is incredibly valuable to help the City know about people who live in or travel to Toronto. However, for a truly effective disaggregated data strategy, it is vital to properly identify which data need to be a focus for disaggregation. This need should be determined separately from what data is available. Since it is not possible or even appropriate to disaggregate data along every conceivable demographic characteristic, it is important to have clear goals for the use of the data.

It is also important to have a well-explained purpose for the disaggregated data collection so that both the people collecting and the people being asked for the information understand why this additional information is being sought. This is important not only for consistency with privacy laws and City policy, but also to gather more relevant and better quality data.

## **Disaggregation by demographic groups**

Disaggregated data can be helpful for the City of Toronto in determining the needs of specific population groups, as well as to identify instances where groups might not be receiving equitable treatment. Identifying when data should be collected in a disaggregated way and for which populations is an important step in policy-making and service planning.

The Ontario Human Rights Commission (OHRC) in its guide to data collection, "Count Me In!" notes that many people believe that collecting data on the basis of human rights grounds is not permitted. However, the OHRC points out this is not correct and that "collecting data on *Code* grounds for a *Code*-consistent purpose *is* permitted, and is in accordance with Canada's human rights legislative framework, including the *Code*, the *Canadian Human Rights Act*, the federal *Employment Equity Act*, and section 15(2) of the *Charter of Rights and Freedoms*." (OHRC, 2009)

Collection of such data should be for a purpose consistent with the Code, such as:

- monitor and evaluate potential discrimination
- identify and remove systemic barriers
- lessen or prevent disadvantage
- promote substantive equality for people identified by Code grounds.

These purposes are consistent with many of the City of Toronto's goals, but these goals must be clearly identified as part of the data collection process. It is also important to note that any data collection undertaken by the City of Toronto must be done in keeping with the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA) and other relevant privacy legislation.

Data disaggregation should be focused in areas and on populations where inequities are likely to exist. The City of Toronto does identify groups which have traditionally faced barriers to full participation in the social, cultural, economic, and political life of the city. These include, but are not limited to Indigenous Peoples, women, immigrants and refugees, racialized communities, persons with disabilities, LGBTQ2S communities, youth, persons with low income and undocumented Torontonians. This is a helpful starting point for the consideration of how to disaggregate data, but the City also acknowledges that other groups may experience vulnerability in particular circumstances. The specific service and policy context matters, and the ways in which data should be disaggregated may well be different for different programs and settings.

A corporate strategy on the consistent collection of disaggregated data would need to negotiate the balance between context and consistency. Such an approach might represent a major change in the way that the City collects personal information from residents. It will require an examination of the City's legal authority to conduct this City-wide initiative, and how that data collection complies with MFIPPA.

## **Disaggregation by geography**

While demographic data is often the primary focus of disaggregated data, it is not the only way that disaggregation of data can be achieved. For a city with over 2.7 million residents, it can also be important to consider how services and policies affect different

parts of the city. Geographically disaggregated data is another way to understand how social needs, opportunities and outcomes are distributed across Toronto.

The needs of groups may also differ depending on where they reside. The City of Toronto uses a wide variety of service area geographies across its many divisions and agencies. However, it also collects data at the Ward level for many purposes, as well as at the social planning neighbourhood level. Much of the neighbourhood level data generated by the City is available for access in Wellbeing Toronto ([www.toronto.ca/wellbeing](http://www.toronto.ca/wellbeing)), an online data mapping application. Mapping data disaggregated by smaller areas of the city helps to see the spatial patterns across Toronto.

The UrbanHEART@Toronto project is one example of how data can be disaggregated geographically. Using the geography of the City of Toronto's 140 social planning neighbourhoods, the study identified the most appropriate indicators of community wellbeing following the World Health Organization's Urban Health Equity Assessment and Response Tool. The resulting indicator scores were used by the City to identify neighbourhoods to be designated for support under the Toronto Strong Neighbourhoods Strategy 2020 (TSNS2020).

This example further illustrates the distinction between using disaggregated data to identify inequities and the need for different disaggregated data to understand program and policy impact. The neighbourhood-level disaggregation required to assess the reach and impact of TSNS2020 must instead focus on data that assesses the work and outcomes of the program.

### **What are the benefits of disaggregated data?**

In explaining what disaggregated data is and how it can be used, this report has outlined the benefits of its use. Disaggregated data allows a more complete understanding of the experience of smaller groups within a larger population. It reveals patterns that might be masked within the data for the overall population.

By making use of disaggregated data, it is possible to more effectively target resources at populations that need them most. This is an important consideration for any organization which seeks careful stewardship of its investments.

Disaggregated data is also necessary to understanding whether groups and communities within the population are being served equitably by City programs and policies. Disaggregated data supports measurement of the City's performance on its equity goals, and will support the development of Key Performance Indicators for equity.

### **What are the limitations of disaggregated data?**

It is important to be aware of the limitations of disaggregated data. These can be broadly grouped as: collection limitations, reporting limitations, and use limitations.

#### **Collection limitations**

Information about peoples' demographic identities can be a sensitive topic and subject to privacy concerns. Collecting sensitive personal information about people in the course of providing access to municipal services must be undertaken carefully and in

full consultation with respective internal stakeholders. A number of considerations are required when collecting sensitive information. Such approaches should consider a number of questions. Is the purpose of the data collection well explained? What are least intrusive methods for gathering this information? Have affected communities been included in the development of the questions? How is anonymity protected? Are the questions compliant with relevant privacy legislation? How would this information be interpreted?

Additional challenges emerge when data collection may be in conflict with other City programs. For example, asking Torontonians to self-identify as undocumented may impact the City's goal to ensure that residents, regardless of immigration status, have access to City services without fear of being asked for proof of status. A separate approach may be necessary to gather information about this population.

With any population, data collection must be accompanied by staff training. The Tri-Hospital + TPH pilot study (The Tri-Hospital + TPH Health Equity Data Collection Project, 2013) found that client response rate is dependent on the comfort of service providers to ask socio-demographic questions in a sensitive manner. Staff who collect the data must be able to properly inform the public as to why this information is being requested. In addition, staff require training on how to ask socio-demographic questions sensitively.

Another collection limitation can be found in the way that population groups are defined. Beyond identifying which populations to collect information for, there is also the challenge of how to ask questions most appropriately. In the "We ask because we care" study undertaken by Toronto Public Health and three Toronto hospitals (The Tri-Hospital + TPH Health Equity Data Collection Project, 2013), the concepts of race, ethnicity, and Indigenous identity were addressed in a single question using a blended set of categories. This approach was based on careful community consultation and pilot testing. However, there is also value in keeping the ideas of race, indigenous identity, and ethnicity separate. Depending on the specific programs and context, the way groups are disaggregated may need to be defined differently. There is no perfect method for classifying complex aspects of human identity. Each method will likely have its own limitations.

This example also raises the issue of defining the right level of disaggregation. A good example here is the use of youth unemployment statistics. Youth unemployment is typically disaggregated from the overall unemployment rate for people aged 15 to 24. However, the employment issues faced by 15 year olds and by 24 year olds are significantly different. As a result, further disaggregation of the youth unemployment data into two youth age groups 15-19 year olds and 20-24 year olds is important. The difference between these two age groups can be seen as reported in the City's Social Development Dashboard.

Ultimately, which specific groups are most important to be disaggregated varies from program to program. This is why the use of tools such as an equity lens is a necessary step to identify how data should be disaggregated for a specific service or policy.



Finally, even once all the questions about how best to categorize the data have been answered, there still remains the challenge of implementing any needed changes to data collection systems and processes. The ability to access and share data is an important element of an effective disaggregated data strategy. For example, privacy impact analyses and de-identification guidelines must be developed for disaggregated data if they are to be shared or reported publicly.

### **Reporting limitations**

An effective disaggregation strategy must also consider the technology needs to present and curate the information. This can have implications on the resources needed for data sharing. The City's data sharing tools such as Wellbeing Toronto, for example, are not necessarily configured to easily allow different lenses on the data it contains, and would need to be reimagined to add this functionality.

The leveraging of technology can enhance the value of disaggregated data. Software can be used to provide consistent ways of capturing and sharing data, storing, and structuring it in ways that permit improved integration of data across service areas. Other technology tools can be used to help visualize information for consumers in on-line interactive reports. For example, Business Intelligence Tools cover the full scope of data analysis and let users retrieve, transform, analyse, and report on disparate data more easily. This might include the need to explore how a specific groups' needs or service outcomes are affected by policy changes. This would allow for analysis and reporting of data by groups for the purposes of monitoring impact in respective service areas.

In addition to the technical challenges of reporting disaggregated data, there is also a challenge presented in the sharing of disaggregated data. Accessing disaggregated administrative data from other orders of government can often be challenging, but even sharing between divisions and agencies at the City must be improved. Given everything we know about the need for clearly communicated goals and purposes for collecting this information, a commitment to open data practices must also be embedded in our strategies for data disaggregation.

### **Use limitations**

In addition to the limitations related to collecting and reporting data to support disaggregation, there are also limitations in how the data may be used. These include ensuring privacy is respected in the disaggregation process, linking data, the reliance on access to data from other sources, and the identification of which secondary data sources are appropriate to support a disaggregated analysis. Not all disaggregated data can be collected in a consistent fashion, nor does it always define groups in the same manner. Often it is difficult to analyse data across service areas in more integrated ways due to the need for context-specific information, or report on data that is not consistently collected over time. This can produce inconsistent classification practices and collection standards.

Many of Council's directions to staff on data disaggregation have requested reporting on broad social strategies. However, the collection of data which might support such analysis takes place across different program areas which have different approaches to data collection, including demographic and location data.

It is also important to note that not all data which supports an equity focus is easily disaggregated. People's experiences of social categories like gender, race, income, ability, sexual orientation, immigration experiences, and many more intersect with one another, producing highly varied experiences. These intersections mean people experience barriers such as sexual discrimination, racism, poverty in very different ways. Use of disaggregated data must be mindful of this reality.

Even the most carefully planned collection of disaggregated data will not always identify the cause of inequities. The disaggregation of data can point to issues that need addressing but that process alone does not necessarily offer a clear way forward. While disaggregated data is a vital resource in helping achieve equity goals, there must be a recognition that there are not always a direct cause-and-effect relationship when examining the data and their contribution to a particular outcome. There may be other external factors that contribute to an outcome which the data may not fully explain.

## **Conclusion**

Disaggregated data, used effectively, can and do support efficiency and equity in the delivery of Toronto's programs, services, and polices. This report has provided a brief overview of disaggregated data, its uses, benefits and limitations.

Council has directed the Equity, Diversity, and Human Rights Division to work with City Divisions to develop a disaggregated data collection strategy. Leveraging and enhancing existing efforts will be necessary to meet Council's directions to staff on disaggregated data. Staff are engaging in this cross-divisional effort to develop a strategy and will be reporting back to Executive Committee and Council in November, 2017.

## **References**

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The Tri-Hospital + TPH Health Equity Data Collection Project. (2013). We ask because we care. Toronto: Toronto Health Equity.

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## **SIGNATURE**

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## **ATTACHMENTS**

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None