

The Flow of Youth Experiencing Homelessness Between Shelter Systems and Permanent Housing During the Pandemic*

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Abstract

Toronto has the largest homeless population in Canada, where thousands are at risk of illness or death due to the poor living conditions and lack of sufficient resources accessible to them. Homeless youth can encounter adverse effects on their mental health and well-being from living without permanent or stable housing. This paper aims to investigate the youths in Toronto who are experiencing homelessness and their flow between the shelter system and permanent housing from 2018 to 2022. During this 5-year period, the rise and spread of the COVID-19 pandemic caused people in a state of homelessness to become extremely vulnerable to the virus, especially with the inadequate access to health care. By exploring the visualized trends of youths who return to the shelter system from housing and who move to housing, I observe that the trend of the latter is descending, while the former is a fluctuating trend. This finding suggests that permanent housing is not used as much as it once was pre-pandemic, and that the lack of housing could impact the mental health of youths.

1 Introduction

In view of the fact that Toronto is one of the top population centers and known to be one of the most expensive cities to live in Canada, there is an intolerably large portion of citizens that are experiencing homelessness. Homelessness is defined as an individual or family in a state of having no stable or permanent housing. This state of living is thus accompanied by the lack of mobility and resources to acquire a home. Experiencing homelessness is rooted systemically in the lack of affordable housing, in the occurrence of financial, cognitive, behavioral, and physical challenges, and in racism and discrimination (Shoemaker et al. 2020). An outcome of the lack of stable living arrangements is that this population has

*Code and data are available at: https://github.com/mxnrms/Youth_Shelter_System_Flow.git

a short-estimated life expectancy and experience premature deaths related to poor physical and mental health as well as substance abuse (Shoemaker et al. 2020).

Permanent housing is a support system that provides individuals and families that are coming from a former state of homelessness with housing and equip them with independent living. However, the permanent housing system in Toronto is not perfect. Ever since the exacerbated effects on the affordable housing crisis caused by the pandemic, there has only been slow responses that lack sufficient innovation to permanent housing for the unhoused (Zwarenstein 2022). During COVID-19, there has been an increase in temporary shelters in various locations in the city, like in hotels. This helped those who are without stable housing in the hopes of preventing the spread of the virus. However, temporary housing is only a short-term solution.

In the following paper, I investigate the trends of homeless youth by comparing those that have returned to shelters from permanent housing with those who have moved to permanent housing between the years of 2018 and 2022. In Section 2, I examine the data set from Open Data Toronto and the visualizations of the data. In Section 3, I analyze the common patterns regarding the flow of homeless youth between the shelter system and permanent housing. I observe implications as to why these patterns are occurring and how they have an affect on the relevant population group of this paper, the youths of Toronto. Additionally, I consider the weaknesses of this data analysis as well as what further steps could be taken in the future.

2 Data

2.1 Data Source

This report uses the Toronto Shelter System Flow data set (Shelter 2023) obtained from the City of Toronto’s Open Data Toronto Portal (Gelfand 2020). This data set is accessed and processed through the use of R (R Core Team 2022), and the R packages “tidyverse” (Wickham et al. 2019), “dplyr” (Wickham et al. 2023), “janitor” (Firke 2021), “here” (Müller 2020), “kableExtra” (Zhu 2021), and “knitr” (Xie 2023). These helped in producing a cleaned version of the data set for this report.

This data is published by the Shelter, Support & Housing Administration. It was first available in January 2018, and is updated on a monthly basis, where the last update occurred on January 17, 2023, as of February 2, 2023. This data is collected through the Shelter Management Information System (SMIS) by tracking people who are accessing the programs of overnight services funded by the City of Toronto, such as emergency shelters, hotel programs, and warming centers (Shelter 2023).

2.2 Variables of Interest

The Toronto Shelter System Flow data set includes 444 observations across 18 variables, such as Date, Population Groups, and different groups for age ranges. The different categories of the 8 population groups are All Populations, Chronic, Families, Youth, Single Adult, Refugees, Non-Refugees, as well as Indigenous, which was only included in January 2021.

The significant variables for the data analysis of this report are the Year, Population Groups, Return From Housing, and Moved To Housing. As the Date variable included both month and year, I used the R package “tidyverse” (Wickham et al. 2019) to separate the entities to produce a Year variable, which presents the last two digits of the year. The Youth category is the relevant population group that will be explored in this paper. The Moved To Housing variable displays the number of individuals who moved to permanent housing from shelters. Thus, the Return From Housing variable displays the number of individuals who were previously recorded as Moved To Housing and returned to the shelter system. The other variables of the data set are used to visualize the overall data of the flow of people experiencing homelessness in the shelter system in Toronto. In the analysis of this report, I will use the Toronto Shelter System Flow data set to focus on the youth population and their experience flowing between homeless shelters and permanent housing.

2.3 Visualizing the Data

The visualizations of the data from the Toronto Shelter System Flow data set will show the flow of shelter use to and from permanent housing during the 5-year time period of 2018 to 2022. I take particular interest in my analysis of the trends from 2020 to 2022, as this period indicates the years of the COVID-19 pandemic.

Before examining the trends of homeless youths and their experience with shelters and housing, I will observe the overall insights from all population groups and see how the City of Toronto’s shelter system is functioning for these groups. I focus on the Return From Housing and Moved To Housing variables to examine how the flow of youth population differs from other population groups in a state of homelessness.

In Figure 1, there is a common gradually increasing trend between most population groups when returning to shelters from permanent housing. The peak of this increase happens the year after the pandemic began, where Toronto experienced the third and fourth wave of COVID-19.

In Figure 2, there is a drastic decreasing trend that is common between most population groups when moving to permanent housing from the shelter system. This decline begins in 2020, the year when the COVID-19 pandemic arisen. Thus, the trough of the trend occurs in 2021, when the third and fourth wave of the virus struck.

Population Groups that Returned from Housing
Between 2018 and 2022

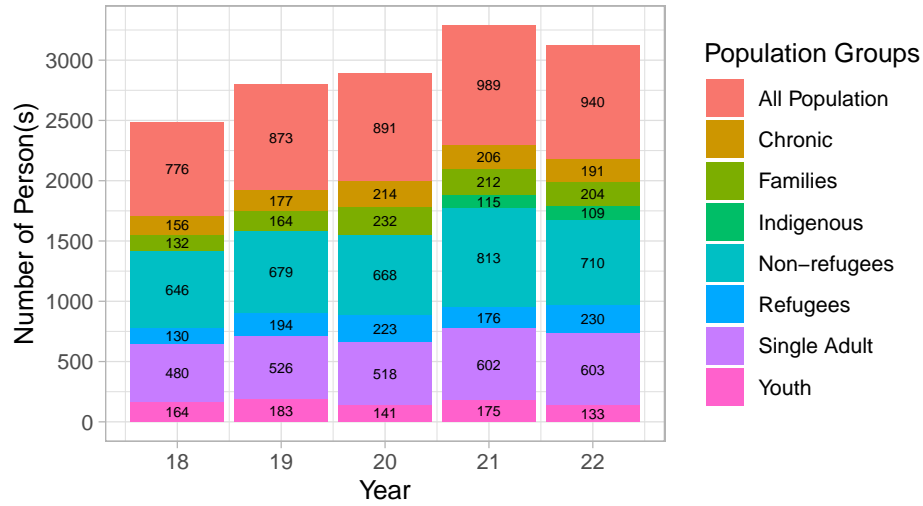


Figure 1: Total number of person(s) in various population groups experiencing homelessness that returned from permanent housing in Toronto by year (2018 to 2022).

Population Groups that Moved to Housing
Between 2018 and 2022

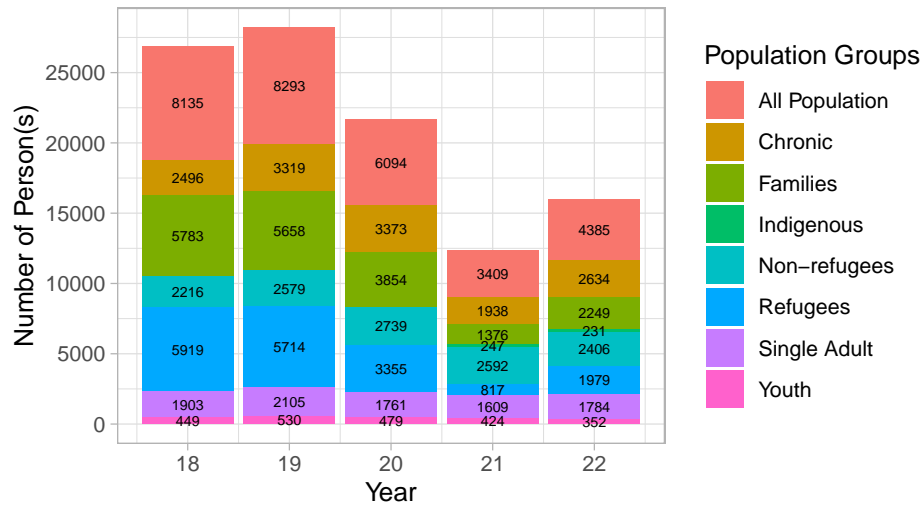


Figure 2: Total number of person(s) in various population groups experiencing homelessness that moved to permanent housing in Toronto by year (2018 to 2022).

Moving from the general overview of the data to the main focus of the data analysis, I will examine the trends of the flow of youths by comparing the patterns that occur for those that return from housing and for those that moved to housing.

Figure 3 visualizes the data for returning from housing in Figure 3a and for moving to housing in Figure 3b, where both visualizations focus specifically on the youth population group. By comparing the two graphs side by side, I am able to identify that there is a clear difference in patterns.

Figure 3a shows that the amount of youth that have returned to homeless shelter services from permanent housing oscillates. There is a fluctuating trend of an increasing and then decreasing number of youths that return from housing.

In relation to the time period in which COVID-19 occurs during these 5 years, there is not as many youths that leave stable housing to return to shelters during the beginning of the pandemic as opposed to the second year of COVID-19, where there is a surge of youth who did. Then, it descended once again in 2022. This overall pattern is similar to the trend in most population groups that returned from housing seen in Figure 1.

Figure 3b displays that the amount of youth that have moved to permanent housing from shelter systems is a significantly descending trend. The peak of this data occurs in 2019, exemplifying that there was previously an increase in youth that moved to housing pre-pandemic. This demonstrates that less and less homeless youths in Toronto are leaving shelters to move to permanent housing during the years of 2020 to 2022.

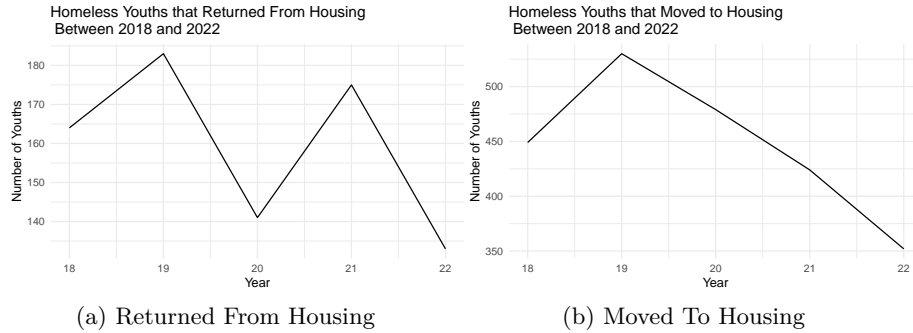


Figure 3: Two flows of youth in shelter systems in Toronto by year (2018-2022).

Finally, Table 1 presents the average of homeless youths that are accounted for under the variables, Newly Identified, Actively Homeless, Returned From Housing, and Moved To Housing. The Newly Identified variable refers to people entering the shelter system for the first time and the Actively Homeless variable refers to people that have used the shelter system at least one time in the last 3 months and did not move to permanent housing (Shelter 2023).

Table 1: Various means of homeless youths in Toronto by year (2018 to 2022).

year	Newly_Identified	Actively_Homeless	Return_From_Housing	Moved_To_Housing
18	107.91667	915.5000	13.66667	37.41667
19	123.25000	964.8333	15.25000	44.16667
20	74.75000	784.4167	11.75000	39.91667
21	94.16667	804.6667	14.58333	35.33333
22	94.91667	902.0000	11.08333	29.33333

What can be discerned from Table 1 is that the average amount of youth who are newly identified only increases slightly pre-pandemic and decreases slightly during the years of the pandemic. This pattern is the same for the youth that are actively homeless. For the average amount of youth that return from permanent housing, there is a fluctuating trend from 2020 to 2022. As for those that move to permanent housing there is a clear decreasing trend during the same 3-year period.

3 Discussion

3.1 Homeless Youths Returning from Housing During the Pandemic

Based on the fluctuation of homeless youths returning from permanent housing during the years of the pandemic, shown in Figure 3a, I find that there are less individuals that returned to shelters from housing during the beginning of COVID-19. However, in the following the trend ascended and then, in 2022, it descended again. Figure 1 shows that this pattern is also common for most population groups of this data set.

This finding suggests that there might have been difficult when returning to shelters during the first year of the spread of the virus. Due to restrictions and the need for isolation, there were obstacles that individuals faced when seeking shelter during the pandemic. The shelter systems established a strict reduced capacity to enforce physical distancing between staff and clients to minimize the spread of the virus (Noble et al. 2022).

Furthermore, the pandemic has had an impact on precarious and low-wage jobs, leading to high levels of unemployment. With this, youth would lose their housing alongside their employment and would move to shelters as a result (Noble et al. 2022). This may attribute to the increase in youths returning to shelters in 2021, as the restrictions of isolation and social distancing were easing.

3.2 Homeless Youths Moving to Housing During the Pandemic

The descending trend of homeless youths moving to housing during the years of the pandemic illustrates how fewer youths move out of shelters to live in permanent housing, shown in Figure 3b. Based on this finding, it suggests that the permanent housing system is not as available or accessible between 2020 and 2022, particularly for youth experiencing homelessness.

At the same time, more and more temporary shelters were being established during the increasing of positive COVID-19 cases. This suggests that the issue of the unhoused was handled with a short-term solution rather than providing adequate permanent living arrangements. Additionally, there were barriers that obstructed access to housing. This affected the youth population in terms of their mental and social well-being, resulting in isolation, poor mental health, and an increase in substance abuse (Noble et al. 2022). It is important to acknowledge that this was especially prevalent for minority groups, so those that identified as Black, as LGBTQ+, and those new to Canada (Noble et al. 2022).

With the priority of providing more temporary housing to mitigate the spread of the virus, there was a lack of effort in providing stable housing for homeless populations. For other population groups in the data, there was an increase in these groups moving to housing after 2021, as seen in Figure 2. This was not the same case for the youth group. It is difficult for those staying in shelters to distance themselves physically and socially in a shared space with others who are in the same position as well as staff (Noble et al. 2022).

3.3 How Permanent Housing Affected Homeless Youths During the Pandemic

When comparing the two graphs in Figure 3, it shows that it is possible that permanent housing was not a viable option for homeless youth, especially in 2021. In Figure 3b, not as many youths moved out of permanent housing and returned to shelters in 2020 and 2022. Simultaneously, less and less youth were being moved to permanent housing, as seen in Figure 3b. Access to permanent housing has been identified as a top priority need by people experiencing homelessness (Shoemaker et al. 2020), demonstrating that there is still a sufficient lack of stable housing for the unhoused population.

Table 1 shows that the average amount of youth that have been newly identified pre-pandemic was increasing until 2020, where it reached a low. Since then the beginning of the pandemic, the average of newly identified youths have increased once again through 2020 to 2022. This suggests that less youths were identified as in a state of homelessness. The table also shows that the average amount of youth that is actively homeless and not moving to permanent housing during COVID-19 is increasing. The pandemic has only negatively

intensified their hardships and created additional barriers to access supports. COVID-19 has limited access to support services for the homeless (Noble et al. 2022). With strict restrictions in place, the lifestyle of homeless youths were exacerbated further. They suffered closures of services and a decrease in accessible supports (Noble et al. 2022). The transition to virtual lifestyles disproportionately impacts the most marginalized (Noble et al. 2022). The structural changes that were outcomes of the pandemic has impacted the well-being of youths, especially those in a state of homelessness, and it is important to implement active supports and further measures in order to care for this youth population.

3.4 Weaknesses and Next Steps

There may have been discrepancies in the data, as this paper did not take into account the COVID-19 related deaths of the population groups. There is also missing data on permanent housing that would be beneficial in seeing its availability, its system, and the flow of homeless populations entering and leaving the housing system. The limitations of the data set that is used is that it exhibits only those that have used services funded by the City of Toronto. Therefore, this data excludes those who are mainly sleeping outdoors or using other homeless shelter support services (Shelter 2023).

Next steps would be to include a data set that focuses on homeless population groups that use shelters not funded by the City of Toronto as well as those that only sleep outdoors. This would help gain a better representative sample of the homeless population. In the future, it would also be helpful to compare the number of accessible shelters available with the amount of permanent housing. This would help in understanding how available stable housing is as opposed to temporary housing.

References

- Firke, Sam. 2021. *Janitor: Simple Tools for Examining and Cleaning Dirty Data*. <https://CRAN.R-project.org/package=janitor>.
- Gelfand, Sharla. 2020. *Opendatatoronto: Access the City of Toronto Open Data Portal*. <https://sharlagelfand.github.io/opendatatoronto/>, <https://github.com/sharlagelfand/opendatatoronto/>.
- Müller, Kirill. 2020. *Here: A Simpler Way to Find Your Files*.
- Noble, Amanda, Benjamin Owens, Naomi Thulien, Amanda Suleiman, and Baltica Cabieses. 2022. “‘I Feel Like i’m in a Revolving Door, and COVID Has Made It Spin a Lot Faster’: The Impact of the COVID-19 Pandemic on Youth Experiencing Homelessness in Toronto, Canada.” *PloS One* 17 (8): e0273502–2. <https://doi.org/https://doi.org/10.1371/journal.pone.0273502>.
- R Core Team. 2022. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Shelter, Support & Housing Administration. 2023. “Toronto Shelter System Flow.” <https://open.toronto.ca/dataset/toronto-shelter-system-flow/>.
- Shoemaker, Esther S, Claire E Kendall, Christine Mathew, Sarah Crispo, Vivian Welch, Anne Andermann, Sebastian Mott, et al. 2020. “Establishing Need and Population Priorities to Improve the Health of Homeless and Vulnerably Housed Women, Youth, and Men: A Delphi Consensus Study.” *PloS One* 15 (4): e0231758–58. <https://doi.org/https://doi.org/10.1371/journal.pone.0231758>.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D’Agostino McGowan, Romain François, Garrett Grolemond, et al. 2019. “Welcome to the tidyverse.” *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.
- Wickham, Hadley, Romain François, Lionel Henry, Kirill Müller, and Davis Vaughan. 2023. *Dplyr: A Grammar of Data Manipulation*.
- Xie, Yihui. 2023. *Knitr: A General-Purpose Package for Dynamic Report Generation in r*. <https://yihui.org/knitr/>.
- Zhu, Hao. 2021. *kableExtra: Construct Complex Table with ‘Kable’ and Pipe Syntax*.
- Zwarenstein, Carlyn. 2022. “Toronto’s Shelter Hotels Promised Safe Transitional Housing—What Happened?” <https://breachmedia.ca/torontos-shelter-hotels-promised-safe-transitional-housing-what-happened/>.