

THE COST OF HOMELESSNESS IN DALLAS & COLLIN COUNTIES

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Executive Summary

- **Challenge:** How do we define and measure the cost components associated with homelessness in Dallas & Collin Counties?
- **Quantification:** We can identify the cost components associated with homelessness based on existing research. The benefits of the project are measured as the total cost saved.
- **Dallas & Collin Counties:** According to the 2023 Housing Forward Point-in-Time Homelessness Count, as of January 2023, there were a total of 4,410 homeless people in Dallas and Collin Counties. The gender breakdown of the count had 37% females and 63% males.
- **Methods:** Apply existing research and use average cost components to estimate the total cost associated with homelessness.
- **Findings:**
 - The total estimated annual costs associated with homelessness for 4,410 homeless persons in Dallas and Collin Counties is \$193,606,366 (\$43,901 per capita)
 - Housing Forward is currently leading an effort to house 2,700 individuals for a budget of \$70 million, which projects a per-capita spending of \$25,925.
 - The associated estimated annual cost of homelessness for a population of 2,700 is \$118,532,700 (\$43,901 per capita x 2,700).
 - If the \$70 million investment in R.E.A.L. Time Rehousing can save a fraction of the costs associated with homelessness, there is a tremendous opportunity for significant cost savings (\$70 million vs. \$118,532,700).

I. Homelessness in North Texas

Homelessness is a significant issue in the state of Texas. Texas has one of the largest populations in the United States, a warm climate, and several major metropolitan centers. The Texas Human and Health Services reports that the Texas homelessness rate was lower than the national rate in 2019, with an average of 9 individuals per 10,000 individuals. As the Texas economy has grown over the last few years, the homelessness rate in the state has declined from 17.1% in 2007 to 8.1% in 2022¹. It must be noted that between 2019 and 2020, the homeless rate in Texas increased slightly from 8.9% in 2019 to 9.4%. This increase might be attributed to the COVID-19 pandemic.

Integrating data from different sources is the most significant challenge in studying the patterns of homelessness and associated economic cost components. Housing Forward² is responsible for conducting the annual Point-in-Time Count of the Dallas and Collin Counties homeless population. They also publish an annual State of Homelessness report that we are using in this report. According to its 2023 State of Homelessness, there were 4,244 individuals experiencing homelessness on a single night in 2023 using a Point-in-Time (PIT) count³. The data showed an overall decline of 4 percent in the homeless population in the two counties, including a 14 percent fall in the unsheltered homeless population. According to the NIH, the Point-In-Time count, where contact is made with each homeless person, is the most reliable technique to quantify the size of the homeless population. An advantage of this approach is that

¹ Annual Point-in-Time Report Prepared for Housing Forward. (2023). In *Institute for Community Alliances*.

² Housing Forward, formerly Metro Dallas Homeless Alliance (MDHA), was founded in 2002 to serve as a collective voice for homelessness in Dallas and Collin Counties, Housing Forward has the expertise, partnerships, and resources to lead a system-wide, data-driven strategy to solve homelessness in our community.

³ Point-in-Time count is the number of homeless individuals at a single specific night in time, providing us with a snapshot of homelessness.

direct contact allows for data accuracy and collection of other sociodemographic and other information on the characteristics of these populations. However, this approach is limited in that it only represents a point-in-time snapshot or cross-sectional account of the state of homelessness at that time.

The 2023 Point-in-Time Survey also showed that the chronic homeless population in Dallas and Collin Counties decreased 32 percent since 2022. Youth homelessness, however, increased by 18 percent and veteran homelessness increased by 21 percent (365 individuals). Ninety-two percent of the housed population remained housed after 12 months of residency. The gender composition of the homeless population (sheltered and unsheltered) was reported as 36% female, 63% male and one percent transgender.

Overall, Housing Forward reports that the number of neighborhoods experiencing chronic and unsheltered homelessness has dropped significantly. Unsheltered homelessness has dropped by 14 percent. It is notable that not only has the size of homeless population declined since 2022, but the average length of homelessness has declined. In 2023 most of the homeless population were older than 24 years old (Chart 1). Although the Dallas County population is 41% Hispanic, only 20.1 percent of its homeless population are Hispanic (Chart 2). It is alarming to note that although less than 25 percent of the Dallas County population are African American, more than half of the homeless population (54.2 percent) are African American (Chart 3).

In the following section we estimate the cost components associated with the homeless population in Dallas and Collin counties using the latest data from 2023. We estimate the annual cost of homelessness as a linear function of the homeless population using the known average cost parameters for hospitalization, medical treatment, emergency room visits, incarceration and emergency shelters.

II. Cost Analysis

Cost Components of homelessness are well recognized and include cost components associated with hospitalization and medical treatment, mental health, emergency room visits, and incarceration. There is an increasing volume of research on these components, which we will use in our estimations in the following subsections.

- Hospitalization

According to a report in the New England Journal of Medicine, homeless people spent an average of four days longer per hospital visit than comparable non-homeless people. This extra cost, approximately \$2,414 per case for the study, is attributable to homelessness. A study of hospital admissions of homeless people in Hawaii revealed that 1,751 adults were responsible for 564 hospitalizations and \$4 million in admission costs. The cost is the cost of admission and is not the same as the daily cost of hospitalization.

There are various estimates of the average cost of hospitalization in Dallas and Collin counties and the average cost of medical treatments. Based on the data from the American Hospital Directory the average gross revenue per day per bed for various hospitals across the City of Dallas varies from \$16 to \$30,115. The numerical average will be \$3,070. The initial hospitalization cost per patient is \$23,843. At this point we would like to refer to Hwang, et al. (2013). They reviewed the administrative data collected on 93,426 admissions across five years in Toronto, Canada. The mean cost for 90,345 admissions is reported to be \$12,555 and for 3,081 homeless patient admissions is reported to be \$13,516. Although the mean cost for the homeless patient admissions is higher than the mean cost for general population, Hwang, et al. (2013) explains the difference based on the number of days and not the level of the care a

homeless patient receives. Further research is needed to thoroughly investigate the discrepancies between the cost of medical treatment for the general patient population and the homeless patient population.

A homeless individual, on average, stays 4 nights more than an average hospitalized patient. Thus, we use the following formula to estimate the total cost of hospitalization for the homeless population:

$$\text{Average Cost of Hospitalization per Homeless Individual} = \text{Average Cost of Hospitalization per Capita} + 4 * \text{Average Daily Cost of Hospitalization} \quad (\text{Eq. 1})$$

$$\text{Total Cost of Hospitalization for Homeless Population} = \text{Num. of Homeless} * \text{Probability (Hospitalization)} * \text{Average Cost of Hospitalization} \quad (\text{Eq. 2})$$

A report from Texas A&M suggests that the probability of hospitalization for an average homeless individual is 31 percent.⁴ Several articles study the hospitalization probability among the homeless population. Lim, Andersen, Leake, Cunningham, and Gelberg (2002) in a pioneering study of 974 homeless women in Los Angeles County, report that 30 percent of women have been hospitalized in the previous 12 months for reasons other than delivery. Hwang et al. (2013) surveyed the homeless population of Toronto, Ontario, Canada. They reported that, on average, 19.5 percent were hospitalized in a medical-surgical bed, and 11.5 percent were hospitalized for psychiatric reasons. Thus, on average, there is a 31 percent probability of hospitalization for surgical or psychiatric reasons.

⁴ Research Report 2023, School of Public Health, Texas A&M, College Station, Texas.

For a homeless population of 4,410 individuals in Dallas and Collin counties, the total cost of hospitalization will be calculated as the following:

$$\textit{Total Cost of Hospitalization for Homeless Population} = 4,410 * 0.31 * \textit{Average Cost of Hospitalization per Homeless Individual}$$

We use Eq.1 to estimate the *Average Cost of Hospitalization per Homeless Individual*:

$$\textit{Average Cost of Hospitalization per Homeless Individual} = \$23,843 + 4 * \$ 3,070 = \$36,123$$

Thus:

$$\begin{aligned} \textit{Total Annual Cost of Hospitalization for Homeless Population} &= 4,410 * 0.31 * \$36,123 \\ &= \$ 49,383,753 \end{aligned}$$

This calculation estimates the annual cost of hospitalization for the homeless population of Dallas and Collin counties to be \$49,383,898 in 2023. In the final tally, hospitalization accounts for 45 percent of the total cost of homelessness in Dallas and Collin counties in 2023.

- Medical Treatment

In addition to hospitalization. The homeless population also needs medical treatment more frequently than the rest of the population. Miller et al. (2021) review 25 studies and report that the homeless population, on average, needs medical treatment 1.4 times more than the average population. Baggett et al. (2010) surveyed 966 adult homeless respondents and reported that 73 percent required medical treatment. Koh et al. (2020) use data on 402 individuals enrolled in Boston Health Care for the Homeless Program (BHCHP) from 2013 to 2015 to estimate average spending of \$18,764 based on their Medicaid claims. Since this is the most

recent estimation of medical treatment among the homeless, we use this number to estimate the total cost of medical treatment in the following formula:

$$\text{Medical Treatment} = \text{Num. of Homeless} * \text{Probability of Medical Treatment} * \text{Average Cost of Medical Treatment} \quad (\text{Eq. 3})$$

$$\rightarrow \text{Medical Treatment} = 4,410 * 18,764 * 0.73 = \$60,406,945$$

Thus, it is estimated that the total annual cost of medical treatment will be \$60,406,945 for Dallas and Collin counties for a population of 4,410 homeless individuals. The calculations assume that seven in ten homeless individuals require medical treatment. The estimated cost of medical treatment differs from the total cost of hospitalization.

- **Mental Health**

There are several studies dedicated to measuring the cost of mental health among the homeless population. Gilmer et al. (2010) assumed that chronically homeless adults use emergency and inpatient psychiatric services heavily. They conducted an experiment from October 2005 to June 2008 in San Diego County, California, offering 154 individuals public mental health services. They showed that the mean number of days spent homeless per year for the individuals receiving mental public health services dropped from 191 days to 62 days. They report that psychiatric inpatient costs declined by \$6,882, emergency service costs declined by \$1,721, and jail mental health services costs declined by \$1,641 per individual during the year. There have been increases in the cost of housing and outpatient costs because homeless individuals spent more time in their housing assignments and received public mental health services. Thus, in the case of the San Diego experience, total cost savings associated with mental

health among the homeless is estimated to equal \$10,244 per capita, as the sum of savings in emergency services, jail mental health services, and psychiatric inpatient services.

Estimating the cost is not the only problem. We need to ask what the likelihood of a homeless individual using mental health services is. Bonin, Fournier, and Blais (2007) report that out of 757 homeless individuals in Montreal, Quebec, 439 individuals met DSM-IV criteria for affective disorders or axis I psychotic disorders, the rate of hospitalization and inpatient services for psychiatric reasons in the previous year is recorded as 41% or two in every five individuals. Krausz et al. (2013) report that 38.2% of 500 homeless individuals living in three major urban centers suffered from mental health disorders. Thus, for the present study, we assume any homeless individual has an average chance of 38.2% of using mental health services at an average cost of \$10,244 each.

*Total Cost of Mental Health = 0.382 * Num. of Homeless * Average Mental Health Cost*

$$= 0.382 * 4,410 * \$10,244 = \$17,257,247 \quad (\text{Eq. 4})$$

Based on the existing data and probability rate of 38.2%, we expect a total cost of \$17,257,247 in annual costs associated with mental health among the homeless population of Dallas and Collin counties.

- Emergency Room Visits

Homeless individuals often visit Emergency Rooms to receive the care they need for their health concerns. According to data from the Texas Health and Human Services Department, there were 170 Emergency Room visits per 100 homeless individuals in Texas from 2015 to 2018. We applied this average to Dallas and Collin counties to estimate the potential total

Emergency Room visits cost based on the homeless population's size. We use the following formula:

$$\text{Total Cost of ER Visits} = 1.7 * \text{Num. of Homeless} * \text{Average Cost of ER Visits} \quad (\text{Eq. 5})$$

Using \$2,200 as the average cost of an ER visit, we estimate the total annual cost of ER visits associated with the existing homeless population is \$16,493,400.

$$\rightarrow \text{Total Cost of ER Visits} = 1.7 * 4410 * \$2,200 = \$16,493,400$$

Further studies can measure the number of ER visits during very cold or scorching weather in Dallas and Collin counties and adjust the total cost of ER visits using a time-variant average for ER visits for the homeless population.

- **Incarceration**

Ringle-Gonzalez et al. (2018) report that homeless youth are 5.51 times more likely to get arrested than youth who have never been homeless. Homelessness was associated with higher rates of problem behavior, including arrests, academic problems, and suicide attempts. However, it is not easy to estimate the total cost of incarceration associated with homelessness. Many researchers have studied the pattern of homelessness among the previously incarcerated, and some have investigated the patterns of imprisonment among the homeless.

Moschino and Johnson (2019) studied the incarcerated homeless population in Australia and concluded that homelessness does not increase the risk of incarceration. However, in their opinion, incarceration increases the risk of homelessness. Remster (2021) studies the patterns of homelessness among formerly incarcerated individuals in the United States by using administrative data from Pennsylvania. He reports that only 6.9 percent of those who became

homeless post-release had been homeless before incarceration. In other words, incarceration increased the probability of becoming homeless by a factor of 10.

Camplain et al. (2019) report that the median length of stay for the first observed incarceration is 1 day, and the median total day of imprisonment is three days at the Coconino County Detention Facility in Flagstaff, Arizona, from 2001–2018 based on a cohort of 75,203 individuals. Western et al. (2021) recorded a median number of days of incarceration as 11 days for New York City jails. His team also reports a 9 percent average incarceration rate among the homeless population of the city of Dallas in 2018. We also have Henrichson (2015), who reports that the average daily Dallas County jail population is 6,144, with an annual cost of \$110,132,749.

Greenberg and Rosenheck (2008) demonstrate that 12.4% of the incarcerated population, on average, had been homeless in the previous year, and 2.9% were homeless at the time of incarceration. Thus, the proportion of all individuals in jail who had been homeless in the prior year was 15.3%. They concluded that the rate of homelessness among jail inmates was approximately 7.5 to 11.3 times the annual rate of homelessness in the general population. Using the number of incarcerated people as the main input, with 15.3% being homeless, the total cost of incarceration of homeless individuals will be their share of the County Jail System budget. For Dallas County, this will be:

$$\text{Annual Cost of Incarceration Homeless Individuals} = \text{Annual Cost of County Jail} * \\ \text{Homelessness Rate of Incarcerated}$$

Which we can estimate as

$$\text{Annual Cost of Incarceration Homeless Individuals} = \$110,132,749 * 0.153 = \$16,850,311.$$

So, \$16,850,311 is spent on the incarceration cost of individuals who have been homeless in the previous year.

- Emergency Shelters

Emergency sheltering is a costly alternative to permanent housing that is not assessed accurately Meyer, Wyse, and Corinth (2023). While it is sometimes necessary for short-term crises, too often, it serves as long-term housing. Texas Homeless Network (2023) reports that 43% of the homeless individuals lived in either an emergency shelter or transitional housing, and 34% lived in an emergency shelter. According to the Texas Homeless Network (2023), 57% of homeless people were unsheltered. The cost of sheltering homeless individuals varies across the United States (HUD, 2014). In 2010, HUD estimated that the average monthly price of emergency sheltering for an individual in Houston varied from \$853 to \$1,187 in 2006 dollars. If rates have increased with inflation, it would range from \$1,327 to \$1,846 in January 2024.

Based on this information, we calculate the annual cost of sheltering the homeless in Dallas and Collin counties for a population of 4,410 individuals with a 34% likelihood ratio of using emergency shelters. First, we use the lower rate of \$1,327:

$$\text{Average Monthly Cost of Emergency Sheltering} = 4,410 * 0.34 * \$1,327 = \$1,989,704$$

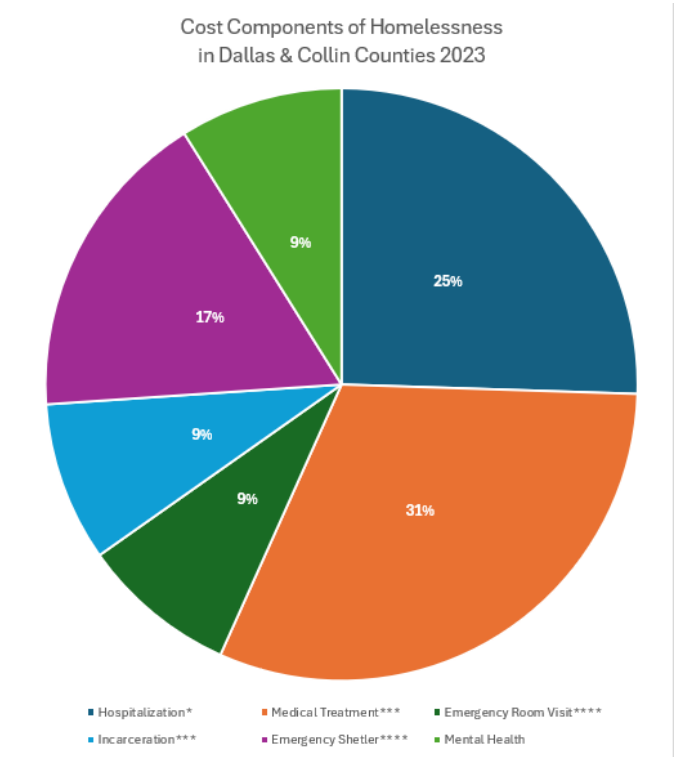
$$\begin{aligned} \text{Average Annual Cost of Emergency Sheltering} &= \text{Average Monthly Cost of Emergency Sheltering} \\ &* 12 = \$23,876,446 \end{aligned}$$

Then we use the higher rate of \$1,846:

$$\text{Average Monthly Cost of Emergency Sheltering} = 4,410 * 0.34 * \$1,846 = \$2,767,892$$

counties. Using this instrument, we estimate the total annual cost associated with a homeless population of 2,700 individuals is \$118,532,700 which is translated from a per-capita spending of \$43,901. 25.5 percent of the total cost is the cost of hospitalization, amounting to \$30,234,489. The emergency shelters account for 17 percent of the total cost, which is \$20,335,225.

Suppose the \$70,000,000 investment in housing 2,700 homeless individuals can save a fraction of the costs associated with homelessness. In that case, there is a tremendous opportunity for significant cost savings without even considering the additional positive economic benefits of increased employment and tax revenues, police calls that do not result in incarceration, decreased clean-up and management of encampments, or reduced staff time needed for outreach, engagement, and relocation.



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