

Economic Cost of Homelessness in Dallas & Collin Counties

Dallas County Health & Human Services

May 2024

Challenge

- How to define and measure the cost components associated with housing the homeless population in Dallas & Collin Counties?

Data Integration

- According to its 2023 Housing Forward State of Homelessness, 4,244 individuals experienced homelessness in Dallas and Colling Counties on a single night in 2023 using a Point-in-Time (PIT) count.
- We use different sources to compile data on the cost components and homelessness characteristics in Dallas and Collin Counties.

Cost Analysis

- Cost Analysis: We estimate the total cost using the following cost components.
- Cost Components
 - Hospitalization
 - Medical Treatment
 - Mental Health
 - Emergency Room Visits
 - Incarceration
 - Emergency Shelters

Hospitalization

- A homeless individual spent, on average, four days longer per hospital visit than a comparable non-homeless individual.
- We use the admission cost of \$23,843 and average cost of \$3,070, with a probability of hospitalization of 0.31.

$$\text{Avg Cost Hospital. per Homeless} = \$23,843 + 4 * \$ 3,070 = \$36,123$$

$$\text{Total Cost of Hospital.} = 4,410 * 0.31 * \$36,123$$

$$= \$ 49,383,753$$

Medical Treatment

- The homeless population requires medical treatment more frequently than the rest of the population
- The most recent estimation of medical treatment among the homeless **\$18,764** based on their Medicaid claims with a 0.73 probability of receiving medical treatment.

*TC of Medical Treatment = Num. of Homeless * Probability of Medical Treatment * Average Cost of Medical Treatment*



Total Cost of Medical Treatment = **4,410 * 18,764 * 0.73 = \$60,406,945**

Mental Health

- We need to ask what the likelihood of a homeless individual using mental health services is; based on available data, we estimate this to be 0.382.
- We use \$10,244 as the cost of mental health per homeless individual seeking mental care.

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



$$= 0.382 * 4,410 * \$10,244 = \$17,257,247$$

Emergency Room Visits

- According to data from the Texas Health and Human Services Department, there were 170 Emergency Room visits per 100 homeless individuals on average in the state of Texas.
- A visit to ER costs, on average, \$2,200. We use this average cost to estimate the total cost of ER visits for the homeless population.

Total Cost of ER Visits = 1.7 * Num. of Homeless * Average Cost of ER Visits



Total Cost of ER Visits = 1.7 * 4,410 * \$2,200 = \$16,493,400

Incarceration

- Estimating the total cost of incarceration for the homeless population in Dallas and Collin counties proved to be the most challenging.
- The likelihood of a homeless individual being arrested is 5.51 times larger than the average person. Based on the available research, we use a probability of 0.09 for the likelihood of incarceration.
- Average day of incarceration in county jails is estimated to be 3 days.
- To estimate the total cost of incarceration associated with homelessness, we estimate the average daily cost of incarceration related to homelessness and then use the average days of imprisonment to calculate the total cost of incarceration related to homelessness.

Incarceration...

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- Probability of Incarceration = 0.09
- Average Cost per Day = $\$110,132,749 / 6,144 = \$17,925$
- Total Homeless Population = 4,410

*Average Cost of Incarceration per Day = Num. of Homeless * Probability (Incarceration) * Average Cost of Incarceration per Day per capita*

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$$\text{Average Cost of Incarceration per Day} = 4,410 * 0.09 * \$17,925 = \$7,114,432$$

- Average Days of Incarceration = 3

*Cost of Incarceration = Num. of Homeless * Probability (Incarceration) * Average Cost of Incarceration per Day per Bed * Average Days of Incarceration*

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$$\text{Cost of Incarceration} = \$7,114,432 * 3 = \$21,342,107$$

Emergency Shelters

- In 2023, Texas Homeless Network (2023) reported that 43% of the homeless individuals were living in either an emergency shelter or transitional housing.
- In 2010, HUD estimated that the average monthly cost of emergency sheltering for an individual in Houston varied from \$853 to \$1,187 in 2006 dollars applying the inflation the rates will be \$1,327 to \$1,846 in January 2024.

Emergency Shelters....2

- 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.

- For the lower rate of \$1,327:

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

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

- For the higher rate of \$1,846:

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

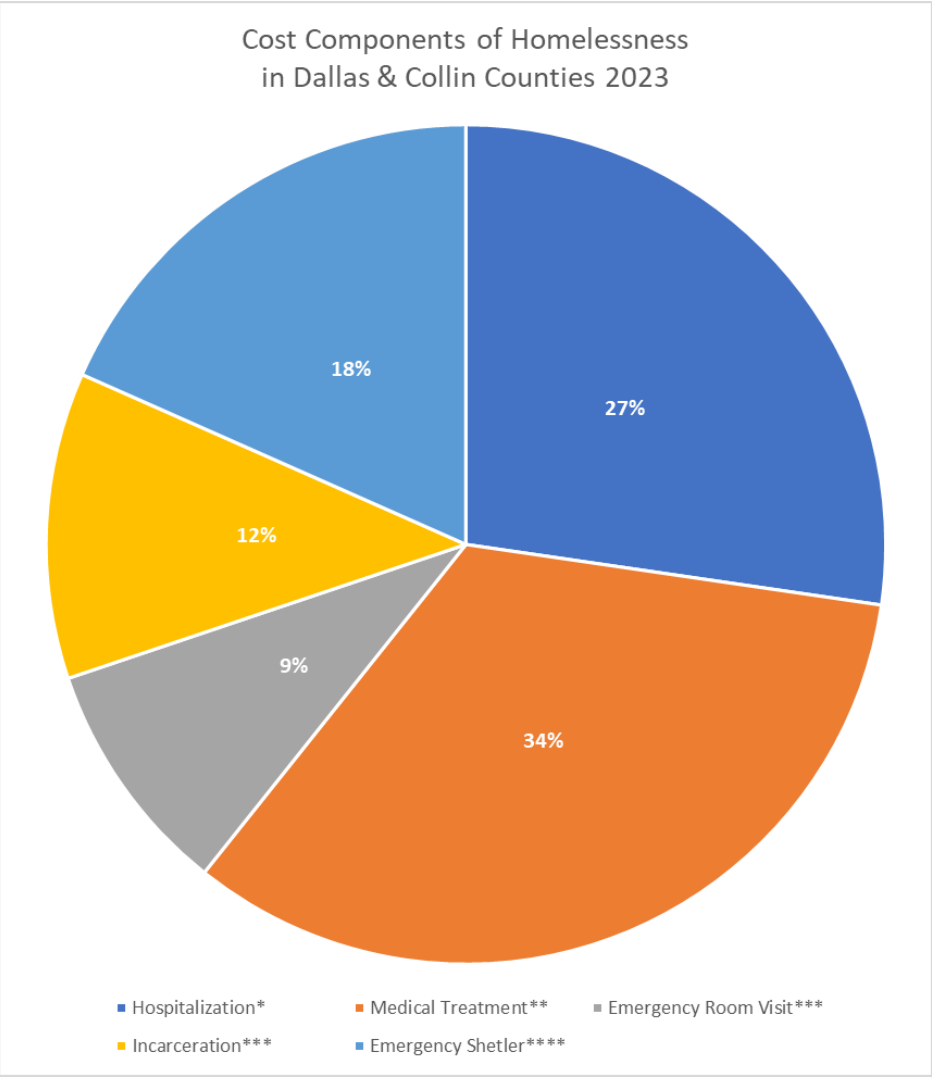
$$\text{Average Annual Cost of Emergency Sheltering} = \text{Average Monthly Cost of Emergency Sheltering} * 12 = \$33,214,709$$

Total Cost of Homelessness in Dallas and Collin Counties

The Cost Components Associated with the Homelessness				
DESCRIPTION	Formula	Initial Cost	Average Total Cost (Homeless)	Cost
Hospitalization*	Average Cost * Num (Homeless) + Days *Daily Expense *Num (Homeless)	\$ 23,843.00	\$ 36,123.00	\$ 49,383,753.30
Medical Treatment**	Average Cost * Num (Homeless)	-	\$ 18,764.00	\$ 60,406,945.20
Emergency Room Visit***	Average Cost ER Visit * Num (ER Vist)	-	\$ 2,200.00	\$ 16,493,400.00
Incarceration***	Average Cost Inc. * Num (Incarcerated Homeless)	\$ -	\$ 17,924.00	\$ 21,342,106.80
Emergency Shelter****	Average Cost of Emergency Shelter	\$ -	\$ 1,846.00	\$ 33,214,708.80
Mental Health	Average Mental Health Cost * Num. of Homeless * Prob (Mental Health Services)	\$ -	\$ 10,244.00	\$ 17,257,247.28
Total Costs				\$ 198,098,161

Per Capita Costs of Homelessness = $\$198,098,161 / 4410 = \$44,920$

Total Cost of Homelessness in Dallas and Collin Counties



Housing Forward R.E.A.L. Time Rehousing

- The Current effort planned to house 2,700 individuals for a budget of \$70 million projects per-capita spending of \$25,925.
- Based on this study, the associated estimated per-capita cost of homelessness for a population of 2700 is \$44,920.
- So, estimated costs associated with homelessness for the 2700 homeless persons is \$121,284,000
- If the \$70 million investment in R.E.A.L. Time Rehousing can save a fraction of the costs associated with homelessness, there is tremendous opportunity for significant cost savings (\$70 million vs. \$121,284,000).