

## RESEARCH IN BRIEF

# Examining the Economic Cost of Youth Homelessness in Southern Nevada

By Jaewon Lim, PhD; Saba Manesh, MS; Patricia Cook-Craig, PhD; Arash Ghafoori, MA; & Melissa Jacobowitz, MPA

In this paper we examine the economic impact of youth homelessness in Southern Nevada. We began this examination by asking a simple question: What would happen if homeless youth earned the same as other youth? We compared educational attainment and income of homeless youth to youth in poverty and all youth in the region. We found that the costs of homelessness to youth and lost economic benefits to the community are staggering and should compel us to swift and decisive action to address the problem.

### Methodology

**Comparison Groups.** In order to understand what homelessness costs youth and their communities it was necessary to select comparison groups. Three groups were compared in this study:

**Group 1:** Homeless youth receiving services in Southern Nevada in agencies participating in HMIS data collection.

**Group 2:** Youth in poverty in Southern Nevada included in the American Community Survey (ACS). The federal definition of poverty was used to select this group.

**Group 3:** All youth in Southern Nevada included in the American Community Survey (ACS).

**Age Cohorts.** Depending on the specific analysis, we compared three different cohorts of youth based on their age including: youth ages 13-18; youth ages 15-18; and transition-age youth 19-24. While we group youth ages 13-15 together for the purposes of examining school attendance patterns, the legal age to work in Nevada is 15 years old. When comparing underage youth patterns related to income we constrained the analysis to ages 15-18.

**Sources of Data.** Three sources of available data were used to examine the impact that homelessness has on lost earnings for youth and lost economic

### HIGHLIGHTS

- Transition age homeless youth have significantly lower rates of participation in post-secondary education. Less than 10% of homeless youth between ages 19-24 in Southern Nevada report any post-secondary education experience.
- The gap in income for homeless youth compared to other youth in the region ranged from \$18.9 million to \$28.4 million between 2014-2016.
- Total lost tax revenue including local, state, and federal taxes ranged between \$3.1 million and \$4.7 million between 2014-2016.
- The economic loss (unattained economic impact combined with uncollected tax revenue) due to the income gap of homeless youth in the Southern Nevada region ranged between \$23.5 million to \$35.8 million between 2014-2016.

benefit to the Southern Nevada region including:

- 1) **Homeless Management Information System (HMIS) data.** HMIS is a homeless data management system used to collect and manage homeless assessment and service delivery data in communities (Bitfocus, 2018).
- 2) **American Community Survey (ACS) data.** The ACS is an ongoing survey that provides vital information on a yearly basis about our nation and its people. It is the premium source for population and housing information about our nation (US Census, 2018, ¶1).
- 3) **IMPLAN® Annual Regional Economic data.** By pairing classic input-output analysis with regional social accounting matrices (SAMs), IMPLAN is designed to create economic models using data collected for a defined study region (IMPLAN, 2018, ¶1).

We examined the education and income data across three years: 2014, 2015, and 2016. The selection of these three years for the analysis was driven by two factors: 1) data collection on youth who are homeless has gotten more sophisticated in recent years; and 2) the latest year of data that was available across the three datasets is 2016. The dollar figure associated with income gaps can vary over time. Using multiple years of data allowed for the capture of some information about the variation between the three years of data used.

### Attendance and Educational Attainment

When examining patterns of self-reported school attendance for youth ages 13-18 years old it is clear that

homeless youth struggle much more than youth in poverty or all youth in Southern Nevada. While the rate of non-attendance for youth overall ranged from 5.0% to 6.7% and between 6.7% to 11.7% for youth in poverty, for homeless youth the rate of non-attendance was much higher. For homeless youth the rate of non-attendance reported across the three years ranged from 28.6% to 32.1%.

The challenges that youth face in connecting to school form a foundation that precedes a troubling trend in education attainment. Across the three years we examined differences in the rates of three possible education outcomes including:

- Less than high school completion
- Receiving a high school diploma or GED
- Participation in post secondary education

Figure 1 shows the trends in education attainment for 19-24 year old transition age youth from 2014-2016.

**Less Than High School Attainment.** Across the three years, approximately 40% of transition age homeless youth reported that they did not finish high school. This is much higher than their comparison cohorts. In that same time span, 20-25% of youth in poverty reported they did not finish high school and only 10-15% of youth overall did not complete their basic education.

**High School or GED Completion.** A higher percentage of transition age homeless youth in Southern Nevada completed high school or got a GED than in the comparison groups. While approximately 36% of youth in poverty and approximately 35% of all youth in the region earned a diploma or a GED, 50-60%

Figure 1: Education Attainment of Transition Age Youth (19-24 Yrs. Old)

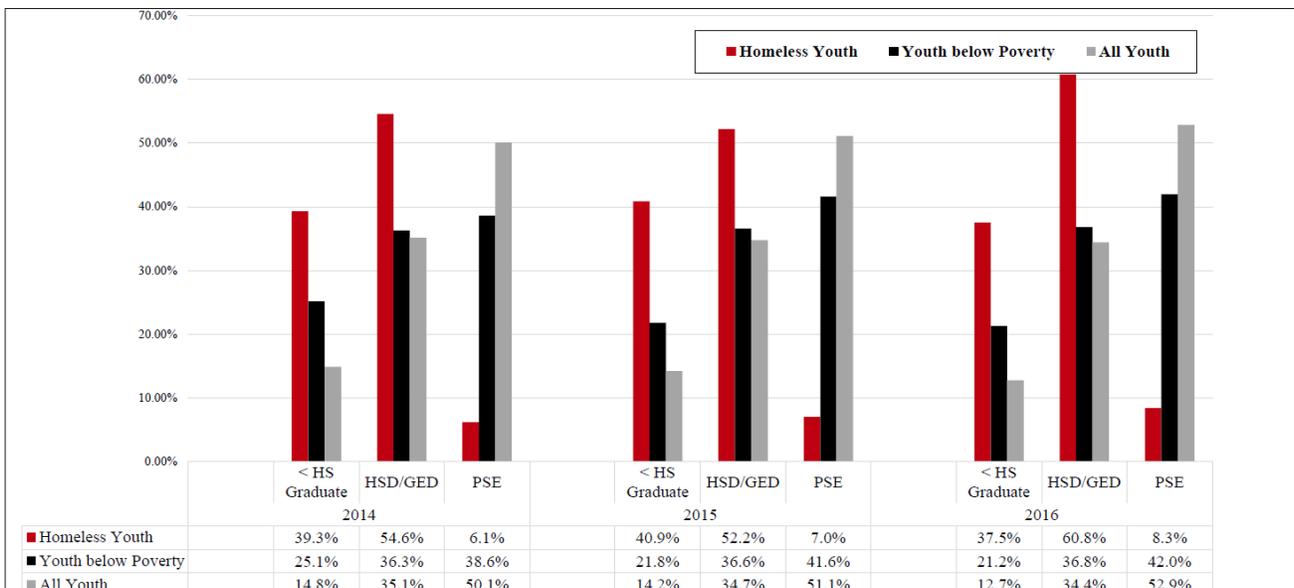
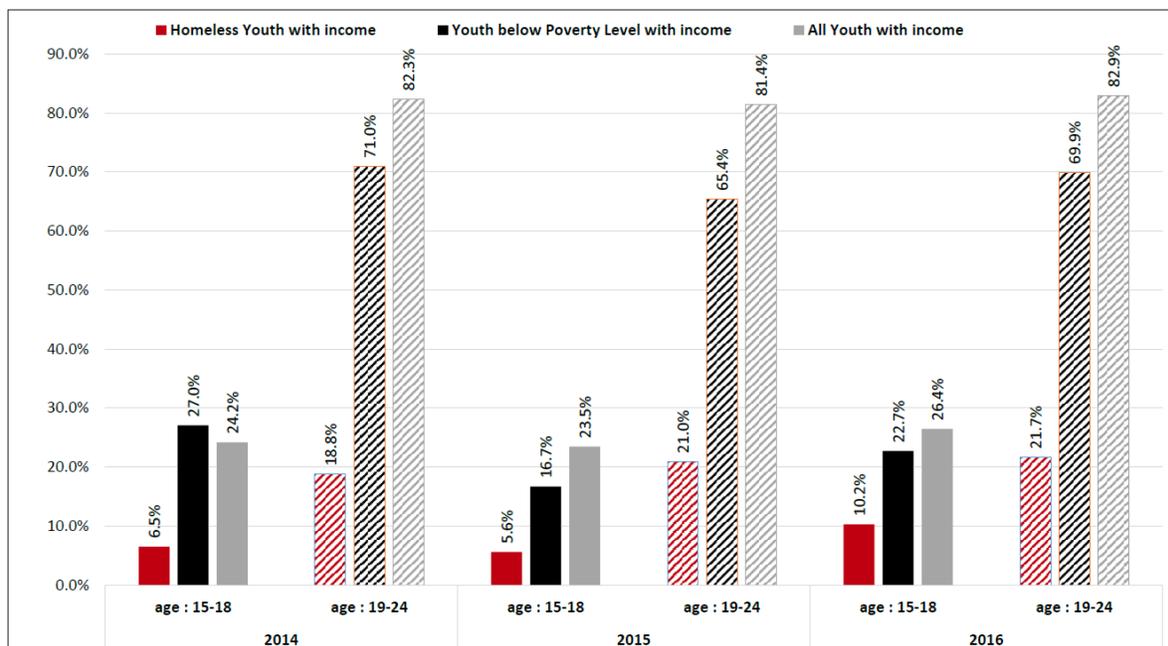


Figure 2: Percentage of Youth with Income By Age Category



of homeless youth reported completion. Given the high rate of transition age youth that do not complete high school, this trend suggests that providers and educators seem to be finding ways to work with homeless youth to complete their basic education demonstrated by the fact that their completion rate is higher than the completion rate of comparison groups.

**Post-Secondary Education.** We also examined data on what percentage of youth ages 19-24 have any post-secondary education. Comparing data across groups, we found that transition age homeless youth lag far behind their counterparts. The rate of participation in post-secondary education for all youth was just over 50% each year between 2014-2016. Youth in poverty were somewhat behind all youth with participation rates of 38% to 42% across the three years. Homeless youth ages 19-24 however lagged far behind. Across the three years, their participation ranged from 6.1% to 8.3%. With such a low rate of participation in any secondary education the opportunities for future earnings are severely constrained.

### Income

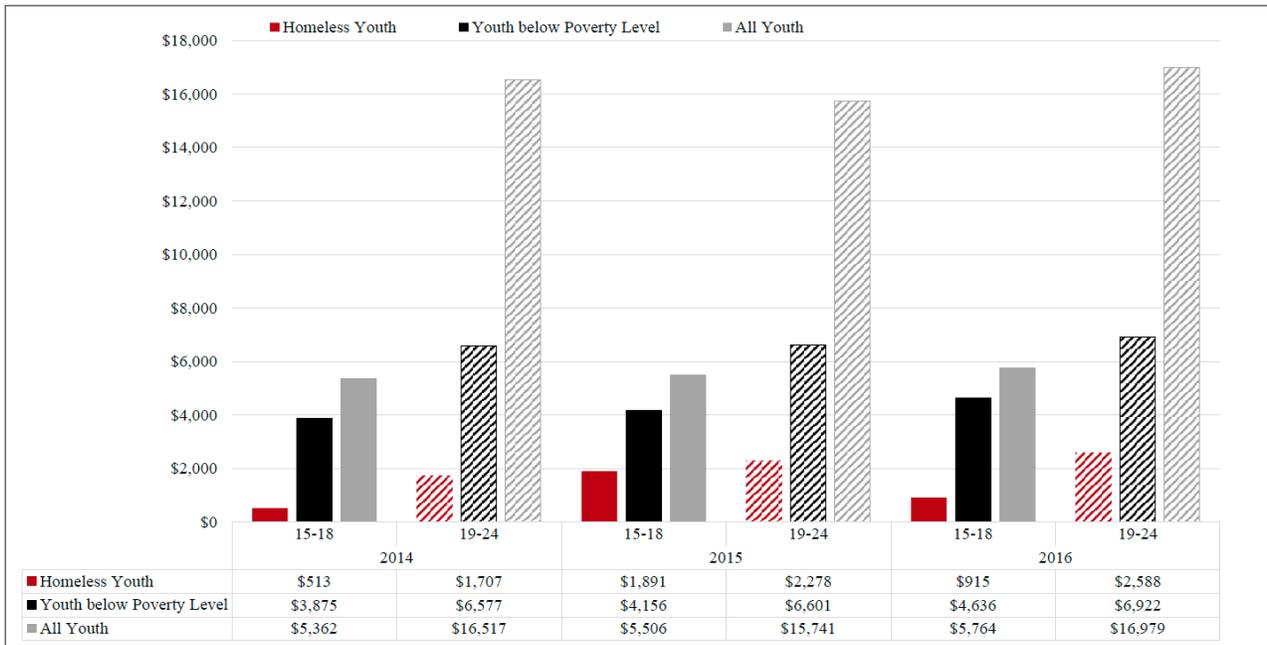
In order to estimate earning gaps, we compared the annual personal income of individuals in each comparison group. We defined income as anything youth earned and the datasets we used to complete this report relied on self-report of income. Including all forms of income reported helps to ensure that we are capturing the most accurate information possible related to the income youth are earning.

**Share of Youth Earning Income.** We first examined the share of youth who reported having any form of income in each age group over the three year period. Figure 2 shows the share of youth reporting income for each comparison group for both youth ages 15-18 years old and transition age youth ages 19-24. Only a small percentage of homeless youth report having any income. For homeless youth ages 15-18 between 5.7% to 10.2% of all homeless youth reported earning income. Between 18.8% and 23.5% of transition age homeless youth report earning income. Both comparison groups reported far higher shares of youth who are earning income. For youth in poverty ages 15-18 the share of youth earning income was between 16.7% and 27%. A much higher share of youth in poverty ages 19-24 (between 65.4% and 71%) earned income. For all youth ages 15-18 approximately one-quarter of youth were earning income while approximately 82% of transition age youth (ages 19-24) earned income.

**Average Annual Income of Youth.** Figure 3 compares the average income reported by youth who earned income in each comparison category broken out by year and age cohort. When we compare the gap in earnings between the groups we find that homeless youth earn less than both youth in poverty and all youth in Southern Nevada. The ranges for each age group in earnings gap between homeless youth and youth in poverty were:

- Ages 15-18: \$2,226 to \$3,720 per youth
- Ages 19-24: \$4,323 to \$4,870 per youth

Figure 3: Youth Average Annual Income By Age Category



The ranges in earnings gap between homeless youth and all youth were:

- Ages 15-18: \$3,615 to \$4,849 per youth
- Ages 19-24: \$13,463 to \$14,810 per youth

**Estimated Additional Income if the Gap Were Closed.** In order to calculate the estimated annual additional income that homeless youth would earn if they closed these gaps we used the number of estimated homeless youth in Southern Nevada from the 2014-2016 Annual Homelessness Report to Congress (AHAR) (Henry et al., 2014, 2015, 2016). For each group, we multiplied the per youth average income gap by the number of homeless youth reported in Southern Nevada for that year. This resulted in the aggregated estimated income loss per year for homeless youth.

Details on the yearly resulting estimated additional income that homeless youth would earn if this gap was closed is as follows:

- 2014: Estimated increase of \$28,422,464
- 2015: Estimated increase of \$26,855,939
- 2016: Estimated increase of \$18,933,673

### Economic Impact of the Income Gap

If we assume that homeless youth did earn the same as other youth, the increased income in Southern Nevada would result in additional economic activities. Additional local spending from increased income would create more jobs that would result in expanded economic output. Table 1 shows the estimated economic impact in terms of jobs created, and sales of local businesses.

Table 1: Economic Cost Due to the Income Gap of Homeless Youth

Year	Employment	Labor Income	Value Added	Output
2014	223	\$9,933,372	\$18,499,411	\$31,093,783
2015	205	\$9,175,257	\$17,352,610	\$29,058,309
2016	144	\$6,428,392	\$12,157,629	\$20,358,906

Source: Economic Impact Analysis by Project Team with IMPLAN® Model and Annual Regional Economic Data

**Table 2: Uncollected Tax Revenue Due to the Income Gap of Homeless Youth**

Year	State & Local Tax Revenue	Federal Tax Revenue	Total Tax Revenue
2014	\$2,003,234	\$2,722,973	\$4,726,207
2015	\$1,890,461	\$2,539,399	\$4,429,860
2016	\$1,324,499	\$1,779,160	\$3,103,659

Source: Economic Impact Analysis by Project Team with IMPLAN® Model and Annual Regional Economic Data

### Uncollected Tax Revenue

Due to the presence of the income gap between homeless youth and all youth, state, local, and federal governments miss the opportunity to gain additional tax revenue. Lost tax revenue can include income tax, business tax, property tax, and sales tax. Table 2 provides annual estimates on the additional taxes that could be collected if earnings of homeless youth matched the earnings of all youth.

Between 2014 and 2016 the range of tax revenue loss that would directly hurt Southern Nevada was between \$1.3 million and \$2 million. For the same period the tax revenue loss to the federal government was between \$1.8 million to \$2.7 million.

### Total Monetary Loss

The total monetary loss is composed of unattained economic impact and uncollected tax revenue due to the income gap. The estimated total monetary loss is an opportunity cost to Southern Nevada's regional economy. Using a very cautious and conservative approach, this study tried to avoid overestimation of the loss. This study did not include the direct cost to provide services to homeless youth. If cost of service delivery could be estimated and included in this analysis, the total cost (opportunity cost plus direct service delivery cost) to Southern Nevada would be higher.

The total monetary loss is shown in Table 3. Between 2014 and 2016 the economic loss to Southern Nevada ranged from \$23.5 million to \$35.8 million.

**Table 3: Total Monetary Loss Due to the Income Gap of Homeless Youth**

Year	Total Economic Impact	Total Tax Revenue	Total Loss to Southern Nevada
2014	\$31,093,783	\$4,726,207	\$35,819,990
2015	\$29,058,309	\$4,429,860	\$33,488,169
2016	\$20,358,906	\$3,103,659	\$23,462,565

Source: Economic Impact Analysis by Project Team with IMPLAN® Model and Annual Regional Economic Data

The estimated loss to Southern Nevada is an annually recurring opportunity cost. Unless we take decisive action to eradicate youth homelessness then the economic loss to Southern Nevada will continue to add up year after year. One obvious strategy to begin to address the problem is to design workforce development strategies that educate or train youth for jobs with long-term career pathways.

Another necessary step is to address the clear pattern in the data that shows that less than 10% of transition age homeless youth have been exposed to post-secondary education. Expanded human capital investment for homeless youth is desperately required to close the income gap. The added benefit will be the positive economic impact in Southern Nevada.

### Study Limitations

The findings of this cost study should be interpreted keeping in mind several limitations which contribute to conservative nature of earning and cost estimates presented in this report.

**Sample Limitations.** Collecting data on homeless youth is difficult. Because they lack a fixed and regular place to call home it hard to access youth for data collection both for service delivery and research purposes. This study relies on existing available data collected through the HMIS system utilized in Nevada. This means that the data on homeless youth used in these cost analyses only reflects data from homeless youth accessing services. Homeless youth not reflected in service

delivery data are likely to experience heightened vulnerability and are less likely to have stable sources of income. It is therefore reasonable to hypothesize that if there were accessible data on unsheltered youth not receiving services included in the analyses the income gap and monetary loss would be higher. The analyses in this report are instead based on data on homeless youth who have intersected with agencies that report data into the HMIS system and who have reported some income.

In addition, income gaps were calculated based on the estimates from Point In Time (PIT) homeless census count data reported in the annual AHAR reports from 2014-2016. Although Point in Time census counts are considered a comparatively reliable strategy for estimating homeless population counts, it is widely understood that homeless youth estimates likely undercount the population due to their housing instability. This is another reason to assume the estimates in this report are conservative.

**Analytic Considerations.** An important analytic feature of this study was the inclusion of data from more than one year. The use of more than one data year allows for the establishment of trends. Increasing the number of years of data would create the capacity to build more robust economic models including other social and economic variables to forecast future trends in youth homelessness.

In addition, HMIS data included information on key variables at program entry and exit but there is no available data that follows homeless youth after program exit. The ability to follow youth as they move into stable housing would allow for analysis of how income and costs change over time.

Periodically HUD changes its guidelines for what data must be tracked. Over the past years HUD has redefined its requirements related to which education data must be collected. This change likely impacted the amount of missing education data in the HMIS dataset. Missing data was excluded in the analyses in this report.

### **Recommendations for Improved Data Systems**

This cost study is an important first step toward understanding the real costs of youth homelessness to the Southern Nevada region. Little research exists that estimates the economic costs of youth homelessness to both the youth themselves and the communities they reside in. The goal is to continue this line of inquiry by conducting additional cost analyses particularly including the youth that we were not able to include in

this study. Recommended changes to improve data systems to achieve this goal include:

- Data collection of unsheltered youth not currently receiving services
- Data that follows youth post exit from programs/services
- Longitudinal data over a longer time span
- A plan for regular, consistent evaluation of cost data

Even without these improvements, the data presents a clear mandate to respond to the urgent need for educational and workforce supports for youth in the region.

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For additional information  
contact: Jaewon Lim, PhD  
University of Las Vegas, Nevada  
[jaewon.lim@unlv.edu](mailto:jaewon.lim@unlv.edu)

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4505 S. Maryland Parkway  
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