The Economic Burden of Youth Experiencing Homelessness and the Financial Case for Investing in Interventions to Change Peoples' Lives:

An Estimate of the Short- and Long-Term Costs to Taxpayers and Society in Hennepin County, Minnesota

A White Paper
Prepared for YouthLink

Steven S. Foldes, Ph.D. and Andrea Lubov, Ph.D.

April 6, 2015

Contents

Summary

During 2011, 1,451 non-disabled teenagers and young adults between the ages of 16 and 24 visited YouthLink, a basic needs drop-in center and home of the Youth Opportunity Center in downtown Minneapolis. These youth, who were overwhelmingly youth of color, were experiencing homelessness or were at-risk of becoming homeless, and YouthLink offered them a respite from street corner life, a hot meal, and ready access to caring staff and a panoply of resources. Some were experiencing homelessness because of myriad problems in their lives; others were experiencing multiple problems because they lost their housing.

As a group, these young people, and thousands who came before and after them, were part of a broader group who are largely disconnected from education and employment. Unlike most of their peers, these disconnected youths were neither investing in the future through educational achievement nor gaining work experience and building economic independence. They represent a largely hidden group at society's margins, and are headed for a life of severely constrained possibilities.

The economic burden of their circumstances affects not only them but taxpayers and society more generally. In estimating these costs, we take a comprehensive and long-range perspective that incorporates lost economic opportunities and actual expenses. Our approach is consistent with methods used by Clive Belfield and colleagues in "The Economic Value of Opportunity Youth," their 2012 report commissioned by the White House Council for Community Solutions to determine the national economic burden of disconnected youth, which they called "opportunity youth." [1]

Our estimates include only the economic impact of homelessness on the youth who experience it or are at risk of becoming homeless, for these are the only costs that can be measured directly in dollars. Behind the financial costs, the emotional costs to the youth are obviously substantial. Inevitably, these youth find themselves adrift at society's edges, and their daily lives often become a scramble to avoid hunger, exploitation by others, and an ongoing search to find a place to sleep. Anxiety and

[1] Belfield CR, Levin HM, Rosen R. The economic value of opportunity youth. The Corporation for National and Community Service and the White House Council for Community Solutions. Washington DC: Civic Enterprises. January 2012. Available at http://www.serve.gov/new_images/council/pdf/econ_value_opportunity_youth.pdf Accessed September 12, 2015.

depression frequently accompany such lives, as the future that their peers anticipate increasingly seems unachievable for them. In focusing on the economic burden to taxpayers and society of youth at risk of or experiencing homelessness, we do not discount the toll on the youth themselves of the lives they live.

To estimate the economic burden of the 1,451 youth who visited YouthLink in 2011, we use data from many local sources. We estimate both their economic burden in 2011 and the short-term costs of this age group (ages 16-24). We rely on Belfield and colleagues' estimate of long-term (ages 25-64) costs. Like Belfield and colleagues, we report only the marginal expenses of such youth beyond average costs for youth in the same age group. The data to which we had access on the wide range of costs we include varied in precision and comprehensiveness, but we maintain that the direction and magnitude—if not the precise amount—of the costs described in this report are an accurate, meaningful, and representative estimate of the economic burden of youth experiencing homelessness or at-risk of becoming homeless.

Using local data allowed us to put a local perspective on the problem of youth experiencing homelessness that was not possible using Belfield's national study. As the study progressed, it became clear to us that each agency that provides assistance to youth experiencing homelessness is aware of the costs it incurs, but no one is aware of the "big picture," the sum of costs incurred by all agencies, taxpayers, and society, particularly over the lifetimes of such youth.

We estimate that on average each member of the YouthLink 2011 cohort imposed a fiscal and social cost in 2011 of $17,152 and $18,638, respectively. As a group, in 2011 the 1,451 members of this cohort cost taxpayers an estimated $24,894,610, and cost society an estimated $27,049,551. The largest costs to taxpayers were public expenditures for the criminal justice system and welfare transfer payments to cohort members. Large costs to society included the costs of crime to victims and lost earnings by members of the cohort. These are average annual costs that recur each year that these youth remain disconnected, whether or not they continue to be affiliated with YouthLink.

To estimate the short-term economic burden of this cohort of youth experiencing homelessness or at-risk of becoming homeless, we calculated the net present value of the stream of five years of annual costs, the average amount of time that any current, specific youth will potentially be a cohort member, using a discount rate of 3.5 percent. The annual burden we calculated is for one year, but only the 24-year olds impose one year of burden. In contrast, 16-year old homeless youth will impose this annual burden each year until they reach 24. Therefore, the average youth will impose the burden for five years. (An approximate interpretation is that the individual burdens are calculated for a youth experiencing homelessness who is 20 years old, which, coincidentally, was the average age of cohort members in 2011).

The short-term fiscal and social 5-year excess costs per member of the YouthLink 2011 cohort are $77,442 and $84,152, respectively, and the excess 5-year fiscal and social costs for the entire cohort are $112,400,468 and $122,130,139, respectively. These amounts represent the average economic burden of the YouthLink 2011 cohort over the 16-24 age range expressed as a lump sum in discounted 2011 dollars.

We use Belfield and colleagues' estimate of the per person long-term (ages 25-64) excess costs for "opportunity youth," which are $170,740 to taxpayers and $529,030 to society, estimated in present value of 2011 dollars using a 3.5 percent discount rate. The report describes our rationale for applying these long-term costs, based on the similarity of the YouthLink 2011 cohort to "opportunity youth" in terms of their lower levels of educational achievement and earned income. Applying Belfield and colleagues' long-term individual estimates to the 1,451 members of the YouthLink 2011 cohort yields excess fiscal and social costs for the entire cohort of $247,743,740 and $767,622,530, respectively, in discounted 2011 present value dollars.

Adding the immediate (5-year) and long-term (ages 25-64) costs provides an estimate of the total lifetime excess economic burden of the 2011 YouthLink cohort, expressed as lump sum amounts in 2011 present value dollars. In total, a 20-year old YouthLink cohort member will impose a full taxpayer burden of $248,182 and a full social burden of $613,182. The cohort will impose a full taxpayer burden of $360,144,208 and a full social burden of $889,752,669. These amounts are summarized in the following table.

Present value of the estimated immediate (5-year), long-term and lifetime fiscal and social costs of the 2011 YouthLink cohort.

	Per cohort member		2011 YouthLink Cohort	
	Fiscal cost	**Social cost**	**Fiscal cost**	**Social cost**
Immediate (5-year) total	$77,442	$84,152	$112,400,468	$122,130,139
Long-term (ages 25-64)	$170,740	$529,030	$247,743,740	$767,622,530
Total lifetime cost	**$248,182**	**$613,182**	**$360,144,208**	**$889,752,669**

Sources: Immediate burden is the authors' estimate, ages 25-64 estimate is based on Belfield table 5, p. 22, adjusted for cohort size.

These excess costs represent a combination of lost opportunities by these youth, such as reduced earned income and lower paid taxes, and excess expenses incurred on their behalf, such as welfare transfer payments, public expenditures for housing and operation of the criminal justice system.

The break-even analysis addresses the question of how many YouthLink clients would need to change the trajectory of their lives in order to cover the annual fiscal cost of the interventions designed to help them become productive adults. We estimate that the net present value of potential savings on each youth between ages 20 and 64 is $211,059.

We estimate a total of $18,607,914 was spent in 2011 to support the YouthLink 2011 cohort, divided in three broad areas:[2]

- Basic Needs: $10,520,994
  These are a range of expenditures intended to meet the day-to-day needs of youth experiencing or at risk of homelessness, such as welfare transfer payments, healthcare services other than for mental health and chemical dependency treatment, nightly shelter and YouthLink drop-in services.

- Housing: $3,613,128
  This category includes costs incurred to house youth experiencing homelessness, with the goal of establishing housing stability. Examples include fiscal expenditures on supportive housing, Emergency Assistance, the Youth Mobile Team and YouthLink services related to housing.

- Transformative Services: $4,473,792
  These expenditures are designed to help youth change their lives through mental health and chemical dependency treatment, education, welfare support programs such as job skills training, and case management by YouthLink and other staff.[3]

Of these amounts, $8,086,921, or 43.5 percent, was spent on housing and transformative services, which have a goal of helping youth to change their lives.

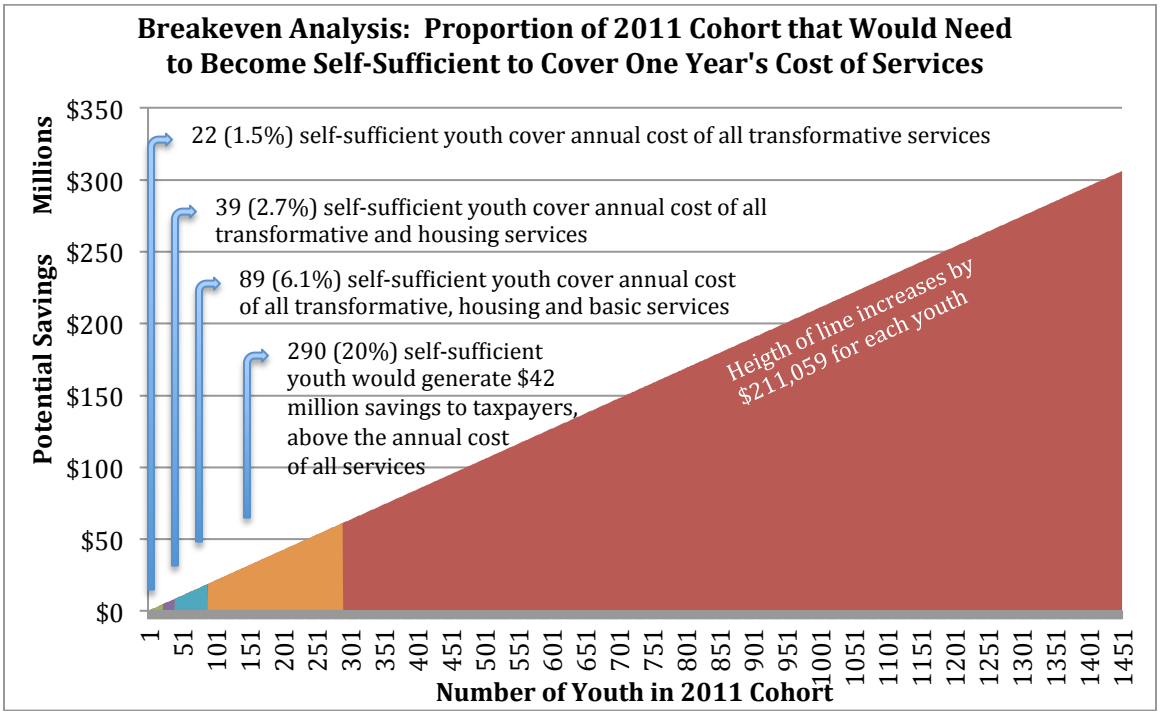
Based on these estimates, the following chart indicates the number of youth whose lives would need to be changed to become self-sufficient, productive adults in order to offset the cost of the interventions.

---

[2] Costs incurred by the 2011 YouthLink cohort in the criminal justice system, while substantial, are not included as an intervention because the criminal justice system is not designed to support homeless youth through meeting their basic needs, providing housing, or to make them less dependent on government supports.

[3] We allocated the cost of foster care into these categories based on estimated expenses for basic needs, housing and transformative services.

Potential lifetime fiscal savings from different number of YouthLink's 2011 cohort becoming self-sufficient at age 20.



Source: Authors' calculations.

As shown, all annual intervention and support costs can be offset if 89 youth (6.1 percent of the cohort) were to earn enough so that they no longer need any public support, beginning at age 20. Transforming only 39 youth (2.7 percent of the cohort) is required to offset the costs of the housing and transformative services, the expenditures designed to help youth change their lives. Calculating the actual number of youth who have successfully made this transition is the topic of a subsequent study.

This estimate of the number of self-sufficient youth needed to offset a full year's cost of intervention programs for all members of the cohort represents the net present value of the avoided costs that taxpayers should otherwise anticipate spending over the next four-and-a-half decades of their lives. Of course, people seldom change as dramatically as assumed in this exercise, but this analysis suggests the potential value of transformative interventions to taxpayers if the interventions can successfully alter the life trajectory at this relatively early point in their lives of only a small number of youth experiencing or at risk of homelessness. Should the interventions succeed in helping more youth, the costs avoided by taxpayers would be substantial. For instance, if just one in five clients of YouthLink were to become self-sufficient, productive adults, the net present value of avoided costs to taxpayers over their lifetimes would be worth an estimated $61.2 million, exceeding the cost of funding total annual intervention and support efforts for all by $42 million.

Hennepin County and other governmental and private entities expend substantial resources to address the problems of youth experiencing homelessness and at-risk of becoming homeless. Most of these expenditures are intended to meet the day-to-day needs of these youth, for needs ranging from meals to nightly shelter and healthcare. Substantial additional expenditures are made to house these youth, with the goal of helping them achieve housing stability. Other expenditures aim to help them transform the trajectory of their lives, by addressing their psychosocial problems, furthering their educations and teaching them job skills.

There are many causes that lead youth to experience homelessness, and multiple obstacles that must be addressed by programs whose goal is to help youth experiencing homelessness alter their lives. Success is not assured, and some youth may not be able to respond to the best programs. The break-even analysis demonstrates, however, that the lifetime economic burden of youth experiencing homelessness or at-risk of becoming homeless is so great that success with only 39 (2.7 percent) of these youth is needed in order to pay for all of the housing and transformative programs that were provided in 2011.

The break-even analysis thus suggests an opportunity for taxpayers and society. To the extent that programs aimed at these youth can help change the direction of their lives, then these programs represent an investment in their—and our—future. For each youth experiencing homelessness or at-risk of becoming homeless who becomes a productive and tax-paying citizen at age 20 saves an estimated $211,059 in lifetime fiscal costs. However, this study shows that although the payoff for helping youth transform their lives is enormous in terms of avoided costs to taxpayers, the period for earning the savings is long. Nevertheless, considering only the economic implications, and leaving aside the human considerations, this becomes an investment opportunity we forego at our own peril.

Members of Advisory Committee

Mikkel Beckman	Director, Office to End Homelessness
Steve Cramer	President and CEO, Minneapolis Downtown Council
Phillipe Cunningham	Senior Policy Advisor on Youth Development and Racial Equity, Office of Minneapolis Mayor
Stefanie Galey	YouthLink Board of Directors; Partner, Faegre, Baker, Daniels
Laura Kadwell	Executive Director, Heading Home Minnesota
Tim Marx	President and CEO, Catholic Charities
Bruce Nerland	YouthLink Board of Directors; Senior Vice President, Morgan Stanley
Laurie Ohmann	Senior Vice President of Client Services and Community Partnerships, Catholic Charities
Brian Paulson	Program Officer, Pohlad Family Foundation
Will Roach	YouthLink Board of Directors; Director of Business Development, Baker Tilly Virchow Krause
Randi Roth	Executive Director, Interfaith Action of Greater Saint Paul
Susan Segal	Minneapolis City Attorney
Lisa Thornquist	Planning Analysis Supervisor, Office to End Homelessness
Ad Hoc:	
Dr. Heather Huseby	Executive Director, YouthLink
Frances Roen	Director of Development and Communications, YouthLink
Marney Thomas	Director of Partnerships and Community Engagement, YouthLink
Katelyn Wareburton	Data Analyst and Special Project Coordinator, YouthLink

Acknowledgements

We are grateful to many individuals and organizations that offered their time and expertise, along with access to data with which to complete this project. The project Advisory Committee, including people with extensive experience and expertise in many aspects of youth homelessness and programs to address it, met several times to review and comment on our estimates of component costs and to review this report. We appreciate their time, interest and expert guidance.

Will Roach, the Chair of the Board of YouthLink, offered enthusiastic support of this project, and the Board of Directors provided an eager and receptive audience to presentations of initial study estimates. YouthLink staff were similarly enthusiastic and supportive and offered essential guidance on their programs, budgets and operations. In particular, we are grateful to Dr. Heather Huseby, Katelyn Warburton, Marney Thomas, Frances Roen, Bob Nelson, Marc Hamann and Jarrod Feld. Josephine Pufpaff, now a Senior Program Manager at the Corporation for Supportive Housing, was an early champion of this study when she was a staff member at YouthLink. Joanna Koenig of Clifton Larsen Allen provided excellent support on YouthLink budget questions.

This report could not have been completed without data and expert staff assistance from Hennepin County staff. In particular, Lisa Thornquist was exceptionally informative, patient and responsive to our many requests.

Many others responded to our requests for specific information on various expenditures. We received assistance with MnSCU data from Dr. Phil Davis, Brenda Bailey and Craig Schoenecker. Dr. Tim Zuel of the Hennepin County Attorney's Office provided information on school dropout issues. Ryan Strack and Margo Hurrle assisted with Minneapolis Public School student data. Lee Blons of Beacon Interfaith Housing and Chris Nimmer of Aeon provided information on supportive housing costs. Steve Hine and Mustapha Hammida of the Minnesota Department of Employment and Economic Development supplied earned income data.

We obtained information on healthcare utilization and costs through the Minneapolis/Hennepin County Office to End Homelessness, with the assistance of Mark Legler and Johanna Lewis. Carol Aschbacker of the Hennepin County Human Services and Public Health Department provided information on the rate of uncompensated healthcare costs. Bao Vang provided Hennepin County administrative costs. Deb Loon from Avenues provided helpful information on youth shelter costs. We also appreciate the assistance of the help line personnel at the Minnesota Demographic Center and the U.S. Census of Governments. We owe special thanks to Professor Maria Hanratty of the University of Minnesota Humphrey Institute who kindly re-analyzed relevant data from a different project to help us with utilization and costs of adult and family shelters.

Professor Clive Belfield of Queens College, CUNY consulted on methodological questions and helped us to adapt his research approach to our local needs. Jody Rooney provided methodological assistance early in this project.

We offer special recognition and appreciation to the Otto Bremer Foundation for the initial support needed to start this project. In 2010, under the leadership of Executive Director Randi Roth, the Otto Bremer Foundation launched intensive responsive grant making around the issue of youth homelessness in the Twin Cities. One significant result of this effort was the increased capacity of YouthLink to serve youth up to age 24. Additionally, the foundation provided funding to initiate this break-even analysis.

Additional funding for this project was provided by the Hearst Foundations and the Blue Cross and Blue Shield of Minnesota Foundation. We are grateful for the interest and support of BCBSMN Foundation Executive Director Carolyn Link and Program Officer Allison Corrado. The authors are solely responsible for any errors.

1. Introduction

A 2012 study of the number of youth experiencing homelessness in Minnesota estimated that on any given night 4,080 unaccompanied youth experience homelessness, more than half of whom were found in the Twin Cities metropolitan area.[4] This estimate is widely considered conservative, since youth experiencing homelessness are difficult to count because they are less likely than adults to stay in shelters and more likely to "couch hop" or stay in places that are difficult to find. Indeed, YouthLink, a drop-in center in downtown Minneapolis that also hosts the Youth Opportunity Center, typically serves about 2,000 teenagers and young adults each year who are experiencing homelessness or are at risk of becoming homeless.

This report concerns the economic burden of youth experiencing homelessness, focusing on the cohort of 1,451 non-disabled youth, ages 16-24, which YouthLink served in 2011. It is essential to understand the economic stakes involved for taxpayers and society if we fail to intervene effectively to help youth experiencing homelessness change the trajectory of their lives. Accordingly, the report seeks to answer the question: How much do these youth experiencing homelessness cost taxpayers and society at large? The goal is to estimate the comprehensive costs of these youth for 2011, for the immediate period when they are ages 16-24, and for the longer term, from age 25 through 64.

A comprehensive and long-term perspective on the costs of youth experiencing homelessness and on programs designed to ameliorate it is essential to making informed policy decisions on allocating resources to address the problem. Toward that end, this report also discusses results of a break-even analysis, intended to answer the question of how many youth experiencing homelessness would need to become productive, taxpaying adults, avoiding a lifetime of dependency, in order to offset the annual cost of the interventions in place in 2011 to help them transform their lives.

[4] Lindberg C, Pittman B, Gerrard MD. Homeless in Minnesota: youth on their own; findings from the 2012 statewide study of homelessness. Saint Paul: Wilder Foundation. May 2015.

2. Youth experiencing homelessness, disconnected youth and employment

Youth experiencing homelessness are part of a larger group of youth who are often described as "disconnected." Such youth may have homes but are neither in school, increasing their skills and building their human capital, nor engaged in the labor market and earning income. In American society, youth who disengage from educational opportunities and the labor force at this age, from 16 to 24, are failing to invest in the human capital needed to build an economic base for an independent life, and are more likely to rely on various forms of government support for the rest of their lives. They represent a largely hidden group at society's margins, and are headed for a life of severely constrained possibilities.

The ages 16-24 are a critical time because youth who drop out of school and do not gain a foothold in the labor market are far less likely to achieve economic independence after they reach 25 years of age. As such, the ages 16-24 represent a critical window of time during which interventions must succeed in order to prevent a lifelong pattern of dependence.

This conclusion is underscored by studies of youth who age out of foster care, many of whom are disconnected youth. Such youth often have bouts of experiencing homelessness, criminal activity, and incarceration.[5,6] The Urban Institute, under contract for the U. S. Department of Health and Human Services, studied the long-term employment outcomes for youth who age out of foster care, using data from three states, including Minnesota.[7] The study relies on data that became available only recently to examine patterns of employment and earnings through age 24 for former foster youth, to document that these youth do not fare well on a variety of employment outcomes.

Compared to youth nationally and even youth from low-income families, youth who age out of foster care are less likely to be employed or employed regularly and they earn very little. As they age from 18 to 24, more than half of these youth exhibit a

---

[5] Courtney M, Piliavin I, Grogan-Kaylor A. The Wisconsin study of youth aging out of out-of-home care: a portrait of children about to leave care. 1998.

[6] Courtney M, Piliavin I, Grogan–Kaylor A, Nesmith A. Foster youth transitions to adulthood: a longitudinal view of youth leaving care. Child Welfare, 2001:80(6), 685-715.

[7] Urban Institute. Coming of age: employment outcomes for youth who age out of foster care through their middle twenties. Prepared under contract HHSP233000010T. U. S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. 2008.

pattern of complete disconnection or only limited connection to the workforce. At age 24, average monthly earnings for former foster youth who worked were $690 in California, $575 in Minnesota, and $450 in North Carolina, compared to $1,535 for all youth nationally. Fewer than one in five earned a livable wage. The study found that case history factors do not appear to play an important role in influencing employment outcomes. Employment and earnings differences between youth who age out of foster care and youth from low-income families persist in California and Minnesota even when controlling for demographic factors.

If unchanged by age 25, this trajectory clearly has lifelong economic consequences for disconnected youth, affecting everything from earnings and self-sufficiency to physical and mental health and marital prospects. In addition, taxpayers and society at large bear an economic burden from the unrealized potential of these youth. This economic burden appears in multiple forms: lower productivity, reduced taxes paid, higher rates of criminal activity, and greater reliance on government support. In addition, such disconnection is a leading social determinant of poor health, raising healthcare costs for the nation.

3. The economic burden of disconnection

The enormous economic burden associated with disconnected youth came into focus only recently. In fall, 2010, President Barack Obama appointed the White House Council for Community Solutions (WHCCS), and charged it with finding ways to solve national problems at the local community level. The Council's key interest became youth unemployment, particularly among disconnected youth who are neither looking for a job nor engaged in education or training. The WHCCS commissioned a study to estimate the size of this group nationally, their demographic characteristics and their social and fiscal costs.

The resulting report by Clive Belfield and colleagues, "The Economic Value of Opportunity Youth," released in January, 2012, estimated that 6.74 million American youth, ages 16-24—fully 17 percent of the age group—are what the authors called "opportunity youth," who are neither in school nor participating in the labor market.[8] About half of these youth are "chronic opportunity youth," and have never been in school or work after the age of 16. The other half are "under-attached," and have not progressed through post-secondary education or secured a stable attachment to employment despite some school and work experience.

The authors used a wide variety of data sources to estimate the costs of these youth. Conservatively, they estimated that each "opportunity youth" imposes—on average and compared to other youth—an immediate taxpayer burden of $13,900 per year and an immediate social burden of $37,450 per year (2011 dollars). These amounts are in addition to the costs non-"opportunity youth" impose on society. These are annual amounts for each year that a youth is identified as having "opportunity youth" status. After each "opportunity youth" reaches 25, he or she will subsequently impose a future lifetime taxpayer burden of $170,704 and a social burden of $529,030, in net present value dollars (discounted 3.5 percent). According to Belfield and colleagues, the net present value of the full economic burden of each 20 year old "opportunity youth" is $235,680 to taxpayers and $704,020 to society at large.

---

[8] Belfield CR, Levin HM, Rosen R. The economic value of opportunity youth. The Corporation for National and Community Service and the White House Council for Community Solutions. Washington DC: Civic Enterprises. January 2012. Available at http://www.serve.gov/new_images/council/pdf/econ_value_opportunity_youth.pdf Accessed September 12, 2015.

4. Approach of this report and limitations

The report by Clive Belfield and colleagues for the White House Council for Community Solutions, with its comprehensive and longitudinal estimate of the economic burden of disconnected, or "opportunity youth," received wide distribution and considerable attention in policy circles and among social service agencies working with these youth. Recognizing its value to frame policy discussions on youth experiencing homelessness as well as the broader category of disconnected youth, this report builds on the approach and methods employed in the WHCCS report.

Accordingly, this report seeks to estimate the comprehensive immediate and longitudinal economic burden of youth experiencing homelessness to taxpayers and society using the same approach. The Belfield report calculates the lost earnings, lower economic growth, lower tax revenues and higher government spending associated with "opportunity youth," and reports only the marginal expenses of such youth beyond average costs for youth in the same age group. In this report we use the same categories of cost reported by Belfield and colleagues and similarly report the marginal costs of youth experiencing homelessness compared to average youth of the same age group, but wherever possible we replace national with local cost estimates. Because these youth were experiencing homelessness, or at risk of becoming homeless, however, we include an additional category of expense for housing, which was not a central concern for Belfield and colleagues' study of the broader group of "opportunity youth." The categories of expenses examined in this report, and their definitions, are in Table 1.

Table 1: Categories of expenses and their definition examined in this report.

Category	Definition
Lost earnings	Gross wage earnings excluding fringe benefits
Lost tax payments	Includes federal, state and local income/consumption taxes
Crime: public expenditures	Criminal justice system, policing and corrections, judicial and legal expenditures (federal, state and local)
Crime: victim costs	Reduced quality of life, monetary damages, lost earnings
Health: public expenditures	Health services paid by DHS, estimated uncompensated care
Welfare: support programs	Expenditures on social supports (e.g. GED training, workforce retraining, foster care)
Welfare: transfer payments	Amounts paid to individuals who receive government supports (MPIF, GA, SNAP)
Housing support:	
Emergency Assistance Program	County support for apartment deposits, back rent and utilities, essential repairs
Temporary shelter stays	Government or charity sponsored short-term shelter program
Supportive housing	Longer-term transitional housing with social supports
Education:	
High school "savings" on dropouts	Net savings on per-student allocation
College "savings" from lower attendance	Net savings in public expenditures for college tuition and support costs
Marginal excess tax burden	Cost of raising taxes to pay for public services

Like Belfield and colleagues, we estimate the immediate burden—that incurred when a person is aged 16-24—and the future burden—that incurred from ages 25 to 64. We also estimate the economic burden of youth experiencing homelessness from the perspective of both the taxpayer and society.

This report's focus, however, is much more specific, examining the expenses associated with 1,451 non-disabled youth who were clients at YouthLink during 2011.[9] The clients from 2011 were selected for two reasons. First, this was the year when YouthLink implemented the Youth Opportunity Center (YOC), which is YouthLink's current configuration. The YOC is a collaboration of agencies providing

[9] This report excludes 348 YouthLink clients during 2011 who were disabled or about whom no data were available from Hennepin County. The disabled youth, who received Supplemental Security Income payments, were excluded because they represent a unique subgroup whose life opportunities tend to differ from those who are not similarly disabled.

services to young people in one location. Having a wide variety of service providers in one location helps break down the barriers young people may face in accessing these services and provides them with a wider range of opportunities and resources. Second, the opportunity exists to follow the 2011 cohort over time in order to determine if the services these young people received helped them to transform their lives by 2016, as they approached—on average—age 25. This line of inquiry is beyond the scope of this report, but will be pursued in a subsequent study.

Belfield and colleagues used a wide range of national data to estimate the number of "opportunity" youth in the U.S. and the economic burden they impose. The approach used in this report similarly draws on a wide range of local data sources, which will be described as each component cost study is discussed below. We were able to obtain de-identified information detailing the 2011 expenses incurred by the 1,451 youth from YouthLink, multiple government agencies and educational institutions, allowing us to report actual short-term costs for this cohort in all but one of the component cost areas. However, data and time limitations made it impossible to directly estimate the long-term costs, from ages 25-64, of the 2011 cohort. Instead, we apply the long-term cost estimate for "opportunity youth" calculated by Belfield and colleagues. The rationale for this decision is discussed in the section on long-term economic burden.

The intent of this analysis is to provide a meaningful estimate of the economic burden of a cohort of youth experiencing homelessness. The precision of the estimate in this report requires comment. Several general and some specific limitations qualify the precision of the estimate.

One general factor is that we have used only a single year of data on the YouthLink 2011 cohort to estimate costs over nine years for the age group from 16-24. Following Belfield and colleagues, we estimate the fiscal and social cost of cohort members in 2011 and implicitly assume that the costs we identified are representative of the annual costs over the period. The short-term estimate of cohort costs for ages 16-24 relies on the fact that the YouthLink 2011 cohort includes youth from each age, and on the assumption that each cohort member remains in this group and accumulates costs for up to nine years, depending on age, whether or not they are YouthLink clients during that time. We know of no reason to believe that this cohort differs materially from YouthLink's clientele in other years, but using cross-sectional data to estimate longitudinal costs requires the assumption that this cohort is representative.

In any economic analysis that gathers data from a wide range of sources, the precision and comprehensiveness of the information varies. A strength of this study is that to calculate the short-term costs it relies on actual behavioral and economic data, mostly from local sources, on specific people. Some information sources,

however, could supply only less precise or complete information, or less than ideal information. Specific data limitations include:

- In the area of criminal activity we had to rely on arrest rather than disposition information, and we had to impute criminal activities for juveniles aged 16-18. We were unable to disaggregate the costs of the criminal justice system and relied on Census of Government data for expenditure estimates, localized to Minnesota, Hennepin County, and Minneapolis. Belfield and colleagues also relied on Census of Government data to estimate criminal justice system costs.

- Regarding education, Minneapolis Public School information did not include data on charter schools, where some YouthLink clients may be enrolled. We did not obtain enrollment information from other school districts, such as St. Paul or suburban districts near Minneapolis. We excluded the relatively minor costs of school retention initiatives such as the be@school program.

- We derived estimates of welfare transfer payments from individual-level data, rendering these estimates highly accurate, but we lacked information on how many cohort recipients were pregnant or already had children, making it necessary to estimate family support, food support, and government supported childcare expenses based on advice from Hennepin County staff.

- We were unable to find comprehensive local data sources on welfare support programs, such as the Job Corps, and in this one category of short-term expenses we used Belfield and colleagues' national estimate of costs.

- YouthLink records did not indicate how many cohort members live in supportive housing, and for how long, requiring that we estimate cohort costs based on a single point-in-time count of YouthLink occupants.

- Similarly, directly comparable information on general population youth was difficult to find in some cases, and often these data are national and not specific to Minnesota.

- In estimating long-term costs, we assumed no inflation or changes in costs, and applied a discount rate of 3.5 percent. In addition, we lacked information on the distribution of costs and had no meaningful assumptions on which to vary component costs, precluding any sensitivity analyses.

Because the precision and completeness of the data to which we had access varies across the component studies, as indicated above, the point estimates we report should be interpreted cautiously.

Ideally, data analysis relies on individual-level data that can be investigated using state-of-the-art statistical techniques. For this study, however, individual-level data were not available from all sources, and the individual-level data were in all instances de-identified, making it impossible, for example, to analyze the earnings of individuals together with their demographic characteristics, educational attainment, criminal activity and receipt of welfare assistance. This limited the ability to investigate associations and causal relationships among these variables.

For all these reasons the precision of the component study estimates varies and associations and causal relationships are not discussed and should not be inferred. Accordingly, it is best to view the overall cost estimate of the YouthLink cohort as a robust but not precise indication of costs.[10] We believe that we have captured the costs that are the major drivers of the economic burden of youth experiencing homelessness in Hennepin County. We maintain that the direction and magnitude—if not the precise amount—of the costs described in this report are an accurate, meaningful, and representative estimate of the economic burden of youth experiencing homelessness or at-risk of becoming homeless.

[10] Costs were calculated to the dollar but this suggests a higher level of precision than is appropriate. All dollar values are estimates, as discussed in the limitations.

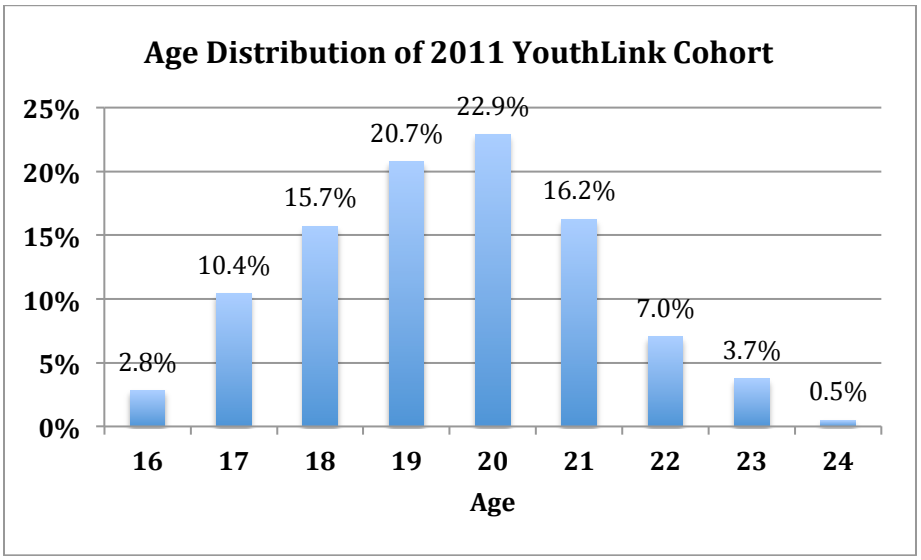
5. Who are YouthLink clients?

The youth who become clients of YouthLink are typically experiencing homelessness and are unaccompanied by an adult. Some may have been turned out from, or run away from dysfunctional families, or are at risk of becoming homeless. Some have aged out or run away from foster care. Many suffer from emotional distress and depression, substance abuse and physical health problems. Often, these youth have a history of poor performance in school, difficulty with employment and brushes with delinquency. Some, particularly the young women, of whom some are single mothers, are especially vulnerable to exploitation. Many such youth find their way to YouthLink, in downtown Minneapolis, a drop-in center and home of the Youth Opportunity Center, where they can get out of the cold, take a shower, eat a hot meal, or receive multiple services from a caring staff. Each year, YouthLink serves approximately two thousand teenagers and young adults, most of whom are between the ages of 16 and 24.

Age, gender and race/ethnicity of the YouthLink 2011 cohort

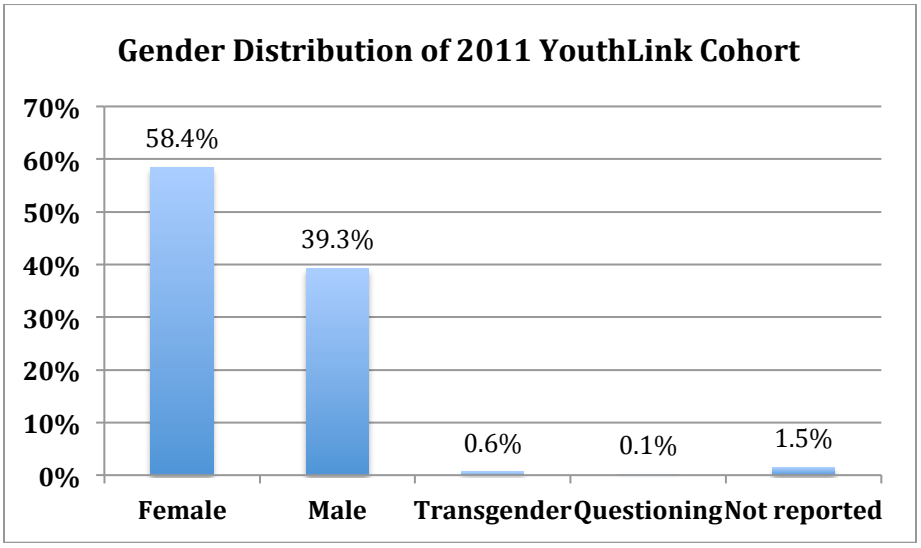
Charts 1 and 2 describe the age and gender of the YouthLink 2011 cohort. As shown, the median age is 20 and 58 percent is female. The larger proportion of females is consistent with the 2012 Wilder study of youth experiencing homelessness, 55 percent of whom were female.

Chart 1: Age distribution of YouthLink 2011 cohort.



Source: YouthLink data analyzed by authors.

Chart 2: Gender distribution of YouthLink 2011 cohort.



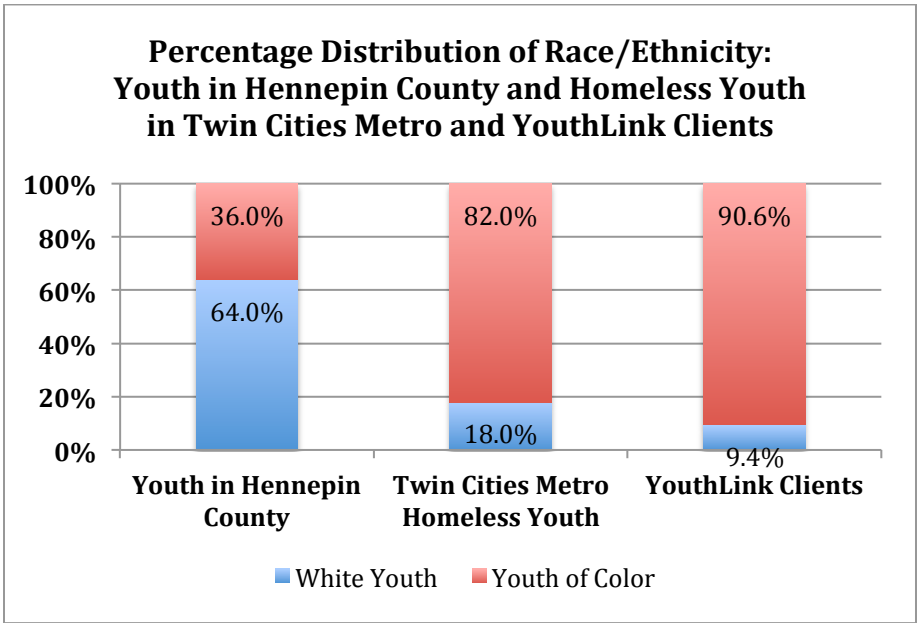
Source: YouthLink data analyzed by authors.

The racial and ethnic characteristics of YouthLink clients indicate a defining aspect of youth homelessness in Hennepin County. Chart 3 presents a percentage distribution of youth ages 16-24 in Hennepin County, based on the 2010 U.S. Decennial Census, and youth of the same age range experiencing homelessness in the Twin Cities metropolitan area, based on 2012 Wilder Foundation data, and YouthLink clients in 2011. The categories have been simplified to compare white youth and youth of color, because these sources use somewhat different racial and

ethnic groupings of persons of color. The specific breakout in the YouthLink cohort is 9.4 percent white or "European American," 66 percent is African or African American, 4 percent is Native American, and 2 percent is Chicano or Latino. The remainder is other races or ethnicities, or multiple races/ethnicities.

As Chart 3 shows, more than 90 percent of the YouthLink 2011 cohort and 82 percent of youth experiencing homelessness in the Twin Cities metropolitan area is youth of color. By comparison, only 36 percent of youth in Hennepin County is youth of color.[11] Based on these data, it is clear that the experience of homelessness among youth is disproportionately a problem of youth of color, and particularly of African American youth.

Chart 3: Race/ethnicity distribution of YouthLink 2011 cohort, compared to homeless youth in the Twin Cities metropolitan area and youth in Hennepin County.



Sources: U. S. Census Bureau; Wilder Foundation; YouthLink data analyzed by authors.

The highly disproportionate representation of youth of color, and particularly African American youth, among YouthLink's clients in 2011 is consistent with national trends among disconnected youth. A recent study of disconnected youth conducted by the Social Science Research Council (SSRC) emphasized the racial/ethnic disparity among such youth, which it defined more restrictively as

[11] U. S. Census Bureau, 2010. Available at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_SF1DP1&prodType=table. Accessed February 10, 2016; Lindberg C, Pittman B, Gerrard MD. Homeless in Minnesota: youth on their own; findings from the 2012 statewide study of homelessness. Saint Paul: Wilder Foundation. May 2015.

youth ages 16-24 who are neither in school nor employed, so similar to Belfield and colleagues' definition of "chronic opportunity youth."[12]

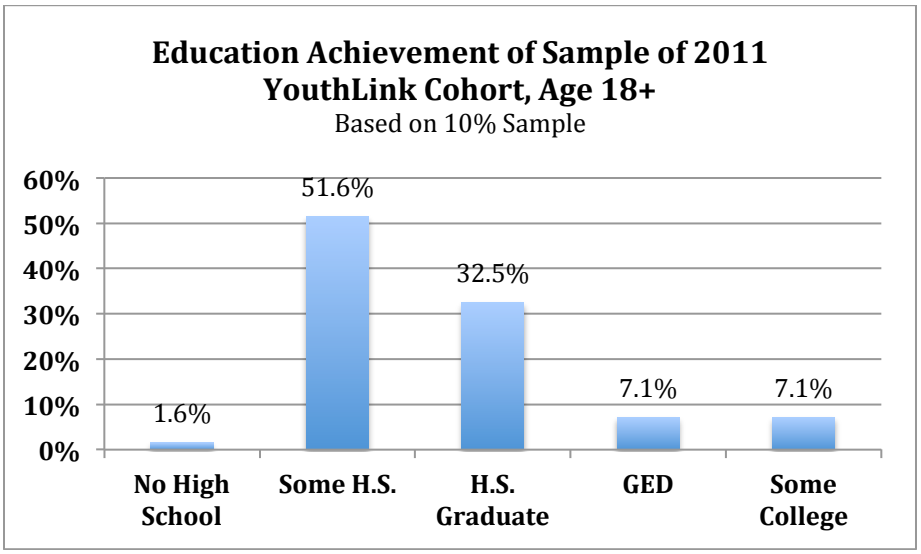
Investigating youth disconnection in the 25 largest metropolitan areas, the SSRC study noted that the rate in the Minneapolis-St. Paul area was 9.3 percent in 2010, second lowest in the country after Boston. The relatively low rate of disconnection in the Twin Cities correlates with relatively high rates of adult educational attainment and labor force participation, and with relatively low rates of poverty and unemployment. However, the SSRC study pointed to the large racial/ethnic gap in youth disconnection in the Twin Cities, where the rate among African Americans was 22.5 percent, compared to 7.2 percent among whites. African American youth are more than three times as likely to be disconnected as whites are—the second-largest disparity of the metro areas in this study after Pittsburgh.

Education and employment of the YouthLink 2011 cohort

Limited educational attainment is a defining characteristic of disconnected youth. In Hennepin County, 92 percent of all adults over age 24 graduated from high school.[13] Belfield and colleagues estimate that the high school graduation rate of "opportunity youth" is 18 percentage points lower than the general population, suggesting that only 74 percent of "opportunity youth" in Hennepin County would be high school graduates. In fact, as shown in Chart 4, among YouthLink clients in 2011 who were age 18 or older, only 40 percent had reached this level or higher of educational attainment, and an additional 7 percent had completed a GED. Although some of these youth may continue their educations and graduate from high school by age 25, this suggests that educational attainment among the YouthLink 2011 cohort is considerably lower than in the general population of Hennepin County.

[12] Burd-Sharps S, Lewis K. One in seven: ranking youth disconnection in the 25 largest metro areas. Brooklyn, New York: Social Science Research Council. September 2012. Available at http://www.measureofamerica.org/one-in-seven/. Accessed October 21, 2015.
[13] U. S. Census Bureau, 2009-2013. Available at http://quickfacts.census.gov/qfd/states/27/27053.html. Accessed October 21, 2015.

Chart 4: Education achievement of YouthLink 2011 cohort, age 18 and greater.

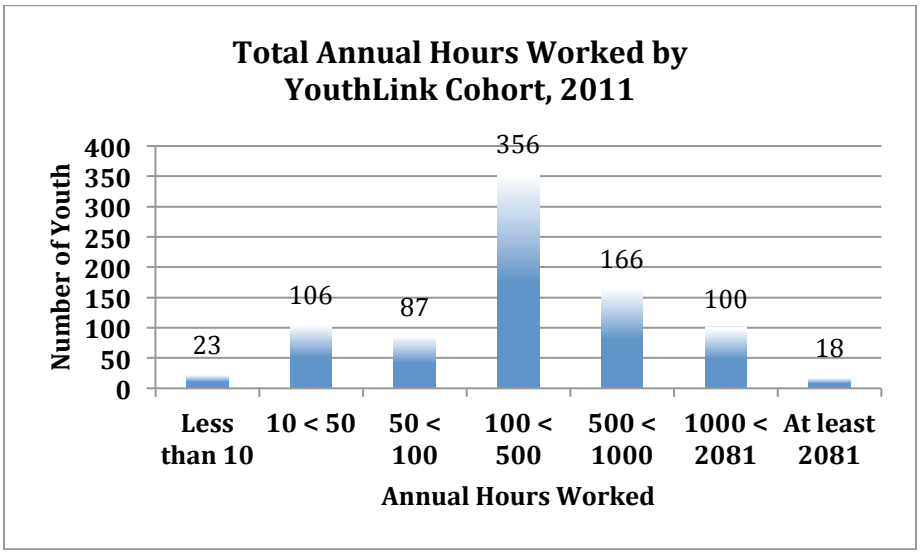


Source: YouthLink data analyzed by authors.

Limited or no employment is the second defining characteristic of disconnected youth. Data from the Minnesota Department of Employment and Economic Development (DEED) on earned income during 2011 reveal that, although as many members of the YouthLink 2011 cohort were employed as youth in the general population, they worked far fewer hours and were paid lower wages. In 2011, 856 (59 percent) members of the YouthLink cohort had reported earnings. In contrast, 60 percent of all youth reported some income in 2011.[14] However, half of the YouthLink cohort were each employed fewer than 296 hours during the year, or less than 6 hours per week and, of them, 128 (15 percent) reported fewer than 52 hours of work during the year, or an average of less than one hour of paid work per week. YouthLink cohort members' annual hours worked during 2011 is illustrated in Chart 5. The consequence of this pattern of employment on earnings among YouthLink cohort members is discussed in the component study on earnings and taxes.

[14] U.S. Census Bureau, Current Population Survey, 2014 Annual Social and Economic Supplement, as cited in Belfield and Minnesota DEED.

Chart 5: Total annual hours worked by YouthLink cohort members during 2011.



Source: De-identified data from DEED, analyzed by the authors.

These data on the educational attainment and employment of the YouthLink 2011 cohort indicate that, as a group, these youth are very similar to the "opportunity youth" described by Belfield and colleagues. Like "opportunity youth," the YouthLink 2011 cohort lags in education and employment, with some who are "chronic opportunity youth," and totally disconnected from education and employment, and some who are "under-attached," in that they may have completed high school and found limited employment but are far from full participants in the economy.

6. Short-term economic burden

Earnings and taxes

Lower earnings, and the lower tax revenues that accompany lower earnings, represent a major component of the economic burden of disconnected youth. Because members of the YouthLink cohort worked and earned less than the general youth population, their "lost earnings" represent a productivity loss to them as well as a social cost to the economy. Because they earn comparatively less, all levels of government receive less tax revenue, which represents a fiscal cost to everyone else. In order to raise needed revenue, everyone else must pay more in taxes to compensate for what they and other disconnected youth do not pay.

As discussed above, because their earned income was lower, members of the YouthLink 2011 cohort paid much less in taxes than most others their age.[15] We estimate the annual social cost of the YouthLink 2011 cohort's lower earnings is $7.3 million and the annual fiscal cost of their lower taxes is nearly $1.8 million.

As discussed above, in 2011, 856 (59 percent) members of the YouthLink cohort had reported earnings. The median hourly earnings of YouthLink cohort members was $8.16, which if they worked full time (2,080 hours), would have led to annual earnings of $16,973. However, because most cohort members worked far less than full time, the actual mean (wage) earnings for cohort members were $3,930.

In contrast, 60 percent of all youth reported some income in 2011.[16] Mean earnings of the general population of U.S. youth aged 16 through 24 were $12,458, a difference of $8,528. The earnings of all youth included some non-wage income as well as earnings of college graduates in this age group. Assuming a random sample of 1,451 youth, 59 percent of whom were employed in 2011, we could expect that their earnings would be $7,299,968 greater than the earnings of the YouthLink

[15] Data from DEED do not include non-wage income, such as various state and federally funded support programs and earnings that are not reported to DEED, including earnings from employers who are not required to report wages paid to DEED, transfer payments such as Social Security, unemployment compensation, various welfare supports (examined in the section dealing with transfer payments), illegal earnings, earnings from financial market transactions, and proceeds from gambling.

[16] U.S. Census Bureau, Current Population Survey, 2014 Annual Social and Economic Supplement, as cited in Belfield, and Minnesota DEED.

cohort members. This amount is the estimated "lost earnings" for cohort members during 2011 and represents a cost to society.

All levels of government share in the tax loss due to lower earnings. Average earnings of cohort members were too low in 2011 for them to pay any federal income taxes, but they paid an average of $244 in Social Security taxes. Their incomes were also too low to pay state income taxes. However, according to the 2015 Minnesota Tax Incidence Study, cohort members who had earnings paid an average of $507 in state and local taxes, including sales taxes and indirect property taxes.[17]

A random sample of 1,451 youth age 16 to 24 would have paid an estimated $431 in federal income taxes (after adjusting for marital status and family size) and $772 in Social Security taxes. They also would have paid an average of $1,607 in state and local taxes, based on the 2015 Minnesota Tax Incidence Study. The calculation of these estimated losses per worker and member of the YouthLink and all-youth cohorts is shown in Table 2. The difference, $1,215, represents lost taxes per cohort member.

Table 2: Federal and State and Local taxes "lost" per person (fiscal cost of "lost" taxes).

	2011 YouthLink cohort		General youth population cohort	
	Per worker	Per cohort member	Per worker	Per cohort member
Federal income taxes	$0	$0	$431	$254
Social Security taxes (6.2%)	$244	$144	$772	$455
MN state and local taxes	$507	$299	$1,607	$948
Total taxes paid	$751	$443	$2,810	$1,658
Total taxes "lost"				**$1,215**

Sources: Minnesota DEED, U.S. Census Current Population Survey, IRS instructions for 2011 tax preparation, Minnesota 2015 Tax Incidence Study.

When calculated at the level of the cohort, the difference in taxes paid by the YouthLink 2011 cohort and 1,451 youth in the general population is about $1.7 million per year, as shown in Table 3 below.

[17] Minnesota Revenue Tax Research Division. 2015 Minnesota Tax Incidence Study: analysis of Minnesota's household and business taxes. March 9, 2015. Available at www.revenue.state.mn.us/research_stats/Pages/Tax_Incidence_studies.aspx Accessed October 16, 2015.

Table 3: Total Federal, State and Local taxes "lost," 1,451 youth.

	YouthLink cohort	General youth population cohort
Federal income taxes	$0	$369,256
Social Security taxes (6.2%)	$208,864	$660,832
MN State and Local taxes	$433,966	$1,375,662
Total taxes paid	$642,830	$2,405,750
Total taxes "lost"		**$1,732,920**

Sources: Minnesota DEED, U.S. Census Current Population Survey, IRS instructions for 2011 tax preparation, Minnesota 2015 Tax Incidence Study.

Crime

Youth commit a disproportionate share of all crimes; the ages 16-24 encompass the peak time of criminal behavior across the lifespan. Nationally, youth are arrested for 37 percent of all violent crimes and 43 percent of all property crimes. Over 300,000 youth are in prison or other detention facilities.[18,19] Criminal activity is highly concentrated; most youth commit no crimes, but 6 percent of youth commit half of all crimes.[20] As Belfield and colleagues point out, "opportunity youth" are more likely to be involved in crime, in part because their incomes are lower.

Belfield and colleagues used data from the National Longitudinal Survey of Youth 1997 (NLSY97), a nationally representative longitudinal survey of youth, to estimate the proportion of all youth crime that is committed by "opportunity youth." The NLSY97 contains information on whether a youth was ever arrested and Belfield and colleagues cross-correlate that with their measure of "opportunity youth" from the NLSY97. Based on their analysis, "opportunity youth" are responsible for 63 percent of all youth crime, even though they are only 17.3 percent of the total youth population. While high, this proportion fits with the well-established correlation between crime and disadvantage and/or low education.

---

[18] Federal Bureau of Investigation Uniform Crime Reports, 2010, Table 38. Available at https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl38.xls. Accessed October 23, 2015.

[19] Sickmund M, Sladky TJ, Kang W, Puzzanchera C. 2011. Easy Access to the Census of Juveniles in Residential Placement. 2011. Available at http://www.ojjdp.gov/ojstatbb/ezacjrp/. Accessed October 23, 2015.

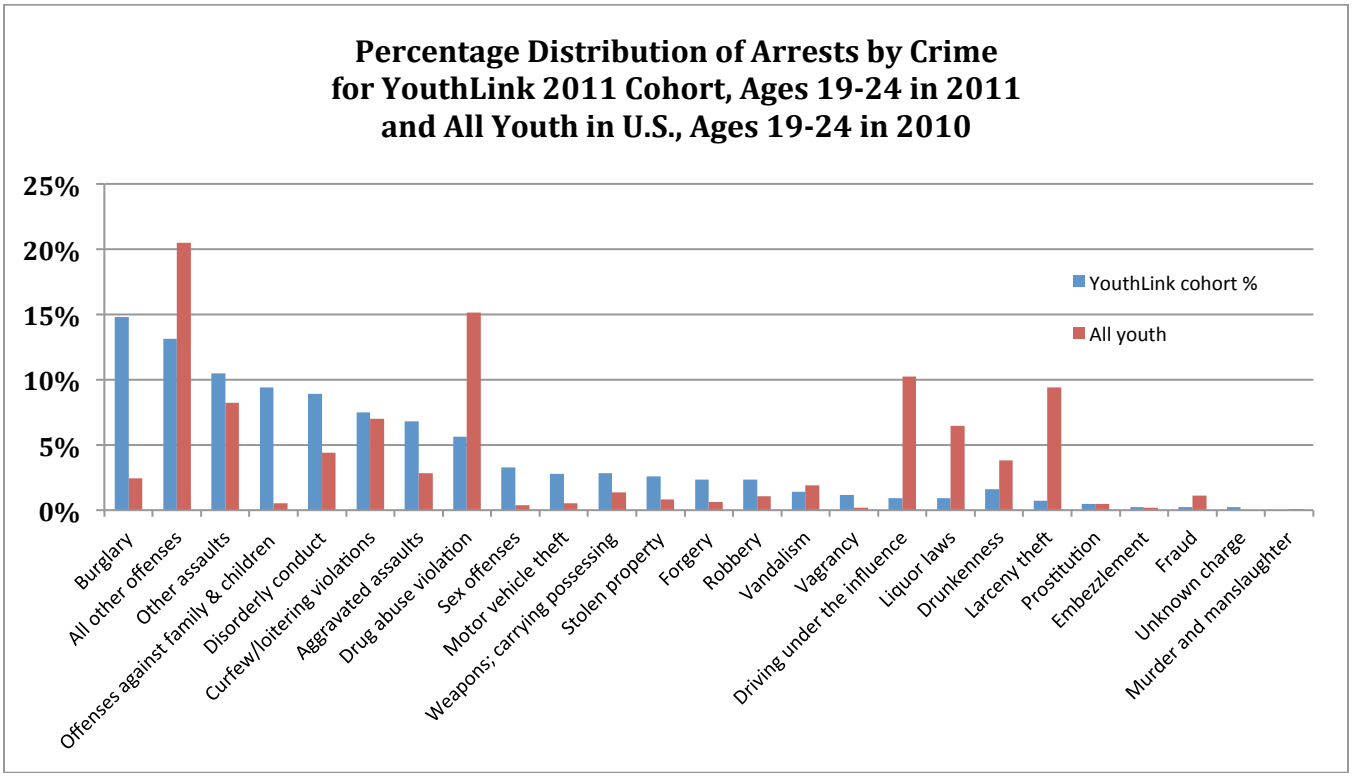
[20] Belfield, page 13, Cohen and Piquero, 2009; Merlo and Wolpin, 2009; Lochner and Moretti, 2004.

Information that we gathered confirms that members of the YouthLink 2011 cohort were arrested for criminal behavior far more often than average youth. Arrest records available on young adults, ages 19-24, from Hennepin County indicate that 222 youth out of 1,035 cohort members of that age group—more than one in five—were arrested during 2011. These youth were arrested 436 times, an average of nearly two arrests per person arrested, and incarcerated for 2,771 days during the year.

We imputed arrests for 16-18 year old members of the YouthLink 2011 cohort, since arrest data for juveniles are unavailable. We imputed arrests based on the fact that 16-18 year olds were involved in 31.4 percent of arrests among all 16-24 year olds in U.S. crime data in 2010. On this basis, we estimate 200 arrests for 16-18 year old cohort members, meaning that there were an estimated 636 arrests in the YouthLink 2011 cohort. Compared with a general cohort of youth of the same ages, YouthLink clients were arrested 7.1 times as often.

The types of crimes for which members of the YouthLink cohort were arrested are shown in a percentage distribution in Chart 6, which also displays comparable data on arrests of all youth of the same ages nationally during 2010.

Chart 6: Arrests by crime (percent of all arrests), YouthLink cohort ages 19 – 24 and all youth ages 19 – 24.



Sources: Hennepin County and U.S. Department of Justice arrest reports by age group. See http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl38.xls.

The data in Chart 6 are ordered by the frequency of arrests for the YouthLink cohort members. In 2011, no one in the YouthLink cohort was arrested for murder, the most violent crime, although 0.1 percent of total arrests for this age group nationally were for murder or manslaughter. A distressing number of arrests among YouthLink cohort members were for offenses against family and children.

Taxpayers pay the cost of the criminal justice system, including policing and adjudication, incarceration and crime prevention by agencies ranging from the Bureau of Alcohol, Tobacco, and Firearms to the Drug Enforcement Administration, among 54 separate agencies, many of which serve youth in some measure. Across all youth aged 16-24, federal, state and local agencies spent $75.1 billion on crime in 2007, or $83.2 billion in 2012 (adjusted by the Consumer Price Index). This is 30.4 percent of total crime spending.[21]

We follow Belfield and colleagues' approach to estimate the excess expense to the criminal justice system incurred by the YouthLink 2011 cohort, but adjusted those data to local populations and expenditures. In order to estimate local costs, we rely,

[21] Belfield, p. 13.

like Belfield and colleagues, on the U.S. Census of Governments (COG) data for spending in Minnesota, Hennepin County and Minneapolis.[22] Using population census data from the same areas, we then estimated total and per person costs for police, corrections and judicial and legal activities at the federal, state, county and city levels. We did this by applying Belfield and colleagues' key estimates of the share of crime attributable to all youth (30.4 percent of all crime) and to opportunity youth (63 percent of youth crime), respectively, to allocate total spending on the criminal justice system for all youth at each level of government. Finally, we allocate costs to estimates of "opportunity youth" and non-"opportunity youth" in order to calculate excess costs.

In 2012, criminal justice spending on Minnesota youth by the federal, state, Hennepin County, and Minneapolis governments was $9,213 per "opportunity youth" and $1,132 per non-"opportunity youth," a difference of $8,081. This amount is the estimated excess spending per opportunity youth in Minnesota. For the entire YouthLink 2011 cohort, the estimated excess spending totals $11,725,212.

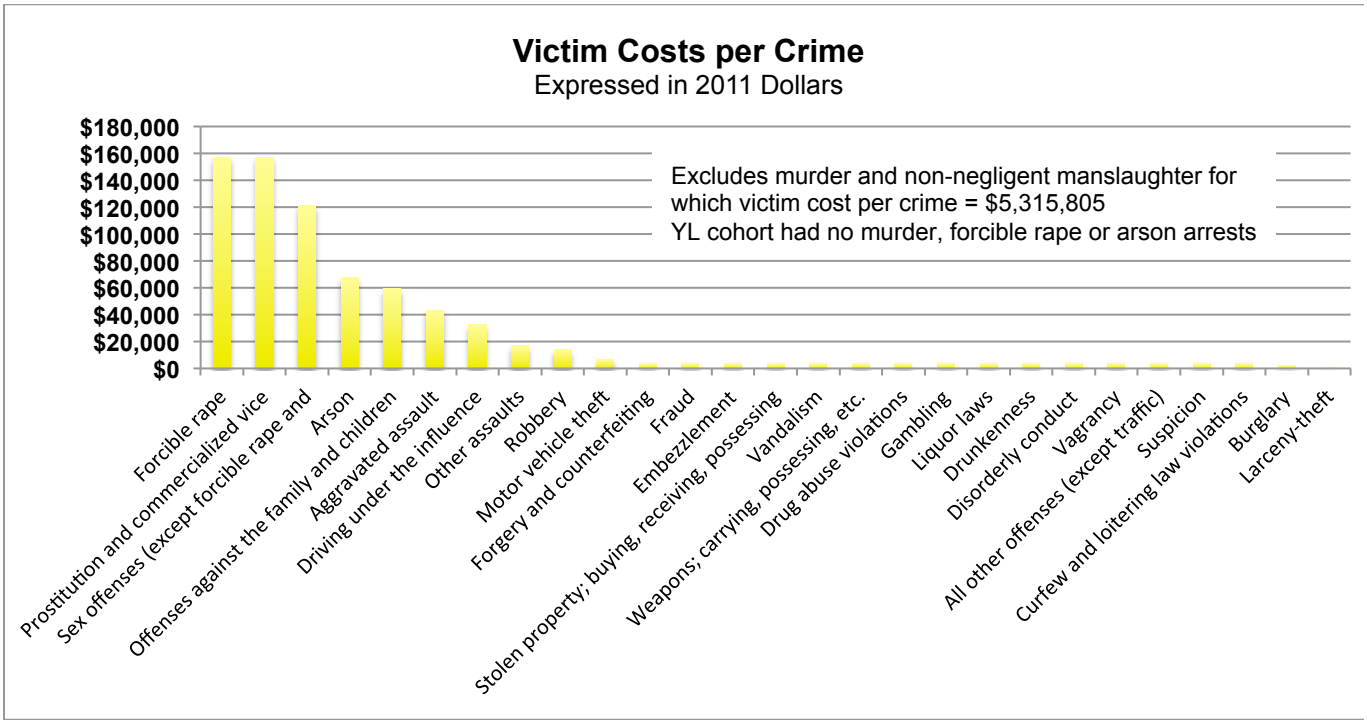
An additional economic burden of criminal activity—a social cost not paid by taxpayers—is the costs directly imposed on victims, and expenditures by victims and potential victims on avoidance of crime. Following Belfield and colleagues, we translate the criminal activity of the YouthLink 2011 cohort into excess costs to victims based on the work of Miller et al.[23] Miller and colleagues focus on estimating the costs of specific types of crime, including tangible losses such as healthcare costs, lost earnings and public program costs related to victim assistance, and intangible costs for pain, suffering and reduced quality of life. These costs exclude the impact of crime-induced fear on society.

Following Belfield and colleagues' methods, we use Miller and colleagues' estimates of the victim costs of specific types of crimes, as shown in Chart 7.

[22] The COG is a survey of all units of government (except the smallest ones) in the United States. The Census is performed every 5 years in years ending in 7 and 2. Annual samples are taken in the intermediate years, but the data in the intermediate years is not reported in sufficient detail to be useful here. We use expenditure data from the 2012 census for the federal government, along with data for Minnesota, Hennepin County, and the city of Minneapolis.

[23] Miller TR, Cohen MA, Wiersema B. 1996. Victim costs and consequences: a new look. National Institute of Justice Research Report, NCJ-155282. These costs were updated to 2011 values by Belfield and colleagues.

Chart 7: Estimated tangible and intangible victim costs per type of crime, expressed in 2011 dollars, following Miller et al. 1996.



To estimate the excess victim costs of crime incurred due to criminal behavior of the YouthLink cohort we multiplied the excess number of crimes for which YouthLink cohort members were arrested, shown in Chart 6, by the estimated cost per type of crime shown in Table 7. It is important to note that YouthLink cohort members were not arrested during this year for murder or non-negligent manslaughter, for which the estimated average victim cost is more than $5.3 million, or for forcible rape or arson, two other crimes with higher victim costs. Table 4 reports the estimated excess costs for the YouthLink 2011 cohort.

Table 4: Estimated excess victim costs for YouthLink 2011 cohort.

	YouthLink 16-24	US population 16-24
Victim costs per arrest	$14,904	$15,088
Victim costs per cohort member	$6,533	$1,363
Excess costs per cohort member	**$5,170**	
Victim costs for 1,451 youth	$9,478,891	$1,974,811
Excess YouthLink victim costs	**$7,504,080**	

Source: Authors' analyses based on Miller and colleagues and Hennepin County and U.S. Department of Justice arrest reports by age group.

The estimated excess victim cost of more than $7.5 million for the YouthLink cohort is a conservative estimate, in part because there were no arrests in the YouthLink cohort for murder in 2011. The US population costs used for comparison include a small number of arrests for murder, which raises the costs per arrest and per cohort member considerably. Were the high victim costs of murder excluded from the US population comparison the excess YouthLink cohort costs would be considerably greater.

Health

Although it is often difficult to distinguish between the causes and consequences of youth experiencing homelessness, there is little doubt that living on the street is strongly associated with loneliness, emotional distress, depression and increased risk of physical health problems.[24] Because they are on their own, and unemployed or only marginally employed, youth experiencing homelessness are rarely covered by commercial health insurance plans so they typically access mental and physical health services through hospital emergency departments or community clinics. Payment for these services may be through Medicaid when they can be enrolled, or the cost may be written off as uncompensated care.

In order to track the utilization and costs of health services for YouthLink clients, we obtained de-identified claims data from the Minnesota Department of Human Services (DHS), with assistance from the Hennepin County Office to End Homelessness. These comprehensive data reported paid claims by DHS on behalf of

[24] Thompson SJ, Bender K, Windsor L, Cook M, Williams T. Homeless youth: characteristics, contributing factors, and service options. J Human Behavior in the Social Environment, 2010(20):193–217.

YouthLink clients between January 2011 and June 2012 provided by all healthcare service providers, through all DHS programs, the largest of which were Medical Assistance and MinnesotaCare. The data included prepaid and fee-for-service claims, which were often used because youth cycle on and off eligibility, sometimes as frequently as monthly. Because of this mix of types of claims, data were analyzed on a per member per month (PMPM) basis. Providers could not be identified because line item detail on the claims was not provided, but it is known that major providers for these youth include Hennepin County Medical Center, North Memorial Medical Center and Red Door Clinic. Staff of Hennepin County Health Care for the Homeless estimated uncompensated costs were 20 percent of total costs.

Comparison data for the youth population were obtained from the Medical Expenditure Panel Survey (MEPS), maintained by the federal Agency for Healthcare Research and Quality. MEPS is a set of large-scale surveys of families and individuals, their medical providers and employers, and is widely considered the most complete source of data on the cost and use of healthcare and health insurance coverage in the United States.[25] Comparison data from MEPS report on healthcare costs for privately insured youth in the Midwest during 2011.

Table 5 describes the average per person and cohort costs for the YouthLink cohorts and a comparison group of 1,451 average youth.

[25] MEPS tables are available through http://meps.ahrq.gov/mepsweb/

Table 5: Comparison of YouthLink and average youth healthcare costs, 2011.

Excess healthcare costs for YouthLink clients	
YouthLink (YL) Costs	
DHS payments per member per year (PMPY) for YL cohort	$ 2,549
Estimated uncompensated care, 20%	$ 510
PMPY for YL cohort including uncompensated care	$ 3,059
Total estimated cost for YL 2011 cohort of 1,451	$ 4,438,301
Average Youth Costs	
MEPS mean PMPY for privately insured youth ages 16-24	$ 2,265
MEPS 2011 total estimated cost for cohort of 1,451	$ 3,286,515
Comparison	
Excess 2011 per person cost for YouthLink cohort	**$794**
Excess 2011 cost for YouthLink cohort of 1,451	**$ 1,151,786**

Sources: DHS Data Warehouse, MMIS Claims Tables as of 2/11/2015, Johanna Lewis, data analyst; MEPS 2011 data on privately insured Midwest youth; Hennepin County Health Care for the Homeless.

As indicated, the excess per person cost for the YouthLink cohort was $794, which represents approximately $1.2 million in excess costs for the cohort, costs that are borne by taxpayers and are a cost to society. The cost difference is understated because the reimbursement rate for services paid by DHS is lower than payments by commercial insurers. Although the costs for the YouthLink clients were only 35 percent higher, the utilization pattern of the YouthLink clients differed greatly from that of average youth. Of the YouthLink clients for whom DHS paid for health services, 79 percent had at least one emergency department claim. Among average youth, only 13 percent had one or more such claim. In addition, about half of the YouthLink clients also had outpatient claims for mental health and chemical dependency services.

Welfare and social supports

Transfer payments are the largest component of public support for members of the YouthLink 2011 cohort. Such payments provide basic support for people who are unable to work. Transfer payments are supported by taxes and also represent a social cost. They are paid by a unit of government (typically the federal or county government) to individuals, for which the individual does not supply any payment, good, or service in exchange. We received de-identified individual-level data from Hennepin County on transfer payments to members of the YouthLink cohort.

Nearly all (1,264, 87 percent) members of the 2011 YouthLink cohort received at least one of three different types of transfer payment: General assistance (GA), Supplemental Nutritional Assistance Program (SNAP), formerly called food stamps, and Minnesota Family Investment Program (MFIP), formerly called Aid to Families with Dependent Children or AFDC.[26]

General Assistance is temporary cash benefits paid to childless people age 16 through 64 who cannot support themselves.[27] The support is limited to six months of eligibility, which may be extended under some circumstances. Support is $203 per month for individuals and $260 for couples, amounts that have not been adjusted since 1987. Recipients are usually also eligible to receive SNAP and healthcare benefits.

In 2011, 352 members of the YouthLink cohort received GA benefits. Sixteen of them received an extension of their benefits or reapplied after an interim. The average benefit period lasted 9.7 months during 2011. The total cost of the YouthLink cohort's GA benefits in 2011 was $693,123, or $478 per member of the cohort, assuming all recipients were single.

The Supplemental Nutritional Assistance Program and Food Support programs were used by more cohort members than any other transfer payment program. In 2011, 1,056 cohort members (73 percent) received SNAP or Food Support assistance. The programs provide food support for people in need, as defined by their income and assets. Eligibility for these programs needs to be regularly updated and is limited to three months unless the recipient is working at least half time or in school. The current allotments, which have not been increased for many years, are based on household size. The amount of assistance ranges from $200 per month for a single person to $526 for a household of 3. To calculate the cost of SNAP we assumed—based on advice from Hennepin County staff—that people receiving SNAP only were single with no children and those receiving MFIP and Food Support lived in 3-person households (one adult with two children). The amount of assistance was based on the number of months each person received assistance during 2011. These results are summarized in Table 6 below.

[26] Many also benefitted from some other aid programs, including healthcare support and emergency assistance. These aid programs are not transfer payments because they are payments made by the government as compensation for goods or services provided by others for someone who is eligible to have the government pay for these goods or services. Such costs are considered in the sections dealing with housing and healthcare benefits, both of which are publicly funded support programs that are not transfer payments.

[27] For youth ages 16-17 this program is called GA for Minors.

Table 6: Cost of SNAP assistance to YouthLink cohort members during 2011.

Allotment type	Number of recipients	Total cost	Cost per recipient	Cost per cohort member
SNAP only	843	$938,644	$1,113	$647
MFIP and food support	213	$435,631	$2,045	$300
Total	**1,056**	**$1,374,285**	**$1,301**	**$947**

Source: Hennepin County.

The Minnesota Family Assistance Program (MFIP) provides support for needy families with children that have very limited income and assets. There are three separate phases to the program:

- Diversionary Work Program (DWP)
- MFIP and child care support—limited to lifetime assistance not exceeding 60 months, with some exceptions for certain hardships
- Additional employment support beginning in the 48th month of receiving MFIP

The DWP is a four-month long program that helps parents find employment before receiving MFIP. It is a chance to let parents learn whether they can support themselves and their children with some assistance. Participants in the program receive some cash assistance, employment support, and childcare assistance. The time spent in the DWP does not count against the 60 month limit of receiving MFIP.

Pregnant women are eligible to receive MFIP, and recipients may receive an additional grant for childcare. Children may remain eligible to continue to receive SNAP if parents become ineligible to receive SNAP.[28] MFIP recipients are eligible to receive employment support, healthcare benefits, and college assistance. The 60 month lifetime limit to receiving MFIP benefits may be extended under special circumstances. Hennepin County data indicate that in 2011, 6 percent of the YouthLink recipients and 13 percent of all MFIP recipients had received benefits for more than 60 months.

In 2011, 373 members of the cohort received MFIP support from Hennepin County, 10 of whom also had received at least 48 months of support and were eligible to receive employment support as they transitioned to work. We calculated MFIP support using the actual number of months each cohort member received MFIP

[28] This is a situation that could occur under a variety of situations. If the head of a household were to become eligible for Social Security disability income, for example, the head of the household would no longer be eligible for MFIP and SNAP, but if the disability income were low enough, any children in the household would continue to be eligible for SNAP.

support in 2011. Hennepin County estimates that most youth who receive MFIP are single with two children, typically one infant and one toddler. Lacking direct information on the number of months of childcare used by these recipients, we assumed conservatively that on average half received childcare support at any given time, based on advice from Hennepin County staff. With these assumptions, average monthly support was $1,469, including childcare support. Employment support cost $1,020 per recipient. The total cost for MFIP and employment support was $4,278,352, or $2,942 per cohort member. These results are detailed in Table 7 below.

Table 7: Cost of MFIP assistance to YouthLink cohort members during 2011.

	Number of recipients	Monthly amount	Total cost	Cost per cohort member
MFIP, including child care	373	$1,469	$4,268,152	$2,942
Employment support	10	$1,020	$10,200	$7
Total			**$4,278,352**	**$2,949**

Source: Hennepin County.

Total cost for transfer payments to cohort members during 2011 was approximately $6.3 million during 2011, or $4,374 per cohort member. This total includes payments for General Assistance (GA), food support (SNAP) and family support (MFIP). These totals are reported below in Table 8.

Table 8: Total cost of transfer payments to YouthLink cohort members during 2011.

Program	Number of recipients	Total cost in 2011	Cost per cohort member
General Assistance	352	$693,123	$478
SNAP	1,056	$1,374,285	$747
MFIP	373	$4,278,352	$2,949
Total		**$6,345,760**	**$4,374**

Source: Hennepin County.

Since the cost per person of these transfer programs to youth in the general population is very small, we did not estimate an excess cost in this category. The costs identified here are the costs of the benefits only, and do not include the cost of administering these programs.

In addition to transfer payments, other social support programs exist to ameliorate the economic and social challenges of disadvantaged youth. A wide variety of programs designed to address the various needs of young adults are supported by the U.S. Departments of Labor, Health and Human Services, Education and Justice,

and administered by federal, state, county and city agencies. Nationally, such programs include Job Corps, Workforce Investment Act Youth Activities, Youth Build, Youth Offender Grants, Chafee Foster Care Independence Program, Runaway and Homeless Youth Program, Adult Education Basic Grants to States (excluding amounts to persons aged 25 and above), Workplace and Community Transition Training for Incarcerated Youth, Education for Homeless Children and Youth, and Title I-D programs.

Unlike other types of costs, we were unable to identify local sources that would have made it possible to estimate the participation by the YouthLink cohort in these many social support programs and to estimate their costs directly in 2011. Instead, we apply the cost per "opportunity youth" estimated by Belfield and colleagues.[29] They draw on a recent tabulation by the General Accounting Office of such programs, and assume that "opportunity youth" rely on these programs in the same heightened proportion as they receive public assistance payments.[30] This yields an extra estimated amount spent on "opportunity youth" of $430 per youth in 2011 dollars based on 2006 appropriations. Applied to the YouthLink cohort, the estimated excess cost of social support programs to taxpayers and society is $623,930.

Education

Education is one area where there is a "savings" to taxpayers and society for the YouthLink 2011 cohort. The "savings" in government subsidies and privately paid fees occur because fewer YouthLink cohort members attend either high school or college than others their age in the general youth population. Of course, these short-term "savings" lead to a long-term burden, because education is an important pathway toward greater future earnings. We examine the cost "savings" for the YouthLink cohort in two areas: high school and post-secondary education.

The estimate for high school "savings" is the net of decreased public costs of education due to lower enrollment among high school aged youth and increased public costs of education due to higher enrollment in high school among post-high school aged youth. These estimated "savings" benefit both taxpayers and society, at least in the short-term. We obtained de-identified individual level data, including student age, on enrollment by members of the YouthLink 2011 cohort from the Minneapolis Public Schools (MPS). For analysis, we divided the cohort by age into those who were age 18 and under (high school age), and those who were age 19 or greater (post high school age) during 2011. We compared the YouthLink

---

[29] Belfield, p. 14.

[30] Government Accountability Office (GAO). *Disconnected Youth: Federal Action Could Address Some of the Challenges Faced by Local Programs That Reconnect Youth to Education and Employment*. 2008. GAO-08-313. Available at http://www.gao.gov/new.items/d08313.pdf. Accessed November 3, 2015.

enrollment patterns to national data from the U.S. Census Bureau Current Population Survey on enrollment in 2011 by the same age ranges to determine reduced or excess enrollment in the YouthLink cohort. We also standardized MPS data to the YouthLink cohort age ranges in order to estimate cohort and per person costs. We derived the per pupil average high school expense of $21,290 from the MPS Annual Financial Report for 2011-2012. This amount represents the fully weighted cost per pupil, applying the per pupil weight stated in the Minnesota Department of Education Levy Limitation and Certification Report.

MPS records contain enrollment history on 66.8 percent of the YouthLink 2011 cohort. Analysis indicates that among those members of the YouthLink cohort whose enrollment history could be found in MPS records, 26.8 percent of high school age youth were not enrolled during 2011. This rate of non-enrollment is more than twice the rate among high school age youth nationally, and translates into a "savings" of $1,213,530, or $853 per YouthLink cohort member.

Analysis revealed, however, that many YouthLink cohort members beyond high school age were still enrolled in high school during 2011. Apparently, some of these youth failed to graduate with most of their peers and were still trying to finish their secondary education. Among the YouthLink cohort, 21.7 percent of post high school age youth were enrolled in high school during the year, compared with only 2.8 percent of youth nationally who were not enrolled in college. These YouthLink high school students imposed an additional expense of $2,171,580, or $1,527 in excess cost per YouthLink cohort member.

Using de-identified enrollment information from the Minnesota State Colleges and Universities system (MnSCU), we also found that, despite their current difficulties, 9.7 percent of post secondary age YouthLink cohort members were enrolled during 2011.[31] Although encouraging, this rate of college enrollment is much lower than that of similar age youth nationally (32.5 percent).

The MnSCU college most frequently attended by YouthLink cohort members in 2011 was the Minneapolis Community and Technical College (MCTC). The average cost per student during 2011 at MCTC was $7,284, of which $5,594 was subsidized by taxpayers, based on the MCTC 2011 Audited Financial Statement. At that cost, the comparatively lower enrollment rate of the YouthLink cohort translates into a fiscal "savings" of $1,288,841, or $888 per YouthLink cohort member. Of the total average cost of MCTC, the remainder, $1,677, was usually paid by students. The comparatively lower enrollment rate translates into a social "savings" of $386,351, or $266 per YouthLink cohort member. These "savings" are summarized in Table 9.

[31] MFIP recipients who are high school graduates may attend MnSCU institutions at no charge.

Table 9: Summary of YouthLink 2011 cohort education fiscal and social "savings."

	2011 YouthLink cohort	YouthLink per person
High school age under enrollment	($1,213,530)	($853)
Over high school age over enrollment	$2,171,580	$1,527
Post-Secondary under enrollment fiscal savings	($1,288,841)	($888)
Net fiscal education savings	**($330,791)**	**($233)**
Post-Secondary under enrollment private savings	**($386,351)**	**($266)**

Sources: Minneapolis Public Schools, Minnesota State Colleges and Universities system, Minneapolis Community and Technical College, U.S. Census Bureau Current Population Survey.

Housing

Members of the YouthLink 2011 cohort were, by virtue of becoming YouthLink clients, experiencing homelessness or at risk of homelessness during some or all of 2011. This difference with "opportunity youth," most of whom are not homeless, requires that we add these costs to those that Belfield and colleagues considered. We estimate the costs of housing cohort members in temporary single adult and family shelters, youth shelters, supportive housing, and financial support provided through the Hennepin County Emergency Assistance Program. Informal housing costs incurred by families or friends of cohort members with whom they may have stayed are not included.

Temporary single adult and family shelters are one resource that some members of the YouthLink 2011 cohort use. The largest such shelters often used by cohort members, and their nightly costs in 2011, are:

- People Serving People for families, $38 per day for adults and $27 for children, 99 beds, plus 10 two bedroom apartments
- Harbor Lights, $6 to $36 per day, various types of housing
- Salvation Army, $6.50 per night, secure waiting space

- Catholic Charities, $6.50 per night, secure waiting space

Utilization data were available on the adult single and family shelters from a Humphrey Institute Capstone Project study led by Professor Maria Hanratty, who performed an additional analysis requested by the authors.[32] Table 10 summarizes the use and costs of these shelters by cohort members.

Table 10: Use and costs of temporary shelters by YouthLink 2011 cohort members.

	Family	Adult
Cohort members served	48	128
Total nights in shelters	2,105	3,922
Average nights per user	43.7	30.5
Total cost	**$133,492**	**$92,037**
Total cost per user	$2,772	$717
Total cost per cohort member	**$92**	**$63**

Sources: Professor Maria Hanratty; Hennepin County Project to End Homelessness.

Youth shelters provide a much more comprehensive set of services to a small number of youth. These shelters are built on a social service model, and services range from food to counseling. Lengths of stay are typically longer than those at temporary single adult and family shelters. A total of 46 such beds were available across four shelters, including eight at YouthLink during 2011. These youth shelters, their nightly costs, and staff estimates of their nightly use by YouthLink clients, are:

- Avenues, $138 per night, 8 of 16 beds typically used by YouthLink clients
- Hope Street, $117 per night, 5 of 16 beds typically used by YouthLink clients
- Safe House, $151 per night, 3 of 6 beds typically used by YouthLink clients
- YouthLink, $41 per night, 8 beds (operational in 2011)

The weighted average cost per night per bed was $103 across these 24 beds, including the eight at YouthLink, that were used by youth who also attended YouthLink and were therefore members of the 2011 YouthLink cohort. The total annual cost for these shelters and services was $901,550, or $37,565 per bed. The annual cost per 2011 YouthLink cohort member was $621.

[32] Williams Q, Oh Y, Zhu W, Buttke D, Hanratty M. A closer look at youth homelessness in Hennepin County: final capstone report. University of Minnesota: Humphrey Institute. June 5, 2015.

Some YouthLink 2011 cohort members had the opportunity to live in supportive housing. During 2011, YouthLink partnered with other agencies to operate three such apartment houses, Archdale, St. Barnabas, and Nicollet Square, with a total of 118 apartments, including seven scattered site units for teen parents. The need for these units, in which the typical stay is 1.5 to 2 years, vastly exceeds supply and vacancies are filled by lottery. YouthLink staffs these units, which accounts for a third of YouthLink's annual budget. Most of these units are typically occupied by youth who are also YouthLink clients. We learned that in April, 2013, 99 of these units, or 83.9 percent of the units in these three supportive housing complexes, currently housed YouthLink clients. In 2011, YouthLink's housing-related program costs for 99 apartments were $909,979.

Assuming a similar number of YouthLink 2011 cohort members were housed in supportive housing units, we estimate the related costs for the cohort in 2011. The market value of the monthly rental cost for these units in that year was $605, and was subsidized with public funds. Youth contribute a growing portion of the monthly cost as their circumstances allow, but according to YouthLink and housing staff, at that time the average occupant contributed $205 monthly at Nicollet Square, and $107 monthly at Archdale and St. Barnabas.

With these inputs, the total housing cost for 99 units was $718,740, of which youth occupants paid $168,555 and $550,185 was subsidized. Including the cost of the YouthLink housing-related program, the total subsidized cost for supportive housing was $1,460,164, or $14,749 per user and $1,006 per YouthLink 2011 cohort member.

In addition, the Youth Mobile Team provides subsidized housing, along with a variety of supportive services, for a small, fluctuating number of youth with the greatest barriers to obtaining housing, most of whom are somewhat older than the average YouthLink client. In 2011, YouthLink expenditures for the Youth Mobile Team, including rent payments on behalf of these youth, were $382,185, or $263 per cohort member.

In addition, 26 YouthLink 2011 cohort members spent time in the foster care system. These youth had an aggregate length of stay of 218.95 months during 2011, or an average length of stay of 8.42 months per foster care user. The total payment for foster care was $328,764, or $12,645 per foster care user and $227 per cohort member.

Finally, the Hennepin County Emergency Assistance Program (EA) provided limited financial support to some YouthLink 2011 cohort members who were at risk of becoming homeless or already experiencing homelessness. Such support is limited to once per year and a maximum of $3,000, and may be used to pay for a youth's

first month of rent and utilities or to prevent youth becoming homeless by paying for such things as back rent or utilities.[33]

In 2011, there were 243 EA payments to members of the YouthLink 2011 cohort totaling an estimated $317,601, or $1,307 per user and $219 per YouthLink 2011 cohort member. In order to estimate the contributions of these youth to their own housing costs, we assumed that all 243 recipients of EA paid rent of $605 per month, minus what was subsidized by EA. Based on these assumptions, the total cost for 243 youth-headed households was $1,764,180, and these youth paid a total of $1,446,579 out of pocket for their housing.

The publicly subsidized housing costs for the YouthLink 2011 cohort are summarized in Table 11.

Table 11: Summary of estimated housing costs for YouthLink 2011 cohort.

	2011 cost per person	2011 cohort total cost
Emergency Assistance	$219	$317,601
Youth shelter	$621	$901,550
Temporary single adult shelter	$63	$92,037
Temporary family shelter	$92	$133,492
Supportive housing and Youth Mobile Team	$1,269	$1,842,349
Foster care	$227	$328,764
Total estimated housing costs	**$2,491**	**$3,615,793**

Source: Authors' analyses.

Determining how much of the estimated housing cost for the cohort is excess cost, beyond that which may be incurred to house average youth, presents a challenge. Data from the U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, indicate that the average cost nationally of housing a young person in 2011 for families with incomes under $57,600 was $2,988. Based on this average, the cost for 1,451 youth living at home would have been $4,335,588, substantially more than the estimated cost of housing for the YouthLink 2011 cohort, described in Table 11, which is $3,615,793. However, YouthLink cohort members paid an estimated $168,555 for supportive housing and $1,446,579 for rent, as noted above, thereby contributing $1,615,134 out of pocket. If one factors in this private

[33] EA is provided by the county, but it is not a transfer payment. It is a payment to a vendor for goods and services.

contribution by YouthLink clients, subtracting it from the cost of privately housing these youth, the public cost is actually $895,339 higher.

Not only is the public cost nearly $900,000 higher than what it would have cost to privately house every member of the YouthLink cohort for the year, the majority of the cohort members were probably not housed for at least part of the year. Unfortunately, we have incomplete information about the housing status of cohort members. As discussed above, we have some indication of the housing status of 243 youth who received EA during the year, 176 youth who stayed in temporary single adult and family shelters during some part of the year, 24 youth who stayed in youth shelters during some part of the year, 26 youth who were in foster care and 99 youth who were in supportive housing for at least part of the year. We have no housing information at all on the remaining 883 (60.9 percent) members of the cohort. During part of the year, some of these youth may have been living with their families of origin and some may have paid for housing privately, which would have reduced the difference between the total private cost of housing 1,451 youth and what we know the public paid to house at least some of these youth at least part of the year.

One way to think about this comparison is that it represents a shift in funding from the private to the public sector. The total estimated private cost to house cohort members for the year in family homes would have been $4,335,588, and the cohort members who lived in supportive housing and those who received EA in fact paid an estimated $1,615,134 out of pocket. The estimated public cost of housing the members of the YouthLink 2011 cohort through EA, various shelters, supportive housing and foster care was $3,615,793. This shift from private to public payments reflects a "savings" to society of an estimated $2,720,454 (the difference between the total estimated private cost and the estimated amount paid by cohort members), or $1,875 per cohort member. This "savings" to society came, however, at the public fiscal cost of an estimated $3.6 million to taxpayers, or $2,491 per cohort member.

Marginal excess tax burden

There is a cost involved in raising taxes to pay for the publicly funded services to youth experiencing or at-risk of homelessness. Economists describe this cost as the marginal excess tax burden and it magnifies the public cost of all such services. We follow Belfield and colleagues, who cite economic sources that place this burden conservatively at 13 percent.[34] This means that the full cost of getting $1 of tax revenue to spend on welfare transfer payments, for example, is actually $1.13. We therefore apply this value to each of the items of government spending. The distortion imposed by collecting taxes for public programs that serve the YouthLink

[34] Belfield, p.15; Allgood S, Snow A. 1998. The marginal cost of raising tax revenue and redistributing income. J Political Economy. 1998(106):1246-1273.

2011 cohort alone is $1,423 per member of the YouthLink 2011 cohort and over $2 million in aggregate.

The annual economic burden

The estimated annual economic burden of the YouthLink 2011 cohort, what they cost taxpayers and society just in 2011, is summarized in Table 12.

Table 12: Annual fiscal and social costs of YouthLink 2011 cohort, per person and as a cohort.

	Cohort costs		Per person costs	
	Excess fiscal	**Excess social**	**Excess fiscal**	**Excess social**
Lost earnings		$7,299,968		$5,031
Lost tax payments	$1,762,920		$1,215	
Crime: public expenditures	$11,725,212	$11,725,212	$8,081	$8,081
Crime: victim costs		$7,504,080		$5,172
Health: public expenditures	$1,151,786	$1,151,786	$794	$794
Welfare: support programs	$623,930	$623,930	$430	$430
Welfare: transfer payments	$6,345,760		$4,374	
Education: public costs	($330,791)	($330,791)	($233)	($233)
Education: private fee savings		($386,351)		($266)
Marginal excess tax burden		$2,182,171		$1,504
Housing: public support	$3,615,793	($2,720,454)	$2,491	($1,875)
Total	**$24,894,610**	**$27,049,551**	**$17,152**	**$18,638**

Source: Authors' analyses.

As shown in Table 12, the annual fiscal cost of the average YouthLink client was more than $17,000, and the social cost was nearly $19,000. When considered over the 1,451 members of the cohort, the fiscal cost was nearly $25 million, and the social cost was approximately $27 million. It is important to understand that these

are annual amounts, and these costs recur each year because each year there are a similar number of YouthLink clients in this age group, and each client can remain in this group for up to nine years, although few remain connected to YouthLink for that long.

The main driver of cost to taxpayers is spending on the criminal justice system, although welfare transfer payments are also a large amount. Lost tax payments are relatively modest because most of the comparison population youth are in school, in college, or in their initial working years and so paying little in taxes. Public support for housing contributed 14.5 percent of excess fiscal costs. The social cost is also driven by the cost of crime, including victim costs, although lost earnings is a large part of the social cost.

7. Immediate, long-term and total lifetime economic burden

Research to this point has focused on estimating the annual cost of assisting the 1,451 members of the YouthLink 2011 cohort. In this section, we transform the annual costs into costs over time in order to estimate the lifetime burden of the YouthLink 2011 cohort. We do this in two steps, what we call the short-term and long-term economic burden.

We estimate the short-term economic burden, what we call the "immediate cost burden," by calculating the present value of the stream of five years of annual costs using a discount rate of 3.5 percent. We calculate the stream of costs for five years because that is the average amount that any current, specific youth will likely be a cohort member. The annual burden is for one year, but only the 24-year olds impose one year of burden. In contrast, 16-year old youth experiencing homelessness will impose this annual burden each year until they reach 24. Therefore, the average youth will impose the burden for five years. (An approximate interpretation is that the individual burdens are calculated for a youth experiencing homelessness who is 20 years old).

Based on the estimated annual totals in Table 12, the immediate fiscal and social 5-year excess costs per member of the YouthLink 2011 cohort are $77,442 and $84,152, respectively, and the excess 5-year fiscal and social costs for the entire cohort are $112,400,468 and $122,130,139, respectively. These amounts represent the economic burden of the YouthLink 2011 cohort over the 16-24 age range.

Life after age 24 will be difficult for those unable to transition from dependence on the types of government supports described in this report. As Belfield and colleagues point out, in the long run, after age 24,

> …the consequences of failure to invest in human capital or labor market skills play out over the life course. Both are important: a youth who is incarcerated at age 20 imposes an immediate economic burden in terms of the criminal justice system and corrections expenditures, but the long run loss—in terms of jeopardized economic well-being as well as future incarceration costs—may be even larger.[35]

[35] Belfield, p. 11.

Directly estimating the long-term (ages 25-64) costs of disconnection is challenging and was beyond the scope of our effort focusing on the YouthLink 2011 cohort. A comprehensive perspective on the economic burden of youth experiencing or at risk of homelessness, however, requires including an estimate of these long-term costs. One reason we closely followed Belfield and colleagues' approach to estimate the annual and immediate costs of the YouthLink cohort was to be able to apply their long-term cost estimate. Another reason was that even if it had been in the scope, some of the data sets that Belfield and colleagues used to estimate the long-term costs are not available in more localized form.

Our justification for using Belfield and colleagues' estimate of per person long-term excess costs hinges on the substantial similarity of the YouthLink 2011 cohort to the "opportunity youth" they describe. We have already discussed, above, the disconnection—or minimal connection—of the YouthLink cohort from both education and employment during ages 16-24, the two defining characteristics of "opportunity youth." Although not identical, the similarities are striking. The high school graduation rate of YouthLink 2011 cohort member who were age 18 or older, for example, was approximately half of the rate in Hennepin County, even lower than the rate of "opportunity youth." Although as many YouthLink cohort members were employed as youth in the general population, they worked far fewer hours and were paid lower wages. Even more than "opportunity youth," members of the YouthLink 2011 cohort were overwhelmingly youth of color. In short, the key characteristics of the YouthLink cohort point to them being members of the larger group that Belfield and colleagues describe as "opportunity youth," except that they are also more likely to be experiencing or at risk of becoming homeless.

Belfield and colleagues estimate that for ages 25-64, the long-term excess fiscal burden per "opportunity youth" is $170,740 and the excess social burden is $529,030.[36] They made separate estimates of the lifetime costs for each of the components they examined for "opportunity youth" and used a discount rate of 3.5 percent.[37,38] They use three different types of data to estimate this lifetime burden. These include some annual information on "opportunity youth" between the ages of 25 to 28 and healthcare cost information until age 31. They then verify their estimates by comparing data on high school dropouts and high school graduates, and by extrapolating earnings differences between "opportunity youth" and average youth in the general population. These estimates may be conservative for members

[36] Belfield, p. 22.

[37] Belfield does not provide a separate estimate for housing costs because many opportunity youth are not homeless or at risk of becoming homeless.

[38] In their long-term individual cost estimate, Belfield and colleagues include a social cost of $39,270 for productivity spillovers, a category not included in the youth analysis. Productivity spillovers come from the workforce working together, helping to train each other, and raising the overall productivity of the workforce. They cite estimates of the value of productivity spillover as being between 10 and 37 percent of earnings (see Belfield, p.19). They estimate the difference in lifetime earnings between high school graduates and dropouts as $392,710 and use 10 percent of that amount, $39,270, as the lifetime estimate of lost productivity spillovers.

of the YouthLink cohort because Belfield did not include costs for housing in the broader category of "opportunity youth."

Applying Belfield and colleagues' long-term individual estimates of $170,740 and $529,030, for the fiscal and social costs, respectively, to the 1,451 members of the YouthLink 2011 cohort, yields excess fiscal and social costs for the entire cohort of $247,743,740 and $767,622,530, respectively. These costs are summarized in Table 13 below. The costs have been computed in a way that makes it possible to add the immediate (5-year) costs to the long-term costs, which are also shown in the table. All costs have been computed using a 3.5 percent discount rate.

Table 13: Present value of the estimated immediate (5-year), long-term and lifetime fiscal and social costs of the 2011 YouthLink cohort.

	Per cohort member		2011 YouthLink Cohort	
	Fiscal cost	**Social cost**	**Fiscal cost**	**Social cost**
Immediate (5-year) total	$77,442	$84,152	$112,400,468	$122,130,139
Long-term (ages 25-64)	$170,740	$529,030	$247,743,740	$767,622,530
Total lifetime cost	**$248,182**	**$613,182**	**$360,144,208**	**$889,752,669**

Source: Immediate burden is the authors' estimate, ages 25-64 estimate is based on Belfield table 5, p 22, adjusted for cohort size.

As shown in Table 13, adding the immediate and long-term estimated costs, our estimates of the lifetime fiscal and social burdens of the YouthLink 2011 cohort are approximately $248,182 and $613,182 per person, respectively, and $360,144,208 and $889,752,669 for the cohort, respectively.

8. Break-even analysis

Until now, we have estimated the economic costs of youth experiencing homelessness assuming that everyone who experiences youth homelessness will likely spend the rest of their lives dependent on some public support. This assumption is supported by Belfield and colleagues' data, discussed above. But some youth, fortunately, are able to overcome the consequences of their homeless youth and become self-sufficient, through their own efforts or with the assistance of interventions designed to help them overcome their present circumstances. This section of the report examines the costs to society avoided by those who do.
The break-even analysis addresses the question of how many YouthLink clients would need to change the trajectory of their lives in order to offset a full year's fiscal cost of the interventions designed to help them become financially self-sufficient adults. We have already established that the estimated discounted fiscal burden of each YouthLink client between the ages of 16 and 64 is $248,182. For the purpose of this break-even analysis, we assume that change occurs at age 20. The estimated net present value of potential costs avoided on each youth is then $211,059.

We calculated the expenditures on the YouthLink 2011 cohort in order to complete the break-even analysis. Table 14 describes these expenditures, divided into three broad areas:[39]

- Basic Needs: These are a range of expenditures intended to meet the day-to-day needs of youth experiencing or at risk of homelessness, such as welfare transfer payments, healthcare services other than for mental health and chemical dependency treatment, temporary shelter and YouthLink drop-in services.

- Housing: This category includes costs incurred to house youth experiencing homelessness, with the goal of establishing housing stability. Examples include fiscal expenditures on supportive housing, youth shelters, Emergency Assistance, the Youth Mobile Team and YouthLink services related to housing.

[39] Costs incurred by the 2011 YouthLink cohort in the criminal justice system, while substantial, are not included as an intervention because the criminal justice system is not designed to support homeless youth through meeting their basic needs, providing housing, or to make them less dependent on government supports.

- Transformative Services: These expenditures are designed to help youth change their lives through mental health and chemical dependency treatment, education, welfare support programs such as job skills training, and case management by YouthLink and other staff.[40]

Table 14: Expenditures for basic needs, housing and transformative services, 2011.

	Basic needs	Housing	Transformative
Healthcare	$2,641,428		$1,796,873
Welfare	$6,345,760		$623,930
Shelter and housing	$225,529	$1,697,380	$454,141
Foster care	$21,736	$169,663	$137,322
Education			$697,242
YouthLink services	$1,080,368	$1,726,519	$723,711
Hennepin County administration	$206,173	$19,566	$40,573
Total	**$10,520,994**	**$3,613,128**	**$4,473,792**

Sources: Hennepin County, YouthLink, Minneapolis Public Schools, MCTC, authors' estimates.

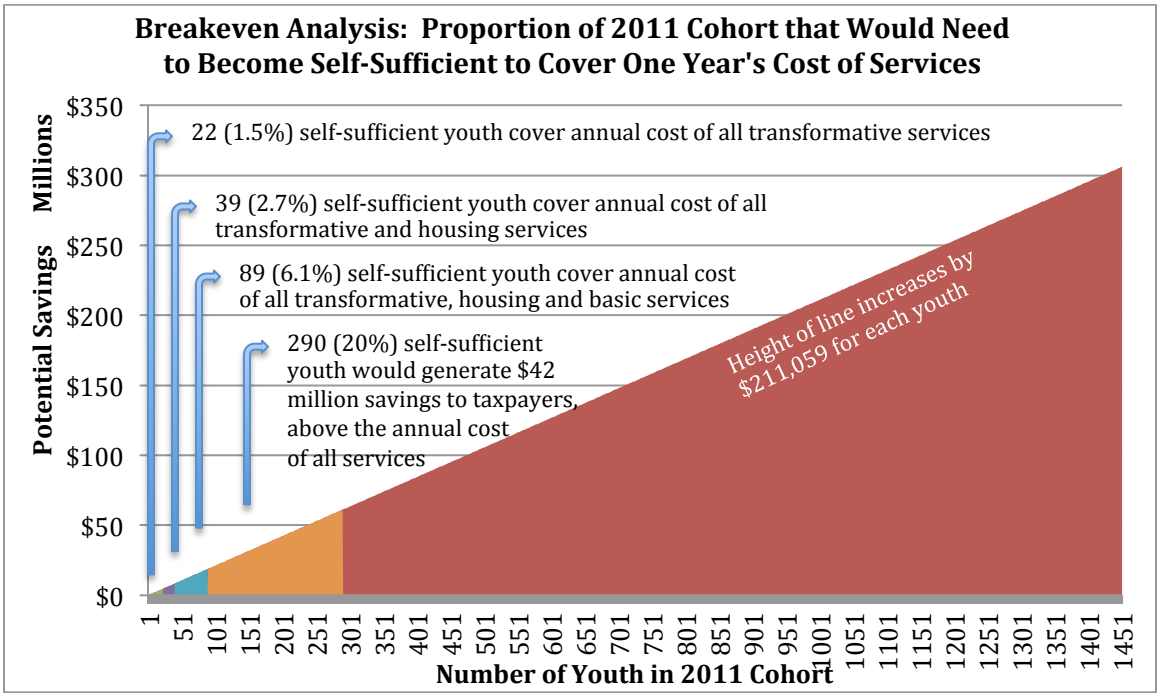
As indicated, an estimated $18,607,914 was spent in 2011 to support the YouthLink 2011 cohort.[41] Of this amount, $8,086,921, or 43.5 percent, was spent on housing and transformative services.

Based on these estimates, Chart 8 indicates the number of youth whose lives would need to be changed to become self-sufficient, productive adults in order to offset the cost of the interventions.

[40] We allocated the cost of foster care into these categories based on estimated expenses for basic needs, housing and transformative services.

[41] We excluded some types of costs when estimating the intervention costs because, while real, these costs do not contribute to maintaining or improving the lives of these youth. The excluded costs include fiscal expenditures for lost tax payments, public expenditures on criminal justice and "savings" on education.

Chart 8: Potential lifetime fiscal savings from different number of YouthLink's 2011 cohort becoming self-sufficient at age 20.



Source: Authors' calculations.

As shown in Chart 8, all annual intervention costs for one year for the entire cohort can be offset if 89 youth (6.1 percent of the cohort) were to become self-sufficient, productive adults, beginning at age 20. Only 39 transformed youth (2.7 percent of the cohort) are required to cover the full year's costs of the housing and transformative services for the entire cohort, counting only the expenditures designed to help youth change their lives.

This estimate of the number of self-sufficient youth needed to offset a full year's cost of intervention programs for all members of the cohort represents the net present value of the avoided costs that taxpayers should otherwise anticipate spending over the next four-and-a-half decades of their lives. Of course, people seldom change as dramatically as assumed in this exercise, but this analysis suggests the potential value of transformative interventions to taxpayers if the interventions can successfully alter the life trajectory at this relatively early point in their lives of only a small number of youth experiencing or at risk of homelessness. Should the interventions succeed in helping more youth, the costs avoided by taxpayers would be substantial. For instance, if just one in five clients of YouthLink were to become self-sufficient, productive adults, the net present value of avoided costs to taxpayers over their lifetimes would be worth an estimated $61.2 million, exceeding the cost of funding total annual intervention and support efforts for all by $42 million. These savings can potentially multiply, as each year brings a new cohort of youth who experience or are at risk of becoming homeless.

9. Conclusions and policy implications

As Belfield and colleagues noted, "The economic consequences of opportunity youth are enormous."[42] The cohort of youth experiencing or at risk of becoming homeless who were clients at YouthLink during 2011 represents a substantial burden to taxpayers and society. Taxpayers face an estimated lump sum cost of $248,182 (2011 dollars) per youth. The net present value of the full lifetime fiscal burden of the 1,451 youth considered in this analysis is an estimated $360,144,208. The costs to society are even higher. From a social perspective, the estimated lump sum cost per youth is $613,182, and the net present value of the full lifetime social burden is an estimated $889,752,669. These excess costs represent a combination of lost opportunities by these youth, such as reduced earned income and lower paid taxes, and excess expenses incurred on their behalf, such as welfare transfer payments, public expenditures for housing and operation of the criminal justice system.

Estimating lifetime costs involves many assumptions, and we relied on Belfield and colleagues' estimate of the long-term costs of "opportunity youth" when calculating the lifetime economic burden of the YouthLink 2011 cohort. We were able, however, to estimate the immediate (5-year) costs of this cohort more directly, using data (with one exception) specific to the members of this cohort. The estimated net present value of the immediate (5-year) economic burden to taxpayers per cohort member is $77,442, and the estimated taxpayer burden of the entire cohort is $112,400,468. The same estimates for the social burden are $84,152 per cohort member, and $122,130,139 for the full cohort.

As we have seen, Hennepin County and other governmental and private entities expend substantial resources to address the problems of youth experiencing and at risk of becoming homeless. Most of these expenditures are intended to meet the day-to-day needs of these youth, for needs ranging from meals to nightly shelter and healthcare. Substantial additional expenditures are made to house these youth, with the goal of helping them achieve housing stability. Other expenditures aim to help them transform the trajectory of their lives, by addressing their psychosocial problems, furthering their educations and teaching them job skills.

There are many causes that lead youth to experience homelessness, and multiple obstacles that must be addressed by programs whose goal is to help such youth to alter their lives. Success is not assured, and some youth may not be able to respond

[42] Belfield, p 26.

to the best programs. The break-even analysis demonstrates, however, that the lifetime economic burden of youth experiencing or at risk of becoming homeless is so great that success with only 2.7 percent of these youth is needed in order to offset the cost of all of the housing and transformative programs that were provided in 2011.

The break-even analysis thus suggests an opportunity for taxpayers and society. To the extent that programs aimed at these youth can help change the direction of their lives, these programs represent an investment in their—and our—future. For each youth experiencing or at risk of homelessness who becomes a productive and tax-paying citizen saves an estimated $211,059 in lifetime fiscal costs. However, this study shows that although the payoff for helping youth transform their lives is enormous in terms of taxpayer savings, the period for earning the savings is long. Nevertheless, considering only the economic implications, and leaving aside the human considerations, this becomes an investment opportunity we forego at our own peril.

About the authors

Steven S. Foldes, Ph.D., is a social scientist with more than 30 years of experience conducting public health and health services research and leading research teams. Dr. Foldes received his doctorate from the University of Chicago and was a Bush Foundation Leadership Fellow. Following a career in applied research that spanned state government, health plans and private industry, in 2011 he started Foldes Consulting, LLC, an independent consulting practice, and was appointed an Adjunct Associate Professor of Epidemiology and Community Health at the University of Minnesota. Over the course of his career Dr. Foldes published many peer-reviewed articles and book chapters. His work has been widely cited in the scientific literature and has been credited with influencing public policy. He was honored with the first national Blue Cross and Blue Shield Association "Best of Blue" award for health services research.

Andrea Lubov received her Ph.D. in economics from Washington State University. As a consultant, her primary focus has been tax policy and local economic development. She also spent several years as a municipal bond underwriter and is the author of three editions of a workbook to accompany a college economics statistics textbook. She was an active member of and did economic research for the Stops for Us coalition, a group of citizen organizations that was able to get three key stops included in the light rail line connecting downtown Minneapolis and St. Paul. In addition, she is an active amateur musician and plays the bassoon in the oldest community orchestra in Minnesota.