

**Does a Drop-in and Case Management Model Improve Outcomes for Young Adults
Experiencing Homelessness: A Case Study of YouthLink**

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EXECUTIVE SUMMARY

This study used two approaches to examine YouthLink as an example of a drop-in and case management model for working with youth experiencing homelessness. These approaches investigated the same group of 1,229 unaccompanied youth, ages 16 to 24 and overwhelmingly Black, who voluntarily visited or received services from YouthLink in 2011. Both approaches looked at the same metrics of success over the same time period, 2011 to 2016. One approach—Study Aim 1—examined the drop-in and case management model overall, asking whether YouthLink’s service model resulted in better outcomes. It compared a YouthLink cohort with a group of highly similar youth who did not visit YouthLink but may have received similar services elsewhere. A second approach—Study Aim 2—investigated within the YouthLink cohort the ways in which YouthLink’s drop-in and case-management approach worked toward achieving the desired outcomes.








Study Aim 1: What is the overall impact of YouthLink’s drop-in and case management services model on long-term outcomes for youth?

The major results of the first approach—Study Aim 1—indicate that YouthLink’s drop-in and case management approach, as implemented from 2011 to 2016, produced considerably better results than the services available to similar youth who did not visit YouthLink, on several but not all key outcomes. As summarized in Executive Summary Exhibit 1, results indicate that the YouthLink cohort found and used emergency shelter more readily when needed. In addition, the YouthLink cohort was nearly twice as likely to obtain permanent supportive housing and stay housed for two months longer than their peers in this setting. The YouthLink cohort was nearly twice as likely to earn a GED as members of the comparison group.

In this comparison, the YouthLink cohort’s results regarding juvenile delinquency and criminal justice involvement and the use of financial support services were more mixed, with members of the YouthLink cohort having a higher likelihood of appearing in court and being adjudicated/convicted of an offense than their peers. A likely explanation, based on many comments in case manager notes, is that YouthLink and Youth Opportunity Center (YOC) staff more successfully encouraged youth with juvenile delinquency and criminal justice issues to confront these problems in court rather than avoiding them, and to resolve outstanding cases with plea deals. The similar likelihood of other outcomes—re-offenses and felony convictions—between the YouthLink and comparison groups supports this interpretation.

In the following exhibits, a green arrow up  or down  indicates a statistically significant higher or lower estimate, respectively, and a clearly favorable outcome effect. A green AND red arrow  indicates a significantly higher or lower estimate but whether this is a favorable outcome remains open to interpretation. A single red arrow up  or down  indicates statistically significant higher or lower estimate, respectively, and a clearly unfavorable outcome effect.

Executive Summary Exhibit 1: Statistically Significant Adjusted Long-term Outcomes, YouthLink Cohort versus Comparison Group, 2011-2016





Statistically Significant Outcomes	Test Statistic	Impact
Housing		
Shelter use (Odds ratio [OR])	2.86	
Shelter estimated mean length of stay (days difference)	5.61	
Permanent supportive housing use (OR)	1.86	
Permanent supportive housing estimated mean length of stay (days difference)	62.71	
Education		
GED attained (OR)	1.90	
Juvenile delinquency and criminal justice involvement		
Any court appearance (OR)	1.51	
Any court appearance resulting in adjudication and/or conviction (OR)	1.45	

YouthLink’s success with the drop-in and case management model is notable because members of the comparison group also received services from an array of organizations with similar goals and sometimes similar service offerings. YouthLink, however, had two advantages during this period. From 2011 to 2016, YouthLink’s staff was stable, experienced, and led by highly experienced managers who emphasized the use of a youth-oriented service approach. Also in 2011, YouthLink implemented the YOC, expanding its onsite service offerings and

reducing the barriers for youth experiencing homelessness to obtain the services they needed in ways that other service providers could not.

A long-term goal of YouthLink and all similar organizations is to help youth reach their goals leading toward financial independence and reduced reliance on taxpayer-funded services. YouthLink and YOC staff work with youth to secure and retain employment. The significant results of the comparison of the use and costs of the YouthLink and comparison groups are summarized below in Executive Summary Exhibit 2. The odds of needing or remaining on General Assistance (GA) were almost 2.5 times greater for the YouthLink cohort than for youth in the comparison group at the conclusion of the follow-up period in 2016. This finding may disappoint those hoping to see reduced reliance on taxpayer-funded services. The estimated odds for use of other support programs—Minnesota Family Investment Plan (MFIP), Emergency Assistance (EA), Supplemental Nutrition Assistance Program (SNAP)—were not significantly different between the two groups. In addition, the estimated odds for the use of any support programs in 2016 were not significantly different in the two groups.

Executive Summary Exhibit 2: Statistically Significant Adjusted Odds of Receiving Financial Support Programs in 2016, and Estimated Cumulative Financial Support Over Follow-up, 2011-2016, YouthLink Cohort versus Comparison Group

Program	Test Statistic	Impact
Use of General Assistance program (OR) in 2016	2.48	
Cumulative estimated mean cost difference per person of Emergency Assistance program, 2011-2016	\$14.64	
Cumulative estimated mean cost difference per person of SNAP, 2011-2016	\$293.06	
Cumulative estimated mean cost difference per person of any DHS program, 2011-2016	\$532.14	

The finding that there were higher estimated costs on average for EA, SNAP and overall programs may also be seen as disappointing by some, although the nominal difference on an annual basis is small. It is likely that the presence of the YOC at YouthLink reduced barriers to enrollment for eligible youth, possibly increasing the odds that members of the YouthLink cohort were more likely to incur these costs. Some observers may see more to appreciate in these results than those who are hoping just for cost savings. In this interpretation, YouthLink helped youth who needed help to get it, which is why those programs exist. It is also possible that the full impact of the YouthLink service model on all outcomes may extend beyond the follow-up period in this study. Furthermore, it is also likely that we have underestimated the impact of the service model solely due to the quasi-experimental design of this study and our inability to select a control group whose members did not receive any similar services.

The results of the financial analysis presented here constitute only part of the picture on employment-related efforts because information on the employment status and earnings of the members of both groups are not included. The somewhat higher costs for support programs by

the YouthLink cohort may have been balanced by higher employment and earnings by some in the YouthLink cohort. Employment and earnings information on members of the YouthLink and comparison groups was not included in this comparison because of the difficulty of accessing these data from the Minnesota Department of Employment and Economic Development (DEED). DEED is prevented by Minnesota statutes from sharing this information at the individual level, even for legitimate research purposes.

From a policy perspective, it is important to recognize that the rate of use of any financial support programs declined steadily and substantially from 2011 to 2016 by members of both the YouthLink and comparison groups. This offers important context for the finding that comparatively, members of the YouthLink cohort were more likely to have used GA in 2016 and cost modestly more from 2011 to 2016.

In the YouthLink cohort, for example, 697 youth (56.7 percent) used one or more programs in 2011, but only 440 youth (35.8 percent) relied on a program in 2016. The total cost of their financial support was \$1,285,462 in 2011, and it declined to \$700,489 in 2016. The observed decline of 257 youth and nearly \$600,000 (a 37 percent decline in youth and a 46 percent decline in costs) in the YouthLink cohort, and a similar decline in the comparison group, represents substantial improvement and considerable savings to taxpayers who fund these programs. It is possible that continued declines in use occurred in both groups following 2016; if so, the long-term cost savings to taxpayers would be substantial.

Study Aim 2: What is the impact of the intensity of case management services and topically focused efforts by YouthLink’s case managers on long-term outcomes for youth?

The second approach of the study focused on the central feature of the drop-in and case management model: the work of the case managers. This approach investigated the impact of three theories of change about the intensity and topical focus of the case manager-client relationship on the outcomes from 2011 to 2016 of youth who visited or received services from YouthLink. This approach addressed these questions through a series of comparisons of some YouthLink clients with other YouthLink clients, using a “dose-response” model.

The first theory, called *relationship intensity*, proposes that the intensity of the relationship between case managers and youth, as measured by minutes of interaction per unique month, affected outcomes. To test this theory, we compared three groups of YouthLink clients: those with no or virtually no relationship with case managers, those with modestly intense relationships, and those with substantially intense relationships.
















The second theory, called *transformative services*, proposes that when case managers focus on specific desired outcomes (housing, education, juvenile delinquency and criminal justice involvement, and employment) those specific outcomes are improved. To examine this theory, we compared three additional groups of YouthLink clients: those with no focus in each of those topic areas indicated in case notes; those with a moderate focus in each topic area; and those with a substantial focus in each topic area.

The third theory, called *normative social behaviors*, advances the idea that case managers’ cultivation of normative social behaviors during their interactions with youth affected the outcomes of interest. To investigate this theory, we compared three other groups of

YouthLink clients: those where case managers did not indicate in their case notes that they encouraged normative social behaviors, those with a moderate focus on such behaviors, and those with a substantial focus on such behaviors.

The major results of this approach—Study Aim 2—indicate that the intensity and focus of the relationships between case managers and youth influenced long-term outcomes, particularly in housing and education. As shown in Executive Summary Exhibit 3, those youth who engaged in more intense relationships with case managers had substantially higher odds of using permanent supportive housing and of staying much longer in these settings. Those youth with intense relationships had higher odds of earning a high school diploma than youth with no or virtually no relationship with case managers. The intensity of relationships did not meaningfully affect other long-term outcomes, although moderate intensity was associated with a slightly higher odds of re-offenses.

Executive Summary Exhibit 3: Significant Long-term Adjusted Outcomes by Intensity and Topical Focus of Case Manager-Client Relationships, 2011-2016

Statistically Significant Outcomes	Greater Relationship Intensity*	Focus on Specific Topics*	Focus on Social Norms*
Housing			
Shelter use (odds ratio [OR])			
Shelter estimated mean length of stay (days difference)			
Permanent supportive housing use (OR)			
Permanent supportive housing estimated mean length of stay (days difference)			
Education**			
High school diploma attained (OR)			
GED attained (OR)			
Juvenile delinquency and criminal justice involvement**			
Re-offenses (OR)			
Conviction of felony (OR)			

* Results were examined for moderate and substantial intensity, and moderate and substantial focus in each area and compared separately to no intensity or focus. For simplicity, this table shows when either moderate or substantial categories are statistically significantly different from no intensity or focus for each outcome. Also for simplicity, test statistics (such as length of stay in permanent housing) are not provided. See tables in text for more detailed results.

** Sample sizes for education outcomes are reduced for receipt of level of attainment prior to 2011, and exclusion of high school eligibility due to age. Sample sizes for re-offenses were reduced to only youth with prior adjudications and/or convictions.


Cells without arrows indicate no statistically significant results.

Similarly, a focus on specific transformative services by case managers and youth also substantially influenced some outcomes of interest. Thus, focus on housing by case managers increased the use and lengths of stay in emergency shelters and permanent supportive housing. A focus specifically on education by case managers also had a positive impact; modest focus increased the likelihood of youth earning a high school diploma, and substantial focus decreased the likelihood of a youth earning a high school diploma but nearly tripled the likelihood of youth attaining a GED.

Finally, relationships in which case managers encouraged normative social behaviors substantially improved outcomes in housing, increasing the use and lengths of stay in both emergency shelters and permanent supportive housing. A substantial focus on normative social behaviors considerably reduced the likelihood of a conviction for a felony. A focus by case managers on normative social behaviors did not have a measurable impact on long-term outcomes in other areas that are reported in Executive Summary Exhibit 3.

As shown in Executive Summary Exhibit 4, increased focus on specific transformative services and on normative social behaviors was associated with modest but significant increases in the adjusted cumulative estimated mean cost differences per person for SNAP benefits. The differences were very modest, averaging \$9 to \$18 dollars per year, depending on the theory of change examined. As discussed above, the interpretation of these results depends on one’s perspective. On the other hand, more intense relationships were associated with slightly lower costs for MFIP. Across all financial support programs, however, none of the theories of change had a significant impact on cumulative costs.

Executive Summary Exhibit 4: Significant Estimated Adjusted Differences in Cumulative Financial Support, 2011-2016, by Intensity and Topical Focus of Case Manager-Client Relationships

Statistically Significant Outcomes	Greater Relationship Intensity*	Focus on Specific Topics*	Focus on Social Norms*
Cumulative estimated mean cost difference per person of MFIP (\$), 2011-2016			
Cumulative estimated mean cost difference per person of SNAP (\$), 2011-2016			

* Results are described here for any level of intensity versus no intense relationship, and any focus versus no focus in each area. See tables in text for more detailed results. Also for simplicity, test statistics are not included.

Although the study approaches differ, the results are mutually supportive. By focusing on the work of the case managers, the second study approach offers insight into how and why YouthLink’s service model seems to have produced many better outcomes overall in comparison with similar youth who did not visit YouthLink. This is particularly striking with outcomes on housing and education. The comparison of YouthLink clients with similar youth who did not visit YouthLink showed strong impact of the drop-in and case management model on long-term

outcomes in housing and education. The investigation of the intensity of relationships between case managers and clients and topical focus by the case managers in their interactions with youth also pointed to effects in those areas. In other words, the impact of the case managers' work with youth is evident in the comparison of the YouthLink cohort with similar youth who did not attend YouthLink, bolstering the results of both approaches.

Implications

Overall, both study approaches demonstrated results that have important implications for public policy on addressing youth homelessness. First, the drop-in and case management model for working with unaccompanied youth experiencing homelessness, as implemented at YouthLink from 2011 to 2016, is effective for achieving desired long-term outcomes, particularly in the areas of housing and education. This model is itself an intervention, providing for youth experiencing homelessness a space away from the dangers of life on the street and in adult-focused service centers. Inside the drop-in, youth are encouraged to build relationships with caring adults who reinforce more normative social behaviors and work toward helping youth achieve their goals. YouthLink's experienced staff and organizational stability during the follow-up period, their youth-oriented focus, and the presence of the YOC, likely contributed to positive outcomes for members of the YouthLink cohort.

Second, the positive outcomes found in this study resulted in large measure from case manager efforts, and overall, more intense relationships, topically focused transformative services, and the cultivation of normative social behaviors were more effective at achieving desired outcomes in housing and education. This means that there is value in supporting enough case managers in such organizations to make it possible for them to build meaningful and intense relationships with the youth they serve.

Finally, while we did not see in our comparison that YouthLink's drop-in and case management model significantly reduced use and costs of taxpayer funded financial support programs, the substantial decline from 2011 to 2016 in both groups of the use and total cost of these financial support programs is notable. It is possible that YouthLink's and other service providers' efforts around helping youth achieve their employment goals began to reduce reliance on financial support programs by the youth who experienced homelessness in 2011 and helped start many of them toward long-term financial self-sufficiency.

LIST OF EXHIBITS

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Does a Drop-in and Case Management Model Improve Outcomes for Young Adults Experiencing Homelessness: A Case Study of YouthLink

INTRODUCTION

Even before the SARS-CoV-2 pandemic began, approximately 7,500 unaccompanied youth ages 16 to 24 experienced homelessness each year in Minnesota, according to a widely cited estimate developed in 2018.¹ In recent years, approximately 2,000 such youth annually visited YouthLink, a nonprofit agency that is Minneapolis' largest drop-in center for youth at risk of or experiencing homelessness. It is well documented that young adults experiencing homelessness or at risk of becoming homeless are subject to many adverse experiences and face reduced future prospects.^{2,3,4,5,6,7,8} The impact of the pandemic and accompanying economic dislocations has not been measured, but it has undoubtedly exacerbated the incidence of homelessness and its effects.

Like other drop-in centers that serve youth experiencing homelessness, YouthLink's mission is to support and empower young people, ages 16 to 24, on their journey to end their homelessness and achieve their goals. YouthLink offers assistance to youth who visit its drop-in center, ranging from such basic services as meals and showers to case management and supportive housing, as well as access to services provided by dozens of affiliated agencies that participate in YouthLink's onsite Youth Opportunity Center (YOC). Typical of a voluntarily drop-in and case management model, many of YouthLink's clients visit once or a few times and develop only transient relationships with YouthLink and its staff. Others visit multiple times, and

¹ Pittman B, Nelson-Dusek S, Gerrard MD, Shelton E. (2020, March). Homelessness in Minnesota: Detailed findings from the 2018 Minnesota homeless study. Wilder Research. Available at <https://www.wilder.org/wilder-research/research-library/homelessness-minnesota-detailed-findings-2018-minnesota-homeless>. Accessed July 6, 2020.

² Hatchimonji DR, Flatley CA, Treglia D, Cutuli JJ. (2021). High school students experiencing homelessness: Findings from the 2019 Youth Risk Behavior Surveillance System (YRBSS). Nemours Children's Health System.

³ Medlow S, Klineberg E, Steinbeck K. (2014). The health diagnoses of homeless adolescents: A systematic review of the literature. *Journal of Adolescence* 37(5):531–542.

⁴ Hodgson KJ, Shelton KH, van den Bree MB, Los FJ. (2013). Psychopathology in young people experiencing homelessness: A systematic review. *American Journal of Public Health* 103(6):24–37.

⁵ Heerde JA, Hemphill SA, Scholes-Balog KE. (2014). "Fighting" for survival: A systematic review of physically violent behavior perpetrated and experienced by homeless young people. *Aggression and Violent Behavior* 19:50–66.

⁶ Greene JM, Ringwalt CL. (1998). Pregnancy among three national samples of runaway and homeless youth. *Journal of Adolescent Health* 23(6):370–377.

⁷ Greene JM, Ennett ST, Ringwalt CL. (1997). Substance use among runaway and homeless youth in three national samples. *American Journal of Public Health* 87(2):229–235.

⁸ Auerswald CL, Lin JS, Parriott A. (2016). Six-year mortality in a street-recruited cohort of homeless youth in San Francisco, California. *PeerJ* 4, e1909.

some become frequent visitors who use many drop-in services and develop intense relationships with case managers and other staff. Oftentimes these relationships last several years.

This study investigates whether this model of service delivery makes a meaningful difference in the lives of the youth served. YouthLink's service model, like that of many drop-in centers that serve youth, is based on two key elements. First, the drop-in center offers youth who are experiencing homelessness a place to avoid the dangers of the street and of adult-focused service centers. More than just a safe haven, the drop-in center is itself an intervention because every hour that a youth spends inside exposes him or her to a different set of social norms and expectations that are important for youth as they work to achieve their goals. The drop-in has explicit rules and implicit expectations that differ from those commonly found on the street. For instance, violent behavior and substance use onsite are not tolerated, and young people are encouraged to engage respectfully with staff, services, and their peers in supportive ways. Meals, showers and washing machines, and services such as healthcare, legal advice, and access to GED preparation also support youth in their efforts to achieve positive outcomes.

Second, YouthLink's staff of experienced case managers offers youth a stable and supportive adult relationship. Many youths who experience homelessness have also experienced highly traumatic contexts growing up, such as living in homes where adults were absent or abusive. Case managers reach out to these youths and provide non-judgmental support and access to a wide range of services. These relationships are premised on the widely held assumption in the world of social work that the relationship itself is helpful and promotes positive developmental outcomes.^{9,10,11} Many of the youth who visit YouthLink have only cursory encounters with case managers, but some develop longstanding and complex relationships that support youth in obtaining supportive or other permanent housing, completing their educational goals, resolving legal issues and finding and retaining jobs. These relationships often become personal, and difficulties with families and significant relationships are discussed. Mental health or chemical dependency issues may also be addressed. Along the way, case managers may encourage normative and socially accepted behaviors as a means of guiding and empowering young adults past avoidable problems.

The policy question we seek to answer is whether drop-in and case management services provide a demonstrable longer-term benefit to young adults and to taxpayers and other funders. In the language of research, we have two specific research aims; 1) we ask if drop-in and case management services led to a variety of positive outcomes by comparing a cohort of youth who received services at YouthLink in 2011 with a similar cohort that did not receive services at YouthLink. Secondly, we ask 2) if those youth who interacted more intensely with case managers had better outcomes than those who visited the facility but had little or no contact with case managers, and if the topical focus of those relationships had an impact on specific outcomes. In both cases, we track outcomes from 2011 through 2016 and focus on indicators

⁹ Coady NF. (1993, May). The worker-client relationship revisited. *Families in Society: The Journal of Contemporary Social Services* 74(5):291-300. Available at <https://doi.org/10.1177/104438949307400504>. Accessed August 23, 2021.

¹⁰ Sieving RE, McRee AL, McMorris BJ, Shlafer RJ, Gower AL, Kapa, HM, ... Resnick MD. (2017). Youth-adult connectedness: A key protective factor for adolescent health. *American Journal of Preventive Medicine* 52(3):S275-S278.

¹¹ Bowers EP, Johnson SK, Warren DJ, Tirrell JM, Lerner JV. (2015). Youth-adult relationships and positive youth development. In *Promoting positive youth development* (pp. 97-120). Springer, Cham.

related to housing, education, legal problems, employment, and use of taxpayer-funded financial support services.

Finding answers to such questions is particularly challenging because this is a highly mobile population. Few social services agencies, including YouthLink, are able to follow youths after they end their associations, so information on the effectiveness of their efforts is limited to occasional anecdotes on former clients. Few rigorous studies have followed any such group of youth in order to describe their progress out of homelessness, or toward completing education goals, reducing their involvement with the juvenile delinquency and criminal justice system, and finding employment and reducing their needs for financial assistance, although results have been generally positive.¹²

Experience has shown that tracking the outcomes of social service interventions on young people experiencing homelessness is difficult to conduct due to the challenge of following and contacting such frequently transient people over many years. In addition, youths in their late teens and early twenties oscillate between youth and adult services, adding to the difficulty of tracking them through agencies that provide services to persons experiencing homelessness. As a result, research on youth experiencing homelessness frequently suffers from limited and biased samples and very short follow up periods. This report describes an innovative and unique research project designed to obtain and analyze data from multiple statewide sources on a large cohort of YouthLink clients in order to describe what happened to them over six years.¹³

Background

Youth experiences of homelessness are the product of complex individual, social and environmental conditions. An array of structural and social determinants may increase the likelihood that youth experience homelessness.¹⁴ These include living in poverty, and structural factors related to housing accessibility and costs;^{15,16,17} individual, family, and community mental health and substance use; young people's exposure to adverse childhood experiences, including family homelessness, death of a caregiver, parental incarceration, and removal into

¹² Morton MH, Kugley S, Epstein R, Farrell A. (2020). Interventions for youth homelessness: A systematic review of effectiveness studies. *Children and Youth Services Review* 116:105096. Available at <https://doi.org/10.1016/j.childyouth.2020.105096>. Accessed August 23, 2021.

¹³ The assembly of the unique person-level dataset used in this research was possible because of the Minn-LInK project at the Center for Advanced Studies in Child Welfare in the School of Social Work at the University of Minnesota. The Minn-LInK data were enhanced with additional data sources, as described in Appendix 1. This dataset is described further in the Methods section below.

¹⁴ Schwan K, French D, Gaetz S, Ward A, Akerman J, Redman M, Stirling T. (2018). Preventing youth homelessness: An international review of evidence. Wales Centre for Public Policy. Available at <https://dera.ioe.ac.uk/32541/1/Preventing-Youth-Homelessness-full-report.pdf>. Accessed September 13, 2021.

¹⁵ Evangelist M, Shaefer HL. (2020). No place called home: Student homelessness and structural correlates. *Social Service Review* 94(1):4-35.

¹⁶ Johnson G, Scutella R, Tseng Y, Wood G. (2015). Examining the relationship between structural factors, individual characteristics, and homelessness, AHURI Positioning Paper No.161. Melbourne: Australian Housing and Urban Research Institute. Available at: <http://www.ahuri.edu.au/publications/projects/p53042>. Accessed September 13, 2021.

¹⁷ Piat M, Polvere L, Kirst M, Voronka J, Zabkiewicz D, Plante M C ... Goering P. (2015). Pathways into homelessness: Understanding how both individual and structural factors contribute to and sustain homelessness in Canada. *Urban Studies* 52(13):2366-2382.

foster care.^{18,19} Earlier trauma and/or mental health issues may precede or accompany experiences of homelessness, placing a substantial burden on young people, their families, and their communities.^{20,21,22} Importantly, due to a longstanding history of structural racism in the United States, children of color disproportionately experience poverty and trauma-related stressors that lead to homelessness.²³

While many structural and social factors may influence whether young people experience homelessness, those who do often become “disconnected” from educational and employment opportunities. Disconnected youth, who are disproportionately youth of color, are neither in school, increasing their skills and building their human capital, nor engaged in the labor market and earning income. Disconnection has critical consequences for young people both developmentally and in terms of human capital. Developmentally, a lack of opportunities to engage in school or the labor market affects the ability of young people to meet critical developmental milestones for their optimal development.^{24,25} From a human capital perspective, youth who drop out of school and do not gain a foothold in the labor market are very likely to remain homeless and far less likely to earn a living wage and live without taxpayer-funded support after they reach 25 years of age.^{26,27} Thus, youth who experience disconnection may face severely constrained possibilities.

While studies on youth experiencing homelessness have not empirically studied long-term outcomes of disconnection, the challenges facing disconnected youth are underscored by studies of youth who age out of foster care, many of whom are disconnected youth.³⁰ One study reported that by age 23 or 24, 29 percent of the study participants who had aged out of foster care had been homeless, 28 percent had slept on someone’s couch, and 39 percent had been homeless

¹⁸ Samuels GM, Cerven C, Curry S, Robinson SR, Patel S. (2019). Missed opportunities in youth pathways through homelessness. Chicago, IL: Chapin Hall at the University of Chicago.

¹⁹ Piat M, Polvere L, Kirst M, Voronka J, Zabkiewicz D, Plante MC, ... Goering P. (2015). Pathways into homelessness: Understanding how both individual and structural factors contribute to and sustain homelessness in Canada. *Urban Studies*, 52(13):2366-2382.

²⁰ Wong CF, Clark LF, Marlotte, L. (2016). The impact of specific and complex trauma on the mental health of homeless youth. *Journal of Interpersonal Violence* 31(5):831-854.

²¹ Perlman S, Willard J, Herbers JE, Cutuli JJ, Eyrich Garg KM. (2014). Youth homelessness: Prevalence and mental health correlates. *Journal of the Society for Social Work and Research* 5(3):361-377.

²² Davies BR, Allen NB. (2017). Trauma and homelessness in youth: Psychopathology and intervention. *Clinical Psychology Review* 54:17-28.

²³ Trent M, Dooley DG, Dougé J. (2019). The impact of racism on child and adolescent health. *Pediatrics* 144(2).

²⁴ Eccles JS, Roeser RW. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence* 21(1):225-241.

²⁵ Crone EA, Dahl RE. (2012). Understanding adolescence as a period of social–affective engagement and goal flexibility. *Nature Reviews Neuroscience* 13(9):636-650.

²⁶ Morton MH, Horwitz B. (2019). Federal actions to prevent & end youth homelessness: Recommendations based on research and a national convening of experts and stakeholders. Chicago, IL: Chapin Hall at the University of Chicago. Available at <https://www.chapinhall.org/wp-content/uploads/Federal-actions-to-prevent-and-end-youth-homelessness-final.pdf>. Accessed August 23, 2021.

²⁷ Chamberlain C, Johnson G. (2013). Pathways into adult homelessness. *Journal of Sociology* 49(1):60–77.

³⁰ Courtney M, Jennifer Hook J, Brown A, Cary C, Love K, Vorhies V, Lee JS, Raap M, Cusick GR, Keller T, Havlicek J, Perez A, Terao S, Bost N. (2011). Midwest evaluation of the Adult Functioning of Former Foster Youth. Chicago: Chapin Hall at the University of Chicago. Available at <https://www.chapinhall.org/research/midwest-evaluation-of-the-adult-functioning-of-former-foster-youth/> Accessed August 19, 2021.

and/or couch surfed since exiting foster care.³¹ Such youth often also have higher levels of criminal activity and incarceration.

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.³² The study relied on data that became available only recently to examine patterns of employment and earnings through age 24 for former foster youth and concluded 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 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—such as how long the youth were in foster care, the number of placements they experienced, or the number of times they came into care—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 persisted in California and Minnesota even when controlling for demographic factors.

For young people who do not obtain consistent employment and earnings by age 25, this trajectory clearly has lifelong economic as well as social consequences. 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 through employment, 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, increasing healthcare costs for the nation.

The long-term economic burden—between ages 25 to 64—associated with disconnected youth came into focus only in the last decade. 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, a highly respected economist, and colleagues, “The Economic Value of Opportunity Youth,” released in January 2012, received substantial

³¹ Dworsky A. Courtney ME. (2010). Assessing the impact of extending care beyond age 18 on homelessness: Emerging findings from the Midwest study. Chicago: Chapin Hall at the University of Chicago. Available at <https://www.chapinhall.org/research/extended-foster-care-delays-but-does-not-prevent-homelessness/>. Accessed August 25, 2021.

³² Urban Institute. (2008). 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.

attention nationally.³³ The authors estimated that 6.74 million American youth, ages 16 to 24—fully 17 percent of the age group—are what they called “opportunity youth,” their term for disconnected youth. Opportunity youth are neither in school nor participating in the labor market. 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 is “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 6.74 million youth. They assessed the excess financial burden to taxpayers, which they called fiscal costs, and the excess burden to society more broadly, which they called social costs (which included the fiscal costs but also costs borne by individuals and nongovernmental organizations such as insurance companies). They estimated conservatively that the aggregate burden for each national cohort of opportunity youth over their lives from age 16 to 64 is \$1.56 trillion in present value terms. The estimated present value of the aggregate social burden is \$4.75 trillion.

Using Belfield and colleagues’ report as a springboard, the WHCCS recommended a range of solutions in its final report to the President in June 2012.³⁴ The Council sought solutions that could be community-wide and which could demonstrably “move the needle” on fundamental community problems. Their recommendations focused on initiatives that would:

- Drive the development of successful cross-sector community collaboratives
- Create nationwide awareness and responsibility for opportunity youth
- Engage youth as leaders in the solution
- Build more robust on-ramps to employment

The nation remains far from achieving these goals, but some government programs and initiatives by some nonprofits and corporations have made efforts to address the needs of opportunity youth. Centers like YouthLink were and remain a small part of this work, focusing on improving outcomes for some of the most at-risk and disengaged youth in the Minneapolis area.

Previous Research on the 2011 YouthLink Cohort: The Economic Burden of Homelessness

A member of the current research team, Steven Foldes, recently applied Belfield and colleagues’ methods to estimate the excess fiscal and social burden of a cohort of 1,451 non-disabled youth, ages 16 to 24, who were clients of YouthLink in 2011, a slightly larger group of the same individuals who are the focus of the present study.³⁵ The purpose of the analysis was to estimate the comprehensive, excess lifetime costs to taxpayers and to society of this cohort, and to perform a break-even analysis of the cost of the interventions provided to the cohort during

³³ Belfield CR, Levin HM, Rosen R. (2012, January). 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. Available at <https://files.eric.ed.gov/fulltext/ED528650.pdf>. Accessed July 6, 2020.

³⁴ The Corporation for National and Community Service. (2012, June). Final report: Community solutions for opportunity youth; The White House Council for Community Solutions. Available at https://assets.aspeninstitute.org/content/uploads/files/content/docs/resources/White_House_Council_For_Community_Solutions_Final_Report.pdf. Accessed July 6, 2020.

³⁵ Foldes SS, Lubov A. (2016, April). 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. Foldes Consulting LLC. Available at <http://www.youthlinkmn.org/the-cost-of-homelessness/>. Accessed July 16, 2016.

2011. Using data from YouthLink, Hennepin County, the State of Minnesota, and other agencies, Dr. Foldes and his co-author, Andrea Lubov, Ph.D., an economist, estimated the cost to taxpayers and society of this specific cohort of youth.

The study estimated that on average each member of the 2011 YouthLink 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 cohort³⁶ cost taxpayers an estimated \$24,894,610, and cost society an estimated \$27,049,551. These costs encompassed lost earnings, lost tax payments, public expenditures on crime, victim costs of crime, public expenditures on health services, welfare support services, welfare transfer payments, public and private educational costs, public support for housing, and the marginal excess tax burden. The highest costs to taxpayers were public expenditures for the criminal justice system and welfare transfer payments to cohort members. High 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.

The study estimated future short- and long-term excess costs for this cohort, incorporating Belfield and colleagues’ estimate of the long-term fiscal and social costs of disconnected youth. All future costs were discounted by 3.5 percent, a standard practice to estimate the present value of inflated future costs. The resulting costs, expressed for the cohort and per cohort member, are summarized in the following table.

Exhibit 1. Present value of the estimated excess fiscal and social costs of the 2011 YouthLink cohort in 2011, in the short-term (5-year) future, and for the long-term future (all future costs discounted at 3.5 percent per year)

	Per cohort member		2011 YouthLink Cohort	
	Fiscal cost	Social cost	Fiscal cost	Social cost
2011	\$17,152	\$18,638	\$24,894,610	\$27,049,551
Short-term (5-years, including 2011)	\$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 (short- plus long-term)	\$248,182	\$613,182	\$360,144,208	\$889,752,669

Sources: 2011 and short-term cost burden are Foldes and Lubov’s estimates based on data gathered from multiple agencies; ages 25-64 estimate is based on Belfield, table 5, p. 22, adjusted for cohort size.

The study also estimated the cost of interventions provided to the 2011 YouthLink cohort in that year. Foldes and Lubov estimated a total of \$18,607,914 was spent in 2011 to support the 2011 YouthLink cohort, divided into three broad areas:

³⁶ The economic analysis included 1,451 non-disabled youth who visited YouthLink in 2011. The present research excluded 222 of those youth due to various data issues. See the discussion of the study sample below.

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.

With information on the estimated lifetime costs to taxpayers for this cohort of youth, and the estimated cost to taxpayers of the support programs provided to the cohort in 2011, it was possible to estimate a break-even point. This analysis revealed that if 89 cohort members (6.1 percent), out of the 1,451 youth in the 2011 YouthLink cohort were to become financially self-sufficient at age 20, the discounted long-term costs avoided by taxpayers would be sufficient to fund the support programs provided in 2011 to the entire cohort.

The economic analysis suggested that the comprehensive, long-term excess costs to taxpayers and society of youth who experience homelessness are high, but that the break-even on interventions is low. Given the substantial fiscal and social costs of youth experiencing homelessness, the stakes are high for social services interventions to effectively alter the life trajectories of these youth. However, little is known about the long-term impact of social services interventions on youth who experience homelessness. This prior economic study did not assess the impact of YouthLink's services and given data limitations did not directly assess how many members of the cohort made progress over time toward financial independence or other indicators of growing self-sufficiency.

The analysis described above served as background for the current research. The break-even analysis was a heuristic exercise that suggested that achieving that difficult goal with just a small number of young adults offers tremendous financial returns to taxpayers, on top of obvious benefits for the youth. The basic question it raised was whether this drop-in and case management service provider for youth experiencing or at risk of homelessness succeeded in helping at least some of their clients to change their life trajectories, to help them achieve success on several key indicators, including becoming independent and less reliant on the resources provided by taxpayers and other donors.

METHODS

The current research sought to determine if a drop-in and case management model helped change the life trajectory of its clients, based on the 2011 YouthLink cohort that was the focus of the prior economic analysis. The research team obtained individual-level data from multiple data sources on YouthLink's interventions and several key outcomes, some dating from as early as 2000 through 2016. Appendix 1 details the data sources used for this study. The focus of the analysis is on outcomes between 2011 and 2016, during the six years after the youth in the 2011 cohort visited or received services from YouthLink, when the median age of the cohort reached 25.

Measured Outcomes

The research team used a wide range of administrative data sources to identify and track multiple indicators of growing self-sufficiency from 2011 to 2016, the period which the research team designated as the follow-up period. The outcomes examined involve programs that are in large part funded by taxpayers and include programs for housing, education, juvenile delinquency and criminal justice, and financial support services administered by the Minnesota Department of Human Services (DHS).

More specifically, housing outcomes included emergency shelter and permanent supportive housing use and the associated total average length of stay in these facilities, respectively. Educational indicators focused on the attainment of a high school diploma or GED as well as any higher education enrollment or degree award. Juvenile delinquency and criminal justice activity were measured by any court appearances resulting in adjudication and/or conviction. Re-offenses and court appearances resulting in a felony conviction were also assessed. Finally, the research team also tracked costs associated with financial support program receipt including Emergency Assistance (EA), Supplemental Nutrition Assistance Program (SNAP), General Assistance (GA), and the Minnesota Family Investment Plan (MFIP). Financial program receipt in 2016, the final year of follow-up, was also assessed to measure how many of these young adults remained on or newly received some form of financial support services.

Study Aim 1: What is the overall impact of YouthLink's drop-in and case management services model on long-term outcomes for youth?

To determine if the YouthLink service model improved outcomes for youth during follow-up, the research team compared the outcomes of interest of the YouthLink cohort with the outcomes of similar youth who did not receive YouthLink services. Both groups were considered homeless because they included youth with a history of using shelter or supportive housing services or were identified in the public schools as homeless.

A High Bar for Comparison

In many comparison studies, such as trials of pharmaceutical products, the comparison group gets nothing, a placebo or “usual care.” This makes it possible to determine if the experimental group, the group that received the intervention, experienced better, similar or worse outcomes. This is possible because the researchers have knowledge of, and some control over the types of interventions that both groups received. In studying the impact of a drop-in and case management model on youth experiencing homelessness in a real-world setting, these basic study conditions are not fully achievable.

First, information on the “intervention” was incomplete. YouthLink administrative and clinical data provided information on the number of visits clients made to their facilities and the amount of time that case managers spent with individual youth. Narrative case notes from those encounters offered details on the issues on which each encounter focused.

Such individual-level information on YouthLink’s Youth Opportunity Center (YOC), however, was not available. Beginning in 2011, YouthLink started to host the YOC, and it became a unique and important part of YouthLink’s service model. Hennepin County selected YouthLink as the host site for this “one-stop shop” for services through a request for proposals process, based on the facility’s downtown location, proximity to public transportation, capacity to host multiple providers, and experience in serving youth. The YOC fostered a safe, supportive environment dedicated to the specific needs of young people, including building a sense of community and belonging, supporting education and employment, and strengthening connections with positive adults. It was designed to lower barriers to accessing all these services.

The YOC provided a physical space for more than three dozen agencies to reach clients, rather than requiring youth to find and navigate those services in locations throughout the city. See Appendix 2 for a list of YOC partners during 2011-2016. These services, used by many youth who visited YouthLink, included direct access to county workers to enroll in financial support programs and address barriers to accessing resources, counseling for legal problems, primary care health services, onsite GED support, and opportunities to connect with music, sports, and other outlets. Unfortunately, some YOC agencies were prevented from sharing information due to privacy restrictions on data access, and others did not capture data systematically. This meant that some of the services provided as part of YouthLink’s “intervention” could not be described or studied in great detail.

Second, information on the services received by members of the comparison group was even less complete. As youth who experienced homelessness, many of these young adults undoubtedly received attention and assistance from school or social services agencies. Although the research team excluded any youth from the comparison group who visited YouthLink, they could have, and some undoubtedly did visit other drop-in centers in the metropolitan area and received case management services from other organizations. Data on any such encounters were unavailable as part of this research. This meant both that the comparison group may have also received services aimed at helping its members achieve desired outcomes, and the types and extent of those services were unknown to the research team.

Comparing the YouthLink and comparison groups, then, was not a clean comparison of one group that received an experimental intervention with another that received nothing or a

placebo. Rather, the comparison group received some form of intervention too. What set apart the YouthLink intervention so that it could be fruitfully compared?

Although information on specific services to individual members of the comparison group was not available, the services generally available to youth experiencing homelessness in the metropolitan area are known and may be compared with what was available from YouthLink during 2011-2016, the period studied for outcome effects. Some important differences existed.

Not all youth who experience homelessness, and who might have been in the comparison group, chose to—or knew how to—connect with any service provider. They might have been couch hopping or spending time in the downtown skyways, the public library, or other public spaces. Other youths might have connected with adult-oriented service providers which are widely considered less suitable for young people. Some adult- or family-focused facilities provide case management or other resources to young people, but if members of the comparison group visited these facilities, they would not have received the youth-specific approach, support and resources that are considered best practices with young adults experiencing homelessness.³⁷

There are a handful of youth-oriented service providers in the metropolitan area, other than YouthLink, with which members of the comparison group may have engaged. These organizations work with youth who are too old to benefit from systems and services that target children but do not quite fit into those systems and services designed for adults. These organizations are similar to YouthLink, in that they offer drop-in centers that provide some level of advocacy and case management that is tailored to the developmental needs of young people and also bring in other services such as traveling nurses and employment counselors.

But none of these other youth-oriented service providers offered the fuller mix of services and resources that YouthLink made available to its visitors through the YOC. The YOC lowered barriers to service access in a way that other providers could not. For example, young people did not need to make appointments or plan far in advance to receive services; childcare was available onsite; transportation was not required; services were accessible in a comfortable and familiar environment; and staff with whom young people were already comfortable assisted them in accessing services and connecting to resources; and there was a substantial continuum of services. YouthLink also offered onsite access to GED preparation.

Still, given that similar services were available and undoubtedly used by some members of the comparison group, the comparison performed in Study Aim 1 set a high bar for YouthLink. To appear more successful than the comparison group, YouthLink had to excel beyond the level of success achieved by other drop-in and case management programs, most of whose goals and approaches are very similar.

The YouthLink Cohort

The original YouthLink sample consisted of 1,451 youth who received services in 2011 and who were aged 16-24 years (as of December 31, 2011). This original cohort excluded youth

³⁷ Patton MQ, Murphy NF. (2014, February). 9 evidence based guiding principles to help youth overcome homelessness. Available at <https://avenuesforyouth.org/wp-content/uploads/2015/12/9-Evidence-Based-Principles-to-Help-Youth-Overcome-Homelessness-Webpublish.pdf>. Accessed Aug. 19, 2021.

who were eligible for Supplemental Security Income (SSI) because these youth are recognized to have substantial disabilities that constrain their ability to achieve financial independence.

The present study required that data linkages be available to multiple additional data sets, starting with Minnesota K-12 education records. (See Appendix 1 on data sources.) Accordingly, the original cohort was further restricted to include only those youth for whom such linkages existed and for whom a matched peer could be identified. Following these additional restrictions, the resulting cohort for this study included 1,229 youth. All had a recent history of having been homeless (identified by a homeless shelter stay or in K-12 education records) or a history of being at risk of homelessness or experiencing homelessness (identified by virtue of their involvement at YouthLink), with some youth experiencing homelessness for multiple years.

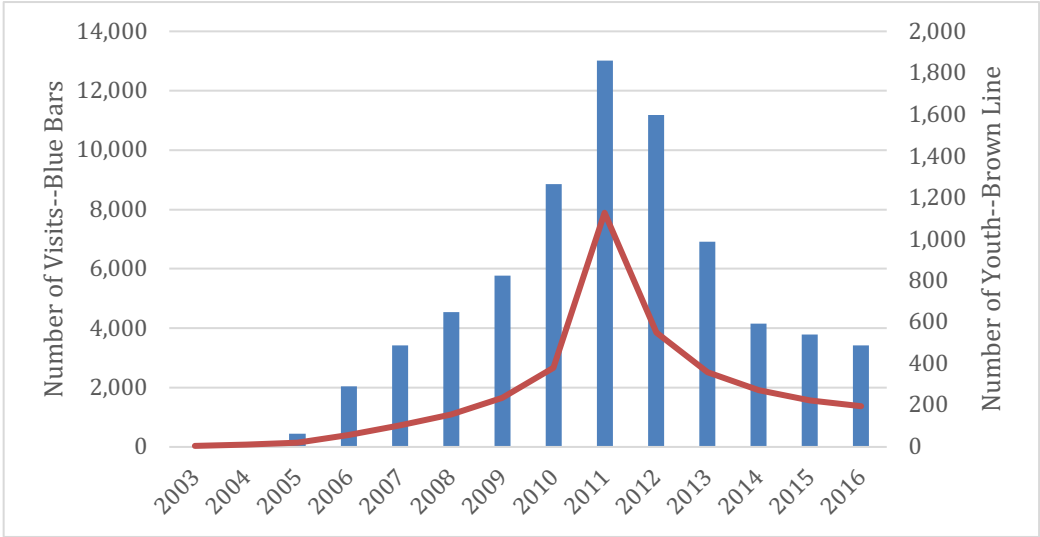
Exhibit 2 provides additional characteristics of the final study cohort. As shown, in 2011, the YouthLink cohort’s median age was 20 years and the cohort was overwhelmingly youth of color, with more females than males. As a group, they were far behind on their educational attainment and a majority were receiving taxpayer-funded support services for people with limited income.

Exhibit 2. Demographic Characteristics of the YouthLink Cohort in 2011

Characteristic	
Median age	20 years
Female	61.0%
Youth of color	85.8%
Last known residence in Hennepin/Ramsey counties	66.9%
Financial program receipt in 2011	56.7%
Number of years homeless or identified as at risk of homeless between 2008 and 2011	
	1 35.4%
	2 28.4%
	3 17.2%
	4 19.0%
	<u>4</u>
	Total 100.0%
Previous child mental health case management	15.5%
Previous child protective services	50.0%
Previous out-of-home placement	35.2%
Previous special education services	37.5%
Previously received free/reduced lunch for 2+ years	88.5%
Earned high school diploma as of 2011	14.9%
Earned MN GED diploma as of 2011	5.4%

All members of the YouthLink cohort visited or received services from YouthLink in 2011, but some had initiated services as early as 2003 and many continued services after 2011. Exhibit 3 shows the distribution of members of the 2011 YouthLink cohort and the number of visits they had from 2003 through 2016.

Exhibit 3. Distribution of Members of the 2011 YouthLink Cohort and their Visits* from 2003 through 2016



* Not all 1,229 youth visited YouthLink’s drop-in during 2011; some youth received services offsite and were included in the study cohort.

The Comparison Group

A major methodological challenge in performing this comparison was to create a comparison group that was as similar as possible to the YouthLink cohort. Obviously, youth experiencing homelessness cannot be randomized to visit or not visit YouthLink, so the research relied on quasi-experimental methods to create the comparison group. The validity and reliability of the findings for Study Aim 1 hinge largely on how effectively the comparison group mirrors the YouthLink cohort.

Each member of the YouthLink cohort was paired with a similar youth experiencing homelessness who never visited YouthLink. A range of data sources was used to identify the best matches for each YouthLink cohort member. To be included in the comparison group, youth must have been aged 16 to 24 in 2011 and received services between 2008 and 2011 from youth shelter programs, supportive housing programs, or adult or family shelters in Hennepin County, or been identified as homeless and highly mobile by local school systems (per the McKinney-Vento Homeless Education Act of 2001).³⁸ As in the YouthLink cohort, young adults who received Supplemental Security Income were excluded.

The YouthLink and comparison group pairs were matched 1:1 on ‘exact’ and ‘fuzzy’ criteria, using available data. Exact rules were used to match YouthLink and comparison group youth identically on gender, race, ethnicity, and age. Fuzzy rules allowed for minor variations in matches between the YouthLink and comparison group youth on receipt of free/reduced lunch, participation in special education, the last year of K-12 enrollment, documentation as homeless

³⁸ See the following for a definition of homelessness in the McKinney-Vento Act: <https://nche.ed.gov/mckinney-vento-definition/>. Accessed Aug. 19, 2021.

via shelter records or via identification as homeless in a Minnesota school, and geographic area of last residence. Thus, the characteristics of comparison group youth closely resembled but were not identical to, the characteristics of YouthLink youth.

However, while we attempted to match members of the two groups on how homelessness was identified (either via shelter or education records), a higher percentage of the comparison group was identified as homeless in education records than members of the YouthLink cohort (63 percent versus 43 percent). This remaining post-matching difference, which could not be adjusted further, is important because the McKinney-Vento Act's definition of homelessness includes youth who may be experiencing homelessness but housed in someone else's home (e.g. "doubled up"), at least temporarily. A higher proportion of such youth in the comparison group may indicate a somewhat lower level of need in this group, at least with regard to housing, as these youth may be able to utilize social networks to achieve some level of housing support.

Controls for Remaining Known Differences between the YouthLink and Comparison Groups

The use of exact and fuzzy matching rules to select the comparison group created very similar groups, but some additional differences remained in several available indicators. The research team carefully considered and sought to control for possible remaining differences between the groups on factors that might influence outcomes for the youth.

Reflecting the research literature, YouthLink case managers cautioned that mental health and chemical dependency (MH/CD) needs, which are more prevalent in youth experiencing homelessness than in the general population, often stood in the way of achieving many kinds of desired outcomes.³⁹ If a difference existed in the prevalence of MH/CD needs between the YouthLink and comparison cohorts, this imbalance could influence the results of the comparison of outcomes between the two groups. For instance, a higher prevalence of MH/CD challenges in the YouthLink cohort might make YouthLink appear less successful than the comparison group despite excellent work by YouthLink staff and strong efforts by youth.

The optimal way to identify the presence of known MH/CD needs in persons experiencing homelessness is through administrative records on treatment for MH/CD maintained by the health services research group at the Minnesota Department of Human Services (DHS), which pays for nearly all such services on behalf of people with limited income. Unfortunately, this group denied access to these records for this study. This meant that current or recent MH/CD service use could not be used to control for possible differences in the two groups.

Lacking access to contemporary indicators of MH/CD treatment, the research team used other variables which were available in other datasets integrated for this study and which are recognized proxies for or correlates of MH/CD challenges. These were a prior receipt of children's mental health case management services provided by county social services agencies, a prior history of child protective services and a prior history of out-of-home placement (e.g., foster care). While involvement with child protective services and out-of-home placement do not

³⁹ Morton MH, Dworsky A, Samuels GM. (2017). Missed opportunities: Youth homelessness in America. National estimates. Chicago, IL: Chapin Hall at the University of Chicago.

directly indicate MH/CD challenges, these types of involvement with county social services agencies typically result from a traumatic experience or set of experiences with high correlation to MH/CD challenges. The prevalence of these factors differed between the matched cohorts, as shown in Exhibit 4.

Exhibit 4: Prevalence of Factors Associated with a History of MH/CD Needs through 2011 in the YouthLink and Comparison Groups after Matching

	YouthLink (Percent)	Comparison Group (Percent)
Child mental health case management	15.5	6.8
Child protective services	50.0	36.3
Out-of-home placement	35.2	19.9

These differences in the two groups following matching suggested that the YouthLink cohort had a higher prevalence of recognized MH/CD and MH/CD-associated challenges than the matched comparison group. Other small differences in the two groups remained following matching that might also influence a comparison of outcomes. In addition, the YouthLink cohort members had a longer prior history of experiencing homelessness. The YouthLink cohort also had more members with a history of enrollment in special education, some of which may represent MH/CD challenges. Although the rates of GED completion before 2011 were low in both groups (under 6 percent) the YouthLink cohort was slightly more likely to have earned a GED certificate. In the analyses, further steps—described below—were implemented to control statistically for these remaining known and measurable differences between the YouthLink and comparison groups.

Statistical Analysis: Study Aim 1

We used logistic regression and generalized linear regression modeling techniques to assess the independent effect of YouthLink’s drop-in and case management service model on our multiple outcomes of interest during long-term follow-up from 2011 to 2016. We ran each regression model separately for each outcome and statistically controlled for observed differences between the YouthLink and comparison cohorts. Each model was adjusted for age, gender, race/ethnicity, any prior history of special education services, children’s mental health case management services, child protective services, or out-of-home placements, and the number of years homeless between 2008 and 2011. Models assessing the impact of YouthLink’s service model on the receipt of and costs associated with DHS financial support programs also statistically adjusted for prior educational attainment (high school diploma or GED) given observed differences at baseline between groups and the likely effect high school completion has on earnings and associated DHS program eligibility.

Study Aim 2: What is the impact of the intensity of case management services and topically focused efforts by YouthLink’s case managers on long-term outcomes for youth?

The research team’s approach to Study Aim 1 was to determine how the long-term outcomes of the entire YouthLink cohort compared to a similar group of youth who did not visit YouthLink. This was designed to provide a comprehensive test of the whole drop-in and case management approach without delving into any components of the model. By contrast, the team’s approach to Study Aim 2 was to focus just on the YouthLink cohort to determine if three key theories of change, discussed below, had an impact on long-term outcomes. Where Study Aim 1 took a comparative approach using a comparison group, Study Aim 2 took a “dose-response” approach, looking only at the YouthLink cohort to investigate whether the intensity and focus of the case manager relationship with youths had an impact on long-term outcomes.

Data Sources

In addition to the data sources used for Study Aim 1 (see Appendix 1), Study Aim 2 also drew on administrative data from YouthLink. These data include information on each youth’s dates of visits to the drop-in center and time spent with YouthLink staff. Detailed narrative case notes document the contents of each YouthLink staff encounter with clients. Three members of the research team (Foldes, Long and Warburton) read and characterized over 60,000 case notes written by case managers about their interactions with members of the YouthLink cohort from 2003 to 2016. The team characterized the case notes by their focus on specific transformative services and cultivation of normative social behaviors, as discussed below.

Case Managers: Basic Needs and Transformative Services

Most drop-in centers for youth experiencing homelessness are staffed with case managers, usually trained staff, who reach out to clients and attempt to build a relationship with them. Outreach may happen in the drop-in center and sometimes in the community, encouraging youth to visit the drop-in. The purpose of this outreach is to determine what challenges exist in each client’s life and to offer resources and personal support to guide each youth toward desired outcomes. At YouthLink, as at other such facilities, staff take a “trauma-informed” approach⁴⁰ and assume a non-judgmental, accepting attitude toward their clients.

The case managers have a range of resources they can offer to clients, beginning with an open and sympathetic ear. Often, immediate needs are pressing, and case managers can help with hygiene, clothing, brief onsite babysitting, and referrals for health services. They can help youth replace lost or stolen identity documents and help them apply for government support services

⁴⁰ Patton MQ, Murphy NF. (2014, February). 9 evidence based guiding principles to help youth overcome homelessness. Available at <https://avenuesforyouth.org/wp-content/uploads/2015/12/9-Evidence-Based-Principles-to-Help-Youth-Overcome-Homelessness-Webpublish.pdf>. Accessed Aug. 19, 2021.

for which they might be eligible. They can provide bus tokens, rides, or small amounts of emergency cash.

Once such immediate needs have been addressed, case managers often try to connect YouthLink clients to transformative services which are designed to support youth in changing the trajectory of their lives from ongoing dependence on assistance to greater independence. Such services include assisting youth in locating housing, whether in an overnight emergency shelter or supportive housing unit, helping to resolve outstanding problems with the juvenile delinquency and criminal justice systems, and supporting them in obtaining education credentials such as GED, job training, and finding and keeping a job.

Recognizing that MH/CD issues may impede progress toward these desired outcomes, case managers may refer clients to psychologists or psychiatrists with whom they have established relationships. At various times, YouthLink case managers have included staff with professional credentials in psychology or clinical social work who provide mental health counseling directly to clients onsite.

How much case managers work with youth on specific outcomes depends on a youth's interest and readiness to engage on a goal and range from little or no focus to a high level of focus. When present in a case note, the research team counted transformative work with youth on housing, education, legal issues, employment, and MH/CD-related challenges.

Case Managers: Supporting Normative Social Behaviors

In the course of ongoing encounters, some lasting years, case managers may develop more long-lasting and intense relationships with some clients. They may learn a great deal about a youth's personal history, his or her family and romantic partners, and observe patterns of behavior that might limit their progress toward their identified goals. In such circumstances, case managers sometimes offer advice intended to head off impending challenges, such as being evicted from an apartment due to violations of basic rules or avoiding a level of truancy that might lead to expulsion from school. These kinds of interventions are attempts to cultivate explicit or implicit normative social behaviors that are integral to success for most desired outcomes. With some youth, encouragement of such normative social behaviors makes up a considerable amount of a case manager's efforts. The research team also counted instances when case managers recorded that they supported normative social behaviors in their encounters with clients. See Appendix 3 for examples of such instances.

Theories of Change

The relationship between case managers and youth is varied and complex. Accurately capturing the nature of this relationship in our existing data sources posed difficulties. After extensive discussion, the research team identified three theories of change that may result in observable changes and might be discerned in the available data. These theories of change, discussed below, are related to each other. They highlight different aspects of the relationship between case managers and youth. Although interrelated, the research team attempted to

separately measure the independent effect on long-term outcomes of each in order to provide insight into which aspects of this relationship are most effective in helping youth reach their goals.

Theory of Change 1: Relationship Intensity

The first theory of change examined as part of Study Aim 2, which we call *relationship intensity*, suggests that more intense relationships between case managers and youth help to produce better long-term outcomes. This concept underlies a great deal of social work and psychology, and holds that a relationship is healing and promotes positive developmental outcomes.^{41,42,43} Some research evidence exists indicating that non-housing case management and support interventions that involve casework, mentoring, and/or youth development programming as key features—involving high-frequency engagement over multiple months or longer—generally yield positive results with youth at risk of or experiencing homelessness.⁴⁴ This may be especially true, it is believed, for adolescents who have experienced trauma, for whom a non-judgmental relationship with a stable adult may model ways to develop a greater sense of personal responsibility. Like other case management models, YouthLink’s approach to case management is premised on this concept.

The youth in the YouthLink cohort ranged widely on the extent of their involvement with case managers. A majority of the youth had just one encounter with a case manager, typically just a brief intake interview. At the other extreme, some youth had hundreds of case notes representing hundreds of hours of interaction with case managers, clearly demonstrating intense relationships. The count of minutes alone, however, fails to describe the intensity of the relationship between the case managers and youth because two youths with the identical number of minutes of interaction may have had those interactions within a month or over a year.

To better capture the intensity of these case manager-client relationships, the research team calculated the average minutes of interaction per unique month over each youth’s duration of involvement with YouthLink. Exhibit 5 shows a distribution of the YouthLink cohort by the number of service minutes per unique month they had during our follow-up period of interest.

⁴¹ Altena AM, Krabbenborg MAM, Boersma SN, MarBeijersbergen MD, van den Berg YHM, Vollebergh WAM, Wolf JRLM. (2017). The working alliance between homeless young adults and workers: A dyadic approach. *Children and Youth Services Review* 73:368-74. Available at <https://doi.org/10.1016/j.chidyouth.2017.01.015>. Accessed Aug. 15, 2021.

⁴² Kidd SA, Miner S, Walker D, Davidson L. (2007). Stories of working with homeless youth: On being “mind-boggling.” *Children and Youth Services Review* 29(1):16-34. Available at <https://doi.org/10.1016/j.chidyouth.2006.03.008>. Accessed Aug. 15, 2021.

⁴³ Alexander C, Charles G. Caring. (2009). Mutuality and reciprocity in social worker—client relationships: Rethinking principles of practice. *Journal of Social Work* 9(1):5-22. Available at <https://doi.org/10.1177/1468017308098420>. Accessed Aug. 15, 2021.

⁴⁴ Morton MH, Farrell AF, Kugley S, Epstein RA. (2019). Evidence summary: Non-housing case management and support for youth homelessness. Chicago, IL: Chapin Hall at the University of Chicago. https://voicesofyouthcount.org/wp-content/uploads/2019/11/Chapin-Hall_VoYC_Evidence-Review_Case-Management-and-Support_2019.pdf. Accessed Aug. 15, 2021.

Exhibit 5: Distribution of Service Minutes per Unique Month of Involvement at YouthLink, 2011 to 2016

Minutes of contact per unique month	Percent of YouthLink Cohort
No contact: Zero to 30	56.5
Minimal contact: 31 to 120	24.5
Substantial contact: 121 or more	19.0

As shown, 81 percent of the youth had fewer than two hours of contact per unique month with a case manager, but 19 percent had substantially more engagement. Using this distribution, the research team hypothesized that greater relationship intensity, as represented by this indicator, is related to better long-term outcomes.

Theory of Change 2: Focus on Transformative Services

The second theory of change examined as part of Study Aim 2, which we call *transformative services*, proposes that when case managers focus on a specific topic with their clients it will improve outcomes in that specific area. For instance, if a youth is ready to engage toward earning his or her GED, and the case manager focuses a considerable part of their time together supporting the effort to reach that goal, that focus could improve the likelihood that the youth will earn the GED.

To investigate whether such topically focused transformative services improved specific outcomes of interest, the research team counted the number of case notes focused on specific transformative services, including housing, education, legal support and employment.⁴⁵ Specifically, to measure the extent to which case managers focused their interactions with youth on specific topics, we calculated the proportion of case notes in which case managers mentioned working with youth on these topics.⁴⁶ Exhibit 6 indicates the percentage of case notes in which specific outcomes were encouraged or pursued by case managers with their clients.

⁴⁵ With the assistance of Yanchen Zhang, Ph.D., the research team implemented a computer algorithm to search over 60,000 case notes for key words to aid analysis. Zhang, Y. (2018). Keyword Highlight Macro Generator version 2.01 [VBA program].

⁴⁶ The research team also counted instances when case managers discussed mental health or chemical dependency issues with youth, or when they referred them to MH/CD services providers. These instances were indicators of possible MH/CD challenges and were used in Study Aim 2 in statistical adjustment.

Exhibit 6: Distribution of Cohort by Degree of Transformative Service Focus, 2011 to 2016

Percent of Case Notes with Topic	Percent of Cohort (n=1,229)
Housing Focus	
None: 0%	64.6
Moderate: > 0% to < 10%	15.9
Substantial: 10% or greater	19.4
Education Focus	
None: 0%	74.5
Moderate: > 0% to < 10%	17.2
Substantial: 10% or greater	8.3
Employment Focus	
None: 0%	75.1
Moderate: > 0% to < 10%	17.2
Substantial: 10% or greater	7.7
Legal Focus	
None: 0%	88.5
Some: >0%	11.5

Theory of Change 3: Focus on Normative Social Behaviors

The third theory of change examined, which we call *normative social behaviors*, suggests that when case managers cultivate normative and socially acceptable behaviors with their clients in the course of their interactions, it will improve outcomes generally. This theory of change was not specifically articulated by leaders at YouthLink, but evidence of this emerged when the research team reviewed thousands of case notes (see Appendix 3). Thus, we also calculated the percent of case notes which encouraged normative social behaviors (Exhibit 7).

Exhibit 7: Distribution of Cohort by Degree of Focus on Normative Social Behaviors, 2011-2016

Percent of Case Notes Invoking Social Norms	Percent of Cohort (n=1,229)
None: 0%	73.7
Moderate: > 0% to < 10%	9.4
Substantial: 10% or greater	16.8

As with other topically focused case manager-client interactions, a large proportion had none or only modest focus on normative social behaviors, but 17 percent of the YouthLink clients had a substantial focus on this area as a component of their relationship with case managers. The research team used the percent of case notes that encouraged normative social

behaviors to test the hypothesis that these interactions, which range across many topics, were related to better long-term outcomes.

Statistical Analysis: Study Aim 2

Similar to Study Aim 1, we used logistic regression and generalized linear regression modeling techniques to assess the independent effect of relationship intensity and the level of topically focused relationships on our multiple outcomes of interest during long-term follow-up. We ran each regression model separately for each outcome and each theory of change (relationship intensity, transformative services, and normative social behaviors). Models statistically controlled for observed differences between groups (such as between the group with substantial contact/intensity and the no-contact group). Each model adjusted for demographic and client characteristics (age, gender, race/ethnicity, any prior history of special education services, children's mental health case management services, child protective services, or out-of-home placements, the number of years homeless between 2008 and 2011, the proportion of all case notes that mentioned MH/CD issues), and the number of visits to YouthLink before 2011.

RESULTS

Study Aim 1: What is the overall impact of YouthLink’s drop-in and case management services model on long-term outcomes for youth?

Observed Outcomes Before Statistical Adjustment for Known Differences

Exhibits 8, 9, and 10 describe outcomes for the YouthLink and comparison groups on the key outcomes of interest as observed in our datasets before statistical adjustment for remaining observed differences in youth characteristics. These descriptive results can identify the presence of substantial intervention effects in the matched groups, which closely resemble each other. Final results, described in Exhibits 11 and 12, add statistical adjustments for remaining known differences in youth characteristics. These adjusted results more accurately reflect the differences between the YouthLink and comparison groups because they adjust statistically for differences in the groups on characteristics such as MH/CD need, which are known to affect the outcomes. Thus, discussion of the implications of this research should focus on the adjusted results.

As seen in Exhibit 8, from 2011 to 2016, by comparison with similar youth, the YouthLink cohort used emergency shelter and permanent supportive housing at substantially higher rates and had considerably longer lengths of stay in those facilities. Rates of attainment of high school diploma, higher education enrollment and degrees were similar in the two groups, but the YouthLink cohort earned a GED at a substantially higher rate (15.3 versus 8.2 percent).

Finally, both the YouthLink cohort and the comparison group had large proportions of youth who were involved in the juvenile justice and criminal justice system. In fact, nearly 54 percent (660 youth) of the YouthLink cohort appeared in court, and nearly 39 percent (477 youth) were adjudicated of an offense or convicted of a crime, including 67 youth convicted of a felony, and 178 who became re-offenders. These levels are high and represent a degree of involvement with juvenile delinquency and criminal justice that is far higher than the rate for this age group in the general population. This is partly due to the criminalization of homelessness, which puts people experiencing homelessness at greater risk of arrest for being homeless. Further, the research team did not investigate the charges for arrests and convictions (other than convictions for felonies), and it is widely recognized that many arrests of people experiencing homelessness occur for what are generally considered nuisance offenses, such as loitering. In any case, this high observed rate fits well with the well-established correlation between crime and

disadvantage or low education.^{47,48} It also accords with the pattern of criminal activity by chronic offenders; approximately 6 percent of all offenders are responsible for half of all crimes.⁴⁹

More important to this study, a considerably higher proportion of the YouthLink cohort had any court appearance, and a court appearance that resulted in an adjudication and/or conviction, than the comparison group. Proportions of re-offenses and convictions for felonies were not statistically significantly different from the comparison group.

Exhibit 8: Observed Long-term Outcomes Before Statistical Adjustment, YouthLink Cohort versus Comparison Group, 2011-2016

Outcomes	YouthLink cohort N=1229	Comparison group N=1229	P* value
Housing			
Shelter use (%)	34.7	13.8	<.01
Shelter mean length of stay (days)	21.4	7.5	<.01
Permanent supportive housing use (%)	23.2	11.4	<.01
Permanent supportive housing mean length of stay (days)	133.4	73.5	<.01
Education**			
High school diploma attained (%)	23.0	25.0	n/s
GED attained (%)	15.3	8.2	<.01
Higher education enrollment (%)	44.3	48.8	n/s
Higher education degree attained (%)	8.2	9.2	n/s
Juvenile delinquency and criminal justice involvement**			
Any court appearance (%)	53.7	43.4	<.01
Any court appearance resulting in adjudication and/or conviction (%)	38.8	30.4	<.01
Re-offenses (%)	37.3	32.4	n/s
Conviction of felony (%)	5.5	5.0	n/s

* Significance of comparisons based on Chi-square tests and Wilcoxon Signed Rank test, as appropriate.

** Sample sizes for education outcomes are reduced for receipt of level of attainment prior to 2011, and exclusion of high school eligibility due to age. Sample sizes for re-offenses were reduced to only youth with prior convictions.

n/s means result is not statistically significantly different.

Need for financial support programs administered by DHS was substantial—greater than 50 percent—in both groups in 2011, as shown in Exhibit 9. Rates of use in both groups declined substantially and similarly over time so that in 2016 only about one-third of youth continued to rely on these programs. As shown in Exhibits 9 and 10, the youth served by YouthLink

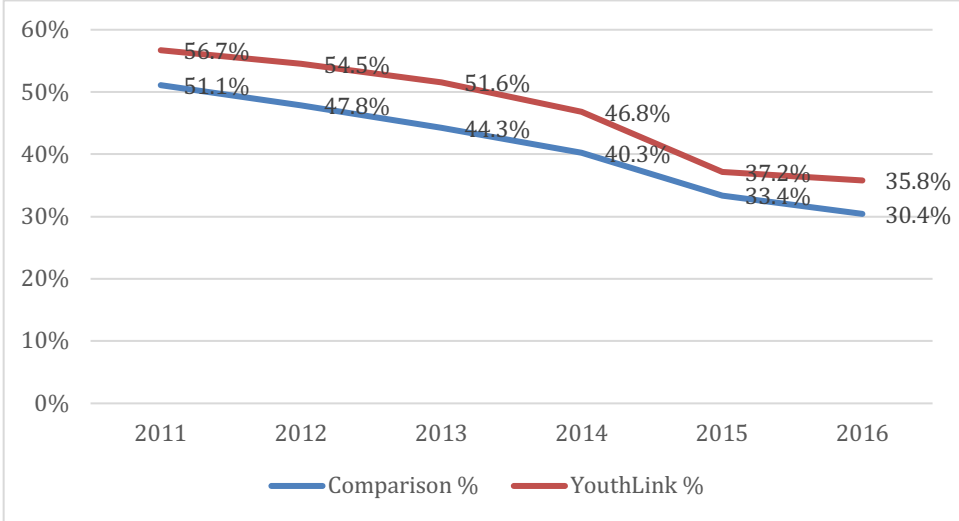
⁴⁷ Merlo A, Wolpin KI. (2009). The transition from school to jail: Youth crime and high school completion among black males. Working Paper, University of Pennsylvania.

⁴⁸ Lochner L, Moretti E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self-reports. *American Economic Review* 94:155-189.

⁴⁹ Cohen M, Piquero A. (2009). New evidence on the monetary value of saving a high risk youth. *Journal of Quantitative Criminology* 25(1):25-49.

continued to have a higher rate of use in the final year of observation and higher cumulative program costs prior to adjustment for remaining known differences in the two groups.

Exhibit 9: Observed Annual Use of Any DHS Financial Support Programs* Before Statistical Adjustment, 2011-2016, YouthLink Cohort versus Comparison Group



* Programs include General Assistance, Minnesota Family Investment Plan, Supplemental Nutrition Assistance Program, and Emergency Assistance, as reported by DHS.

Exhibit 10: Observed Use of Financial Support Programs in 2016 Before Statistical Adjustment, and Cumulative Financial Support Over Follow-up, 2011-2016, Before Adjustment, YouthLink Cohort versus Comparison Group

Program	YouthLink Cohort (N=1229)	Comparison Group (N=1229)	P* Value
Use of General Assistance program (%) in 2016	7.2	2.7	<.01
Use of MN Family Investment Plan (MFIP) (%) in 2016	18.0	14.7	.03
Use of Emergency Assistance program (%) in 2016	4.2	3.2	n/s
Use of Supplemental Nutrition Assistance Program (SNAP) (%) in 2016	27.6	24.0	.04
Use of any DHS program (%) in 2016	35.8	30.4	<.01
Cumulative mean cost per person of General Assistance program, 2011-2016	\$699.51	\$204.29	<.01
Cumulative mean cost per person of MFIP, 2011-2016	\$1559.22	\$1414.92	n/s
Cumulative mean cost per person of Emergency Assistance program, 2011-2016	\$147.53	\$125.19	n/s
Cumulative mean cost per person of SNAP, 2011-2016	\$2471.26	\$1750.74	<.01
Cumulative mean cost per person of any DHS program, 2011-2016	\$4877.52	\$3495.15	<.01

* Significance of comparisons based on Chi-square tests and Wilcoxon Signed Rank test, as appropriate.

Outcomes Following Statistical Adjustment for Known Differences

The above results precede additional adjustments for known remaining differences in youth characteristics, such as differences in the presence of MH/CD and associated MH/CD challenges in the two groups. Exhibits 11 and 12 present final results after adjusting for these remaining known differences.

Exhibit 11: Long-term Outcomes After Statistical Adjustment, YouthLink Cohort versus Comparison Group, 2011-2016

Outcomes	Test Statistic	P value
Housing		
Shelter use (Odds ratio [OR])	2.86	<.01
Shelter estimated mean length of stay (days difference)	5.61	<.01
Permanent supportive housing use (OR)	1.86	<.01
Permanent supportive housing estimated mean length of stay (days difference)	62.71	<.01
Education*		
High school diploma attained (OR)	0.89	n/s
GED attained (OR)	1.90	<.01
Higher education enrollment (OR)	0.94	n/s
Higher education degree attained (OR)	1.15	n/s
Juvenile delinquency and criminal justice involvement*		
Any court appearance (OR)	1.51	<.01
Any court appearance resulting in adjudication and/or conviction (OR)	1.45	<.01
Re-offenses (OR)	1.18	n/s
Conviction of felony (OR)	0.94	n/s

* Sample sizes for education outcomes were reduced for receipt of level of attainment prior to 2011, and exclusion of high school eligibility due to age. Sample sizes for re-offenses were reduced to only youth with prior convictions. n/s means result is not statistically significantly different.

Housing

Higher use by members of the YouthLink cohort of emergency shelter and permanent supportive housing seen in the unadjusted results remained after adjustment. As seen in Exhibit 11, YouthLink cohort members were estimated to have had nearly three times the likelihood of shelter use and almost twice the likelihood of supportive housing use. Between 2011 and 2016, YouthLink clients were estimated to have stayed, on average, nearly six days longer in emergency shelters and an estimated average of 112 days in supportive housing over the follow-up period, nearly 63 days longer than youth in the comparison group.

Education

YouthLink clients had nearly twice the estimated odds of earning a GED during follow-up. The estimated odds for earning a high school diploma, enrollment in higher education and earning a higher education degree were similar for both groups.

Juvenile delinquency and criminal justice involvement

The likelihood of any court appearance and court appearances resulting in adjudication and/or conviction was estimated to be 45-50 percent higher for members of the YouthLink cohort, but estimated odds for re-offenses and felony convictions did not differ between the two groups.

Use and Costs of Financial Support Programs

Exhibit 12 displays adjusted results for use of financial support services and differences in costs of these services between the two groups. Considering utilization, the YouthLink cohort had a nearly 2.5 higher likelihood of needing or remaining on General Assistance in 2016 than the comparison group. There were no significant differences in the odds for using MFIP, EA, SNAP, or overall use of any DHS program in the final year of observation. When considering costs over the duration of the observation period, estimated costs were substantially higher for the YouthLink cohort for SNAP (\$293 mean cost per person difference), for EA (\$15 mean cost per person difference) and across all DHS programs (\$532 mean cost per person difference) between 2011 and 2016.

Exhibit 12: Adjusted Odds of Receiving Financial Support Programs in 2016, and Difference in Estimated Cumulative Financial Support Per Person Over Follow-up, 2011-2016, YouthLink Cohort versus Comparison Group

Program	Test Statistic	P Value/ C.I.*
Use of General Assistance program (OR) in 2016	2.48	<.01
Use of MN Family Investment Plan (OR) in 2016	1.18	n/s
Use of Emergency Assistance program (OR) in 2016	1.32	n/s
Use of Supplemental Nutrition Assistance Program (OR) in 2016	1.09	n/s
Use of any DHS program (OR) in 2016	1.16	n/s
Cumulative estimated mean cost difference per person of General Assistance program, 2011-2016	\$54.88	n/s
Cumulative estimated mean cost difference per person of MFIP, 2011-2016	\$38.95	n/s
Cumulative estimated mean cost difference per person of Emergency Assistance program, 2011-2016	\$14.64	3.84, 24.62
Cumulative estimated mean cost difference per person of SNAP, 2011-2016	\$293.06	213.29, 373.07
Cumulative estimated mean cost difference per person of any DHS program, 2011-2016	\$532.14	383.83, 682.69

* Significance of cost difference is inferred by a confidence interval (C.I.) that does not encompass zero in bootstrapped iterations.
n/s means result is not statistically significantly different.

Discussion of Study Aim 1 Results

The comparison of YouthLink cohort members with a similar comparison group revealed several meaningful findings. More than any other outcome, housing the homeless is the priority for any drop-in and case management organization working with this population. The drop-in and case management service model offered at YouthLink was considerably more successful in this regard than the interventions that may have been used by members of the comparison group. Youth who visited or received services from YouthLink were nearly three times as likely to find emergency shelter when needed, and more importantly, almost twice as likely to obtain permanent supportive housing (estimated odds ratios of 2.86 and 1.86, respectively, Exhibit 11). Consistent with use, members of the YouthLink cohort stayed an estimated average of 112 days in supportive housing over the follow-up period, 63 days longer than members of the comparison group.

Beyond focusing on housing issues, drop-in and case management service providers also provide varying levels of transformative interventions aimed at education, juvenile delinquency and criminal justice and employment. In this comparison, the YouthLink cohort was 83 percent more likely to earn a GED (estimated odds ratio of GED attainment 1.83, Exhibit 11). It is likely

that the easy accessibility of onsite GED preparation as part of the YouthLink YOC helped to achieve this very positive education result. While these relatively large differences in adjusted housing and education outcomes between groups could be biased by our sample selection we did not find any adjusted differences in earned high school diplomas between groups despite our comparison group having a slightly higher proportion of youth still in school before 2011.

The juvenile delinquency and criminal justice results show that the YouthLink cohort had increased odds of any court appearance and court appearances resulting in adjudication and/or convictions. It is possible to interpret this result in various ways. A likely explanation is that YouthLink and YOC staff more successfully encouraged youth with juvenile delinquency and criminal justice issues to confront these problems in court rather than avoiding them, and to potentially resolve outstanding cases with plea deals. The similar likelihood of other outcomes—re-offenses and felony convictions—between the groups supports this interpretation.

It is also possible that the YouthLink cohort may have been more likely to be involved in juvenile delinquency and criminal activities than were members of the comparison group due to some remaining bias in the sample selection. As noted earlier, a larger proportion of the comparison group was identified as homeless via education versus shelter records. They may have had a lower likelihood of involvement with juvenile delinquency and criminal activities simply because a slightly higher proportion of members of the comparison group was still in school before 2011.

A long-term goal of YouthLink and all similar organizations is to help youth reach their goals leading toward financial independence and reduced reliance on taxpayer-funded services. YouthLink and YOC staff work with youth to secure and retain employment. Therefore, some may interpret the finding that the YouthLink cohort's odds of needing or remaining on General Assistance were almost 2.5 times greater than for youth in the comparison group at the conclusion of the follow-up period in 2016 as a disappointment. The estimated odds for using other support programs—MFIP, EA, SNAP—were not significantly different in the two groups. In addition, the estimated odds following adjustment for the use of any support programs in 2016 were not significantly different in the two groups (Exhibit 12). This means that the higher rate of use observed in the unadjusted data on the use of any financial support programs by the YouthLink cohort in 2016 (35.8 percent versus 30.4 percent; Exhibit 9) disappeared following adjustment for known differences between the groups.

The finding that there were higher estimated costs on average for SNAP and overall programs may also be seen as disappointing, although the nominal difference per person on an annual basis is small. Some observers may see more to appreciate in these results than those who are hoping just for cost savings. In this interpretation, YouthLink helped youth who qualified for assistance to receive it. The presence at YouthLink of the YOC reduced barriers to enrollment for those eligible, possibly increasing the odds that members of the YouthLink cohort were more likely to incur these costs. It is important to recognize that lower barriers to these programs meant that people who needed help got it, which is why those programs exist.

It should be noted that the results of the financial analysis presented here constitute only part of the picture on employment-related efforts because information on the employment status and earnings of the members of both groups were not included. The somewhat higher costs for support programs by the YouthLink cohort may have been balanced by higher employment and earnings by some in the YouthLink cohort. Employment and earnings information on members

of the YouthLink and comparison groups was not included in this comparison due to the difficulty of accessing these data from the Minnesota Department of Employment and Economic Development (DEED). Minnesota statutes prevent DEED from sharing this information at the individual level, even for legitimate research purposes. In addition, these estimated differences in costs for DHS programs may reflect the possibility that the comparison group members had a slightly lower need for services at baseline due to selection bias. Finally, we may not have estimated the full impact of the YouthLink service model on all outcomes, which may extend beyond the follow-up period in this study.

From a policy perspective, it is important to recognize that the rate of use of any financial support programs declined steadily and substantially from 2011 to 2016 by members of both the YouthLink and comparison groups. In the YouthLink cohort, for example, 697 youth (56.7 percent) used one or more programs in 2011, but only 440 youth (35.8 percent) relied on a program in 2016. The observed decline of 257 youth in the YouthLink cohort, a 37 percent decrease, and a similar decline in the comparison group, represents a substantial improvement, suggesting that some members of both groups had begun to find a foothold in the job market.

Along with the decline in the use of programs by members of both the YouthLink and comparison groups, the total costs also declined similarly in both groups. As noted, the adjusted comparison indicates that the YouthLink cohort used a modestly higher estimated average amount of support per person across all DHS programs than the comparison group. But the more important finding from a policy perspective is the substantial decline in both groups from 2011 to 2016 in the cost of these programs to taxpayers. For instance, the total cost of the YouthLink cohort's financial support was \$1,285,462 in 2011, and it declined to \$700,489 in 2016. This observed decline of nearly \$600,000, a 46 percent decline in costs, and a similar decline in the comparison group, represents substantial improvement and considerable savings to taxpayers who fund these programs. It is possible that continued declines in use occurred in both groups following 2016; if so, the long-term cost savings to taxpayers would be substantial.

Study Aim 2: What is the impact of the intensity of case management services and topically focused efforts by YouthLink's case managers on long-term outcomes for youth?

Outcomes Following Statistical Adjustment

Exhibits 13 through 21 describe the adjusted results assessing the impact of case manager-client intensity of relationship and topically focused efforts on the long-term outcomes of interest.

Theory of Change 1: Relationship Intensity

Exhibits 13, 14, and 15 show the adjusted outcomes by the intensity of the relationship between case managers and members of the YouthLink cohort, as measured by service minutes

per unique month. Results indicate that YouthLink clients who had substantial contact with case managers, defined as 121 minutes per unique month or more, were more than four times as likely (estimated odds ratio of 4.16, Exhibit 13) to use permanent supportive housing than YouthLink clients with no contact. Even moderate contact with case managers, defined as 31 to 120 minutes per unique month, resulted in 57 percent higher odds, compared with no contact, of using permanent supportive housing. In addition, those with substantial versus no contact had an estimated average of 176 days longer lengths of stay in permanent supportive housing. The degree of contact with case managers did not affect the use or length of stay in emergency shelters.

In education, having substantial contact versus no contact with case managers resulted in 73 percent higher odds of attaining a high school diploma. Only one outcome was statistically significant in juvenile delinquency and criminal justice; members of the YouthLink cohort with moderate contact with case managers had a higher likelihood of re-offending.

Exhibit 13: Long-term Outcomes of Intensity of Case Manager-Client Relationships After Statistical Adjustment, 2011-2016

Outcomes	Intensity of Relationship*			
	Moderate Contact versus No Contact	P value	Substantial Contact versus No Contact	P value
Housing				
Shelter use (Odds ratio [OR])	1.23	n/s	1.12	n/s
Shelter estimated mean length of stay (days difference)	-0.08	n/s	-1.12	n/s
Permanent supportive housing use (OR)	1.57	.015	4.16	<.01
Permanent supportive housing estimated mean length of stay (days difference)	39.56	n/s	175.50	<.01
Education**				
High school diploma attained (OR)	0.92	n/s	1.73	.02
GED attained (OR)	1.13	n/s	1.05	n/s
Higher education enrollment (OR)	0.88	n/s	1.03	n/s
Higher education degree attained (OR)	1.07	n/s	1.15	n/s
Juvenile delinquency and criminal justice involvement**				
Any court appearance (OR)	1.06	n/s	0.88	n/s
Any court appearance resulting in adjudication and/or conviction (OR)	1.30	n/s	0.89	n/s
Re-offenses (OR)	1.80	.01	0.80	n/s
Conviction of felony (OR)	1.77	n/s	0.81	n/s

* Intensity of case manager-client relationship was measured by service minutes per unique month: No contact=0 to 30 minutes; Moderate contact=31 to 120 minutes; Substantial contact=121 minutes or more.

** Sample sizes for education outcomes were reduced for receipt of level of attainment prior to 2011, and exclusion of high school eligibility due to age. Sample sizes for re-offenses were reduced to only youth with prior adjudications and/or convictions. n/s means result is not statistically significantly different.

Results on economic outcomes are displayed in Exhibits 14 and 15. The intensity of the case manager-client relationships did not affect the use of any financial support programs in 2016. Those YouthLink clients who had more than 30 minutes per unique month with case managers received on average \$51 less in MFIP benefits between 2011 and 2016, compared with YouthLink clients with no contact, a statistically significant but small difference.⁵⁰ The intensity in relationships with case managers had no impact on the cumulative total of DHS program costs.

Exhibit 14: Odds of Receiving Financial Support Programs in 2016 by Intensity of Case Manager-Client Relationships After Statistical Adjustment

Program	Intensity of Relationship*			
	Moderate Contact versus No Contact	P value	Substantial Contact versus No Contact	P value
Use of General Assistance program (OR) in 2016	0.91	n/s	1.26	n/s
Use of MN Family Investment Plan (OR) in 2016	0.99	n/s	0.65	n/s
Use of Emergency Assistance program (OR) in 2016	0.99	n/s	0.37	n/s
Use of Supplemental Nutrition Assistance Program (OR) in 2016	1.11	n/s	1.01	n/s
Use of any DHS program (OR) in 2016	1.00	n/s	0.86	n/s

* Intensity of case manager-client relationship was measured by service minutes per unique month: No contact=0 to 30 minutes; Moderate contact=31 to 120 minutes; Substantial contact=121 minutes or more. n/s means result is not statistically significantly different.

⁵⁰ Review of case notes suggested that less than 30 minutes of contact between case managers and youth usually amounted to an intake interview. Accordingly, the research team considered this less than substantial contact.

Exhibit 15: Estimated Difference of Intensity of Case Manager-Client Relationships on Cumulative Financial Support After Statistical Adjustment, 2011-2016

Program	Intensity of Relationship*	
	Any Contact versus No Contact	C.I.**
Estimated mean cost difference per person of General Assistance program, 2011-2016	\$-25.04	n/s
Estimated mean cost difference per person of MN Family Investment Plan, 2011-2016	\$-51.44	-443.50, -9.54
Estimated mean cost difference per person of Emergency Assistance program, 2011-2016	\$-0.48	n/s
Estimated mean cost difference per person of Supplemental Nutrition Assistance Program, 2011-2016	\$55.31	n/s
Estimated mean cost difference per person of all DHS programs, 2011-2016	\$-26.84	n/s

* Intensity of case manager-client relationship was measured by service minutes per unique month: No contact=0 to 30 minutes; Any contact=31 minutes or more.

** Significance of cost difference is inferred by a confidence interval (C.I.) that does not encompass zero in bootstrapped iterations.

Theory of Change 2: Focus on Transformative Services

Exhibits 16 through 18 show results of the degree of transformative services focus on related outcomes of interest. As seen in Exhibit 16, the degree of focus on housing-specific topics had a substantial impact on the housing outcomes of interest. Placing a moderate focus—defined as between zero and ten percent of case notes on housing issues—compared with no such focus resulted in an estimated 1.6 times greater odds of emergency shelter use. Placing a substantial focus—ten percent or more of case notes focused on housing issues—compared with no such focus resulted in an estimated two times greater odds of emergency shelter use. Those with a moderate focus on housing issues had more than four times the estimated odds of using permanent supportive housing compared with those with no focus on this topic. A substantial versus no focus resulted in an estimated 2.5 times greater odds of using permanent supportive housing.

Similarly, the degree of focus on housing issues affected housing lengths of stay. Those with a substantial focus on housing, compared with no such focus, spent an estimated 11 days longer on average in emergency shelters. Those with a moderate focus on housing had an estimated 181 day longer length of stay on average in permanent supportive housing compared with no such focus, and a substantial focus versus no such focus yielded an estimated average 85 days greater length of stay.

In education, the degree of focus on education-specific topics had an influence on the attainment of high school diplomas and GED. Moderate focus compared with no focus increased

the likelihood that youth would earn a high school diploma, but substantial focus versus no focus decreased the likelihood of youth attaining it. Substantial focus on education-related topics, however, increased the odds by 2.6 of youth earning a GED.

The degree of focus by case managers on juvenile delinquency and criminal justice topics did not affect those outcomes of interest.

Exhibit 16: Long-term Outcomes of Degree of Transformative Service Focus After Statistical Adjustment, 2011-2016

Outcomes	Degree of Focus on Transformative Service*			
	Moderate Focus versus No Focus	P value	Substantial Focus versus No Focus	P value
Housing focus on housing				
Shelter use (Odds ratio [OR])	1.56	.02	2.01	<.01
Shelter estimated mean length of stay (days difference)	3.99	n/s	10.62	.02
Permanent supportive housing use (OR)	4.10	<.01	2.48	<.01
Permanent supportive housing estimated mean length of stay (days difference)	181.05	<.01	85.03	<.01
Education focus on education**				
High school diploma attained (OR)	1.67	.04	0.51	.04
GED attained (OR)	1.60	n/s	2.59	<.01
Higher education enrollment (OR)	1.41	n/s	0.68	n/s
Higher education degree attained (OR)	0.68	n/s	0.80	n/s
Juvenile delinquency and criminal justice focus on juvenile delinquency and criminal justice involvement***				
Any court appearance (OR)			1.11	n/s
Any court appearance resulting in adjudication and/or conviction (OR)			1.02	n/s
Re-offenses (OR)			1.66	n/s
Conviction of felony (OR)			0.82	n/s

* Degree of focus on each transformative service was measured by percent of case notes indicating work on each transformative service: No focus=0 percent; Moderate focus=>0 percent to <10 percent; Substantial focus=10 percent or greater.

** Sample sizes for education outcomes were reduced for receipt of level of attainment prior to 2011, and exclusion of high school eligibility due to age. Sample sizes for re-offenses were reduced to only youth with prior adjudications and/or convictions.

*** Due to small sample size for this analysis, moderate and substantial degree of focus were combined to compare with no focus.

n/s means result is not statistically significantly different.

The degree of focus on employment-related issues as part of the case manager-client relationship did not affect use of financial support programs in 2016 (Exhibit 17). However, any focus on employment-related issues, compared with no such focus, resulted in a modest estimated \$102 higher cost for SNAP over six years (Exhibit 18).

Exhibit 17: Odds of Receiving Financial Support Programs in 2016 by Degree of Focus on Employment

Program	Degree of Focus on Transformative Service*			
	Moderate Focus versus No Focus	P value	Substantial Focus versus No Focus	P value
Use of General Assistance program (OR) in 2016	1.51	n/s	1.90	n/s
Use of MN Family Investment Plan (OR) in 2016	0.61	n/s	0.75	n/s
Use of Emergency Assistance program (OR) in 2016	0.47	n/s	1.40	n/s
Use of Supplemental Nutrition Assistance Program (OR) in 2016	0.89	n/s	1.32	n/s
Use of any DHS program (OR) in 2016	0.79	n/s	1.19	n/s

* Degree of focus on each transformative service was measured by percent of case notes indicating work on each transformative service: No focus=0 percent; Moderate focus=>0 percent to <10 percent; Substantial focus=10 percent or greater. n/s means result is not statistically significantly different.

Exhibit 18: Estimated Adjusted Difference by Degree of Focus on Employment on Cumulative Financial Support, 2011-2016

Program	Degree of Focus on Employment*	
	Any Focus versus No Focus	C.I.**
Cumulative estimated mean cost difference per person of General Assistance program, 2011-2016	\$2.54	n/s
Cumulative estimated mean cost difference per person of MN Family Investment Plan, 2011-2016	\$-6.17	n/s
Cumulative estimated mean cost difference per person of Emergency Assistance program, 2011-2016	\$6.57	n/s
Cumulative estimated mean cost difference per person of Supplemental Nutrition Assistance Program, 2011-2016	\$102.10	68.83, 376.35
Cumulative estimated mean cost difference per person of all DHS programs, 2011-2016	\$86.12	n/s

* Degree of focus on employment was measured by percent of case notes focusing on employment issues: No focus=0 percent; Moderate focus=>0 percent to <10 percent; Substantial focus=10 percent or greater. Due to small sample size for this analysis, moderate and substantial degree of focus were combined to compare with no focus.

** Significance of cost difference is inferred by a confidence interval (C.I.) that does not encompass zero in bootstrapped iterations.

Theory of Change 3: Focus on Normative Social Behaviors

Exhibits 19 through 21 present adjusted results assessing the impact of focus on normative social behaviors as part of the case manager-client relationship on the outcomes of interest, as measured by the proportion of case notes that focus on normative social behaviors.

The degree of focus on normative social behaviors had a significant impact on the use of emergency shelter and permanent supportive housing and associated lengths of stay (Exhibit 19). Specifically, a substantial focus—defined as ten percent or more of case notes—compared with no such focus was associated with nearly 2.5 greater odds of emergency shelter use and more than four times greater odds of permanent supportive housing use, with estimated lengths of stay differences of 11 and 206 days, respectively. Permanent supportive housing use was an estimated average of 126 days longer even with a moderate focus, defined as between zero and less than ten percent of case notes, compared with no such focus on normative social behaviors.

The degree of focus on normative social behaviors did not influence any outcomes in education. A substantial focus compared to no focus, however, reduced by two-thirds the likelihood of conviction for a felony.

Exhibit 19: Long-term Outcomes of Degree of Focus on Normative Social Behaviors After Statistical Adjustment, 2011-2016

Outcomes	Degree of Focus on Social Norms*			
	Moderate Focus versus No Focus	P value	Substantial Focus versus No Focus	P value
Housing				
Shelter use (Odds ratio [OR])	1.39	n/s	2.48	<.01
Shelter estimated mean length of stay (days difference)	5.95	n/s	11.49	.02
Permanent supportive housing use (OR)	2.89	<.01	4.03	<.01
Permanent supportive housing estimated mean length of stay (days difference)	125.95	.04	205.73	<.01
Education**				
High school diploma attained (OR)	0.82	n/s	1.06	n/s
GED attained (OR)	1.16	n/s	1.36	n/s
Higher education enrollment (OR)	0.56	n/s	0.79	n/s
Higher education degree attained (OR)	0.77	n/s	0.60	n/s
Juvenile delinquency and criminal justice involvement**				
Any court appearance (OR)	1.01	n/s	0.84	n/s
Any court appearance resulting in adjudication and/or conviction (OR)	0.82	n/s	0.78	n/s
Re-offenses (OR)	0.63	n/s	0.95	n/s
Conviction of felony (OR)	1.24	n/s	0.34	.01

* Degree of focus on social norms was measured by percent of case notes invoking normative social behaviors: No focus=0 percent; Moderate focus=>0 percent to <10 percent; Substantial focus=10 percent or greater.

** Sample sizes for education outcomes were reduced for receipt of level of attainment prior to 2011, and exclusion of high school eligibility due to age. Sample sizes for re-offenses were reduced to only youth with prior adjudications and/or convictions. n/s means result is not statistically significantly different.

The degree of case manager focus on normative social behaviors did not significantly impact the use of financial support programs in 2016 (Exhibit 20). However, any focus compared with no focus on normative social behaviors resulted in a modestly \$106 higher estimated cost for SNAP benefits over six years (Exhibit 21).

Exhibit 20: Odds of Receiving Financial Support Programs in 2016 by Degree of Focus on Normative Social Behaviors

Program	Degree of Focus on Social Norms*			
	Moderate Focus versus No Focus	P value	Substantial Focus versus No Focus	P value
Use of General Assistance program (OR) in 2016	0.94	n/s	1.38	n/s
Use of MN Family Investment Plan (MFIP) (OR) in 2016	1.02	n/s	0.71	n/s
Use of Emergency Assistance program (OR) in 2016	0.63	n/s	1.17	n/s
Use of Supplemental Nutrition Assistance Program (SNAP) (OR) in 2016	0.88	n/s	1.14	n/s
Use of any DHS program (OR) in 2016	1.00	n/s	1.05	n/s

* Degree of focus on social norms was measured by percent of case notes invoking normative social behaviors: No focus=0 percent; Moderate focus=>0 percent to <10 percent; Substantial focus=10 percent or greater. n/s means result is not statistically significantly different.

Exhibit 21: Estimated Difference of Degree of Focus on Normative Social Behaviors on Cumulative Financial Support, 2011-2016

Program	Degree of Focus on Social Norms *	
	Any Focus versus No Focus	C.I.**
Cumulative estimated mean cost difference per person of General Assistance program, 2011-2016	\$41.40	n/s
Cumulative estimated mean cost difference per person of MN Family Investment Plan, 2011-2016	\$0.86	n/s
Cumulative estimated mean cost difference per person of Emergency Assistance program, 2011-2016	\$3.50	n/s
Cumulative estimated mean cost difference per person of Supplemental Nutrition Assistance Program, 2011-2016	\$106.14	45.51, 371.55
Cumulative estimated mean cost difference per person of all DHS programs (\$), 2011-2016	\$84.82	n/s

* Degree of focus on social norms was measured by percent of case notes invoking normative social behaviors: No focus=0 percent; Any focus=>0 percent.

** Significance of cost difference is inferred by a confidence interval (C.I.) that does not encompass zero in bootstrapped iterations.

Discussion of Study Aim 2 Results

The intensity and topical focus of the relationship between case managers and youth had an impact on selected outcomes. Housing is the most important goal for any drop-in and case management organization, and the most consistent and substantial effect that spanned all three theories of change (relationship intensity, transformative services and normative social behaviors) was that more contact or focus led to better housing results. This included anywhere from nearly two to over four times the likelihood that an individual secured permanent supportive housing and stayed housed for a substantially longer time. While less desirable than a placement in permanent supportive housing, use of emergency shelters was also positively influenced by a housing-specific services intervention and a focus on normative social behaviors.

The intensity and focus of case manager efforts also affected educational attainment. Greater intensity in relationships increased the likelihood of earning a high school diploma. A moderate focus on education in the case manager-client relationship increased the likelihood of earning a high school diploma, while a substantial focus, compared with no focus, decreased that likelihood. However, the biggest impact on education outcomes was found with a substantial focus on education, where youth had 2.59 higher odds of earning a GED. Case managers working with youth and supporting them to reach their secondary education goals was clearly successful. None of the theories of change had a measurable impact on higher education outcomes.

We found that a moderate intensity of relationships was associated with an increased likelihood of juvenile delinquency and criminal re-offenses. Based on the content of the case notes in this area, it appears that case managers spent substantial time and effort with those youth with the most severe challenges. There was no comparative difference in the adjusted odds for re-offenses with substantial contact, but moderate contact, compared to no contact, appears to have had an effect. Interestingly, a substantial focus on normative social behaviors resulted in a 66 percent reduced likelihood of youth being convicted of a felony.

Turning to financial results, none of the theories of change had any impact on the new or continued use of financial support programs in 2016, our final year of follow-up. However, increased focus on specific topics on and normative social behaviors was associated with modest but significant increases in the cumulative estimated adjusted mean cost differences per person for SNAP benefits. The differences were very modest, averaging \$9 to \$18 dollars per person per year, depending on the theory of change examined. On the other hand, more intense relationships were associated with slightly lower costs for MFIP. But overall, across all programs, none of the theories of change had a measurable impact on costs.

CONCLUSIONS AND POLICY IMPLICATIONS

This study used two approaches to examine YouthLink as an example of a drop-in and case management model for working with youth experiencing homelessness. These approaches investigated the same group of 1,229 unaccompanied youth, ages 16 to 24 and overwhelmingly Black, who voluntarily visited or received services from YouthLink in 2011. Both approaches looked at the same metrics of success over the same time period, 2011 to 2016. One approach—Study Aim 1—examined the drop-in and case management model overall, asking whether YouthLink’s service model resulted in better outcomes. It compared a YouthLink cohort with a group of highly similar youth who did not visit YouthLink but may have received similar services elsewhere. A second approach—Study Aim 2—investigated within the YouthLink cohort the ways in which YouthLink’s drop-in and case-management approach worked toward achieving the desired outcomes.

Study Aim 1: What is the overall impact of YouthLink’s drop-in and case management services model on long-term outcomes for youth?

The major results of the first approach—Study Aim 1—indicate that YouthLink’s drop-in and case management approach, as implemented from 2011 to 2016, produced considerably better results than the services available to similar youth who did not visit YouthLink, on several but not all key outcomes. As summarized in Executive Summary Exhibit 1, results indicate that the YouthLink cohort found and used emergency shelter more readily when needed. In addition, the YouthLink cohort was nearly twice as likely to obtain permanent supportive housing and stay housed for two months longer than their peers in this setting. The YouthLink cohort was nearly twice as likely to earn a GED as members of the comparison group.

In this comparison, the YouthLink cohort’s results regarding juvenile delinquency and criminal justice involvement and the use of financial support services were more mixed, with members of the YouthLink cohort having a higher likelihood of appearing in court and being adjudicated/convicted of an offense than their peers. A likely explanation, based on many comments in case manager notes, is that YouthLink and Youth Opportunity Center (YOC) staff more successfully encouraged youth with juvenile delinquency and criminal justice issues to confront these problems in court rather than avoiding them, and to resolve outstanding cases with plea deals. The similar likelihood of other outcomes—re-offenses and felony convictions—between the YouthLink and comparison groups supports this interpretation.

YouthLink’s success with the drop-in and case management model is notable because members of the comparison group also received services from an array of organizations with similar goals and sometimes similar service offerings. YouthLink, however, had two advantages during this period. From 2011 to 2016, YouthLink’s staff was stable, experienced, and led by highly experienced managers who emphasized the use of a youth-oriented service approach. Also in 2011, YouthLink implemented the YOC, expanding its onsite service offerings and

reducing the barriers for youth experiencing homelessness to obtain the services they needed in ways that other service providers could not.

A long-term goal of YouthLink and all similar organizations is to help youth reach their goals leading toward financial independence and reduced reliance on taxpayer-funded services. YouthLink and YOC staff work with youth to secure and retain employment. The odds of needing or remaining on General Assistance (GA) were almost 2.5 times greater for the YouthLink cohort than for youth in the comparison group at the conclusion of the follow-up period in 2016. This finding may disappoint those hoping to see reduced reliance on taxpayer-funded services. The estimated odds for use of other support programs—Minnesota Family Investment Plan (MFIP), Emergency Assistance (EA), Supplemental Nutrition Assistance Program (SNAP)—were not significantly different between the two groups. In addition, the estimated odds for the use of any support programs in 2016 were not significantly different in the two groups.

The finding that there were higher estimated costs on average for EA, SNAP and overall programs may also be seen as disappointing by some, although the nominal difference on an annual basis is small. It is likely that the presence of the YOC at YouthLink reduced barriers to enrollment for eligible youth, possibly increasing the odds that members of the YouthLink cohort were more likely to incur these costs. Some observers may see more to appreciate in these results than those who are hoping just for cost savings. In this interpretation, YouthLink helped youth who needed help to get it, which is why those programs exist. It is also possible that the full impact of the YouthLink service model on all outcomes may extend beyond the follow-up period in this study. Furthermore, it is also likely that we have underestimated the impact of the service model solely due to the quasi-experimental design of this study and our inability to select a control group whose members did not receive similar services.

The results of the financial analysis presented here constitute only part of the picture on employment-related efforts because information on the employment status and earnings of the members of both groups are not included. The somewhat higher costs for support programs by the YouthLink cohort may have been balanced by higher employment and earnings by some in the YouthLink cohort. Employment and earnings information on members of the YouthLink and comparison groups was not included in this comparison because of the difficulty of accessing these data from the Minnesota Department of Employment and Economic Development (DEED). DEED is prevented by Minnesota statutes from sharing this information at the individual level, even for legitimate research purposes.

From a policy perspective, it is important to recognize that the rate of use of any financial support programs declined steadily and substantially from 2011 to 2016 by members of both the YouthLink and comparison groups. This offers important context for the finding that comparatively, members of the YouthLink cohort were more likely to have used GA in 2016 and cost modestly more from 2011 to 2016.

In the YouthLink cohort, for example, 697 youth (56.7 percent) used one or more programs in 2011, but only 440 youth (35.8 percent) relied on a program in 2016. The total cost of their financial support was \$1,285,462 in 2011, and it declined to \$700,489 in 2016. The observed decline of 257 youth and nearly \$600,000 (a 37 percent decline in youth and a 46 percent decline in costs) in the YouthLink cohort, and a similar decline in the comparison group, represents substantial improvement and considerable savings to taxpayers who fund these

programs. It is possible that continued declines in use occurred in both groups following 2016; if so, the long-term cost savings to taxpayers would be substantial.

Study Aim 2: What is the impact of the intensity of case management services and topically focused efforts by YouthLink’s case managers on long-term outcomes for youth?

The second approach of the study focused on the central feature of the drop-in and case management model: the work of the case managers. This approach investigated the impact of three theories of change about the intensity and topical focus of the case manager-client relationship on the outcomes from 2011 to 2016 of youth who visited or received services from YouthLink. This approach addressed these questions through a series of comparisons of some YouthLink clients with other YouthLink clients, using a “dose-response” model.

The first theory, called *relationship intensity*, proposes that the intensity of the relationship between case managers and youth, as measured by minutes of interaction per unique month, affected outcomes. To test this theory, we compared three groups of YouthLink clients: those with no or virtually no relationship with case managers, those with modestly intense relationships, and those with substantially intense relationships.

The second theory, called *transformative services*, proposes that when case managers focus on specific desired outcomes (housing, education, juvenile delinquency and criminal justice involvement, and employment) those specific outcomes are improved. To examine this theory, we compared three additional groups of YouthLink clients: those with no focus in each of those topic areas indicated in case notes; those with a moderate focus in each topic area; and those with a substantial focus in each topic area.

The third theory, called *normative social behaviors*, advances the idea that case managers’ cultivation of normative social behaviors during their interactions with youth affected the outcomes of interest. To investigate this theory, we compared three other groups of YouthLink clients: those where case managers did not indicate in their case notes that they encouraged normative social behaviors, those with a moderate focus on such behaviors, and those with a substantial focus on such behaviors.

The major results of this approach—Study Aim 2—indicate that the intensity and focus of the relationships between case managers and youth influenced long-term outcomes, particularly in housing and education. Those youth who engaged in more intense relationships with case managers had substantially higher odds of using permanent supportive housing and of staying much longer in these settings. Those youth with intense relationships had higher odds of earning a high school diploma. The intensity of relationships did not meaningfully affect other long-term outcomes, although moderate intensity was associated with a slightly higher odds of re-offenses.

Similarly, a focus on specific topics by case managers and youth also substantially influenced some outcomes of interest. Thus, focus on housing by case managers increased the use and lengths of stay in emergency shelters and permanent supportive housing. A focus specifically on education by case managers also had a positive impact; modest focus increased the likelihood of youth earning a high school diploma, and substantial focus decreased the

likelihood of a youth earning a high school diploma but nearly tripled the likelihood of youth attaining a GED.

Finally, relationships in which case managers encouraged normative social behaviors substantially improved outcomes in housing, increasing the use and lengths of stay in both emergency shelters and permanent supportive housing. A substantial focus on normative social behaviors considerably reduced the likelihood of a conviction for a felony. A focus by case managers on normative social behaviors did not have a measurable impact on long-term outcomes in other areas.

Increased focus on specific transformative services and on normative social behaviors was associated with modest but significant increases in the adjusted cumulative estimated mean cost differences per person for SNAP benefits. The differences were very modest, averaging \$9 to \$18 dollars per year, depending on the theory of change examined. As discussed above, the interpretation of these results depends on one's perspective. On the other hand, more intense relationships were associated with slightly lower costs for MFIP. Across all financial support programs, none of the theories of change had a measurable impact on cumulative costs.

Although the study approaches differ, the results are mutually supportive. By focusing on the work of the case managers, the second study approach offers insight into how and why YouthLink's service model seems to have produced many better outcomes overall in comparison with similar youth who did not visit YouthLink. This is particularly striking with outcomes on housing and education. The comparison of YouthLink clients with similar youth who did not visit YouthLink showed strong impact of the drop-in and case management model on long-term outcomes in housing and education. The investigation of the intensity of relationships between case managers and clients and topical focus by the case managers in their interactions with youth also pointed to effects in those areas. In other words, the impact of the case managers' work with youth is evident in the comparison of the YouthLink cohort with similar youth who did not attend YouthLink, bolstering the results of both approaches.

Implications

Overall, both study approaches demonstrated results that have important implications for public policy on addressing youth homelessness. First, the drop-in and case management model for working with unaccompanied youth experiencing homelessness, as implemented at YouthLink from 2011 to 2016, is effective for achieving desired long-term outcomes, particularly in the areas of housing and education. This model is itself an intervention, providing for youth experiencing homelessness a space away from the dangers of life on the street and in adult-focused service centers. Inside the drop-in, youth are encouraged to build relationships with caring adults who reinforce more normative social behaviors and work toward helping youth achieve their goals. YouthLink's experienced staff and organizational stability during the follow-up period, their youth-oriented focus, and the presence of the YOC, likely contributed to positive outcomes for members of the YouthLink cohort.

Second, the positive outcomes found in this study resulted in large measure from case manager efforts, and overall, more intense relationships, topically focused transformative services, and the cultivation of normative social behaviors were more effective at achieving

desired outcomes in housing and education. This means that there is value in supporting enough case managers in such organizations to make it possible for them to build meaningful and intense relationships with the youth they serve.

Finally, while we did not see in our comparison that YouthLink's drop-in and case management model significantly reduced use and costs of taxpayer funded financial support programs, the substantial decline from 2011 to 2016 in both groups of the use and total cost of these financial support programs is notable. It is possible that YouthLink's and other service providers' efforts around helping youth achieve their employment goals began to reduce reliance on financial support programs by the youth who experienced homelessness in 2011 and helped start many of them toward long-term financial self-sufficiency.

APPENDIX 1

Data Sources Used in Research

- **YouthLink (MARRS)** data included information about client visits to the drop-in center, as well as case notes and services provided via case managers during meetings with youth between 2003 and 2016. These data were used to depict various aspects of YouthLink’s drop-in and case management services model, including the intensity of case management services and topically focused efforts by YouthLink case managers. The data were also used to exclude youth from the comparison group if they had received services from YouthLink at any time up until 2016 and to statistically control for differences in the length of homelessness experienced by youth.
- **Minnesota Department of Education** contributed two sources of data for the project:
 - **Minnesota Automated Student Reporting System (MARSS)** is an individual student record system that serves as the Minnesota Department of Education's primary reporting system for student data. MARSS contains data for all students attending public K-12 schools in Minnesota, such as grade level, services received (e.g., special education), residential school district, and graduation. MARSS data (2000-2016) were used in the development of the Aim 1 comparison group, as statistical controls for potentially confounding variables in analyses, and as a key outcome (i.e., graduation) of interest for Aims 1 and 2.
 - **General Education Development (GED)** data for individuals who passed all four GED exams (2003-2016) – language arts, math, social studies, and science - were used in Aims 1 and 2 as a key outcome of interest.
- **Minnesota Department of Human Services** contributed two sources of data for the project:
 - **Social Services Information System (SSIS)** data included information about children’s involvement in the Child Protection System (as alleged victims of maltreatment), out-of-home care (e.g., foster care), and receipt of children’s mental health case management (2000-2016). Data were used as statistical controls for potentially confounding variables in Aim 1 and 2 analyses.
 - **MAXIS** data included information about taxpayer funded supports, including cash (MFIP) and food (SNAP) assistance, and emergency (EA) and general (GA) assistance from 2011 to 2016. These data served as key outcomes of interest for Aims 1 and 2.
- **Homeless Management Information System (HMIS)** data included information on youth experiencing or at risk of homelessness who sought assistance via shelters, rental assistance, permanent housing, or street outreach programs (2000-2016). These data were used in the development of the Aim 1 comparison group, as statistical controls for potentially confounding variables in all analyses (i.e., length of homelessness), and as key

outcomes (i.e., shelter stays and use of permanent housing) of interest for analysis of Aims 1 and 2.

- **State Court Administrators Office (SCAO)** data included information on juvenile delinquency and adult criminal court involvement between 2011 and 2016, and were used as key outcomes of interest for Aim1 and 2 analyses.
- **Office of Higher Education (OHE)** data included information about enrollment in one of thirty-seven Minnesota State Colleges and Universities (MNSCU) and degrees awarded. These data were used as key outcomes of interest for analysis of Aims 1 and 2.
- **Hennepin County Shelter** data included information about stays in youth shelters within Hennepin County that were not included in HMIS data. These data were used in the development of the Aim 1 comparison group and as statistical controls for potentially confounding variables in all analyses (i.e., length of homelessness).

APPENDIX 2

Youth Opportunity Center Partners, 2011 to 2016

Beginning in 2011, YouthLink started to host the YOC after Hennepin County selected it through a request for proposals process. YouthLink offered a downtown location, proximity to public transportation, capacity to host multiple providers, and experience in serving youth.

The YOC quickly became a unique and important part of YouthLink’s service model. The YOC offered youth a “one stop shop” for services in a safe, supportive environment dedicated to the specific needs of young people. It lowered barriers to accessing a wide range of services by eliminating the need for youth to find and navigate those services in locations throughout the city. As shown below, some agencies participated in the YOC during the entire follow-up period of this research project; others participated only in some years.

Unfortunately, individual-level information on the services these organizations provided to the youth who took advantage of them was not available. Most organizations did not track their services systematically, and some indicated that restrictions on privacy prevented sharing any information. It is clear, however, that youth who visited YouthLink had easier access to a wide range of resources and services than similar youth who did not visit YouthLink.

	2011	2012	2013	2014	2015	2016
Drop-in and Basic Needs						
Arts in Action- <i>drama therapy</i>	✓	✓				
Avenues for Homeless Youth-GLBT Host Home Program- <i>supportive services</i>	✓	✓	✓		✓	
The Bridge for Youth- <i>supportive services</i>		✓	✓		✓	
Catholic Charities Hope Street Shelter- <i>overnight emergency shelter</i>					✓	
Catholic Charities Young Fathers Program- <i>engaging young fathers with training/support</i>				✓	✓	
Cornerstone- <i>domestic violence, sexual assault community programs</i>					✓	✓
The Family Partnership Teen PRIDE Program- <i>supportive services for LGBTQ youth</i>			✓	✓	✓	✓
Family Wise- <i>family supports/childcare services</i>		✓	✓	✓		
Hennepin County Eligibility Support- <i>screening for GA, MA, SNAP, MFIP eligibility</i>	✓	✓	✓	✓	✓	✓
Hennepin County Front Door, Homeless Access- <i>connection/referrals to homeless service resources</i>	✓	✓	✓	✓	✓	✓
Kulture Klub Collaborative- <i>on-site artistic outlet</i>	✓	✓	✓	✓	✓	✓
Learning Dreams- <i>personal goal setting</i>		✓	✓	✓	✓	✓
Minneapolis Public Library- <i>outreach location/access to basic needs</i>						✓
Public Allies- <i>young adult leadership</i>				✓		

Plymouth Church Neighborhood Foundation- <i>connection to a variety of community resources</i>	✓					
Tubman and The Link Youth and Young Adults Program- <i>assisting youth experiencing partner violence, sexual assault or stalking</i>		✓	✓	✓	✓	✓
Safelink- <i>cell phone access</i>					✓	
Salon D’Pugh- <i>salon</i>		✓				
Salvation Army- <i>shelter</i>					✓	
StreetWorks/Lutheran Social Service of MN- <i>outreach collaborative serving at risk youth</i>	✓					✓
Housing Stability						
Aeon- <i>supportive housing services</i>	✓	✓	✓	✓	✓	✓
Beacon Interfaith Housing Collaborative- <i>supportive housing services</i>		✓	✓	✓	✓	✓
Common Bond- <i>supportive housing services</i>					✓	✓
Hearth Connection- <i>scattered site supportive housing for older youth</i>	✓	✓	✓	✓	✓	✓
Hennepin County					✓	✓
Hope4Youth- <i>drop-in and support in North Mpls.</i>						✓
The Link- <i>multiple support services for youth</i>			✓	✓	✓	✓
Project for Pride in Living- <i>housing supportive services</i>					✓	✓
Education and Employment						
Augsburg Fairview Academy- <i>secondary charter school</i>						✓
American OIC- <i>American Indian education, training, and employment services</i>					✓	✓
Elpis Enterprise- <i>employment training</i>			✓	✓	✓	✓
Emerge- <i>employment opportunity for “hard to employ” youth</i>		✓				
HIRED- <i>employment support</i>	✓	✓	✓	✓	✓	✓
ING- <i>financial literacy training</i>		✓	✓			
GED Testing Service					✓	✓
Minneapolis Community and Technical College (MCTC)- <i>career assessment/supportive educational opportunities</i>			✓	✓	✓	✓
MN Internship Center- <i>secondary charter school</i>						✓
Tree Trust- <i>school enrollment program</i>					✓	✓
Minneapolis Central Library				✓		
Minneapolis Public Schools Homeless and Highly Mobile Student Services- <i>education resources for homeless youth</i>			✓	✓	✓	✓
Minneapolis Public Schools “We Want You Back”- <i>enrollment/re-enrollment assistance plus GED</i>	✓	✓		✓		

Minneapolis WorkForce Center/The Zone- <i>employment services</i>	✓	✓				
Voya-financial literacy training				✓	✓	✓
Job Corps-employment support					✓	✓
PPL Learning Center-job skills and training program					✓	✓
East Side Neighborhood Family Services-job training and supportive services					✓	✓
Summit Academy OIC-vocational schools					✓	✓
Goodwill-Easter Seals-employment support					✓	✓
YMCA Twin Cities-supportive services	✓	✓	✓		✓	✓
Health and Wellness						
The Aliveness Project-HIV/STI testing			✓	✓	✓	✓
Children's Dental Services-dental care	✓	✓	✓	✓		
City House						✓
Headway Emotional Health Services-mental health care			✓	✓	✓	✓
Health Care for the Homeless-health care	✓	✓	✓	✓	✓	✓
Hennepin County Child and Teen Check-up- health care	✓	✓	✓	✓	✓	✓
Minnesota AIDS Project (MAP)-HIV testing and support services		✓	✓	✓	✓	✓
MNSure Navigation-enrollment assistance				✓		✓
Minnesota Visiting Nurse Agency-support youth during and after pregnancy	✓	✓	✓	✓	✓	✓
NorthPoint Health and Wellness Center-medical and behavioral health services, education, dental services, human services (food shelf, housing assistance, employment)	✓	✓	✓	✓	✓	✓
NorthPoint African American Men's Project- health/wellness services		✓	✓	✓		
Hennepin County Red Door Clinic-HIV/STD testing and support services	✓			✓	✓	✓
Teen Age Medical Services-health/wellness services			✓			
U of MN Extension-Simply Good Eating Programs-nutrition and wellness programming			✓			
Legal						
Faegre Baker Daniels, LLP-pro bono legal aid	✓	✓	✓	✓	✓	✓
Volunteer Lawyers Network-pro bono legal aid	✓	✓	✓	✓	✓	✓
Legal Aid-pro bono legal aid	✓	✓	✓	✓	✓	✓
Lindquist & Vennum, LLP-pro bono legal aid	✓	✓				
Minnesota Justice Foundation-pro bono legal aid	✓	✓	✓	✓	✓	✓

APPENDIX 3

How Case Managers Cultivate Normative Social Behaviors with Clients

As described in the text, case managers at YouthLink often encourage normative social behaviors when working with youth, typically with those youth with whom they have a relationship. Evidence about how case managers do this is available from the case notes that they write to document each encounter they have with youth. The research team reviewed and characterized over 60,000 case notes written by case managers over their years of contact with the 1,229 members of the YouthLink cohort.

The behaviors that case managers encourage span many topics, including school, drug use, living arrangements and nonviolent behavior in the drop-in. There are some similarities, however, in the strategies employed by the case managers. Sometimes, case managers encourage normative social behaviors by focusing on consequences and life choices. When they do this, the case managers sometimes sound like more mature advisors, warning youth about the likely consequences of poorly thought-out actions. Case managers often cultivate normative social behaviors to reduce friction and hostility in the drop-in center, which may involve using peer pressure to isolate deviant behavior and marginalize rule violators. Another focus for case managers is managing volatile emotions and other anti-social behaviors. Despite the differences in settings or the behaviors involved, it became clear that the normative social behaviors that the case managers cultivated in all these examples tend to be related to achieving maturity and self-sufficiency, avoiding imminent violations of implicit or explicit social norms, and avoiding legal problems.

Another way to characterize what case managers sometimes do when they support normative social behaviors is that they encourage code-switching by youth in certain circumstances. The concept of code-switching derives from linguistics, and typically refers to changing one's language or dialect in order to assimilate into the predominant culture.⁵¹ It has been used more broadly as well, to refer to appearance and behavior associated with socially or racially different contexts, such as Black employees' strategies to suppress their use of African-American Vernacular English, and to change their appearance and comportment to succeed in predominantly white work environments.⁵² The YouthLink case managers encourage code-switching when, for example, they try to get youth to change their appearance and demeanor when interviewing for a job.

Following is a small selection of examples, drawn verbatim from case notes. Most of these case notes are selections from what are sometimes long strings of case notes detailing a case manager's work with an individual client over many months. The examples included below

⁵¹ DeBose C. (1992). Codeswitching: Black English and Standard English in the African-American linguistic repertoire. In Eastman C. (ed.). *Codeswitching*. Clevedon: Multilingual Matters. p. 157–167. ISBN 978-1-85359-167-9.

⁵² McCluney CL, Robotham K, Lee S, Smith R, Durkee M. (2019, November 15). The costs of code-switching. *Harvard Business Review*. Available at <https://hbr.org/2019/11/the-costs-of-codeswitching>. Accessed August 14, 2021.

illustrate the cultivation of normative social behaviors. Where they appear, names have been disguised.

Encouraging normative social behaviors by focusing on consequences and life choices

6/28/2012

Met with youth for case management meeting. He just came from meeting with job counselor at ESNS. He was not in a good mood. His job counselor explained the process to B. and he said it seemed like too much. He was frustrated and felt it did not benefit him quick enough. He felt that resorting to street life would be easier. He said it seems like it's costing him more to catch the bus and make his app'ts then what he is receiving from services. Writer told youth that if he is not receiving more than what he is putting out then he should not continue; but if he is benefitting from services, he needs to be patient. Writer explained that investing in himself through hard work and determination is a process that will take time, and he ought to be careful about how he spends his time or end up doing time behind bars. Writer reminded youth that he has support but it is up to him to utilize it. Writer gave youth four bus tokens to get to follow up app't with job counselor Monday. Youth will follow up with writer after his app't Monday at ESNS.

7/12/2012

Youth came in and checked in. Writer signed him up for MCTC orientation online. Youth scored poorly on placement tests; said he did not take it seriously. He wants to retake them before going to orientation. B. said he only got a couple hours of sleep and was in a bad mood. Writer tried talking about making "real life choices" and youth became upset and said he was offended. Writer tried to provide clarity but youth did not want to listen and ended the meeting abruptly. He was upset but not disrespectful. His language and demeanor implied that he did not care about following through with important meetings to better his circumstances.

1/7/2010

Client approached me today, after avoiding me for a while, to let me know that I would be a 'grandmother'. I asked the client how she felt about being pregnant and she said that she was ok with it as long as she stayed focused on her goals. I told her that I would continue to push and motivate her as much as possible.

1/13/2009

I spoke with D. and she said she is back in school and is attending like she is supposed to. She said sometimes she gets a little frustrated because she is behind so many credits. I explained to her that sometimes when we make a mistake in life we have to go back and clean-up that "mess" before we can move forward. D. told me she would start taking her education more seriously.

6/2/2009

Sat with ladies during drop in and discussed why it is not safe to go to New York with a man you barely know with no money, what the effects of this could be, and other options.

3/24/2009

B. came in today saying that she was going to go use but decided to come here instead. I told her I was really happy that she did that. We talked about a Rule 25 and treatment for a long time and she said she would consider it. I took her down to the clothing closet to get her some clean clothes and got her some basic needs supplies and sat with her while she ate.

11/3/2008

Talked with client about the seriousness of paying rent and what seems like avoidance. She assured me she would pay rent but has not yet. Her balance is about \$1,000 and she will need to sign a mutual term for non-payment of rent for over two months. Talked about what she does with her money and why she thinks she doesn't have to pay, her other bills, and the amount of money she spends on clothes and going out to eat.

11/6/2009

Met with R. today to check in on how things are going. He is concerned that his girlfriend may be pregnant, we discussed what this would mean for his life. We talked about his goals and what he wants in life and the importance of keeping those in mind with decisions he is making now. Troubleshooted options for various aspects of his life and set up next meeting for 2 weeks from now.

11/24/2009

Case manager received phone call from R.'s Dean. He got into a verbal altercation with another classmate. During the altercation both youth began representing their rival gangs. The school has a no representation policy therefore both youth will be suspended for a day. Case manager went to R.'s school to pick him up. The two discussed the situation and R. seemed to take more ownership this time than with prior incidents. R. stated that he has a lot going on and his girlfriend is for sure pregnant. Case manager discussed the possibility of anger management to him and he said he would be willing to do it, but doesn't want to participate in a program outside of YouthLink.

12/22/2011

Had long conversation with J. about life expectations and the importance of keeping a job. He mentioned having a hard time focusing but that he is trying really hard.

10/3/2013

Writer spoke with M. about his habit of being untruthful at times. M. took it to heart and was receptive to this and reflected on past childhood triggers and functions behind this habit that he is being more and more mindful of now. It was very productive.

11/13/2006

Gathered goods for client's apartment-discussed the importance of established house rules with guests as to not get in trouble with her landlord. Also followed up on how the parenting classes are going.

7/12/2011

Talked about his incident with his brother on 7/7. I reminded him how great he is doing and how

fast a really bad decision can make him lose his housing. He understood and agreed that no such incidents would happen again. He accepted his lease violation and his repercussions that came with it.

7/20/2011

Talked about his classes. He said he is doing ok. I reminded him that his first classes are important to do well so he could establish a good academic start in case things were to change in the future. He told me he would pass the classes and not to worry. I told him it was more than just passing a class, it was important to work on maintaining a good GPA.

7/29/2011

We picked up his check and deposited it at Wells Fargo. I assisted him to write out his first check to pay rent. I commended him for paying rent early.

6/27/2013

Youth stopped by for bus tokens and we had a conversation about rent. Youth is working two jobs and making over \$1000/month but is behind on rent. Youth admitted to having a shopping addiction. Writer and youth will create budget on 07/01/13 at 10am. M. joined the discussion and youth agreed to make rent payment tomorrow and pay all of July rent on 07/05/13. M. and writer discussed apartment cleanliness and personal hygiene. M. informed youth that there is an "awful" odor coming from his apartment. We discussed proper ways to clean and the importance of doing laundry and taking care of oneself. Youth was not defensive and said he will do a better job.

2/29/2012

Picked up C. today and took her to get a replacement MN driver's license and took her shopping at Target for some cleaning supplies. C. stated that she was kicked out of Job Corps for having a dirty UA (urinalysis). Had a lengthy conversation with her about her CD and MH issues and the consequences they are having on her life. Discussed the possibility of her needing to go to treatment and/or re-engage in therapy. It was a good conversation and C. was receptive to the things I had to say. She stated that she would get back in contact with her therapist by the end of the week.

Supporting normative social behaviors to maintain safety in the drop-in

8/18/2008

Talked to youth about the current drop-in restriction. Explained what happened and that we need to keep drop-in safe for everyone. I told them that we know it is unrealistic to expect that they will not do drugs; it is realistic to expect that they respect OffStreets enough to not bring it with them when they come. The youth were understanding, but upset that one person had to ruin it for everyone. I let them know we are always open to suggestions on other approaches to solving the problem.

12/13/2007

Met with these youth prior to them being let back into the drop-in center. We met in small groups and discussed expectations and basic responsibility for the space. All were very

cooperative and some even genuinely concerned for the overall lack of ownership that their youth peers have. Asked that they all step up and help keep the space organized, clean, safe and comfortable. Let them know that we will have a zero tolerance for gang related behaviors as well as swearing and horseplay.

4/21/2006

Client came in as scheduled. We discussed the event that made her non drop-in. She admits to her involvement "being stupid" and claims to being all worked up because she is friends with both of the people involved in the fight. When asked what she would do differently she said she will either stay inside the building (if something is happening in the parking lot) or go to staff and let them know what is going on. Client reports understanding the rules of the agency and really just wants help finding her own place and getting into school rather than participating in drama.

9/25/2009

Received info from C. and other staff that she had been in a fight on YL property the previous night. Her friends and boyfriend had helped her jump another male peer. Fight had been pretty bad according to staff report. She is on hold until further notice. Spoke to C. about incident. She was worried it would affect her housing. I told her it would not, but that it would affect her ability to access YouthLink, possibly for a long time. She asked me to bring her some food/supplies. I told her I would not have time because I had to work drop in. She became upset and I reminded her that this inconvenience was a natural consequence of her fighting on YL property. She hung up on me. Spoke to J. at Praxis. She will be picking C. up tonight to begin process of getting her a mentor. Gave her C.'s contact info and told her about incident from previous night. Later J. stopped up to pick up C.'s belongings. C. waited in car across the street due to being banned from property. Brought her a plate of food.

Encouraging youth to adopt normative social behaviors in relationships

10/12/2010

Met with G. regarding her status. Discussed issue that caused her to be non-OffStreets. She understands the impact her behavior had and that it was inappropriate. We discussed that it is ok for her to feel and express her emotions; we just need to develop a plan for her to get separated if she feels like she is going to lose control. We discussed her ability to request to leave a space when she feels she is getting angry. She feels she can do this. She feels comfortable with all staff approaching her and working with her. She is willing to do community service and wants to repair her relationship with D. She also wants to work on anger and ways to cope with her emotions. She is interested working with S. (clinician on YL staff).

8/9/2010

A. understands how his behavior has negatively impacted his status. He would like staff to pull him aside to correct him and not "call him out" in front of other people. It was explained to him that although this would be the best practice, it is not always possible, but this would be conveyed in staff meeting. He agreed to respect staff, notice when he is starting to get upset and

take a "time out," and not to talk about other people in drop-in. He also agreed to meet with MHP for some sessions around anger management.

6/9/2006

Client was having some boyfriend drama today and was making it everyone else's business. I pulled her into my office to discuss how this wasn't appropriate. She understood and was good the rest of the night.

6/14/2012

Group started with a check-in, then we had an engaging discussion on youth behavior in public, disrespect, and how it effects other aspects of their lives and the greater community. We discussed the responsibility of older people talking to youth about disrespect and how youth would respond. Everyone agreed that they have acted out in public places and they all thought they would do things differently after discussion.

3/20/2003

I spoke with E. She told me she was suspended until tomorrow. I went to pick her up, and we went to the library. We talked about the incident that got her suspended, and did a behavior contract and she also wrote a letter of apology to the girl she got into the fight with.

Two case studies, below, illustrate how case managers deal with individual clients by encouraging normative social behaviors over a longer time period. Although different, these examples illustrate how case managers encourage youth to adopt more socially acceptable and appropriate behavior.

Case Study: Helping youth manage difficult feelings in the drop-in

8/10/2011

Discussed D's status in staff meeting. D. addressed staff at staff meeting regarding drop-in status. He expressed feelings of being treated unfair and anger issues. It was agreed that writer and D. would create a contract in order for D. to get back into drop-in. He was allowed to be in drop-in with the agreement that he sit down with writer and create contract after he is done working at 6pm. D. left before created contract.

8/11/2011

D. agreed to create contract regarding his drop-in status but left two nights in a row before he created it. The contract was a part of the deal to get D. back into drop-in. He is now back on non-drop-in.

8/15/2011

Created contract with D. as discussed in staff meeting to ensure he follows the rules and shows staff and youth respect instead of shutting down when he is upset. D. signed it; writer put a copy in D's file and in youth status binder.

2/9/2012

D. was having a hard day due to some words exchanged with a couple of different youth. Staff was being very patient with D. but he was disrespectful and challenged staff on everything; he was asked to turn his music down or put on headphones several times, he was asked to leave once he received his bus token and refused, he walked around drop-in in a very aggressive manner as if he were going to blow up on somebody. Staff was not able to pull him aside and talk with him b/c he would not engage. D. was told that his status could be affected b/c of his Behavior.

2/28/2012

Writer, S., and D. had a mediation (session) regarding the ongoing disrespect for staff. D. did not greet writer as if he was hostile. S. led the mediation and offered D. a chance to give feedback, he did not have much to say. Writer spoke about repairing relationship and began to open up. D. said he thinks his personality does not go well with writer and he did not feel that there was anything that can be done about it. D. became agitated for no apparent reason and did not want to finish the meeting. He did eventually stay and listened to writer. D. felt writer holds black youth to a higher standard. Writer processed a little bit about that. Writer told him he is held to a high standard b/c he is smart. By the end of the meeting it was clear that D. was not ready to move forward but he did agree to respect all staff and be open to taking directions. Writer did not feel the mediation would bring about any change.

3/20/2012

Met D. at B. to discuss plan to manage anger while in Drop-In. He plans to discuss with staff if he needs to pace or separate himself from the Drop-In for a moment.

6/26/2014

Writer spoke with D. about cracking jokes on other youth in the drop-in and how it could be hurtful. D. stated that everybody cracks jokes on people and it is part of the drop-in culture. Writer asked D. to watch what he says and if the people he is cracking the jokes on does not find it funny to please stop.

Case Study: Providing safer and more socially acceptable options for a woman engaging in survival sex

4/21/2010

Discussed client needs in staff meeting, it seems she may be swayed to stripping for money. Will follow up with client.

4/22/2010

Follow up with client regarding past note. She did not speak of stripping but says she will get the money needed for rent. We discussed healthy boundaries and lifestyle and that she does not have to partake in that lifestyle, we will find another way to pay her rent.

4/27/2010

Talked with client today about some issues she has been having with her family and friends. She

wanted to discuss gang life and almost getting jumped, her mother, and her ex-boyfriend. We also had a conversation about safety as she is currently dancing for money. Gave her resources and offered other options for employment. Will follow up.

6/29/2010

Conversation over phone with client about prostitution and stripping and gave her options for making money other ways. Gave client resources, talked about safety, and updated staff as to her situation.

8/26/2010

Talked with client about safe sex and stripping. She has been "working" a lot and reports that she is very tired. Talked about tricks, safe words, and safety in general. She does not like "working" but reports that she is not making enough as a personal care attendant because the County has not finished the paperwork yet.

ABOUT THE AUTHORS



Steven S. Foldes, Ph.D., is a social scientist with more than 35 years of experience conducting public health and health services research and leading research teams. Dr. Foldes received his doctorate in social anthropology from the University of Chicago and did post-doctoral work in public health and business at Harvard University, Northwestern University and the Carlson School of Business at the University of Minnesota. He 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. His research has been widely cited in the scientific literature and has been credited with influencing public policy.

Building on his previous research with YouthLink, Dr. Foldes first recognized that this research could be conducted with the Minn-LInK dataset and collaborated with Dr. Kristine Piescher and YouthLink to conduct this research. Drs. Foldes and Piescher assembled the research team, negotiated access to additional datasets, and led the research effort. Dr. Foldes led the writing of the white paper.



Kirsten Hall Long, Ph.D., is a health economist with over 25 years of applied economic, clinical and outcomes research experience. Dr. Long earned her doctoral degree in economics from Indiana University. Prior to establishing her consulting firm in 2010, she was a Consultant in the Division of Health Care Policy & Research at the Mayo Clinic College of Medicine, where her work focused on designing and conducting economic analyses alongside clinical trials, observational economic analyses, cost-effectiveness analysis and technology assessment. In a consulting capacity, she continues to work collaboratively with health care providers, payers and other researchers on economic study design, data collection and analyses across varied research topics.

Actively involved in this study from inception, Dr. Long was involved in study design and research protocol development, led the analyses of several key outcomes, and collaborated on interpretation of results at every stage. She co-wrote the white paper with Dr. Foldes.



Kristine Piescher, Ph.D., is a social scientist with over 15 years of applied family systems and child welfare research experience. Dr. Piescher earned her doctoral degree in family social science from the University of Minnesota. She currently serves as the Director of Research and Evaluation at the Center for Advanced Studies in Child Welfare (CASCW) at the University of Minnesota where she leads a number of large-scale and locally-based research and evaluation projects, including the Minn-LInK project. Through Minn-LInK,

Dr. Piescher and her team have integrated over two decades of identified, statewide administrative data from multiple child- and family-serving agencies; these data have been used since 2003 to answer questions about the effects of policies, programs, and practice on the well-being of children in Minnesota. Dr. Piescher works closely with state and local child- and family-serving agencies, child welfare practitioners, educators, administrators, policy makers, and interdisciplinary teams of researchers in her research, which focuses largely on child maltreatment and foster care in Minnesota, child welfare workforce development, and child welfare system change.

Dr. Piescher collaborated with Dr. Foldes to assemble the research team, negotiate access to necessary datasets, and lead the research effort. Dr. Piescher also led data integration efforts at Minn-LInK, served as a liaison to data owners, and contributed to the writing of this white paper.



Katelyn Warburton, M.A., is a homeless programs administrator at the Office of Economic Opportunity (Minnesota Department of Human Services). Ms. Warburton earned her Master of Arts Degree in Organizational Leadership and Policy Development from the University of Minnesota. Prior to DHS, Ms. Warburton worked in various direct care and administrative roles in the non-profit sector—most recently as the Data Analyst/Special Projects Coordinator at YouthLink. During her time at YouthLink, Ms. Warburton assisted in gathering data and coordinating feedback sessions with YouthLink staff to guide this research project.

Ms. Warburton was an integral member of the research team from the inception of this study. Her understanding of YouthLink and public policy issues regarding homelessness helped contextualize this study, and she was actively involved in the interpretation and communication of the results.



Saahoon Hong, Ph.D., is an Assistant Research Professor at the Indiana Division of Mental Health and Addiction at Indiana University. Dr. Hong utilizes the Division’s integrative data system for quality improvement initiatives that support the use of outcome management tools in practice. Prior to his appointment at Indiana University, Dr. Hong served as a Senior Minn-LInK Researcher at the Center for Advanced Studies in Child Welfare (CASCW) at the University of Minnesota. Dr. Hong earned his doctoral degree in Educational Psychology with a concentration in Learning/Cognition at the University of Minnesota. His research has focused on cognitive psychology, quantitative research methods, cross-system data analysis, positive behavioral interventions and supports, mental health, educational well-being, child maltreatment, and special education.

Dr. Hong was involved in study design and research protocol development; he also developed the comparison group, co-created the analytic plan for Aim 1, and conducted Aim 1 analyses.



Nina L. Alesci, Ph.D., M.P.H. is an independent consultant providing evaluation and primary research study design, data analysis, and reporting services on survey and claims data for public health and health care clients. She received her masters' degree in Public Health Administration in 1999 and her doctoral degree in Epidemiology in 2010, both from the University of

Minnesota. Her work has included evaluations of interventions improve quality and cost outcomes in Medicare and Medicaid populations. She has also conducted qualitative and quantitative studies of health behaviors and evaluated programs and policies designed to reduce youth and adult tobacco use.

For the current study, Dr. Alesci conducted statistical analyses for the Study Aims 1 and 2 outcomes on housing and costs of taxpayer-funded services. She also offered methods support, particularly on measure development and model specification.