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Trends in trimorbidity among adults experiencing homelessness in Minnesota, 2000-2018

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Abstract

Background: Earlier and more severe onset of chronic health conditions contributes to the increased risk of premature death among adults experiencing homelessness. Trimorbidity, a subset of multimorbidity representing overlap of physical health, mental health, and substance use conditions, disproportionately impacts adults experiencing homelessness. We know of no longitudinal data comparing trimorbidity trends among adults experiencing homelessness.

Objective: To characterize nineteen-year trimorbidity trends among adults experiencing homelessness.

Research Design: Repeated longitudinal, statewide survey administered every three years.

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Conflicts of interests in the last three years: None

Subjects: Adults living throughout Minnesota experiencing homelessness.

Measures: Reported diagnoses of chronic health conditions within 3 categories: physical health conditions (hypertension, heart disease, asthma, diabetes); mental health conditions (depression, post-traumatic stress disorder, bipolar disorder, schizophrenia/other paranoid and delusional disorders); and substance use conditions (alcohol and illicit substances).

Results: 25,552 surveys were completed by adults at 3 year intervals in a total of 7 waves. Participants reported increasing frequency and duration of homelessness, and more nights slept outside/in a car. 77.3% of adults experiencing homelessness in 2018 had one or more chronic health condition in any domain. From 2000-2018, bi- and trimorbidity surpassed morbidity within a single domain. This was driven by increases in mental health conditions. In 2018, 31.7% of participants reported bimorbidity and 16.3% of adults reported trimorbidity.

Conclusions: Adults experiencing homelessness bear a substantial and growing burden of bi- and trimorbidity. Ensuring accessible, high quality care that includes robust services that can address all 3 categories of health is critical. Such care is best delivered in combination with affordable supportive housing.

Keywords

Multimorbidity; homelessness; chronic disease; mental health; substance use

Introduction

The overlap of chronic conditions, or multimorbidity, affects increasing proportions of people worldwide and is overrepresented among those experiencing homelessness.¹ Whereas multimorbidity refers to the coexistence of multiple health conditions² regardless if they are related to physical health, mental health, or substance use, trimorbidity is a specific type of multimorbidity that includes the overlap of physical health, mental health, and substance use conditions.³ Trimorbidity expands upon past research about dual-diagnosis of a serious mental illness and a substance use disorder which has found that these conditions greatly impede disease control and adherence to care and lead to increased healthcare costs, increased risk of violence, and homelessness.⁴ Trimorbidity has emerged in the literature specifically to describe the severe, complex needs of people experiencing homelessness.^{3,5-6} Trimorbidity has been associated with a four-fold increased risk of unplanned hospital admission among people experiencing homelessness in the UK.⁷ Trimorbidity has been described as more common among people sleeping outside (“rough sleepers”) than those accessing shelter or supportive housing. This is likely driven by a complex set of factors which include that people with substance use disorders and mental health diagnoses avoid shelter settings due to policies requiring sobriety and symptoms including psychosis, paranoia, and social anxiety.^{8,9}

Increasing evidence supports the need to augment traditional count-based studies of multimorbidity¹⁰ by considering the overlap among morbidity categories of physical health, mental health, and substance use. Important work from Scotland underscores this need by documenting the strong socio-economic gradient to accumulation of chronic health conditions, especially chronic mental illness.¹¹ Furthermore, a separate, large survey of

English primary care patients documented the lowest levels of health-related quality of life among people with comorbid mental health and physical health conditions.¹²

Robust evidence documents the poor health effects of homelessness. Adults experiencing homelessness have earlier and more severe onset of chronic conditions than their housed peers.¹³ While not universal, adults experiencing homelessness have higher rates of mental health and/or substance use conditions than non-homeless populations.¹⁴ Combined, these chronic conditions increase the risk of premature death for people experiencing homelessness with risk estimated to be 2 to 5-fold higher than their age-matched, housed peers.¹⁵ For example, a study compared shifts in causes of death among people using Boston's Health Care for the Homeless program from 1988-1993 to 2003-2008. They found that in spite of increases in health insurance coverage and health care access during that time, excess mortality remained high. The most common cause of death shifted over time from HIV-associated infections to overdoses of illicit drugs, including opioids, and psychotropic drugs.¹⁶ Despite this important finding, we know of no longitudinal examination of trimorbidity among adults experiencing homelessness. Understanding if and how overlapping diagnoses of physical health, mental health, and substance use conditions may be changing over time is critical to developing an appropriate response to the health needs of people experiencing homelessness.

This paper will address this gap by characterizing nineteen-year trends in the prevalence of trimorbidity—a specific type of multimorbidity representing the overlap of physical health, mental health, and substance use conditions—using data from a statewide survey conducted every three years among people experiencing homelessness.

Methods

We used 2000-2018 data from the Minnesota Homeless Study to characterize the burden of health conditions among adults experiencing homelessness in Minnesota. Every three years Wilder Research conducts a one-day, statewide study to estimate the prevalence of people experiencing homelessness and to characterize their life experiences and health conditions. The survey is always conducted on the third Thursday in October and is separate from the Housing and Urban Development (HUD) federally mandated point-in-time (PIT) count which takes place in January. The Minnesota Homeless Study includes more thorough data than the HUD PIT count because 1) the Study administers a 45 minute interview rather than a 5 minute questionnaire, 2) the Study includes many sites that are not covered by the HUD PIT count, and 3) the Study provides a cash stipend for participation in the interview. Data collected on American Indian reservations are not included in our sample as they are managed separately.

The Minnesota Homeless Study attempts to count all people staying in emergency and domestic violence shelters, transitional housing programs, encampments, those using outreach services (e.g. hot meal programs, service centers) but staying outside, and people doubled up with friends/family when this meets the federal definition of homelessness.¹⁷ All counted participants are invited to take a verbally administered survey by trained data collectors which takes approximately 45 minutes. Survey participants receive \$10 cash. We

included in this analysis adult participants (18 years or older) from each survey wave between 2000 and 2018. Observations in each wave are deidentified and, thus, some participants may be represented in multiple years.

The Hennepin Healthcare Research Institute Institutional Review Board deemed this study exempt from review as it uses de-identified data.

We used Stata 15.1 to count and classify common physical health, mental health, and substance use conditions reported among participants.¹⁸ Wording of some survey questions were informed by the Behavioral Risk Factor Surveillance System survey.¹⁹ We included select, common health conditions that were asked consistently in the Minnesota Homeless Study from 2000-2018. We did not include other conditions asked inconsistently across this time period. Throughout this article, we retain the wording aligned with wording of the original survey questions. In all years, participants were asked whether or not they had a variety of physical and mental health conditions and about their substance use. We examined positive responses to physical health conditions (hypertension, heart disease, asthma, and diabetes); mental health conditions (major depression, post-traumatic stress disorder (PTSD), bipolar disorder, and schizophrenia combined with other paranoid or delusional disorders); and substance use conditions (reported diagnoses of alcohol or drug abuse disorder, alcoholism, chemical dependency, or any reported use of illicit substances, including inhalants, methamphetamine, opioids, cocaine, heroin, or synthetic stimulants (“bath salts”)). Wilder Research changes substance use items based on trends in Minnesota. They began asking about methamphetamine in 2003, and began asking about synthetic stimulants in 2012. Minnesota legalized the use of medical marijuana in 2014. The survey did not distinguish between marijuana obtained illegally and that obtained with a prescription. Although we report trends in marijuana use, we did not include marijuana use in our definition of substance use condition.

We examined the demographic characteristics and homeless experiences of survey participants in each survey wave and compared responses over time. We examined frequency trends in the annual prevalence and overlap of diagnoses within physical health, mental health, and substance use categories from 2000-2018. We calculated the incidence of trimorbidity, the overlap of physical health, mental health, and substance use conditions, in each survey wave. We also examined disaggregated annual prevalence rates of each health domain as well as specific diagnoses within each domain.

We completed sensitivity analyses to assess the degree to which the prevalence of health conditions might be associated with changes in demographic and homeless factors. Due to the limited availability of some variables in early survey years, we completed a series of regression models: First, we estimated multivariable multinomial logistic regression models to examine the yearly prevalence of people with different trimorbidity domains (single, bimorbidity, or trimorbidity) using four specifications: 1) unadjusted; 2) adjusted for age, gender, marital status, race, ethnicity, employment, education, and homeless duration in all years; 3) adjusted for health insurance in available years in addition to covariates in (2); 4) adjusted for “nights slept outside/in car” in available years in addition to covariates in (2) and (3). Second, we ran three separate multivariable binary logistic regression models to

estimate each domain of trimorbidity (physical, mental illness, and substance use disorder) using the four specifications previously described. Third, we ran a multinomial logistic regression model to estimate the yearly prevalence of people with different counts of physical health conditions (1, 2, 3 or more) controlling for age, gender, marital status, race, ethnicity, employment, education, and homeless duration. For all sensitivity analyses, we used post-estimation predictive margins to estimate the yearly prevalence adjusted for covariates set at their observed sample values.

Results

Demographic and Homeless Characteristics

The Minnesota Homeless Study had 25,552 survey responses from adults experiencing homelessness between 2000 and 2018 (Table 1). Participation per year varied with the lowest number of participants at 2,271 in 2000, the highest at 4,465 in 2012. The average age of survey participants increased from 35.2 in 2000 to 39.8 in 2018. Survey participants were majority male and unmarried. A majority of participants identified as White; however, a disproportionately greater number of participants reported Black and Native American races and Hispanic ethnicity than expected given state demographics.^{20,21} Employment decreased over time with 37.7% reporting full or part time work in 2000 compared to 26.5% in 2018. Throughout the full study period, 60.9% of participants had a high school degree/GED or greater.

In 2018 166% more survey participants than in 2000 described their current episode of homelessness as lasting 5 years or longer (a change from 6.3% in 2000 to 17.0% in 2018) (Table 1). During this time, more participants also reported increased lifetime episodes of homelessness (5-7 and 8 or more episodes of lifetime homelessness). Starting in 2012, participants were asked where they spent each of the last 30 nights. Compared to 2012, in 2018 participants reported more nights spent outside or in a car (2012 mean 5.3 nights (SD 9.6), 2018 mean 8.5 nights (SD 11.6)), and fewer nights spent in regular housing (2012 mean 0.8 nights (SD 3.9), 2018 mean 0.5 nights (SD 3.0)) or shelters (2012 mean 17.9 nights (SD 13.1), 2018 mean 15.2 nights (SD 13.4)).

Chronic conditions and Trimorbidity

In 2018, 77.3% participants had one or more chronic health conditions in any trimorbidity domain (single morbidity, bimorbidity, or trimorbidity). This rate steadily rose from 64.5% of participants in 2000 (Figure 1A). From 2000-2015 participants most commonly reported a chronic condition in a single domain (32.1-35.4%). However in 2018, more participants reported bimorbidity (31.7%), or involvement of two chronic condition categories, than single condition category (29.3%). In that same year, trimorbidity impacted 16.3% of participants, a rate that steadily rose from 7.9% in 2000 to 10.6%–11.3% in 2003-2009, and 12.6%–13.3% from 2012-2015.

Participants increasingly reported physical health, mental health, or substance use conditions between 2000 and 2018 (Figure 1B). Physical health conditions impacted 32.5% of participants in 2000; this steadily increased to 45.0% in 2018. Mental health conditions

impacted 33.5% of participants in 2000 and increased to 57.0% in 2018. Substance use conditions impacted 36.7% of participants in 2000 and increased to 41.9% of participants in 2018.

Sensitivity analyses showed that trends in the domains trimorbidity (Supplemental Table 1) and the prevalence of physical health, mental health, and substance use conditions (Supplemental Table 2) did not vary substantively between unadjusted and adjusted models. These models also confirm that increases in people with insurance coverage or sleeping outside/in cars (Supplemental Table 3) do not fully explain increases in trimorbidity (Adjustment-2 and Adjustment-3, Supplemental Table 1).

We disaggregated our data to examine specific diagnoses within the 3 chronic health condition categories which impacted adults experiencing homelessness.

Increasing numbers of adults experiencing homelessness between 2000-2018 reported 4 common physical health conditions—asthma, diabetes, heart disease, and hypertension (Figure 2). Hypertension was most common and peaked in 2015 when it affected 29.1% of participants. Asthma steadily increased from 2000 to 2018 when it affected 20.1% of participants. Heart disease affected 7.2-8.2% of participants from 2000-2009 but rose to 11.2% by 2015. Diabetes affected 6.4-7.3% of participants from 2000-2006 but increased to 12.5% by 2018. A sensitivity analysis showed that trends in physical conditions remained consistent in unadjusted and adjusted models (Supplemental Figure 1, Supplemental Table 4).

Increasing numbers of adults experiencing homelessness between 2000-2018 reported being diagnosed with 4 mental health conditions: depression, PTSD, bipolar, and schizophrenia/other paranoid or delusional disorders (Figure 3). Depression affected 24.3% of participants in 2000, making this the most commonly reported mental health condition; this increased to 44.3% in 2018. PTSD affected 13.1% of participants in 2000 and increased to 35.6% of participants in 2018. Bipolar disorder affected 12.3% of participants in 2000 and increased to 23.9% in 2018. Schizophrenia/other paranoid or delusional disorders affected 6.4% of participants in 2000 and increased to 10.0-10.9% of participants from 2006-2018. The number of participants who reported diagnoses of all mental health conditions (depression, PTSD, bipolar, and schizophrenia) increased four-fold over this time period, from 1.1% in 2000 (n = 26) to 4.4% in 2009-2018 (n = 187 in 2018) (data not shown).

The overall portion of participants who met our definition of having a substance use condition (reported alcohol/drug abuse disorder or chemical dependency and/or use of illicit substances) remained relatively steady between 2000-2018 (35.1-41.9%). However, the types of substances used among this group varied substantially over this time (Figure 4). Alcohol abuse disorder was the most commonly reported substance use condition from 2000-2009 peaking in 2006 when it affected 21.7% of participants. However, this changed in later years, and by 2012 18.2% of participants reported alcohol abuse disorder. While illicit substance use affected 3.7-9.6% of participants between 2000-2015, this more than doubled to 20.2% in 2018. Although we did not include marijuana use in our definition of participants having a substance use condition, we did examine trends in marijuana use

among those with other qualifying criteria. In 2012, 18.1% of such participants reported marijuana use, which was equal to those reporting alcohol abuse disorder. However in 2015, users of marijuana (20.8%) surpassed those reporting alcohol abuse disorder (17.1%), and reached 30.5% of participants by 2018.

Discussion

In this study we used a statewide survey of adults experiencing homelessness and found a steady rise in the rates and overlap of physical health, mental health, and substance use conditions from 2000-2018 using data from 25,522 surveys. These changes were not explained by concurrent changes in demographic or homeless characteristics of participants. The increasing overlap of morbidity categories was especially clear in 2018 when bimorbidity, or involvement of two chronic condition categories, surpassed single condition categories. This same year, trimorbidity reached an all-time high impacting 16.3% of all participants. In 2018, participants most commonly reported diagnoses of hypertension and depression. That same year participants with substance use conditions reported increased use of marijuana and illicit substances which surpassed those reporting alcohol abuse disorder. These substantial increases in the rates of overlap among physical health, mental health, and substance use conditions between 2000-2018 likely impacted health-related quality of life among adults experiencing homelessness and strained existing public health and health care delivery systems.¹²

Secondary findings of this study include documentation of the substantial increase in the frequency and duration of homelessness as well as the number of nights slept outside/in a car among adults experiencing homelessness in Minnesota over time. We also documented rising proportions of people impacted by specific physical health and mental health diagnoses over time. A sharp rise in reports of hypertension and asthma contrasted a slower rise in heart disease. Diabetes rates reached an all time high in 2018 affecting over 12% of participants, a rate higher than the national average in the general population (10.5%).²² Depression and PTSD diagnoses rose more sharply than a slower rise in bipolar disorder and schizophrenia. Types of substances used among those with a substance use condition revealed a stark increase in the use of marijuana and illicit drugs and a decrease in reports of alcohol abuse disorder.

Increasing rates of bi- and trimorbidity among adults experiencing homelessness may be driven by a number of factors. First, epidemiology data from the United States documents an epidemic of mental illness and substance use disorders.²³ Our data suggest that adults experiencing homelessness are heavily impacted by these conditions. We document an especially substantial rise in the rates of mental health conditions among people experiencing homelessness between 2000 and 2018 (Figure 1B). Second, we confirmed aging patterns seen among adult homeless populations in other regions with the average age of survey participants rising 4.6 years from 2000 to 2018 (Supplemental Figure 1). However, in sensitivity analyses, age-adjustment (along with adjustment for other changing demographics) did not account for the increased number of physical health conditions among survey participants during this time period. Third, participants in this study reported increasing rates of homelessness frequency, duration, and nights slept outside/in a car from

2000-2018, though again, these trends did not account for the changes we found in trimorbidity. That our adjustments did not substantively alter our findings suggests that increasing chronic conditions among individuals who are homeless are likely driven by worsening health profiles and not changing demographics.

Our findings add to existing cross-sectional studies of chronic disease, multimorbidity and trimorbidity among homeless populations^{1,3-6} by adding a large sample of over 25,000 participants and trend data to allow examination of changes over this nineteen year period. We found a lower rate of trimorbidity than Stringfellow et al. (39%)³ and Dobrovic (86.5%).⁵ This is likely due to the fact that their sampling of patients engaged in primary care with the Veteran's Administration or Health Care for the Homeless (N=601)³ and people rough sleeping in Adelaide, Australia (N=30)⁵ resulted in an older, sicker subset of people experiencing homelessness than our statewide survey. Rates of chronic diseases in this study are comparable to other population prevalence estimates previously published for adults experiencing homelessness. Such estimates have broad ranges given the heterogeneity of their study designs and sampling frames.^{14,15,24}

Our trend data enables public health and health system leaders to better understand the overlapping, complex needs of adults experiencing homelessness and the critical need for more affordable housing. Rising rates of trimorbidity underscore the need to continue ongoing work to design and test integrated primary care – providing physical and behavioral health care and social services to populations experiencing homelessness ideally delivered within or in conjunction with affordable housing programs.²⁵⁻²⁸ Delivery of services should be accessible, mobile, coordinated, and include robust treatment of mental health and substance use conditions. It should emphasize trusted, longitudinal relationships with people experiencing homelessness and patient-centered strategies including harm reduction.²⁹ Such work should also include standardized methods to document trimorbidity trends over time, such as measurement of the overlap of physical health, mental health, and substance use conditions. Such measurement will be of value to compare findings from this study to other regions and assess the ongoing, complex needs of this population.

Our work must be interpreted with attention to several limitations. First, while our sample size is large, there is an unquantified amount of overlap between survey wave participants. Given the nature of our trend-based study question, this may allow us to document the evolution of trimorbidity among some participants and does not substantially detract from our conclusions. Second, our data come from the Minnesota Homeless Survey, a survey designed to inform local service delivery. It relies on self-report which is subject to respondent bias, although this bias would be similar in each year and would be unlikely to affect trends. Survey questions changed slightly from year to year and were not all previously validated with psychometric testing. Third, while we have a statewide sample, it did not include all people experiencing homelessness and was not designed with probabilistic methods and therefore cannot be considered representative of the statewide homeless population. This aligns with difficulties previous researchers have found conducting random sampling in homeless populations.³⁰ Finally, we consider these rates to be underestimates of the true prevalence of morbidity across these domains given that only select diagnoses were asked consistently across survey waves. Consistent use of a more

comprehensive list of physical health (e.g. cancer, chronic kidney disease, hepatitis), mental health (e.g. Autism Spectrum Disorders, Traumatic Brain Injury), and substance use conditions (e.g. pain relievers, stimulants) would likely yield rates even higher than those we report.^{31,32}

In conclusion, nineteen years of statewide survey data demonstrates a stark rise in the diagnosis and overlap of physical health, mental health, and substance use conditions among adults experiencing homelessness from 2000-2018. Bi- and trimorbidity emerged as the most common domains of morbidity among participants in 2018. This underscores the importance of efforts to deliver integrated physical health, mental health, and substance use services within affordable housing to people experiencing homelessness. Such programs will offer the best opportunity to support people experiencing homelessness to get and sustain housing, optimize their physical and behavioral health, reduce their health disparities, and improve their health-related quality of life.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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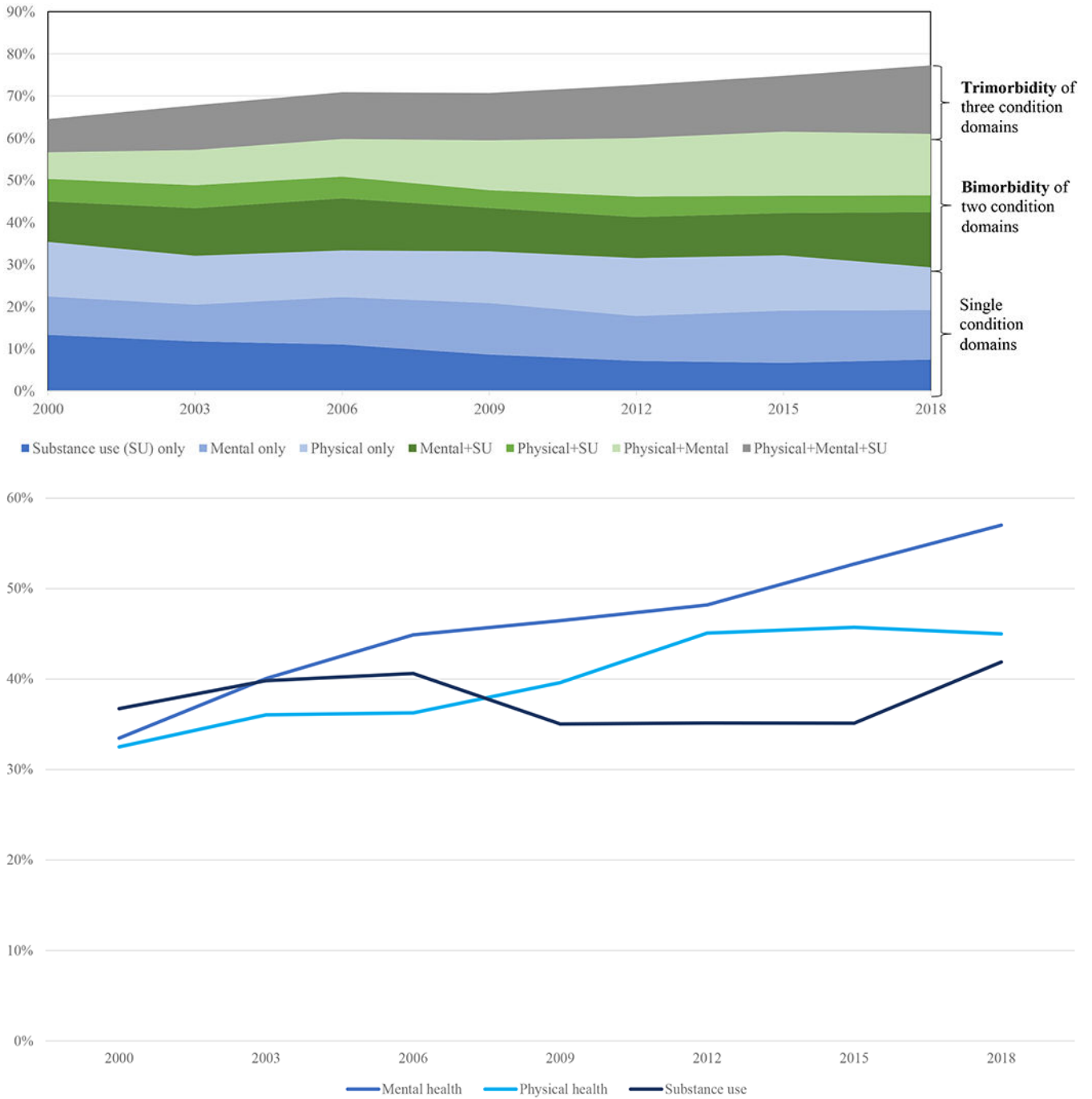


Figure 1.
 A. Cumulative prevalence of adults experiencing homelessness reporting various combinations of trimorbidity domains
 Note: De-duplicated categories means each participant is represented in a single, exclusive category
 B. Prevalence of adults experiencing homelessness reporting any physical health, mental health, and substance use conditions

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Note: Categories allow overlap which means a person is represented in each relevant condition category.

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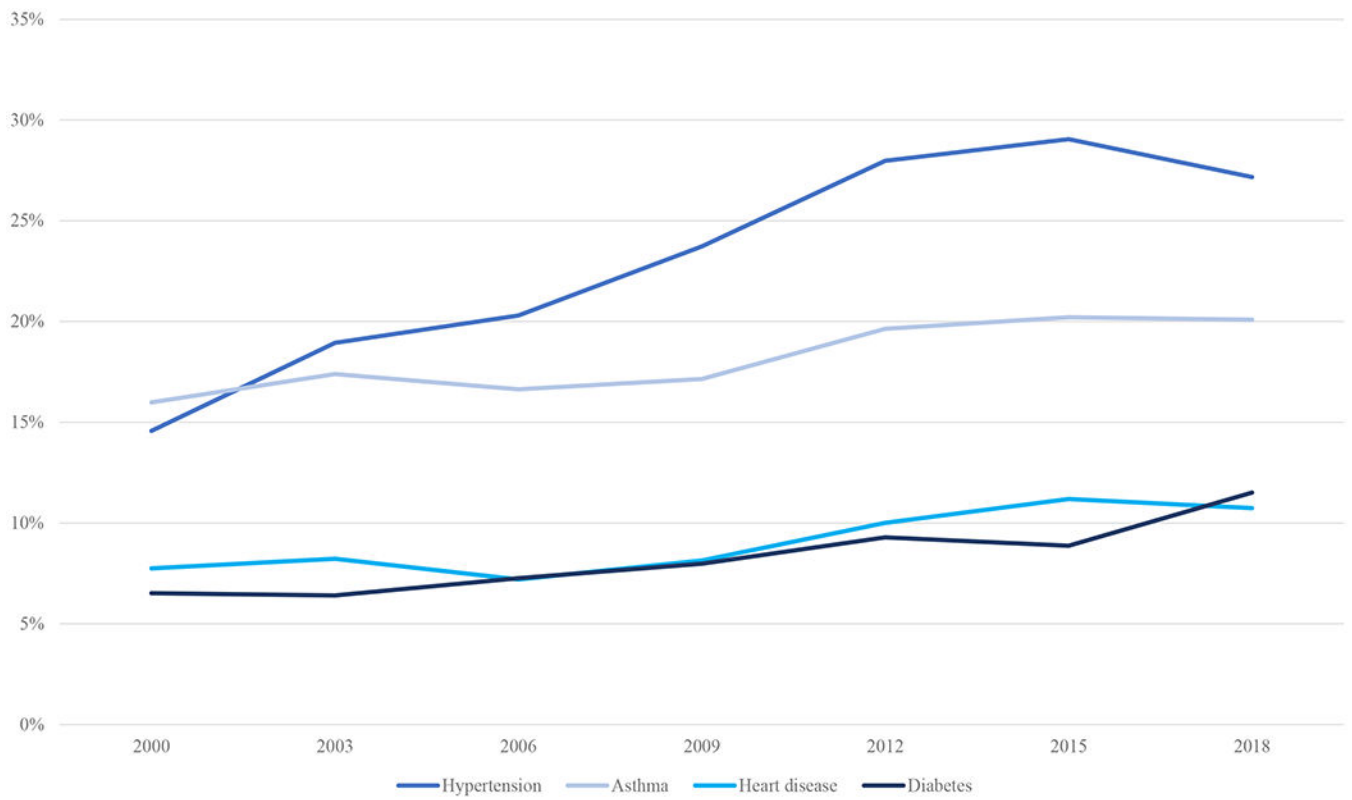


Figure 2.

Prevalence of diagnoses of chronic physical conditions among adults experiencing homelessness from 2000-2018

Note: Categories allow overlap which means a person is represented in each relevant condition category.

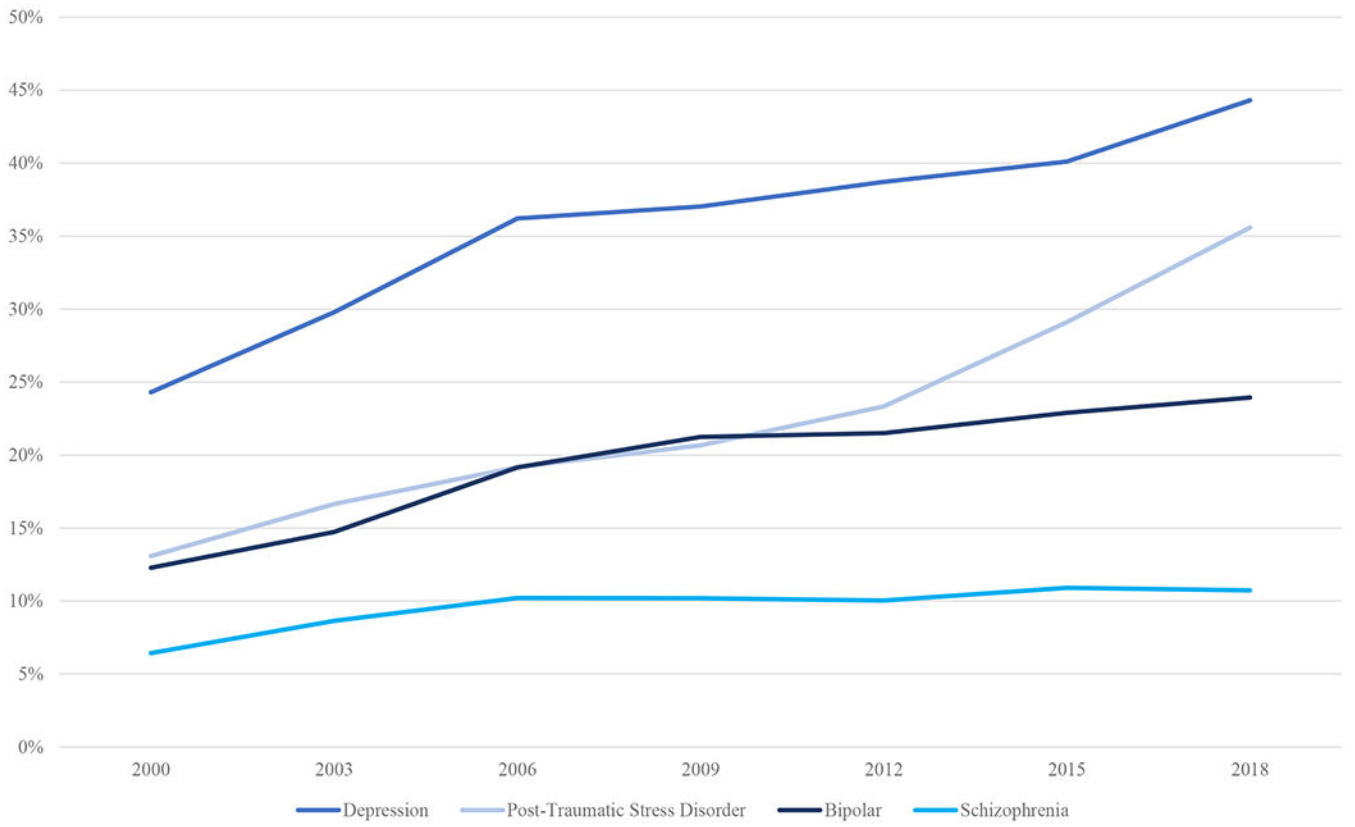


Figure 3. Prevalence of diagnoses of mental health conditions among adults experiencing homelessness from 2000-2018
Note: Categories allow overlap which means a person is represented in each relevant condition category.

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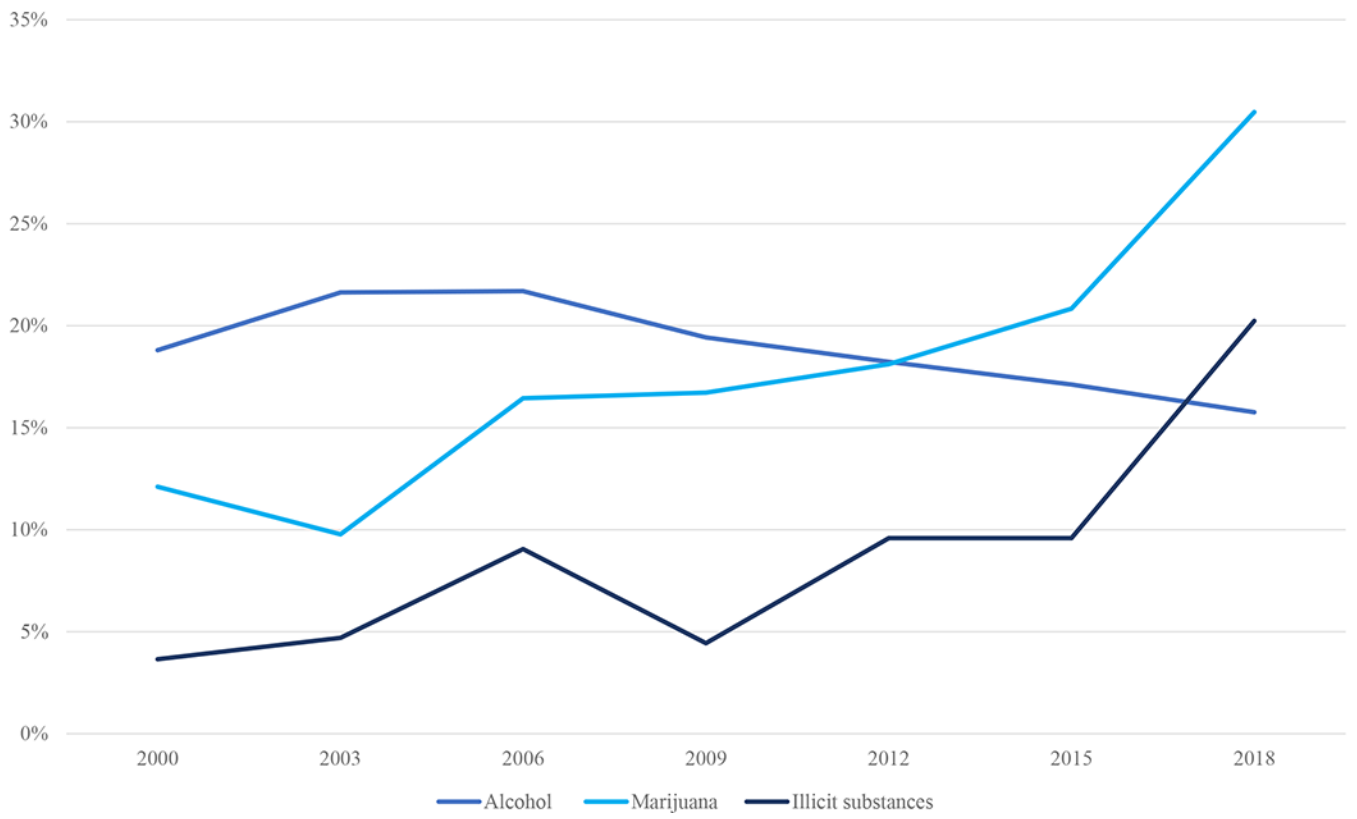


Figure 4. Prevalence of substances used by adults experiencing homelessness from 2000-2018
Note: Categories allow overlap which means a person is represented in each relevant condition category.

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Table 1.

Demographic and homelessness characteristics of participants in the Minnesota Homeless Survey from 2000-2018

	Survey years:	2000	2003	2006	2009	2012	2015	2018
		2,271	3,088	3,582	4,437	4,465	3,528	4,181
Age (M, SD)		35.2, 11.2	37.1, 11.6	37.8, 12.2	37.2, 12.7	38.1, 13.4	39.1, 13.6	39.8, 13.6
Gender								
	Male	1,009(44.4)	1,577(51.1)	1,905(53.2)	2,442(55.0)	2,474(55.4)	1,864(52.8)	2,283(54.6)
Marital status								
	Married	170(7.5)	189(6.1)	219(6.1)	209(4.7)	206(4.6)	211(6.0)	216(5.2)
Race								
	African American/ African native	900(39.6)	1,126(36.5)	1,290(36.0)	1,727(38.9)	1,559(34.9)	1,305(37.0)	1,434(34.3)
	Native American/Indian Native	304(13.4)	328(10.6)	435(12.1)	554(12.5)	526(11.8)	356(10.1)	620(14.8)
	Asian/Asian American	25(1.1)	33(1.1)	61(1.7)	47(1.1)	63(1.4)	53(1.5)	72(1.7)
	White	847(37.3)	1,345(43.6)	1,469(41.0)	1,723(38.8)	1,930(43.2)	1,465(41.5)	1,550(37.1)
	Other or multiple	170(7.5)	194(6.3)	291(8.1)	333(7.5)	355(8.0)	275(7.8)	439(10.5)
Ethnicity								
	Hispanic	135(5.9)	212(6.9)	237(6.6)	326(7.3)	323(7.2)	254(7.2)	340(8.1)
Employment								
	Employed	857(37.7)	912(29.5)	940(26.2)	810(18.3)	1,021(22.9)	995(28.2)	1,108(26.5)
Education								
	High school degree/GED or greater	1,425(62.7)	1,893(61.3)	2,123(59.3)	2,688(60.6)	2,676(59.9)	2,211(62.7)	2,546(60.9)
Homeless duration								
	Less than a year	1,394(61.4)	1,720(55.7)	1,873(52.3)	2,131(48.0)	2,122(47.5)	1,532(43.4)	1,670(39.9)
	1-5 years	663(29.2)	1,065(34.5)	1,267(35.4)	1,722(38.8)	1,725(38.6)	1,449(41.1)	1,739(41.6)
	More than 5 years	143(6.3)	271(8.8)	401(11.2)	517(12.9)	578(12.9)	516(14.6)	711(17.0)
Lifetime frequency of homelessness								
	1 time	--	--	988(27.6)	1,082(24.4)	1,212(27.1)	814(23.1)	924(22.1)
	2-4 times	--	--	1,266(35.3)	1,538(34.7)	1,536(34.4)	1,242(35.2)	1,418(33.9)
	5-7 times	--	--	471(13.1)	611(13.8)	605(13.5)	539(15.3)	647(15.5)
	8 or more	--	--	682(19.0)	1,055(23.8)	963(21.6)	824(23.4)	1,067(25.5)
Nights spent in last 30 days (M, SD)								
	Outside/in a car	--	--	--	--	5.3, 9.6	5.4, 9.6	8.5, 11.6
	Doubled up	--	--	--	--	5.1, 9.4	4.6, 8.8	4.8, 8.9
	Shelter	--	--	--	--	17.9, 13.1	18.4, 12.8	15.2, 13.4
	Regular housing	--	--	--	--	0.8, 3.9	0.9, 3.9	0.5, 3.0
	Other	--	--	--	--	--	0.7, 3.6	1.0, 4.0
Health insurance in past month								

	Survey years:	2000	2003	2006	2009	2012	2015	2018
	Insured	--	2,105(68.2)	2,376(66.3)	3,238(73.0)	3,486(78.1)	2,684(76.1)	3,123(74.7)

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