Spotlight:

The Decline in Life Expectancy in the Finger Lakes Region, 2013-2021

Common Ground Health

Overview

Life expectancy is a key metric to assess the health of a population and examine mortality across groups of people. Researchers track life expectancy at birth, which is the number of years a newborn is expected to live based on location and demographics. Since 1880, life expectancy at birth for Americans has increased for each generation[1] due to advances in clean water, sanitation, antibiotics, and vaccines, among other public health efforts.

However, for the first time since World War I and the Great Influenza pandemic of 1918, life expectancy has fallen in the United States.[2] And we've experienced this same decline in the Finger Lakes region.

Common Ground Health performed detailed analyses to examine changes to life expectancy from 2000-2021 across the region, and for specific demographic groups.
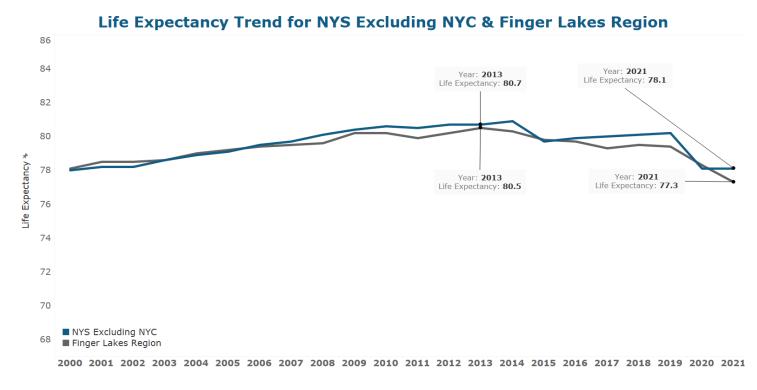
These are our key findings:

- Average life expectancy across the region declined by more than 3 years from 2013 to 2021.

- The primary causes for this drop are increases in premature mortality from drug overdoses, homicide, and heart disease, in addition to deaths from COVID-19.

- The declines were largest for communities of color and in ZIP codes with low socioeconomic status, leading to the largest disparities in life expectancy since at least 2000.

In this spotlight, we provide a more detailed look at how and why life expectancy has fallen across the region, and the disparate effects that race, ethnicity, and socioeconomic status have on mortality.

For the first time since World War I, life expectancy has fallen in the United States.

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[1] Dattani, S., Rodés-Guirao, L., Ritchie, H., Ortiz-Ospina, E., & Roser, M. (2023, December 28). *Life expectancy.* Our World in Data. https://ourworldindata.org/life-expectancy

[2] United Nations, Department of Economic and Social Affairs, Population Division. *World Population Prospects 2019, Volume I: Comprehensive Tables.* https://www.statista.com/statistics/1040079/life-expectancy-united-states-all-time/

Life Expectancy Trend for NYS Excluding NYC & Finger Lakes Region

Year: **2013**
Life Expectancy: **80.7**

Year: **2021**
Life Expectancy: **78.1**

Year: **2013**
Life Expectancy: **80.5**

Year: **2021**
Life Expectancy: **77.3**

- NYS Excluding NYC
- Finger Lakes Region

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Source: NYS Vital Statistics; US Census Bureau Population Estimates; Years 2000 - 2021
Analysis and Life Expectancy Calculations by Common Ground Health

Figure 1

Life expectancy dropped significantly in the Finger Lakes region.

From 2000 to 2013, life expectancy increased steadily for all groups that we analyzed, regardless of race, ethnicity, and socioeconomic status (SES). The average life expectancy in the region climbed to an all-time high of 80.5 years. Since then, however, the trend has reversed. We witnessed a small decline between 2013 and 2017 with life expectancy dropping to 79.3 years, and then a more acute decline between 2019 and 2021 with life expectancy falling to 77.3 years, the lowest since 2000. This significant drop erased all the life expectancy gains since 2000 and is a concerning signal about the health of our region's residents.

To understand this significant change in life expectancy, we need to examine the causes of premature mortality. We assess this through years of potential life lost (YPLL).[3] Prior to 2013, life expectancy was rising across the region due to fewer people dying early of cancer and heart disease, the leading causes of death in the region. From 2013 to 2019, life expectancy fell as fatal drug overdoses increased. These deaths alone accounted for 57% of the increase in overall YPLL.
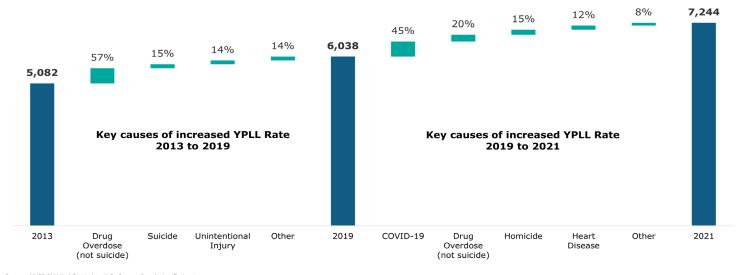
During the same period, there were two other significant causes of increased YPLL: suicide and unintentional injury, such as falls and traffic accidents. The sharper decline in life expectancy from 2019 to 2021 is attributed to COVID-19 and a further rise in YPLL from drug overdoses. Regionally, COVID-19 and drug overdoses accounted for 45% and 20% of the increase in YPLL. Additionally, significant increases in YPLL from homicides and heart disease further decreased life expectancy from 2019 to 2021.

The data in figure 2 focus on causes of death explaining the recent decline in life expectancy. Figure 3 provides a broader look at the top causes of death and shows that cancer and heart disease remain the leading causes of mortality based on the number of overall deaths. Cancer also remains the top cause of *premature* mortality despite a drop in its YPLL rate, which reflects fewer people dying at younger ages.

The significant increase in drug overdoses coupled with the relatively young average age (44) is why drug overdose has replaced heart disease as the cause of death with the second highest YPLL rate.

[3] Years of potential life lost (YPLL) is used widely to assess the rate of premature mortality. YPLL places a larger weight on the deaths of younger people, in contrast with overall mortality statistics, which are dominated by deaths of the elderly. Common Ground Health calculates years of potential life lost (YPLL) for deaths that take place prior to age 75. A death at age 65 has YPLL of 10, where as a death at age 35 has a YPLL of 40. The rates are calculated per 100,000 population and are age-sex adjusted to account for differences in population distribution.

Change in YPLL Rate from 2013 -> 2019 -> 2021
Finger Lakes Region

Key causes of increased YPLL Rate 2013 to 2019

Key causes of increased YPLL Rate 2019 to 2021

2013: 5,082
Drug Overdose (not suicide): 57%
Suicide: 15%
Unintentional Injury: 14%
Other: 14%
2019: 6,038
COVID-19: 45%
Drug Overdose (not suicide): 20%
Homicide: 15%
Heart Disease: 12%
Other: 8%
2021: 7,244

Source: NYSDOH Vital Statistics; U.S. Census Population Estimates
Age-sex adjusted YPLL rates calculated by Common Ground Health. Analysis based on primary cause of death.

Figure 2

Top 10 Causes of Death
Finger Lakes Region Years 2019-2021

	Number of Deaths	Average Age of Death	YPLL Rate	YPLL Change
Cancer	8,000	73	1,043	-182
Heart Disease	7,829	78	762	50
Alzheimer's and Other Dementias	4,600	87	40	8
COVID-19	2,632	78	230	230
COPD	1,656	77	105	-4
Stroke	1,579	81	106	3
Unintentional Injury	1,311	68	473	24
Drug Overdose	1,094	44	979	731
Diabetes	988	72	176	76
Kidney Failure and Disease	949	80	71	12

Source: NYS Vital Statistics; US Census Bureau Population Estimates; Years 2019 - 2021
Analysis and Calculations by Common Ground Health

Figure 3

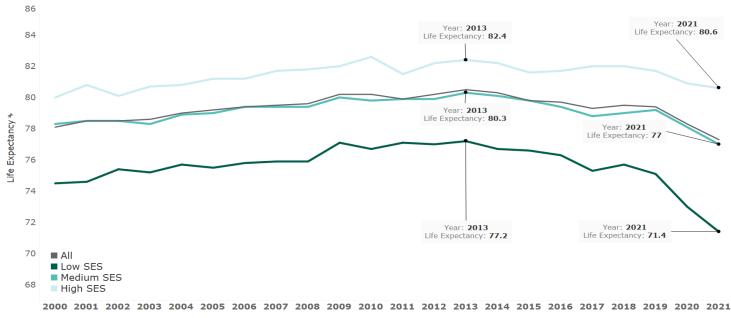# Life Expectancy and Socioeconomic Status in the Finger Lakes

Residents of ZIP codes with low socioeconomic status (SES)[4] have consistently had shorter life expectancy than their peers living in ZIP codes with higher SES. This disparity has widened in recent years. Since 2013, life expectancy has fallen steadily and significantly for residents in low SES areas, in contrast with a marginal decline for those living in high SES areas.

In 2021, we witnessed the largest life expectancy gap since at least 2000, with those living in low SES ZIP codes having a life expectancy 9.2 years lower than those living in high SES ZIP codes. Notably, residents in high SES ZIP codes were the only SES group to have a higher life expectancy in 2021 than in 2000.

The same causes of death affecting the overall regional trend have produced the especially steep decline in life expectancy for those living in areas with low socioeconomic status seen in figure 4. The impact of these causes has been particularly intense among the lower SES population. Since 2013, YPLL rates from drug overdoses have significantly increased across the

socioeconomic spectrum, but the increase in low SES areas was nearly triple the rise seen in high SES areas. In addition, the increase in YPLL due to homicide is mostly concentrated in the ZIP codes with low SES. And the impact of COVID-19 was also felt disproportionately in areas with low SES, which had a YPLL rate nearly 4 times the rate experienced in high SES areas.

Similar patterns exist when examining a snapshot of the leading causes of premature death by socioeconomic status as shown in figure 5. Three of the top five causes are the same across low, medium, and high SES areas: drug overdose, heart disease, and cancer. However, for each of these causes, the YPLL rate is much lower in the high SES ZIP codes. Similarly, COVID-19 is the fourth leading cause for both low and medium SES ZIP codes, albeit with a much higher YPLL rate in the low SES areas.

The other notable difference between the SES area is that homicide is the third leading cause of YPLL in the low SES ZIP codes, whereas suicide makes the top five list in high SES ZIP codes. Collectively, these data highlight how the SES life expectancy gap is the result of disparities across a wide variety of health issues.
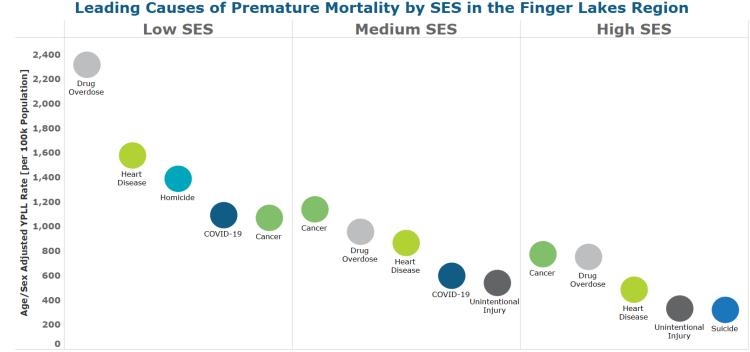

Life Expectancy by Socioeconomic Status (SES) in the Finger Lakes Region

Year: **2013** Life Expectancy: **82.4**
Year: **2021** Life Expectancy: **80.6**
Year: **2013** Life Expectancy: **80.3**
Year: **2021** Life Expectancy: **77**
Year: **2013** Life Expectancy: **77.2**
Year: **2021** Life Expectancy: **71.4**

Legend:
■ All
■ Low SES
■ Medium SES
■ High SES

Source: NYS Vital Statistics; US Census Bureau Population Estimates; Years 2000 - 2021
Analysis and Life Expectancy Calculations by Common Ground Health
Socioeconomic status (SES) is determined by ZIP code. Each data point represents the people who live in ZIP codes with a particular SES level.

Figure 4

[4] The Socioeconomic Status (SES) index was developed by Common Ground Health and calculated using income, education, and occupation indicators from the U.S. Census Bureau's American Community Survey. Each ZIP code is assigned a SES ranking from 1 (low) to 5 (high). The lower SES areas tend to have lower average income and higher poverty rates, lower educational attainment, and lower employment rates in high status jobs. Using the metric, we assigned an SES level to mortality records by ZIP code and aggregated that data for our Life Expectancy and YPLL calculations.
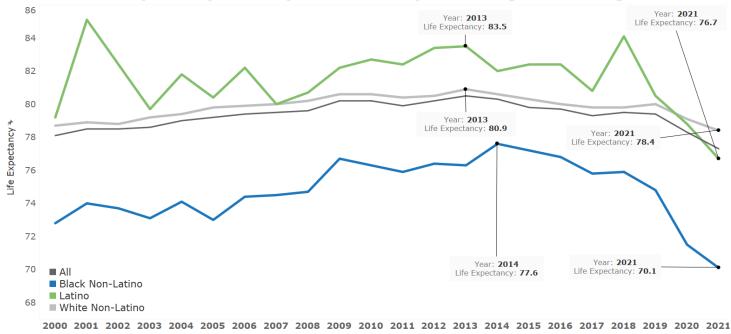
Leading Causes of Premature Mortality by SES in the Finger Lakes Region

| Low SES | Medium SES | High SES |

Age/Sex Adjusted YPLL Rate [per 100k Population]

Low SES:
- Drug Overdose (~2,320)
- Heart Disease (~1,560)
- Homicide (~1,380)
- COVID-19 (~1,090)
- Cancer (~1,060)

Medium SES:
- Cancer (~1,150)
- Drug Overdose (~950)
- Heart Disease (~860)
- COVID-19 (~590)
- Unintentional Injury (~540)

High SES:
- Cancer (~760)
- Drug Overdose (~750)
- Heart Disease (~480)
- Unintentional Injury (~350)
- Suicide (~330)

Source: NYS Vital Statistics; US Census Bureau County Population Estimates and Claritas ZIP Level Estimates; Years 2021
Analysis and Calculations by Common Ground Health
Socioeconomic status (SES) is determined by ZIP code. Each data point represents the people who live in ZIP codes with a particular SES level.

Figure 5

Life Expectancy Trend by Race/Ethnicity in the Finger Lakes Region

Year: **2013**
Life Expectancy: **83.5**

Year: **2021**
Life Expectancy: **76.7**

Year: **2013**
Life Expectancy: **80.9**

Year: **2021**
Life Expectancy: **78.4**

Year: **2014**
Life Expectancy: **77.6**

Year: **2021**
Life Expectancy: **70.1**

Legend:
- All
- Black Non-Latino
- Latino
- White Non-Latino

Source: NYS Vital Statistics; US Census Bureau Population Estimates; Years 2000 - 2021
Analysis and Life Expectancy Calculations by Common Ground Health
All line is inclusive of all residents in Finger Lakes Region Region. Additional Races (i.e. Asian, American Indian/Alaska Native, etc.) are not shown individually on the chart due to small sample size

Figure 6

Racial & Ethnic Disparities in Life Expectancy in the Finger Lakes

People of color in our region generally experience worse health outcomes than their White neighbors. This is especially true for Black[5] residents, who fare worse by nearly every health metric.

In 2000, life expectancy for Black residents (72.8 years) was about six years shorter than it was for White and Latino residents. This gap narrowed through the following decade, as life expectancy for Black residents rose more quickly than it rose for the White and Latino populations. Black life expectancy reached a peak of 77.6 years in 2014 thanks to large drops in premature mortality due to heart disease, HIV and cancer.

Latino life expectancy trends were similarly positive from 2000 to 2013, driven primarily by reductions in YPLL from heart disease, HIV, and homicide. Latino life expectancy was generally rising and remained higher than the life expectancy for the White population.

However, more recently, both the Black and Latino populations experienced a sharper increase in premature mortality than the White population. Black and Latino life expectancies have fallen 7.5 and 6.8 years respectively from their peaks. In contrast, White life expectancy has only declined by 2.5 years. White life expectancy in 2021 was essentially the same as it was in 2000, whereas Black and Latino life expectancies were significantly below their levels in 2000.

The steep declines in life expectancy for the Black and Latino populations were caused primarily by increases in drug overdoses and homicides, along with deaths from COVID-19. The continued rise of drug overdoses pulled down the life expectancy for all analyzed groups, but the impact was much greater for communities of color. The YPLL rate from drug overdoses for Black and Latino people rose at more than twice the rate of the increase for White people.

Similarly, the YPLL rate from COVID-19 for the Black and Latino populations were 180% and 50% higher than the White rate, respectively. Not only were Black and Latino people more likely to die from COVID-19, but they also did so at a younger average age. And the rise in homicide deaths has been borne almost entirely by the Black and Latino communities. The homicide YPLL rate more than doubled for the Black population, and more than tripled for the Latino population. In contrast the rate fell slightly for the

[5] In this paper, Latino refers to any person whose ethnicity is Latino, regardless of race. Black refers to Black non-Latino persons and White refers to White non-Latino. Persons of other races who are non-Latino are included in the 'All' lines on charts but not separately analyzed due to small sample size.

White population during this same period.

We see similar patterns when looking at a snapshot of the overall top causes of premature mortality for these racial/ethnic groups as shown in figure 7. In 2021, drug overdose, heart disease, cancer, and COVID-19 were in the top five causes of premature mortality for the Black, Latino, and White populations.

However, huge disparities are evident when comparing the YPLL rates across those groups for each cause. For each of these causes, Black residents have much higher YPLL rates than both Latino and White residents.

The other notable difference is that while homicide makes the top five list for both the Black and Latino populations, the Black YPLL rate is nearly four times the Latino rate. This chart shows that racial disparities in life expectancy are caused by a broad range of health issues.
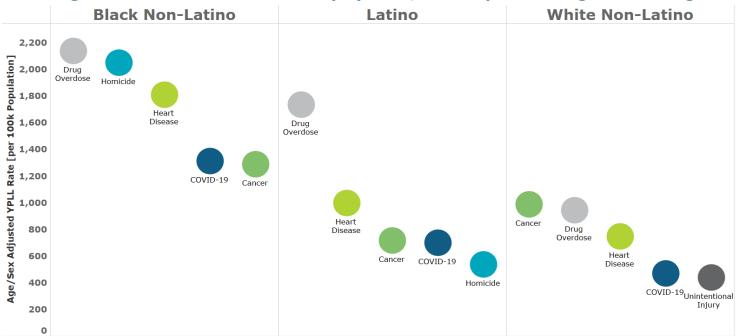
While we see a clear interplay between SES and life expectancy, the significant disparities for Black people can't fully be explained by SES. Racial disparities in life expectancy are so deep that they overwhelm the typically protective health benefits of living in areas with higher socioeconomic status.

As seen in figure 8, both White and Black people living in high SES areas have longer life expectancy than their counterparts in lower SES areas. However, the life expectancy of Black people living in high SES

ZIP codes (72 years) is less than the life expectancy of White people living in low SES ZIP codes (73 years).

Additionally, the life expectancy gap between Black and White people is significantly larger in the high SES areas than in the low SES areas (9 years vs. 4 years). This chart shows that there are significant racial inequities that layer on top of already large socioeconomic inequities undermining health for many in our region.
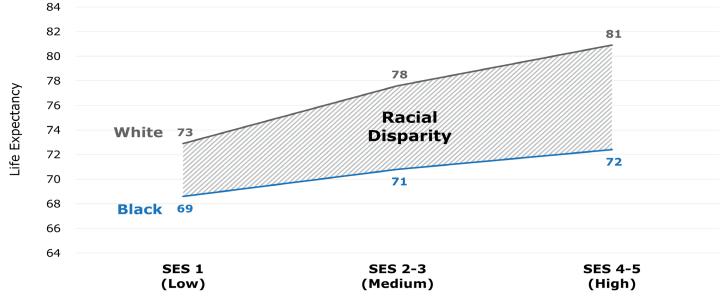
"The color of your skin or amount of resources in your neighborhood should not determine how long you live. We know how to close these gaps: we can reverse overdoses, we can de-escalate violence and we can prevent drug addiction, heart disease and COVID. What we need is continued commitment to public health preventative measures and immediate action to ensure that everyone is able to live a long and healthy life."

— **Wade Norwood**, CEO
Common Ground Health

Leading Causes of Premature Mortality by Race/Ethnicity in the Finger Lakes Region

Figure 7

Source: NYS Vital Statistics; US Census Bureau Population Estimates; Years 2021
Analysis and Calculations by Common Ground Health

7

Life Expectancy by socioeconomic status & race
Finger Lakes 2021

Source: NYSDOH Vital Statistics 2021 for Finger Lakes nine county region; Analysis by Common Ground Health

Figure 8

Conclusion

For the first time in 100 years, life expectancy has fallen across the United States and within our Finger Lakes region.

The downward trend began in 2013 driven primarily by a rise in deaths from drug overdoses. And then COVID-19 hit, directly leading to more than 2,600 deaths in our region. In addition, its disruption to our daily lives produced a ripple effect in other areas of our health and well-being. Many residents struggled with mental and behavioral health issues, and some communities witnessing an escalation in violence.

While every major demographic group was negatively impacted, the effects were particularly damaging in communities of color and areas with low SES, which experienced much larger drops in life expectancy. These forces have had a huge toll on the health and longevity of our region, leaving us in 2021 with a lower average life expectancy and larger racial/ethnic and socioeconomic disparities than twenty years ago.

These numbers are sobering. In presenting them, we hope to inform community-wide conversations and to mobilize efforts to improve health and well-being. As the life expectancy trends before 2013 show, our community knows how to improve life expectancy and to reduce disparities.The community needs

commitment and immediate action to address the root causes of these health inequities.

We have outlined some calls to action in the previous reports *The Color of Health: The Devastating Toll of Racism on Black Lives* and *Unheard: How Silencing Latino Voices Harms Latino Health Equity*.

Collectively, we can reverse declining trends in life expectancy. ■

About Common Ground Health

Founded in 1974, Common Ground Health is the health planning organization for the nine-county Finger Lakes region. We bring together health care, education, business, government and other sectors to find common ground on health issues. Learn more about our community tables, our data resources and our work improving population health at www.CommonGroundHealth.org.

Common Ground Health