The Impact of the COVID-19 Pandemic on Life and Death in Chicago, 2020

Life Expectancy Roundtable
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Results reported by:

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COVID-19 was the 2nd leading cause of death in Chicago during 2020. Cancer mortality was the only leading cause to decrease in number from 2019.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Primary Cause of Death</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heart disease</td>
<td>5325</td>
<td>20.7</td>
</tr>
<tr>
<td>2</td>
<td>COVID-19</td>
<td>4108</td>
<td>16.0</td>
</tr>
<tr>
<td>3</td>
<td>Cancer</td>
<td>4056</td>
<td>15.8</td>
</tr>
<tr>
<td>4</td>
<td>Accidents (drug overdoses, car crashes)</td>
<td>1831</td>
<td>7.1</td>
</tr>
<tr>
<td>5</td>
<td>Stroke</td>
<td>1366</td>
<td>5.3</td>
</tr>
<tr>
<td>6</td>
<td>Diabetes</td>
<td>814</td>
<td>3.2</td>
</tr>
<tr>
<td>7</td>
<td>Homicide</td>
<td>723</td>
<td>2.8</td>
</tr>
<tr>
<td>8</td>
<td>COPD</td>
<td>639</td>
<td>2.5</td>
</tr>
<tr>
<td>9</td>
<td>Alzheimer’s disease</td>
<td>527</td>
<td>2.1</td>
</tr>
<tr>
<td>10</td>
<td>Kidney disease</td>
<td>495</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology.

For comparison:

2019 Top 10 Leading Causes of Death

1 Heart Disease
2 Cancer
3 Accidents
4 Stroke
5 COPD
6 Diabetes
7 Kidney Disease
8 Homicide
9 Alzheimer’s disease
10 Influenza and pneumonia
Life expectancy in Chicago decreased by nearly two years from 2019 to 2020, the largest single-year decrease on record.

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology
Decreases in life expectancy were seen among all race-ethnicity groups in 2020

The largest decline in life expectancy from 2019 to 2020 was among Latinx Chicagoans, at 3.2 years. Black and Asian-American Chicagoans experienced life expectancy declines of 2 years, and white Chicagoans’ life expectancy decreased by 1 year.

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology
Decreases in life expectancy were seen among both males and females in 2020.

The largest decline in life expectancy from 2019 to 2020 was among males. Males experienced a 2.4 year drop in life expectancy compared to 1.4 years among females.

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology
The life expectancy gap between Black and white Chicagoans increased to 10 years in 2020. For the first time since 2001, the life expectancy among Black Chicagoans was below 70 in 2020. The life expectancy gap between 2019 and 2020 for Black and white Chicagoans increased by 0.9 years (gap of 9.1 to 10 years), equal to the increase seen between 2015 to 2016 (gap of 7.4 to 8.3 years).
Once the highest among all race-ethnicity groups, Latinx Chicagoans have lost over 7 years in their expected length of life since 2012.

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology

Once the second-highest among all racial-ethnic groups (after Asian-Americans), Latinx Chicagoans have lost over 7 years in their expected length of life since 2012.
76 of Chicago’s 77 community areas saw a decrease in life expectancy from 2019 to 2020. 12 community areas experienced a decrease in life expectancy of more than 3 years from 2019 to 2020.
The number of Chicago community areas with a life expectancy of less than 70 years was 4 in 2019, and 11 in 2020, nearly tripling in one year. All 11 community areas with life expectancies of less than 70 years of age are predominantly of Black population and very low economic hardship level.
There was a 32% increase in excess deaths – the difference between observed and expected deaths compared to average number of deaths in the past 5 years. From 2019 to 2020, there were 6,000 more deaths than expected. Overall, 21% of the excess deaths seen in 2020 compared to 2019 were due to COVID-19, while 11% of the excess deaths were due to all other deaths combined.
Of 2,075 non-COVID excess deaths, over 1,600 among the top 10 leading causes: homicide, diabetes, accidental deaths, alzheimers, stroke, heart disease

<table>
<thead>
<tr>
<th>10 leading cause of death 2020</th>
<th>Observed deaths</th>
<th>Expected deaths</th>
<th>Excess death (count)</th>
<th>Excess deaths (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assault (Gun-related homicides, etc.)</td>
<td>723</td>
<td>468</td>
<td>255</td>
<td>54%</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>814</td>
<td>585</td>
<td>229</td>
<td>39%</td>
</tr>
<tr>
<td>Accidents (Drug overdoses, Motor vehicle accidents, etc.)</td>
<td>1,831</td>
<td>1,448</td>
<td>384</td>
<td>26%</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>527</td>
<td>431</td>
<td>97</td>
<td>22%</td>
</tr>
<tr>
<td>Cerebrovascular diseases (Stroke)</td>
<td>1,366</td>
<td>1,231</td>
<td>135</td>
<td>11%</td>
</tr>
<tr>
<td>Diseases of heart</td>
<td>5,325</td>
<td>4,831</td>
<td>494</td>
<td>10%</td>
</tr>
<tr>
<td>Nephritis, nephrotic syndrome and nephrosis (Kidney Disease)</td>
<td>495</td>
<td>491</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>Malignant neoplasms (Cancer)</td>
<td>4,056</td>
<td>4,026</td>
<td>30</td>
<td>1%</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases (COPD)</td>
<td>639</td>
<td>635</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>Coronavirus disease 2019</td>
<td>4,108</td>
<td>0</td>
<td>4,108</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology

Heart disease was the leading cause of death in Chicago in 2020; Coronavirus disease 2019 and cancer were the 2nd and 3rd leading causes of death, respectively. However, when looking at excess deaths (the difference between expected and observed deaths), homicides were over 50% greater than expected, while deaths due to diabetes and unintentional injuries were nearly 40% and over 25% greater than expected, respectively.
Premature mortality – defined as death at less than 65 years of age - increased by 32% citywide during the first year of the pandemic, after a 3-year downward trend. Premature mortality increase and among all racial-ethnic groups, and among both males and females. In 2020, Black Chicagoans were 2.5 times more likely to die prematurely than Latinx Chicagoans, 3 times more likely to die prematurely than white Chicagoans, and nearly 4 times more likely to die prematurely than Asian/Pacific Islander Chicagoans.
Overall death rates increased across all race-ethnicities from 2019 to 2020. Nearly half the deaths – 49% - were among Black Chicagoans. The increase in overall death rates varied greatly by race-ethnicity. For white Chicagoans, the overall death rate increased by 19%. For Blacks and Asian/Pacific Islanders the overall death rates increased by 31% and 42%, respectively. For Latinx Chicagoans, the overall death rate increased by 63%.
Overall death rates increased across all adult age groups between 2019 and 2020; Largest rate increase seen among 18-29 year olds

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2017 #</th>
<th>2017 Rate</th>
<th>2018 #</th>
<th>2018 Rate</th>
<th>2019 #</th>
<th>2019 Rate</th>
<th>2020 #</th>
<th>2020 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago</td>
<td>19663</td>
<td>818.7</td>
<td>19565</td>
<td>828</td>
<td>19525</td>
<td>827.2</td>
<td>25644</td>
<td>1084.8</td>
</tr>
<tr>
<td>Ages 0-17</td>
<td>360</td>
<td>57.9</td>
<td>377</td>
<td>60.6</td>
<td>302</td>
<td>48.6</td>
<td>279</td>
<td>44.9</td>
</tr>
<tr>
<td>Ages 18-29</td>
<td>696</td>
<td>120.6</td>
<td>559</td>
<td>96.9</td>
<td>528</td>
<td>91.5</td>
<td>794</td>
<td>137.6</td>
</tr>
<tr>
<td>Ages 30-44</td>
<td>1039</td>
<td>168.2</td>
<td>1079</td>
<td>174.7</td>
<td>1075</td>
<td>174.1</td>
<td>1561</td>
<td>252.8</td>
</tr>
<tr>
<td>Ages 45-64</td>
<td>4743</td>
<td>788.4</td>
<td>4745</td>
<td>788.7</td>
<td>4701</td>
<td>781.4</td>
<td>6193</td>
<td>1029.4</td>
</tr>
<tr>
<td>Ages 65+</td>
<td>12790</td>
<td>4601.8</td>
<td>12774</td>
<td>4596.1</td>
<td>12882</td>
<td>4634.9</td>
<td>16790</td>
<td>6041</td>
</tr>
</tbody>
</table>

Age-adjusted rates per 100,000 Chicago residents

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology

Overall death rates increased across all adult age groups from 2019 to 2020. Death rate among 0 to 17 year olds decreased by 8% compared to 2019. The largest 1-year rate increase among age groups was among 18-29 year olds (50%) and 30-44 year olds (45%). Death rate among 65+ years increased by over 30% compared to 2019.
Death rates from gun-related homicide increased by over 60% during the first year of the pandemic.

Increases were observed among all race-ethnicities and among both males and females. Rates among Latinx nearly doubled; rates among Blacks, already the highest by a very large margin, increased by more than 50%. The Black-white disparity in 2020 was at an historic high.
Death rates from motor vehicle accidents increased by 54% during the first year of the pandemic.

Death rates from motor vehicle accidents among Chicagoans increased sharply from 2019 to 2020, by 54%. While increases were seen across all racial-ethnic groups, and among both males and females, the motor vehicle accident death rate among Black Chicagoans, already the highest among all racial-ethnic groups, increased by 88%.
Death rates from drug overdoses increased by 44% during the first year of the pandemic. Increases were observed among all race-ethnicities and among both males and females. Rates among Latinx nearly doubled during the pandemic. Rates among Blacks increased 43% in 2020 to a level which exceeded the death rates among Blacks for homicide and diabetes. The drug overdose mortality rate of Black Chicagoans was 2 times to 4 times higher than other racial-ethnic groups.
Death rates from diabetes increased among Chicagoans by 36% during the first year of the pandemic to its highest level in 20 years. Increases were observed among all race-ethnicities and both males and females; the largest increase was seen in Blacks, Asian/Pacific Islanders and males.

Source: IDPH vital records as analyzed by CDPH Office of Epidemiology
Alcohol-related death rates increased by more than 25% during the first year of the pandemic. A 39% increase was observed among white Chicagoans, and a 29% increase was observed among Black Chicagoans. While the rate of alcohol-related death for males, was nearly 3 times the rate for females, the rate from 2019 to 2020 increased more among female Chicagoans at 21% versus a 17% increase for males.
Overall HIV mortality increased by 18% from 2019 to 2020. Increases were seen among all racial-ethnic groups. Male Chicagoans saw a 32% increase in HIV mortality, while female Chicagoans saw a 17% decrease in HIV mortality.
The citywide overall flu/pneumonia death rate increased 14% during the first year of the pandemic.

The annual death rates from flu and pneumonia combined increased by 14% from 2019 to 2020, but they were 9x times lower than the overall 2020 death rate from COVID-19. There was a large disparity in the change in flu and pneumonia death rates by race-ethnicity: Latinx, Asian/Pacific Islander and Black Chicagoans saw increases of 28%, 36% and 40%, respectively, while white Chicagoans saw a decrease of 15%.
Death rates from heart disease increased by 10% during the first year of the pandemic. Increases were observed among all race-ethnicities and both males and females.
Death rates from cancer decreased 5% among Chicagoans during the first year of the pandemic. This overall decrease was primarily driven by decreases among Blacks and females from 2019 to 2020.
The overall infant mortality rate decreased by 17% from 2019 to 2020. Declines in infant mortality rates among Latinx Chicagoans were 22%. Sharp declines were seen in Asian/Pacific Islanders (62%) and whites (73%). The infant mortality rate for Black Chicagoans, however, increased slightly.
Healthy Chicago Survey Methods

Healthy Chicago Survey 2020 (HCS Core)
- Survey invitations mailed to a random sample of over 14,000 addresses across all 77 community areas
- 113-question web/mail survey covering a broad range of health-related topics
- Conducted June to December 2020
- Completed survey: n=4,517 (38% response rate)
- English, Spanish

Healthy Chicago Survey 2021 COVID-19 Social Impact Survey
- 3,293 HCS Core respondents agreed to be re-contacted for additional survey
- 67-question web/mail survey focused on COVID-19 impact
- Conducted April to May 2021
- Completed: n=2,198 (67% response rate)
- English, Spanish

*Weighting is a statistical adjustment to a survey sample to permit inferences to be made at a population level

Survey Conducted by Chicago Department of Public Health and RTI International. Two waves of the Healthy Chicago Survey were fielded after the pandemic began in March 2020: The Healthy Chicago Survey 2020 Core was fielded from June to December of 2020, and the Healthy Chicago Survey 2021 COVID-19 Social Impact Survey was fielded April and May of 2021. Analysis conducted by Chicago Department of Public Health and the DePaul University – Department of Health Sciences
During the first year of the pandemic, 15% of all adults reported not being able to access health care when they needed it since COVID started in March 2020 (Answered NO).

Among all racial-ethnic groups, 27% of Latinx Chicagoans reported not being able to access health care when they needed it since the pandemic began in March 2020.

Source: Healthy Chicago Survey 2021 COVID-19 Social Impact Survey

* p<0.05; **p<0.01; *** p<0.001
Overall, 19% of Chicagoans who reported missing a medical appointment reported missing an URGENT medical appointment during the second year of the pandemic. White Chicagoans were two to three times less likely to report missing an urgent medical appointment than other racial-ethnic groups.
During the first year of the pandemic, 27% of all adults reported losing their health care coverage.

(Among those with no health insurance) Since COVID started in March 2020, did you lose your health care coverage? (YES answers)

Adult Chicago residents: 27% (n=73,639)

27% of adult Chicagoans reported losing their health care coverage since the beginning of the pandemic. Black Chicagoans were most likely to report losing their health care coverage, 35%, nearly twice that of the 19% of white Chicagoans who reported losing their health care coverage.

Source: Healthy Chicago Survey 2021 COVID-19 Social Impact Survey

*p < 0.05; **p < 0.01; ***p < 0.001
Serious psychological distress was reported by 10% of all adult Chicagoans in 2020, up from 7% in 2018. Latinx Chicagoans were most likely to report experiencing serious psychological distress.
During the first year of the pandemic, 35% of all adults reported witnessing and/or experiencing violence in the neighborhood.

In the past 12 months, have you witnessed and/or personally experienced violence in your neighborhood? (Answered YES)

Adult Chicago residents: 35% (n=712,319)

In 2020, 35% of adult Chicagoans reported witnessing and/or personally experiencing violence in their neighborhoods. This varied by race-ethnicity greatly: 44% and 43% of Black and Latinx Chicagoans, respectively, reported witnessing and/or experiencing violence in their neighborhoods compared to 26% and 20% of white and Asian/Pacific Islander Chicagoans, respectively.
During the first year of the pandemic, 40% of all adults reported working in-person all the time.

(Among those employed) What best describes how you currently work?
(Answered “In person all the time”)

Adult Chicago residents: 40% (n=508,726)

In 2021, 40% of all employed adult Chicago residents reported working in-person all the time, as opposed to working remotely all or part of the time. Black Chicagoans were more than twice as likely as white Chicagoans to report working in-person all the time; Latinx Chicagoans were nearly three-quarters more likely than white Chicagoans to report working in-person all the time.
During the first year of the pandemic, 47% of adults had a reduction in pay.

Nearly half of all adult (18 years and older) Chicagoans reported that they and/or someone in their household had a reduction in employment and/or pay during the first year of the pandemic. Of all the racial-ethnic groups, Latinx Chicagoans were most likely to report a reduction in pay, at 58%.
Among all adult Chicagoans who reported a reduction in employment and/or pay in their households during the first year of the pandemic, one-third reported that this reduction was due at least in part to increased childcare responsibilities. Among all racial-ethnic groups, white Chicagoans were least likely to report that their reduction in pay/employment was due to childcare responsibilities.
In 2020, Black and Latinx adult Chicagoans were more likely to put off paying for food to pay for other expenses.

In the first year of the pandemic, Black and Latinx adult Chicagoans were more than 3 times more likely than white adult Chicagoans to report putting off paying for food to pay for other expenses, and more than twice as likely as Asian/Pacific Islander Chicagoans.
In 2020, 21% of adult Chicagoans reported being “always” or “usually” worried or stressed about having enough money to pay for housing in the previous 12 months. While nearly identical to 2018 levels, this varied greatly by race-ethnicity. 28% and 25% of Black and Latinx Chicagoans, respectively, reported being worried about having enough money to pay for housing, more than double that of white Chicagoans.
Black and Latinx Chicagoans were less likely to have reliable internet access at home

Compared to white Chicagoans, Latinx Chicagoans were four times less likely to have reliable internet access at home, and Black Chicagoans were six times less likely to have reliable internet access at home.
To explore more health data about Chicago and your community please visit:

chicagohealthatlas.org