



**HEALTHY  
CHICAGO**

CHICAGO DEPARTMENT OF PUBLIC HEALTH

# HEALTHY CHICAGO REPORTS

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Life Expectancy in Chicago, 1990-2010

June 2014



Rahm Emanuel  
Mayor



Bechara Choucair, M.D.  
Commissioner

**REPORTED BY**

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Chicago is getting healthier. How do we know this? Because Chicago residents are living longer. Life expectancy has long been one of the most commonly used measures of a population's general health as it is a reflection of a number of overall indicators which include quality of care, access to care, health behaviors and the environment. This report shows a dramatic increase in our City's life expectancy over the past two decades. A Chicago resident born today can expect to live to 77.8 years of age, a new high for our City and more than seven years longer than a resident born in 1990.

Not only are Chicagoans living longer, but we are outpacing the nation. Since 1990, our life expectancy has grown twice as fast as the U.S. rate overall. True, the U.S. rate is still slightly higher, but that gap is closing quickly. Furthermore, as this report demonstrates, the improvements in life expectancy are being felt across our great city. In fact, we have seen significant increases in life expectancy in every neighborhood, among both males and females and among every ethnic group in the City over the past twenty years.

Over this same period, we have moved toward greater health equity, as we have helped close some long standing gaps between Chicago's major ethnic groups. For example, differences in life expectancy at birth between non-Hispanic blacks (NH blacks) and non-Hispanic whites (NH whites) decreased by 10%, while life expectancy differences

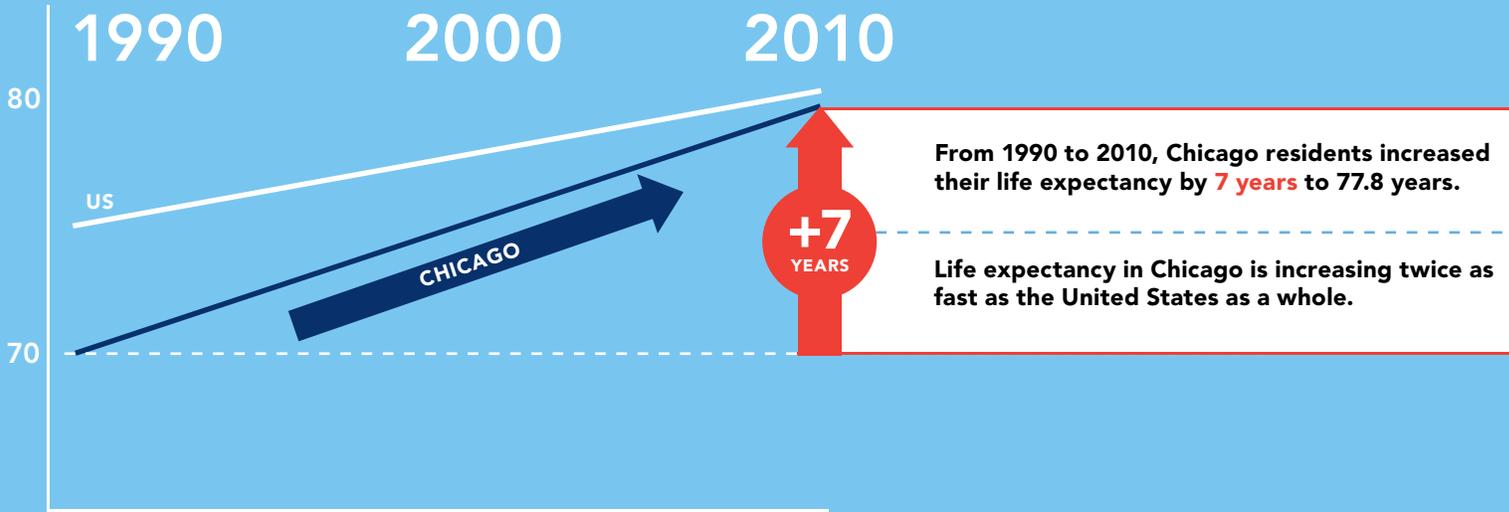
between the two groups due to perinatal conditions decreased by 50%.

These trends reflect the long-term efforts by CDPH and our partners to improve the overall health and well-being of our City's residents through Healthy Chicago. Launched by Mayor Rahm Emanuel in 2011, Healthy Chicago is the City's very first comprehensive public health agenda, serving as a blueprint for all City agencies and our partners to create the environmental, systemic and policy changes necessary to continue to improve the health of all people.

Bechara Choucair, M.D.  
Commissioner of Public Health

# LIFE EXPECTANCY AT BIRTH IN CHICAGO, 1990-2010

Life expectancy in Chicago is up...

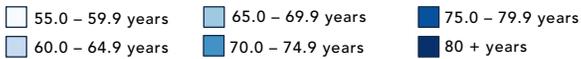
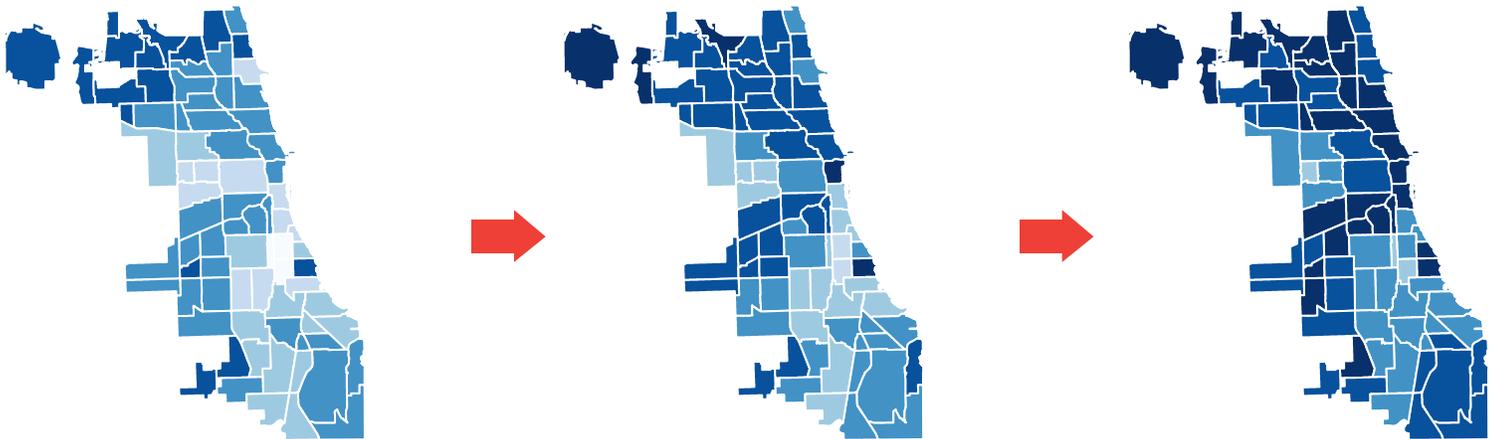


In every neighborhood...

1990

2000

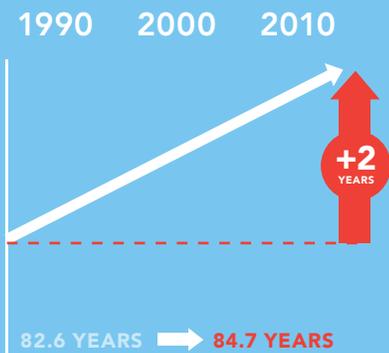
2010



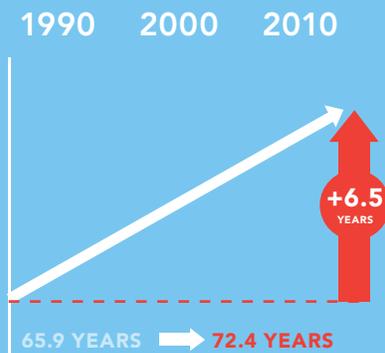
Residents in every neighborhood in Chicago have experienced increases in life expectancy since 1990.

And among every group.

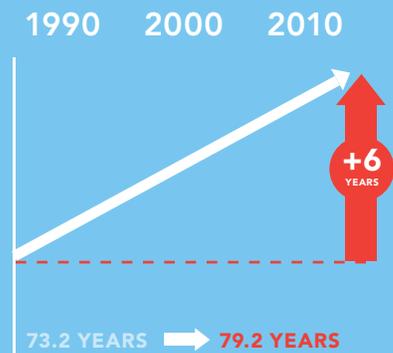
There has been a significant increase in life expectancy among the three major racial-ethnic groups in Chicago.



Hispanic



Non-Hispanic Black



Non-Hispanic White

## KEY FINDINGS

**Life expectancy at birth in Chicago increased between 1990 and 2010. Differences in life expectancy among the sexes, racial-ethnic groups and community areas decreased during the same time period. Disparities in life expectancy still remain, and the Chicago Department of Public Health, along with our many partners, are addressing these gaps through strategies set forth in *Healthy Chicago*.**

Life expectancy at birth is an indicator of the overall health of a population. It represents the average number of years that an infant would be expected to live if they experienced the age-specific mortality rates present in their year of birth. This report examines life expectancy at birth in Chicago by sex, race-ethnicity and community area, and what specific causes of death contribute to differences in life expectancy between racial-ethnic groups, and place of birth among Hispanics.

Life expectancy at birth in Chicago increased by more than seven years between 1990 and 2010, reaching 77.8 years in 2010. Life expectancy at birth in the United States (US) also increased between 1990 and 2010. However, Chicago's life expectancy has increased at a faster rate, decreasing the gap in life expectancy between Chicago and the US by 82%, 4.9 years in 1990 to 0.9 years in 2010 (Figure 1a).

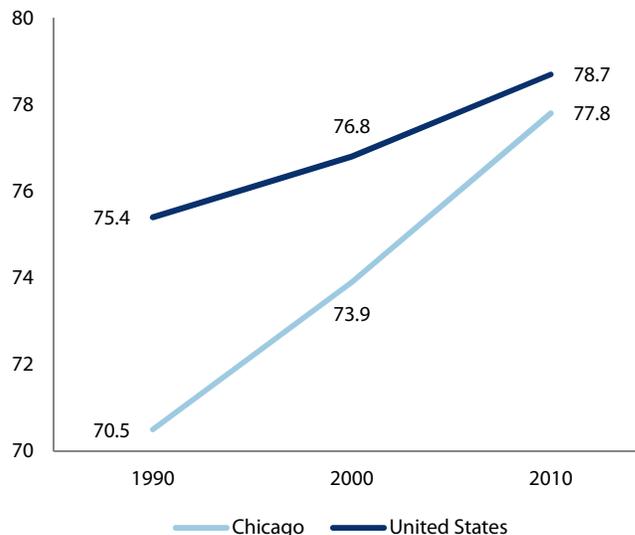
Life expectancy at birth in Chicago increased between 1990 and 2010 for both sexes and all racial-ethnic groups studied (Figure 1b). By 2010, life expectancy at birth was 84.7 years for the Hispanic population, 72.4 years for the non-Hispanic black population and 79.2 years for the non-Hispanic white population. Differences in life expectancy at birth between NH blacks and whites decreased by almost 10% between 1990 and 2010. For Hispanic and NHW populations, differences in life expectancy decreased more than 40% during the 30 year study period. For all three time points, the life expectancy at birth was greatest for the Hispanic population, and lowest for the NH black population. Foreign-born Hispanics had longer life expectancies in 1990, 2000 and 2010 compared to US-born Hispanics (Figure 3). This disparity, however, decreased by 45% over the 20 year study period.

For all community areas in Chicago, life expectancy at birth increased, on average by 6.9 years, between 1990 and 2010 (Figure 1c). Disparity in life expectancies between community areas decreased from 21.7 years in 1990 to 16.5 years in 2010.

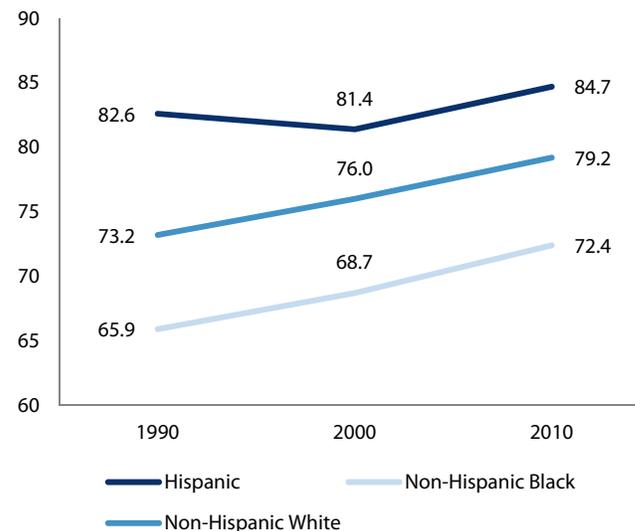
Life expectancy differences due to perinatal conditions between NH whites and blacks decreased by 65% for females, and more than 50% for males between 1990 and 2010. Differences in life expectancy at birth due to heart disease between Hispanics and NH whites in Chicago decreased by more than 50% for females, and almost 40% for males.

Figure 1. Life expectancy at birth, 1990-2010.

## a. In Chicago and the United States



## b. By race-ethnicity, Chicago.



## c. By place of birth for Hispanics, Chicago.

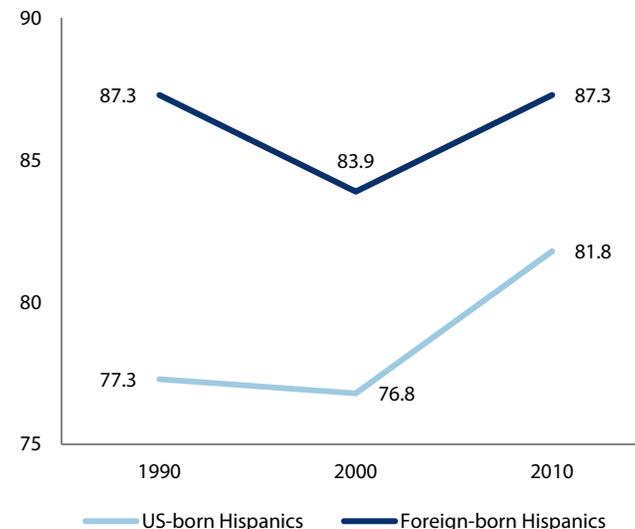
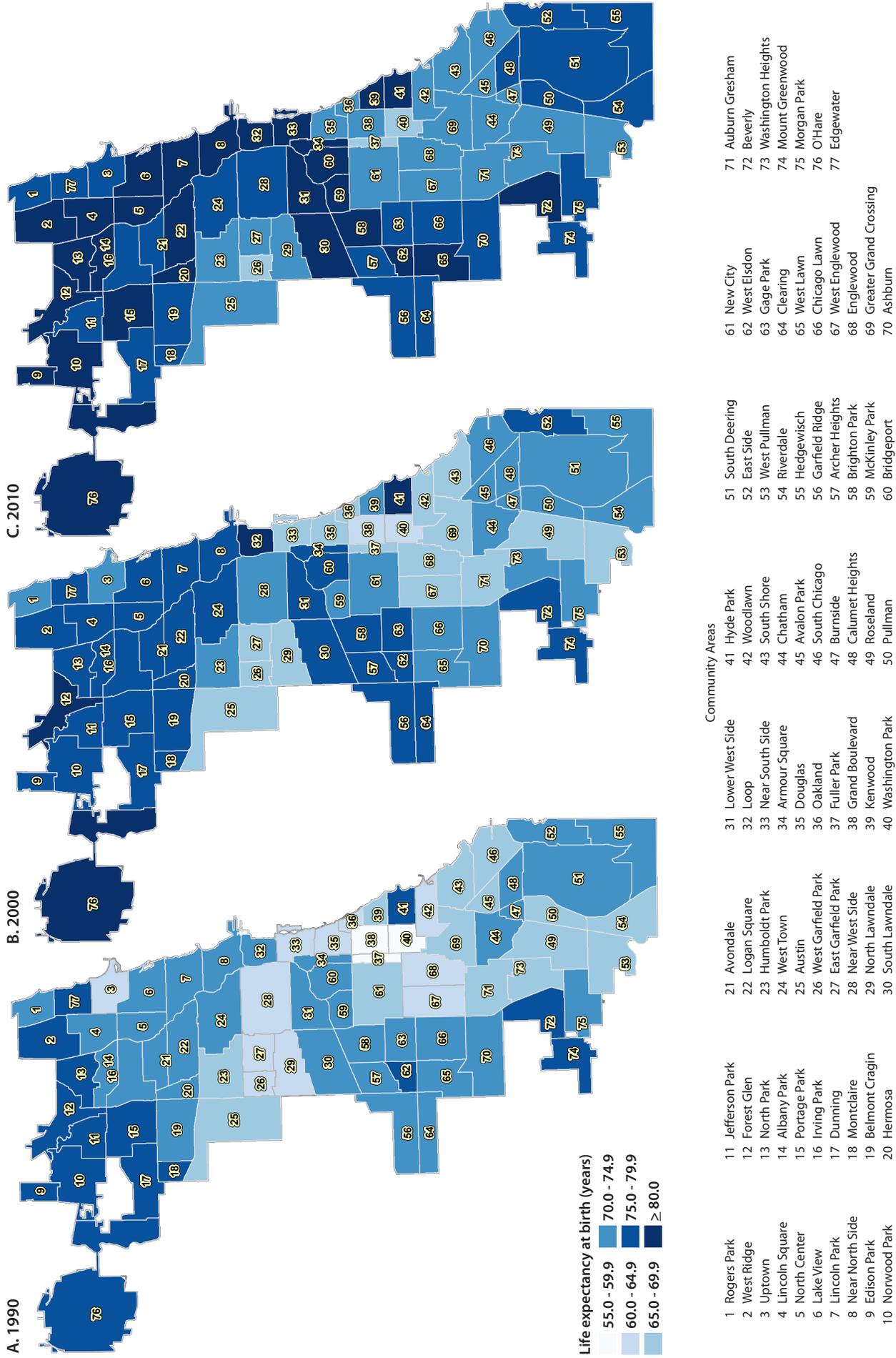


Figure 2. Life expectancy at birth by community area, Chicago, 1990-2010.



## INTRODUCTION

Life expectancy at birth is an indicator of the overall health of a population. It represents the average number of years that an infant would be expected to live if they experienced the age-specific mortality rates present in the year of birth. Life expectancy at birth is one of the measures used by Healthy People 2020 to monitor general health status. General health status and disparities are two of the four foundation health measures that Healthy People 2020 utilizes to track progress of health promotion, disease and disability prevention, disparity elimination and improved quality of life.<sup>1</sup> Life expectancy in the United States (US) has gradually increased over time for the population overall, as well as for all racial-ethnic groups. In 2010, life expectancy at birth reached 78.7 years for the overall population, 81.2 years for Hispanics, 78.8 years for Non-Hispanic (NH) whites and 74.7 years for NH blacks in the US.<sup>2</sup> This report examines life expectancy at birth in Chicago by sex, race-ethnicity and community area, and what specific causes of death contribute to differences in life expectancy between NH blacks and whites, Hispanics and NH whites, and US-born and foreign-born Hispanics.

## METHODS

Death data were derived from vital statistics files produced by the Illinois Department of Public Health (IDPH) for years 1989-1990, 1999-2000, 2009-2010. Two years' of data were combined to minimize the effects of extreme variations in annual mortality due to flu epidemics, heat waves, etc. Each record contains the Chicago community area assigned to the individual based on address of residence at time of death. US-born was defined as having one of the 50 states, Washington DC or any US territory listed as the place of birth on the death certificate. All other birthplaces were categorized as foreign-born.

Abridged life tables were constructed, and life expectancy was calculated utilizing the Chiang methodology.<sup>3</sup> Age-specific death rates were calculated using 1990, 2000 and 2010 U.S. Census population data. Population estimates for US-born and foreign-born Hispanics were obtained from the 5% samples of the 1990 and 2000 U.S. Census, and the 2008-2010 American Community Survey using the Integrated Public Use Microdata Series.<sup>4</sup> Cause-specific mortality rates were calculated and age-adjusted using the 2000 U.S. standard population. Although death rates were produced for 1989-1990, 1999-2000 and 2009-2010, we refer to these years as 1990, 2000 and 2010 for simplicity.

Deaths were categorized into specific causes of death based on the underlying cause of death recorded on the death certificate. Causes of death are translated into International Classification of Disease, Ninth Revision (ICD-9) codes for deaths in 1989 and 1990, and International Classification of Disease, Tenth Revision (ICD-10) for deaths in 1999, 2000,

2009 and 2010. (See Table 1 in the Appendix for the specific causes of deaths and related ICD codes used in this report.) Deaths for 1989-1999 were adjusted using comparability ratios developed by the Centers for Disease Control & Prevention to account for differences between ICD-9 and ICD-10 codes.<sup>5</sup>

To estimate the contribution of various causes of death to differences in life expectancy between racial-ethnic groups in 1990, 2000 and 2010, we used the decomposition method developed by Arriaga.<sup>6</sup> NH white was chosen as the reference racial-ethnic group. For the comparison between US-born and foreign-born Hispanics, foreign-born was chosen.

*The data used to prepare the findings and develop the figures in this report can be found in the Appendix.*

## RESULTS

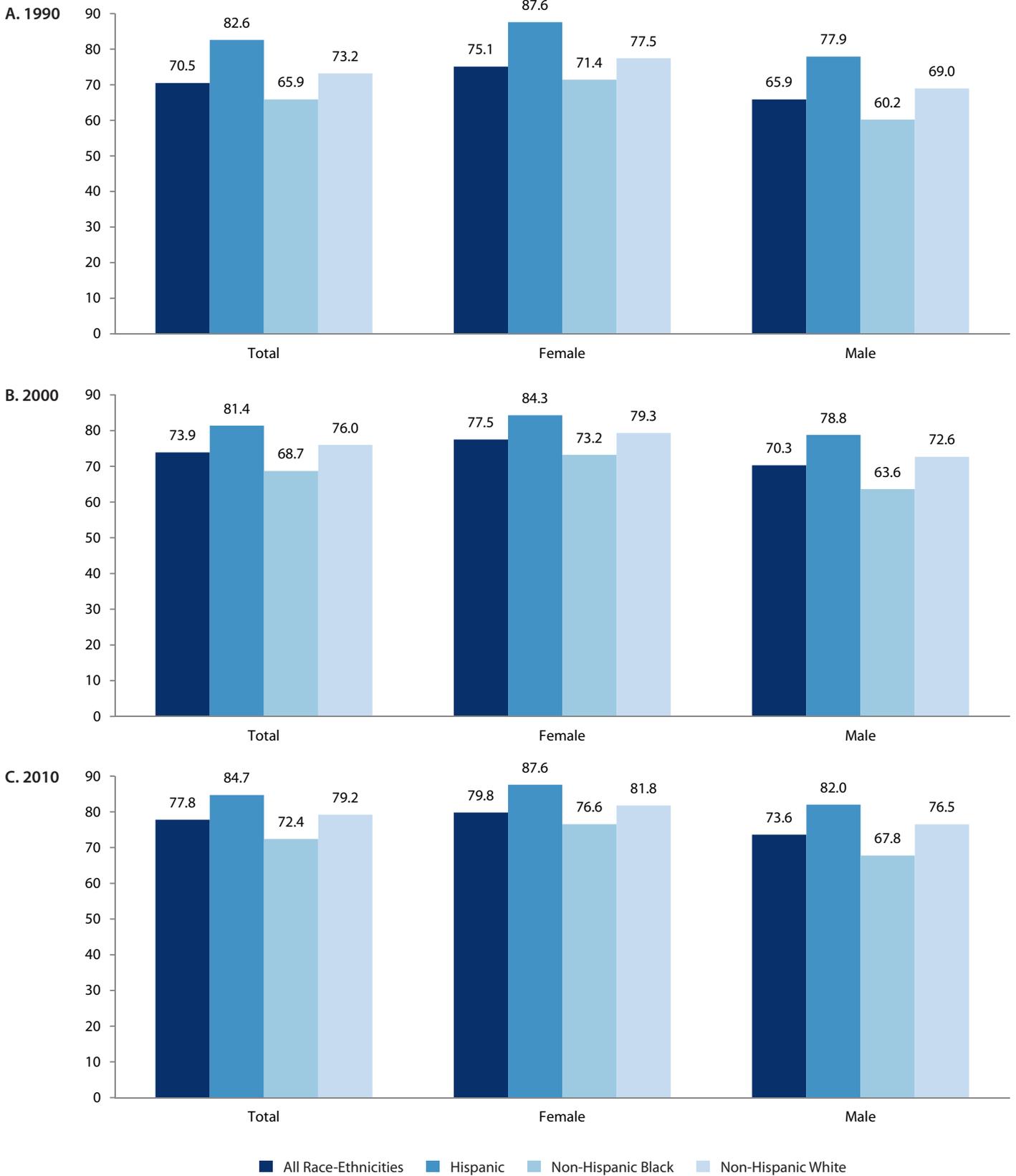
### How does life expectancy at birth vary by community area?

- Life expectancy at birth in Chicago for all sexes, race-ethnicities and community areas increased from 70.5 years (1990) to 73.9 years (2000) to 77.8 years (2010). **FIGURES 2 & 3**
- In 1990, community area life expectancy ranged from 57.1 years to 78.8 years. In 2000, community area life expectancy ranged from 63.8 years to 82.3 years and in 2010, from 68.8 years to 85.2 years. **FIGURE 2**
- Life expectancy increased, on average by 6.9 years, for all community areas between 1990 and 2010 while disparities in life expectancy between community areas decreased from 21.7 years in 1990 to 16.5 years in 2010.

### How does life expectancy at birth differ by race-ethnicity and sex?

- Life expectancy increased between 1990 and 2010 for Hispanic, NH black and NH white populations, and for females and males of all race-ethnicities. **FIGURE 3**
- For all three time points, the Hispanic population had the highest life expectancy of the three major racial-ethnic groups in Chicago. This “Hispanic paradox” has also been observed nationally, with several theories suggested in the literature. These include factors related to social support, acculturation, the “healthy migrant effect,” return migration (i.e., the “salmon hypothesis”) and misclassification of ethnicity on death certificates.<sup>8,9</sup> **FIGURES 1 & 3**
- In 2010, Hispanic females had the highest life expectancy at birth, 87.6 years. There was no change in life expectancy at birth between 1990 and 2010 for Hispanic females, whereas all other sex and race-ethnicity combinations increased between 1990 and 2010. **FIGURE 3**

Figure 3. Life expectancy at birth by sex and race-ethnicity, Chicago, 1990-2010



### How does life expectancy at birth differ for non-Hispanic whites and blacks?

- Between 1990 and 2010, life expectancy increased significantly for both NH white and black males and females. Life expectancy at birth in 2010 for NH white males was 76.5 years and for NH black males was 67.8 years. In 2010, life expectancy at birth for NH white females was 81.8 years and for NH black females was 76.6 years. **FIGURE 3**
- Over the entire 20 year study period, both NH white and black males gained 7.6 years. NH white females gained 4.3 years, compared to 5.1 years for NH black females.
- While NH white male gains were relatively even across the two decades, gains among NH black males, NH black females and NH white females were greater in the period between 2000 and 2010.
- The gap between life expectancies for NH white males and NH black males did not change over the 20 year period.
- The gap between life expectancies for NH white females and NH black females closed by 0.8 years over the 20 year period. These gains were made entirely from 2000 to 2010.

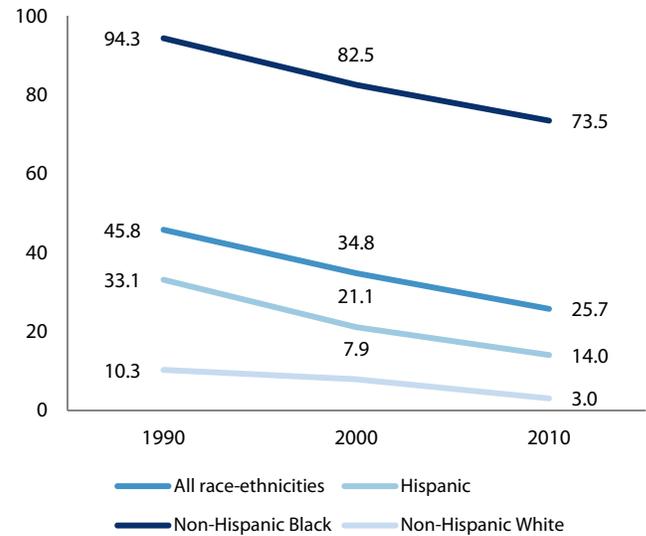
### What specific causes of death influenced the difference in life expectancy between non-Hispanic white and non-Hispanic black populations in 1990, 2000 and 2010?

- NH black males and females experienced excess mortality in all disease categories for all three time points compared to NH white males and females except for suicide (and chronic liver disease and cirrhosis among males in 2010). **FIGURES 5 & 6**
- For NH black females, the greatest contributor to this difference in life expectancy at birth was heart disease and cancer. **FIGURE 5**
- For NH black males, the greatest contributors to this difference in life expectancy at birth were homicide and heart disease. Though homicide is a large contributor to the *difference* in life expectancy between NH black and white males, homicide rates in Chicago for NH black males have decreased by more than 20 percent during the 20 year study period. **FIGURES 4 & 5**

### How does life expectancy at birth differ for Hispanics and non-Hispanic whites?

- In 2010, life expectancy at birth for Hispanic males (82.0 years) was 5.5 years greater than for NH white males. In 2010, life expectancy at birth for Hispanic females (87.6) was 5.9 years greater than for NH white females. **FIGURE 3**

Figure 4. Age-adjusted mortality rate (per 100,000) due to homicide for males by race-ethnicity, Chicago, 1990-2010.



- Between 1990 and 2010, life expectancy for Hispanic males increased significantly. Hispanic males gained 4.1 years, compared to 7.6 years among NH white males.
- The gap between life expectancies for Hispanic and NH white males closed by 3.5 years over the 20 year study period.
- During the 20 year study period, life expectancy at birth did not change for Hispanic females, while life expectancy in NH white females increased significantly by 4.3 years.
- The gap between life expectancies for Hispanic and NH white females closed by 4.3 years over the 20 year period. These gains were largely made from 1990 to 2000.

### What specific causes of death influenced the difference in life expectancy between Hispanic and non-Hispanic white populations in 1990, 2000 and 2010?

- For all three time points, the top causes of death that contributed to a Hispanic advantage in life expectancy at birth among females were heart disease and cancer. A top cause of death that contributed to a NH white advantage in life expectancy at birth for females was diabetes. **FIGURE 7**
- Similar to females, the top causes of death that contributed to a Hispanic advantage in life expectancy at birth for males were heart disease and cancer. Diabetes and homicide were top causes of death contributing to a NH white advantage in life expectancy at birth among males. Though homicide is a contributor to the *difference* in life expectancy between Hispanic and NH white males, homicide rates in Chicago for Hispanic males have decreased by almost 60 percent during the 20 year study period. **FIGURES 4 & 8**

Figure 5. Contribution of specific causes of death to the difference in life expectancy at birth between non-Hispanic black and white females, Chicago, 1990-2010

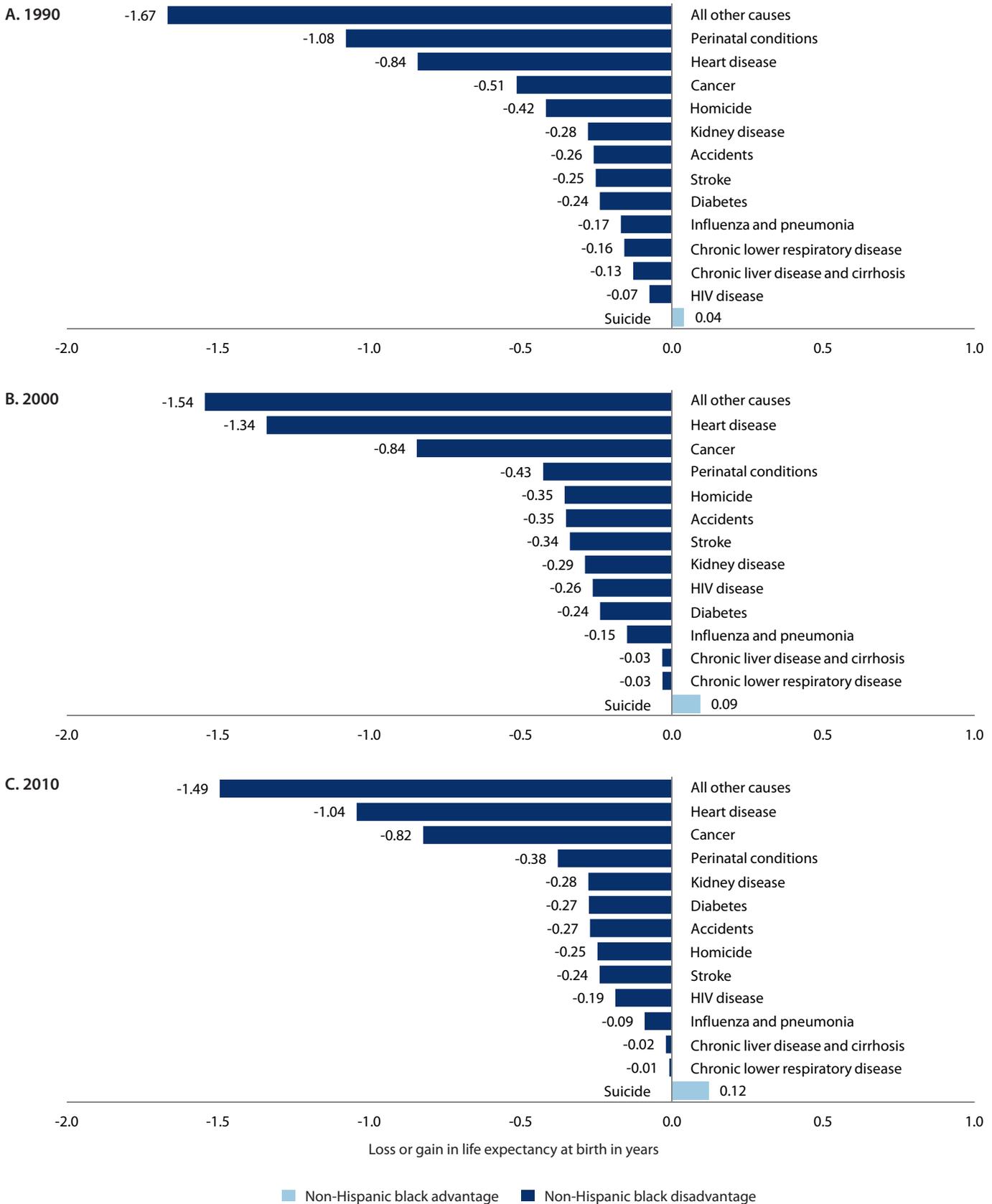


Figure 6. Contribution of specific causes of death to the difference in life expectancy at birth between non-Hispanic black and white males, Chicago, 1990-2010

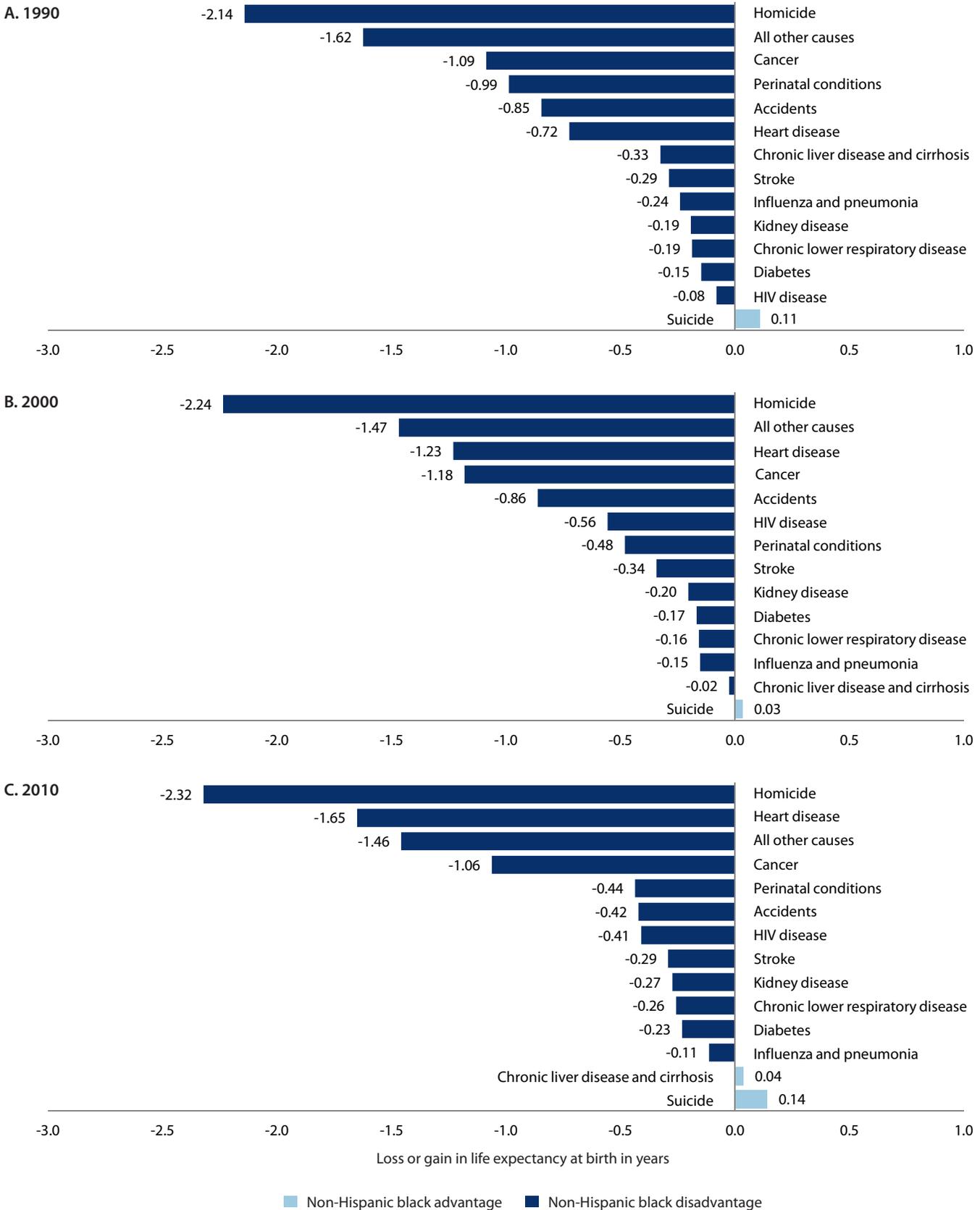


Figure 7. Contribution of specific causes of death to the difference in life expectancy at birth between Hispanic and non-Hispanic white females. Chicago, 1990-2010

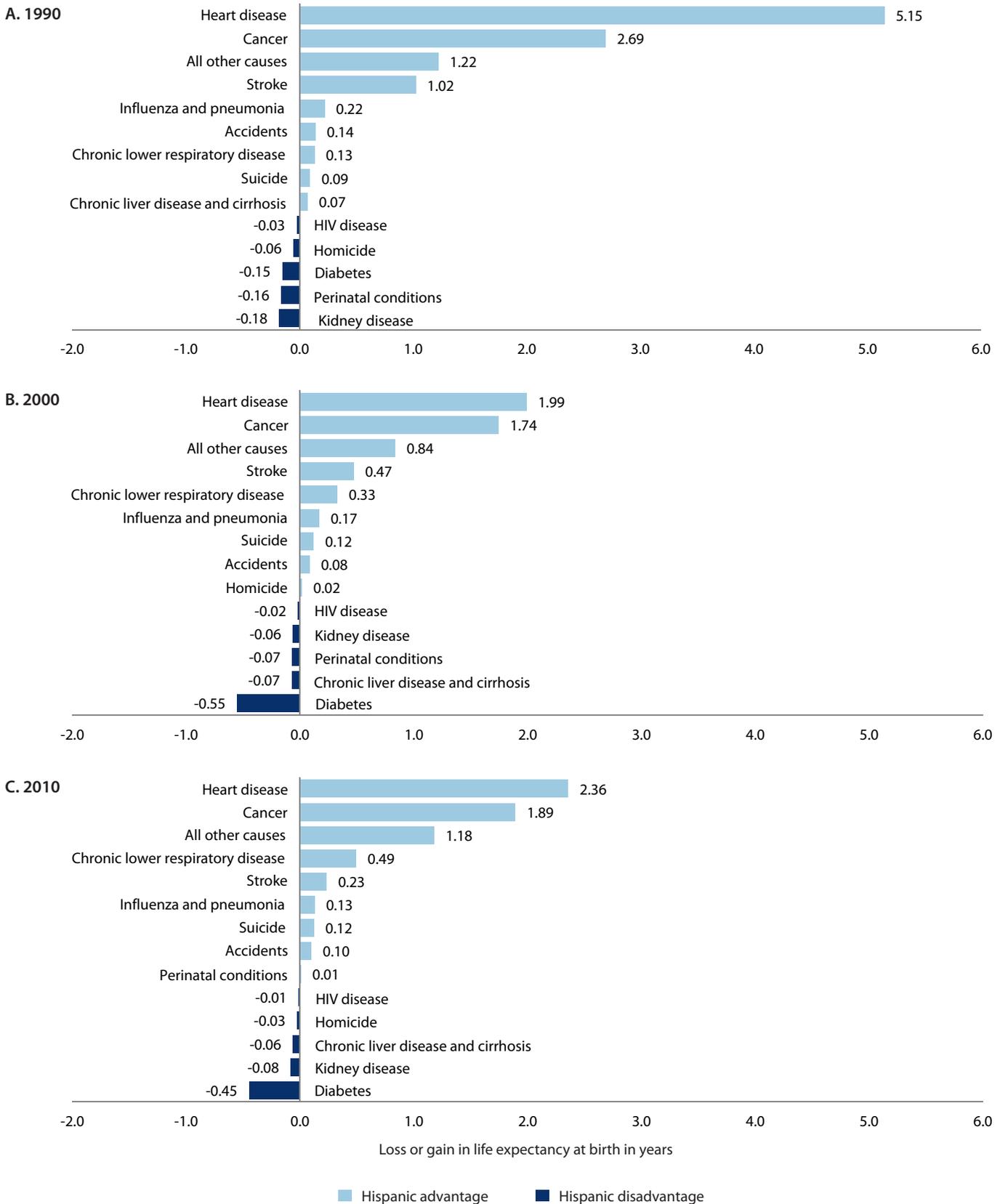
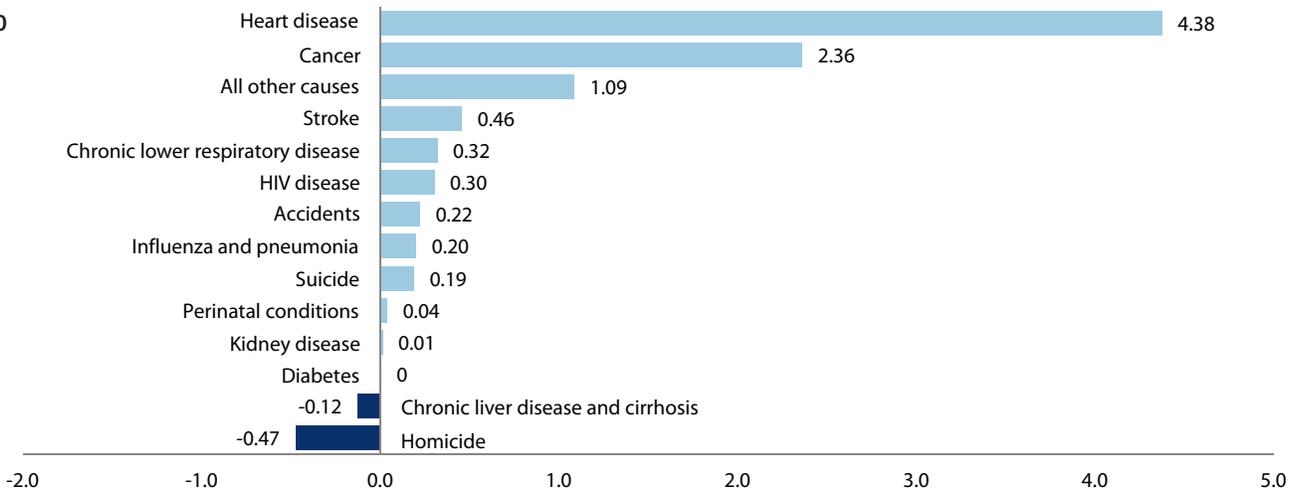
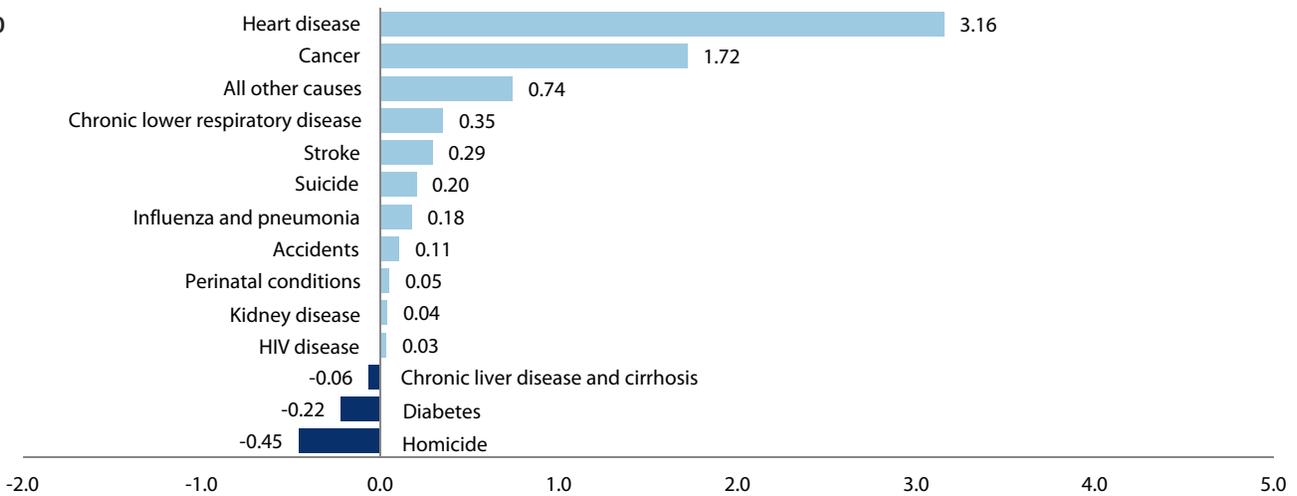


Figure 8. Contribution of specific causes of death to the difference in life expectancy at birth between Hispanic and non-Hispanic white males, Chicago, 1990-2010

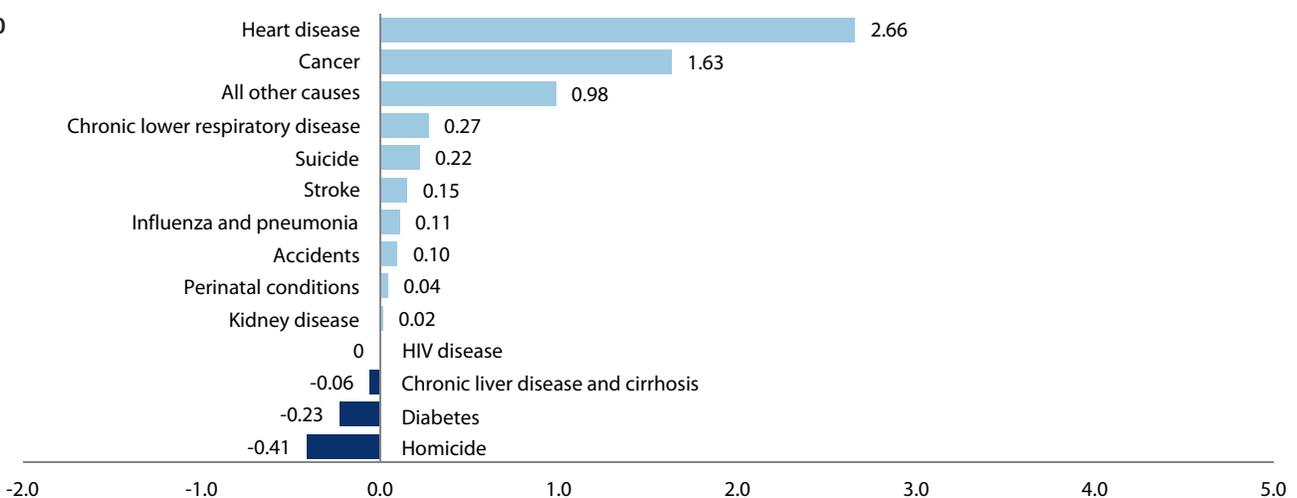
A. 1990



B. 2000



C. 2010



Loss or gain in life expectancy at birth in years

■ Hispanic advantage ■ Hispanic disadvantage

### How does life expectancy at birth differ for US-born and foreign-born Hispanics?

- Life expectancy at birth was ten years higher in foreign-born Hispanics compared to US-born in 1990, and had decreased by 45% to 5.5 years by 2010. In 2010, life expectancy at birth was approximately the same among US-born and foreign-born Hispanics (86.8 and 85.2, respectively). **FIGURE 1**
- In 1990 and 2000, the top cause of death that contributed to a foreign-born Hispanic advantage was heart disease. In 2010, all other causes became the top cause that contributed to this advantage, followed by heart disease and diabetes. **FIGURE 9**

### SUMMARY

Life expectancy at birth in Chicago has steadily increased since 1990 to 77.8 years in 2010. Life expectancy at birth has increased for both sexes, all three major racial-ethnic groups and in each community area over the past 20 years. Though differences in life expectancy between the sexes, racial-ethnic groups and community areas decreased between 1990 and 2010, disparities remain. The strategies outlined in Chicago's public health agenda, *Healthy Chicago*, launched in 2011, are addressing these disparities through policy, systems and environmental change lead by the Chicago Department of Public Health in partnership with many public health stakeholders.

### DISCLAIMERS

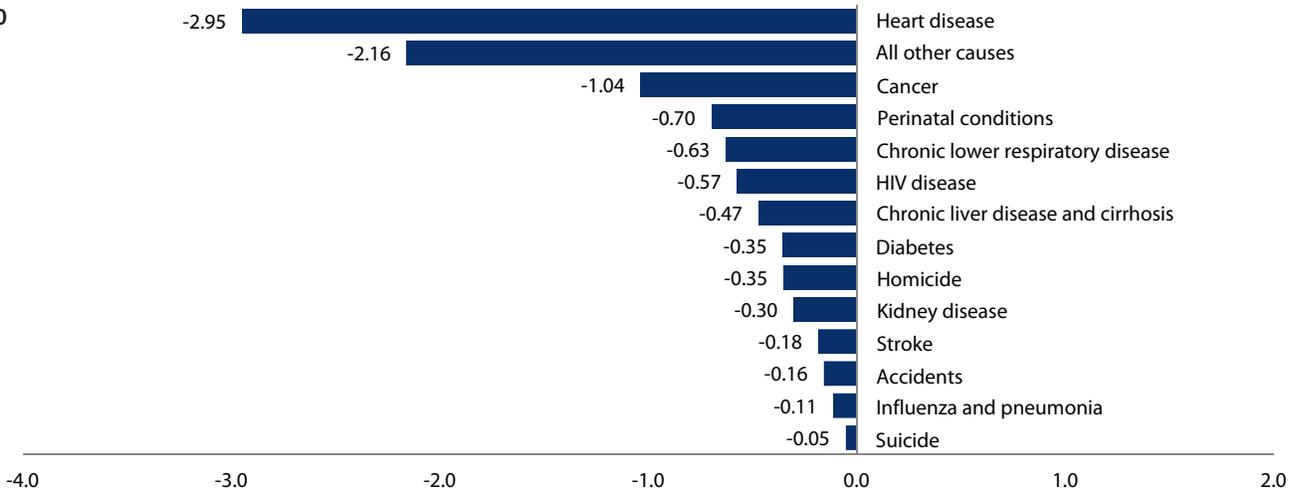
IDPH specifically disclaims responsibility for any analysis, interpretations, or conclusions. The population counts used in the rate calculations are estimates, and this potential source of error should be taken into account when considering the precision of the indicators. Error can result from geocoding due to inaccurate or incomplete source data (e.g., the recording of a person's residential residence does not include "North" or "South") or discrepancies in the reference data used to match addresses to their associated geographies (e.g., a particular street segment is excluded or associated to corresponding geographies incorrectly). This potential source of error should be taken into account when considering the precision of community area measures. Numbers may not add up due to rounding. Methods and data sources may not be identical to those used in CDPH reports published prior to May 2014.

### REFERENCES

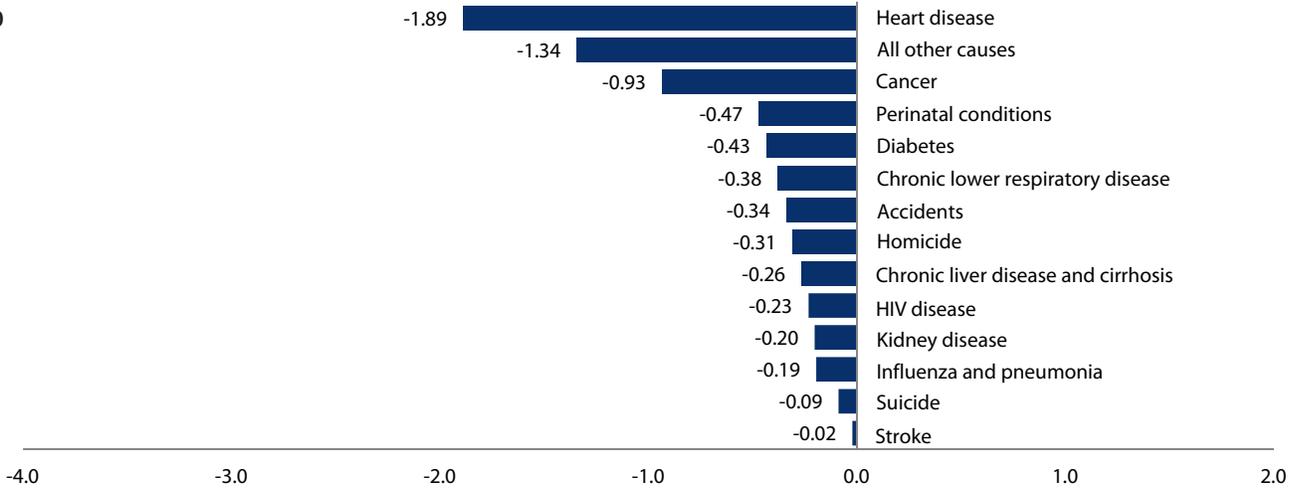
1. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Available at [<http://www.healthypeople.gov/2020/about/GenHealthAbout.aspx#life>] Accessed 01/06/2014.
2. Murphy SL, Xu JQ, Kochanek KD. Deaths: Final data for 2010. National vital statistics reports; vol 61 no 4. Hyattsville, MD: National Center for Health Statistics. 2013.
3. Chiang CL, The Life Table and its Applications, Malabar (FL), Robert E Kreiger Publ Co. 1984.
4. Ruggles S, Alexander JT, Genadek K, Goeken R, Schroeder MB, Sobek M. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis, University of Minnesota, 2010.
5. Anderson RN, Miniño AM, Hoyert DL, Rosenberg HM. Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates. National vital statistics reports; vol 49 no. 2. Hyattsville, Maryland: National Center for Health Statistics. 2001.
6. Arriaga EE. Measuring and explaining the change in life expectancies. *Demography* 1984; 21: 83-96.
7. Arias E, Eschbach K, Schauman WS, et al. The Hispanic Mortality Advantage and Ethnic Misclassification on US Death Certificates. *Am J Public Health*. 2010; 100: S171-S177.
8. Ruiz JM, Steffen P, Smith TB. Hispanic Mortality Paradox: A Systematic Review and Meta-Analysis of the Longitudinal Literature. *Am J Public Health*. 2013; 103: e52-e60.

Figure 9. Contribution of specific causes of death to the difference in life expectancy at birth between US-born and foreign-born Hispanics, Chicago, 1990-2010

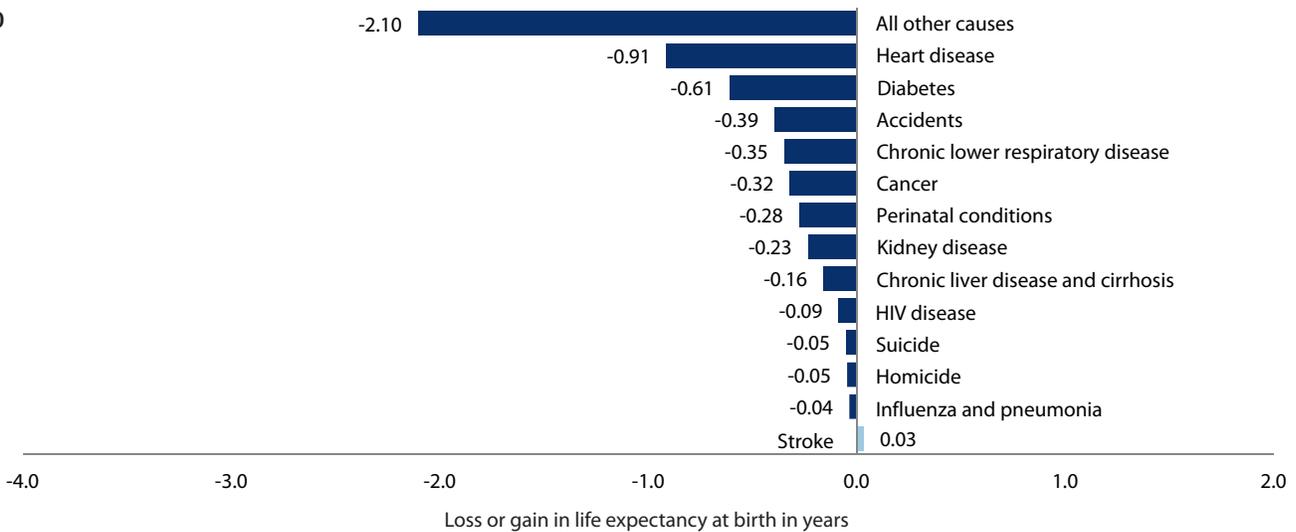
A. 1990



B. 2000



C. 2010



■ US-born advantage ■ US-born disadvantage

## APPENDIX

Table 1. Specific causes of death and their related ICD-9 and ICD-10 codes

	ICD-9	ICD-10
Human immunodeficiency virus (HIV) disease	042-044	B20-24
Malignant neoplasms (Cancer)	140-208	C00-97
Diabetes mellitus (Diabetes)	250	E10-14
Heart disease <sup>1</sup>	390-398, 402, 404, 410-429	I00-09, I11, I13, I20-51
Cerebrovascular diseases (Stroke)	430-434, 436-438	I60-69
Influenza and pneumonia	480-487	J10-18
Chronic lower respiratory disease	490-494, 496	J40-47
Chronic liver disease and cirrhosis <sup>2</sup>	571	K70, K73-74
Kidney disease <sup>3</sup>	580-589	N00-07, N17-19, N25-27
Certain conditions originating in the perinatal period (Perinatal conditions)	760-771.2, 771.4-779	P00-96
Accidents <sup>4</sup>	E800-E869, E880-E929	V01-X59, Y85-86
Intentional self-harm (Suicide) <sup>5</sup>	E950-E959	X60-84, Y87.0
Assault (Homicide) <sup>6</sup>	E960-E969	X85-Y09, Y87.1

<sup>1</sup>Includes acute rheumatic fever, chronic rheumatic heart diseases, hypertensive heart disease, hypertensive heart and renal disease, ischaemic heart diseases, pulmonary heart disease and diseases of pulmonary circulation and other forms of heart disease (excluding other heart disorders in diseases classified elsewhere); <sup>2</sup>Includes alcoholic liver disease, chronic hepatitis, not elsewhere classified and fibrosis and cirrhosis of liver; <sup>3</sup>Includes glomerular diseases (excluding glomerular disorders in diseases classified elsewhere), renal failure, disorders resulting from impaired renal tubular function, unspecified contracted kidney and small kidney of unknown cause; <sup>4</sup>Includes transport accidents, other external causes of accidental injury and sequelae of other accidents; <sup>5</sup>Includes intentional self-harm and sequelae of self-harm; <sup>6</sup>Includes assault and sequelae of assault.

Table 2. Life expectancy at birth by sex and race-ethnicity, Chicago, 1990-2010

Race-ethnicity	Years (95% CI)			Change		
	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010
	<i>All</i>					
All	70.5 (70.3, 70.7)	73.9 (73.8, 74.1)	77.8 (77.6, 78.0)	3.4	3.9	7.3
Hispanic	82.6 (82.0, 83.1)	81.4 (81.0, 81.9)	84.7 (84.4, 85.1)	-1.2	3.3	2.1
US-born*	77.3 (76.4, 78.1)	76.8 (76.1, 77.4)	81.8 (81.2, 82.3)	-0.5	5.0	4.5
Foreign-born	87.3 (86.6, 88.0)	83.9 (83.3, 84.4)	87.3 (86.8, 87.8)	-3.4	3.4	0.0
Non-Hispanic Black	65.9 (65.7, 66.2)	68.7 (68.4, 68.9)	72.4 (72.1, 72.7)	2.8	3.7	6.5
Non-Hispanic White	73.2 (72.9, 73.4)	76.0 (75.8, 76.3)	79.2 (78.9, 79.4)	2.8	3.2	6.0
	<i>Female</i>					
All	75.1 (74.9, 75.4)	77.5 (77.3, 77.7)	79.8 (79.6, 80.0)	2.4	2.3	4.7
Hispanic	87.6 (86.9, 88.4)	84.3 (83.8, 84.9)	87.6 (87.1, 88.0)	-3.3	3.3	0.0
Non-Hispanic Black	71.4 (71.1, 71.8)	73.2 (72.9, 73.6)	76.6 (76.2, 76.9)	1.8	3.3	5.1
Non-Hispanic White	77.5 (77.1, 77.8)	79.3 (79.0, 79.6)	81.8 (81.5, 82.1)	1.9	2.4	4.3
	<i>Male</i>					
All	65.9 (65.6, 66.1)	70.3 (70.0, 70.5)	73.6 (73.4, 73.8)	4.4	3.3	7.7
Hispanic	77.9 (77.2, 78.7)	78.8 (78.2, 79.4)	82.0 (81.4, 82.4)	0.9	3.2	4.1
Non-Hispanic Black	60.2 (59.8, 60.6)	63.6 (63.3, 64.0)	67.8 (67.4, 68.2)	3.4	4.2	7.6
Non-Hispanic White	69.0 (68.6, 69.3)	72.6 (72.3, 73.0)	76.5 (76.2, 76.9)	3.7	3.9	7.6

\*Including those born in Puerto Rico, Guam and all other US territories.

**Table 3. Life expectancy at birth by community area, Chicago, 1990-2010**

Community Area	Years (95% CI)			Change		
	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010
1 Rogers Park	70.9 (69.9, 71.9)	73.1 (72.2, 74.1)	77.3 (76.3, 78.2)	2.2	4.1	6.3
2 West Ridge	76.9 (76.1, 77.8)	78.1 (77.3, 78.8)	80.3 (79.5, 81.1)	1.1	2.2	3.4
3 Uptown	64.0 (63.1, 64.9)	71.7 (70.8, 72.7)	76.0 (75.1, 76.9)	7.7	4.3	12.0
4 Lincoln Square	74.2 (73.1, 75.4)	76.8 (75.8, 77.8)	80.5 (79.3, 81.6)	2.6	3.7	6.2
5 North Center	73.4 (72.1, 74.7)	77.9 (76.6, 79.1)	81.5 (80.1, 82.8)	4.5	3.6	8.1
6 Lake View	73.9 (73.0, 74.8)	79.2 (78.3, 80.2)	81.9 (81.1, 82.7)	5.3	2.6	8.0
7 Lincoln Park	73.9 (72.9, 74.9)	76.5 (75.6, 77.4)	81.3 (80.4, 82.3)	2.6	4.8	7.4
8 Near North Side	74.9 (73.7, 76.0)	79.6 (78.7, 80.5)	85.2 (84.5, 86.0)	4.7	5.6	10.4
9 Edison Park	77.6 (75.9, 79.4)	79.4 (77.6, 81.2)	81.0 (78.9, 83.0)	1.8	1.5	3.3
10 Norwood Park	76.7 (75.6, 77.8)	78.4 (77.4, 79.3)	80.9 (79.8, 82.0)	1.7	2.5	4.2
11 Jefferson Park	76.8 (75.4, 78.2)	79.3 (78.1, 80.5)	79.7 (78.6, 80.9)	2.5	0.5	2.9
12 Forest Glen	78.8 (77.5, 80.1)	80.6 (79.3, 81.9)	83.4 (82.1, 84.8)	1.8	2.8	4.6
13 North Park	76.9 (75.3, 78.4)	78.8 (77.4, 80.3)	84.4 (82.8, 86.0)	2.0	5.6	7.5
14 Albany Park	74.0 (72.9, 75.0)	77.7 (76.8, 78.7)	80.6 (79.6, 81.7)	3.8	2.9	6.7
15 Portage Park	75.1 (74.2, 75.9)	76.4 (75.6, 77.2)	80.3 (79.5, 81.1)	1.3	3.9	5.2
16 Irving Park	74.6 (73.6, 75.6)	77.0 (76.1, 77.9)	79.6 (78.6, 80.6)	2.4	2.6	5.0
17 Dunning	76.8 (75.6, 77.9)	79.2 (78.3, 80.2)	79.8 (70.0, 72.7)	2.4	0.6	3.0
18 Montclair	77.1 (75.1, 79.1)	79.3 (77.5, 81.1)	79.6 (77.9, 81.4)	2.2	0.3	2.5
19 Belmont Cragin	73.7 (72.8, 74.7)	76.4 (75.6, 77.3)	79.5 (78.7, 80.4)	2.7	3.1	5.8
20 Hermosa	74.0 (72.4, 75.6)	77.8 (76.1, 79.4)	80.5 (78.9, 82.0)	3.8	2.7	6.4
21 Avondale	74.0 (72.9, 75.2)	77.8 (76.7, 79.0)	79.8 (78.7, 80.9)	3.8	2.0	5.8
22 Logan Square	71.6 (70.8, 72.4)	75.1 (74.2, 75.9)	80.3 (79.4, 81.3)	3.5	5.3	8.7
23 Humboldt Park	68.4 (67.3, 69.5)	71.2 (70.2, 72.3)	74.5 (73.5, 75.6)	2.8	3.3	6.1
24 West Town	70.5 (69.7, 71.4)	75.8 (74.9, 76.7)	79.5 (78.6, 80.5)	5.3	3.7	9.0
25 Austin	66.0 (65.2, 66.8)	69.6 (68.8, 70.3)	71.9 (71.1, 72.6)	3.6	2.3	5.9
26 West Garfield Park	63.2 (61.3, 65.0)	66.8 (65.0, 68.5)	68.8 (66.9, 70.6)	3.6	2.0	5.6
27 East Garfield Park	61.5 (59.8, 63.3)	65.7 (63.9, 67.6)	71.7 (70.0, 73.5)	4.2	6.0	10.2
28 Near West Side	63.7 (62.4, 65.0)	72.8 (71.5, 74.0)	78.9 (77.8, 80.0)	9.1	6.1	15.2
29 North Lawndale	62.0 (60.8, 63.3)	67.3 (66.1, 68.6)	72.1 (70.7, 73.5)	5.3	4.7	10.0
30 South Lawndale	72.7 (71.7, 73.6)	76.8 (75.9, 77.8)	82.2 (81.2, 83.2)	4.2	5.4	9.5
31 Lower West Side	74.0 (72.7, 75.3)	77.0 (75.7, 78.4)	81.4 (79.9, 82.9)	3.0	4.4	7.5
32 Loop	73.7 (71.5, 75.8)	81.2 (79.7, 82.7)	85.0 (83.6, 86.4)	7.6	3.8	11.3
33 Near South Side	60.1 (57.1, 63.0)	68.0 (65.6, 70.3)	80.6 (78.9, 82.3)	7.9	12.6	20.5
34 Armour Square	74.8 (72.5, 77.2)	77.1 (75.0, 79.3)	81.9 (80.1, 83.7)	2.3	4.8	7.1
35 Douglas	64.8 (63.4, 66.2)	65.6 (64.2, 67.1)	74.1 (72.6, 75.7)	0.8	8.5	9.3
36 Oakland	60.2 (57.1, 63.4)	68.3 (64.9, 71.6)	73.6 (70.2, 77.0)	8.1	5.4	13.4
37 Fuller Park	59.8 (55.7, 63.9)	66.2 (62.2, 70.2)	69.8 (66.3, 73.3)	6.4	3.6	10.0
38 Grand Boulevard	57.1 (55.8, 58.4)	64.4 (62.8, 65.9)	74.1 (72.4, 75.7)	7.3	9.7	17.0
39 Kenwood	67.6 (65.7, 69.6)	74.2 (72.4, 76.0)	80.5 (78.9, 82.1)	6.6	6.3	12.9
40 Washington Park	58.0 (56.2, 59.9)	63.8 (61.8, 65.8)	68.9 (66.6, 71.3)	5.8	5.1	10.9
41 Hyde Park	75.0 (73.5, 76.5)	82.3 (80.8, 83.8)	82.3 (80.9, 83.8)	7.3	0.0	7.3
42 Woodlawn	63.1 (61.6, 64.7)	68.5 (67.0, 70.0)	74.5 (73.0, 76.0)	5.4	6.0	11.4

Continued on next page

**Table 3. Life expectancy at birth by community area, Chicago, 1990-2010 (continued)**

Community Area	Years (95% CI)			Change		
	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010
43 South Shore	68.0 (67.0, 69.1)	69.7 (68.7, 70.6)	72.5 (71.4, 73.5)	1.6	2.8	4.4
44 Chatham	71.0 (69.5, 72.5)	71.4 (70.1, 72.7)	74.0 (72.5, 75.4)	0.4	2.6	3.0
45 Avalon Park	68.0 (65.1, 70.9)	72.7 (70.5, 74.9)	74.7 (72.1, 77.4)	4.7	2.1	6.7
46 South Chicago	69.9 (68.7, 71.2)	71.1 (69.8, 72.4)	72.7 (71.2, 74.2)	1.1	1.6	2.8
47 Burnside	70.9 (66.6, 75.3)	71.1 (66.7, 75.5)	71.9 (64.4, 79.3)	0.2	0.8	1.0
48 Calumet Heights	72.3 (70.5, 74.2)	73.3 (71.6, 75.0)	77.1 (75.2, 79.0)	1.0	3.8	4.8
49 Roseland	66.8 (65.7, 67.8)	69.8 (68.8, 70.9)	72.9 (71.7, 74.1)	3.1	3.0	6.1
50 Pullman	67.8 (64.9, 70.7)	71.2 (68.7, 73.8)	76.4 (74.2, 78.6)	3.4	5.2	8.6
51 South Deering	70.5 (68.6, 72.3)	73.0 (71.2, 74.7)	76.2 (74.3, 78.2)	2.5	3.3	5.8
52 East Side	73.2 (71.6, 74.8)	75.6 (74.3, 77.0)	78.4 (76.9, 79.9)	2.4	2.7	5.2
53 West Pullman	67.8 (66.5, 69.2)	69.9 (68.7, 71.2)	71.6 (70.2, 73.0)	2.1	1.7	3.8
54 Riverdale	67.8 (64.9, 70.7)	70.3 (67.2, 73.4)	76.4 (72.3, 80.5)	2.5	6.1	8.6
55 Hegewisch	72.6 (70.3, 74.8)	73.3 (71.0, 75.7)	77.1 (75.0, 79.2)	0.8	3.7	4.5
56 Garfield Ridge	74.5 (73.4, 75.6)	76.8 (75.7, 78.0)	79.8 (78.7, 81.0)	2.3	3.0	5.3
57 Archer Heights	73.0 (70.6, 75.5)	77.0 (75.0, 79.0)	79.5 (77.6, 81.3)	3.9	2.5	6.4
58 Brighton Park	71.2 (69.8, 72.6)	76.9 (75.7, 78.2)	80.8 (79.6, 82.0)	5.8	3.9	9.6
59 McKinley Park	72.4 (70.6, 74.4)	74.8 (73.0, 76.6)	80.4 (78.6, 82.3)	2.4	5.6	8.0
60 Bridgeport	73.0 (71.7, 74.3)	75.6 (74.4, 76.8)	80.2 (78.9, 81.5)	2.7	4.6	7.3
61 New City	65.5 (64.4, 66.6)	72.4 (71.2, 73.6)	74.4 (73.2, 75.5)	6.9	2.0	8.9
62 West Elsdon	76.2 (74.2, 78.2)	75.1 (73.3, 76.9)	81.0 (79.4, 82.6)	-1.1	5.9	4.8
63 Gage Park	73.3 (71.9, 74.7)	76.5 (75.1, 77.9)	79.2 (77.9, 80.5)	3.2	2.7	5.9
64 Clearing	74.2 (72.9, 75.6)	75.6 (74.3, 76.9)	77.5 (76.1, 78.8)	1.4	1.9	3.3
65 West Lawn	74.9 (73.6, 76.2)	74.9 (73.6, 76.1)	80.5 (79.2, 81.9)	0.0	5.7	5.6
66 Chicago Lawn	72.8 (71.7, 73.9)	73.7 (72.7, 74.8)	75.2 (74.1, 76.3)	0.9	1.5	2.4
67 West Englewood	64.6 (63.4, 65.8)	67.1 (65.9, 68.3)	70.1 (68.7, 71.5)	2.5	3.0	5.5
68 Englewood	62.4 (61.1, 63.7)	66.7 (65.4, 68.0)	70.7 (69.3, 72.0)	4.3	4.0	8.3
69 Greater Grand Crossing	65.6 (64.3, 67.0)	69.0 (67.8, 70.3)	71.1 (69.8, 72.5)	3.4	2.1	5.5
70 Ashburn	73.5 (72.4, 74.5)	73.8 (72.7, 74.9)	78.2 (77.1, 79.3)	0.4	4.4	4.7
71 Auburn Gresham	68.0 (66.9, 69.1)	68.9 (67.8, 70.0)	72.6 (71.5, 73.8)	0.9	3.7	4.6
72 Beverly	75.9 (74.4, 77.3)	78.5 (77.1, 79.9)	80.5 (79.1, 82.0)	2.6	2.1	4.7
73 Washington Heights	68.7 (67.1, 70.2)	70.8 (69.4, 72.2)	74.9 (73.3, 76.4)	2.1	4.1	6.2
74 Mount Greenwood	75.7 (74.4, 77.1)	76.0 (74.4, 77.5)	79.6 (78.1, 81.0)	0.2	3.6	3.9
75 Morgan Park	72.0 (70.5, 73.4)	72.7 (71.3, 74.2)	75.3 (73.7, 76.9)	0.8	2.6	3.3
76 O'Hare	78.8 (76.8, 80.9)	80.4 (78.4, 82.4)	82.2 (80.3, 84.0)	1.5	1.8	3.3
77 Edgewater	78.0 (76.9, 79.1)	76.5 (75.6, 77.3)	79.8 (78.8, 80.7)	-1.6	3.3	1.7
Chicago	70.5 (70.3, 70.7)	73.9 (73.8, 74.1)	77.8 (77.6, 78.0)	3.4	3.9	7.3

**Table 4. Contribution of specific causes of death to the difference in life expectancy at birth between non-Hispanic blacks and whites, Chicago, 1990-2010**

Cause of death	Female						Male					
	Year			Change			Year			Change		
	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010
HIV disease	-0.07	-0.26	-0.19	-0.19	0.07	-0.11	-0.08	-0.56	-0.41	-0.48	0.15	-0.33
Cancer	-0.51	-0.84	-0.82	-0.33	0.02	-0.31	-1.09	-1.18	-1.06	-0.09	0.12	0.02
Diabetes	-0.24	-0.24	-0.27	0.00	-0.04	-0.04	-0.15	-0.17	-0.23	-0.02	-0.06	-0.08
Heart disease	-0.84	-1.34	-1.04	-0.50	0.30	-0.20	-0.72	-1.23	-1.65	-0.51	-0.42	-0.93
Stroke	-0.25	-0.34	-0.24	-0.09	0.10	0.01	-0.29	-0.34	-0.29	-0.05	0.05	0.00
Influenza and pneumonia	-0.17	-0.15	-0.09	0.02	0.06	0.08	-0.24	-0.15	-0.11	0.09	0.04	0.13
Chronic lower respiratory disease	-0.16	-0.03	-0.01	0.13	0.02	0.15	-0.19	-0.16	-0.26	0.03	-0.10	-0.07
Chronic liver disease and cirrhosis	-0.13	-0.03	-0.02	0.10	0.01	0.11	-0.33	-0.02	0.04	0.30	0.06	0.36
Kidney disease	-0.28	-0.29	-0.28	-0.01	0.01	0.00	-0.19	-0.20	-0.27	-0.01	-0.07	-0.08
Perinatal conditions	-1.08	-0.43	-0.38	0.65	0.05	0.70	-0.99	-0.48	-0.44	0.51	0.04	0.55
Accidents	-0.26	-0.35	-0.27	-0.09	0.08	-0.01	-0.85	-0.86	-0.42	-0.02	0.44	0.42
Suicide	0.04	0.09	0.12	0.05	0.03	0.08	0.11	0.03	0.14	-0.07	0.11	0.03
Homicide	-0.42	-0.35	-0.25	0.06	0.11	0.17	-2.14	-2.24	-2.32	-0.09	-0.09	-0.18
All other causes	-1.67	-1.54	-1.49	0.12	0.05	0.17	-1.62	-1.47	-1.46	0.16	0.01	0.17
All cause	-6.03	-6.10	-5.22	-0.07	0.87	0.80	-8.76	-9.02	-8.74	-0.26	0.28	0.02

**Table 5. Contribution of specific causes of death to the difference in life expectancy at birth between Hispanic and non-Hispanic whites, Chicago, 1990-2010**

Cause of death	Female						Male					
	Year			Change			Year			Change		
	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010
HIV disease	-0.03	-0.02	-0.01	0.01	0.01	0.01	0.30	0.03	0.00	-0.27	-0.03	-0.30
Cancer	2.69	1.74	1.89	-0.95	0.15	-0.80	2.36	1.72	1.63	-0.64	-0.09	-0.73
Diabetes	-0.15	-0.55	-0.45	-0.40	0.10	-0.29	0.00	-0.22	-0.23	-0.22	-0.01	-0.23
Heart disease	5.15	1.99	2.36	-3.16	0.37	-2.79	4.38	3.16	2.66	-1.22	-0.50	-1.72
Stroke	1.02	0.47	0.23	-0.55	-0.24	-0.79	0.46	0.29	0.15	-0.16	-0.14	-0.31
Influenza and pneumonia	0.22	0.17	0.13	-0.05	-0.04	-0.09	0.20	0.18	0.11	-0.02	-0.07	-0.09
Chronic lower respiratory disease	0.13	0.33	0.49	0.20	0.17	0.36	0.32	0.35	0.27	0.03	-0.08	-0.05
Chronic liver disease and cirrhosis	0.07	-0.07	-0.06	-0.14	0.01	-0.13	-0.12	-0.06	-0.06	0.06	0.01	0.07
Kidney disease	-0.18	-0.06	-0.08	0.12	-0.02	0.10	0.01	0.04	0.02	0.03	-0.02	0.00
Perinatal conditions	-0.16	-0.07	0.01	0.10	0.08	0.17	0.04	0.05	0.04	0.01	-0.01	0.00
Accidents	0.14	0.08	0.10	-0.06	0.02	-0.04	0.22	0.11	0.10	-0.12	-0.01	-0.13
Suicide	0.09	0.12	0.12	0.03	0.00	0.03	0.19	0.20	0.22	0.01	0.02	0.03
Homicide	-0.06	0.02	-0.03	0.07	-0.04	0.03	-0.47	-0.45	-0.41	0.02	0.04	0.06
All other causes	1.22	0.84	1.18	-0.39	0.34	-0.04	1.09	0.74	0.98	-0.35	0.24	-0.10
All cause	10.16	4.98	5.87	-5.18	0.89	-4.28	8.97	6.13	5.47	-2.84	-0.66	-3.50

**Table 6. Contribution of specific causes of death to the difference in life expectancy at birth between US-born and foreign-born Hispanics, Chicago, 1990-2010**

Cause of death	Year			Change		
	1990	2000	2010	1990 to 2000	2000 to 2010	1990 to 2010
HIV disease	-0.57	-0.23	-0.09	0.34	0.14	0.49
Cancer	-1.04	-0.93	-0.32	0.10	0.61	0.72
Diabetes	-0.35	-0.43	-0.61	-0.08	-0.17	-0.25
Heart disease	-2.95	-1.89	-0.91	1.06	0.98	2.04
Stroke	-0.18	-0.02	0.03	0.16	0.06	0.22
Influenza and pneumonia	-0.11	-0.19	-0.04	-0.08	0.16	0.08
Chronic lower respiratory disease	-0.63	-0.38	-0.35	0.25	0.03	0.28
Chronic liver disease and cirrhosis	-0.47	-0.26	-0.16	0.21	0.10	0.31
Kidney disease	-0.30	-0.20	-0.23	0.10	-0.03	0.07
Perinatal conditions	-0.70	-0.47	-0.28	0.23	0.19	0.42
Accidents	-0.16	-0.34	-0.39	-0.18	-0.06	-0.24
Suicide	-0.05	-0.09	-0.05	-0.04	0.04	0.00
Homicide	-0.35	-0.31	-0.05	0.04	0.26	0.31
All other causes	-2.16	-1.34	-2.10	0.81	-0.76	0.05
All cause	-10.02	-7.09	-5.54	2.93	1.55	4.48

**Table 7. Age-adjusted mortality rates (per 100,000) by sex and race-ethnicity, Chicago, 1990-2010**

Cause of death	All race-ethnicities			Hispanic			Non-Hispanic Black			Non-Hispanic White		
	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010
	<i>All</i>											
All cause	1,143.6	1,003.7	788.5	559.3	607.9	491.3	1,392.1	1,272.3	1,030.8	1,076.4	941.4	753.6
HIV disease	22.5	12.2	6.7	17.4	5.9	3.1	23.4	24.3	14.9	25.2	6.4	2.9
Cancer	257.1	224.7	187.3	99.2	115.0	102.6	310.2	284.5	238.1	245.3	217.7	189.4
Diabetes	27.0	30.9	25.8	23.3	46.4	33.2	35.7	38.4	33.6	21.9	24.4	18.7
Heart disease	393.6	316.7	217.7	156.3	170.5	111.8	413.3	376.5	279.4	400.8	318.7	219.8
Stroke	68.3	59.7	39.4	28.3	31.5	27.2	78.4	73.9	49.5	63.6	54.7	35.0
Influenza and pneumonia	32.2	28.7	20.0	17.2	17.9	14.3	40.7	34.4	23.1	28.4	27.6	19.8
Chronic lower respiratory disease	36.2	35.9	30.2	17.7	17.3	14.2	42.7	36.4	35.9	34.3	40.0	33.3
Chronic liver disease and cirrhosis	24.6	12.5	9.4	23.5	16.4	12.6	29.8	12.7	8.2	20.7	12.3	9.9
Kidney disease	20.7	22.6	22.8	16.4	18.6	18.3	32.9	33.4	32.9	13.6	16.8	16.1
Perinatal conditions	11.1	9.1	6.7	10.4	6.2	4.3	29.8	14.6	12.1	9.4	6.2	4.8
Accidents	38.9	39.6	27.1	28.0	30.3	21.3	56.2	55.6	36.4	34.6	34.3	26.5
Suicide	10.2	7.8	6.5	6.9	4.5	4.1	7.1	7.1	4.0	14.1	11.5	11.6
Homicide	25.6	20.5	14.6	19.9	12.3	8.4	52.2	44.8	38.3	6.8	5.2	2.1
	<i>Female</i>											
All cause	902.3	812.8	657.2	422.2	498.8	404.6	1,067.2	1,012.5	833.9	827.9	756.5	628.7
HIV disease	3.6	4.8	3.3	3.3	1.5	1.2	5.1	11.0	7.8	2.4	0.9	0.7
Cancer	210.7	190.2	165.3	86.9	97.8	88.3	235.7	229.9	204.6	209.0	188.8	169.9
Diabetes	26.5	28.9	22.2	24.2	47.6	30.5	35.4	36.5	29.0	20.7	21.7	15.0
Heart disease	312.1	251.5	170.5	118.6	144.4	86.4	337.3	306.1	216.3	306.2	240.9	168.3
Stroke	62.7	55.3	36.7	26.2	27.6	25.5	71.3	67.1	44.4	58.2	50.7	33.3
Influenza and pneumonia	26.2	23.0	16.9	14.7	14.1	11.0	32.0	26.6	19.6	23.3	22.3	16.1
Chronic lower respiratory disease	24.4	31.0	26.9	12.1	16.9	10.9	29.0	28.6	29.0	22.7	35.8	32.8
Chronic liver disease and cirrhosis	14.0	7.2	5.8	9.8	9.7	8.3	17.6	7.7	5.9	12.1	6.5	5.2
Kidney disease	16.7	19.8	19.2	15.6	16.1	15.3	28.0	30.7	27.4	10.3	13.6	13.0
Perinatal conditions	18.1	8.3	5.9	9.8	6.3	3.9	26.9	12.7	10.5	6.8	5.1	4.1
Accidents	21.5	20.6	15.4	14.4	14.7	10.5	26.8	29.9	22.3	19.4	17.3	14.3
Suicide	4.2	3.1	3.0	2.3	1.5	1.8	3.5	2.1	1.6	5.7	5.7	5.6
Homicide	9.4	6.6	3.7	4.8	2.4	2.0	17.1	13.6	8.4	3.5	2.7	1.2
	<i>Male</i>											
All cause	1,539.4	1,267.3	962.5	716.7	724.1	590.3	1,857.5	1,651.5	1,317.8	1,435.4	1,200.1	910.6
HIV disease	43.4	20.1	10.4	30.2	10.2	5.1	47.1	41.6	23.9	47.6	11.8	5.1
Cancer	335.6	281.6	222.7	121.8	138.5	122.1	430.1	377.4	297.6	309.4	266.1	218.4
Diabetes	27.8	33.7	30.4	21.7	43.6	36.1	36.4	41.1	40.2	23.2	28.1	22.9
Heart disease	513.0	408.6	279.9	203.7	195.8	141.1	522.1	480.1	371.3	541.3	428.3	284.0
Stroke	75.9	65.7	42.7	32.1	36.4	29.5	88.0	83.3	56.3	71.0	60.8	37.2
Influenza and pneumonia	42.6	37.9	25.1	20.2	23.5	18.8	54.5	47.8	29.1	37.6	35.9	25.7
Chronic lower respiratory disease	56.9	44.5	35.5	26.5	18.2	18.5	65.2	50.2	47.9	55.0	47.4	34.1
Chronic liver disease and cirrhosis	37.4	18.4	13.6	37.8	23.7	16.7	45.8	19.5	11.4	31.1	18.1	14.9
Kidney disease	27.7	27.1	28.2	16.3	20.8	22.1	40.6	37.4	42.1	19.9	22.6	20.9
Perinatal conditions	21.9	9.9	7.4	10.9	6.2	4.8	32.6	16.4	13.6	11.8	7.1	5.5
Accidents	64.9	61.5	40.5	39.7	45.2	32.1	95.1	89.6	55.1	51.8	53.4	39.7
Suicide	17.7	13.1	10.7	11.3	7.3	6.7	11.7	13.7	7.1	24.0	17.7	17.9
Homicide	45.8	34.8	25.7	33.1	21.1	14.0	94.3	82.5	73.5	10.3	7.9	3.0



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