

GREATER NEW HAVEN

Community Index 2019

QUALITY OF LIFE

RACIAL EQUITY

DEMOGRAPHICS

ECONOMY

EDUCATION

LIFE EXPECTANCY

HEALTH OUTCOMES

RISK FACTORS

COMMUNITY TRUST

PARTICIPATION

PUBLIC REALM

Understanding well-being,
economic opportunity, and change in
Greater New Haven neighborhoods

A CORE PROGRAM OF

DataHaven

In collaboration with **The Community Foundation for Greater New Haven** and other community partners and a **Community Health Needs Assessment** for the towns served by Yale New Haven Hospital

The
COMMUNITY
Foundation
for Greater
New Haven
NOW MORE THAN EVER


Connecticut Health
FOUNDATION


NewAlliance Foundation

Yale
NewHaven
Health


United Way
United Way of
Greater New Haven


CAROLYN FOUNDATION


NH
HD



DataHaven

The Twenty Fifth Year

Thank you to our Major Funders

DataHaven



2018 DataHaven Community Wellbeing Survey Funders

The Greater New Haven Community Index makes extensive use of the DataHaven Community Wellbeing Survey, which completed live, in-depth interviews with 16,043 randomly-selected adults in Connecticut last year. In addition to the major funders listed above, supporters of the interviews in Greater New Haven included the town of Milford, Yale Medicine, and Planned Parenthood of Southern New England.

Lead Authors

Mark Abraham, Executive Director, DataHaven
Camille Seaberry, Senior Research Associate, DataHaven

Co-Authors

Josephine Ankrah, Alexandra Bourdillon, Kelly Davila, Emily Finn, Shaun McGann, Aparna Nathan, DataHaven
Jessica Clavette, Volunteer, and Brian Slattery, Consultant

Other Contributors

Matt Higbee, The Community Foundation for Greater New Haven
Brian Weeks, New Haven Health Department
Connecticut Hospital Association ChimeData
Don Levy and Meghann Crawford, Siena College Research Institute
John Kudos and Ashley Wu, Kudos Design Collaboratory™
Linda F Cantley and Deron Galusha, Yale Occupational and Environmental Medicine Program
Calvin Jahnke, Caleb Kassa, John Park, DataHaven Summer Interns, and Carole Bass, Consultant

Please contact DataHaven for permission to reproduce any of the text, images, or graphics in this report. We strongly encourage requests from organizations that wish to use this information or conduct further analysis to benefit community action. Contact information is listed on the back of the report. Nothing in this report should be interpreted to represent the official views of any of the participating organizations.

Suggested Citation: Abraham, M., Seaberry, C., Ankrah, J., Bourdillon, A., Davila, K., Finn, E., McGann, S., Nathan, A. (2019). Greater New Haven Community Index 2019. New Haven, CT: DataHaven. Available at ctdatahaven.org.

© 2019 DataHaven
ISBN 978-1-7340851-1-2 (paperback)

GREATER NEW HAVEN Community Index 2019

Understanding well-being, economic
opportunity, and change in Greater
New Haven neighborhoods

DataHaven Community
Index & Personal
Wellbeing Index

DATAHAVEN COMMUNITY
INDEX, PG 19

DATAHAVEN PERSONAL
WELLBEING INDEX, PG 21

Demographic Change
& an Inclusive Economy

POPULATION CHANGE, PG 37

INCOME AND POVERTY, PG 41

HOUSING, PG 46

JOBS AND JOBS ACCESS, PG 49

EDUCATION, PG 53

Creating a Healthier Region

CONNECTING HEALTH AND WEALTH, PG 71

INFANT AND CHILD HEALTH, PG 73

HEALTH RISK FACTORS, PG 75

HEALTH OUTCOMES, PG 82

Civic Life &
Infrastructure

STEWARDSHIP OF THE PUBLIC REALM, PG 91

COMMUNITY TRUST AND APPRECIATION, PG 96

PARTICIPATION IN PUBLIC LIFE, PG 98

CONCLUSION AND ENDNOTES, PG 102



A festival on the New
Haven Green, the
city's central public
square. Photo credit:
International Festival
of Arts & Ideas



Visual Appendix

50 figures, 35 tables, 1 report —
here's a preview of what we learned
about Greater New Haven

Follow the story and access
resources at [#CommunityIndex](#)

 [ctdata](#)
 [connecticutdata](#)
 [ctdata](#)
 [ctdatahaven.org](#)

CHAPTER 1

DataHaven Community Index & Personal Wellbeing Index

★ QUALITY OF LIFE

DataHaven Community
Index
DataHaven Personal
Wellbeing Index

FIG 1.1 COMMUNITY
WELL-BEING COMES FROM
A NUMBER OF DIFFERENT
FACTORS PG 14

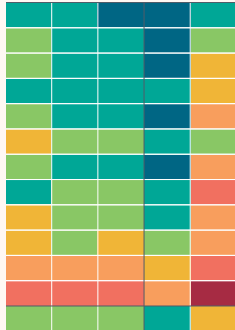


FIG 1.2 COMPARED TO
THE US & OTHER METROS,
WELL-BEING IS HIGH BUT
VARIED PG 15

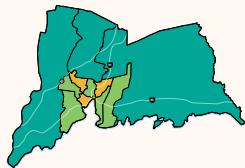


FIG 1.3 WHITE & ASIAN
RESIDENTS RANK WELL
ABOVE BLACK & LATINO
RESIDENTS ON WELL-BEING
MEASURES PG 15

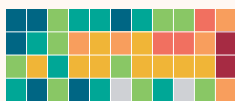
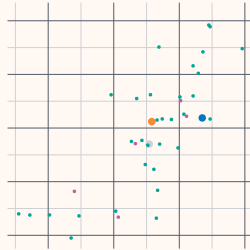


FIG 1.4 RESIDENTS ARE
HAPPIER & HEALTHIER IN
PLACES THAT SCORE HIGH
ON COMMUNITY WELL-BEING
AS WELL AS THOSE WITH
STRONG NEIGHBORHOOD
ASSETS PG 16 & 17



CHAPTER 2

Demographic Change & an Inclusive Economy

● POPULATION CHANGE

A Growing Population
An Aging Region
Increased Diversity
Changing Household
Structure

FIG 2.1 GNH'S OLDER POP.
IS PROJECTED TO CONTINUE
GROWING PG 24

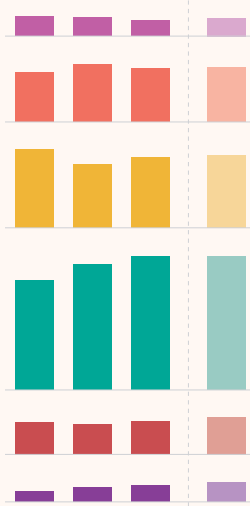


FIG 2.2 CHILDREN & YOUNGER
ADULTS ARE MUCH MORE
RACIALLY DIVERSE PG 25

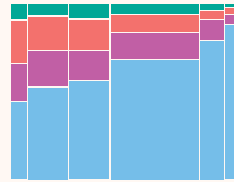


FIG 2.3 THE REGION IS
DIVERSIFYING, SOME PLACES
MORE THAN OTHERS PG 25



FIG 2.4 IMMIGRANTS MAKE
UP A GROWING SHARE OF
THE REGION'S POP. PG 26

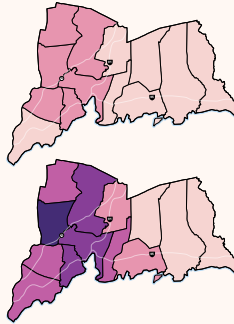


FIG 2.5 GNH IS HOME
TO A LARGE IMMIGRANT
COMMUNITY PG 26

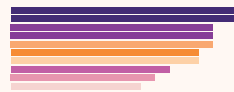


FIG 2.6 MARRIED-COUPLE
HOUSEHOLDS HAVE
DECLINED SLIGHTLY PG 27



\$ INCOME & POVERTY

Median Income
Disparities
Wage Gaps & Wealth Gaps
Income Inequality
Rising Low-Income Rate
Financial Security

FIG 2.7 LOW-INCOME RATES
ARE RISING, ESPECIALLY
AMONG CHILDREN PG 27

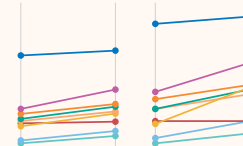


FIG 2.8 GNH HAS WIDE
INCOME DISPARITIES PG 28

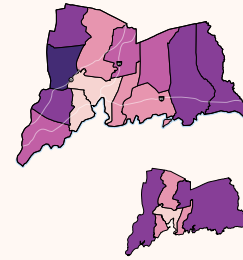


FIG 2.9 THE HIGHEST-
EARNING 5% MAKE 15X MORE
MONEY THAN THE BOTTOM
20% PG 29

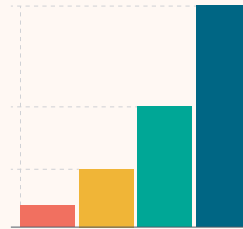


FIG 2.10 GNH HAS A WAGE
GAP BY BOTH GENDER & RACE
PG 29

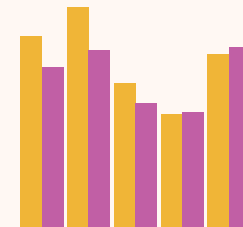


FIG 2.11 GNH'S MIDDLE
CLASS HAS SHRUNK
DRASTICALLY PG 29

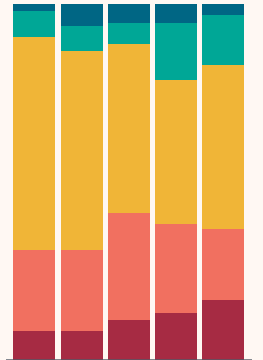
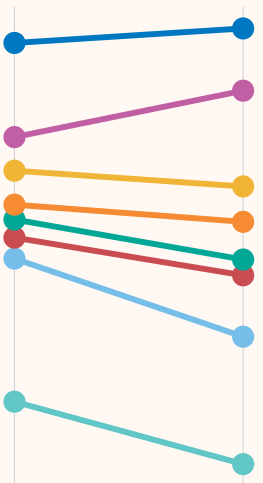


FIG 2.12 AVG INCOMES HAVE
RISEN, BUT ONLY IN HIGH-
INCOME TOWNS PG 29



🏠 HOUSING

Housing Stock
Housing Affordability
Housing Discrimination

FIG 2.13 GNH HOUSING
VALUES ARE HIGH IN OUTER
RING TOWNS PG 30

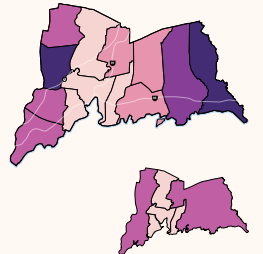


FIG 2.14 RENTER'S COST BURDEN RATES HAVEN'T DECLINED POST-RECESSION
PG 31

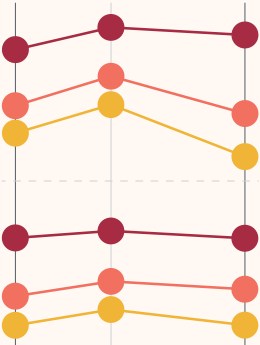


FIG 2.15 THE AVG. RENTER'S INCOME IS \$10K SHORT OF AFFORDING A 2BR APT. PG 31

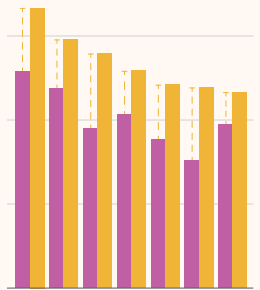


FIG 2.16 HOMEOWNERSHIP IS STILL LOW IN LOWER-GRADE AREAS PG 31

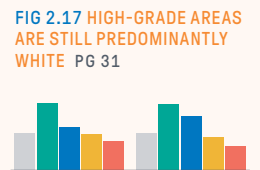
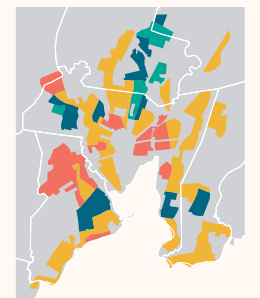


FIG 2.17 HIGH-GRADE AREAS ARE STILL PREDOMINANTLY WHITE PG 31



FIG 2.18 THE PATTERNS IN 1930S REDLINING MAPS ARE STILL PRESENT TODAY PG 32



JOBS & JOBS ACCESS

Regional Job & Wage Trends
Transportation & Job Locations
Underemployment

FIG 2.19 NEW HAVEN PROVIDES MANY JOBS & WORKERS TO THE SURROUNDING REGION PG 33

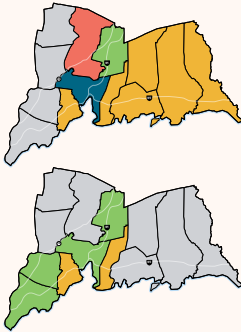
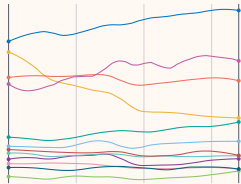


FIG 2.20 GNH'S MANUFACTURING SECTOR HAS DECLINED, WHILE HEALTH CARE & SOCIAL ASSISTANCE JOBS SOAR PG 34



EDUCATION

Early Childhood
K-12 & Postsecondary Education
Risk Factors for Youth

FIG 2.21 NEW HAVEN'S OUTER RING SCHOOL DISTRICTS ARE MUCH LESS DIVERSE THAN THE CITY'S SCHOOLS PG 34

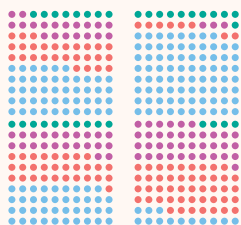


FIG 2.22 BLACK & SPECIAL EDUCATION STUDENTS ARE SUSPENDED FAR MORE OFTEN THAN OTHERS PG 34

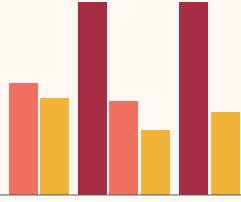


FIG 2.23 GNH SCHOOLS HAVE WIDE ACHIEVEMENT GAPS PG 35

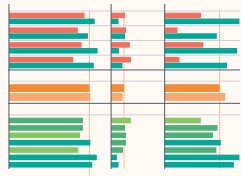


FIG 2.24 SIX YEARS AFTER GRADUATING HIGH SCHOOL, ONLY 48% OF GNH PUBLIC SCHOOL STUDENTS HAVE A COLLEGE DEGREE PG 35



FIG 2.25 GNH RESIDENTS HAVE VERY DIFFERENT IDEAS OF WHAT YOUNG PEOPLE EXPERIENCE PG 36



FIG 2.26 WHITE CHILDREN FROM LOW-INCOME HOMES IN GNH CAN EXPECT GREATER UPWARD ECONOMIC MOBILITY THAN BLACK CHILDREN FROM HIGH-INCOME HOMES PG 36



CHAPTER 3

Creating A Healthier Region

INFANT & CHILD HEALTH
Healthy Birth Outcomes
Environmental Threats

HEALTH RISK FACTORS

Inadequate Access to Health & Dental Care
Experiences of Discrimination
Adverse Childhood Experiences
Nutrition, Physical Activity, & Substance Use
The Opioid Crisis

HEALTH OUTCOMES

Early Onset of Chronic Diseases
Mental Health
Injuries
Infectious Diseases

CONNECTING HEALTH & WEALTH

Fairfield County's 19-year Difference in Life Expectancy
Leading Causes of Death

FIG 3.1 LIFE EXPECTANCY IN GNH IS HIGH, BUT OFTEN DIFFERS BY SEVERAL YEARS BETWEEN ADJACENT NEIGHBORHOODS PG 61

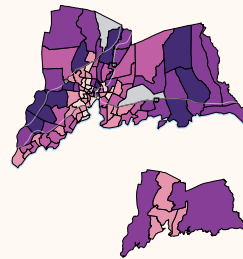


FIG 3.2 CANCERS & INFANT/FETAL MORTALITY IMPACT GNH'S LIFESPANS THE MOST PG 62

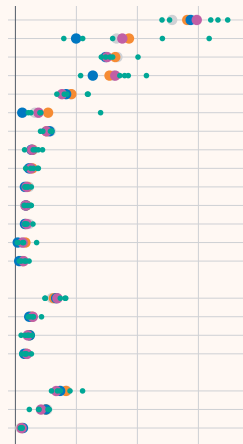


FIG 3.3 RATES OF HOSPITALIZATIONS & ED VISITS VARY BY GEOGRAPHY PG 63

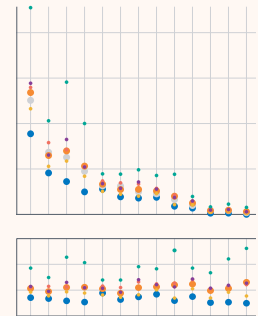


FIG 3.4 PREVENTABLE HOSPITAL VISITS SHOW LARGE DIFFERENCES ACROSS AGE & GENDER PG 64

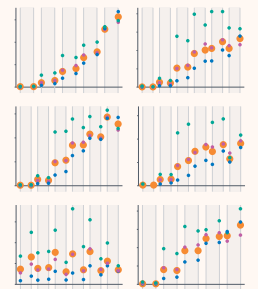


FIG 3.5 PREVENTABLE HOSPITAL VISITS SHOW LARGE DIFFERENCES ACROSS AGE & GENDER PG 65

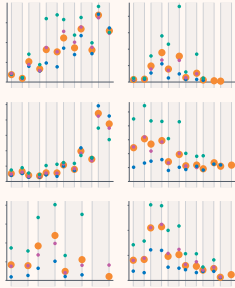


FIG 3.6 GROWING INEQUALITY IN RATES OF HOSPITAL ENCOUNTERS PG 66



FIG 3.7 GROWING INEQUALITY IN RATES OF HOSPITAL ENCOUNTERS PG 67

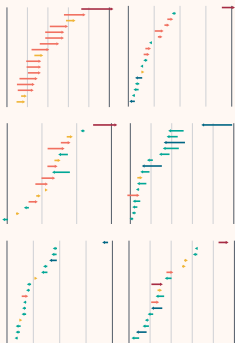


FIG 3.8 NEARLY HALF OF ALL ADULTS SAY YOUTH SUSCEPTIBILITY TO DRUG & ALCOHOL ABUSE IS A TOSS-UP PG 68

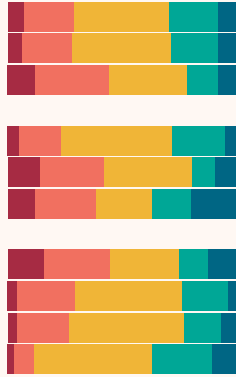


FIG 3.9 OVERDOSE DEATH RATES HAVE SKYROCKETED OVER THE PAST FEW YEARS PG 69

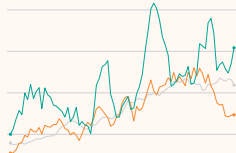


FIG 3.10 FENTANYL'S STEEP RISE HAS ECLIPSED DECREASING OVERDOSE RATES FROM OTHER DRUGS PG 69

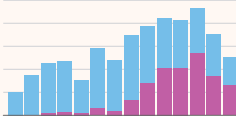


FIG 3.11 RESIDENTS OFTEN SEE THEIR RACE AS MAJOR REASON FOR DISCRIMINATION IN MULTIPLE AREAS OF THEIR LIVES PG 70

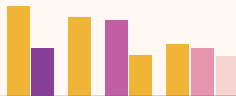
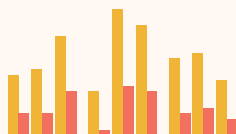


FIG 3.12 BLACK, LATINO, & LOWER-INCOME ADULTS DISPROPORTIONATELY EXPERIENCE NEGATIVE ENCOUNTERS WITH POLICE PG 70



CHAPTER 4

Civic Life & Infrastructure

STEWARDSHIP OF THE PUBLIC REALM

Investment in Public Resources
Perceived Access to & Quality Of Community Resources
Public Libraries
Climate Stewardship

FIG 4.1 WEALTHIER TOWNS NET MORE MONEY FROM PROPERTY VALUES & SPEND MORE MONEY ON EDUCATION PG 88

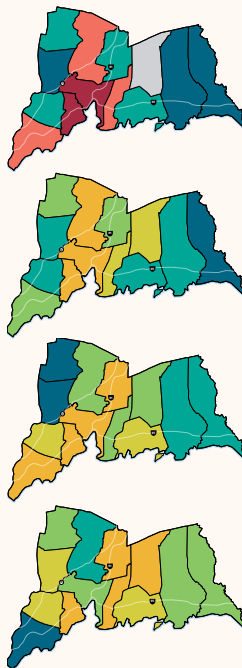


FIG 4.2 IN TOWNS W/ MORE SURPLUS MONEY, RESIDENTS RATE NEIGHBORHOOD ASSETS & FACILITIES MORE HIGHLY PG 89

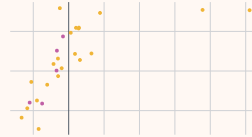
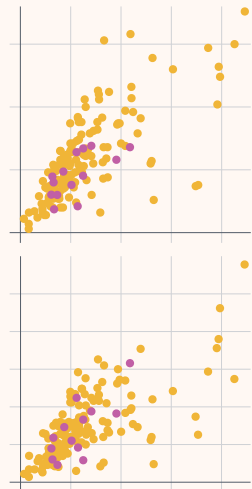


FIG 4.3 TOWNS THAT SPEND MORE ON THEIR LIBRARIES SEE GREATER LIBRARY USE PG 89



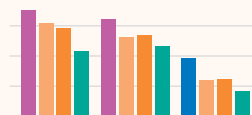
COMMUNITY TRUST & APPRECIATION

Local News Coverage

PARTICIPATION IN PUBLIC LIFE

Volunteering
Arts & Culture
Voting
Community Design

FIG 4.4 VOTER TURNOUT IS HIGH FOR NATIONAL & STATE ELECTIONS, BUT MUCH LOWER IN MUNICIPAL ONES PG 90



INTRODUCTION

What matters more, having a job or having food on your plate?

Can money really buy happiness?
Is it really true that if you haven't
got your health, you haven't got
anything?

As federal, state, and local agencies wrestle with one tough budget season after another, and have to decide how to help the greatest number of people with limited government funds, these questions matter—a lot.

Understanding what people need across our regions and neighborhoods helps answer these questions.

This report, *The Greater New Haven Community Index 2019*, collects and analyzes over 100 sources of national, state, and local data that pertain to these questions. But we have supplemented that information by conducting live, in-depth interviews with tens of thousands of randomly-selected adults statewide—over 32,000 in 2015 and 2018, including conversations with 5,000 representative adults in Greater New Haven. The DataHaven Community Wellbeing Survey (DCWS), believed to be the largest of its type in the United States, produces reliable data about life satisfaction, physical and mental health, neighborhood conditions, economic opportunity, and civic engagement that are not available at the local level from any of the other public data sources we work with. We use the latest data from the 2018 DCWS throughout this report. Data from our 2012 and 2015 DCWS were also discussed in the 2013 and 2016 iterations of this report.¹

Working with DataHaven, researchers Jan Wollenberg and Chris Barrington-Leigh of McGill University used this survey data to construct a model that could predict individuals' levels of life satisfaction.² The model accounted for household income, household size, self-reported physical and mental health, and personal experiences including food security, employment, and neighborhood conditions. Using these variables, Wollenberg and Barrington-Leigh created a life satisfaction score ranging from 0 to 100. Among the key findings:

Addressing food insecurity would be more likely to increase overall life satisfaction than addressing unemployment.

Some might think that, after health, employment matters above all else. Indeed, for adults in the workforce, having employment improved life satisfaction as much as a nearly six-fold increase in household income did, whereas food security equaled only a 4.2-fold increase. However, there are approximately 400,000 food-insecure Connecticut adults, compared to about 200,000 Connecticut adults who are unemployed, according to the DataHaven survey.

Money can buy happiness—but only up to a point.

Underscoring the importance of food security, the researchers found that having enough money to consistently buy food for themselves and their families improved adults' life satisfaction as much as if they quadrupled their household income. Meanwhile, even more Connecticut adults than who are food-insecure—about 680,000, or 19 percent—say they live in neighborhoods with low walkability. The researchers' analysis of life satisfaction data shows that improving quality of life issues such as walkability, trust in neighbors, and interactions with local government would likely make life better for many residents.

The old saying about health turned out to be somewhat true, but not for the reasons we might expect.

Having excellent rather than poor physical and mental health improved life satisfaction scores by 18 and 26 points, respectively. The sizeable effect of improving mental health and the number of adults who face challenges in this area is consistent with other research suggesting that preventing depression would translate into enormous gains in life satisfaction. Meanwhile, a lack of

health insurance had just a modest effect on the entire population. This is not because health insurance is not important—having insurance improved life satisfaction by 4 points on the scale. But in recent years, Connecticut has done a relatively good job making sure that all people can get health insurance, whether through work, state-sponsored insurance, or AccessHealthCT (the state's insurance marketplace under the Affordable Care Act). Currently, only about 5 percent of adults in Connecticut are uninsured. If uninsurance rates were to rise back to where they were before the Affordable Care Act, the model suggests that the effect on people's well-being would be quite significant.

What does all this mean for local and state agencies looking to do the best they can with what they have? The survey's insights—whether at the level of the entire population or a single program—suggest more cost-effective ways to improve the lives of the widest range of people. Increasing families' incomes across the board would be a costly endeavor. Thus, improving access to nutritious food and health care, strengthening neighborhood assets and walkability, and deepening people's relationships with different levels of government are both more attainable and, perhaps, more effective.

About this Community Indicators Program and Community Health Needs Assessment

The Greater New Haven Community Index 2019 is part of a comprehensive community indicators program that collects, shares, and evaluates quality-of-life data on an ongoing basis at the state, regional, and neighborhood levels. This work builds upon the primary mission of DataHaven, a formal partner of the National Neighborhood Indicators Partnership, and is consistent with our focus since we released our first printed book of social indicator maps nearly 25 years ago in New Haven.

This report was made possible by contributions from more than 100 funders. A list of funders in this region can be found inside the front cover. We have also consulted extensively with other community partners and subject matter experts throughout the state and beyond, and are profoundly grateful for their guidance and support.

The Community Foundation for Greater New Haven, a core funding partner with DataHaven and *The Community Index* since its inception, is working to advance a regional agenda for economic growth that is truly inclusive. *The Community Index* is providing critical baseline data that will help inform community conversations and strategies that promote growth and identify opportunities for reducing the inequities faced by too many people in Greater New Haven.

Because it covers health and several other issues that relate to it, *The Greater New Haven Community Index 2019* is also designed to meet requirements for **Community Health Needs Assessments (CHNA)** for Yale New Haven Hospital, as laid out in Internal Revenue Service Form 990 Schedule H and Notice 2011-52. The CHNA also serves local health departments participating in national accreditation processes. Chapter 3 of the *Community Index* is intended to document key health needs in communities served by all hospitals, while using a unified approach to reach the broadest possible audience throughout Greater New Haven. To add further context and locally-specific analysis, **additional CHNA sections** have been created based on the work of a multi-agency community-hospital coalition existing within each hospital's primary service area. Whereas the entire region is of interest to every hospital, these additional sections provide further documentation of the

community needs identified within the geographic area on which each hospital plans to focus. They also outline the processes used by each hospital to develop CHNAs and **Community Health Improvement Plans** within each hospital's primary service area. Like this report, the additional sections have benefited from input from dozens of local public health experts. They will be found on the individual hospital websites when they are finalized this year.

The topics included in this report have been the subject of other studies, but to our knowledge there has never been a program that has synthesized them into a single report. Following on our 2016 *Community Index*, we envision that this report will continue to serve as a platform to further the availability of neighborhood-level data and address gaps in disaggregated data related to age, gender, race, ethnicity, national origin, sexual orientation, disability, and other demographic characteristics. Since 2016, we have improved the quality of available data in several ways, including working diligently to ensure that all persons are represented in the information sources used in the report. Doing so allows the program to highlight areas where the region is and is not doing well, and also lets community leaders find data that are relevant to their interests and see how the work they do across different sectors contributes to the broader whole.

We recognize that most of the potential demographic or neighborhood data breakdowns do not fit within the practical confines of this report. We have published disaggregated data elsewhere on the DataHaven website (ctdatahaven.org), and we plan to release additional regional and statewide publications on health equity and other subject-specific topics in the near future. We encourage community partners to submit requests for the data that they need, using the instructions on our website: ctdatahaven.org/ask-mark.

Geography

In this report, Greater New Haven is generally defined as 13 towns: the city of New Haven, the Inner Ring suburbs (East Haven, Hamden, West Haven), and the Outer Ring suburbs (Bethany, Branford, Guilford, Madison, Milford, North Branford, North Haven, Orange, Woodbridge). Data for Milford, the largest town within the Outer Ring, are sometimes presented in addition to the combined Outer Ring data. In some cases, data are also presented for specific neighborhoods or groups of neighborhoods within New Haven. [SEE CHAPTER 1](#) In 2019, we have also worked with partner organizations to publish separate reports that cover other areas of Connecticut including the Lower Naugatuck Valley, Fairfield County, and Greater Hartford regions. [SEE OUR WEBSITE FOR DETAILS](#) **DH**

CHAPTER 1

DataHaven Community Index and Personal Wellbeing Index

Gross Domestic Product or
Gross Domestic Happiness?

Why should we measure well-being, happiness, and life satisfaction directly?

IN THIS CHAPTER

- Greater New Haven has relatively high well-being compared to other areas nationwide.
 - But well-being varies by demographic factors like race, income, and hometown.
-

Asking residents about how they are doing on a daily basis is the most democratic approach to evaluating the extent to which a region's communities are flourishing. Measures of subjective well-being do not presuppose that any given resident needs a set of specific material goods, such as a paycheck of a certain size or a car, in order to be content with life. The greatest hopes and concerns of residents may lie within social aspects such as supportive friendships; access to fresh air, water, parks, and safe streets; or how they generally perceive their lives and their communities.

Traditional economic measures such as gross domestic product—the monetary value of all goods and services produced within the area—often show that Connecticut's metropolitan regions are among the wealthiest and most productive in the world. However, they do not necessarily account for how that affluence is distributed or how residents experience it. The many processes and policies that lead to social and economic inequalities, and the impacts that these inequalities can have on children and adults over time, are fundamental to understanding our current and future levels of well-being. Countries such as the United Kingdom and New Zealand have already begun to harness the power of a population well-being framework to inform public policy decisions.^{3, 4}

When integrated with other data, measures of well-being also help illuminate the deep connections among financial stress, health, and happiness in a way that economic statistics alone do not. For example, 1 in 8 Greater New Haven adults experience food insecurity. Our analysis suggests that reducing food insecurity would lead to a dramatic increase in the overall well-being of the region. The same data suggest that boosting incomes universally would lead to a much smaller gain.

To summarize and draw connections across these measures, we begin the report by introducing indexes of the region: the DataHaven Community Index and Personal Wellbeing Index. Additionally, a Neighborhood Assets Index is defined later in this report. [SEE TABLE 4B](#) Each index is a blend of indicators that capture the physical and social environments in which people live in Greater New Haven—including measures of community-wide health, infrastructure, education, and economics.

Executive Summary

The DataHaven Community Index incorporates 12 indicators into a single factored score that can be compared across multiple geographies. The indicators range from common economic measures, including poverty and unemployment rates, to educational attainment, life expectancy, and other general measures of quality of life. Greater New Haven would rank 17th among 107 large U.S. metropolitan areas, but the relatively high standard of living is divided; the region includes some of the highest- and lowest-scoring areas in our analysis.

Between 2012 and 2017 (the latest year for which these data are available), many Community Index scores improved, due in large part to economic recovery and expansion after the Great Recession. Despite this apparent progress, substantial regional and racial inequalities remain.

DataHaven's Personal Wellbeing Index—consisting of measures of self-reported life satisfaction, happiness, anxiety, and health—also reveals a high degree of inequality by geography, race and ethnicity, and household income level. Greater New Haven's score on the Personal Wellbeing Index is lower than the state average. **DH**

FIG 1.1

Community well-being comes from a number of different factors

COMPONENTS OF THE DATAHAVEN COMMUNITY INDEX, 2017

INDEX COMPONENTS	US	CONNECTICUT	GREATER NEW HAVEN	BEST	WORST
OPPORTUNITY YOUTH	7%	5%	4%	MILFORD 2%	NEW HAVEN, LOWER-INCOME 9%
HEALTH INSURANCE	90%	94%	94%	OUTER RING 97%	NEW HAVEN, LOWER-INCOME 88%
HIGH SCHOOL GRADUATES	87%	90%	91%	OUTER RING 95%	NEW HAVEN, LOWER-INCOME 79%
UNEMPLOYMENT	7%	7%	7%	OUTER RING 5%	NEW HAVEN, LOWER-INCOME 14%
YOUNG CHILD POVERTY	22%	15%	18%	HAMDEN 5%	NEW HAVEN, LOWER-INCOME 44%
WORKERS WITH SHORT COMMUTE	63%	65%	70%	NEW HAVEN, OTHER 76%	MILFORD 66%
POVERTY	15%	10%	12%	OUTER RING 4%	NEW HAVEN, LOWER-INCOME 31%
SEVERE HOUSING COST BURDEN	15%	16%	20%	OUTER RING 14%	NEW HAVEN, LOWER-INCOME 34%
PRESCHOOL ENROLLMENT	48%	64%	64%	MILFORD 72%	EAST HAVEN 37%
LIFE EXPECTANCY	78.7 yrs	80.3 yrs	79.8 yrs	OUTER RING 81.6 yrs	NEW HAVEN, LOWER-INCOME 76.8 yrs
YOUTHFUL LABOR FORCE	26%	24%	25%	NEW HAVEN, OTHER 34%	OUTER RING 21%
MEDIAN HOUSEHOLD INCOME	\$58K	\$74K	\$70K	OUTER RING \$94K	NEW HAVEN, LOWER-INCOME \$34K
COMMUNITY INDEX OVERALL (0-1,000)	594	657	652	OUTER RING 734	NEW HAVEN, LOWER-INCOME 453

NOTE: Please refer to text (Chapter 1) and endnotes (Chapter 5) for definitions of indicators used in this Index.

FIG 1.2

Compared to the US and other metros, well-being is high but varied

COMPOSITE SCORE OF THE DATAHAVEN COMMUNITY INDEX, BY TOWN & NEIGHBORHOOD WITH NEARBY METROS, GREATER NEW HAVEN, 2017

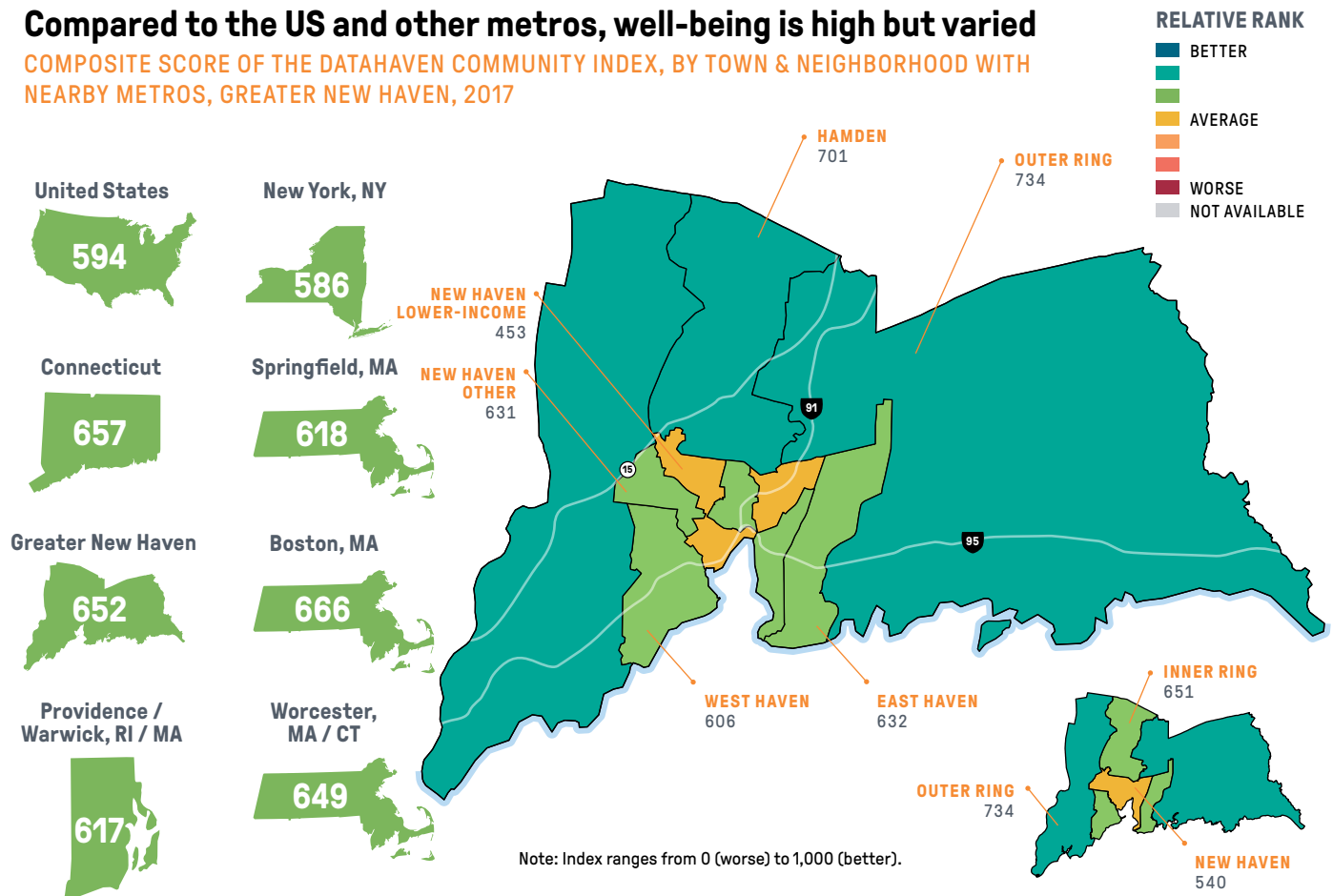


FIG 1.3

White and Asian residents rank well above Black and Latino residents on well-being measures

COMPONENTS OF THE DATAHAVEN COMMUNITY INDEX BY RACE/ETHNICITY, GREATER NEW HAVEN, 2017

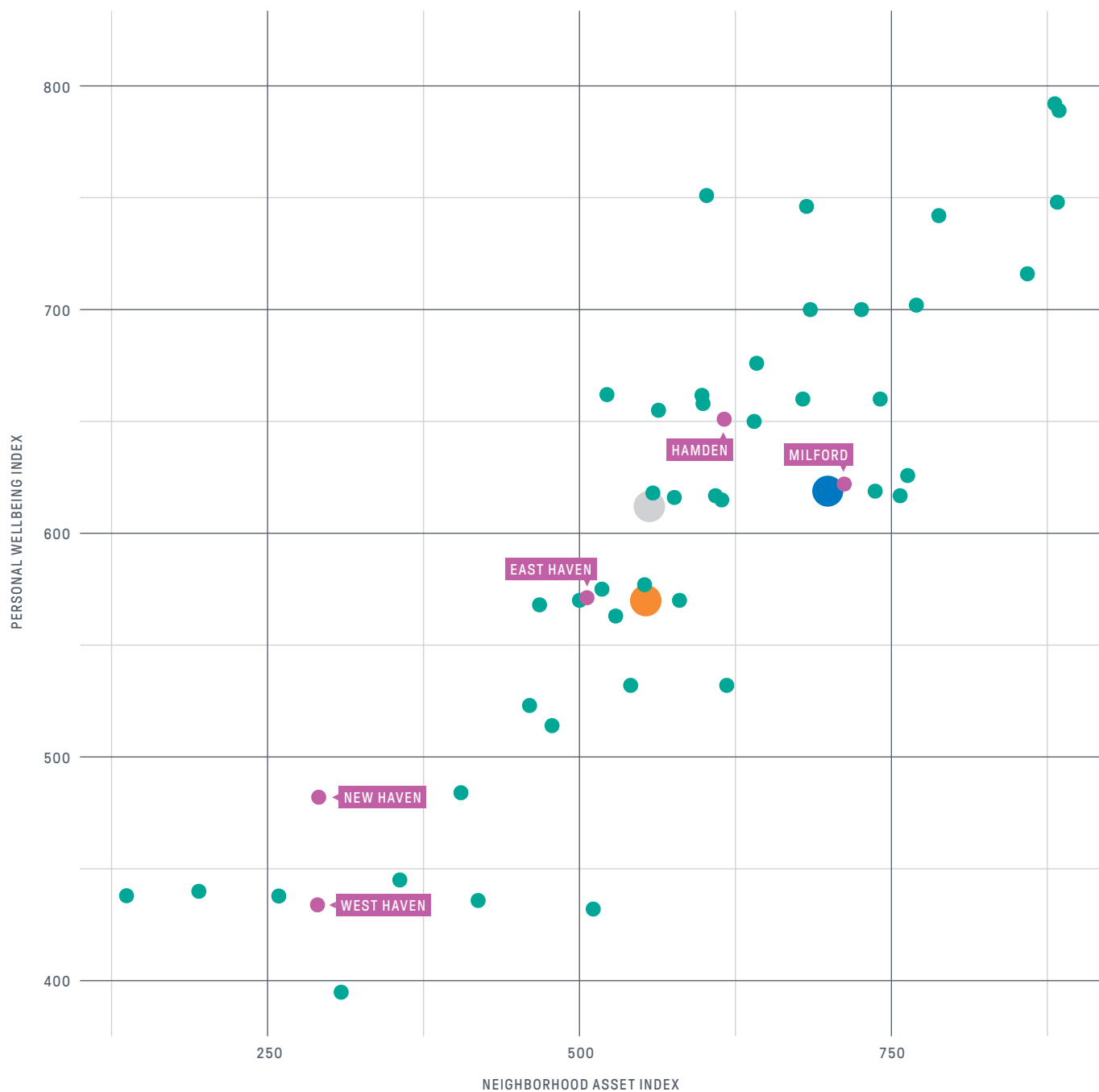
	HEALTH INSURANCE	HIGH SCHOOL GRADUATES	WORKERS W/ SHORT COMMUTE	YOUNG CHILD POVERTY	POVERTY	OPPORTUNITY YOUTH	SEVERE HOUSING COST BURDEN	UNEMPLOYMENT	LIFE EXPECTANCY	YOUTHFUL LABOR FORCE	MEDIAN HOUSEHOLD INCOME
WHITE	96%	94%	68%	10%	8%	4%	18%	7%	80 yrs	23%	\$77K
BLACK	94%	88%	69%	33%	22%	17%	36%	12%	77 yrs	26%	\$42K
LATINO	85%	78%	72%	27%	21%	10%	31%	10%	78 yrs	32%	\$45K
ASIAN	92%	93%	69%	7%	11%	N/A	25%	4%	N/A	39%	\$81K

FIG 1.4
Residents are happier and healthier in places that score high on community well-being...
PERSONAL WELLBEING INDEX VS DATAHAVEN COMMUNITY INDEX



...as well as those with strong neighborhood assets

PERSONAL WELLBEING INDEX VS DATAHAVEN NEIGHBORHOOD ASSET INDEX



NOTE: Each index is scaled from 0 (worse) to 1,000 (better).

TABLE 1A

DataHaven Community Index

SCORES FOR LARGE U.S. METROPOLITAN AREAS AND LOCAL CITIES, TOWNS, AND NEIGHBORHOODS, 2012 AND 2017

RANK	LOCATION	2017 COMM. INX.	2012 COMM. INX.	PERCENT CHANGE	RANK	LOCATION	2017 COMM. INX.	2012 COMM. INX.	PERCENT CHANGE
	New Haven Outer Ring	734	653	↑12%	24	Seattle, WA ♦	643	565	↑14%
	Milford	710	646	↑10%	25	Santa Rosa, CA ♦	643	545	↑18%
1	Madison, WI	706	631	↑12%	26	Milwaukee, WI ♦	642	563	↑14%
	Hamden	701	630	↑11%	27	Buffalo, NY	640	581	↑10%
2	Des Moines, IA	691	635	↑9%	28	Pittsburgh, PA	640	580	↑10%
3	San Jose, CA ♦	688	595	↑16%	29	Kansas City, MO	638	576	↑11%
4	Minneapolis-St. Paul, MN ♦	683	607	↑13%	30	Syracuse, NY	638	582	↑10%
5	Ogden, UT	683	612	↑12%	31	New Haven, CT metro (incl. Waterbury)	637	568	↑12%
6	Portland, ME ♦	675	590	↑14%	32	Portland, OR ♦	634	547	↑16%
7	Hartford, CT metro area (incl. Middlesex County)	671	604	↑11%		East Haven	632	603	↑5%
8	Albany, NY	669	606	↑10%		New Haven Other Neighborhoods	631	573	↑10%
9	Provo, UT ♦	667	592	↑13%	33	Boise, ID ♦	629	540	↑16%
10	Boston, MA	666	598	↑11%	34	Ventura, CA ♦	628	550	↑14%
11	Omaha, NE	665	612	↑9%	35	Columbus, OH	628	570	↑10%
12	Grand Rapids, MI ♦	663	557	↑19%	45	Springfield, MA	618	561	↑10%
	Connecticut (state avg.)	657	593	↑11%	46	Providence, RI	617	554	↑11%
13	San Francisco, CA ♦	656	566	↑16%		West Haven	606	570	↑6%
14	Salt Lake City, UT ♦	656	574	↑14%		United States (national avg.)	594	529	↑12%
15	Bridgeport-Stamford-Norwalk, CT (Fairfield County)	655	593	↑10%	74	New York, NY ♦	586	512	↑14%
16	Honolulu, HI ♦	653	580	↑13%		New Haven ♦	540	462	↑17%
17	Colorado Springs, CO ♦	652	574	↑14%	100	Lakeland, FL ♦	537	469	↑14%
	Greater New Haven (area covered by this report)	652	582	↑12%	101	Stockton, CA ♦	536	459	↑17%
18	Raleigh, NC	651	586	↑11%	102	Memphis, TN	532	495	↑7%
	New Haven Inner Ring	651	602	↑8%	103	Riverside, CA ♦	522	447	↑17%
19	Worcester, MA	649	594	↑9%	104	El Paso, TX ♦	517	445	↑16%
20	Harrisburg, PA	647	598	↑8%	105	Bakersfield, CA ♦	504	436	↑16%
21	Washington, DC	647	584	↑11%	106	Fresno, CA ♦	500	437	↑14%
22	Rochester, NY	647	587	↑10%		New Haven Lower-Income Neighborhoods ♦	453	360	↑26%
23	Denver, CO ♦	644	556	↑16%	107	McAllen, TX ♦	434	364	↑19%

Connecticut cities, towns, and neighborhoods

♦ Community Index Score improvement at or above the national average.



DATAHAVEN COMMUNITY INDEX

Greater New Haven Ranks 17th Nationally

The Community Index integrates 12 individual and household indicators into a single factored score ranging from 0 to 1,000.⁵ Distilling this information into a single score allows us to make relative comparisons of multiple geographies ranging from the national level to large metropolitan regions to individual neighborhoods within cities.⁶ These measures incorporate the latest available Census American Community Survey (ACS) data with life expectancy data from the Centers for Disease Control and Prevention.⁷ [SEE FIG 1.1, 1.2, 1.3 /](#)

[SEE TABLE 1A, 1B](#)

With an overall Community Index score of 637, the New Haven metropolitan area (including Waterbury and all of New Haven County) ranks 31st on a list of 107 U.S. metropolitan areas with a population of at least 500,000. Greater New Haven, as defined in this report, would rank 17th nationally if it were included, tied with Colorado Springs, with a score of 652. In both the metropolitan area and Greater New Haven, scores have improved by approximately 70 points (or 12 percent) since 2012 as the result of continued economic recovery after the Great Recession. Most Index scores in 2017 are higher as a result of improvements in economic outcomes such as unemployment and the expansion of health insurance coverage.⁸ While the Community Index scores in all neighborhoods and towns in Greater New Haven improved since 2012, the scores for Outer Ring towns improved about 1.7 times as much as Inner Ring towns⁹, largely due to aggregate gains in preschool enrollment in Outer Ring towns (71 percent in 2017, up from 65 percent in 2012).¹⁰ Low-income neighborhoods in New Haven saw the greatest improvement of all GNH geographies: 93 points, or 26 percent.

While the improvement in Greater New Haven's Community Index score is not itself significant in light of the overall improvement nationwide, it is driven by significant improvements in health insurance coverage, the average unemployment rate, and the percent of households spending more than half of their income on housing costs (severe housing cost burden). However, in 2017, severe housing cost burden still affected one in five households in Greater New Haven and one in three low-income households in New Haven.¹¹

Some towns in Greater New Haven, and even individual neighborhoods in the city of New Haven, would rank among both the highest and lowest scoring regions in the nation. All nine Outer Ring towns scored more than the highest-ranked U.S. metro area, and nearly double New Haven's six lowest-income neighborhoods. The city's large and relatively affluent Westville and East Rock neighborhoods would also score higher than most of the nine Outer Ring towns if we were to group them separately from the city's other neighborhoods.

This inequality is largely related to income. Median household income in the Outer Ring towns was more than twice that of New Haven, and nearly three times as much as in low-income New Haven neighborhoods in 2017.¹² As a result, the poverty rate was 26 percent in New Haven compared to just 6 percent in Milford; poverty among children was nearly nine times greater in low-income New Haven neighborhoods (44 percent) than Outer Ring towns (5 percent).¹³ Generally, outcomes are most favorable in Outer Ring towns and least favorable in low-income New Haven neighborhoods, as summarized in the table below. [SEE TABLE 1B](#)

GREATER NEW HAVEN'S 15-YEAR DIFFERENCE IN LIFE EXPECTANCY

While Greater New Haven's average life expectancy of 79.8 years is relatively high by U.S. standards, it masks a dramatic difference within the region. Life expectancy in one of New Haven's low-income neighborhoods is just 71 years—nearly 15 years lower than that of the neighborhood with the highest life expectancy (85.8 years, in Orange).¹⁵ Town-wide averages range from a maximum of 83.4 years in Orange to a minimum of 77.8 years in West Haven and 78.2 years in New Haven, a difference of more than five years.

[SEE CHAPTER 3 FOR MORE DETAILS](#)

TABLE 1B

DataHaven Community Index and its components by area and neighborhood

LOCAL DATA VALUES AND SCORES, 2017

LOCATION	OPPORTUNITY YOUTH	POVERTY	HIGH SCHOOL GRADUATES	YOUNG CHILD POVERTY	HEALTH INSURANCE COVERAGE	PRE-SCHOOL ENROLLMENT	UNEMPLOYMENT RATE	LIFE EXPECTANCY	SEVERE HOUSING COST BURDEN	YOUTHFUL LABOR FORCE	WORKERS WITH SHORT COMMUTE	MEDIAN HOUSEHOLD INCOME	2017 COMM. INX.
United States	7%	15%	87%	22%	90%	48%	7%	78.7	15%	26%	63%	\$57,652	594
Connecticut	5%	10%	90%	15%	94%	64%	7%	80.3	16%	24%	65%	\$73,781	657
Greater New Haven	4%	12%	91%	18%	94%	64%	7%	79.8	20%	25%	70%	\$69,812	652
New Haven	7%	26%	85%	34%	90%	61%	10%	78.2	29%	32%	74%	\$39,191	540
Low-Income Nbhds	9%	31%	79%	44%	88%	58%	14%	76.8	34%	29%	72%	\$33,763	453
Other Nbhds	4%	20%	90%	23%	91%	64%	7%	79.8	24%	34%	76%	\$51,057	631
Inner Ring	4%	10%	91%	14%	94%	57%	8%	78.9	19%	25%	72%	\$65,044	651
East Haven	7%	9%	90%	13%	93%	37%	7%	78.8	19%	25%	74%	\$63,051	632
Hamden	3%	8%	94%	5%	95%	70%	6%	80.1	17%	24%	69%	\$74,281	701
West Haven	2%	13%	88%	22%	92%	53%	10%	77.8	22%	26%	74%	\$55,299	606
Outer Ring	3%	4%	95%	5%	97%	71%	5%	81.6	14%	21%	66%	\$94,251	734
Milford	2%	6%	95%	12%	96%	72%	6%	80.2	17%	25%	66%	\$86,382	710

Community Index by Race/Ethnicity

To further reveal the extent to which these measures vary across the population, we disaggregated each of the Community Index indicators by four racial/ethnic groups.¹⁴ [SEE FIG 1.3](#)

White and Asian residents are generally more economically advantaged than Black and Latino residents. Median incomes among Asian households (\$81,000) were about twice those of Black households (\$42,000),¹⁶ and the rate of poverty in the Black community was twice that of the Asian community (22 percent compared to 11 percent), and nearly five times greater among children (33 percent compared to 7 percent).¹⁷ Most New Haven residents who are employed enjoy a relatively short commute to work.¹⁸ Adult educational attainment was higher than the state and national averages in 2017, and has improved significantly since 2012.¹⁹ Life expectancy in Greater New Haven is comparable to the US average of 79 years.²⁰

Average unemployment in Black communities in Greater New Haven was nearly double (12 percent) the rate in white communities (7 percent).²¹ In 2017, 17 percent of Black youth between 16 and 19 years old were neither in school nor working (“opportunity youth” or “disconnected

youth”) compared to 4 percent of white youth.²² These young people who become “disconnected” from school and the labor force often find it difficult to reconnect, which may further complicate their ability to pursue higher education or ultimately secure a living-wage job. These outcomes can significantly limit lifetime economic mobility, and, in the worst cases, may perpetuate intergenerational poverty.²³

TABLE 1C

DataHaven Index scores**GREATER NEW HAVEN WITH DEMOGRAPHIC GROUPS**

LOCATION	COMMUNITY INDEX	PERSONAL WELLBEING INDEX	NEIGHBORHOOD ASSETS INDEX
Connecticut	657	612	556
Greater New Haven	652	570	553
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN			
Male	N/A	612	538
Female	N/A	570	556
Age 18–34	N/A	432	441
Age 35–49	N/A	440	540
Age 50–64	N/A	698	464
Age 65+	N/A	794	681
White	686	572	579
Black	465	576	367
Latino	499	388	431
<\$15K	N/A	299	401
\$15K–\$30K	N/A	349	405
\$30K–\$50K	N/A	406	514
\$50K–\$75K	N/A	567	577
\$75K–\$100K	N/A	619	553
\$100K–\$200K	N/A	789	620
\$200K+	N/A	959	716
BY REGION			
New Haven	540	482	291
Inner Ring	651	568	468
East Haven	632	571	506
Hamden	701	651	616
West Haven	606	434	290
Outer Ring	734	619	699
Milford	710	622	712

Note: All indices scaled from 0 (worse) to 1,000 (better).

**DATAHAVEN PERSONAL WELLBEING INDEX**

As discussed above, the DataHaven Community Wellbeing Survey's questions on health, happiness, anxiety, and life satisfaction help us understand how people evaluate and experience their day-to-day life across multiple dimensions. Designed by a panel of local and national survey research experts, these questions are regularly used to evaluate personal well-being. For this report, we integrate the following four items into a Personal Wellbeing Index score from 0 to 1,000:

- How would you rate your overall health?
- Overall, how satisfied are you with your life nowadays?
- Overall, how happy did you feel yesterday?
- Overall, how anxious did you feel yesterday?

Greater New Haven's score on the Personal Wellbeing Index is lower than the state average. However, throughout most of the state and in Greater New Haven, personal well-being has worsened slightly since 2015, with the measure of life satisfaction declining the most. In Greater New Haven, 66 percent of all adults reported being mostly or completely satisfied with life in 2018, compared to 71 percent in 2015. Further analysis is needed to identify and address this decline in life satisfaction, which has been steepest among adults under 50. [SEE TABLE 1C](#)

The DataHaven survey also includes questions on topics such as social support, meaning and purpose in life, and having time to enjoy life. The results from these measures are also essential for understanding quality of life, and detailed data may be found on the DataHaven website. However, they are not included in this report's Personal Wellbeing Index score.

We often find strong correlations between the Community Index, Personal Wellbeing Index, and other community-level outcomes, suggesting that continuing to improve community health and quality of life in Greater New Haven requires a comprehensive, multi-sectoral approach. The aspiration of this report is that these data will reveal both assets and opportunities, and provide a starting point for action by community leaders.

[SEE FIG 1.4 DH](#)

CHAPTER 2

Demographic Change and an Inclusive Economy

Before we can begin to understand what life is like in Greater New Haven, we need to understand who lives here.

Greater New Haven is a region comprised of 13 cities and towns.

IN THIS CHAPTER

- Greater New Haven's older population is expanding, while its younger residents are becoming more racially and ethnically diverse.
- Population growth is accompanied by increasing income and wealth disparities and a widening gap between higher- and lower-income households.
- As jobs move away from the manufacturing sector, the service industry is growing but offers lower wages.
- Achievement gaps within the education system, socioeconomic inequities, and the changing availability of jobs in specific sectors restrict opportunities for economic mobility.

Executive Summary

Greater New Haven is a region comprised of 13 cities and towns—a central urban hub, New Haven, and an inner and outer ring of suburban towns. Area residents are growing both older and more diverse—diversity that is increasingly concentrated in urban areas and highest amongst residents under 35. Part of the increase in this diversity has been driven by a more than doubling of the number of immigrant residents in Greater New Haven since 1990.

Compared to the state overall, Greater New Haven has a smaller share of married couples with children and a larger share of single adults living alone. In 2017, more than half of the housing units in Greater New Haven were single-family although housing construction permits issued have shifted toward multi-family buildings in recent years.

Wealth and income are highly variable across Greater New Haven, with Outer Ring towns' median household income more than 40 percent greater than the Inner Rings', and over 2.4 times that of the city of New Haven. Significant wage gaps exist along racial, gender, and educational attainment lines. However, in recent years, this income inequality has decreased, and the concentration of wealth in certain neighborhoods has eased to some degree. Despite this progress, there is still significant room for improvement, as evidenced by the fact the number of Greater New Haven residents living in the poorest neighborhoods increased by 147 percent from 1980 to 2017. Also concerning is the fact that the low-income rate among Greater New Haven's children is higher and increasing faster than the rest of the population.

Similar inequality marks homeownership in Greater New Haven, and housing costs are unsustainable for many, with more than a third of households spending more than 30 percent of their income on housing.

Jobs are shifting from manufacturing toward service industries, including health care and social assistance. The median wage in Greater New Haven is lower than the state average, but is growing at a faster pace than the state overall.

Data point to a significant shortage in childcare options for infants and toddlers, but 64 percent of the region's three- and four-year-olds were enrolled in preschool in 2017. When looking at K–12 education, the student population is growing more diverse each year, although this diversity is considerably lower in the Outer Ring suburbs. In addition, Outer Ring schools serve fewer high-needs students than the Inner Ring. Standardized test scores in the region still fall below those of the state overall, but Greater New Haven did see a considerable increase in math scores between 2014–15 and 2017–18. In addition, standardized test scores were lower among the region's students of color and higher-need students, who also face several other challenges, including lower graduation rates, chronic absenteeism, and school discipline. **DH**

FIG 2.1

Greater New Haven's older population is projected to continue growing

POPULATION AND CHANGE BY AGE GROUP, GREATER NEW HAVEN, 1990–2035

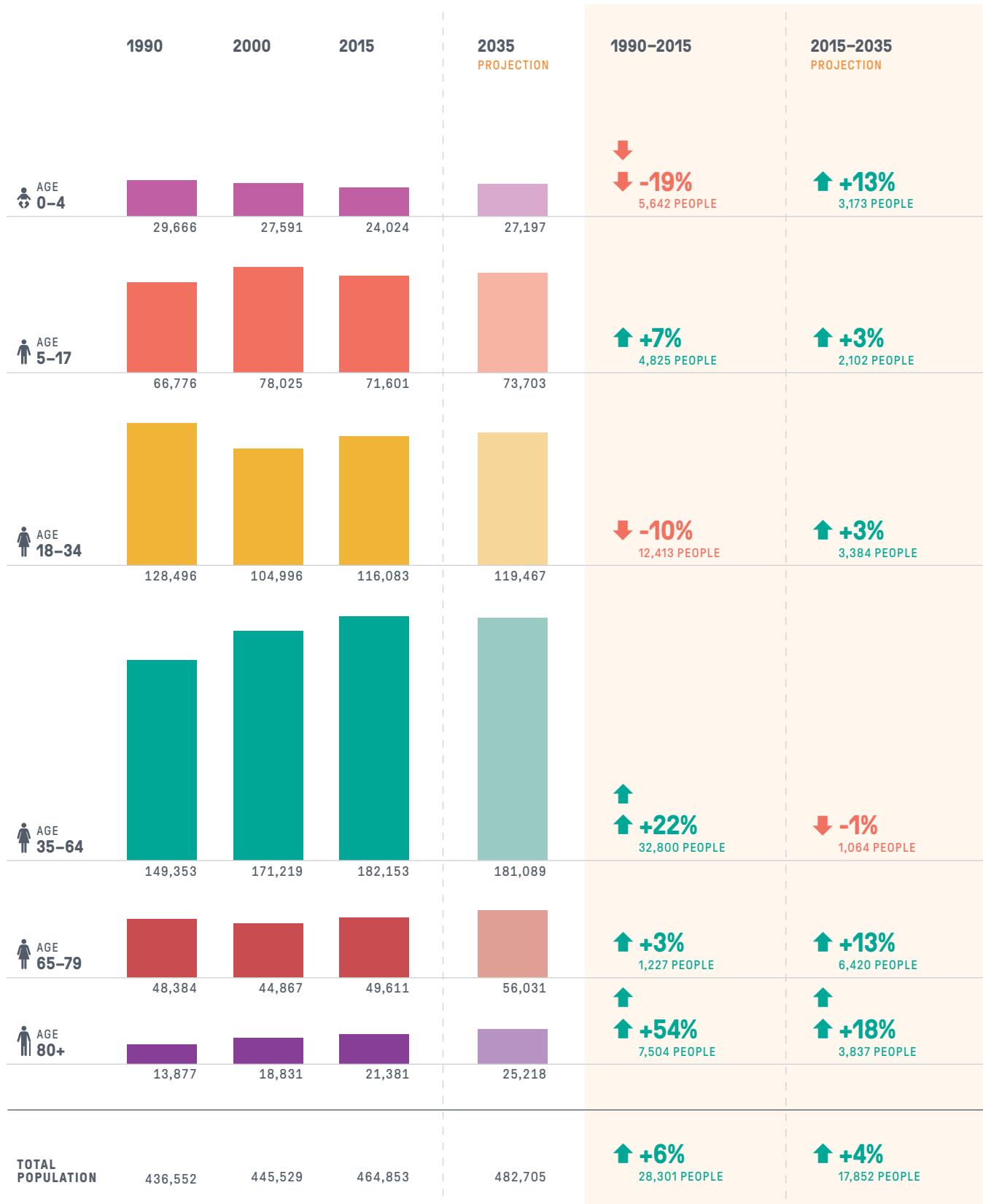


FIG 2.2

Children and younger adults are much more racially diverse

POPULATION BY AGE AND RACE, GREATER NEW HAVEN, 2010

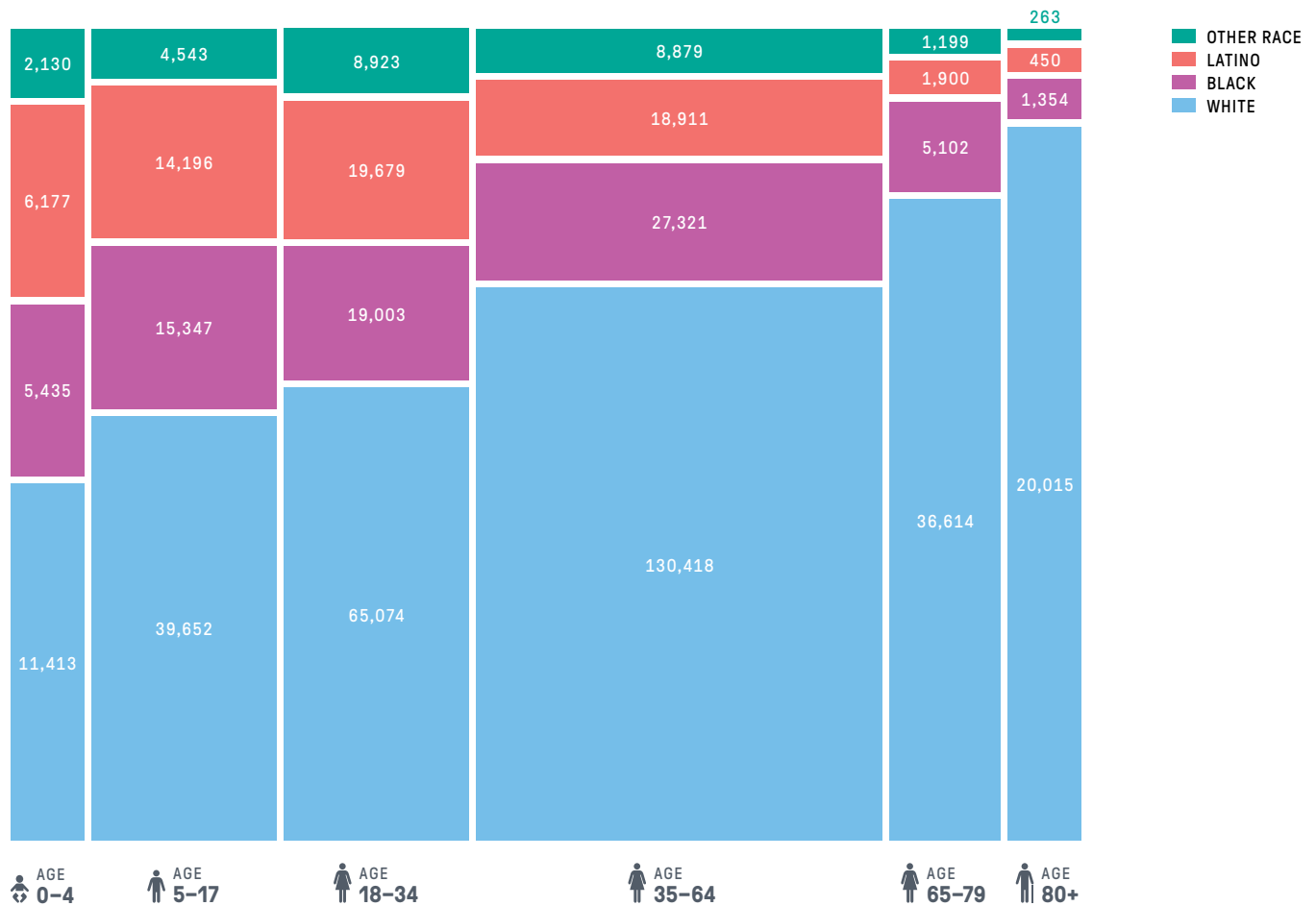


FIG 2.3

The region is diversifying, some places more than others

NON-WHITE SHARE OF POPULATION, 1990-2017

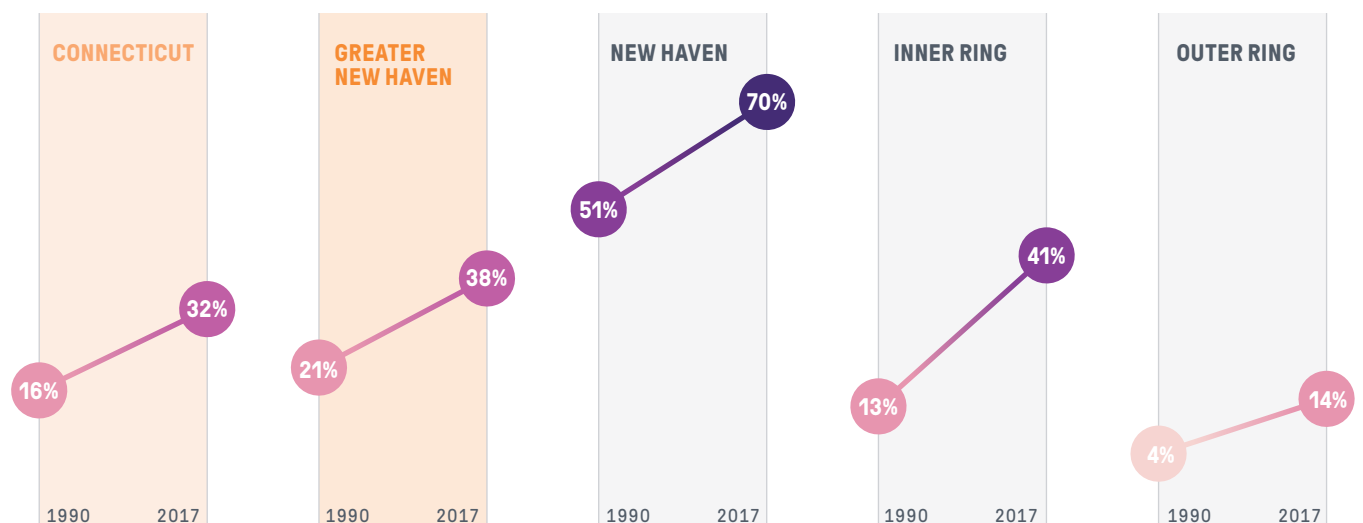


FIG 2.4
Immigrants make up a growing share of the region's population
FOREIGN-BORN SHARE OF POPULATION, GREATER NEW HAVEN, 1990 AND 2017

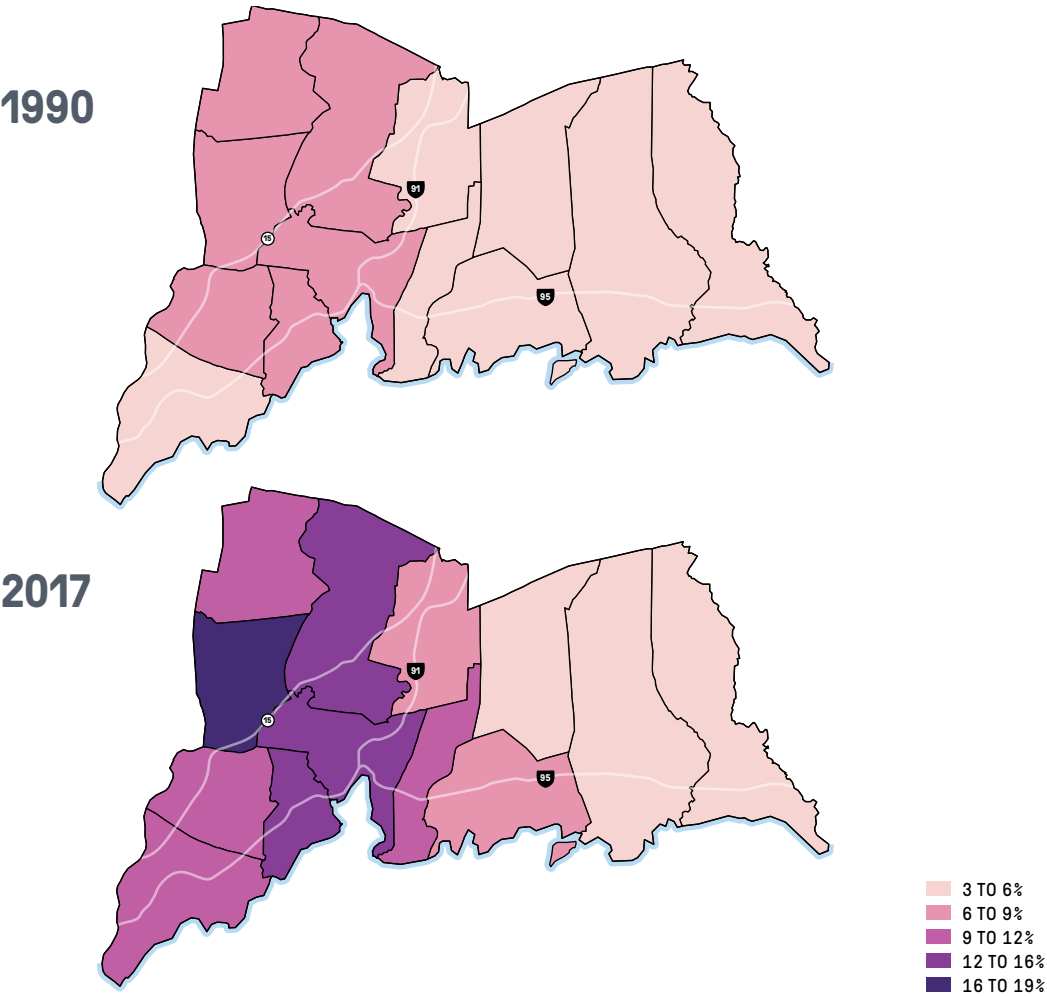


FIG 2.5
About 1 in 8 Greater New Haven residents are immigrants
FOREIGN-BORN SHARE OF POPULATION, 2017

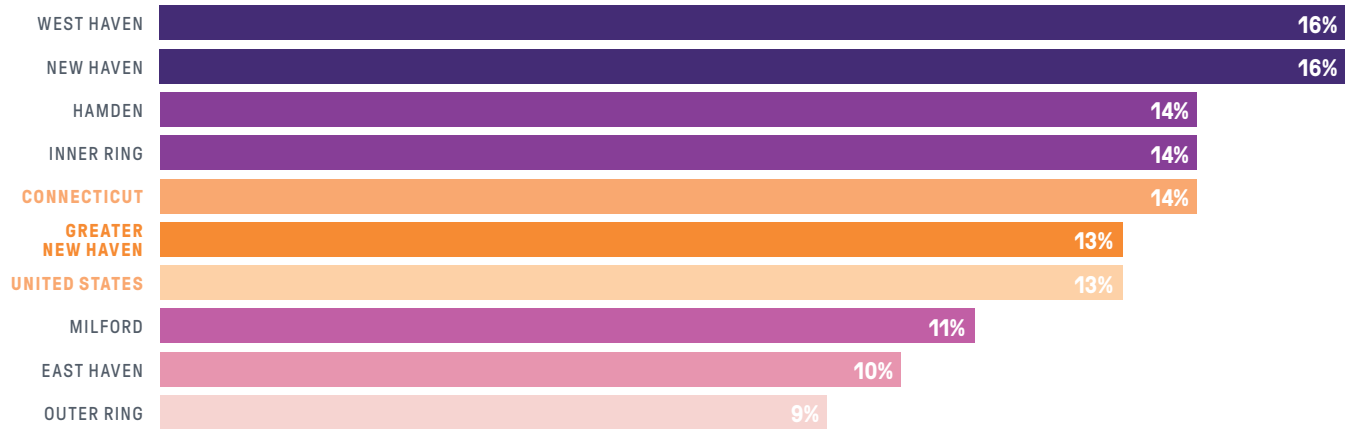


FIG 2.6

Shares of married-couple households have declined slightly

HOUSEHOLDS BY TYPE, GREATER NEW HAVEN, 1990–2017

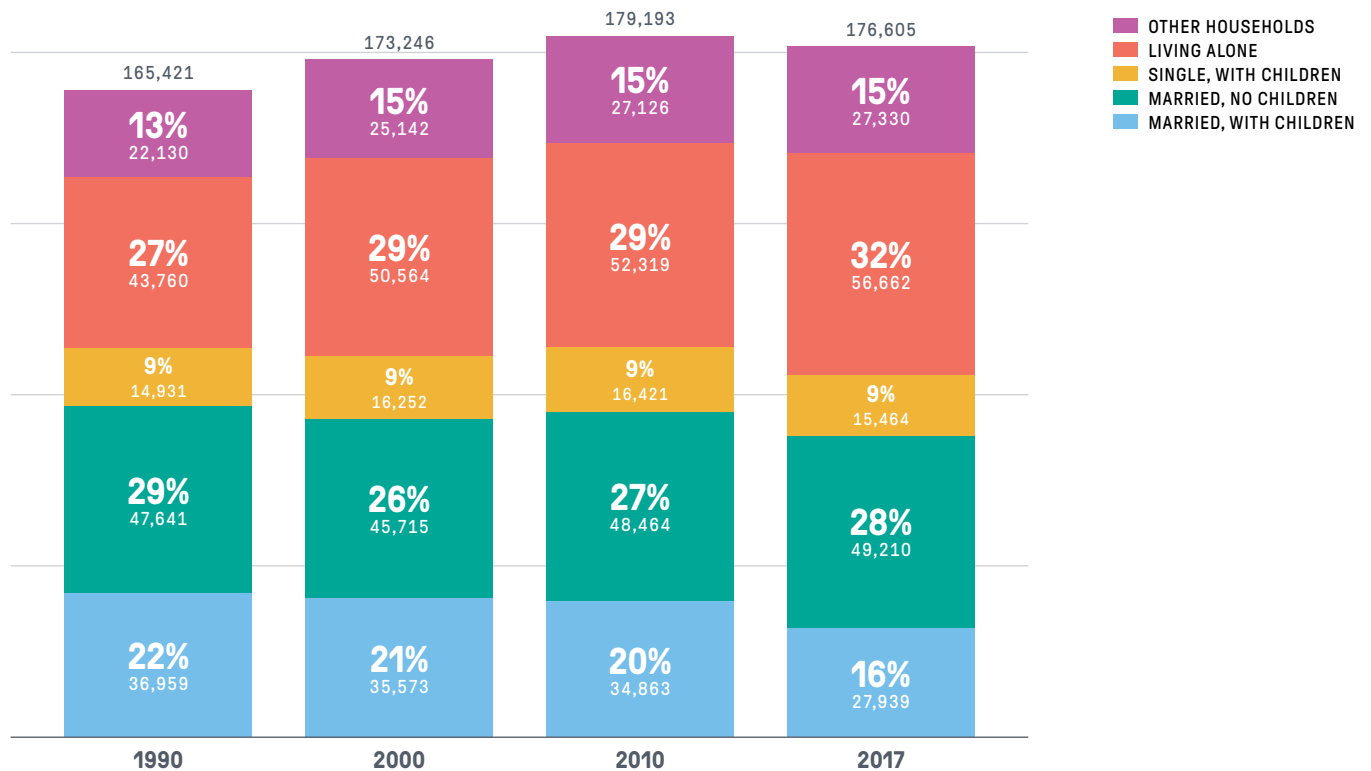


FIG 2.7

Low-income rates are rising, especially among children

LOW-INCOME RATE BY AGE, GREATER NEW HAVEN, 2000–2017

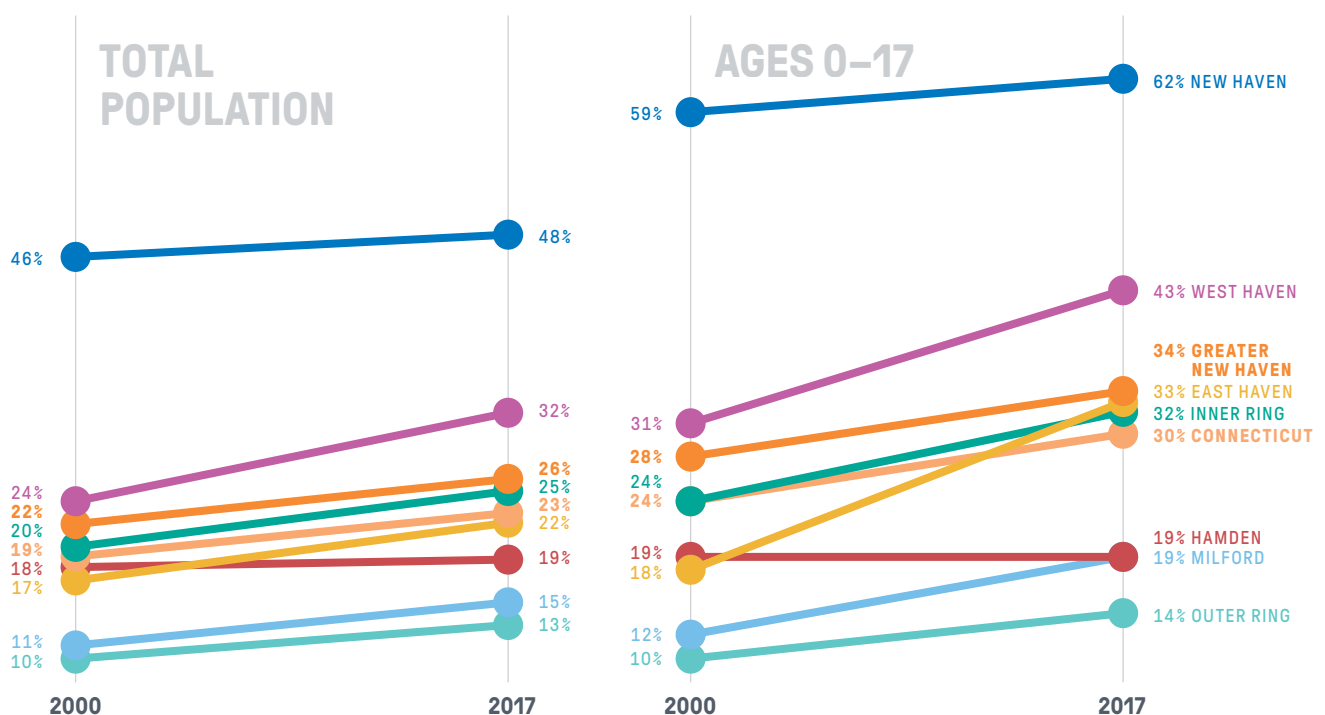


FIG 2.8

Greater New Haven has wide income disparities

MEDIAN HOUSEHOLD INCOME BY TOWN, GREATER NEW HAVEN, 2017

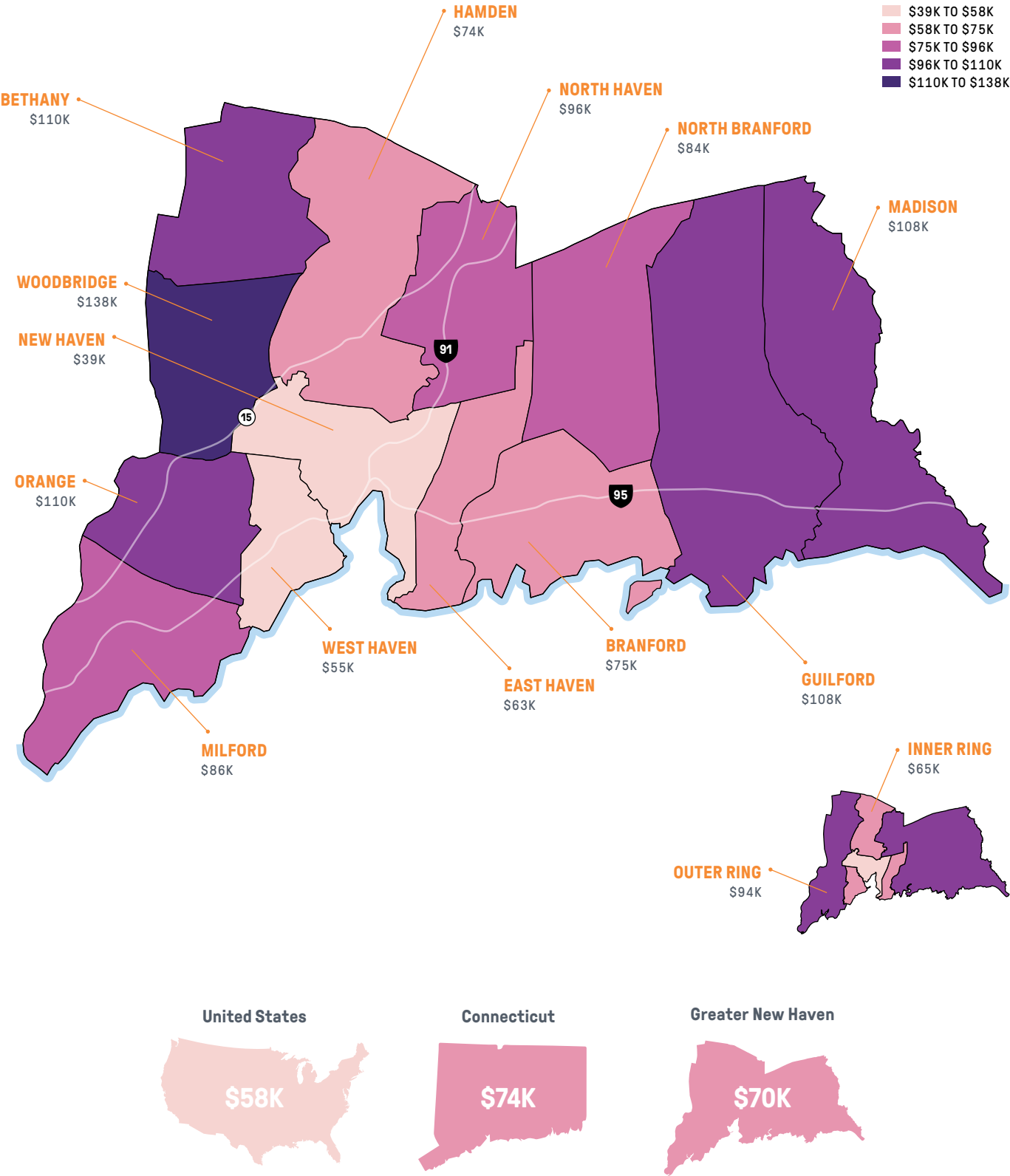


FIG 2.9

The highest-earning 5% makes 10x more money than the bottom 20%

MEDIAN HOUSEHOLD INCOME BY QUANTILE, GREATER NEW HAVEN, 2016, WITH RATIO TO BOTTOM 20% INCOME

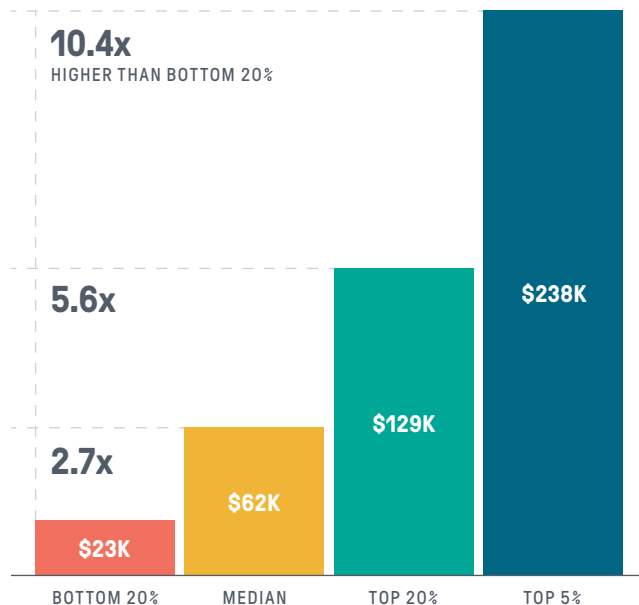


FIG 2.10

Greater New Haven has a wage gap by both gender and race

MEDIAN INCOME OF FULL-TIME ADULT WORKERS, GREATER NEW HAVEN, 2016

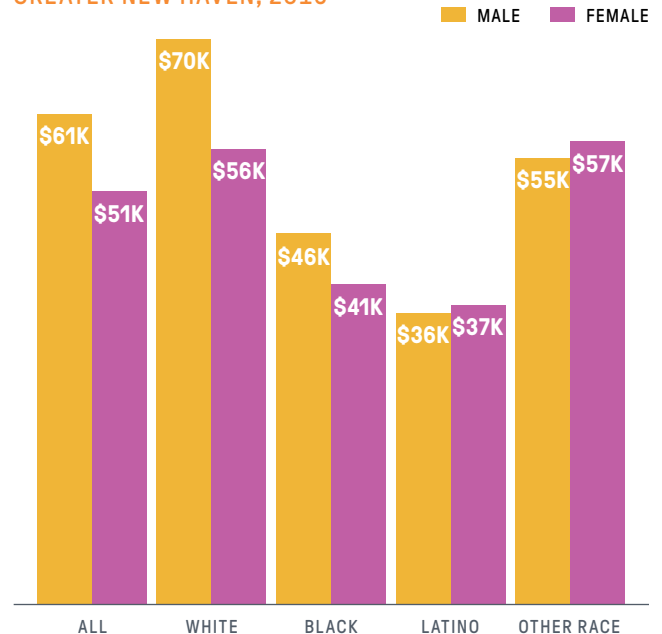


FIG 2.11

Greater New Haven's middle class has shrunk considerably

DISTRIBUTION OF POPULATION BY NEIGHBORHOOD INCOME LEVEL, GREATER NEW HAVEN, 1980-2017

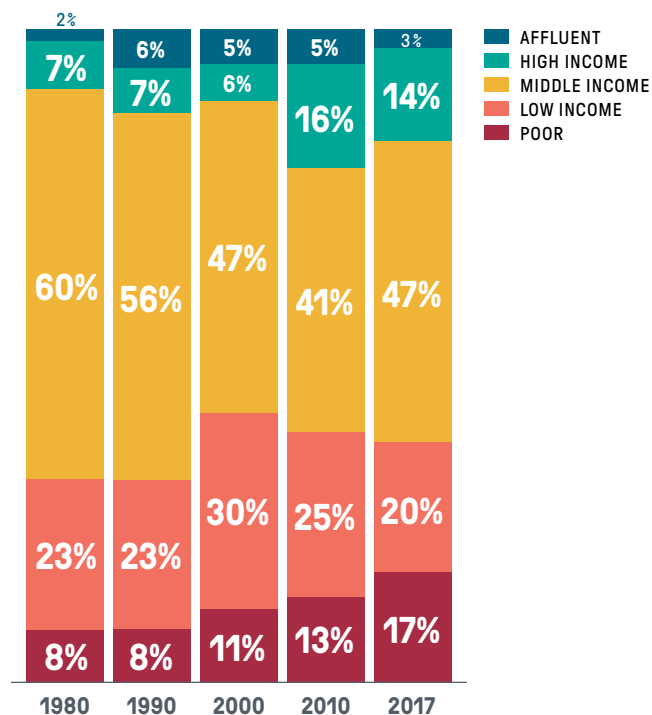


FIG 2.12

Average incomes have risen in higher-income towns

MEDIAN HOUSEHOLD INCOME, GREATER NEW HAVEN, 1990-2017, ADJUSTED TO 2017 DOLLARS

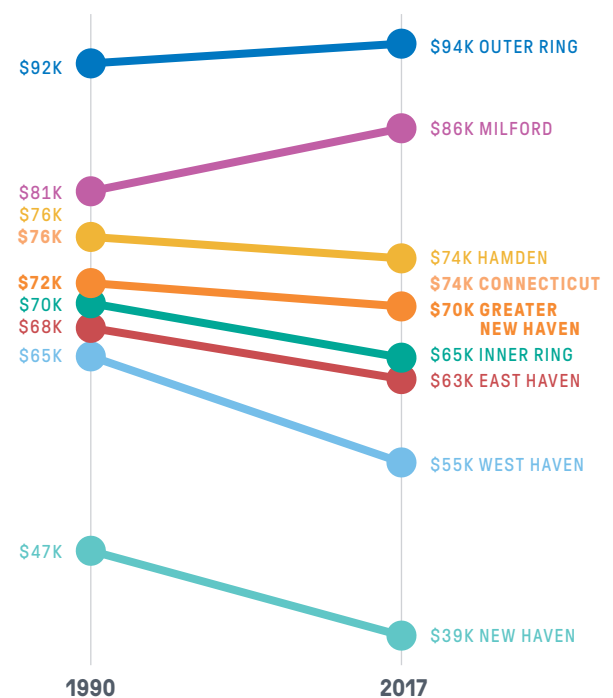


FIG 2.13

Housing values are very high in the Outer Ring towns

MEDIAN HOUSING VALUE BY TOWN, 2017

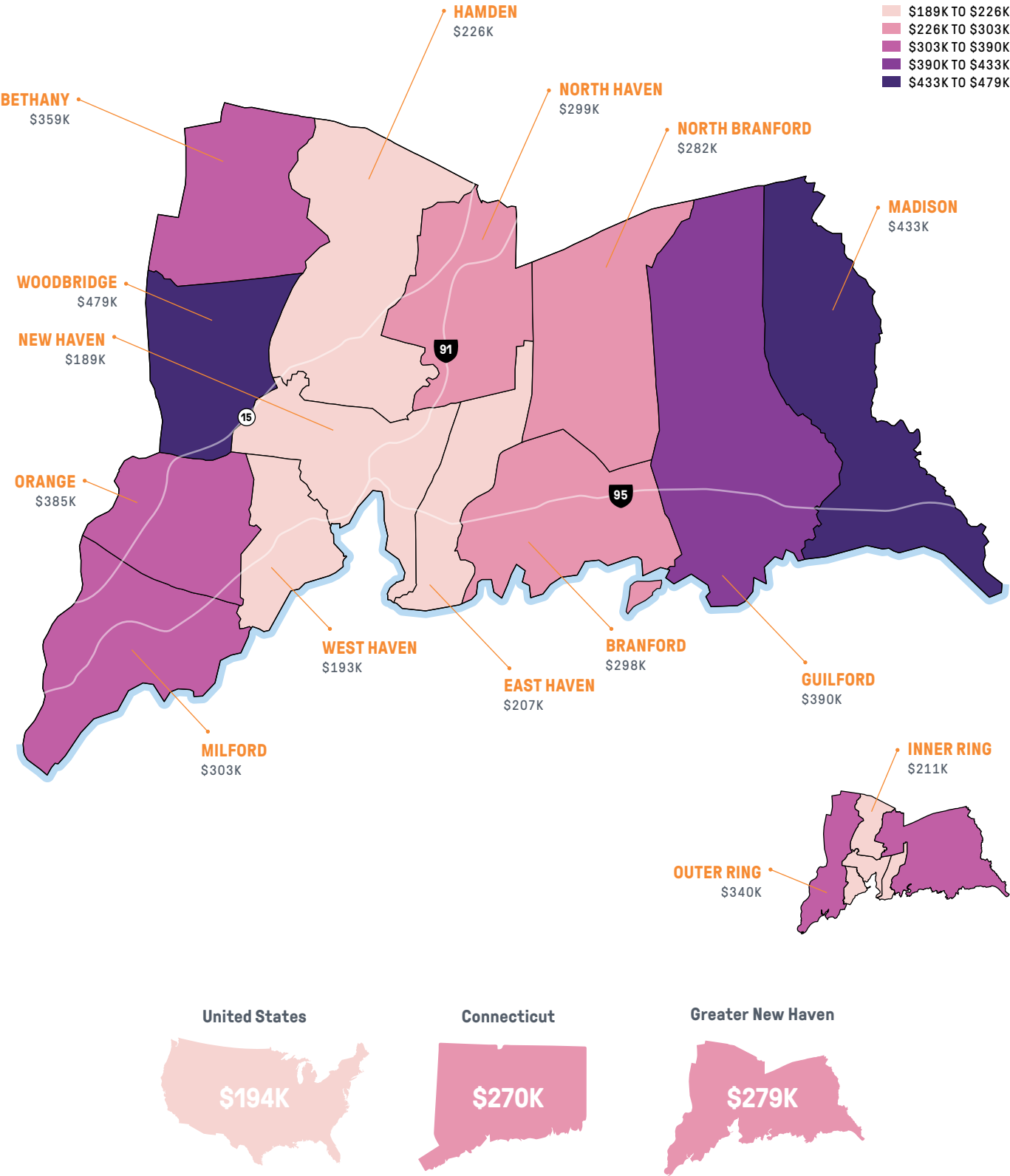


FIG 2.14

Cost-burden rates are back to pre-Recession levels, but are still high for renters

COST-BURDEN AND SEVERE COST-BURDEN RATES BY TENURE, NEW HAVEN COUNTY, 2005–2017

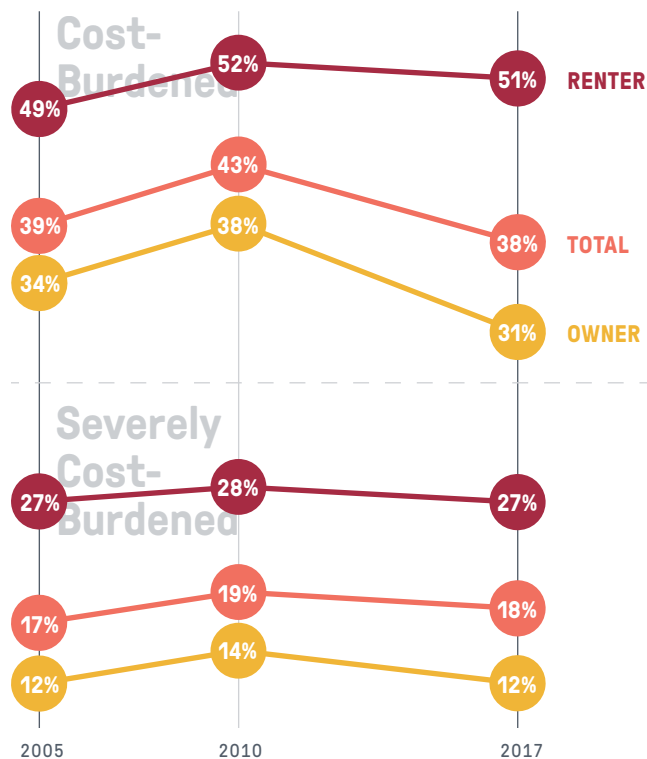


FIG 2.15

The average renter is \$10,000 short of affording a 2 bedroom apartment

MEDIAN RENTER HOUSEHOLD INCOME AND MINIMUM HOUSEHOLD INCOME TO AFFORD 2BR HOUSING, GREATER NEW HAVEN, 2017, WITH SHORTFALL SHOWN

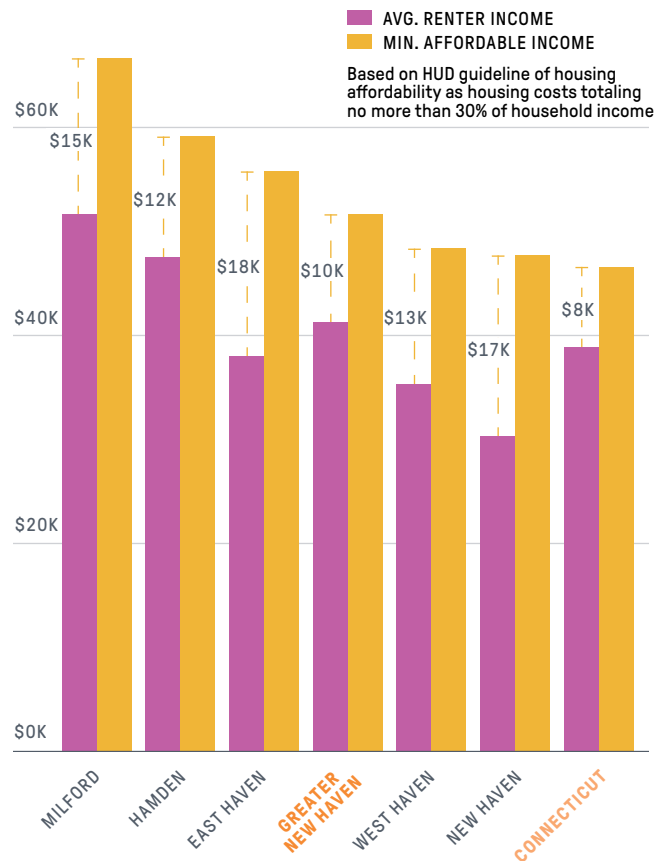


FIG 2.16

Homeownership is still low in lower-grade areas

HOMEOWNERSHIP RATE BY HISTORIC REDLINING GRADE, HOLC-MAPPED PARTS OF GREATER NEW HAVEN TOWNS, 2010

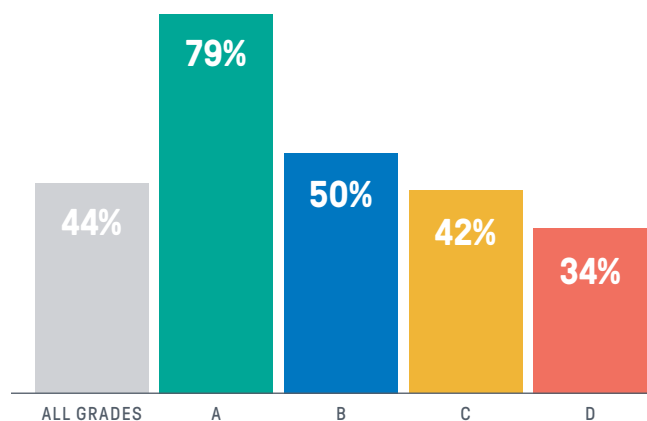


FIG 2.17

High-grade areas are still predominantly white

WHITE SHARE OF POPULATION BY HISTORIC REDLINING GRADE, HOLC-MAPPED PARTS OF GREATER NEW HAVEN TOWNS, 2010

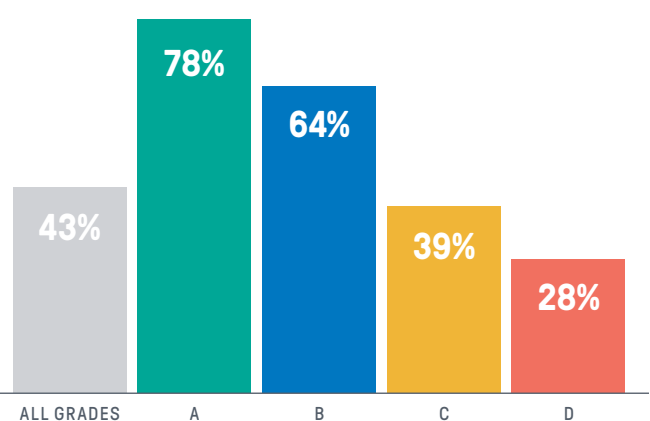
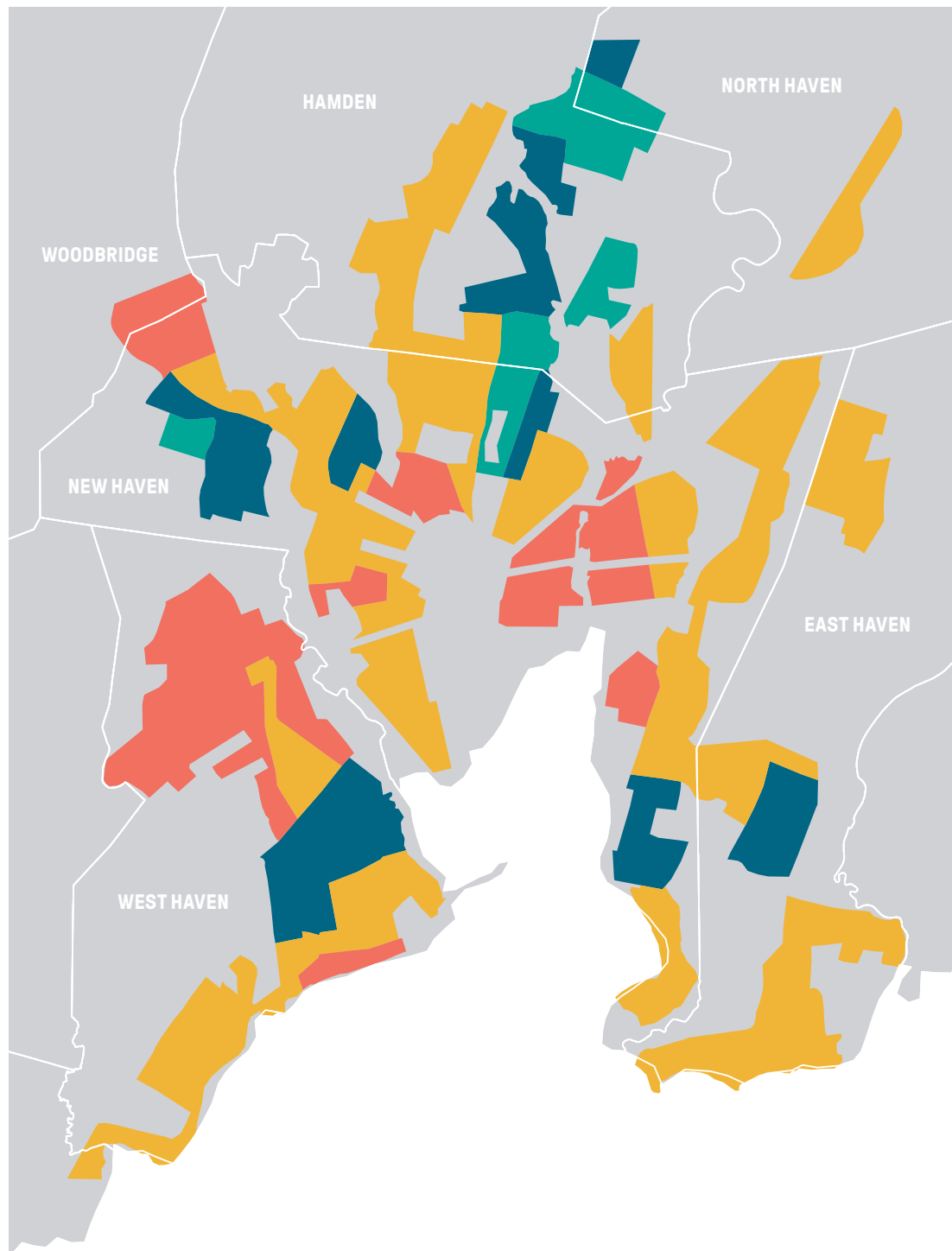


FIG 2.18

The patterns in 1930s redlining maps are still present today

HOLC REDLINED AREAS OF NEW HAVEN AND NEIGHBORING TOWNS, 1937



HOLC GRADE

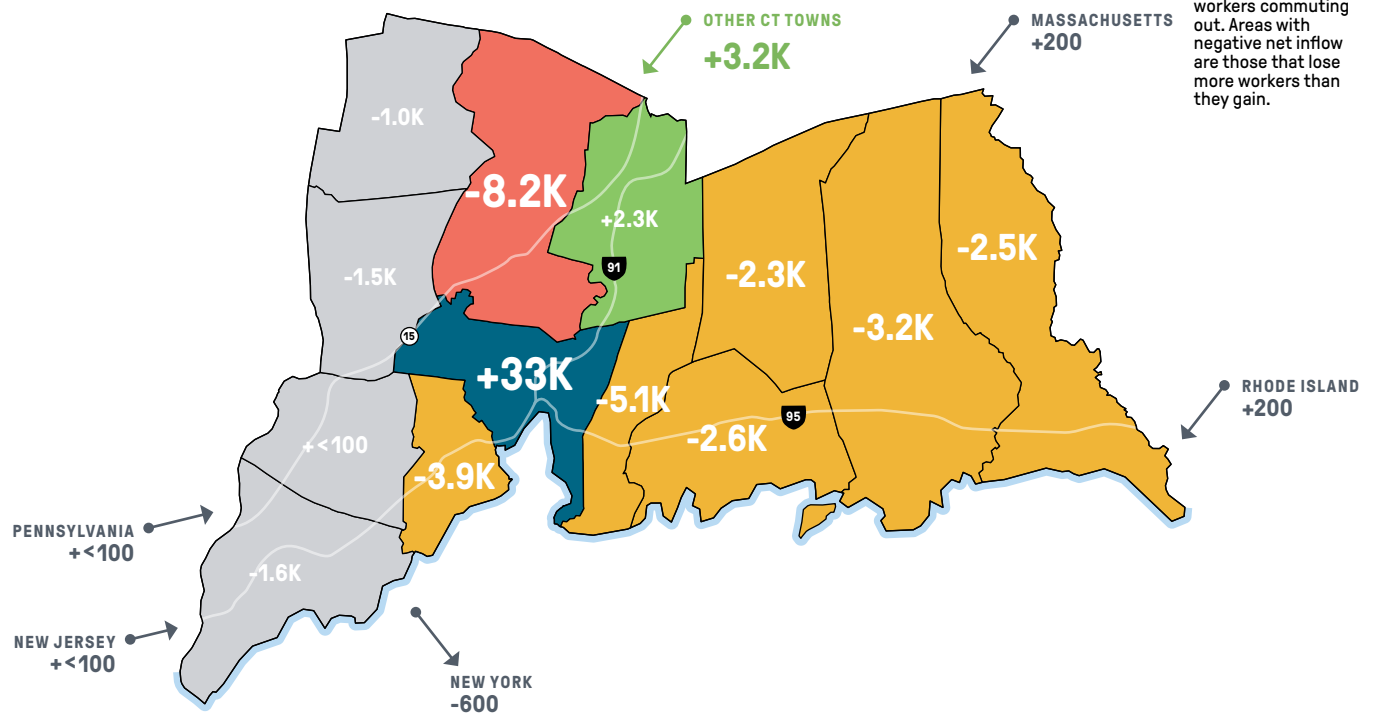
- A - BEST
- B - STILL DESIRABLE
- C - DEFINITELY DECLINING
- D - HAZARDOUS

FIG 2.19

New Haven provides many jobs and workers to the surrounding region

NET INFLOW OF WORKERS BY TOWN AND WAGE, 2015

Higher-wage workers (\$40K or higher)



Lower-wage workers (under \$40K)

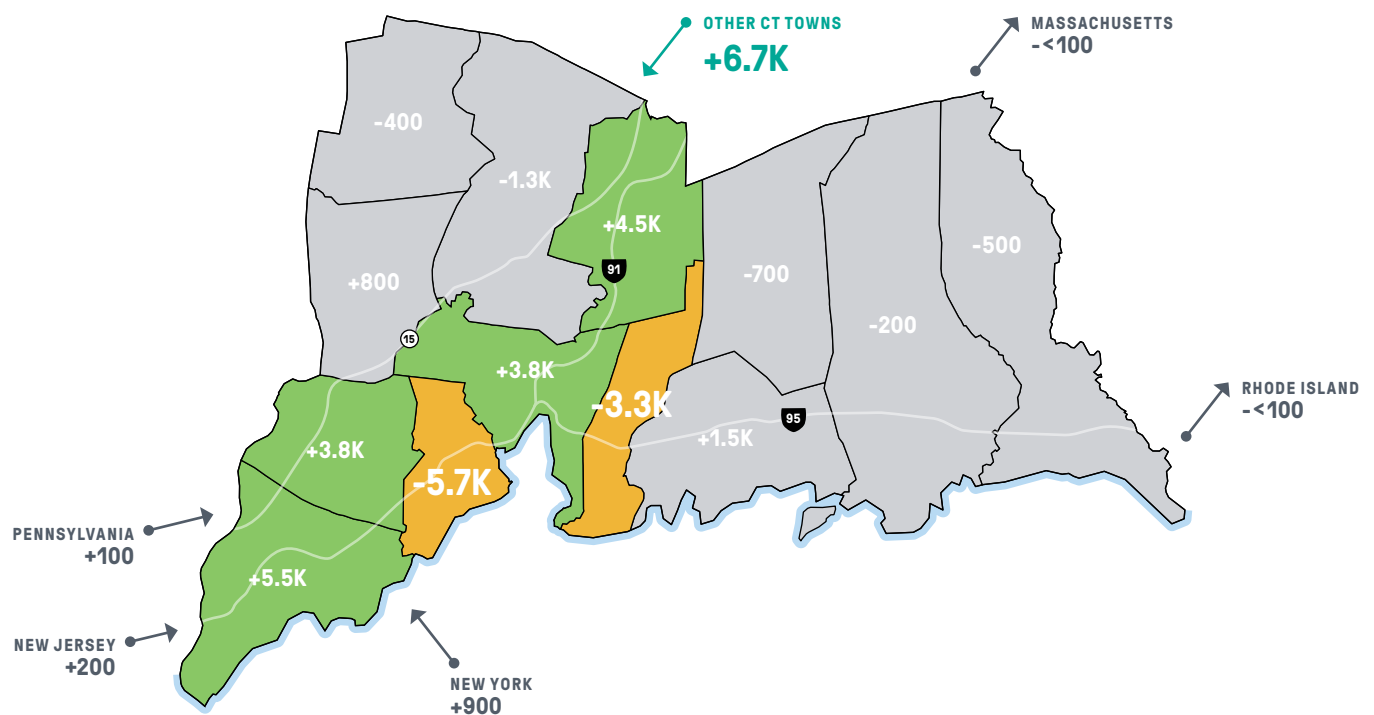


FIG 2.20

New Haven County's manufacturing sector has declined, while health care & social assistance jobs soar

NUMBER OF JOBS BY SECTOR, NEW HAVEN COUNTY, 2000–2017

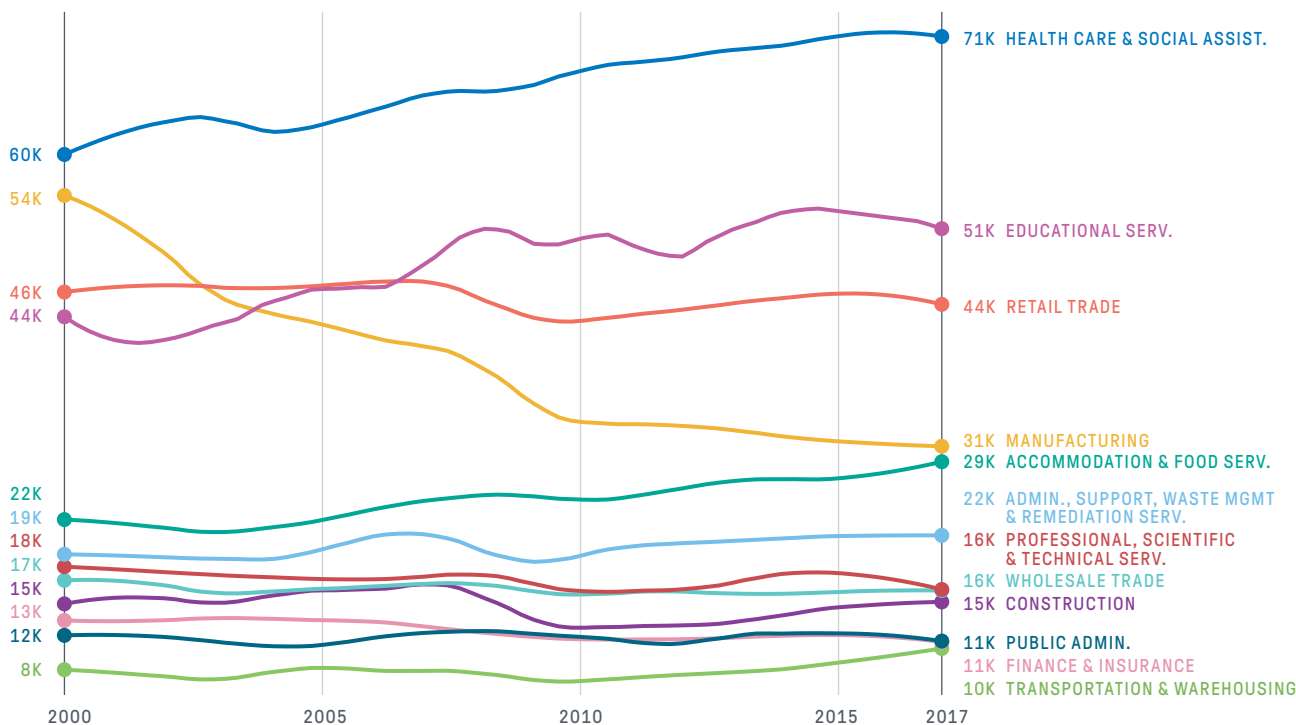


FIG 2.21

New Haven's Outer Ring school districts are much less diverse than the city's schools

COUNT OF K-12 STUDENTS BY RACE, PER 100 STUDENTS, 2018–2019

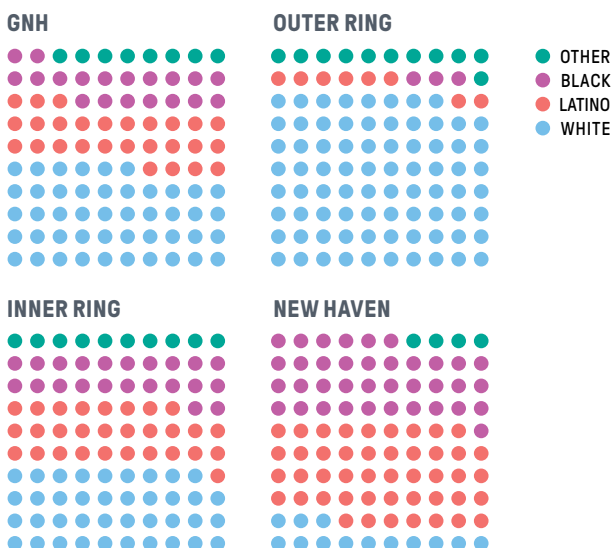


FIG 2.22

Black and special education students are suspended far more often than others

PERCENTAGE OF STUDENTS SUSPENDED OR EXPELLED AT LEAST ONCE DURING SCHOOL YEAR, GREATER NEW HAVEN K-12 DISTRICTS, 2017–2018

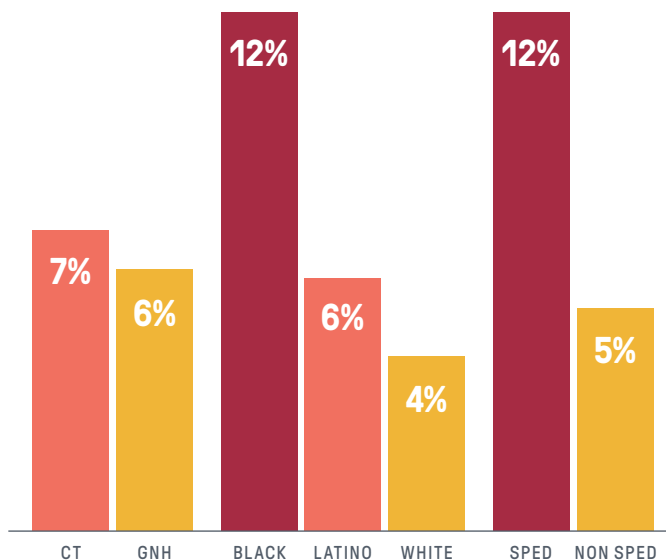
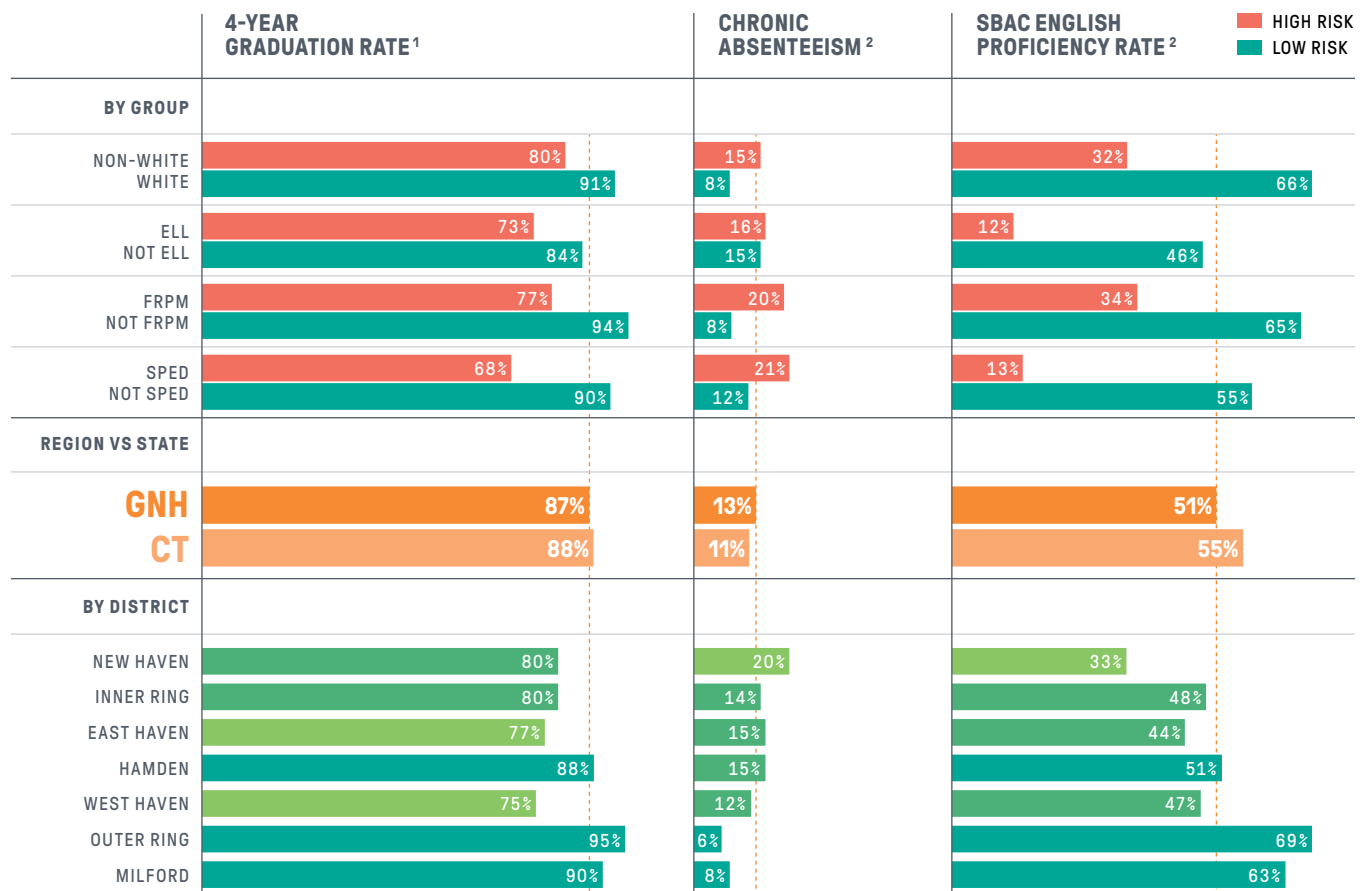


FIG 2.23

Greater New Haven schools have wide achievement gaps

PERCENT OF PUBLIC K-12 STUDENTS MEETING ACHIEVEMENT MEASURES, GREATER NEW HAVEN, 2017-2018



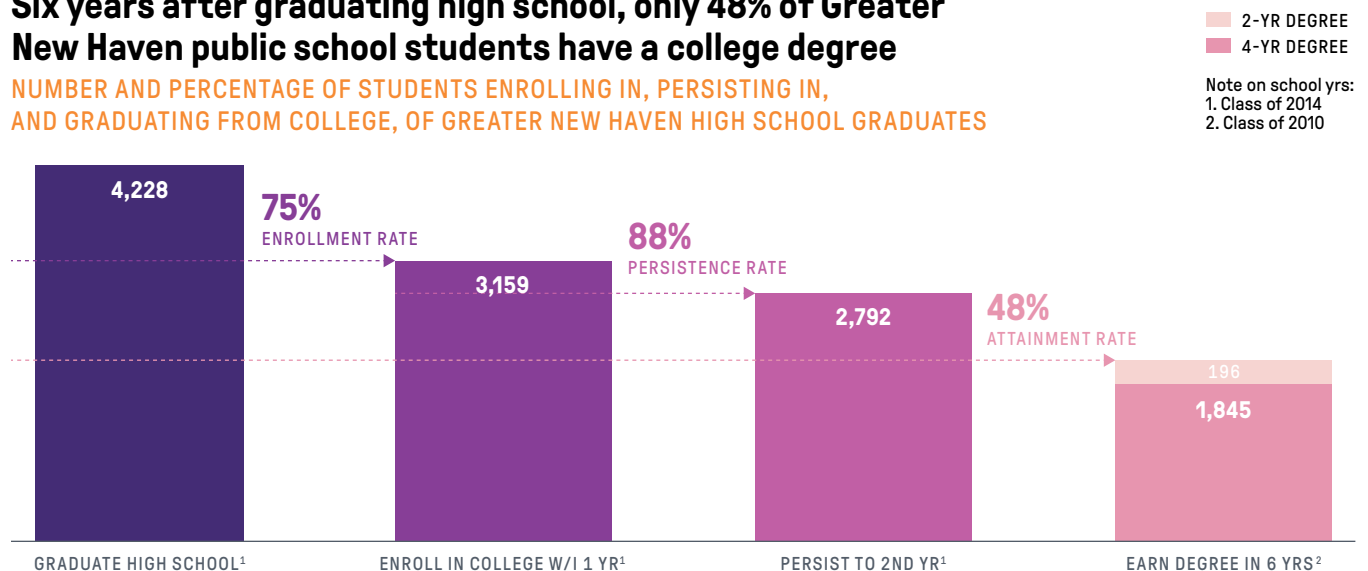
Note on school years: 1. Class of 2017 2. School year 2017-2018

GNH Benchmark

FIG 2.24

Six years after graduating high school, only 48% of Greater New Haven public school students have a college degree

NUMBER AND PERCENTAGE OF STUDENTS ENROLLING IN, PERSISTING IN, AND GRADUATING FROM COLLEGE, OF GREATER NEW HAVEN HIGH SCHOOL GRADUATES



2-YR DEGREE
4-YR DEGREE

Note on school yrs:
1. Class of 2014
2. Class of 2010

FIG 2.25

Greater New Haven residents have very different ideas of what young people experience

SHARE OF ADULTS RATING AS ALMOST CERTAIN OR VERY LIKELY THAT YOUNG PEOPLE IN THEIR AREA HAVE THE FOLLOWING EXPERIENCES, 2018

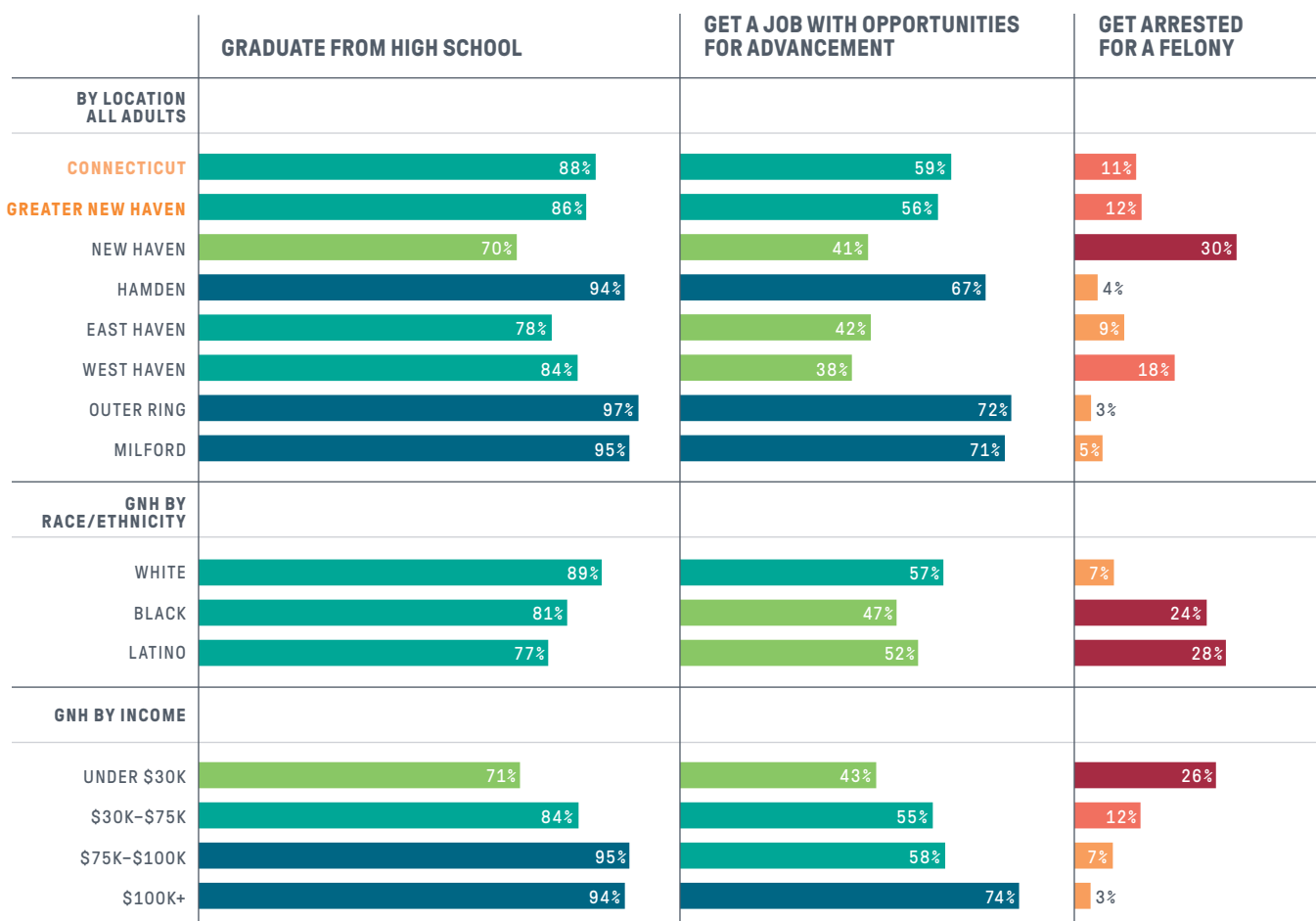
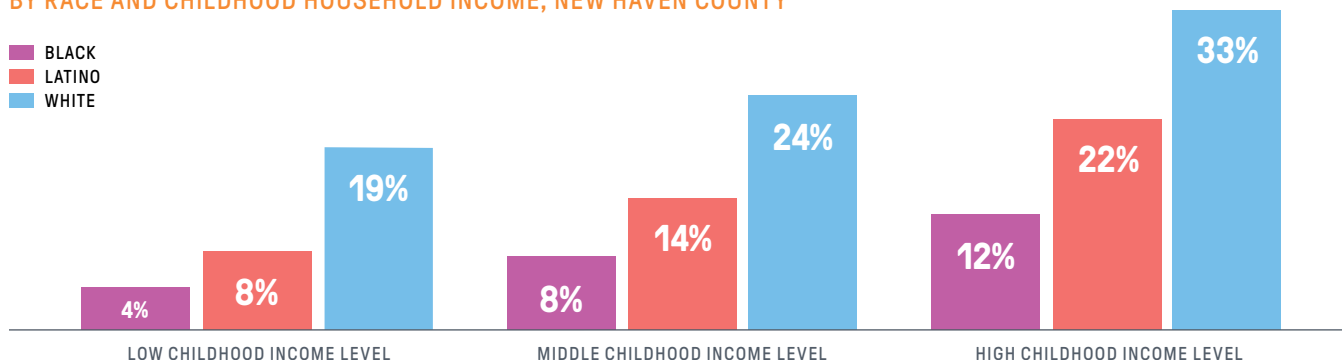


FIG 2.26

White children from low-income homes in Greater New Haven can expect greater upward economic mobility than Black children from high-income homes

PROBABILITY (%) OF REACHING TOP 20% OF HOUSEHOLD INCOMES AS ADULTS
BY RACE AND CHILDHOOD HOUSEHOLD INCOME, NEW HAVEN COUNTY





POPULATION CHANGE

A Growing Population

Greater New Haven, as defined by this report [SEE GEOGRAPHY DISCUSSION IN THE INTRODUCTION](#), is a group of 13 cities and towns located within New Haven County and centered upon the city of New Haven, which for centuries has been one of the most economically significant urban centers in New England. Greater New Haven sits in close proximity to many other large urban areas. National reports tend to define metropolitan areas based on counties, so New Haven County as a whole is frequently referred to as the New Haven-Milford metropolitan statistical area (MSA), and is often either considered to be a component of the New York City megalopolis (the “Tri State” area), or is set within the Hartford-New Haven Designated Market Area, which is one of the nation’s 35 largest media markets. However, New Haven County is not considered to be a useful designation locally, as its outermost boundaries also cross through former industrial centers such as Waterbury, Meriden, and Derby that developed independently from and are not as closely connected to the city of New Haven. [SEE FIG 1.2](#)

Given that regional agencies tend to define their geographic service areas in different ways, the sponsors of this report and similar reports published over recent decades have agreed that the 13 contiguous and interconnected towns of Greater New Haven should be a common area of focus. The city of New Haven is by far the densest and most populous of these municipalities, and is bordered by three Inner Ring suburbs (East Haven, Hamden, West Haven), as well as nine Outer Ring suburbs (Bethany, Branford, Guilford, Madison, Milford, North Branford, North Haven, Orange, Woodbridge).

The total population of Greater New Haven’s 13 towns and cities is 465,633, including 93,991 children. Nearly two-thirds of the population lives in just four municipalities, however. The city of New Haven is the second-most populous municipality in the state with 130,884 residents, including 28,955 children, while Hamden, Milford, and West Haven are among the 20 largest municipalities in the state with over 50,000 residents each.²⁴

The population of every town in the region has grown since 1990. Since 2000, the regional population has increased by 4.5 percent, a rate

slower than that of Connecticut overall (up 5.5 percent). The city of New Haven grew slightly faster than the region, increasing nearly 6 percent from 123,626 residents in 2000. [SEE TABLE 2A](#)

An Aging Region

Between 2000 and 2017, the median age in Greater New Haven increased from 36.6 to 39.3.²⁵ This increase is in line with Connecticut’s other more urban areas, while the state’s rural counties generally experienced steeper increases. Overall, the median age in Greater New Haven in 2017 was slightly younger than that of the state (40.8), but older than that of the U.S. (37.8).²⁶ Compared to the region overall, the median age of residents in the Inner Ring was younger (37.7) while the median age of residents in the Outer Ring was older (46.6); the urban core had the youngest population, with a median age of only 30.7.²⁷

From 1990 to 2015, Greater New Haven’s population declined for two age groups: children under five years old decreased by 19 percent, a loss of 5,642 children, and young adults ages 18 to 34 decreased by 10 percent, a loss of 12,413 people.²⁸ Though older seniors ages 80 and over were the fastest-growing age group during this period, increasing by 54 percent, or 7,504 people, middle-aged adults ages 35 to 64 represented the largest segment of growth, increasing by 22 percent, or 32,800 people.²⁹

Looking forward to 2035, Greater New Haven’s older population is projected to keep growing as the Baby Boomer generation ages. From 2015 to 2035, the region is expected to see a 14 percent increase in the overall senior population (ages 65 and over)—a more modest growth rate than the projected 20 percent statewide increase.³⁰ The transition of Baby Boomers into the senior age group is projected to contribute to a 1 percent decline in Greater New Haven’s middle-aged population, while all younger age groups are projected to grow.³¹ Children under five are expected to experience the highest rate of growth among younger age groups, with an increase of 13 percent, or 3,173 young children—partially offsetting the previous population decline of this age group between 1990 and 2015.³²

Greater New Haven’s total population is expected to increase 4 percent between 2015 and 2035, outpacing the 1 percent increase projected statewide.³³ However, this growth will not be evenly distributed. The city of New Haven and its Inner

Ring suburbs are expected to experience strong growth, with the former increasing by 9 percent, or 11,700 people, and the latter increasing by 14 percent, or 20,758 people.³⁴ Over the same period, the population of the region's Outer Ring towns is expected to decline 8 percent, or 14,606 people.³⁵

SEE FIG 2.1

Increased Diversity

Between 1990 and 2017, people of color living in Greater New Haven increased from 21 percent of the population to 38 percent. In 2017, 62 percent of Greater New Haven residents were white, 15 percent were Black, 15 percent were Latino, 5 percent were Asian, and 3 percent were other races.³⁶ Combined, the non-white population in the region nearly doubled to over 175,000 people between 1990 and 2017.³⁷ Meanwhile, the white population in Greater New Haven decreased by over 56,000 between 1990 and 2017—a 16 percent reduction; statewide the white population decreased 11 percent.³⁸ SEE FIG 2.3

However, not all towns are diversifying at similar rates and magnitudes. During the same time period, the non-white share of Greater New Haven's Outer Ring population increased from 4 percent to 14 percent.³⁹ The rapidly-diversifying Inner Ring towns went from 13 percent non-white in 1990 to 41 percent in 2017. New Haven is much more diverse than its surrounding towns, with a population that is 30 percent white, 32 percent Black, 30 percent Latino, and 8 percent other races. More than half of the region's Black and Latino residents live in New Haven. SEE TABLE 2B

Racial and ethnic diversity in Greater New Haven is highest among the population under 35, supporting the proposition that the region will continue to diversify over the coming decades.⁴⁰ Based on the most recent decennial census figures, from 2010, only 30 percent of middle-aged residents (ages 35 to 64), 18 percent of younger seniors (ages 65 to 79), and 9 percent of older seniors (ages 80 and up) in Greater New Haven were people of color; however, 55 percent of

TABLE 2A

Population and growth

POPULATION IN GREATER NEW HAVEN AND TOWNS, 2017

LOCATION	POPULATION 1990	POPULATION 2017	POPULATION PERCENT CHANGE, 1990 TO 2017	DENSITY, 2017 POP. PER SQ. MI.	MEDIAN AGE 2000	MEDIAN AGE 2017	CHANGE IN MEDIAN AGE
United States	248,709,873	321,004,407	29%	91	35.3	37.8	2.5
Connecticut	3,287,116	3,594,478	9%	742	37.4	40.8	3.4
Greater New Haven	436,552	465,633	7%	1,531	36.6	39.3	2.7
Bethany	4,608	5,526	20%	262	40.6	47.8	7.2
Branford	27,603	28,149	2%	1,291	41.4	47.5	6.1
East Haven	26,144	29,006	11%	2,358	38.8	43.1	4.3
Guilford	19,848	22,377	13%	475	41.8	48.3	6.5
Hamden	52,434	61,493	17%	1,886	37.7	37.4	-0.3
Madison	15,485	18,247	18%	505	41.0	48.4	7.4
Milford	49,938	53,867	8%	2,426	39.4	44.8	5.4
New Haven	130,474	130,884	0%	6,999	29.3	30.7	1.4
North Branford	12,996	14,275	10%	576	39.1	48.0	8.9
North Haven	22,247	23,877	7%	1,148	41.9	45.6	3.7
Orange	12,830	13,981	9%	813	43.2	45.8	2.6
West Haven	54,021	55,044	2%	5,144	36.4	35.1	-1.3
Woodbridge	7,924	8,907	12%	474	42.8	47.7	4.9

TABLE 2B

Characteristics by race and origin

POPULATION OF GREATER NEW HAVEN BY RACE AND IMMIGRATION HISTORY, 2017

LOCATION	TOTAL POPULATION	PERCENT WHITE	PERCENT BLACK	PERCENT LATINO	PERCENT ASIAN	PERCENT OTHER RACE	FOREIGN-BORN POPULATION	PERCENT FOREIGN BORN
United States	321,004,407	62%	12%	18%	5%	3%	43,028,127	13%
Connecticut	3,594,478	68%	10%	15%	4%	3%	511,893	14%
Greater New Haven	465,633	62%	15%	15%	5%	3%	58,847	13%
New Haven	130,884	30%	32%	30%	5%	3%	21,448	16%
Inner Ring	145,543	59%	18%	16%	5%	3%	19,889	14%
East Haven	29,006	77%	2%	15%	5%	2%	2,844	10%
Hamden	61,493	58%	23%	11%	5%	3%	8,291	14%
West Haven	55,044	51%	21%	21%	4%	4%	8,754	16%
Outer Ring	189,206	86%	2%	5%	5%	2%	17,510	9%
Milford	53,867	84%	3%	7%	5%	2%	5,840	11%

children under five, 46 percent of children ages 5 to 17, and 42 percent of young adults (ages 18 to 34) identified as such.⁴¹ [SEE FIG 2.2](#)

Greater New Haven's diverse population includes a substantial and growing immigrant community. Between 1990 and 2017, the number of immigrants residing in Greater New Haven doubled, increasing by 29,617 individuals.⁴² By 2017, 13 percent of the region's residents, or 58,847 individuals, were foreign-born—a share similar to Connecticut overall (14 percent).⁴³ In 2017, Inner Ring towns had a higher share of immigrant population (14 percent) than the Outer Ring (9 percent).⁴⁴ Immigrants from around the world call Greater New Haven home, including more than 2,000 residents each from Mexico, China, India, Ecuador, Jamaica, and Italy.⁴⁵ [SEE FIG 2.4, 2.5](#)

A disproportionate share of Greater New Haven's immigrant population resides in the urban core and surrounding Inner Ring suburbs. In 2017, foreign-born residents comprised 16 percent of New Haven's and West Haven's total populations.⁴⁶ Additionally, large immigrant communities existed in Hamden (14 percent share), Milford, (11 percent share), and East Haven (10 percent share).⁴⁷ In 2017, New Haven and West Haven accounted for 40 percent of the region's population and 51 percent of its immigrants.⁴⁸

In 2017, 44 percent of immigrants living in Greater New Haven were naturalized United States citizens—below the 50 percent naturalization rate for immigrants statewide.⁴⁹ In Connecticut's major

core cities, lower shares of immigrants are naturalized; for example, in the city of New Haven, only 26 percent of foreign-born residents are naturalized citizens.⁵⁰ New Haven's naturalization rate is even lower than most large cities in the state, which may be driven by the sizeable number of international students attending the area's universities. Additionally, immigrants residing in New Haven are more likely to have recently arrived in the U.S.—67 percent arrived in 2000 or later, compared to 51 percent for Greater New Haven overall.⁵¹ Twenty-three percent of Greater New Haven's immigrant population entered the country in 2010 or later.⁵²

As of 2016, 78 percent of both Connecticut and Greater New Haven residents ages 5 and over live in households where English is the primary language.⁵³ After English and Spanish, Italian, Chinese, French, Polish, and Arabic are the most commonly spoken languages in the region—Italian being particularly common in Greater New Haven compared to other areas of the state.⁵⁴ In 2017, 7 percent of Greater New Haven residents ages 5 and older struggled with English proficiency, meaning they spoke English less than very well—similar to the state rate of 8 percent.⁵⁵ While low English proficiency is typically more common in Connecticut's large cities (23 percent in Bridgeport and 19 percent in Hartford), the city of New Haven had a comparatively low rate of 11 percent.⁵⁶

Another aspect of diversity among Greater New Haven residents is in sexual orientation and

gender identity. A 2016 Gallup poll found that 10 million Americans—4.6 percent—identify as lesbian, gay, bisexual, or transgender (LGBT), an increase of 1.75 million people since 2012.⁵⁷ The 2018 DataHaven Community Wellbeing Survey found that 8 percent of adults in Connecticut identify as not being straight, with a similar proportion in Greater New Haven. Additionally, 0.7 percent of adults in both Connecticut and Greater New Haven identify as transgender. Quantifying diversity in sexual orientation and gender identity is valuable in itself, but it also has important implications for other aspects of well-being, like health. LGBTQ individuals face specific health challenges, discussed in Chapter 3.

Changing Household Structure

In 2017, Greater New Haven had 176,605 total households, representing a 7 percent increase from 1990, or 11,184 additional households.^{58, 59} The share of households headed by married couples has decreased, from 51 percent of households in 1990 to 44 percent in 2017. Households composed of adults living alone or non-family households have shown growth over this period.⁶⁰ [SEE FIG 2.6](#)

Compared to the state overall, Greater New Haven had a smaller share of married couple households (44 percent of Greater New Haven households, 49 percent of Connecticut households) and a larger share of single adults living alone (32 percent in Greater New Haven, 28 percent of Connecticut).⁶¹ While Connecticut's largest core cities generally had fewer married couple households and larger shares of less-traditional households compared to other towns and regions across the state, this trend was particularly pronounced in the city of New Haven where 42 percent of households were adults living alone—perhaps a reflection of the large number of colleges and universities located in and around the city.⁶² [SEE TABLE 2C](#)

TABLE 2C

Household structure

HOUSEHOLDS BY TYPE, GREATER NEW HAVEN, 2017

LOCATION	TOTAL HOUSEHOLDS COUNT	MARRIED, W/ CHLD. COUNT	MARRIED, W/ CHLD. SHARE	MARRIED, NO CHLD. COUNT	MARRIED, NO CHLD. SHARE	SINGLE, W/ CHLD. COUNT	SINGLE, W/ CHLD. SHARE	LIVING ALONE COUNT	LIVING ALONE SHARE	OTHER HOUSEHOLDS COUNT	OTHER HOUSEHOLDS SHARE
United States	118.8M	22.7M	19%	34.7M	29%	10.8M	9%	32.9M	28%	17.7M	15%
Connecticut	1,361,755	259,868	19%	404,743	30%	116,400	9%	383,275	28%	197,469	15%
GNH	176,605	27,939	16%	49,210	28%	15,464	9%	56,662	32%	27,330	16%
New Haven	49,987	5,329	11%	6,781	14%	7,159	14%	20,726	42%	9,992	20%
Inner Ring	53,539	7,881	15%	14,905	28%	4,645	9%	17,095	32%	9,013	17%
East Haven	11,270	1,472	13%	3,454	31%	917	8%	3,654	32%	1,773	16%
Hamden	22,882	3,717	16%	7,010	31%	1,418	6%	7,330	32%	3,407	15%
West Haven	19,387	2,692	14%	4,441	23%	2,310	12%	6,111	32%	3,833	20%
Outer Ring	73,079	14,729	20%	27,524	38%	3,660	5%	18,841	26%	8,325	11%
Milford	21,634	3,865	18%	7,398	34%	1,038	5%	6,402	30%	2,931	14%



INCOME AND POVERTY

Median Income Disparities

Greater New Haven households had a median income of \$69,812 in 2017—about \$4,000 lower than Connecticut and \$12,000 higher than the nation.⁶³ Since 1990, inflation-adjusted median household income has decreased about 3 percent (▼3.1%) both statewide and in Greater New Haven.⁶⁴ Income inequality remains a significant issue in the region. In 2016, the New Haven-Milford MSA's level of income inequality ranked 29th of the 100 largest U.S. metros—an identical level of income inequality as the Hartford-West Hartford-East Hartford MSA, but lower than that of Fairfield County.⁶⁵ Median household income among Outer Ring towns was \$94,251 in 2017—nearly \$30,000 more than the Inner Ring (\$65,044) and over 2.4 times that of the city of New Haven (\$39,191).⁶⁶ In 2016, the highest-earning 5 percent of households in Greater New Haven earned about \$237,500 per year—over 10 times more than the roughly \$23,000 per year earned by the poorest 20 percent of households.⁶⁷ [SEE FIG 2.8, 2.9](#)

Wage Gaps and Wealth Gaps

While median household income is a useful indicator for analyzing inequality, it is critical to dig deeper into other underlying disparities, including differences in wages and wealth. Consider the wages of Greater New Haven's full-time, year-round workers ages 25 and older in 2016: when disaggregated by sex, men had median earnings of \$60,812, compared to \$51,474 for women.⁶⁸ In other words, Greater New Haven's women earned 85 cents on the men's dollar—a smaller gender wage gap than Connecticut's overall (77 cents on the dollar).⁶⁹

Looking at full-time, year-round workers by both sex and race/ethnicity yields even starker discrepancies. The overall wage gap in Greater New Haven in 2016 can be largely attributed to the higher median earnings of white men; the intraracial wage gaps between Black men and Black women is 89 cents, and Latinas actually outearn Latino men by about \$1,000. Educational attainment also plays a role in the wage gap, but fails to account for it entirely. Statewide, the wage gap between men and women with graduate degrees was wider than within any other level of educational attainment.⁷⁰

In Greater New Haven, the median earnings for women with a graduate degree were \$72,111, nearly \$22,000 less than for men with a graduate degree, who earned \$94,005.⁷¹ Taking the analysis one step further, large wage gaps were apparent when disaggregating median earnings by sex, race/ethnicity, and educational attainment. For example, statewide, Latinas with bachelor's degrees earned about \$4,600 less than white men with only high school diplomas; white men with bachelor's degrees made over \$20,000 more than Black women with graduate or professional degrees, and about \$22,000 more than Latinas with graduate or professional degrees.⁷² [SEE FIG 2.10](#)

Beyond income is wealth—or the money, assets, and other financial resources that go beyond one's current paycheck. The racial wealth gap is a particular concern: nationally, white adults aged 60 to 70 have a median net worth about seven times greater than that of Black adults the same age. Differences in earnings are one important factor, but there are others: for instance, white families overall are about five times more likely than Black families to receive the kind of large inheritance or cash transfer that might be used for the purchase of a home or vehicle, invested in business endeavors, or used toward education costs.⁷³ Discrimination also results in property devaluation for some Black homeowners; in 2016, the median home value in majority-Black neighborhoods in the New Haven-Milford MSA (\$202,597) was estimated to be devalued by about 14 percent on average, or \$30,529, after accounting for structural characteristics of homes and neighborhood amenities.⁷⁴ In Greater New Haven, 27 percent of Black and 24 percent of Latino adults report that they have a negative net worth, compared to 15 percent of white adults.⁷⁵ [SEE TABLE 2F](#)

Income Inequality

Income and wealth are perhaps the most important factors that influence where an individual or family lives, because of choice or the resources available to them. As will be discussed later in this chapter, housing costs differ vastly—not only between municipalities, but also between neighborhoods. While gentrification has become a frequent topic of public debate due to skyrocketing housing costs in desirable parts of “superstar cities” such as New York and San Francisco, recent studies have found that the most common form of contemporary neighborhood change is the

concentration of low-income populations. For example, one such study found that between 2000 and 2016, the low-income population of economically declining areas grew by 44 percent (5,369,000 people) in the 50 largest U.S. metropolitan areas; while Greater New Haven was not included in the analysis, the New York City and Hartford metropolitan regions reported similar increases of 49 percent and 44 percent, respectively, in the number of low-income people living in economically declining areas.⁷⁶

Analyzing population distribution by neighborhood income level paints a picture of the shrinking of the region's middle class, as increasing numbers of people are living in neighborhoods at the extremes.⁷⁷ Greater New Haven's middle-class neighborhoods—those where average family income is similar to that of the state overall—have progressively shrunk from housing 60 percent of the population in 1980 to only 47 percent in 2017. While the share of residents residing in middle income neighborhoods in Greater New Haven in 2017 was still substantially below levels in the 1980s and 1990s, there has been improvement since 2010 (an increase of 7 percentage points, or 30,355 people, living in middle income neighborhoods).⁷⁸ Concurrently, there was a slight reduction in the concentration of residents living in low-income, high-income, and affluent neighborhoods. Indeed, the New Haven-Milford MSA was shown to experience a significant decline in income inequality in recent years (2014 to 2016)—the second biggest decline across the country's 100 largest U.S. metros.⁷⁹ However, mirroring the continued national trend of increasing concentration among the most economically disadvantaged, between 2010 and 2017, the share of Greater New Haven residents living in the poorest neighborhoods increased by 3 percentage points, or 16,595 people.⁸⁰ [SEE FIG 2.11](#)

These income inequality trends have direct bearing on the well-being of Greater New Haven residents. A wealth of research shows that regardless of objective economic growth, communities will not become happier without addressing inequality.⁸¹ Income inequality fragments communities by dismantling trust and ties, especially across income lines.⁸² In regions with higher levels of inequality, people are less likely to belong to social organizations and participate in civic life—all important components of community well-being.⁸³ As discussed throughout this report, the concentration of

TABLE 2D

Growing neighborhood income inequality

POPULATION AND DEFINITION BY NEIGHBORHOOD INCOME LEVEL, GREATER NEW HAVEN, 2017

INCOME BRACKET	DEFINITION BASED ON AVG FAMILY INCOME	POPULATION 1980	POPULATION 2017	CHANGE IN TOTAL POPULATION 1980–2017
Affluent	1.5x AFI or above	7,754	12,106	↑56%
High income	1.25 to 1.49x AFI	30,889	63,412	↑105%
Middle income	0.75 to 1.24x AFI	248,320	217,236	↓13%
Low income	0.5 to 0.74x AFI	96,287	95,313	↓1%
Poor	Under 0.5x AFI	31,371	77,566	↑147%

Note: See Fig. 2.11 for a graphic representation of these data.

economically disadvantaged residents in particular neighborhoods has negative impacts on well-being that stem from fewer educational and job opportunities, increased health risks, and limited access to quality community resources.⁸⁴ Research indicates that areas that are more residentially segregated by race and income have lower levels of economic mobility, defined as the ability of those in the next generation to move up the economic ladder compared to their parents.⁸⁵ In towns experiencing an increasing concentration of low-income populations, local governments may struggle to distribute public resources in a manner that meets the basic needs of their residents, resulting in overburdened public schools, underfunded public libraries, and deferred maintenance on infrastructure. [SEE CHAPTER 4](#)

Further exacerbating income inequality is the fact that median household incomes have only increased in the region's higher-income towns.⁸⁶ Between 1990 and 2017, only 5 of the region's 13 towns saw increases in inflation-adjusted median household income, all of which were in the Outer Ring.⁸⁷ The region's overall median household income was stagnant during this period, decreasing by around 3 percent—a reflection of the wider state trend.⁸⁸ Greater New Haven's Inner Ring towns experienced a 7 percent decline, with West Haven seeing a decrease of 15 percent, while the city of New Haven declined 17 percent.⁸⁹ [SEE FIG 2.12](#)

Rising Low-Income Rate

Since 2000, the low-income rate in Greater New Haven has been on the rise.⁹⁰ “Low-income” denotes individuals living in households with annual incomes of less than twice the federal poverty level, also encompassing those living

below the poverty line.⁹¹ In 2017, a family of two earning \$32,480 or less was considered low-income, as was a family of four earning \$49,200 or less.⁹² Between 2000 and 2017, the share of Greater New Haven's population living in low-income households increased from 22 percent to 26 percent, similar to the statewide increase from 19 percent to 23 percent. The low-income rate in New Haven is substantially higher than the region overall, approaching 50 percent in 2017; additionally, the low-income rate for the Inner Ring (25 percent) was nearly double that of the Outer Ring (13 percent).⁹³ [SEE TABLE 2E](#)

In Greater New Haven and statewide, the low-income rate among children is both higher and growing faster than for the population as a whole. In 2017, nearly two out of three children ages 0 to 17 in New Haven lived in low-income households, meaning in the city alone, almost 18,000 youth faced severe economic hardship.⁹⁴ Though New Haven had the highest child low-income rate in the region in 2017, the rate among Inner Ring suburbs has seen a far sharper uptick, from 24 percent in 2000 to 32 percent in 2017. [SEE FIG 2.7](#)

Financial Security

While this report uses the low-income threshold to identify those living under severe economic hardship, many individuals and families above that line struggle mightily to make ends meet.

The ALICE Project (Asset Limited, Income Constrained, Employed), a United Way initiative spanning a number of states including Connecticut, utilizes a “household survival budget” based on the actual costs of basic necessities such as housing, childcare, food, transportation, and healthcare for different types of households in each county in Connecticut to establish an ALICE income threshold which encompasses households above the poverty line that earn less than the basic cost of living in the county.⁹⁵ The most recent ALICE analysis found that, in 2016, 33 percent of the region's households qualified as ALICE—along with an additional 11 percent of households below the poverty line. Taken together, 44 percent of households were struggling to satisfy basic needs required to live and work, well above the 26 percent low-income rate for Greater New Haven defined above.⁹⁶

DataHaven's 2018 Community Wellbeing Survey results revealed many Greater New Haven residents face financial stress: 34 percent of adults in the region report that they are just getting by or finding it difficult to manage financially.⁹⁷ These rates have changed little since the last time the survey was conducted, in 2015. [SEE TABLE 2F](#)

When people are forced to choose among basic needs, such as rent, childcare, transportation to work, or treating a health condition, they are left with no good options—their well-being will ultimately suffer.

TABLE 2E

Low-income population

LOW-INCOME (<200% FPL) POPULATION BY AGE GROUP, GREATER NEW HAVEN, 2017

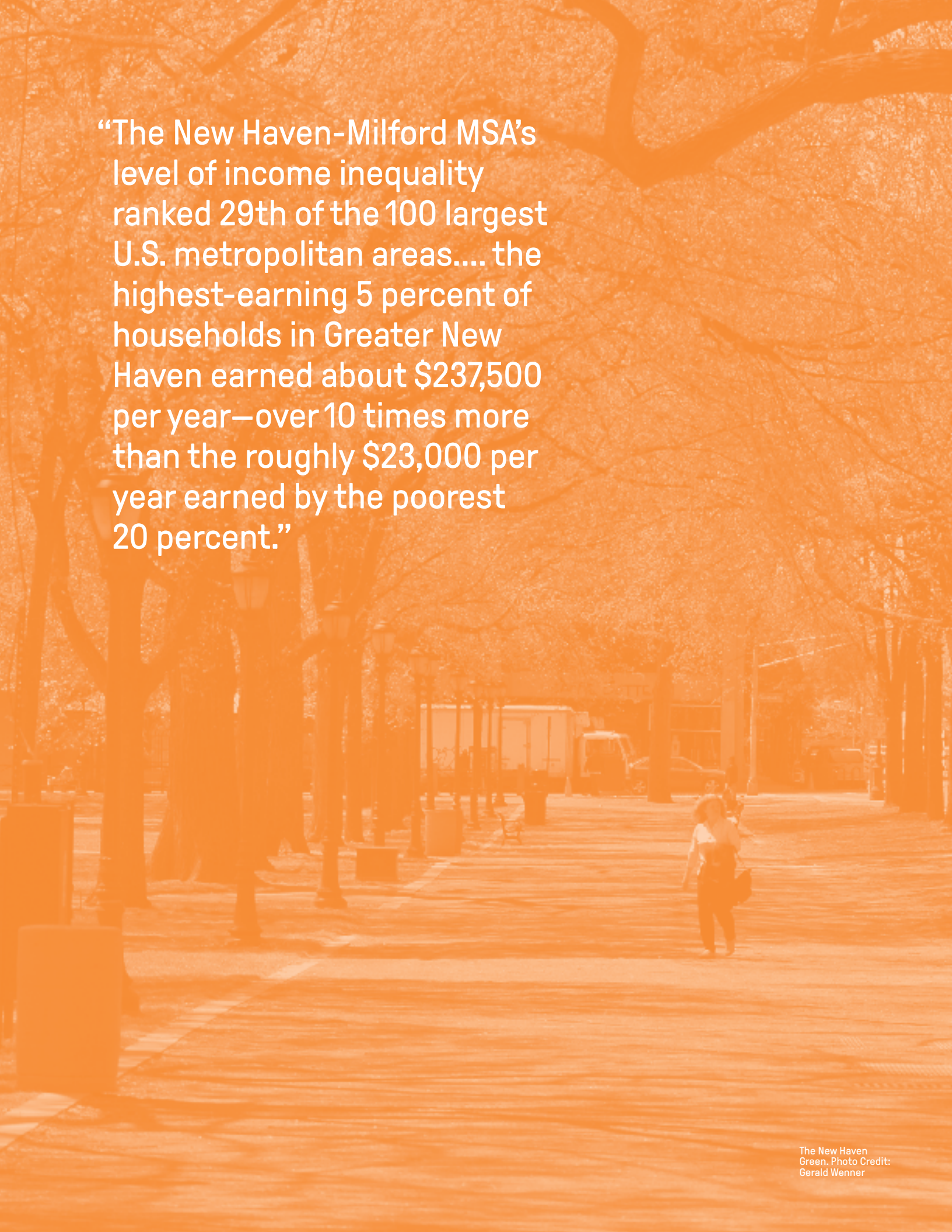
LOCATION	ALL AGES, POVERTY STAT. DETERMINED	ALL AGES, LOW-INCOME	ALL AGES, LOW-INCOME RATE	AGES 0–17, POVERTY STAT. DETERMINED	AGES 0–17, LOW-INCOME	AGES 0–17, LOW-INCOME RATE	AGES 0–5, POVERTY STAT. DETERMINED	AGES 0–5, LOW-INCOME	AGES 0–5, LOW-INCOME RATE
United States	313M	102.5M	33%	72.4M	30.6M	42%	23.4M	10.6M	45%
Connecticut	3,486,033	802,453	23%	752,655	225,715	30%	221,412	72,246	33%
Greater New Haven	446,916	116,457	26%	93,138	31,709	34%	28,157	10,258	36%
New Haven	122,320	58,932	48%	28,672	17,874	62%	9,725	6,123	63%
Inner Ring	136,850	33,693	25%	27,420	8,718	32%	8,445	2,616	31%
East Haven	28,741	6,451	22%	5,438	1,811	33%	1,513	477	32%
Hamden	56,160	10,621	19%	10,736	2,076	19%	3,369	484	14%
West Haven	51,949	16,621	32%	11,246	4,831	43%	3,563	1,655	46%
Outer Ring	187,746	23,832	13%	37,046	5,117	14%	9,987	1,519	15%
Milford	53,399	8,027	15%	9,563	1,813	19%	2,823	624	22%

TABLE 2F

Financial insecurity

SHARE OF ADULTS, GREATER NEW HAVEN, 2018

LOCATION	JUST GETTING BY	LESS THAN 2MO SAVINGS	NEGATIVE NET WORTH	FOOD INSECURE	UTILITY SHUTOFF THREAT	TRANSPORTATION INSECURE	NO BANK ACCOUNT
Connecticut	33%	33%	17%	13%	10%	12%	9%
GNH	34%	33%	18%	13%	10%	13%	11%
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN							
Male	29%	27%	14%	12%	7%	12%	11%
Female	38%	39%	22%	14%	12%	13%	10%
Age 18–34	42%	42%	21%	18%	13%	19%	17%
Age 35–49	41%	35%	28%	20%	14%	13%	11%
Age 50–64	32%	31%	8%	10%	11%	10%	7%
Age 65+	21%	23%	12%	5%	3%	8%	5%
White	32%	32%	15%	9%	9%	10%	7%
Black	42%	43%	27%	20%	14%	20%	18%
Latino	47%	52%	24%	38%	20%	29%	27%
<\$15K	60%	61%	32%	33%	14%	33%	41%
\$15K–\$30K	60%	47%	33%	26%	22%	26%	15%
\$30K–\$50K	47%	42%	29%	21%	16%	15%	12%
\$50K–\$75K	32%	32%	22%	12%	9%	10%	8%
\$75K–\$100K	26%	22%	14%	6%	8%	7%	3%
\$100K–\$200K	15%	24%	7%	3%	5%	4%	2%
\$200K+	8%	9%	2%	6%	2%	1%	2%
BY GEOGRAPHY							
New Haven	41%	39%	24%	21%	14%	21%	19%
Inner Ring	36%	38%	23%	14%	12%	14%	10%
East Haven	32%	36%	16%	11%	14%	10%	6%
Hamden	32%	35%	19%	12%	10%	15%	8%
West Haven	42%	46%	24%	18%	12%	15%	14%
Outer Ring	25%	27%	9%	6%	4%	5%	5%
Milford	32%	36%	14%	9%	3%	7%	5%



“The New Haven-Milford MSA’s level of income inequality ranked 29th of the 100 largest U.S. metropolitan areas.... the highest-earning 5 percent of households in Greater New Haven earned about \$237,500 per year—over 10 times more than the roughly \$23,000 per year earned by the poorest 20 percent.”



HOUSING

Housing Stock

In 2017, 60 percent of Greater New Haven households owned the home in which they lived, compared to 67 percent statewide.⁹⁸ The region's homeownership rate grew slowly but steadily between 1980 and 2010, from 60 to 64 percent.⁹⁹ But this gain was essentially wiped out from 2010 to 2017, when the rate fell back to 60 percent.¹⁰⁰ The recent decline in homeownership, a trend that occurred across Connecticut and nationally, reflects the massive impact of the 2008 housing crash and subsequent Great Recession.

Statewide, cities such as New Haven tend to have lower homeownership rates than surrounding suburbs. Only 28 percent of households in New Haven are owner-occupied, versus 63 percent of Inner Ring households and 81 percent of Outer Ring households.¹⁰¹ Homeownership rates also vary widely by race in Greater New Haven. In 2017, 72 percent of white households owned their housing, compared to 35 percent of Black households and 31 percent of Latino households.¹⁰² [SEE TABLE 2G](#)

In 2017, the majority of housing units in Greater New Haven were single-family (58 percent), a lower

mark than the statewide share of 65 percent.¹⁰³ The region's shifting household structure is affecting the types of housing units being built. Housing units in multi-family residential buildings, traditionally concentrated in urban areas, are increasingly becoming the housing type of choice for young workers, single adults, and other non-traditional households, due to a preference to be nearer to the amenities typical of denser, urban communities; the inability to afford a single-family home; or a desire to downsize.

Developers continue to respond to this shift in housing demand: 73 percent of housing units built between 2014 and 2017 were in multi-family buildings, compared to 61 percent built between 2010 and 2013, and just 28 percent built between 2001 and 2004.¹⁰⁴ The city of New Haven captured 34 percent of the region's new housing construction between 2014 and 2017, compared to 42 percent between 2010 and 2013 and 14 percent between 2001 and 2004.¹⁰⁵ [SEE TABLE 2H](#)

Housing Affordability

The cost of owning a home in Greater New Haven can be high, particularly in the Outer Ring towns. In 2017, Greater New Haven's median housing value was \$279,333, slightly above the statewide median of \$270,100.¹⁰⁶ Within Greater New Haven and a few

TABLE 2G

Homeownership

HOMEOWNERSHIP RATE, TOTAL AND BY RACE OF HOUSEHOLDER, GREATER NEW HAVEN, 2017

LOCATION	TOTAL HOUSEHOLDS	OWNER OCCUPIED HOUSEHOLDS	HOME-OWNERSHIP RATE	WHITE TOTAL HOUSEHOLDS	WHITE OWNER OCCUPIED HOUSEHOLDS	WHITE HOME-OWNERSHIP RATE	BLACK TOTAL HOUSEHOLDS	BLACK OWNER OCCUPIED HOUSEHOLDS	BLACK HOME-OWNERSHIP RATE	LATINO TOTAL HOUSEHOLDS	LATINO OWNER OCCUPIED HOUSEHOLDS	LATINO HOME-OWNERSHIP RATE
United States	118.8M	75.8M	64%	81.3M	58.2M	72%	14.5M	6.1M	42%	15.1M	7M	46%
Connecticut	1.4M	906,798	67%	1M	762,221	76%	130,942	51,237	39%	164,460	55,650	34%
Greater New Haven	176,605	106,429	60%	118,683	85,359	72%	27,727	9,794	35%	20,345	6,350	31%
New Haven	49,987	13,913	28%	17,447	6,396	37%	17,095	4,553	27%	12,182	2,287	19%
Inner Ring	53,539	33,550	63%	35,420	25,012	71%	9,288	4,382	47%	5,836	2,559	44%
East Haven	11,270	7,787	69%	9,284	6,685	72%	218	196	90%	1,243	496	40%
Hamden	22,882	14,857	65%	14,600	10,805	74%	5,015	2,541	51%	1,631	779	48%
West Haven	19,387	10,906	56%	11,536	7,522	65%	4,055	1,645	41%	2,962	1,284	43%
Outer Ring	73,079	58,966	81%	65,816	53,951	82%	1,344	859	64%	2,327	1,504	65%
Milford	21,634	16,525	76%	18,927	14,962	79%	544	303	56%	958	585	61%

TABLE 2H

Housing units and new housing permits

HOUSING UNITS PER STRUCTURE (2017) AND NEW HOUSING PERMITS PER YEAR (2001–2017), GREATER NEW HAVEN

	CURRENT HOUSING STOCK							NEW HOUSING PERMITS								
LOCATION	TOTAL UNITS COUNT	SINGLE FAMILY COUNT	SINGLE FAMILY SHARE	2 TO 9 UNITS COUNT	2 TO 9 UNITS SHARE	10+ UNITS COUNT	10+ UNITS SHARE	ALL UNITS AVG CT. 2001–2004	ALL UNITS AVG CT. 2014–2017	ALL UNITS CHANGE	SINGLE FAMILY AVG CT. 2001–2004	SINGLE FAMILY AVG CT. 2014–2017	SINGLE FAMILY CHANGE	MULTI FAMILY AVG CT. 2001–2004	MULTI FAMILY AVG CT. 2014–2017	MULTI FAMILY CHANGE
Connecticut	1.5M	974K	65%	336.7K	23%	185K	12%	10,323	4,032	↓61%	8,440	1,844	↓78%	1,883	2,188	↑16%
GNH	194.8K	112.4K	58%	50,274	26%	32,071	17%	896	469	↓48%	645	131	↓80%	251	338	↑35%
New Haven	56,360	13,257	24%	28,664	51%	14,439	26%	122	128	↑5%	70	5	↓93%	52	123	↑137%
Inner Ring	59,310	35,064	59%	13,008	22%	11,238	19%	154	73	↓53%	122	19	↓84%	32	54	↑69%
East Haven	12,494	8,363	67%	2,389	19%	1,742	14%	56	7	↓88%	45	7	↓84%	12	0	↓100%
Hamden	24,865	14,921	60%	4,564	18%	5,380	22%	68	24	↓65%	48	4	↓92%	20	20	0%
West Haven	21,951	11,780	54%	6,055	28%	4,116	19%	29	42	↑45%	29	8	↓72%	0	34	N/A
Outer Ring	79,089	64,093	81%	8,602	11%	6,394	8%	620	268	↓57%	453	107	↓76%	167	160	↓4%
Milford	23,329	17,522	75%	3,046	13%	2,761	12%	223	182	↓18%	110	22	↓80%	114	160	↑40%

surrounding towns, white homeowners have median home values that are similar to the regional median, while Black and Latino homeowners' median values are only about \$189,000.¹⁰⁷ The substantial differences in housing values between towns in the region mean that many prospective homeowners are limited to more affordable communities, potentially contributing to the region's neighborhood income inequality. Overall, inflation-adjusted median housing values in the region increased by \$44,382, or 19 percent, between 2000 and 2017; the statewide increase during this period was \$40,853, or 18 percent.¹⁰⁸ New Haven saw a particularly large increase of 27 percent during this period, though the city's median home values still lagged significantly behind the region as a whole.¹⁰⁹ [SEE FIG 2.13](#)

In Connecticut in 2017, more than 37,000 mortgages were issued to homebuyers,¹¹⁰ 5 percent of which qualified as high-cost. High-cost mortgages have annual percentage rates that exceed by a certain threshold the rate that would be granted to a well-qualified borrower.¹¹¹ These mortgages are more expensive for borrowers, theoretically increasing the risk of default. In Connecticut, the proportion of mortgages qualifying as high-cost held around 1 percent from 2010 to 2012, peaked at 7 percent in 2014, sharply declined, and now appears to be increasing as of

2016. In Greater New Haven, 6 percent of mortgages in 2017 were high-cost, but the percent of high-cost mortgages varied widely by town, from 12 percent in West Haven and 10 percent in New Haven to 1 percent in Woodbridge and 2 percent in Milford and Madison.¹¹²

Historically, Black and Latino homebuyers have received high-cost mortgages more often than white borrowers. In Greater New Haven in 2017, just 4 percent of white borrowers received high-cost mortgages, compared to 13 percent of Latino borrowers and 15 percent of Black borrowers. Statewide in the same year, 4 percent of white borrowers, 12 percent of Black borrowers, and 11 percent of Latino borrowers received high-cost mortgages. These loans are often concentrated in areas with more non-white residents. The average high-cost mortgage in Greater New Haven in 2017 went to a homebuyer in a census tract where 41 percent of the residents were people of color. Non-high cost mortgages were given in census tracts with 24 percent people of color, on average.¹¹³

Homebuyers with lower incomes are more likely to receive high-cost mortgages. In Greater New Haven, the median income for high-cost borrowers in 2017 was \$66,000, compared to \$84,000 for borrowers with non-high cost mortgages. The median loan amount for a high-

cost mortgage was \$177,000, compared to \$218,000 for other mortgages.¹¹⁴ In both cases, loan amounts are lower than the median home value of \$279,333 in Greater New Haven, suggesting that more affordable housing is in demand.

Housing affordability is a serious issue in Greater New Haven. The 2018 DataHaven Community Wellbeing Survey found that 9 percent of adults in Greater New Haven did not have enough money for housing or shelter at some point in the preceding year.¹¹⁵ But two of every five Greater New Haven households are either housing cost-burdened (21 percent)—meaning that they spend more than the recommended 30 percent of income on housing¹¹⁶—or severely cost-burdened (20 percent), meaning more than 50 percent of their income goes toward housing. Renters are generally at heightened risk: 29 percent of renter-occupied households are severely housing cost-burdened, more than double the 14 percent of owner-occupied households.¹¹⁷

The overall cost-burden rate in New Haven County peaked in 2010 during the Great Recession at 43 percent, and has steadily decreased during the post-recession years.¹¹⁸ While the cost-burden rate for homeowners has actually improved since 2005—currently standing at 31 percent—the rate for renters has actually gone up slightly, from 49 percent to 51 percent.¹¹⁹ [SEE FIG 2.14 / SEE TABLES 1B, 2I](#)

In 2017, the median rent for a two-bedroom housing unit in Greater New Haven was \$1,301 per month, or \$15,612 annually.¹²⁰ Based on this, the average renting household in Greater New Haven would need to earn \$52,040 per year to be able to avoid being cost-burdened—about \$10,000 more than the median household income of the region's renter households. This rent affordability shortfall varies across the region, but is particularly high in the Inner Ring towns and in New Haven, where the vast majority of households rent and where affordable housing is scarce.¹²¹ [SEE FIG 2.15](#)

Renters facing this affordability shortfall may also face the possibility of eviction when their wages are not enough to cover rent. The eviction rate (number of evictions per renter-occupied household) in Connecticut between 2001 and 2016 averaged 3.1 percent, peaking at 3.9 percent in 2003. In 2016, the eviction rate in Connecticut was 3.0 percent—or 13,800 households, slightly higher than the national average that year of 2.3 percent. In Greater New Haven, 3.3 percent, or approximately 2,500 households, were evicted in 2016. Sixty percent of these formal evictions took place in New Haven, where 1,481, or 4.1 percent percent of renter-occupied households, were evicted in 2016. Madison had the lowest eviction rate, 0.8 percent or 9 households. These rates are derived from the best available nationwide evictions dataset, which

TABLE 2I

Housing costs

MEDIAN HOUSING VALUE AND SEVERE HOUSING COST BURDEN, GREATER NEW HAVEN, 2017

LOCATION	MEDIAN HOUSING VALUE	NUMBER OF HOUSEHOLDS	SEVERELY COST BURDENED	SEVERE COST-BURDEN RATE	NUMBER OF RENTER HOUSEHOLDS	SEVERELY COST BURDENED	RENTER SEVERE COST-BURDEN RATE
United States	\$193,500	118,825,921	17,391,545	15%	42,992,786	10,170,930	24%
Connecticut	\$270,100	1,361,755	223,106	16%	454,957	115,898	26%
Greater New Haven	\$279,333	176,605	34,870	20%	70,176	20,450	29%
New Haven	\$189,400	49,987	14,386	29%	36,074	11,678	32%
Inner Ring	\$210,804	53,539	10,249	19%	19,989	5,430	27%
East Haven	\$206,900	11,270	2,194	20%	3,483	948	27%
Hamden	\$225,700	22,882	3,809	17%	8,025	2,007	25%
West Haven	\$193,300	19,387	4,246	22%	8,481	2,475	29%
Outer Ring	\$339,544	73,079	10,235	14%	14,113	3,342	24%
Milford	\$303,200	21,634	3,579	17%	5,109	1,390	27%

is based on court-reported filings and whether an eviction took place as a result. Because not all evictions take place through the legal system, and because these data are based solely on available court records, these rates likely do not capture the true magnitude of evictions.¹²²

Evictions, whether formal or informal, do not affect all families equally. The 2018 DataHaven Community Wellbeing Survey found that 16 percent of white adults, 25 percent of Black adults, and 39 percent of Latino adults in Greater New Haven had moved within the past three years; of these adults, who were mostly renters, about 4 percent had been evicted.¹²³ Of those renters who were not evicted, about 1 in 10 adults said they had moved in part because of rent increases at their previous home, and about 1 in 14 said they moved because their landlord would not fix things.¹²⁴ Low-income adults (earning less than \$30,000 per year) and adults living with children were more likely to report having been unable to afford adequate housing. For children in housing-insecure families, educational and cognitive development outcomes are a concern as they must cope with the stress of increased residential mobility and risk of homelessness.¹²⁵

Housing Discrimination

Redlining is the shorthand used to refer to the practice of rating certain neighborhoods as risky or undesirable for investment for reasons historically rooted in the races, ethnicities, occupations, and income levels of the areas' residents. In the early 1930s, the federal government established the Home Owners' Loan Corporation (HOLC) to help fund mortgages for homebuyers. HOLC created maps of cities that rated neighborhoods from A ("Best") to D ("Hazardous"), including large parts of New Haven and the Inner Ring towns.¹²⁶ Neighborhoods rated as "hazardous" were shaded red and were subsequently considered to be too risky for mortgage loans or other investments.

Today, the impact of redlining on communities across the country remains apparent. Comparing the neighborhoods targeted for investment decades ago to demographics from 2010,¹²⁷ we notice comparatively high rates of homeownership in higher-grade areas—79 percent in Greater New Haven's A-grade areas compared to 44 percent overall and just 34 percent in D-grade areas. The areas are also racially segregated, and higher-grade areas were predominantly white in 2010.

Seventy-eight percent of people in A-grade areas were white, compared to just 28 percent in D-grade areas.¹²⁸ [SEE FIG 2.16, 2.17, 2.18](#)

Zoning is perhaps the most common and powerful tool policymakers have at their disposal to encourage the development of more and more affordable housing where it is needed most, but local zoning codes are often used instead to prevent the development of affordable units. At their worst, zoning regulations further perpetuate decades of race- and class-based discrimination. A recent Connecticut Mirror/ProPublica article reveals the extent to which zoning regulations in southwest Connecticut prevent willing developers from building affordable housing despite evident need and demand.¹²⁹ When they are permitted to break ground, these affordable developments are disproportionately located in low-income neighborhoods and communities of color, further reinforcing social and economic segregation. For example, according to the Connecticut Department of Housing, 32 percent of New Haven's total housing units were given some form of government housing assistance in 2018, compared to about 5 percent of units in Milford and about 11 percent of the state's housing stock overall.¹³⁰



JOBS AND JOBS ACCESS

Regional Job and Wage Trends

Since 2000, the number of jobs in Greater New Haven (represented in this subsection by New Haven County, as data were only available at that level) has ebbed and flowed in line with the larger economic climate. The total job count fell following the early 2000s recession, nearly bounced back by 2007, and sharply decreased following the Great Recession. By 2017, the number of jobs in New Haven County (365,909) had somewhat recovered since the last peak in 2007 (372,606).¹³¹ This pattern was similar to the statewide trend over the same time period.

While the total number of jobs in New Haven County in 2017 was similar to the number in 2000, they have shifted dramatically toward a service economy. In the early 2000s, the county's two largest sectors were health care and social assistance and manufacturing. Since then, manufacturing jobs have plummeted by more than

TABLE 2J

Wage trends by sector

AVERAGE WAGE BY INDUSTRY, NEW HAVEN COUNTY, 2000–2017, IN 2017 DOLLARS

INDUSTRY	WAGE 2017	CHANGE IN WAGE, 2000–2017	PERCENT CHANGE
All NAICS Sectors	\$57,091	↑\$1,806	↑3.3%
Health Care and Social Assistance	\$50,486	↓\$34	↓0.1%
Educational Services	\$63,144	↑\$8,614	↑15.8%
Manufacturing	\$70,161	↓\$265	↓0.4%
Professional, Scientific, and Technical Services	\$94,707	↓\$2,814	↓2.9%
Retail Trade	\$31,486	↓\$4,011	↓11.3%
Wholesale Trade	\$81,447	↑\$2,656	↑3.4%
Finance and Insurance	\$94,779	↑\$16,273	↑20.7%
Construction	\$68,167	↑\$2,282	↑3.5%
Administrative and Support and Waste Management and Remediation Services	\$44,765	↑\$9,026	↑25.3%
Public Administration	\$68,531	↑\$8,340	↑13.9%
Management of Companies and Enterprises	\$129,232	↑\$49,531	↑62.1%
Accommodation and Food Services	\$20,169	↓\$98	↓0.5%
Transportation and Warehousing	\$45,613	↓\$864	↓1.9%
Information	\$85,423	↑\$12,758	↑17.6%
Other Services (except Public Administration)	\$31,198	↓\$2,933	↓8.6%
Real Estate and Rental and Leasing	\$56,049	↑\$8,132	↑17.0%
Utilities	\$108,244	↑\$20,452	↑23.3%
Arts, Entertainment, and Recreation	\$36,637	↑\$5,388	↑17.2%
Agriculture, Forestry, Fishing and Hunting	\$32,435	↓\$2,093	↓6.1%
Mining, Quarrying, and Oil and Gas Extraction	\$76,203	↓\$4,487	↓5.6%

TABLE 2K

Changing industry footprint

SHARE OF TOTAL PAYROLL BY INDUSTRY, NEW HAVEN COUNTY, 2000–2017

INDUSTRY	PAYROLL	SHARE OF PAYROLL 2000	SHARE OF PAYROLL 2017	CHANGE SHARE OF PAYROLL
All NAICS Sectors	\$21,000,000,000	N/A	N/A	N/A
Health Care and Social Assistance	\$3,600,000,000	14.8%	17.1%	↑2.3%
Educational Services	\$3,200,000,000	11.7%	15.5%	↑3.8%
Manufacturing	\$2,100,000,000	18.4%	10.3%	↓8.1%
Professional, Scientific, and Technical Services	\$1,600,000,000	8.8%	7.4%	↓1.4%
Retail Trade	\$1,400,000,000	8.0%	6.7%	↓1.3%
Wholesale Trade	\$1,300,000,000	6.6%	6.3%	↓0.3%
Finance and Insurance	\$1,100,000,000	5.1%	5.2%	↑0.1%
Construction	\$1,000,000,000	5.0%	4.9%	↓0.1%
Administrative and Support and Waste Management and Remediation Services	\$970,000,000	3.3%	4.6%	↑1.3%
Public Administration	\$790,000,000	3.5%	3.8%	↑0.3%
Management of Companies and Enterprises	\$690,000,000	1.5%	3.3%	↑1.8%
Accommodation and Food Services	\$580,000,000	2.2%	2.8%	↑0.6%
Transportation and Warehousing	\$470,000,000	1.9%	2.2%	↑0.3%
Information	\$460,000,000	4.3%	2.2%	↓2.1%
Other Services (except Public Administration)	\$460,000,000	2.0%	2.2%	↑0.2%
Real Estate and Rental and Leasing	\$330,000,000	1.2%	1.6%	↑0.4%
Utilities	\$260,000,000	0.7%	1.3%	↑0.6%
Arts, Entertainment, and Recreation	\$250,000,000	0.9%	1.2%	↑0.3%
Agriculture, Forestry, Fishing and Hunting	\$26,000,000	0.1%	0.1%	0.0%
Mining, Quarrying, and Oil and Gas Extraction	\$14,000,000	0.1%	0.1%	0.0%

a third, and health care jobs have grown to 71,000 employees.¹³² Home health aides, nurses, and health care managers and executives are among the most common occupations within this sector.¹³³ As New Haven County's senior population grows, health care and social assistance workers will likely continue to be in high demand. The Connecticut Department of Labor's most recent

2016 forecast estimates that, statewide, the health care and social assistance sector will grow by an additional 11 percent by 2026.¹³⁴ Both educational services and accommodation and food services also saw growth from 2000 to 2017, adding about 7,400 and 6,600 jobs, respectively.¹³⁵ [SEE FIG 2.20](#)

In 2017, the average wage in New Haven County was \$57,091—nearly \$10,000 below the state average

of \$66,990.¹³⁶ Between 2000 and 2017, the average wage in New Haven County increased by about 3 percent, outpacing the 1 percent wage growth statewide during that period.¹³⁷ In the county's fast-growing service sectors, wages are generally lower, and since 2000 have been largely stagnant. Meanwhile, wages in some higher-paying sectors, such as finance and insurance, have continued to climb. Educational services, now the second-largest sector, posted wage increases of 16 percent over this period.¹³⁸ [SEE TABLE 2J](#)

While the finance and insurance sector accounts for an outsized share of total payroll in Fairfield and Hartford Counties, the same cannot be said in New Haven County, where the sectors with the largest shares of total payroll in 2017 were educational services and health care and social assistance, at 16 and 17 percent, respectively.¹³⁹ These sectors also demonstrated the largest growth in share of total payroll between 2000 and 2017, which tracks with their increasing number of employees over this time period. [SEE TABLE 2K](#)

Transportation and Job Locations

Transportation is a key factor in access to quality jobs. With Greater New Haven residents holding jobs throughout the county and state, and sometimes even beyond state lines, the importance of reliable and affordable transportation cannot be overstated.¹⁴⁰ As is the case in other large cities, New Haven experiences a large net inflow of higher-wage workers (**▲33,000**) each day due to it having a high concentration of higher-paying jobs, with earnings of at least \$40,000 per year, though only 20 percent of these high-wage jobs in New Haven are held by city residents. The issue known as spatial mismatch, in which many workers experience “reverse” commutes to get to lower-paying jobs in outer suburbs, is also a concern. While New Haven has the highest share of residents who hold jobs in the same town that they live in, two-thirds of the lower-income workers who live in the city travel to surrounding towns for work; this is seen in the net inflow of lower-wage workers in the Outer Ring suburbs of Milford (**▲5,500**), North Haven (**▲4,500**), Orange (**▲3,800**), and Branford (**▲1,500**). [SEE FIG 2.19](#)

Regional commuter rail connections, bus services, and walking or biking provide options for some workers, especially those employed in city centers. However, most residents rely on a car to reach the greatest number of available jobs within

a reasonable commuting distance, as well as necessary services such as shopping and health care. Results from the 2018 DataHaven Community Wellbeing Survey indicate that 14 percent of Greater New Haven's adults do not have access to a car when they need it.¹⁴¹ In the region, 46 percent of adults who earn less than \$15,000 per year and 26 percent who earn between \$15,000 and \$30,000 report not having access to a car when needed.¹⁴² As detailed in a 2014 report, *How Transportation Problems Keep People Out of the Workforce in Greater New Haven*, these adults also face much higher levels of underemployment.¹⁴³ Additionally, about half of adults who face transportation insecurity also report that they have missed a doctor's appointment in the past year due to lack of reliable transportation.¹⁴⁴ These survey data underscore the importance of alternative local transportation options. [SEE TABLE 2L](#)

Lack of car access is far more common for Black residents (21 percent) and Latino residents (26 percent) than among white residents (only 10 percent).¹⁴⁵ As discussed above, the substantial disparity in median household income and family wealth between white households and Black and Latino households in Greater New Haven is one important factor in explaining these differences in car access.

Additionally, it is important to consider the potential trade-offs between housing and transportation costs. Adults who seek lower-cost housing farther from work or services may shoulder a much greater burden of transportation expenses, and have to cope with the many other potentially-negative impacts of longer daily travel times, including those related to employment and health.¹⁴⁶

Underemployment

Though Greater New Haven's average unemployment rate from 2013 to 2017 mirrored the statewide and nationwide rates (all 7 percent), there was significant variation by place and race/ethnicity within the region.¹⁴⁷ [SEE FIG 1.3, TABLE 1B](#)

However, a much greater number of residents—particularly within certain population groups—find economic opportunities to be limited. The unemployment rate counts people without a job but looking for work; it does not consider part-time workers who would prefer full-time work, nor those who are interested in working but not actively searching for a job. The DataHaven Community Wellbeing Survey captures both of

TABLE 2L

Economic opportunity

SHARE OF ADULTS, GREATER NEW HAVEN, 2018

LOCATION	FEEL AREA HAS GOOD OPPORTUNITIES FOR EMPLOYMENT	FEEL YOUTH HAVE OPPORTUNITIES FOR JOB ADVANCEMENT	UNDEREMPLOYED	HAVE ACCESS TO A CAR
Connecticut	50%	59%	16%	88%
Greater New Haven	49%	56%	20%	86%
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN				
Male	49%	56%	20%	87%
Female	49%	56%	19%	86%
Age 18–34	49%	57%	27%	82%
Age 35–49	50%	57%	17%	89%
Age 50–64	46%	55%	13%	88%
Age 65+	51%	53%	N/A	88%
White	52%	57%	14%	90%
Black	39%	47%	28%	79%
Latino	39%	52%	31%	74%
<\$15K	36%	48%	N/A	54%
\$15K–\$30K	33%	38%	N/A	74%
\$30K–\$50K	43%	62%	N/A	87%
\$50K–\$75K	48%	51%	N/A	89%
\$75K–\$100K	61%	58%	N/A	93%
\$100K–\$200K	60%	71%	N/A	99%
\$200K+	64%	78%	N/A	96%
BY GEOGRAPHY				
New Haven	37%	41%	30%	75%
Inner Ring	42%	52%	20%	88%
East Haven	49%	42%	N/A	91%
Hamden	53%	67%	N/A	92%
West Haven	29%	38%	N/A	84%
Outer Ring	64%	72%	10%	95%
Milford	58%	71%	N/A	94%

these groups in its underemployment measure.

In 2018, 20 percent of Greater New Haven adults reported being underemployed. This figure was slightly higher than that of the state, and triple the region's official unemployment rate in that same year.¹⁴⁸ The underemployment rate in Greater New Haven varies; for example, three times the share of adults in New Haven were underemployed (30 percent) as in the Outer Ring suburbs (10 percent).¹⁴⁹ Across Greater New Haven, adults under age 35 face higher rates of

underemployment (27 percent) than adults ages 35 to 64 (15 percent).¹⁵⁰ Additionally, the disproportionately high rates of underemployment among communities of color may play a role in the more negative outlook regarding economic opportunities reported by Black and Latino residents. Overall, the survey results suggest that Greater New Haven residents who earn more than \$75,000 per year are almost twice as likely as residents earning less than \$30,000 per year to be optimistic about job opportunities for residents in their area. [SEE TABLE 2L](#)



EDUCATION

Early Childhood

Children's experiences in their first five years profoundly affect their life outcomes. Their mother's access to prenatal care, the quality of their living environment, and their social interactions affect their brain development, overall well-being [SEE CHAPTER 3](#) and ability to succeed in school and beyond.

According to a 2017 Connecticut Voices for Children report, from 2005 to 2016, the state expanded its childcare funding, with the result that 80 percent of four-year-olds in the state were enrolled in preschool, even though the need for care for infants and toddlers was still well ahead of the available capacity. The report notes that community wealth strongly predicts both whether children go to preschool and the level of their later academic performance, suggesting that greater attention should be paid to the economic barriers that prevent many children from accessing high-quality early childhood education.¹⁵¹

In 2017, 6,529 children, or 64 percent of the region's three- and four-year-olds, were enrolled in preschool, including about 2,700 children in preschool classrooms provided by public school districts.¹⁵² This is a small increase from 61 percent enrollment in 2000. As noted in the DataHaven Community Index, preschool enrollment is higher in the Outer Ring than in the region as a whole. Enrollment is particularly low in East Haven where only 37 percent of preschool-aged children are enrolled. [SEE TABLE 1B](#)

Additionally, childcare providers in Greater New Haven have a combined capacity of 2,567 slots for infants and toddlers, representing only about 18 percent of the region's children under age 3, indicating a severe shortage in early childcare options.¹⁵³

According to the United Way ALICE Project, the minimum monthly childcare cost for a young family—a household with two adults, one infant, and one preschooler—is about \$1,718 in Greater New Haven.¹⁵⁴ In the Greater New Haven region in 2018, the average childcare facility charged about \$239 a week to care for infants and toddlers, and about \$220 for preschoolers.¹⁵⁵ According to these figures, the young family described above would spend \$23,868 per year on childcare.¹⁵⁶

These high costs have clear implications for the region's many working families struggling to

make ends meet. According to the 2018 DataHaven Community Wellbeing Survey, of the adults in the region living with children below kindergarten age, 48 percent report that it is either somewhat or very difficult to find high-quality, affordable childcare.¹⁵⁷ In Greater New Haven, childcare is both a great financial burden and a great necessity, as it prepares children for the future and enables parents to work.

K-12 and Postsecondary Education

Greater New Haven is home to 59,517 public school students from preschool to 12th grade, including 2,688 in pre-kindergarten programs, 38,969 kindergarten and elementary school students, and 17,860 high schoolers.¹⁵⁸ More than a third of these students attend New Haven public schools. The region's public school students are just under half (46 percent) white, 27 percent Latino, 20 percent Black, and 8 percent other races.¹⁵⁹ Notably, the region's Outer Ring towns have far less diverse student bodies: 78 percent of students in the Outer Ring are white, while only 8 percent are Latino and 3 percent are Black. Three of the larger districts are far more diverse: in New Haven, West Haven, and Hamden, no one racial group constitutes a majority.¹⁶⁰ [SEE FIG 2.21](#)

Students who take special education classes, who qualify for free or reduced-price meals (FRPM) at school based on family incomes less than 185 percent of the federal poverty level, or who are English Language Learners (ELL) are considered to be high-needs students; students may have more than one of these designations.¹⁶¹ In the region, 15 percent of students have a special education designation, 45 percent of students qualify for FRPM, and 9 percent of students are ELL. New Haven and the Inner Ring districts serve larger shares of high-needs students than the Outer Ring towns. Special education students make up similar shares of students throughout the region (15 percent in New Haven, 17 percent in the Inner Ring, and 13 percent in the Outer Ring), but ELL students are more concentrated in New Haven (17 percent) and the Inner Ring (10 percent) than the Outer Ring (3 percent), as are FRPM-eligible students (70 percent in New Haven, 52 percent Inner Ring, 18 percent Outer Ring).¹⁶²

On the state's major standardized test, the Smarter Balanced Assessment Consortium (SBAC), scores rated as meeting or exceeding grade-level goals are considered passing. Since 2015, students in Greater New Haven public school districts have

consistently had passing rates 3 to 6 percentage points below the state's average in both English/language arts (ELA) and math, though math scores have improved from 33 percent passing in the 2014–15 school year to 43 percent in 2017–18. ELA scores are generally higher: 51 percent of Greater New Haven students passed ELA in the 2017–18 school year, only 1 percentage point above the 2014–15 test.¹⁶³

Stark disparities in standardized test performance exist throughout Greater New Haven. In the 2017–18 school year, white students had about twice the pass rate (66 percent) of Black (31 percent) and Latino students (34 percent) in ELA; these gaps are even wider in math. Gaps of similar magnitude exist as well between students eligible for FRPM and those ineligible, and are more severe between students in special education and those not, and ELL versus non-ELL students.¹⁶⁴ [SEE FIG 2.23](#)

Though Greater New Haven's four-year high school graduation rate is about the same as the state average—rising from 80 percent of the class of 2011 to 87 percent of the class of 2017 graduating on time—the region's achievement gap appears here as well. Of the class of 2017, 91 percent of the region's white students graduated on time, several percentage points above the rates of Black students (80 percent) and Latino students (79 percent), a pattern mirrored statewide. The gaps are even wider for high-needs students: the four-year high school graduation rate is only 68 percent for special education students, 73 percent for ELL students, and 77 percent for FRPM students in the region.¹⁶⁵

In discussing achievement gaps, it is worth noting the role of school segregation and distribution of resources. There are 14 public school districts within Greater New Haven, but the majority of Black, Latino, FRPM, and ELL students are concentrated in just a few. Three districts—New Haven, Hamden, and West Haven—educate a combined 55 percent of the region's students, but are home to 93 percent of the region's Black students, 83 percent of Latino students, 77 percent of FRPM-eligible students, and 85 percent of ELL students.¹⁶⁶ Sixty-eight percent of the region's Black students go to school in New Haven alone. These are also towns that have less money available to spend on students and other resources that can support opportunities for young people. [SEE CHAPTER 4](#)

One way to level the playing field moving into adulthood might be through post-secondary

preparatory programs. Many high schools offer college and career readiness (CCR) programs, including Advanced Placement (AP), International Baccalaureate (IB), career education, and other opportunities. In the 2017–18 school year, 66 percent of Greater New Haven's 11th- and 12th-graders were in CCR courses and programs—or more than 5,800 upperclassmen. This varies widely between districts, from 90 percent of Madison upperclassmen being in CCR to 46 percent in East Haven; in New Haven, 64 percent are in CCR.¹⁶⁷

While three out of four high school graduates in the area enroll in college within a year, and 88 percent of those students re-enroll for a second consecutive year, less than half of the public high school graduates in Greater New Haven have a college degree six years after graduating high school.¹⁶⁸ A 2019 report from Fairfield County's Community Foundation highlights the importance of post-secondary certificates offered in expanding job sectors at community colleges.¹⁶⁹ [SEE FIGURE 2.24 / SEE TABLE 2M](#)

The city of New Haven has seen several positive trends in high school and college graduation rates since the introduction of New Haven Promise in 2010. This program provides up to full-tuition college scholarships to qualifying public school students. Since 2010, school enrollment in New Haven public schools increased by 17 percent.¹⁷⁰ During this time, graduation rates for the district's Black and Latino students have increased from 61 percent of the class of 2010 to 78 percent of the class of 2017, the highest among Connecticut's four largest districts.¹⁷¹ According to the program, Promise Scholars are completing college within six years at a rate of 65 percent, compared to 48 percent of students in Greater New Haven.¹⁷² Black students, who comprise nearly half of the Promise Scholars attending four year colleges, have a college graduation rate of 64 percent, more than 20 points higher than the national average, and 63 percent of the students from the lowest household income bracket (under \$30,000)—the largest segment of Promise scholars—graduated within six years.¹⁷³

Adults with high school diplomas or college degrees have more employment options and considerably higher potential earnings, on average, than those who do not finish high school.¹⁷⁴ In 2017, 9 percent of adults ages 25 and older in the region had less than a high school education. This is about

TABLE 2M

College enrollment, persistence, and completion

COUNT AND RATE OF ENROLLMENT IN COLLEGE, PERSISTENCE INTO 2ND YEAR, AND COMPLETION WITHIN 6 YEARS, CLASS OF 2010 AND 2014, GREATER NEW HAVEN

LOCATION	CLASS OF 2014					CLASS OF 2010			
	GRADUATED HIGH SCHOOL	ENROLLED IN COLLEGE	ENROLLMENT RATE	PERSISTED	PERSISTENCE RATE	EARNED DEGREE IN 6 YRS	ATTAINMENT RATE	WITH 4 YR DEGREE	WITH 2 YR DEGREE
Connecticut	37,708	27,697	73%	24,540	89%	18,706	49%	16,400	2,306
Greater New Haven	4,228	3,159	75%	2,792	88%	2,041	48%	1,845	196
New Haven	1,049	705	67%	542	77%	216	22%	189	27
Inner Ring	976	672	69%	584	87%	415	39%	352	63
East Haven	218	143	66%	122	85%	87	38%	72	15
Hamden	434	321	74%	279	87%	215	45%	195	20
West Haven	324	208	64%	183	88%	113	32%	85	28
Outer Ring	2,203	1,782	81%	1,666	93%	1,410	64%	1,304	106
Milford	501	370	74%	343	93%	265	51%	222	43

27,900 people. While 40 percent of adults in the region have four-year college degrees, attainment rates are not as high in some areas, particularly in the city of New Haven where 15 percent of adults 25 years and older lack a high school diploma.¹⁷⁵

SEE TABLE 1B, 2N

Risk Factors for Youth

There is room for improvement regarding chronic absenteeism in Greater New Haven, which is a detriment to academic success, especially when it occurs in early grades. A national study found that over half of chronically-absent kindergarteners became chronically-absent first graders.¹⁷⁶ Chronic absenteeism is defined as a student missing at least 10 percent of the days for which they were enrolled during a school year. In the 2017–18 school year, 13 percent of students in Greater New Haven were chronically absent from school. This rate included 8 percent of white students, 20 percent of Black students, 18 percent of Latino students, and 9 percent of students of other races/ethnicities. Further, special education students and those eligible for FRPM were more than twice as likely to miss so many days of school as their lower-risk counterparts.¹⁷⁷ Factors that contribute to chronic absenteeism may include individual- and family-level predictors such as asthma and other chronic diseases, poverty, and parent involvement, as well as school-level factors such as bullying and school

maintenance.¹⁷⁸ SEE FIG 2.23

Academic disadvantages that result from chronic absenteeism are also at play for students who miss class due to in-school or out-of-school suspensions. Students who are suspended or expelled from school are more likely to have negative perceptions of school¹⁷⁹ and to have lower GPAs.¹⁸⁰ Perhaps most gravely, they are also more likely to be involved with the juvenile justice system.¹⁸¹ Black and Latino students—particularly boys—are expelled or suspended far more frequently than white students,¹⁸² even as early as preschool.¹⁸³ Even when the confounding effects of socioeconomic status are controlled for, Black students are still disciplined more frequently than their white counterparts.¹⁸⁴ In Greater New Haven public schools, Black students are suspended or expelled at a rate three times greater than white students and special education students are suspended or expelled more than twice as often as students who are not in special education. SEE FIG 2.22

Adults' perceptions of what youth in their towns are likely to experience are generally positive, but vary greatly from town to town. For example, in New Haven, adults are much less likely to think that a young person in their town will graduate from high school or get a job with opportunities for advancement compared to adults in the state and surrounding towns. New Haven residents are three times more likely than

TABLE 2N

Educational attainment

EDUCATIONAL ATTAINMENT, ADULTS AGE 25+, GREATER NEW HAVEN BY TOWN, 2017

LOCATION	POPULATION AGES 25+	NO HIGH SCHOOL DIPLOMA	NO HIGH SCHOOL DIPLOMA SHARE	BACHELORS OR HIGHER	BACHELORS OR HIGHER SHARE	MASTERS OR HIGHER	MASTERS OR HIGHER SHARE
United States	216,271,644	27,437,114	13%	66,887,603	31%	25,510,535	12%
Connecticut	2,480,297	242,500	10%	953,199	38%	421,144	17%
Greater New Haven	317,760	27,884	9%	125,603	40%	61,505	19%
New Haven	81,047	12,443	15%	27,505	34%	14,920	18%
Inner Ring	97,435	8,965	9%	31,772	33%	14,830	15%
East Haven	21,094	2,044	10%	4,999	24%	1,793	9%
Hamden	40,302	2,440	6%	18,089	45%	9,523	24%
West Haven	36,039	4,481	12%	8,684	24%	3,514	10%
Outer Ring	139,278	6,476	5%	66,326	48%	31,755	23%
Milford	40,466	2,130	5%	16,739	41%	7,088	18%

residents statewide to think that a young person in their neighborhood will get arrested for a felony. In addition to perceptual differences by place within the region, adults also perceive youth experiences differently depending on race. Black and Latino adults in Greater New Haven are more than three times as likely as white adults to think that children in their neighborhood will someday be arrested for a felony. Lastly, wealth correlates with more positive perceptions of young people's future experiences. For example, 43 percent of adults earning under \$30,000 think that their neighborhood youth are very likely to get a job with opportunities for advancement, compared to 73 percent of adults earning \$100,000 or more who think the same.¹⁸⁵ [SEE FIG 2.25](#)

The relationship between education and subsequent economic opportunity is apparent. The quality of a child's education is highly correlated with upward mobility,¹⁸⁶ but a person's economic future is largely dependent upon the circumstances of their youth. The place a child grows up, their race, and their family's income will generally determine whether that child will move up the socioeconomic ladder. Children in Connecticut are slightly more advantaged than children nationwide¹⁸⁷—partially due to the state's overall wealth—but other disparities are evident. White children in New Haven County, regardless of their family's income, are more likely than their Black or Latino peers to experience upward economic mobility. In New Haven County, the probability of

a low-income white child growing up to be within the top 20 percent of households by income (19 percent) is almost twice that of a high-income Black child (12 percent), and nearly five times that of a low-income Black child (4 percent).¹⁸⁸ As a result of factors beyond their control, these children are subject to the effects of differential access to quality education, post-secondary and employment opportunities, and wealth-building opportunities. Those with better access tend to have correspondingly better overall health and higher quality of life than people with limited access to those opportunities. [SEE FIG 2.26 DH](#)

“Between 1990 and 2017, the number of immigrants residing in Greater New Haven doubled, increasing by 29,617 individuals.”

Families walk along the Quinnipiac River in Fair Haven. Photo Credit: New Haven Register



CHAPTER 3

Creating A Healthier Region

Overall, Greater New Haven is a healthy place to call home.

Residents' average self-reported health and life expectancy are similar to those of the state overall and higher than the country.

IN THIS CHAPTER

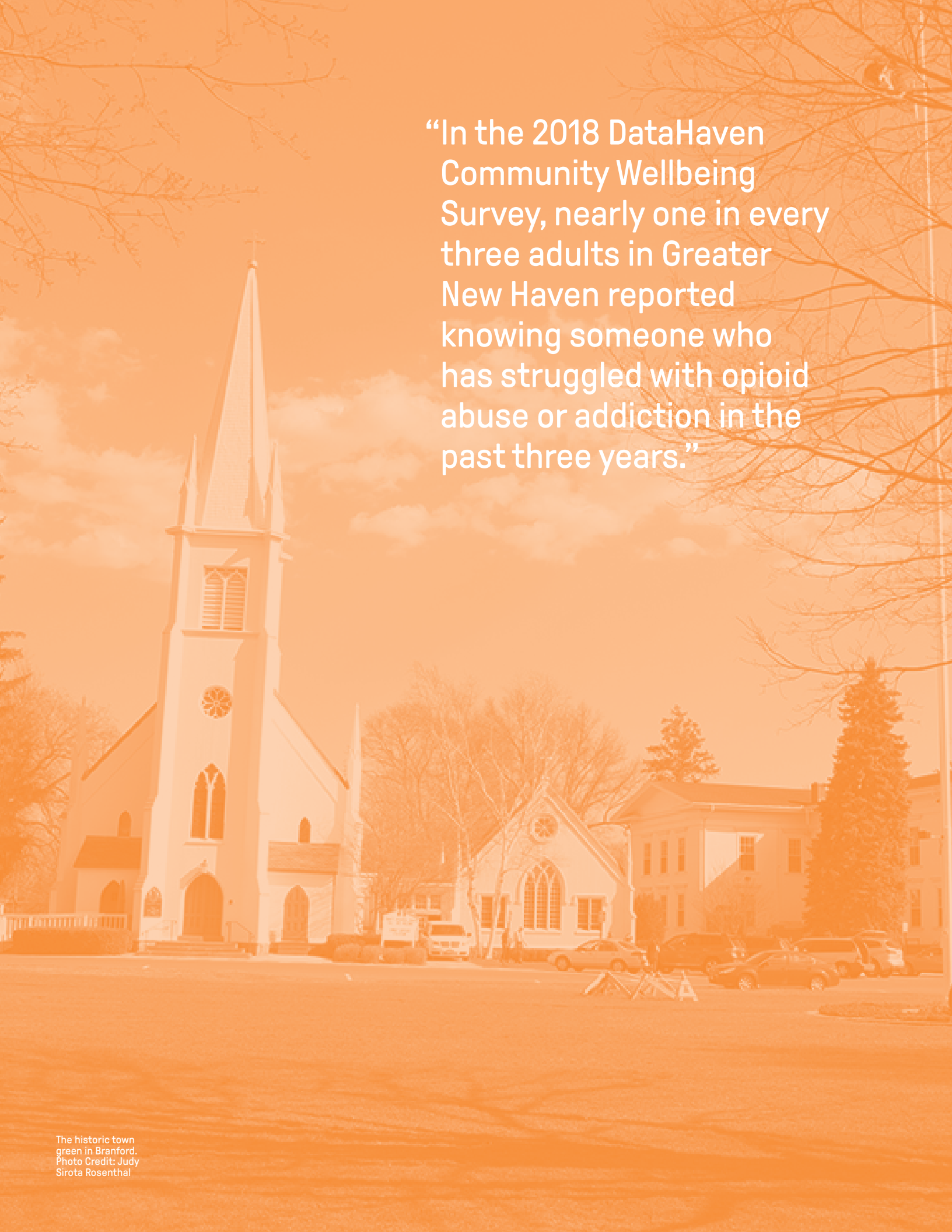
- Greater New Haven is relatively healthy, but there are disparities across its towns and diverse demographic groups.
 - Overdose-related deaths are increasing, particularly due to fentanyl.
 - Race-based discrimination is an obstacle to residents moving to certain areas, working, and accessing healthcare.
 - Patterns of inequity can be seen in barriers to healthcare access and in health outcomes.
-

Executive Summary

Residents' average self-reported health and life expectancy are similar to those of the state overall and higher than the country. However, these measures belie more concerning health patterns for both lower-income and Black and Latino residents. Residents of more marginalized neighborhoods of Greater New Haven are less likely to report being in good health; have lower life expectancies—by up to 15 years; shoulder a higher burden of chronic illnesses such as cardiovascular disease—for which middle-aged Black adults are up to ten times more likely than whites to be hospitalized—and childhood asthma; have considerably higher rates of infant mortality; and report higher rates of anxiety and depression. One health struggle that is currently borne to a greater extent by white Greater New Haven residents is the opioid epidemic. The drug overdose death rate has been higher for white residents than people of color, but death rates are increasing more rapidly among people of color in the past few years.

Disparities also exist in health insurance coverage and preventive care. While only 4 percent of white adults are uninsured, 7 percent of Black adults, 12 percent of Latino adults, and 9 percent of adults with incomes under \$30,000 lack health insurance. More than two in ten residents reported postponing potentially necessary medical care, citing numerous barriers. These barriers may contribute to residents' reliance on health care delivered in the emergency room: in 2018, more than a quarter of adults in Greater New Haven reported going to the emergency room at least once. Greater reliance on the emergency room, measured by those who visited an ER at least three times in the past year, was twice as high among lower-income adults as among those with higher incomes.

Analysis of all available data did point to some potential improvements over recent years, including lower rates of non-adequate prenatal care and low-birthweight babies. One potential cause for these decreases could be area disease prevention programs and strategies. Another cautiously optimistic note was seen in 2017 and 2018, when deaths due to opioids decreased; however, there is still much need for improvement regarding opioids. **DH**



“In the 2018 DataHaven Community Wellbeing Survey, nearly one in every three adults in Greater New Haven reported knowing someone who has struggled with opioid abuse or addiction in the past three years.”

FIG 3.1

Life expectancy in Greater New Haven is high, but often differs by several years between adjacent neighborhoods

ESTIMATED LIFE EXPECTANCY IN YEARS, GREATER NEW HAVEN, 2010–2015

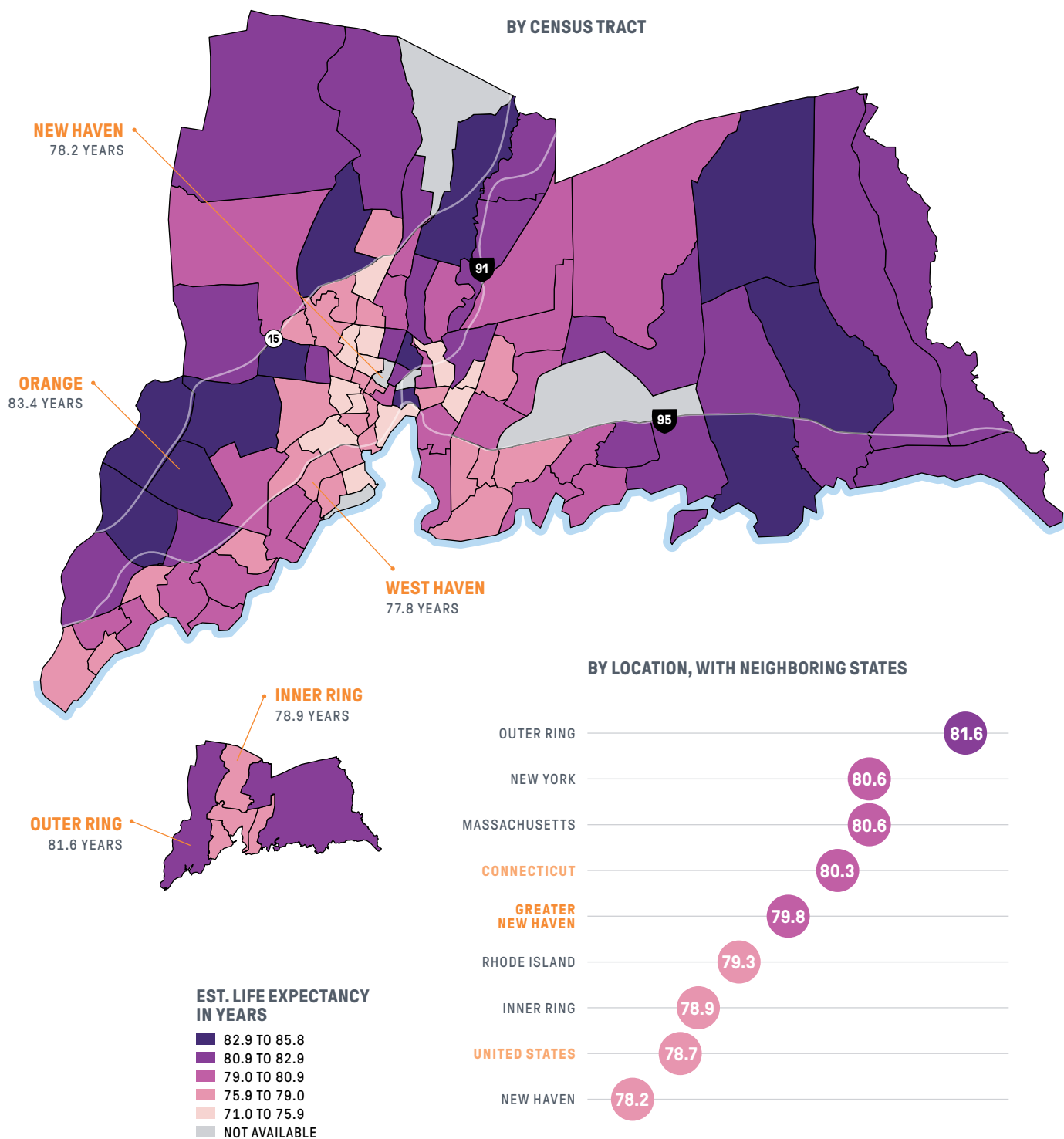


FIG 3.2

Cancers and infant/fetal mortality impact Greater New Haven's lifespans the most

YEARS OF POTENTIAL LIFE LOST BEFORE AGE 75 PER 100,000 RESIDENTS BY CAUSE OF DEATH, GREATER NEW HAVEN, 2010-2014

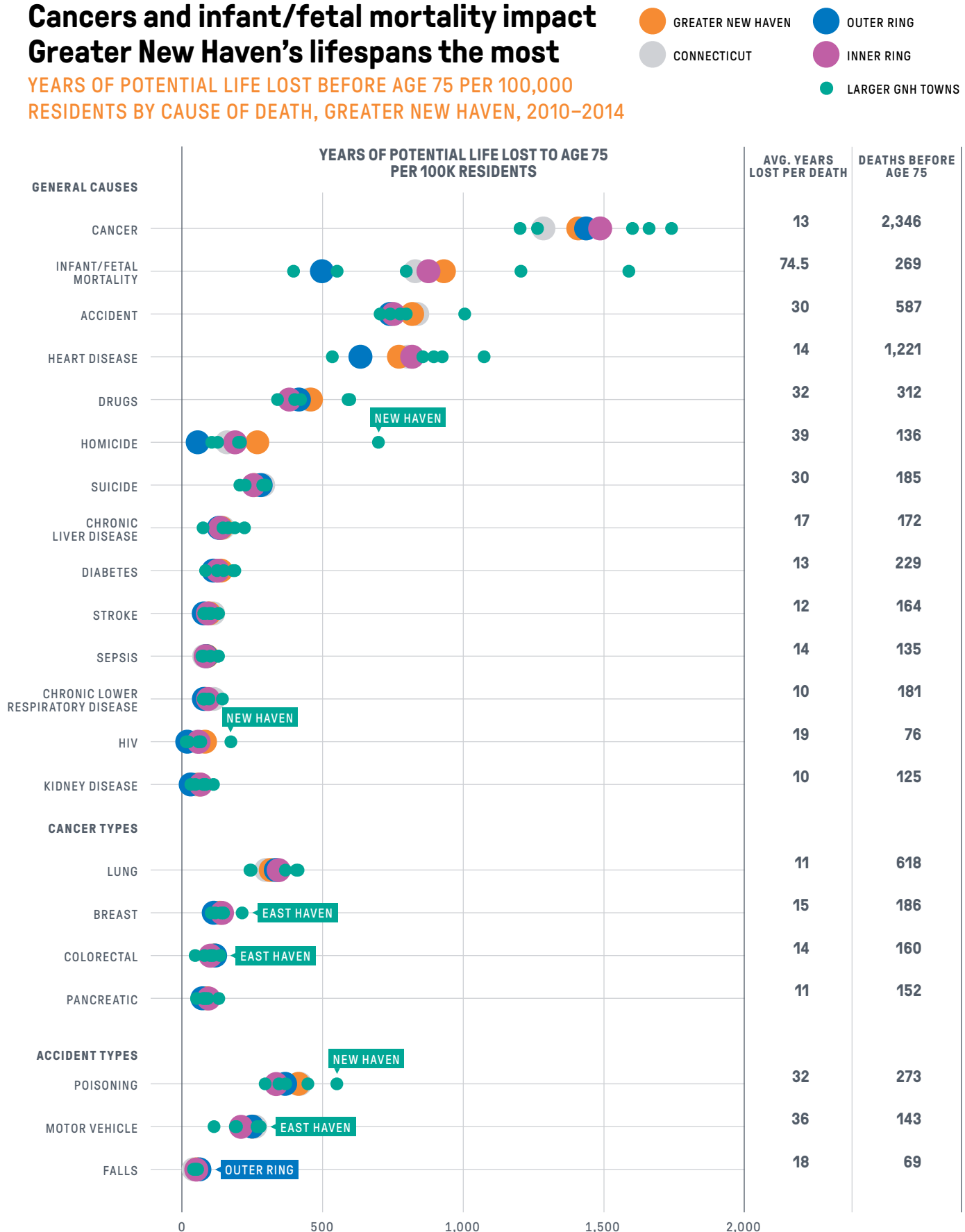


FIG 3.3

Rates of hospitalizations and ED visits vary by geography

AGE-ADJUSTED AND RELATIVE AGE-ADJUSTED RATES, PER 10,000 RESIDENTS, 2015–2017

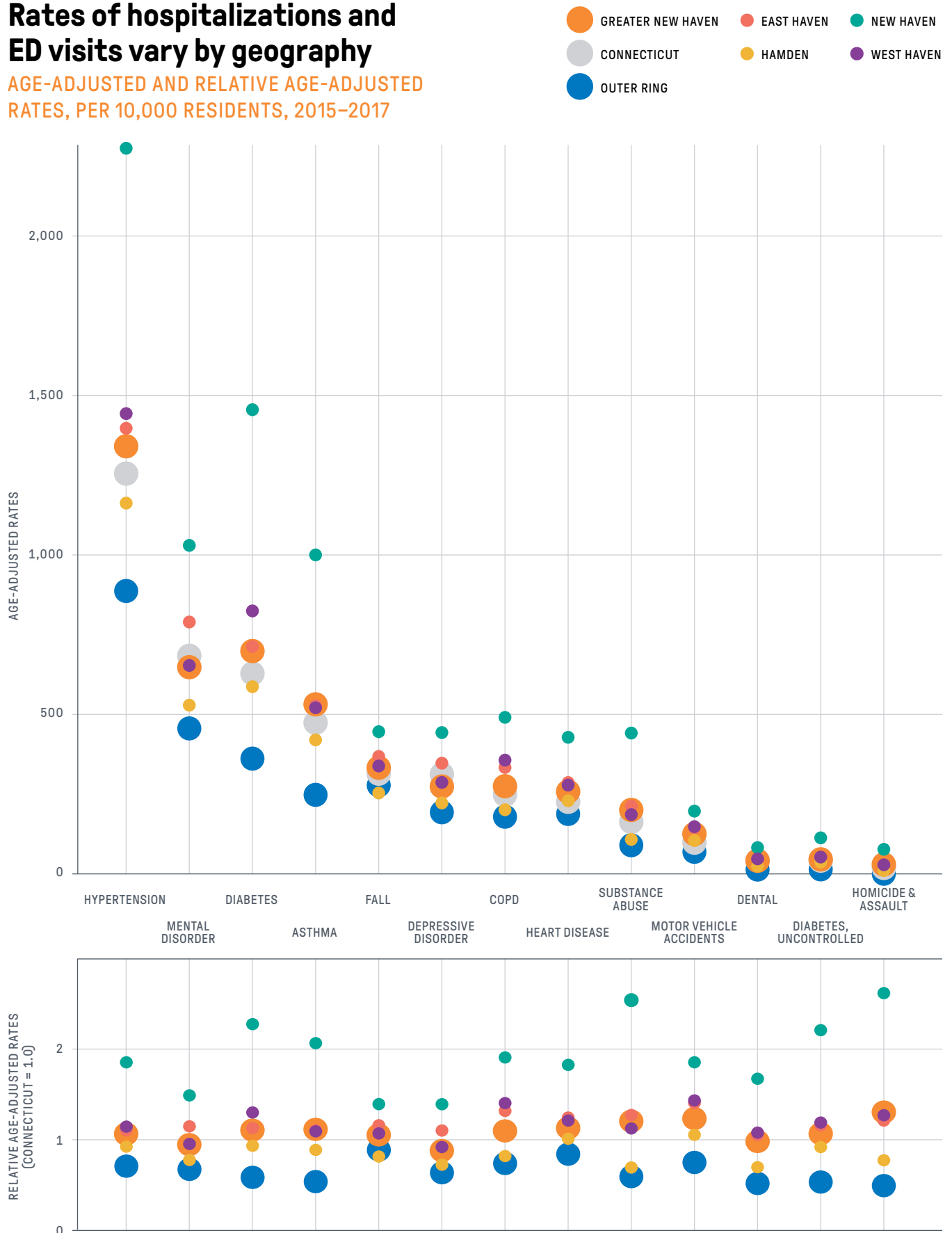


FIG 3.4

Preventable hospital visits show large differences across age and gender

CHRONIC DISEASE, ENCOUNTER RATE (PER 10,000 RESIDENTS), 2015–2017

GREATER NEW HAVEN OUTER RING
NEW HAVEN INNER RING

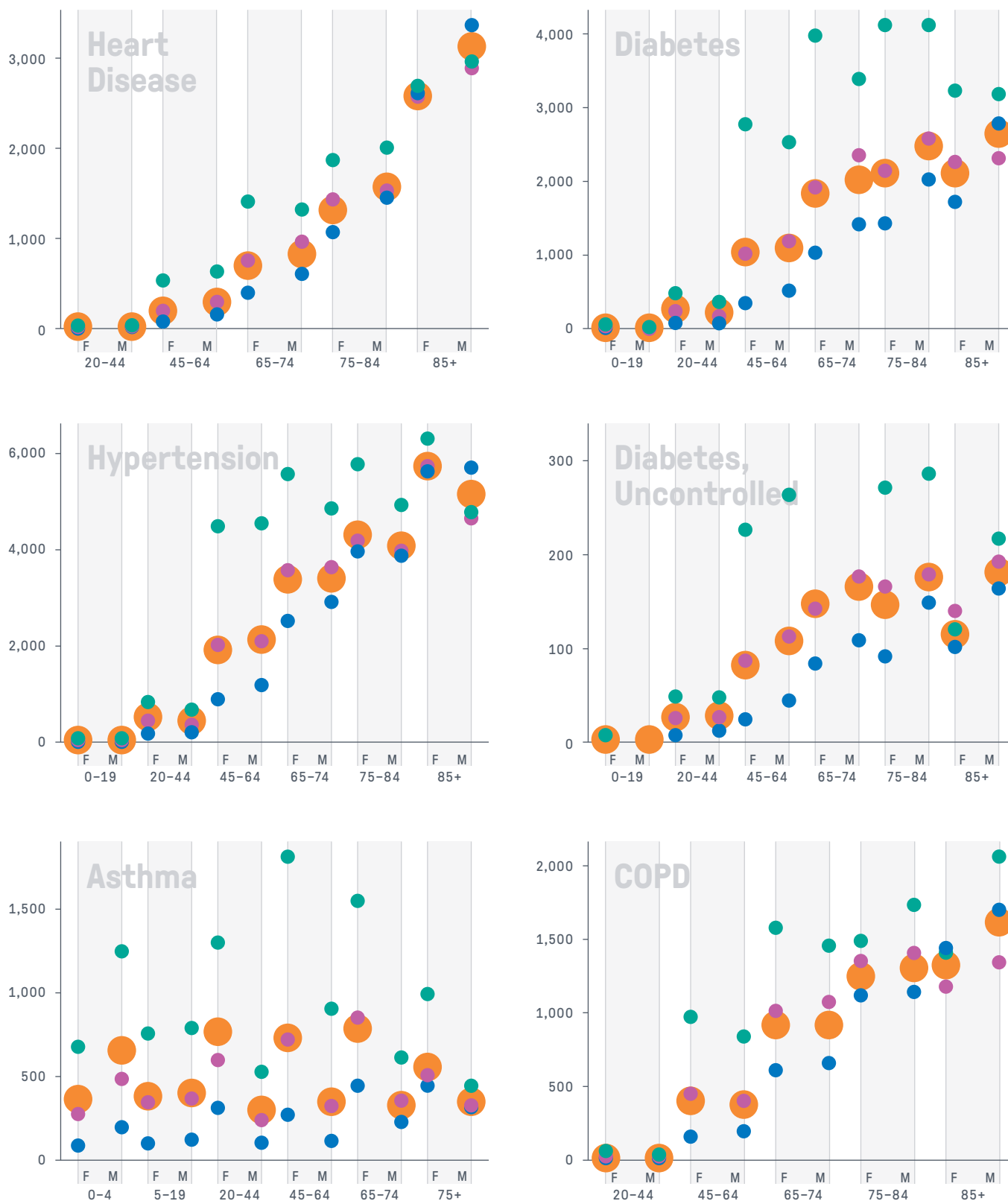


FIG 3.5

Preventable hospital visits show large differences across age and gender

OTHER HEALTH ISSUES, ENCOUNTER RATE (PER 10,000 RESIDENTS), 2015-2017

GREATER NEW HAVEN OUTER RING
NEW HAVEN INNER RING

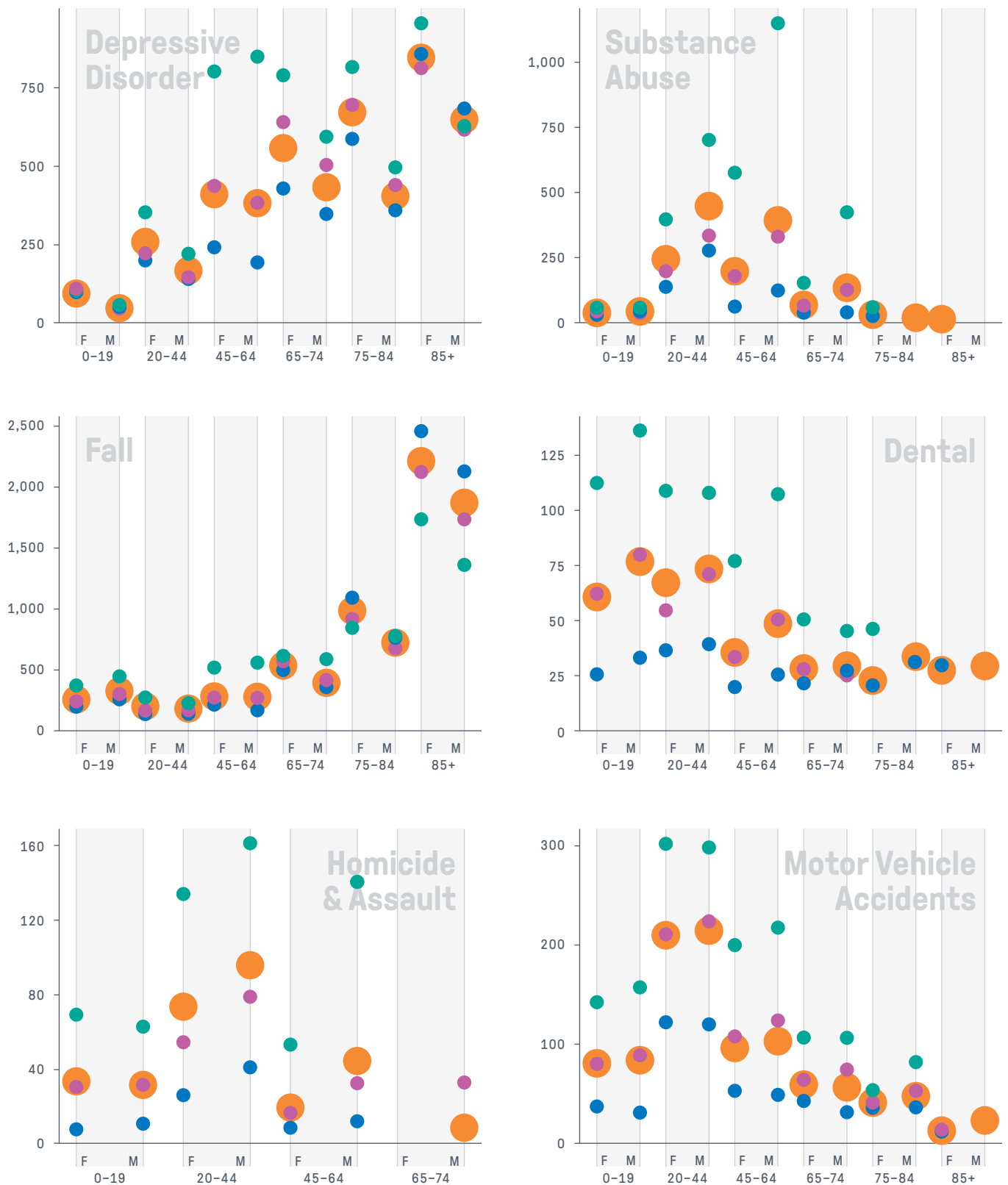


FIG 3.6
Growing inequality in rates of hospital encounters

CHRONIC DISEASE, AGE-ADJUSTED RATE OF HOSPITALIZATIONS AND ED ENCOUNTERS (PER 10,000 RESIDENTS),
2012–2014 TO 2015–2017

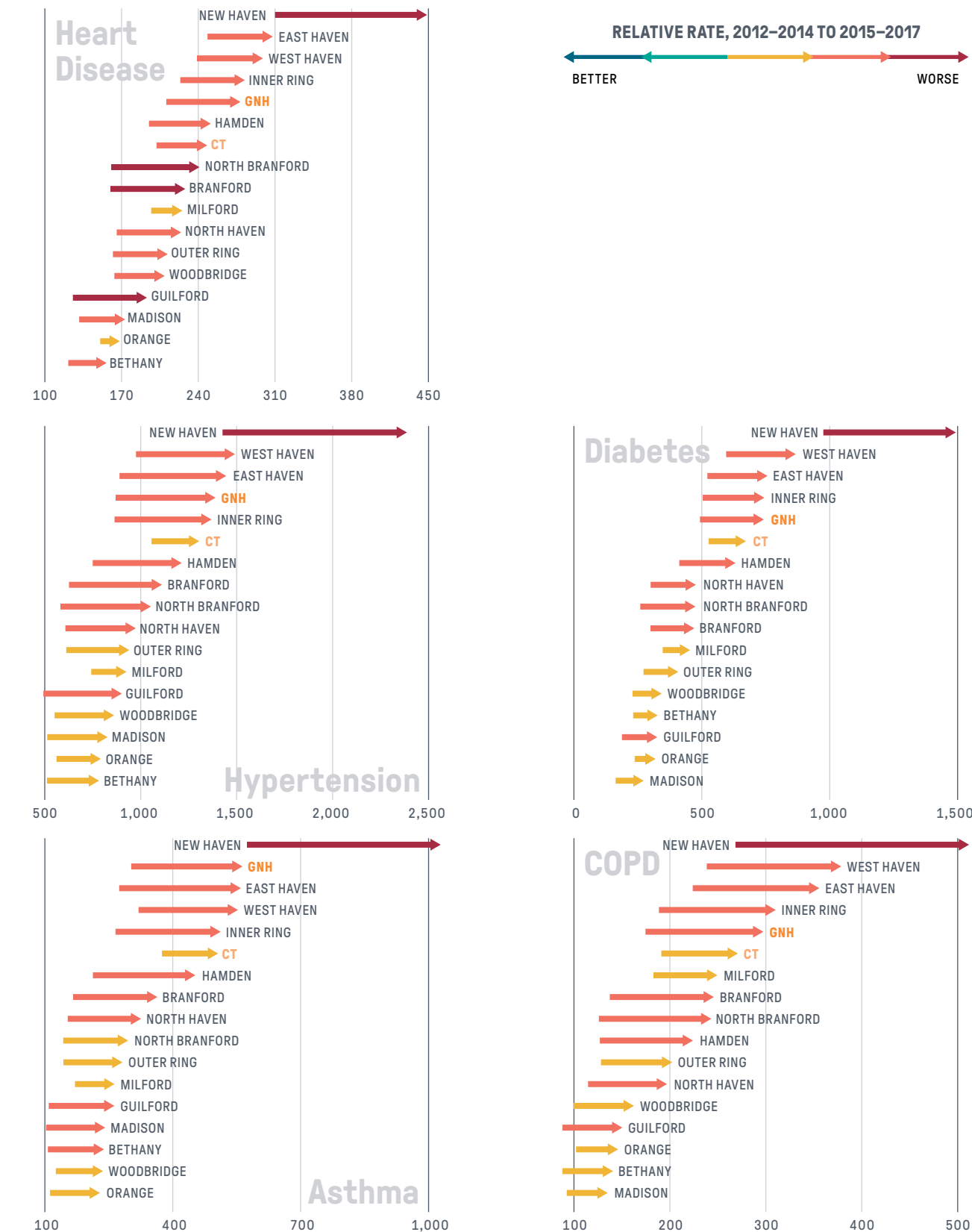


FIG 3.7

Growing inequality in rates of hospital encounters

OTHER HEALTH ISSUES, AGE-ADJUSTED RATE OF HOSPITALIZATIONS AND ED ENCOUNTERS (PER 10,000 RESIDENTS), 2012–2014 TO 2015–2017

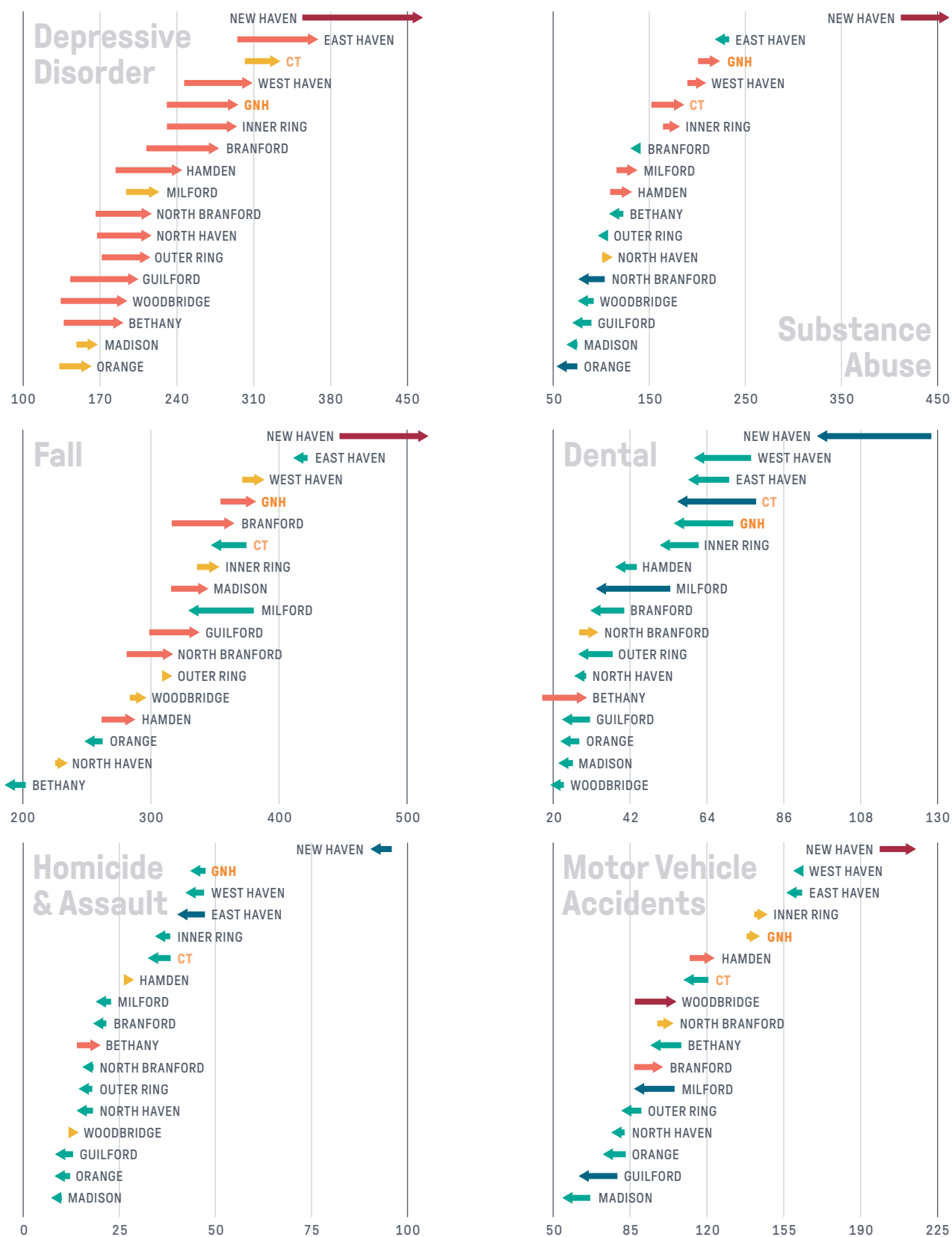


FIG 3.8

Across groups, large shares of adults say youth susceptibility to drug and alcohol abuse is a toss-up

RESIDENTS' RATING OF LIKELIHOOD THAT YOUTH IN THEIR AREA WILL ABUSE DRUGS OR ALCOHOL, PERCENT OF RESPONDENTS BY RACE AND INCOME, GREATER NEW HAVEN, 2018

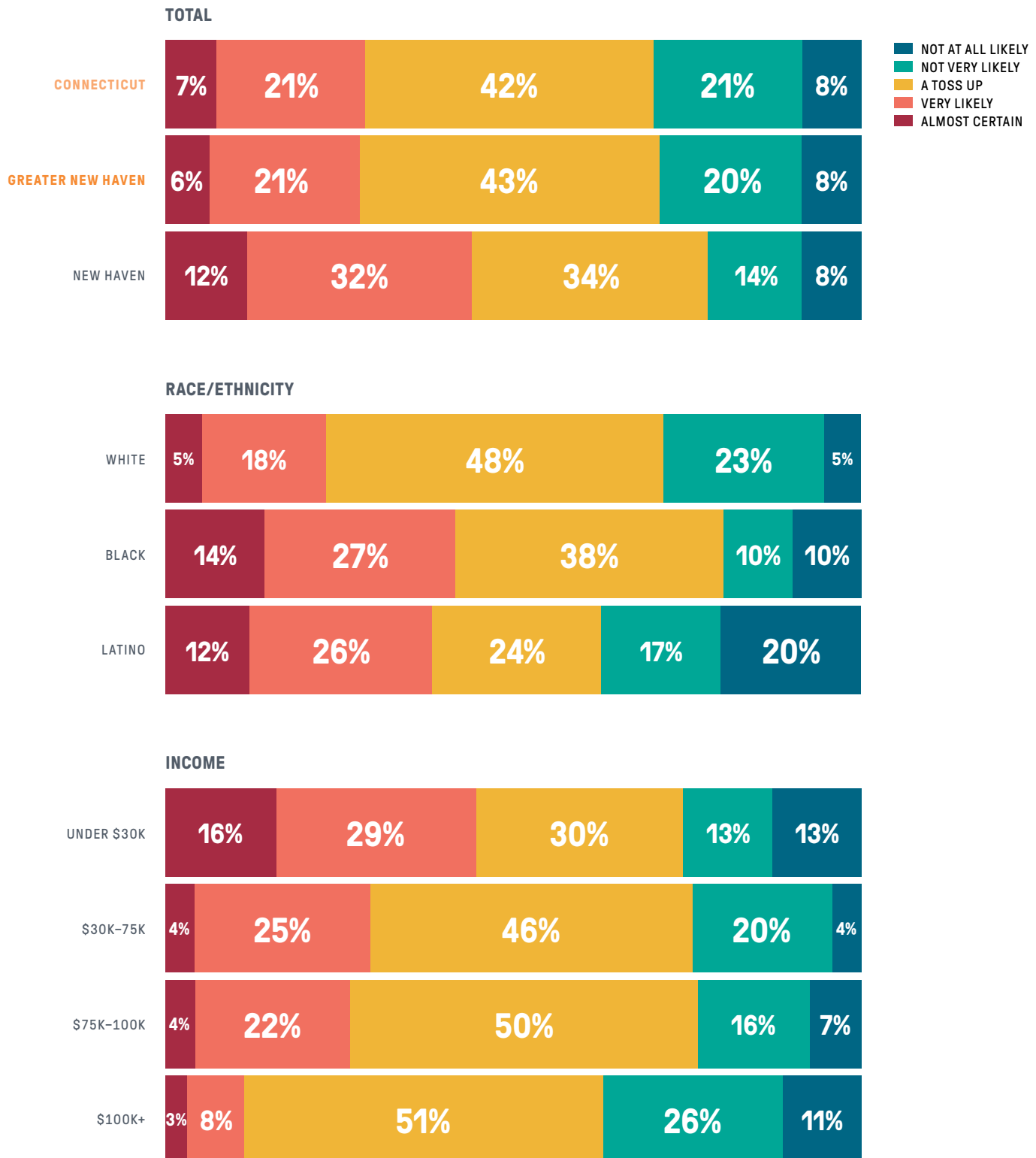


FIG 3.9

Overdose death rates have skyrocketed, but are beginning to subside again

AGE-ADJUSTED MONTHLY RATE OF DRUG OVERDOSE DEATHS PER 1 MILLION RESIDENTS, 2012–2018

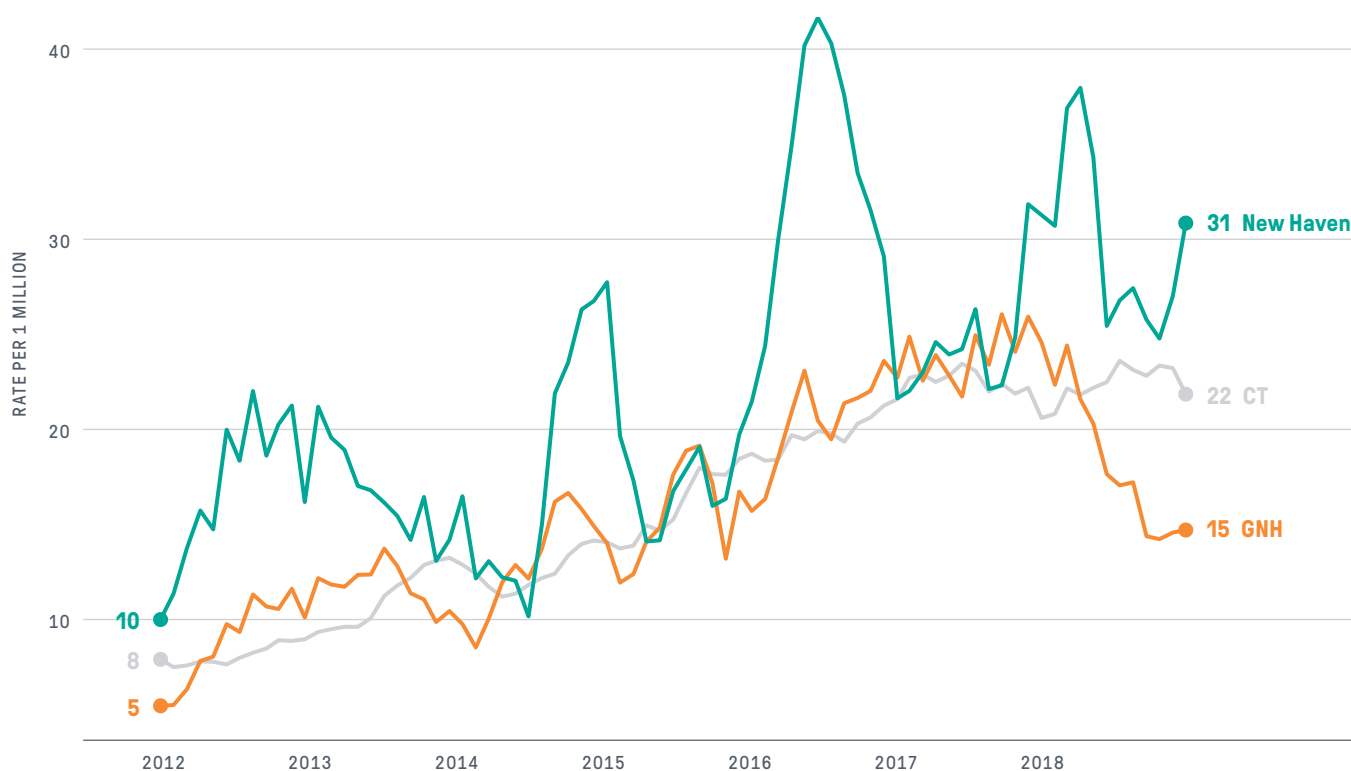


FIG 3.10

Fentanyl's steep rise coincided with overall increasing drug overdoses

COUNT OF DRUG OVERDOSE DEATHS AT 6-MONTH INTERVALS BY PRESENCE OF FENTANYL, WITH PERCENTAGE OF DEATHS THAT ARE FENTANYL-RELATED, GREATER NEW HAVEN, 2012–2018

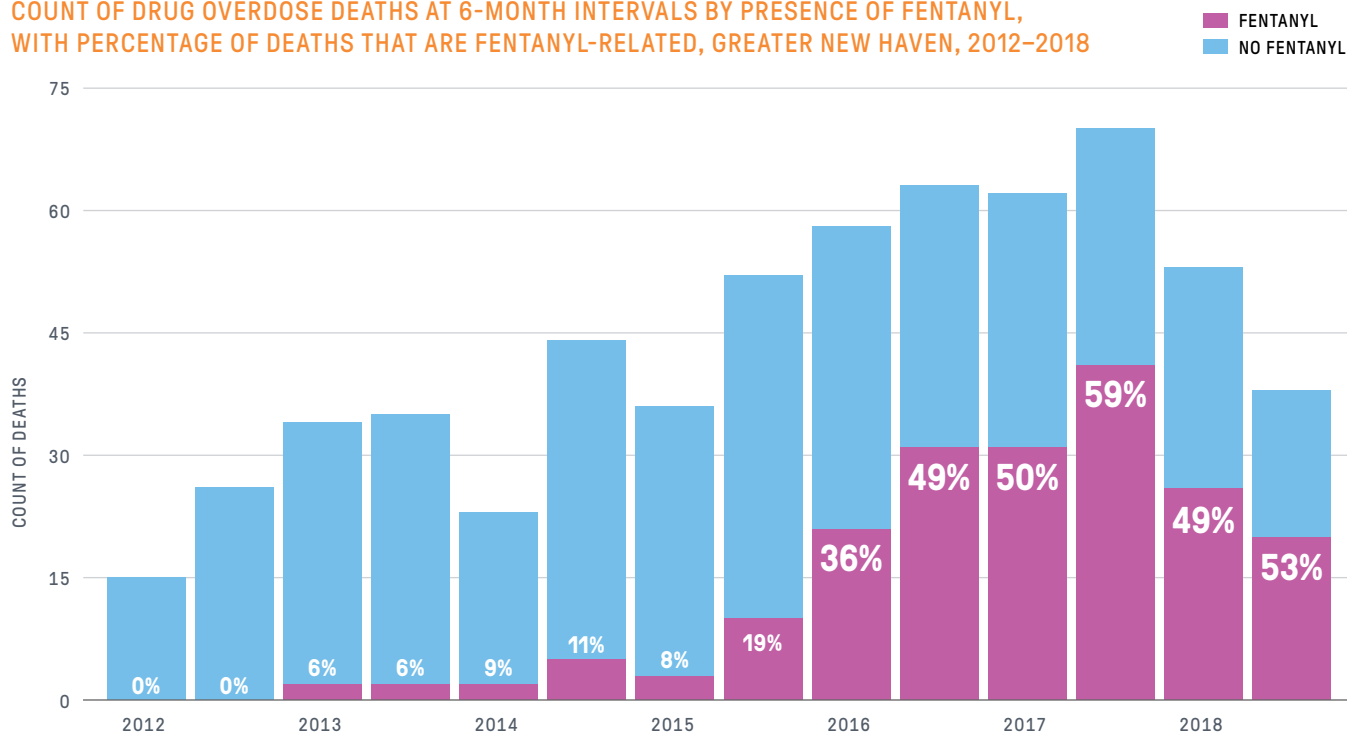


FIG 3.11

Residents often see their race as major reason for discrimination in multiple areas of their lives

PERCENT OF ADULTS REPORTING PERCEIVED REASONS FOR THEIR DISCRIMINATION, OF ADULTS CITING A REASON FOR EXPERIENCES OF DISCRIMINATION, GREATER NEW HAVEN, 2018

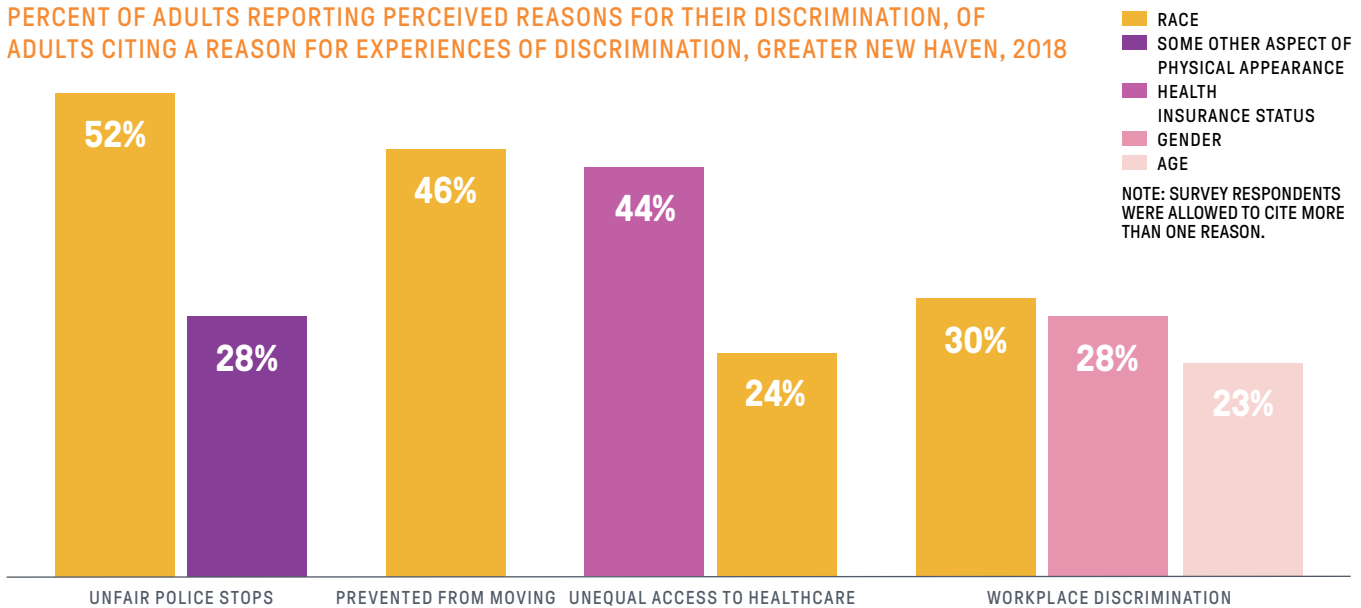
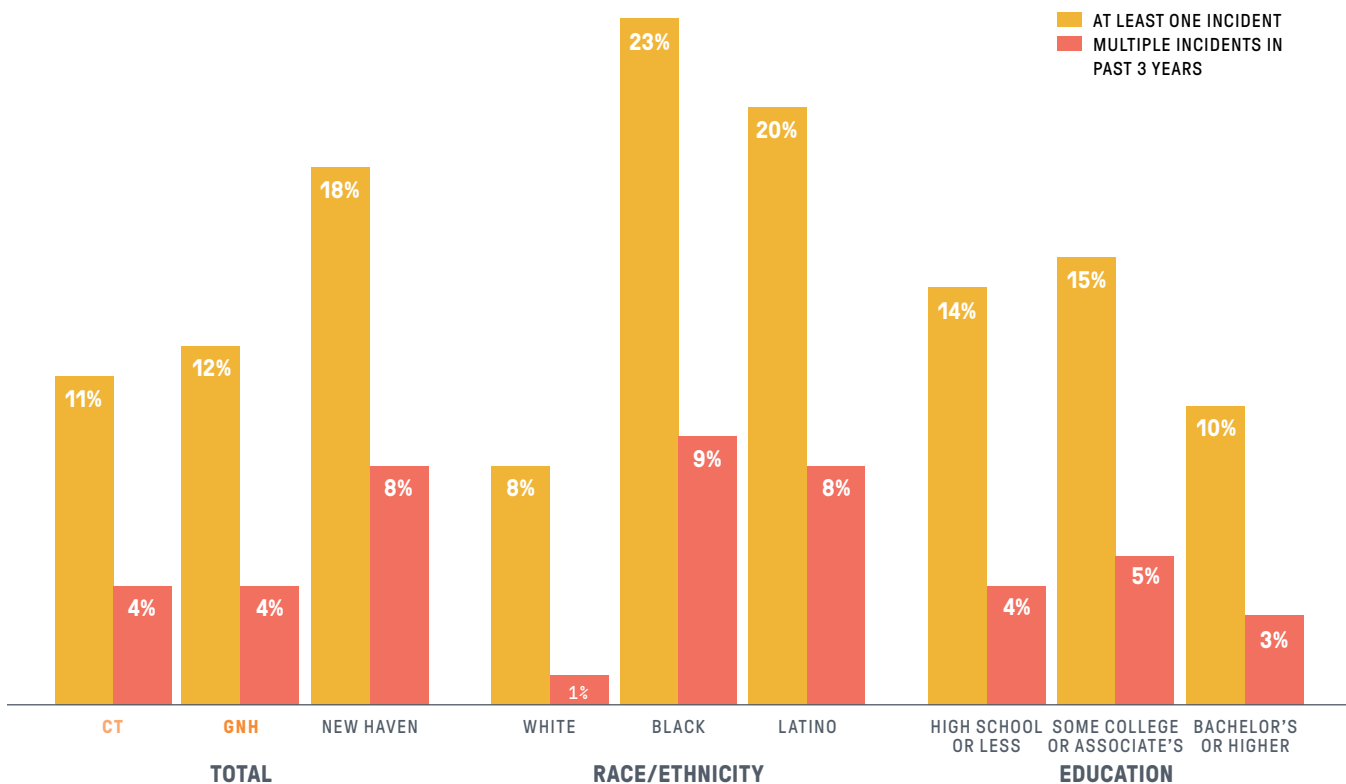


FIG 3.12

Black, Latino, and lower-income adults with less education disproportionately experience negative encounters with police

PERCENT OF GREATER NEW HAVEN ADULTS REPORTING UNFAIR POLICE STOPS, SEARCHES, OR OTHER MISTREATMENT AND FREQUENCY OF INCIDENTS, BY RACE AND EDUCATION, 2018





CONNECTING HEALTH AND WEALTH

As in the nation as a whole, the health of Greater New Haven's residents helps drive their high quality of life and economic vitality. Children and adults who have the resources they need to reach their full health potential face fewer barriers to success in school and in the workforce, and experience fewer health care costs. Over the long term, employers and individual households prefer to establish themselves in areas where they can benefit from this resulting prosperity. Furthermore, any healthy population is going to be stronger, more innovative, and better able to overcome adversity than one facing greater barriers to health.

According to the 2018 DataHaven Community Wellbeing Survey, 58 percent of Greater New Haven's adults reported being in very good health—a figure that was similar to the statewide average (59 percent)¹⁸⁹, and above the most recent national rate (51 percent).¹⁹⁰ This measure of self-rated health is widely used, as it is one of the most reliable ways to predict a population's quality of life and lifespan.¹⁹¹

Similarly, most Greater New Haven residents can expect to live long and healthy lives. The average life expectancy in the region was 79.8 years from 2010 to 2015, above the national average of 78.7 years, and fairly similar to the statewide average of 80.3 years.¹⁹²

There are many opportunities to improve the region even further by reducing or removing the barriers that prevent all residents from reaching their full health potential. The conditions that shape the health a person experiences throughout their lifespan are known as the social determinants of health.

While the U.S. is financially prosperous overall, its income-related health differences are among the highest of all middle- or high-income nations in the world. Nationally, wealthier residents (i.e., those earning \$100,000 or more annually) are nearly half as likely as middle-income residents to rate their health as fair or poor, and the percent of low-income residents who reported not being able to access health care due to the cost was 16 percentage points higher than among wealthy residents.¹⁹³ Income-related differences in health are also evident in Greater New Haven, where 73 percent of adults earning \$100,000 or more per

year report being in excellent or very good health, compared to just 42 percent of adults who earn less than \$30,000 per year.¹⁹⁴

Income and employment status often drive differences in access to healthcare, the likelihood of getting preventative screenings as recommended, the affordability of life-saving medicines, and the ability to purchase other goods and services, including high-quality housing. These differences can compound over generations, as children who grow up in higher-income households are more likely to succeed in school and obtain jobs with greater potential for advancement.

Factors such as racial or gender-based discrimination, sleep deprivation, health literacy, linguistic isolation, family social history, excessive debt, and variations in the quality of the built environment—all of which can underlie income differences—also play a role in disparate health outcomes. Poor health can worsen as these factors interact with each other.

On the other hand, communities may enact policies and provide resources that can improve the health status of all people. These “protective factors” include stable and affordable housing, accessible childcare, reliable transportation options, green spaces and places to exercise, effective public health services, and policies such as paid family leave. Region-wide efforts to align policies, unify monitoring and data collection systems, and address gaps in services can help begin to create conditions in which everyone can achieve their full health potential.

Information collected during the 2019 Community Health Needs Assessment process—including data on life expectancy, adverse conditions, and self-rated health, as well as interviews and focus groups with hundreds of residents and local experts—reveal that concerns around well-being and the social determinants of health vary significantly from neighborhood to neighborhood within Greater New Haven. Residents and policymakers can use these local data to further elevate the health and prosperity of Greater New Haven.

Greater New Haven's 15-Year Difference in Life Expectancy

While Greater New Haven's average life expectancy of 79.8 years is high, it masks a dramatic difference within the region. While the average Greater New Haven resident lives one year longer than the

typical American, life expectancy in one of New Haven's low-income neighborhoods is just 71 years—nearly 15 years lower than that of the neighborhood with the highest life expectancy (85.8 years, in Orange).¹⁹⁵ Town-wide averages range from a maximum of 83.4 years in Orange to a minimum of 77.8 years in West Haven and 78.2 years in New Haven, a difference of more than 5 years.¹⁹⁶ [SEE FIG 3.1](#)

Differences within cities and towns are also significant. Within New Haven, life expectancies in the Westville (83.9 years), Wooster Square (83.5 years), and East Rock (82.8 years) neighborhoods are well above the state average of 80.3 years. Those of the Dixwell (73.2 years), Newhallville (71.7 years), and several other neighborhoods are far lower.¹⁹⁷ Large differences in life expectancy are also found within the Inner Ring suburbs and in Milford.

These variations in life expectancy can be explained by differences in the rates of premature death within the population—calculated based on the number of years of potential life lost by residents before they reach their 75th birthdays (YPLL-75). In Greater New Haven, cancers, fetal and infant mortality, cardiovascular diseases, opioid use disorders, suicides, motor vehicle crashes, and homicides are most prominent among the causes of premature death as measured by YPLL-75. [SEE FIG 3.2](#)

To illustrate the impact of the differences in the rates of premature death in Greater New

Haven, consider the more than five year difference in life expectancy between the adjacent towns of West Haven and Orange. For every 100,000 residents under the age of 75, a total of 6,646 years of potential life were lost due to all premature deaths in West Haven each year from 2010 to 2014, compared to 2,967 in Orange. Heart disease, one of the leading causes of premature death, cost 1,073 years of life per 100,000 residents in West Haven (based on 38 premature deaths each year, with an average age at death of 60) and 517 in Orange (seven premature deaths each year, with an average age at death of 65). Injury, a cause of premature death including overdoses, motor vehicle crashes, homicide, and suicide, led to the loss of 1,231 years of life per 100,000 residents in West Haven (21 premature deaths from injury each year, with an average age at death of 44), and 501 in Orange (three premature deaths per year, with an average age at death of 51). [SEE TABLE 3A](#)

Leading Causes of Death: Cancer, Heart Disease, and Injuries

Cancers were among the most common causes of premature death in Greater New Haven from 2010 to 2014, with lung cancer by far the most common cause of cancer-related premature mortality.

Premature death rates from lung cancer in most of Greater New Haven's towns and cities were not statistically different from the statewide average of 297 years lost per 100,000 residents. Also,

TABLE 3A

Premature death rates by geography

YEARS OF POTENTIAL LIFE LOST BEFORE AGE 75 (YPLL-75) PER 100,000 RESIDENTS PER YEAR DUE TO LEADING CAUSES, 2010–2014

LOCATION	ALL PREMATURE DEATHS	ALL CANCERS	INFANT AND FETAL DEATH	HEART DISEASE	DRUG-RELATED DEATHS	SUICIDE	MOTOR VEHICLE CRASHES	HOMICIDE
Connecticut	5,418	1,284	828	802	451	287	259	158
Greater New Haven	5,579	1,408	930	770	457	255	237	245
New Haven	7,055	1,263	1,588	924	589	223	265	697
Inner Ring	5,644	1,484	875	813	380	253	208	187
East Haven	6,153	1,740	395	895	420	292	112	125
Hamden	4,476	1,201	796	533	399	204	188	200
West Haven	6,646	1,660	1,204	1,073	338	286	276	205
Outer Ring	4,551	1,432	495	663	410	276	236	43
Milford	5,555	1,601	550	855	595	297	192	104

Greater New Haven residents experienced rates of lung cancer-related encounters at hospitals and emergency departments that were similar to those of residents statewide.¹⁹⁸ However, elevated rates of premature mortality due to lung cancer were measured in West Haven, East Haven, and Branford (405, 411, and 456 years lost per 100,000 residents, respectively).

Premature deaths due to other specific types of cancer were, for the most part, not statistically different from statewide averages, so few substantial differences within the region were observed beyond the fact that cancer death rates overall were slightly lower in wealthier towns. Other than lung cancer, the most notable difference was that premature death rates due to liver cancer in New Haven and West Haven (117 and 124 years lost per 100,000 residents, respectively) were twice the state average (61 years lost per 100,000 residents). This is equivalent to about eight “excess premature deaths” per year—defined as the number of premature deaths every year from liver cancer over and above what the number would have been if it had corresponded with the statewide average.

Cigarette smoking is one notable risk factor for cancer, causing an estimated 48.5 percent of all deaths from 12 major types of cancer combined.¹⁹⁹ It is a contributing factor in up to 90 percent of lung cancer deaths, as smokers are 15 to 30 times more likely to die of lung cancer than non-smokers,²⁰⁰ as well as half of bladder cancer deaths. While smoking rates have fallen during the past two decades, they remain relatively high in parts of the region. Obesity, unhealthy diets, alcohol consumption, and physical inactivity are also considered to be significant risk factors for cancer.

Heart disease and other cardiovascular diseases cause one-third of U.S. deaths overall,²⁰¹ and are also a leading cause of premature death in Greater New Haven. In 2010 to 2014, rates of premature mortality due to heart disease in the city of New Haven were 46 percent higher than the rates in the Outer Ring.

Injury is also a leading cause of death, particularly among younger adults and children. From 2010 to 2014, the impact of injuries on premature death rates was similar to that of cancer in most towns. Higher premature death rates in New Haven were in large part attributable to the 19 residents who lost their lives due to homicide during each of those five years, on average, with an average age at death of just 28 years. Since 2014, the number of

homicides in New Haven has substantially declined. However, the opioid crisis throughout the region has made injuries even more significant as a cause of reduced life expectancy in recent years. Topics related to the leading causes of death are discussed below in more detail.



INFANT AND CHILD HEALTH

Healthy Birth Outcomes

A person’s childhood is formative in almost every way. For instance, the health of a child in the first few years of their life strongly determines how healthy they will be as an adult. This path begins while the child is still in the womb—with the health of the child’s mother.

Since the dawn of modern public health, statistics on infant outcomes have been considered one of the most effective indicators of the overall health of a community. Despite rising life expectancy overall due to medical advances, rates of infant mortality in the U.S. remain very high relative to what they are in many other advanced economies. In 2017, France, Spain, Italy, the Czech Republic, South Korea, and Hong Kong had infant mortality rates of between 2.6 and 3.3 deaths per 1,000 live births—about half the rate of 5.8 deaths per 1,000 live births experienced in the U.S. that year.²⁰² In 2015, the rate of infant mortality in Greater New Haven was 5.3 deaths per 1,000 live births; within New Haven, this rate was higher, at 6.3 deaths per 1,000 live births. These rates were not significantly different from the state average of 5.6 deaths per 1,000 live births, but are still considered high by international standards.²⁰³

Regional and city-level averages mask large disparities by race and ethnicity. In Greater New Haven between 2011 and 2015, the average infant mortality rate of babies born to Black mothers was 10.5 per 1,000 live births, higher than the 6.9 per 1,000 births to Latina mothers, and 2.7 times higher than the rate of 3.9 per 1,000 babies born to white mothers. These differences follow a pattern observed statewide and nationally.²⁰⁴

The two most significant causes of infant mortality are birth defects and conditions related to preterm birth or low birthweight. Birth defects have many causes, some of which are unknown,

TABLE 3B

Birth outcomes

DATAHAVEN ANALYSIS OF CTDPH VITAL STATISTICS DATA, 2006–2010 AND 2011–2015

LOCATION	2006–2010 (5 YEARS)			2011–2015 (5 YEARS)			PERCENT CHANGE, 2006–2010 TO 2011–2015		
	TOTAL BIRTHS	PERCENT LOW BIRTHWEIGHT	PERCENT NON-ADEQUATE PRENATAL CARE	TOTAL BIRTHS	PERCENT LOW BIRTHWEIGHT	PERCENT NON-ADEQUATE PRENATAL CARE	TOTAL BIRTHS	PERCENT LOW BIRTHWEIGHT	PERCENT NON-ADEQUATE PRENATAL CARE
Connecticut	200,357	8.0%	20%	181,687	7.8%	23%	-9%	↓3%	↑14%
Greater New Haven	26,183	8.8%	18%	23,586	7.5%	19%	-10%	↓15%	↑5%
New Haven	10,460	10.1%	24%	9,280	8.6%	23%	-11%	↓14%	↓5%
Inner Ring	8,380	8.4%	16%	7,483	7.7%	18%	-11%	↓9%	↑11%
East Haven	1,500	8.8%	15%	1,318	7.1%	17%	-12%	↓19%	↑13%
Hamden	3,248	8.3%	14%	2,940	7.3%	16%	-9%	↓12%	↑17%
West Haven	3,632	8.4%	19%	3,225	8.2%	20%	-11%	↓2%	↑7%
Outer Ring	7,343	7.4%	12%	6,823	5.6%	15%	-7%	↓24%	↑25%
Milford	2,448	7.7%	12%	2,244	6.1%	17%	-8%	↓21%	↑40%

but some of the most preventable risk factors may include a lack of folic acid, alcohol use and smoking, obesity, and uncontrolled diabetes.²⁰⁵ Similarly, the causes of premature birth and low birthweight are complex, but some are related to health inequities such as a lack of adequate prenatal care, poor nutrition, and factors that exacerbate the risk of chronic diseases. As shown elsewhere in this report, the rates at which women face these conditions diverge along socioeconomic, racial, and geographic lines.

The rate of low birthweight babies—defined as the percentage of infants born that weigh fewer than roughly five and a half pounds—has been significantly improving throughout most of Greater New Haven during the past decade. Between 2006–2010 and 2011–2015, the five-year periods used for our analysis of local area data, the rate of low birthweight babies in Greater New Haven improved, falling from 8.8 percent to 7.5 percent. Statewide, the rate of low birthweight babies fell from 8.0 percent to 7.8 percent during that same time period. The low birthweight rate varied from 5.6 percent of infants in the Outer Ring to 8.6 percent in New Haven, but these areas saw large improvements relative to the statewide trend. West Haven also experienced a fairly high rate and was the only large town without a substantial improvement; its low birthweight rate held steady at between 8.2 and 8.4 percent of infants during that time period. [SEE TABLE 3B](#)

The rate of non-adequate prenatal care—meaning that the mother went to fewer than 80 percent of the expected prenatal care visits or did not start the visits until her second trimester—rose from 18 to 19 percent of births in Greater New Haven between 2006–2010 and 2011–2015, similar to the trend observed statewide during that time period (an increase from 20 to 23 percent). The increase in the region was significantly smaller than that seen in the state primarily because New Haven was one of the few places in Connecticut that saw an improvement in its rate of non-adequate prenatal care, with the share of births with non-adequate care in that city declining from 24 percent to 23 percent between 2006–2010 and 2011–2015. For comparison, in the similarly-sized cities of Bridgeport and Stamford, non-adequate prenatal care rates were 33 percent in the 2011–2015 period.

Environmental Threats

While lead—a dangerous neurotoxin—is toxic to everyone, lead poisoning is of particular concern to children under the age of six due to rapid development in early childhood. Health problems related to lead are a constant concern in areas with older housing stock that contain lead paint. As such, regulations that aim to limit children’s exposure have been tightened. Even at relatively low levels, however, lead poisoning can cause behavioral changes and cognitive impairment in

children. As of May 2013, the state's reference level is 5 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$); a child under six years old with a level higher than that is classified as lead poisoned. In 2016, there were 399 children under six years old in Greater New Haven with blood lead concentrations higher than the reference, or 4.4 percent of those tested. The vast majority of these cases were among children living in New Haven (314 cases).²⁰⁶ That city's rate of lead poisoning has declined, from 9.0 percent of all children tested in 2013 to 7.6 percent in 2016, but still has one of the highest rates in the state. By comparison, in the Inner Ring and Outer Ring suburbs of Greater New Haven, rates of lead poisoning were 2.5 percent and 0.9 percent, respectively, in 2016.²⁰⁷

Children are also at increased risk of asthma exacerbations due to environmental factors, including cockroaches, mold, and traffic pollution.²⁰⁸ Childhood asthma affects children's quality of life and performance in school and it can be fatal if left untreated. According to the State of Connecticut Department of Public Health's School-Based Asthma Surveillance Report of 2019, levels of childhood asthma are generally lower in Greater New Haven public schools than statewide between 2012 and 2014; however, there are noticeable differences from town to town.²⁰⁹ Across Connecticut, one in seven children in the public school system had asthma (about 14 percent). Rates of childhood asthma in most Greater New

Haven public school districts fell below the statewide average, including in Orange, Woodbridge, and Milford where the rates were lower than 8 percent. On the other hand, New Haven, East Haven, and West Haven had the highest rates among public school districts in Greater New Haven. Rates of hospital and emergency room encounters for asthma among children four years old and younger also differ from town to town across the region.²¹⁰ [SEE TABLE 3C](#)



HEALTH RISK FACTORS

Inadequate Access to Health and Dental Care

Health-related challenges begin with access to healthcare. In 2018, the percentage of uninsured adults in Greater New Haven was the same as that of Connecticut overall (5 percent),²¹² yet there are notable disparities. While only 4 percent of Greater New Haven's white population lacks insurance, the numbers jump to 7 percent for its Black population and 12 percent for Latinos.²¹³ [SEE TABLE 3E](#)

Having health insurance, however, does not guarantee timely or high-quality medical care. Reasons for foregoing medical care are complex and overlapping, and lower-income residents may disproportionately be faced with the challenge of pursuing medical care in lieu of other basic necessities. In 2018, 22 percent of Greater New Haven adults reported having postponed necessary medical care within the past year, and 9 percent reported having failed to get care altogether.²¹⁴ They cited myriad reasons. Nearly half of survey respondents who missed or postponed care cited having been too busy with work or other commitments (48 percent), not feeling their issues were serious enough (45 percent), or fearing the cost would be too high (40 percent). Scheduling problems can disrupt care: 30 percent of adults who missed or postponed care could not get an appointment soon enough, and 20 percent could not get to a provider during their open hours. Insurance not paying for treatment was an issue for 21 percent of adults missing or delaying care, and insurance not being accepted was an issue for 15 percent. Additionally, 19 percent of those with disrupted care cited their caregiving obligations.²¹⁵

TABLE 3C

Asthma prevalence by public school district CT DPH SCHOOL-BASED ASTHMA SURVEILLANCE, 2012–2014

SCHOOL DISTRICT ²¹¹	ASTHMA PREVALENCE
Connecticut	14.3%
Greater New Haven	12.0%
New Haven	14.7%
Inner Ring	11.7%
East Haven	13.1%
Hamden	10.5%
West Haven	12.2%
Outer Ring	9.7%
Milford	7.9%

TABLE 3D

Frequent emergency room use and health-related social needs

SHARE OF ADULTS, GREATER NEW HAVEN, 2018

	NO HEALTH INSURANCE	DIDN'T GET MEDICAL CARE THEY NEEDED IN PAST YEAR	FOOD INSECURE	TRANSPORT INSECURE	STAYED HOME FROM DOCTOR IN PAST YEAR DUE TO LACK OF TRANSPORT	THREATENED WITH UTILITY SHUTOFF IN HOME	PHYSICALLY ATTACKED OR THREATENED IN PAST YEAR
All adults in the region, ages 18+	5%	9%	13%	13%	4%	10%	5%
Adults who did not receive care in ER last year	5%	7%	10%	9%	2%	8%	4%
Adults who used ER 1–2x last year	5%	13%	19%	19%	9%	13%	10%
Adults who used ER 3x+ last year	7%	19%	35%	35%	20%	32%	13%
Relative risk: Frequent users vs. non-users of ER	1.6x	2.7x	3.5x	3.8x	9.9x	4.1x	3.5x

In Greater New Haven, 12 percent of adults—including 21 percent of young adults—lack a medical home, meaning that they do not have any person or place that they consider to be their personal doctor, who they see on an ongoing basis.²¹⁶

Lacking affordable medical care may play a role in residents relying on the emergency room. In 2018, 26 percent of Greater New Haven adults reported receiving care in a hospital emergency room at least once.²¹⁷ While only 5 percent of adults in the region did so three or more times during the past year, this figure was more than double among those earning less than \$30,000 per year (11 percent).²¹⁸ Lack of transportation, food insecurity, and unstable housing also contribute to frequent use of emergency rooms. In Greater New Haven, residents lacking health insurance were slightly more likely than those with insurance to be frequent users of an emergency room last year, but residents who experienced food or transportation insecurity were substantially more likely to have visited an emergency room than other residents.²¹⁹ [SEE TABLE 3D](#)

Affordability is a challenge for many residents. In 2018, 15 percent of Greater New Haven residents earning less than \$30,000 per year did not get prescription medicines they needed because they could not afford the medication, compared to 9 percent of residents overall, and 5 percent of residents earning over \$100,000 per year.²²⁰ Additionally, 7 percent of adults in Greater New Haven said that they altered the way they take their

prescription medicines last year because they could not afford to get more of them.²²¹

Dental care is also important because oral health affects many other areas of life, including overall well-being and performance at school and in work. Good oral health helps prevent infections, heart disease, stroke, adverse birth outcomes, and other serious conditions, and has other impacts on quality of life.²²² According to the CDC, over 40 percent of US adults experience mouth pain each year, causing many people to miss work for emergency dental care. In Connecticut, about 16 percent of elementary school-age children have untreated tooth decay.²²³

In 2018, 28 percent of Greater New Haven adults said they had not been to the dentist in the past year. This rate was substantially higher among younger adults (34 percent), New Haven residents (34 percent), and residents earning less than \$30,000 per year (44 percent).²²⁴

Emergency room encounters related to preventable dental conditions are considered an incidence proxy for the lack of timely and adequate oral health care. Seeking acute care at a hospital for a severe tooth infection, for example, may not address the underlying need for preventive dental care. Overall, from 2015 to 2017, Greater New Haven had slightly lower rates of emergency room encounters and hospitalizations for preventable dental conditions than the state average. However, New Haven had higher reported rates, with 98

TABLE 3E

Barriers to healthcare

SHARE OF ADULTS, GREATER NEW HAVEN, 2018

LOCATION	DIDN'T GET CARE	POSTPONED CARE	NO MEDICAL HOME
Connecticut	9%	23%	12%
Greater New Haven	9%	22%	12%
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN			
Male	8%	19%	14%
Female	9%	24%	10%
Age 18–34	11%	27%	21%
Age 35–49	11%	25%	16%
Age 50–64	8%	23%	N/A
Age 65+	4%	12%	N/A
White	7%	22%	N/A
Black	9%	23%	N/A
Latino	18%	26%	N/A
Under \$30K	16%	26%	N/A
\$30K–\$100K	8%	23%	N/A
\$100K+	4%	23%	N/A
BY GEOGRAPHY			
New Haven	12%	26%	19%
Inner Ring	10%	25%	11%
East Haven	9%	23%	13%
Hamden	8%	20%	11%
West Haven	12%	30%	7%
Outer Ring	5%	16%	8%
Milford	8%	22%	11%

encounters per 100,000 residents per year across all age groups, compared to 58 per 100,000 statewide. The greatest burden of encounters for preventable dental conditions fall in the under 45 age groups. New Haven also saw remarkably higher rates in the 0–19 age group compared to the statewide average, with signs that this burden is growing among children and youth. [SEE FIG 3.3, 3.4, 3.5, 3.6, 3.7](#)

Experiences of Discrimination

In 2018, the DataHaven Community Wellbeing Survey included for the first time a sequence of questions about experiences of discrimination (EOD), drawn from a body of scientific work pioneered largely by David Williams of the Harvard

School of Public Health.²²⁵ Discrimination is a social stressor that impacts mental and physical health both directly and indirectly, especially within the broader context of structural, institutional, and cultural racism.²²⁶ In Greater New Haven, some adults reported that discrimination affected their ability to get the health care they needed. In 2018, 10 percent of all adults in the region said that, when seeking health care, they had been treated with less respect, or received worse care than what others received.²²⁷ For these adults, health insurance status and race were the two most commonly reported reasons for discrimination. Most of these adults experienced this issue repeatedly: 64 percent said such incidents had happened multiple times in the past 3 years.

LGBTQ individuals, as a group, have a higher risk for a variety of conditions, including sexually-transmitted diseases, poor mental health, homelessness, harassment, violence, and social isolation.²²⁸ They also face stigmas, lack of cultural competency in healthcare providers, and exclusionary insurance policies.²²⁹ Transgender people in particular often have difficulty simply accessing care: statewide, only 57 percent of self-identifying transgender participants in the DataHaven Community Wellbeing Survey reported that their primary care provider can provide them with trans-inclusive services, and 44 percent said they had forgone medical care in the past year for fear of harassment or mistreatment.²³⁰ These findings match research done nationally by organizations seeking to understand the concrete ways discrimination and lack of access to resources impair the health of LGBTQ people.²³¹

In addition to asking about health care discrimination, the 2018 survey probed residents' experiences with negative interactions with and unfair stops by police, differential treatment while searching for housing, and unfair treatment when seeking employment or a promotion. Combining the survey items into an experiences-of-discrimination scale suggests a link between discrimination and poor health in Greater New Haven. In a future report, we will complete a more rigorous statistical analysis of these data. [SEE FIG 3.11, 3.12 / SEE TABLE 3F](#)

Adverse Childhood Experiences

According to the Connecticut Department of Public Health, adverse childhood experiences (ACEs) can affect a child's social, emotional, and cognitive

development; their adoption of risky behavior later in life; and their chances of disease and even early death. Three of five adults across the state reported having had at least one ACE—ranging from an incarcerated household member or sexual abuse to the more prevalent household drinking problems, divorced parents, and emotional abuse. Two-thirds of those who had had at least one ACE had experienced multiple ACEs.²³²

In the 2018 Community Wellbeing Survey, Greater New Haven residents expressed general concerns for youth living in their neighborhoods. Among all the adults in the region, 27 percent thought it was likely that youth would abuse drugs or alcohol, 9 percent thought it was likely that youth would join a gang, and 12 percent felt the same about the chances of youth getting arrested for felonies.²³³ These data varied by town and neighborhood, however. In the city of New Haven, the corresponding figures were 44 percent, 24 percent, and 30 percent, respectively. [SEE FIG 2.25, 3.8](#)

Nutrition, Physical Activity, and Substance Use

Attaining and maintaining good health requires not only access to high quality medical services, but also engagement in daily behaviors that promote health. However, broader issues of income, education, employment, and racial and gender discrimination can pose obstacles to living a healthy lifestyle. Being able to afford nutritious food costs money. Taking full advantage of preventive screenings through regular checkups, to say nothing of exercising regularly, takes time. While tobacco use, poor diets, lack of exercise, and substance use—modifiable behavioral risk factors that are sometimes referred to as the “actual” causes of death—are critical to understand, they should be considered in the context of a growing body of literature that documents their connections to poverty, inequality, and other social issues.

Statistical modeling has revealed the extent to which body weight is influenced by neighborhood factors such as access to healthy foods and walking spaces. Social context can also influence health-related behaviors: for example, if you live in a neighborhood where smoking is prevalent, you are more likely to take up smoking yourself. Or, if recreational sports are important to the fabric of your community, you may be more active. The effects of these ecological drivers on children and adolescents can impact the development of

TABLE 3F

Experiences of discrimination

SHARE OF ADULTS HAVING EVER EXPERIENCED DISCRIMINATION, GREATER NEW HAVEN, 2018

LOCATION	WORKPLACE	POLICE STOPS	PREVENTED FROM MOVING	RECEIVED POOR SERVICE
Connecticut	27%	11%	4%	10%
Greater New Haven	28%	12%	5%	9%
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN				
Male	25%	18%	5%	9%
Female	31%	7%	5%	10%
Age 18–34	23%	12%	3%	N/A
Age 35–49	36%	17%	5%	N/A
Age 50–64	35%	14%	9%	N/A
Age 65+	20%	7%	4%	N/A
White	27%	8%	3%	N/A
Black	35%	23%	11%	N/A
Latino	30%	20%	11%	N/A
Under \$30K	33%	14%	6%	N/A
\$30K–\$75K	26%	11%	4%	N/A
\$75K+	26%	12%	4%	N/A
BY GEOGRAPHY				
New Haven	37%	18%	8%	8%
Inner Ring	24%	13%	6%	8%
East Haven	26%	7%	8%	N/A
Hamden	25%	14%	5%	N/A
West Haven	28%	18%	5%	N/A
Outer Ring	23%	7%	1%	7%
Milford	26%	8%	1%	N/A

obesity later in life.²³⁴ Consequently, there is a need to intervene on these pervasive drivers of health risks that also contribute to cancer, depression, diabetes, heart disease, stroke, injury, and other conditions that can reduce life expectancy and quality of life.

In Connecticut, 29 percent of adults have a body mass index that classifies them as obese. Connecticut’s obesity rate has increased dramatically since 1990, when it was estimated to be only 10 percent.²³⁵ Between 2015 and 2018, the prevalence of obesity among Greater New Haven adults stayed around 30 percent, while obesity rates rose statewide from 26 percent in 2015 to 29

TABLE 3G

Health risk factors

SHARE OF ADULTS WITH WELL-BEING AND CHRONIC DISEASE RISK FACTORS, GREATER NEW HAVEN, 2018

LOCATION	VERY GOOD SELF-RATED HEALTH	ANXIETY	DIABETES	CURRENT ASTHMA	OBESITY	HAS HEALTH INSURANCE	DENTAL VISIT PAST YR	DEPRESSION	SMOKING	FOOD INSECURITY
Connecticut	59%	12%	10%	11%	29%	95%	74%	9%	14%	13%
GNH	58%	14%	9%	11%	30%	95%	72%	11%	16%	13%
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN										
Male	60%	14%	10%	9%	31%	93%	69%	11%	17%	12%
Female	57%	13%	9%	13%	28%	96%	76%	12%	14%	14%
Age 18–34	62%	19%	2%	14%	27%	92%	66%	17%	19%	18%
Age 35–49	58%	16%	5%	12%	31%	95%	70%	12%	18%	20%
Age 50–64	61%	10%	11%	10%	34%	97%	78%	9%	17%	10%
Age 65+	50%	8%	23%	8%	29%	97%	76%	6%	9%	5%
White	61%	13%	9%	10%	27%	96%	75%	10%	15%	9%
Black	51%	13%	13%	13%	40%	93%	70%	12%	19%	20%
Latino	51%	21%	11%	N/A	39%	88%	72%	22%	N/A	38%
Under \$30K	42%	21%	16%	N/A	38%	91%	56%	21%	22%	29%
\$30K–\$100K	58%	13%	8%	N/A	28%	95%	71%	11%	15%	13%
\$100K+	73%	11%	4%	N/A	28%	98%	87%	6%	11%	4%
BY GEOGRAPHY										
New Haven	55%	15%	10%	14%	31%	93%	66%	15%	19%	21%
Inner Ring	52%	15%	11%	10%	35%	96%	71%	11%	16%	14%
East Haven	54%	11%	13%	9%	34%	95%	70%	12%	19%	11%
Hamden	56%	14%	10%	11%	31%	95%	74%	9%	13%	12%
West Haven	45%	17%	14%	12%	40%	95%	69%	14%	17%	18%
Outer Ring	67%	12%	9%	12%	28%	97%	82%	10%	12%	6%
Milford	67%	10%	10%	13%	29%	97%	78%	10%	12%	9%

percent in 2018 according to the DataHaven Community Wellbeing Survey,²³⁶ and from 25 percent in 2015 to 27 percent in 2017 according to the Behavioral Risk Factor Surveillance System.²³⁷ The share of Greater New Haven adults who reported exercising fewer than three days per week increased slightly, from 38 percent to 42 percent, between 2015 and 2018.²³⁸ Childhood obesity is also a major concern, though Connecticut's estimated 11.9 percent obesity rate among youth ages 10 to 17 is lower than the U.S. rate of 15.8 percent.²³⁹ Local, state, and national rates are calculated based on self-reported or parent and caregiver-reported height and weight, and likely underestimate

the actual obesity rate by a few percentage points.

Despite major reductions in cigarette smoking over the past several decades, there is still room for significant progress. The connection between smoking and cancer is discussed above, and smoking and secondhand smoke have been linked to many other health issues including infant health, asthma, and stroke. More adults smoke cigarettes in Greater New Haven (16 percent) than in the state overall (14 percent). The region's smoking rate increased slightly between 2015 and 2018, but is still relatively high among residents earning less than \$50,000 per year, and is 19 percent in East Haven and New Haven.²⁴⁰ When looking at smoking

patterns by age, as of 2018, 19 percent of the region’s adults between the ages of 18 and 34 reported that they currently smoke cigarettes.²⁴¹ Vaping is becoming more common, particularly among young adults. In 2018, 10 percent of adults in Greater New Haven reported using e-cigarettes or vaping more than once a month, slightly above the statewide rate of 8 percent; among adults age 18 to 34, 36 percent had tried e-cigarettes as of 2018.²⁴² [SEE TABLE 3G](#)

Some in the region struggle with alcohol, marijuana, and opioid use disorders. In 2018, 8 percent of adults reported drinking heavily (more than four drinks at once for women or five drinks for men) at least six times in the past month. Eight percent of adults—including 14 percent of those ages 18 to 34—reported using marijuana more than 10 times during any given month.²⁴³ Drinking too much can dramatically change mood and behavior, and long-term alcohol use can damage organs including the heart and liver, increasing the risk of cancers and other diseases.²⁴⁴ Like alcohol, marijuana is associated with depression and anxiety, though it is not yet known whether this is a causal relationship.²⁴⁵ The opioid crisis, which has connections to the use of other substances such as alcohol, is covered below.

The Opioid Crisis

The opioid crisis has made headlines across the country, with some of the highest overdose death rates occurring in the northeast U.S. In 2016, Connecticut ranked 11th among all states in the country in the rate of overdose deaths, and several nearby states—including New Hampshire, Massachusetts, Rhode Island, and Maine—fell within the top 10.²⁴⁶ Thousands of Americans die of opioid overdoses each month, including an average of 67 Connecticut residents per month from 2015 to 2018. Between 2015 and 2018, Greater New Haven averaged 23 drug overdose deaths per 100,000 residents per year, just below the state’s rate of 24.2 per 100,000; filtered for just opiate- and opioid-related deaths, these rates become 21.6 and 22.8, respectively.^{247, 248} [SEE TABLES 3H, 3I](#)

The full effect of the opioid crisis is not captured in the comprehensive 2010–2014 premature mortality data that we used toward the beginning of this chapter. Over just a few years, the number of deaths from drug overdoses in Greater New Haven increased by 80 percent, from 67 deaths in 2014 to 121 deaths in 2016; this increase

was driven mostly by a steep rise in opiate- and opioid-related deaths.²⁴⁹ The weight of overdose deaths comes not only from sheer numbers, but also from the epidemic’s reach: the median age for fatal overdoses in Greater New Haven is 44, about 36 years younger than the region’s overall life expectancy.²⁵⁰ When ranking major causes of premature death by years of potential life lost prior to age 75 (YPLL-75) in Greater New Haven, we estimate that deaths from opioid-related overdoses between 2015 and 2018 would rank 5th highest after cancer, infant and fetal mortality, accidents, and heart disease.²⁵¹ [SEE FIG 3.9, 3.10](#)

The Centers for Disease Control and Prevention characterizes the epidemic as multilayered with three distinct waves.²⁵² Prescription opioids were the main drivers of the first wave (1990s); heroin was largely responsible for the rise in 2010; and synthetic opioids, such as fentanyl, have driven the current wave, which began in 2013.²⁵³

TABLE 3H
Overdose deaths by substance
TOTAL COUNT AND ANNUALIZED AGE-ADJUSTED OVERDOSE DEATH RATE PER 100K RESIDENTS BY PRESENCE OF OPIATES OR OPIOIDS, GREATER NEW HAVEN, 2015–2018

LOCATION	ANY SUBSTANCE COUNT	ANY SUBSTANCE RATE	OPIATE/OPIOID COUNT	OPIATE/OPIOID RATE
Connecticut	3,423	24.2	3,202	22.8
Greater New Haven	432	23.0	405	21.6
Inner Ring	147	24.8	141	24.0
Outer Ring	131	19.6	127	19.0

TABLE 3I
Overdose deaths by race and ethnicity
TOTAL COUNT AND ANNUALIZED AGE-ADJUSTED OVERDOSE DEATH RATE PER 100K RESIDENTS BY RACE, GREATER NEW HAVEN, 2015–2018

LOCATION	WHITE COUNT	WHITE RATE	BLACK COUNT	BLACK RATE	LATINO COUNT	LATINO RATE
Connecticut	2,673	29.5	296	18.9	393	19.1
Greater New Haven	324	29.1	69	22.6	33	12.9
Inner Ring	123	37.1	16	14.1	8	8.6

These patterns hold true in Greater New Haven, where the death rate from drug overdoses has mirrored the upward trend seen throughout the state and country, generally staying tied with the statewide rate. Similar also is the skyrocketing prominence of fentanyl: the substance was detected in only four of Greater New Haven's 110 overdose deaths (under 4 percent) in 2012 and 2013, but in 118 of the 223 deaths (53 percent) in 2017 and 2018. One positive note for the region is that unlike most other regions of the state, Greater New Haven's overdose death rate began trending back downward around late 2017; the region's monthly death rate continued declining for all of 2018.²⁵⁴

As is the case elsewhere, men make up much larger shares of drug overdose deaths in Greater New Haven than women: since 2012, women have never accounted for more than a third of the region's overdose deaths in a given year. Rates for white residents are higher as well: between 2015 and 2018, white residents' age-adjusted overdose death rate was 29.1 per 100,000 residents per year, higher than Black residents' rate of 22.6 and Latinos' 12.9.²⁵⁵

For every person who dies of an opioid overdose, many more seek treatment, often multiple times. Between the 2014 and 2018 fiscal years, Greater New Haven residents were admitted to opioid treatment programs a total of 20,140 times, averaging 4,028 admissions per year, or 865 admissions per 100,000 residents per year. East Haven, New Haven, and West Haven had rates above the regional average; the rate in East Haven was 1.8 times as high, at 1,540 admissions per 100,000 residents per year. The majority of these admissions were to programs funded by the state Department of Mental Health and Addiction Services. Though harder to track, people often are admitted to programs multiple times within one year.²⁵⁶

Many residents also seek or receive care for substance use disorders at area hospitals and emergency rooms. For hospital and emergency room encounters related to substance use, a category that includes diagnoses related to use of opioids and other drugs, rates in Greater New Haven are comparable to those of statewide averages, although the rate has been increasing more slowly between the 2012–2014 and 2015–2017 time periods. A greater burden of substance use encounters exists within towns in the New Haven Inner Ring (173 encounters per 10,000 residents

per year) compared to those in the Outer Ring (105 encounters per 10,000 residents). Rates in New Haven were the highest in the region and grew considerably from 412 encounters per 10,000 residents annually in 2012–2014 to 454 in 2015–2017, even as rates declined in Outer Ring towns. Statewide trends across age groups and genders are also reflected in the Greater New Haven region, with greater burden on male populations in the 20–44 and 45–64 age groups.²⁵⁷

SEE FIG 3.3, 3.4, 3.5, 3.6, 3.7

The reach of the opioid crisis goes beyond just people who have struggled with addiction themselves. In the 2018 DataHaven Community Wellbeing Survey, nearly one in every three adults in Greater New Haven reported knowing someone who has struggled with opioid abuse or addiction in the past three years. Out of that one-third of respondents, 6 percent said they themselves were struggling with opioids, 40 percent cited a family member, 38 percent cited a close friend, and 44 percent cited an acquaintance. These numbers include adults who knew multiple people dealing with addiction.²⁵⁸

Of all Greater New Haven adults, 25 percent reported knowing at least one person who died of an opioid overdose. Twenty-one percent of these adults lost a family member to an opioid overdose, 44 percent lost a close friend, and 60 percent lost an acquaintance.²⁵⁹

A 2019 New England Public Policy Center report found that counties with the lowest rates of opioid prescribing are also those with the lowest rates of fatal overdoses.²⁶⁰ Additionally, some research has suggested a relationship between opioid misuse and frequent drinking²⁶¹ and tobacco use.²⁶² The frequent use of these substances has been associated with higher pain intensity, which may increase the person's likelihood of developing an opioid dependency. In particular, many studies of alcohol use disorders have established that heavy drinking is a strong predictor of opioid misuse.²⁶³ In addition to improving our understanding of addiction and expanding access to prevention and treatment services, strategies to address the opioid crisis may include the promotion of overdose-reversing drugs such as naloxone, improved prescription monitoring, evidence-based pain management, and public education.



HEALTH OUTCOMES

Early Onset of Chronic Diseases

According to the Centers for Disease Control and Prevention (CDC), six out of every ten adults in the U.S. live with a chronic disease, and four out of every ten have two or more concomitant chronic conditions.²⁶⁴ These conditions include heart disease, cancer, chronic lung disease, chronic kidney disease, stroke, Alzheimer's, and diabetes. Ninety percent of healthcare expenditures go towards the treatment of chronic and mental health conditions, and in 2010, chronic diseases comprised seven of the top ten causes of mortality in the U.S., accounting for over 65 percent of all deaths.^{265, 266} According to the Hospitalization Cost and Utilization Project (HCUP), from 2006 to 2011, emergency department visits for common chronic conditions such as diabetes, pulmonary and heart disease, and essential hypertension increased significantly among adults, with the greatest increase observed in adults 85 and over.²⁶⁷ Disproportionately more clinical visits to physicians' offices, hospital outpatient services, and hospital emergency departments occur for patients who are in the oldest age groups and those who are more prone to experiencing chronic diseases.²⁶⁸

While chronic diseases are a relatively common experience for older adults, they may develop much earlier in life, sometimes even in childhood. As described above, the data on Greater New Haven's neighborhood life expectancy and premature mortality reveal large disparities in health and well-being within the region. However, mortality data only tell us about people who die; they do not provide a complete picture of the impact of chronic diseases on people's quality of life throughout youth and middle age. Our analyses of the data collected through the DataHaven Community Wellbeing Survey and of the records of residents' visits to statewide hospitals and emergency rooms over the past six years create a clearer picture of the full burden of these conditions. [SEE FIG 3.3, 3.4, 3.5, 3.6, 3.7 / SEE TABLE 3J](#)

In Greater New Haven, chronic diseases such as hypertension, heart disease, diabetes, and chronic lung diseases such as chronic obstructive pulmonary disease (COPD) have consistently ranked among the most common causes for hospitalization and emergency room encounters.

Between the 2012–2014 and 2015–2017 periods, hospital encounter rates for diabetes, COPD, and hyper-tension increased more quickly than they did statewide. In general, the greatest increases in encounter rates were seen within the 65–84 age groups. Across the region, towns with a greater burden of chronic disease often saw larger increases in their per capita hospital encounter rates over this six-year time period than healthier towns.²⁶⁹ This suggests that health-related inequalities, as measured by the impact that these conditions have on residents of different towns and demographic groups, may have increased in recent years.

Examining data from hospitals and other sources by age, gender, and race/ethnicity reveals disparities in the extent to which chronic diseases develop early in populations that face greater levels of economic and social adversity. For cardiovascular disease, disparities between Black and white adults are particularly pronounced. A 2010 study found that nationally, 28 percent of cardiovascular disease deaths among Black adults occurred among persons younger than 65 years of age, compared to just 13 percent of white adults.²⁷⁰ Consistent with statewide and national averages, in Greater New Haven the greatest burden of hospitalization and emergency department visits from 2015 to 2017 due to heart disease fell on older age groups. However, there were some exceptions to this rule that are likely driven by racial and ethnic disparities. Residents in the 45–84 age range in New Haven also experienced particularly high rates of hospital encounters related to heart disease. Compared to the trends observed in Connecticut as a whole, New Haven experienced considerable increases in hospital visits for lung disease, diabetes, and asthma. While available hospital encounter data has limitations when it comes to fully capturing the race/ethnicity of patients, our analysis suggests that middle-aged Black adults aged 20 to 64 are several times more likely than whites of the same age to be hospitalized for cardiovascular disease.²⁷¹

Several of the region's wealthier towns, such as Orange, Bethany, Madison and Woodbridge saw remarkably small increases across the various chronic diseases. If sustained over time, these trends show how disease prevention efforts or other factors in these towns may be shifting the burden of chronic disease.²⁷²

TABLE 3J

Selected hospital encounters and hospital encounters by age

RATES OF HOSPITALIZATIONS AND ED VISITS PER 10,000 RESIDENTS PER YEAR, 2015–2017

AGE-ADJUSTED RATES OF HOSPITALIZATIONS AND ED VISITS FOR ALL RESIDENTS							
LOCATION	DEPRESSIVE DISORDER	DIABETES	FALLS	HEART DISEASE	HYPERTENSION	MENTAL DISORDER	SUBSTANCE ABUSE
Connecticut	326	639	328	240	1,261	694	178
Greater New Haven	288	709	346	272	1,346	659	215
New Haven	456	1,460	458	441	2,345	1,038	454
Inner Ring	287	711	322	275	1,325	640	173
East Haven	360	723	381	300	1,402	799	227
Hamden	237	598	268	244	1,169	541	123
West Haven	301	834	352	292	1,448	664	201
Outer Ring	208	375	292	203	896	469	105
Milford	216	421	313	218	881	482	129

AGE-SPECIFIC RATES OF HOSPITALIZATIONS AND ED VISITS FOR DIABETES AND HEART DISEASE						
LOCATION	DIABETES			HEART DISEASE		
	AGE 20–44	AGE 45–64	AGE 65–74	AGE 20–44	AGE 45–64	AGE 65–74
Connecticut	223	908	1,895	23	193	670
Greater New Haven	250	1,088	1,956	22	250	766
New Haven	423	2,655	3,725	34	582	1,364
Inner Ring	211	1,095	2,114	18	243	850
East Haven	215	1,153	1,816	12	266	880
Hamden	171	889	1,883	16	187	793
West Haven	253	1,283	2,580	23	288	896
Outer Ring	87	430	1,209	12	116	496
Milford	80	544	1,388	N/A	148	591

Note: See Figures 3.4 and 3.5 for additional age- and gender-specific rates.

Mental Health

As described in the introduction to this report, reducing the frequency at which residents experience depression or other mental health disorders represents one of the greatest opportunities to improve the overall well-being of Greater New Haven. Depression may be rooted within many different social, medical, and environmental factors, including substance use, traumatic experiences, and social isolation. In addition, not only is depression underdiagnosed among racial and ethnic minorities, including Black, Latino, and Asian Americans, but these groups are also less likely to have access to and receive adequate care for depression.²⁷³

Depression is a risk factor or cause of many other health problems, including chronic pain, insomnia, and conditions that are exacerbated when patients have difficulty accessing medical care or taking medications according to the instructions of health care providers.²⁷⁴

In the 2018 DataHaven Community Wellbeing Survey, 14 percent of Greater New Haven adults reported being anxious most or all of the time, and 11 percent reported feeling down, depressed, or hopeless more than half of the days during the past two weeks, rates that were similar to the statewide average and had changed little since our 2015 survey. Residents with low incomes experienced higher rates of anxiety and depression. Among adults earning less than \$30,000 per year, 21 percent reported feeling anxious more than half of the days during the past two weeks, and 21 percent reported this level of depression. Among adults earning \$100,000 or more, the rates of these levels of anxiety and depression are only 11 percent and 6 percent, respectively.²⁷⁵

Depression and other mental health disorders are significant factors in Greater New Haven's residents' decisions to seek or receive care within the state's hospitals and emergency rooms. Statewide and throughout the region, hospital encounters for mental disorders rose considerably between 2012–2014 and 2015–2017, and also increased for depressive disorders. While Greater New Haven on average experienced lower rates compared to CT averages, New Haven and East Haven had markedly higher rates, while towns such as Bethany, Madison and Orange were among those with the lowest rates. Similar to the trends seen in other encounters, towns with greater burden of disease typically experienced greater

increases, suggesting a growing inequality in the prevalence of these diseases. The considerably higher rates in New Haven can in part be attributed to drastically higher rates among the 45–64 age group. However, overall within Greater New Haven, the greatest increases in mental disorders were seen in the 85-and-over age group, while for depressive disorders, there were marked increases for the 65–74 age group. A difference was also observed by gender: in Greater New Haven, females experienced higher rates than males across all age groups for depressive and mental disorders. However, New Haven remained an exception with disproportionately higher rates of encounters among men in the 45–64 age group.

Injuries

Intentional and unintentional injuries, including drug overdoses (covered above), falls, assaults, and suicide, are the leading causes of death in the U.S. for people between the ages of 1 and 44. They also have major consequences on quality of life, as there are 13 hospitalizations and 129 emergency room encounters for every death.²⁷⁶ Injuries, including the costs of resulting physical and mental disabilities, have a negative impact on productivity and quality of life. Data on hospital and emergency room encounters help illustrate the extent of this burden within Greater New Haven. [SEE FIG 3.3, 3.4, 3.5, 3.6, 3.7](#)

Falls are the most common cause of non-fatal injury in the U.S. and within Greater New Haven. Rates of hospital and emergency room encounters are particularly high among older seniors, with slightly higher rates in females compared to males. According to the CDC, one in four adults ages 65 and up will fall each year, and 20 percent of falls will induce a serious injury such as a hip fracture or traumatic brain injury, which can be debilitating and sometimes life-threatening.²⁷⁷ Extensive and costly treatment may often be required, with greater burden on older adults for whom costs average \$30,000 per fall, making them among the 20 most expensive medical conditions.²⁷⁸ Fall prevention strategies, physical rehabilitation and close assessments of risk factors offer effective mechanisms for reducing the burden of these types of encounters.²⁷⁹ As such, fall encounters offer a lens into access to preventive care, safe housing, and ambulatory processes among older populations. Residents of New Haven experience higher rates of hospital encounters due to falls.

Statewide and across most towns in Greater New Haven, the rates of these encounters did not change drastically from 2012–2014 to 2015–2017 time periods.

The burden of injuries related to motor vehicle crashes is also considerable. In 2013, among high-income countries, the U.S. experienced the highest rates of road traffic deaths and second highest in crash deaths related to alcohol.²⁸⁰ Motor vehicle accidents are preventable using interventions that improve seat belt use, create safer streets for vulnerable road users, and enhance the enforcement of traffic safety laws, especially among youth who are at risk.²⁸¹ The rate of road crash-related hospital encounters in Greater New Haven is slightly higher to that of the state as a whole, but the burden is drastically higher in New Haven compared to the Outer Ring. The highest rates are seen in the 20–44 age group, both statewide and within the region. Overall, rates within the region appear to be decreasing over time.

Intentional injuries, such as those related to youth violence, domestic violence, and suicide attempts, are also troubling. Within Greater New Haven, rates of hospital encounters related to homicide and assault were slightly higher than statewide averages, with the greatest rates in New Haven. As with statewide trends, these rates were highest among the 20–44 age group, and slightly higher among males compared to females. Most towns did not experience significant changes in these rates between 2012–2014 and 2015–2017. On the other hand, hospital encounters related to suicide and self-harm decreased during this time period. For suicide and self-harm encounters, the greatest burden was on females ages 0 to 19, and on both men and women ages 20 to 44.²⁸² Strikingly, New Haven saw disproportionately high rates of homicide/assault and suicide/self-harm among males in the 45–64 age group. The Connecticut Suicide Prevention Plan (PLAN 2020) contains detailed information on suicide and self-harm data and prevention.²⁸³

Infectious Diseases

Sexually transmitted infections (STIs) are a concern in Greater New Haven, as throughout the state and nation. Like other infectious organisms, STIs can have long-term implications for health, including reproductive health problems and certain types of cancers. Generally speaking, reported infection rates in Connecticut for chlamydia, the

most common STI, are nearly double what they were 15 years ago. In 2011 and 2015, reported chlamydia infection rates in New Haven (973 per 100,000 persons in 2015) were between 2.6 and 3.1 times higher than the statewide average, and about twice as high as the region's rate (458 per 100,000 people in 2015). Gonorrhea infections in Greater New Haven have slightly declined over the past two decades. While rates are generally too small to be reportable for smaller towns, reported gonorrhea infection rates in New Haven in 2015 (190 per 100,000 persons) were still more than twice the region's rate and three times the state average.²⁸⁴ STIs can increase the risk of transmission and acquiring diseases such as HIV or hepatitis C. According to analysis provided by the New Haven Health Department, in the city of New Haven in 2017, 63 percent of new HIV diagnoses were among Black residents, followed by 25 percent that were among Latino residents. The primary transmission pathway was via men who have sex with men (MSM) at 63 percent; overall, 84 percent of all new HIV diagnoses were among men. STI prevention continues to be a focus area for many local health departments and partners.

Other infectious diseases are also important to the health of the region. The Connecticut Department of Public Health routinely tracks reports of certain infectious diseases such as Lyme disease, West Nile virus, and tuberculosis in order to identify trends and help prevent and control outbreaks. Vaccine Preventable Diseases (VPDs) continue to be a major concern, as these diseases can be prevented via adherence to the CDC's immunization schedules. VPDs include measles, mumps, hepatitis A and B, influenza, pertussis, tetanus, and others. For example, as of August 2019, there have been over 1,000 confirmed measles cases in the United States, even though in the year 2000, the CDC had declared measles eliminated from the United States. In 2019, the Greater New Haven region experienced measles exposure scenarios related to outbreaks propagated by poor vaccine compliance and international travel. The growing concern of reduced vaccination compliance is applicable to most VPDs, as herd immunity, in which the majority of a community is immunized against the disease, mitigates the spread of infection.²⁸⁵ **DH**

CHAPTER 4

Civic Life and Infrastructure

Civic life, defined broadly as the attitudes, activities, and investments that build on the collective resources, skills, expertise, and knowledge of citizens to improve the quality of life in communities, is a powerful dimension of our overall health and well-being.²⁸⁶

Civic life represents all the ways that residents can participate in their communities, and help improve the quality of life for everyone.

IN THIS CHAPTER

- Wealthier towns in Greater New Haven have access to more property tax revenue to fund public resources.
 - Community trust is high but variable—as is participation in public life through voting, volunteering, and advocating for the community.
-

Executive Summary

This chapter looks at three key components of civic life.

Stewardship of the Public Realm includes how municipalities provide essential services to their residents. In Connecticut, municipal revenue consists primarily of grants and property tax receipts. Reliance on property taxes presents a challenge to Connecticut's larger cities, which tend to house more tax-exempt properties—including colleges and hospitals—and thus impose a higher tax burden on their residents. In addition, as Connecticut's property tax rate is the same regardless of income level, it is regressive and therefore results in lower-income households' taxes consuming a greater share of their income. As a result, wealthier towns generate higher tax receipts, which fund higher-quality public resources, including education, which then attract additional wealthy residents. When considering residents' perceptions of their local governments' stewardship, 48 percent of Greater New Haven adults felt positively about the responsiveness of their local government to the needs of residents, and 70 percent responded positively about the condition of area parks and public recreational facilities. Just over one-quarter of adults felt the area in which they lived was improving. Overall, residents' wealth influences their perceptions, with higher-income residents reporting greater access to and satisfaction with community resources.

Community Trust and Appreciation: a strong majority of Greater New Haven residents reported trusting neighbors, having reliable social support networks, and feeling satisfied with where they live. While most white residents rated the police positively in terms of keeping residents safe, this measure was not as high among minority residents. Minority residents were also more likely to report experiencing unfair or abusive treatment by police multiple times in the past three years.

Participation in Public Life, including volunteering, voting, and using available cultural resources, was more common among higher-income residents and those with more education. This contributed to voter turnout rates that were considerably higher in the wealthier Outer Ring suburbs compared to the city of New Haven. Since 2015, adults statewide reported a significant increase in their perceived ability to influence local government decision-making, a positive trend seen within Greater New Haven as well, and which may be due, at least in part, to a national increase in young voters' political engagement. **DH**

FIG 4.1

Wealthier towns net more money from property values and spend more money on education

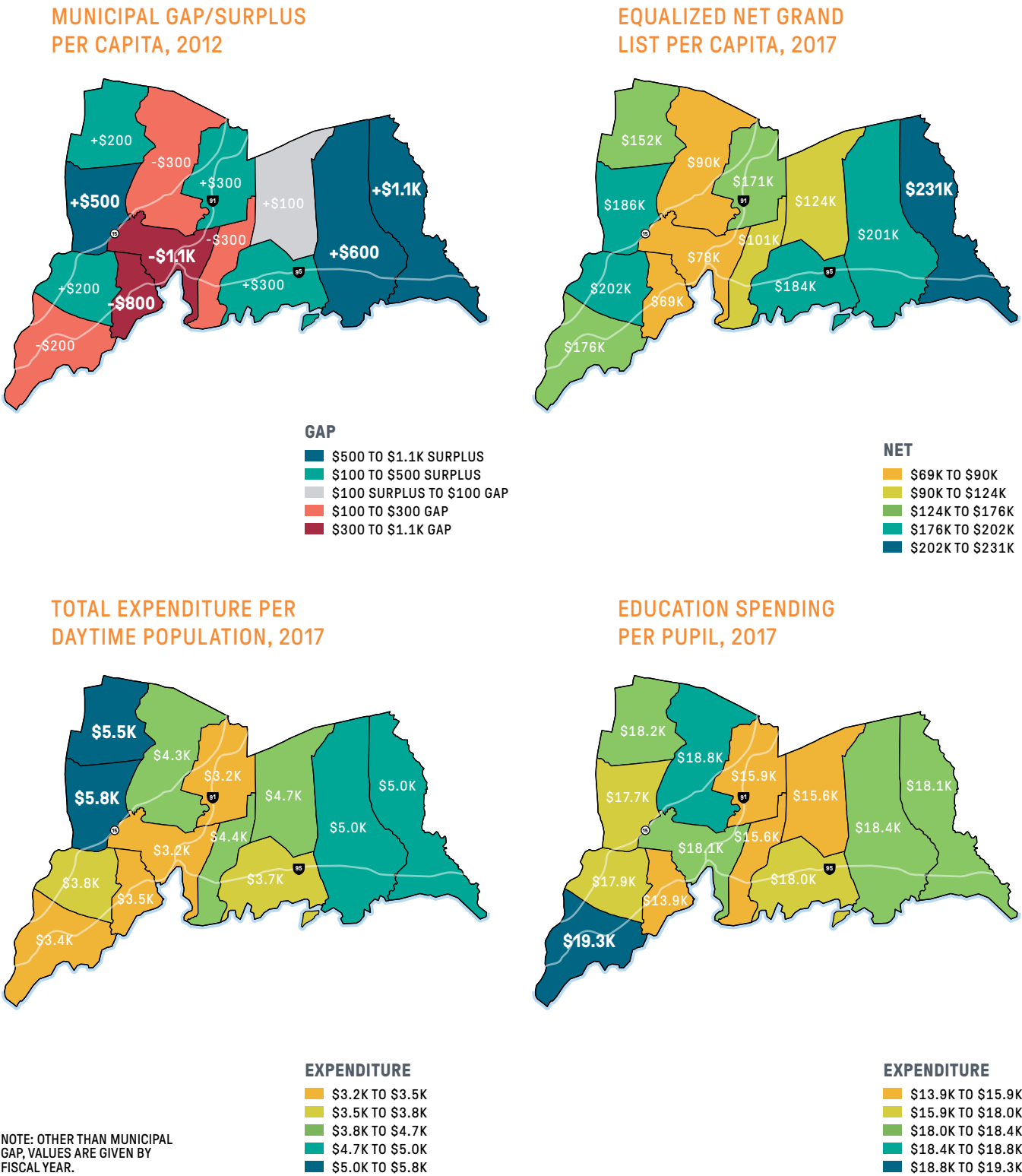


FIG 4.2

In towns with more surplus money, residents rate neighborhood assets and facilities more highly

NEIGHBORHOOD ASSETS INDEX VS MUNICIPAL SURPLUS PER CAPITA

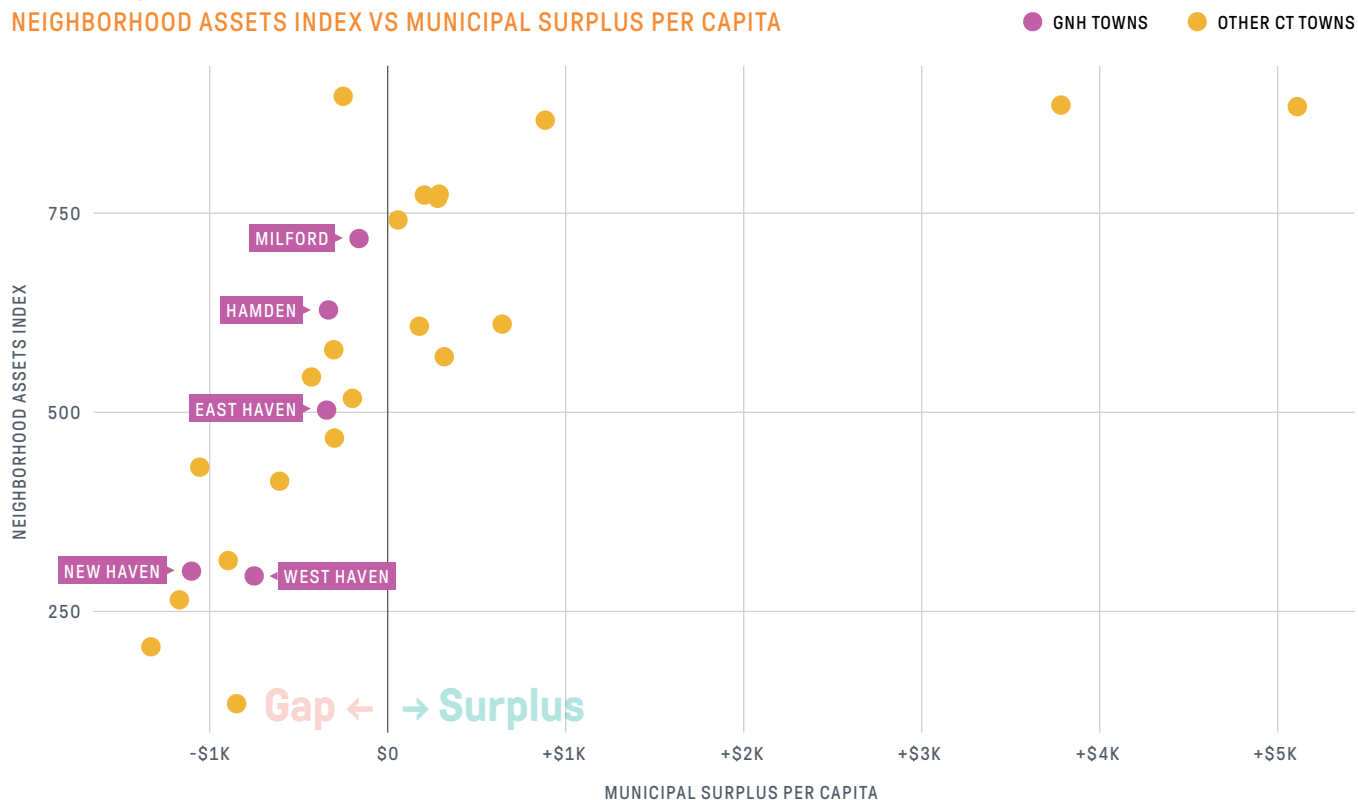


FIG 4.3

Towns that spend more on their libraries see greater library use

AVERAGE TOWN PUBLIC LIBRARY VISITS PER CAPITA AND CIRCULATION PER CAPITA VERSUS TOTAL LIBRARY EXPENSES PER CAPITA, 2017–2018

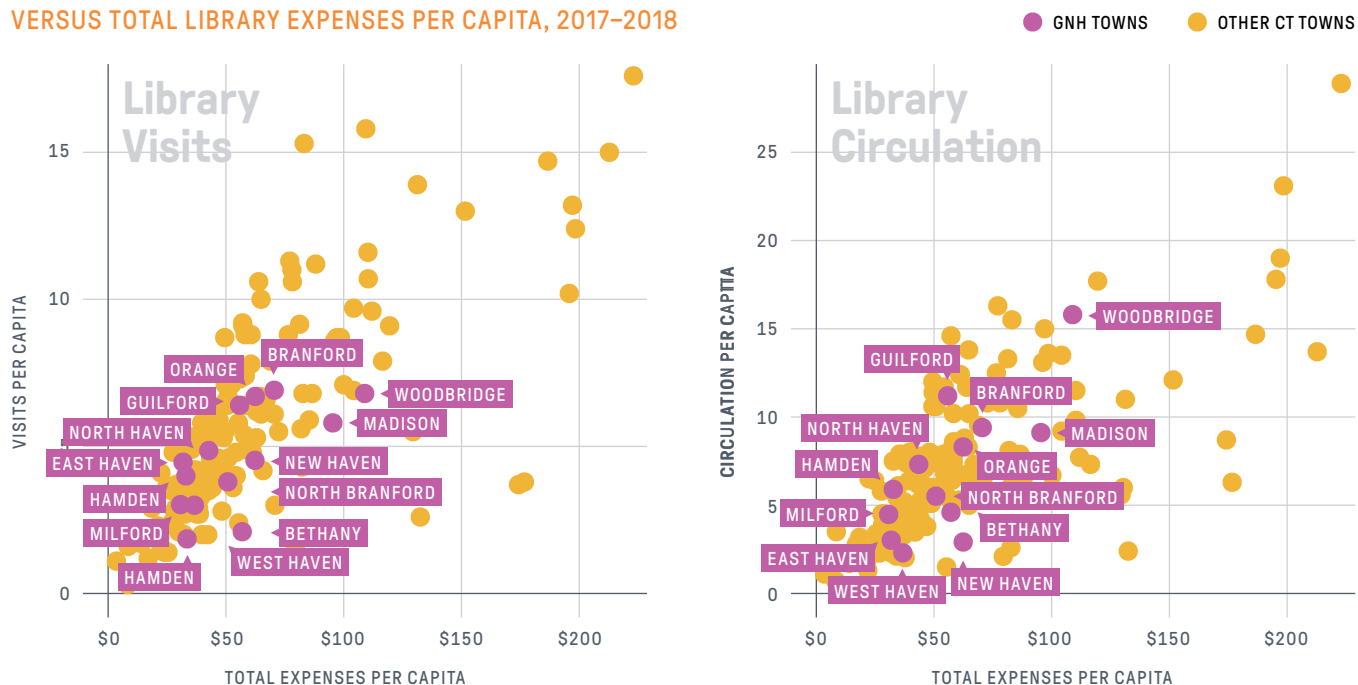
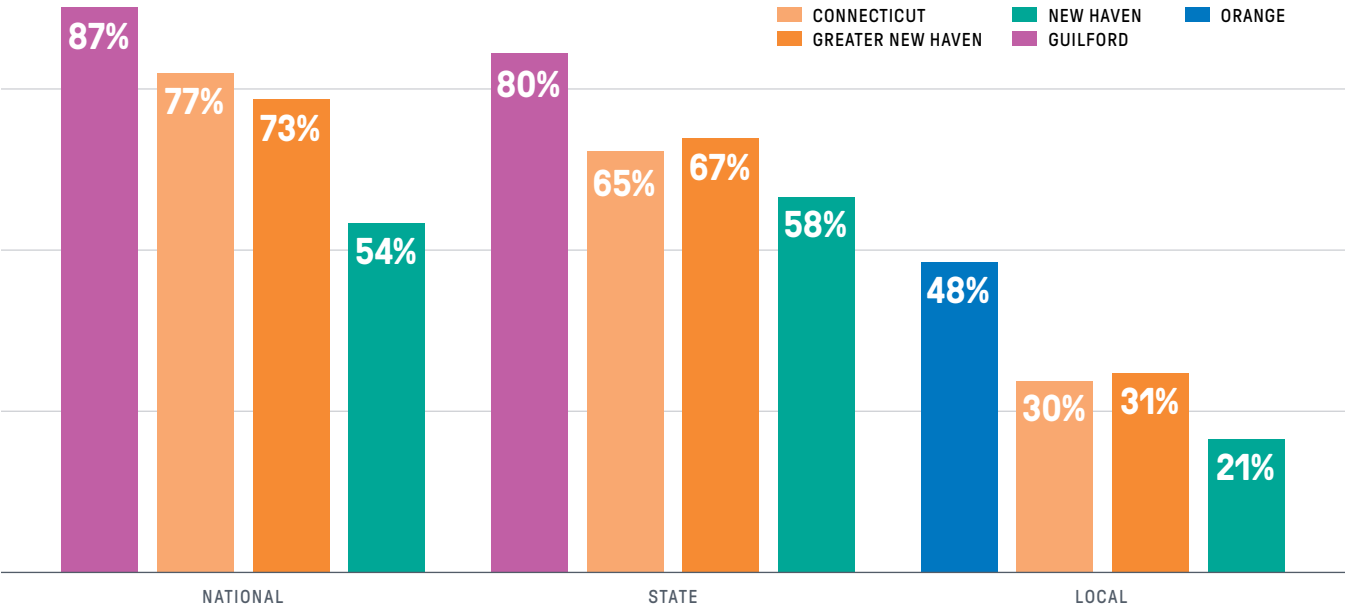


FIG 4.4

Voter turnout is high for national and state elections, but much lower in municipal ones

PERCENT OF ELIGIBLE VOTERS WHO VOTED IN ELECTIONS, WITH GREATER NEW HAVEN HIGHEST AND LOWEST TOWN RATES, 2016–2018



INTRODUCTION

Civic life, defined broadly as the attitudes, activities, and investments that build on the collective resources, skills, expertise, and knowledge of citizens to improve the quality of life in communities, is a powerful dimension of our overall health and well-being.²⁸⁶ We view civic life broadly, encompassing both engagement and trust, as the sum of all efforts that promote the common good within communities. These range from the more recognizable—like informed local voting and volunteering—to the less obvious, such as access to and quality of public resources, design and upkeep of public parks, and residents’ sense of safety in their neighborhoods. Measures of civic life provide insight as to how residents feel about their communities, the ways they choose to get involved, and opportunities for improving life in the cities and towns they share.

As a growing body of research continues to illuminate the strength of the link between civic life and community health and well-being, we are reminded that our connection to and involvement in our communities is inextricably linked to quality of life.²⁸⁷ Higher levels of civic trust, participation, and engagement are correlated with both more equitable economic outcomes and many positive health outcomes, such as lower mortality rates, improved mental and physical health, and lower crime rates.^{288, 289, 290, 291} Based on this body of work, we chose to frame our Civic Life section using three key domains: Stewardship of the Public Realm, Community Trust and Appreciation, and Participation in Public Life.²⁹²

Greater New Haven towns and cities each have a unique sense of community, with varying traditions, public resources, and physical spaces. Each reader should reflect on the dynamics of civic life within their particular community as they read this section, in order to recognize local assets and identify specific ways in which they can strengthen their communities.



STEWARDSHIP OF THE PUBLIC REALM

Investment in Public Resources: Municipal Financial Capacity

Residents rely on their local governments to provide a wide array of resources. While public education, social and health services, public safety, and infrastructure may come to mind as the key municipal responsibilities, local governments offer many additional programs and services—like public libraries and related programming, transportation assistance, and adult education—which underserved or at-risk populations may disproportionately rely on. The fiscal health of local governments directly impacts their ability to invest in such programs and services. These resources are truly a cornerstone of civic life, helping to mitigate socioeconomic inequalities, bridging social divides, and ultimately, fostering trust in the responsiveness of government to community needs.²⁹³

Local government revenue comes from municipal taxes and fees (almost exclusively property tax in Connecticut), as well as state and federal grants. On a per capita basis, Connecticut’s wealthier suburbs—able to draw on stronger tax bases—are the biggest spenders.²⁹⁴ For example, in 2017 Woodbridge spent the most per resident of Greater New Haven’s municipalities at \$5,557—much higher than the \$3,139 spent per resident in West Haven, the region’s lowest-spending municipality.²⁹⁵ Between 2002 and 2015, spending in the state’s wealthiest communities increased much faster than spending in the poorest communities.²⁹⁶ In some ways, a more telling figure is expenditures per daytime “resident”—that is, the spending done to support the number of people present in a town during the average workday. This helps illustrate the spending towns must do to meet the needs of people who work, but do not live, in that town, such as road maintenance and public safety needs. In municipalities with large inflows of workers, this measure of per-capita spending drops; bigger cities that act as regional job centers are most impacted. It is a fiscal challenge for these urban areas to provide the resources necessary to support a large inflow of workers while being unable to draw on these workers as an asset to their taxbase. In New Haven, the city with the largest net inflow of workers in the region, municipal spending in 2017 was well above the

regional average at \$4,572 per resident, but spending per daytime population was only \$3,189, below the regional average of \$3,694.²⁹⁷ [SEE FIG 4.1 /](#)

[SEE TABLE 4A](#)

Research has confirmed that disparities in towns' "municipal gap"—the difference between a town's costs of providing public services and its ability to pay for such services—are driven primarily by differences in revenue-raising capacity.²⁹⁸ Wealthier municipalities with greater tax-generating ability can afford to fund more high-quality public resources, while fiscally distressed municipalities may experience challenges in meeting the needs of their residents.²⁹⁹ Among most of Greater New Haven's Outer Ring towns, which generally have larger tax bases, this municipal gap becomes a surplus, with towns taking in more dollars per person in revenue than they need to spend; meanwhile, New Haven operates on a gap of more than \$1,100 per resident.³⁰⁰ There is a strong correlation between the size of a municipality's equalized net grand list per capita (an estimate of the market value of all taxable property per resident) and overall spending; even when they do not have high tax rates, towns with more taxable wealth are able to spend more money on resources for residents. In Greater New Haven, Outer Ring suburbs have higher equalized net grand lists; in 2017 Guilford, Madison, and Orange had equalized net grand lists per capita in excess of \$200,000, compared to between \$69,000 and \$101,000 in the Inner Ring towns and the city of New Haven.³⁰¹

Connecticut municipalities' reliance on property taxes to generate revenue is particularly troublesome for larger cities, many of which are home to a disproportionate number of tax-exempt state-owned and private properties, like hospitals and colleges.³⁰² For example, over 54 percent of New Haven's 2016 total grand list was tax-exempt—the highest share of any major city in Connecticut; to compare, this figure ranges between 6 and 8 percent in the region's towns with the highest equalized net grand lists per capita (Guilford, Madison, and Orange).³⁰³ While state payment in lieu of taxes (PILOT) grants were designed to partially reimburse municipalities for funds lost due to tax-exempt properties, these reimbursements have declined in recent years.^{304, 305} A 2017 report estimated that New Haven should have received \$107.2 million in PILOT reimbursements for tax-exempt hospitals and colleges based on

state statutory obligations for the 2015–16 fiscal year, but actually received only \$43.5 million—a \$63.7 million shortfall.³⁰⁶

Local property taxes play an important role in funding public schools; in Connecticut, 58 percent of all education funding comes from this source.³⁰⁷ Though spending per student varies widely, even among municipalities with similar populations, the state's wealthiest suburbs generally spend more per student than its largest cities.^{308, 309} In Greater New Haven, the city of New Haven spent above the regional average in 2017, at a similar level as the region's wealthier towns (but still below the level of spending in the state's wealthiest suburbs in Fairfield County). While the Inner Ring towns of West Haven and East Haven spent below the regional average, Hamden spent more per student than any town except Milford. While most towns in Greater New Haven spent at levels similar to the regional average (\$17,485), there were disparities between the extremes; for example, West Haven spent \$13,903 per student, while Milford spent over \$19,000.³¹⁰ [SEE FIG 4.1 /](#) [SEE TABLE 4A](#)

TABLE 4A

Municipal expenditures and financial capacity indicators

INDICATORS BY TOWN, GREATER NEW HAVEN, FY 2017

LOCATION	MUNICIPAL GAP OR SURPLUS PER CAPITA	EXPENDITURE PER DAYTIME POPULATION	EQ. NET GRAND LIST PER CAPITA	SCHOOL SPENDING PER PUPIL
Connecticut	N/A	\$3,816	\$150,956	\$16,592
Greater New Haven	N/A	\$3,694	\$122,562	\$17,485
Bethany	+\$183	\$5,473	\$151,991	\$18,246
Branford	+\$319	\$3,726	\$184,471	\$17,978
East Haven	-\$343	\$4,413	\$100,960	\$15,596
Guilford	+\$641	\$5,025	\$200,984	\$18,378
Hamden	-\$336	\$4,277	\$90,103	\$18,786
Madison	+\$1,145	\$4,959	\$231,330	\$18,094
Milford	-\$161	\$3,433	\$176,043	\$19,261
New Haven	-\$1,101	\$3,189	\$78,225	\$18,091
North Branford	+\$67	\$4,667	\$123,836	\$15,602
North Haven	+\$254	\$3,214	\$170,883	\$15,941
Orange	+\$247	\$3,780	\$201,609	\$17,941
West Haven	-\$750	\$3,498	\$68,586	\$13,903
Woodbridge	+\$467	\$5,837	\$186,448	\$17,726

Note: Other than municipal gap, values are given by fiscal year.

TABLE 4B

Perceived access to and quality of community resources

NEIGHBORHOOD ASSETS INDEX: SHARE OF ADULTS BY COMPONENT, AND COMPOSITE SCORE, GREATER NEW HAVEN, 2018

LOCATION	GOVERNMENT IS RESPONSIVE	GOOD TO RAISE KIDS	GOOD CONDITION OF PARKS	SAFE SIDEWALKS	SAFE BIKING	REC FACILITIES AVAILABLE	NEIGHBORHOOD ASSETS INDEX
Connecticut	51%	75%	75%	61%	63%	70%	556
GNH	48%	73%	70%	68%	70%	72%	553
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN							
Male	47%	72%	73%	70%	73%	75%	538
Female	49%	72%	70%	66%	67%	69%	556
Age 18–34	42%	66%	63%	73%	74%	73%	441
Age 35–49	48%	72%	69%	70%	70%	74%	540
Age 50–64	44%	73%	71%	62%	66%	72%	464
Age 65+	60%	80%	82%	66%	67%	69%	681
White	52%	79%	74%	64%	67%	72%	579
Black	31%	58%	62%	82%	77%	72%	367
Latino	42%	57%	60%	82%	73%	76%	431
Under \$30K	39%	57%	61%	75%	68%	65%	403
\$30K–\$100K	50%	74%	73%	72%	73%	73%	550
\$100K+	58%	82%	79%	59%	67%	76%	641
BY GEOGRAPHY							
New Haven	34%	45%	55%	85%	76%	74%	291
Inner Ring	42%	67%	65%	73%	69%	68%	468
East Haven	46%	76%	63%	63%	54%	62%	506
Hamden	53%	79%	80%	79%	85%	77%	616
West Haven	26%	54%	55%	74%	57%	66%	290
Outer Ring	62%	92%	81%	57%	66%	74%	699
Milford	59%	87%	80%	81%	76%	78%	712

Cities and towns with lower property values may be forced to levy higher property taxes to fund public education and other critical municipal programs and services. For example, based on the most updated mill rates for the 2019 fiscal year, the owner of a \$200,000 home would pay \$3,926 of property taxes in Madison, but \$6,017 in the city of New Haven.³¹¹ Nonetheless, research shows that the property tax has the largest impact on Connecticut households of any state or municipal tax and is indeed regressive, meaning low-income households pay a higher share of their incomes than wealthy households because assessed property value, rather than income level, determines the tax.³¹²

Perceived Access to and Quality of Community Resources

On the whole, Greater New Haven respondents to DataHaven's 2018 Community Wellbeing Survey indicated general satisfaction with the quality of and access to public resources while acknowledging room for improvement. When asked about the responsiveness of their local government, 48 percent of adults in Greater New Haven described it as "excellent" or "good," lower than the statewide average (51 percent).³¹³ When asked whether the area in which they lived was getting better or worse, 27 percent indicated that it was getting much or somewhat better, while 51 percent

reported that it was about the same.³¹⁴ Seventy percent rated the condition of public parks and other public recreational facilities as “excellent” or “good,” a few points below the state average.³¹⁵

Disaggregating survey results by respondents’ town and income levels reveals that wealthier individuals and residents of wealthier towns report greater access to and satisfaction with goods and services, cultural events, and recreational facilities in their communities.³¹⁶ [SEE FIG 4.2 / SEE TABLE 4B](#)

Food deserts, defined as areas where it is difficult to purchase fresh fruits, vegetables, and other healthful whole foods, typically occur in economically distressed urban areas.³¹⁷ The low-income people who live in those areas are less likely to have the car access needed to get to grocery stores across the region.³¹⁸ In 2018, only 58 percent of adults in both New Haven and West Haven reported good or excellent access to affordable, high-quality fruits and vegetables, contrasted with 83 percent of Hamden and 81 percent of Outer Ring adults.³¹⁹

Highlight: Public Libraries

Public libraries are invaluable anchor institutions that transcend their traditional role of lending books. While their utilization and functions vary greatly from community to community, they often act as centers for educational programming, incubators for entrepreneurs and ideas, hubs for technology and digital learning, and platforms for civic engagement and arts education and appreciation. Overall, library spending in Greater New Haven in fiscal years 2017 and 2018 averaged \$51 per resident—below the state average of \$60.³²⁰ However, some towns spent much less, while others spent more; Milford spent \$31 per capita, while Woodbridge spent \$109.³²¹

Towns that spend more on their libraries generally see higher use; in other words, towns with higher total library expenses per capita tend to experience more visits and have higher circulation per capita than lower-spending towns. For example, in 2017 and 2018, East Haven’s public library had 4.3 visits per capita and a circulation per capita of 3.0, while Woodbridge’s public library had 6.8 visits per capita and a circulation per capita of 15.8.³²² Greater New Haven’s Outer Ring suburbs spent \$56 per capita, compared to \$34 among Inner Ring towns; the higher-spending Outer Ring suburbs also saw slightly more library use than the Inner Ring towns. [SEE FIG 4.3](#)

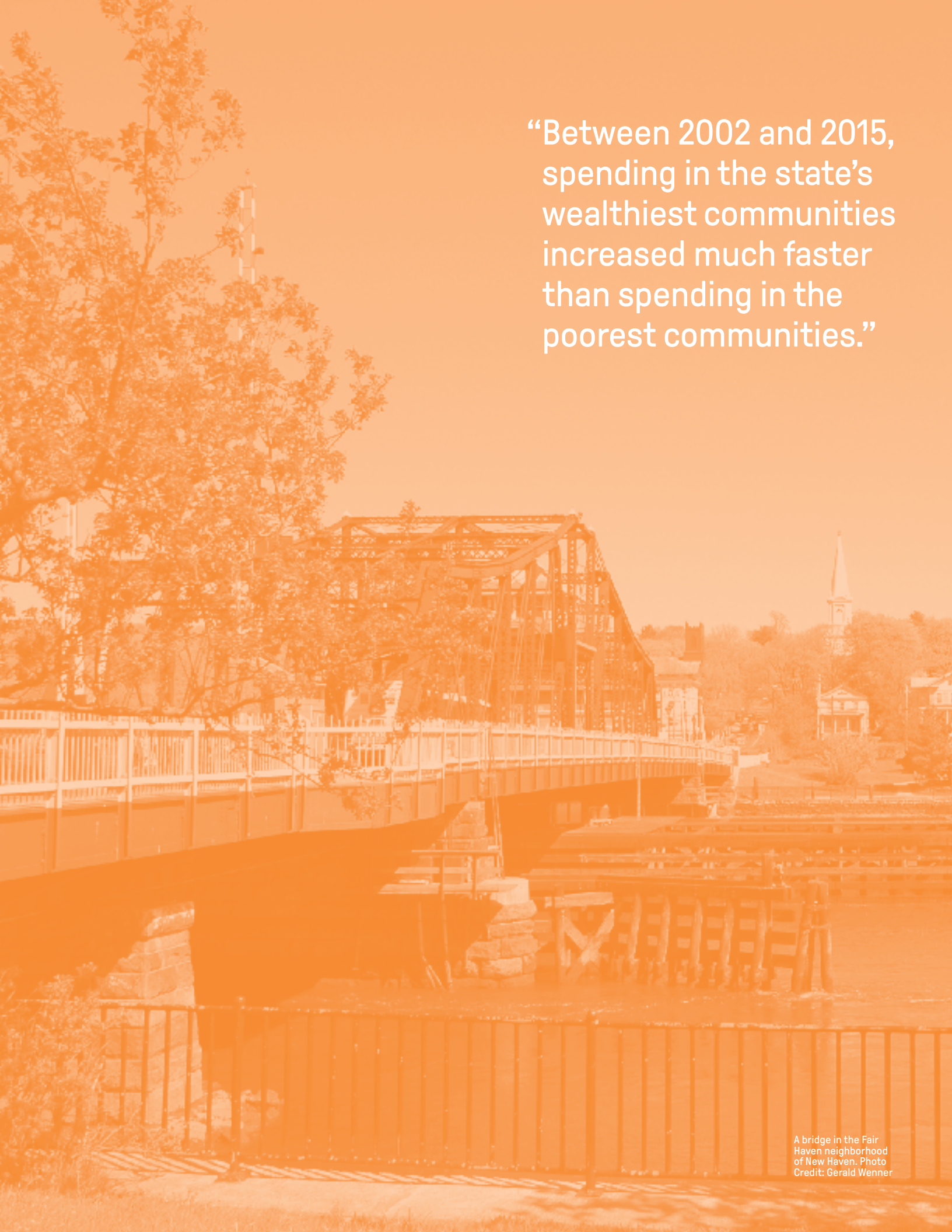
As libraries have evolved over the years, the way residents interact with and utilize them is changing; statewide, library circulation per capita has trended downward since the early 2000s, decreasing from averaging 8.5 in 2001 and 2002 to 6.7 in 2017 and 2018.³²³ For lower-income residents—less likely to own an internet connected device or have wifi access at home—library computers are a critical resource. In 2017 and 2018, Greater New Haven’s higher-spending Outer Ring towns had more public library computers available per 10,000 residents (10.6) than the region’s Inner Ring towns (5.6).³²⁴ The city of New Haven has made a strong investment in computers, with 17.4 available per 10,000 residents.³²⁵

Highlight: Climate Stewardship

Carbon dioxide and other greenhouse gas emissions, driven by human activity, are increasing global temperatures and thus contributing to issues that have major implications for Greater New Haven: damage to ecosystems, severe storms, extreme flooding, and more heat waves.³²⁶ One study projects that the average summer high temperature in New Haven in 2050 will be 85.8 degrees, an increase of 4.5 degrees since 2000.³²⁷

With a substantial shoreline, Greater New Haven is particularly vulnerable to the dangers of sea level rise, coastal storms, and flooding.³²⁸ Estimates suggest New Haven County’s “100-year flood height”—the level of flooding that statistically has a 1 percent chance of occurring any given year—is 5.8 feet above the high tide line.^{329, 330} The region is home to more than 15,062 residents that live in areas six feet or less above the high tide line, meaning their property would be at risk of exposure if a 100-year flood were to occur; an estimate puts the property value in this exposure zone at \$2.7 billion.³³¹ One risk model estimates a 49 percent chance of a 100-year flood that reaches 6 feet or more above the local high tide line in New Haven County occurring between 2016 and 2050.³³²

Looking at the bigger picture, efforts to address climate change should lead to changes that reduce emissions, such as more efficient housing, transportation, and land use. Currently, the estimated annual carbon footprint of each Greater New Haven household ranges from roughly 35 metric tons of emissions in the central areas of New Haven, to between 60 and 75 metric tons in Orange, Woodbridge, Bethany, Guilford, and Madison.³³³



“Between 2002 and 2015,
spending in the state’s
wealthiest communities
increased much faster
than spending in the
poorest communities.”

A bridge in the Fair
Haven neighborhood
of New Haven. Photo
Credit: Gerald Wenner



COMMUNITY TRUST AND APPRECIATION

At a fundamental level, civic trust helps to bridge divides and foster cooperation—conditions necessary for both political engagement and economic development; in fact, research has shown strong, positive correlations between regions' levels of civic trust and economic performance.^{334, 335} Higher levels of civic trust also lead to healthier and more cohesive communities, encouraging the growth of social organizations—some of which promote equitable access to much-needed local programs and services in education, transportation, community health, and recreation.

Overall, Greater New Haven adults report feelings of trust in one another, good relationships with friends and family, and appreciation for the communities in which they live. The 2018 DataHaven Community Wellbeing Survey showed that 83 percent of adults agreed that people in their neighborhood could be trusted, 69 percent usually or always receive the social support they need, and 82 percent were satisfied with where they live.³³⁶ Greater New Haven adults also indicated they felt safe in their communities, as 75 percent rated the job done by police to keep residents safe as excellent or good, and 67 percent felt safe walking in their neighborhoods at night—similar to statewide rates for both measures.³³⁷ However, about 60 percent of both Black and Latino adults in the region said local police are doing a good or excellent job, compared to 83 percent of white adults.³³⁸ This may stem from these communities' interactions with the police force: 23 percent of Black adults and 20 percent of Latino adults reported experiencing an unfair stop, search, or other incident of mistreatment by the police at least once, compared to only 8 percent of white adults.³³⁹ [SEE FIG 3.12 / SEE TABLE 4C](#)

Confidence in civic, nonprofit, and philanthropic organizations serving the area is another important aspect of community trust. Community philanthropy that supports locally driven development, strengthens community capacity and voices, builds on local resources, and holds itself accountable not only produces lasting results but also increases residents' trust in their community institutions.³⁴⁰

Highlight: Local News Coverage

Local news coverage is a vital tool for encouraging political participation and accountability. A growing body of literature has documented the effect of news coverage on measures of local civic trust and engagement. Areas with fewer local news outlets and declining coverage tend to have lower levels of civic participation and voter turnout.³⁴¹ Individuals who are more likely to volunteer, vote, and be active in their communities, are also more likely than less engaged residents to use and value local news.³⁴² Cities served by newspapers experiencing sharp declines in staffing see reduced political competition in mayoral elections.³⁴³ Additionally, declining local news coverage has been linked to a reduction in community political knowledge and participation, and ongoing research suggests that the closure of a local newspaper may actually increase cost of government due to reduced journalistic scrutiny of deals and spending.^{344, 345}

In recent years, local political news coverage has continued to diminish as the industry's revenue declines, with well over a thousand local newspapers being shuttered across the U.S. over the last 15 years.³⁴⁶ According to the 2018 Pew Research Center's Local News Survey, 89 percent of adults living in the New Haven-Milford MSA did not pay for local news during the past year.³⁴⁷ Only 67 percent of adults reported that they follow the local news very or somewhat closely.³⁴⁸

It is important to note that several new nonprofit digital journalism platforms are available in Connecticut. We can get an idea of the demand for local journalism in Greater New Haven by looking at data for usage of The Connecticut Mirror, a nonprofit media organization headquartered in Hartford that focuses on public policy and political issues in the state. Between July 2018 and July 2019, CT Mirror recorded over 205,000 readers in Greater New Haven, a 25 percent increase from the previous year.³⁴⁹

TABLE 4C

Community trust and appreciation

SHARE OF ADULTS, GREATER NEW HAVEN, 2018

LOCATION	SATISFIED W/ AREA	POLICE APPROVAL	SAFE WALKING AT NIGHT	TRUST NEIGHBORS	POSITIVE ROLE MODELS	RECEIVE SOCIAL SUPPORT
Connecticut	82%	78%	70%	85%	78%	71%
GNH	82%	75%	67%	83%	77%	69%
BY DEMOGRAPHIC WITHIN GREATER NEW HAVEN						
Male	82%	76%	71%	86%	76%	70%
Female	82%	75%	63%	81%	75%	70%
Age 18–34	83%	67%	64%	75%	70%	61%
Age 35–49	82%	74%	71%	81%	77%	64%
Age 50–64	82%	78%	73%	86%	77%	72%
Age 65+	84%	85%	62%	90%	82%	81%
White	84%	83%	72%	86%	81%	73%
Black	78%	60%	60%	70%	64%	61%
Latino	75%	59%	49%	71%	63%	57%
<\$15K	73%	57%	51%	67%	61%	58%
\$15K–\$30K	73%	59%	54%	68%	63%	59%
\$30K–\$50K	84%	73%	63%	77%	67%	61%
\$50K–\$75K	85%	78%	69%	86%	80%	64%
\$75K–\$100K	83%	79%	66%	88%	79%	68%
\$100K–\$200K	86%	83%	80%	90%	86%	82%
\$200K+	91%	90%	82%	89%	87%	90%
BY GEOGRAPHY						
New Haven	75%	52%	49%	67%	56%	64%
Inner Ring	79%	78%	66%	81%	71%	67%
East Haven	82%	85%	73%	86%	73%	71%
Hamden	83%	83%	71%	86%	78%	64%
West Haven	72%	67%	61%	76%	63%	67%
Outer Ring	89%	87%	80%	94%	88%	74%
Milford	85%	80%	79%	94%	86%	72%



PARTICIPATION
IN PUBLIC LIFE

Community and civic engagement can take many forms, from more commonly cited activities—like volunteering and voting—to the vast array of opportunities provided by arts and cultural events, community and school meetings, and religious organizations. As different as they may be, these forms of participation in public life arise from a shared sense of responsibility and belonging, as well as investment and ownership in the local, regional, national, and international communities to which residents belong.³⁵⁰ The quality of our communities, and our democracy, depend on participation and citizen engagement across the various dimensions of public life.³⁵¹

Opportunities for, and rates of, civic participation are impacted by socioeconomic status in both Connecticut and Greater New Haven; rates of volunteering, voting, and using cultural resources were lower for individuals with lower incomes and levels of educational attainment, indicating that structural inequalities may create obstacles to actively participating in public life.³⁵²

Volunteering

In 2018, 39 percent of Greater New Haven adults reported having volunteered in the past year, about equal to the state level.³⁵³ However, statewide data reveals that some residents volunteer more than others. As educational attainment and personal income increase, so do rates of volunteering. For example, only 29 percent of adults with a high school degree or less reported volunteering,

compared to 48 percent of those with a bachelor’s degree or higher; 27 percent of adults earning less than \$30,000 per year volunteered, compared to 54 percent of adults earning over \$100,000.³⁵⁴

The DataHaven Community Wellbeing Survey attempts to capture neighborhood engagement beyond formal volunteering; the survey asks about collective efficacy, such as whether people nearby are involved in trying to improve their neighborhood, and how likely it is that they would organize to prevent the closing of a local fire station.³⁵⁵ In 2018, 79 percent of Greater New Haven adults felt their neighbors were invested in improving the neighborhood, while 87 percent believed neighbors would organize to prevent the closing of a fire station.³⁵⁶ Though difficult to measure at the local level, “informal volunteering”—such as supporting family and friends or doing favors for neighbors—is also an important aspect of community life. According to the Corporation for National and Community Service, in 2018, national rates for these activities were 43 percent and 51 percent, respectively.³⁵⁷

Arts and Culture

Community-based arts and cultural resources serve as venues for creativity, innovation, dissent, and dialogue; nurture cultural movements; cultivate public imagination; and drive and inspire authentic civic engagement. From film festivals to theatre groups and museums, these assets provide opportunities for bringing together diverse groups of people and building social capital—both between people and across organizations, like block associations, civic groups, congregations, and political and business groups.³⁵⁸ By providing the physical and experiential space for people to

TABLE 4D
Participation in public life
SHARE OF ADULTS, GREATER NEW HAVEN, 2018

LOCATION	VOLUNTEER	UTILIZE ARTS & CULTURAL RESOURCES	NEIGHBORS INVOLVED IN IMPROVING AREA	NEIGHBORS WOULD ORGANIZE FOR FIRE STATION	CAN INFLUENCE LOCAL GOVERNMENT
Connecticut	41%	64%	77%	84%	72%
Greater New Haven	39%	67%	79%	87%	73%
New Haven	43%	68%	71%	81%	69%
Inner Ring	16%	63%	72%	90%	65%
Outer Ring	45%	69%	86%	87%	79%

TABLE 4E

Recent voter turnout

SHARE OF ELIGIBLE VOTERS VOTING IN 2016, 2017, AND 2018 ELECTIONS

LOCATION	2018 MIDTERM	2017 MUNICIPAL*	2016 PRESIDENTIAL
Connecticut	65%	30%	77%
Greater New Haven	67%	31%	73%
New Haven	58%	21%	54%
Inner Ring	66%	34%	80%
East Haven	60%	42%	75%
Hamden	75%	31%	85%
West Haven	59%	32%	78%
Outer Ring	71%	34%	81%
Milford	67%	28%	78%

* Unofficial Results: note, only towns holding November municipal elections were included in these rates.

connect, build trust, and cultivate understanding, local arts and cultural resources act as platforms for public dialogue and engagement—critical elements of a healthy democracy.³⁵⁹

Research has shown access to arts and culture fosters stewardship, participation, and civic trust. People who partake in the arts and cultural activities were 12 percent more likely to donate money to a local organization, 14 percent more likely to attend local events, and 21 percent more likely to rate local leaders as effective.³⁶⁰ In 2018, 67 percent of Greater New Haven adults utilized arts and cultural resources in the area—such as concerts, museums and cultural events—at least a few times over the past year, which was similar to the statewide rate.³⁶¹ As with volunteering, statewide data show that individuals with higher levels of educational attainment and personal income utilize arts and cultural resources more often: 51 percent of adults with a high school degree or less compared to 70 percent with a bachelor's degree or higher, and 56 percent of individuals earning less than \$30,000 per year versus 70 percent of those earning above \$100,000.³⁶²

Voting

As is the trend nationally, voter turnout in Greater New Haven varies by type of election, with greater turnout for higher-office elections. The region's turnout rate was 73 percent in the 2016 presidential election, 67 percent in the 2018

midterm election, and only 31 percent in the 2017 municipal election.³⁶³ These rates were similar to the statewide marks, and higher than national levels. In Greater New Haven, turnout for the 2016 presidential election increased only slightly from that in 2012, while turnout for the 2018 midterm election was 14 percentage points higher than for the 2014 midterms.³⁶⁴ Nationally, turnout in the 2018 midterms was the highest in four decades, reversing a trend of declining interest in midterm elections and likely reflecting the tumultuous political landscape following the 2016 presidential election.³⁶⁵ But turnout in local elections has continued to trend downward in both the state and Greater New Haven over time. In the 2007 municipal elections, 41 percent of registered Greater New Haven residents cast a ballot—10 percentage points higher than turnout for the 2017 municipal election a decade later.³⁶⁶ [SEE FIG 4.4 / SEE TABLE 4E](#)

Town-level voter turnout rates reinforce the finding that socioeconomic status affects participation in public life. Across the three most recent major elections, turnout rates were lowest in the city of New Haven, near or above the Greater New Haven average in the Inner Ring, and highest in the Outer Ring. New Haven's recent voter turnout rates were 58 percent in the 2018 midterm, 21 percent in the 2017 municipal elections, and 54 percent in the 2016 presidential election. Meanwhile, recent turnout rates for Outer Ring suburbs were higher, at 71 percent, 34 percent, and 81 percent, respectively.³⁶⁷ Low voter turnout is driven by a range of factors, including a lack of basic information on elections, distance to polling stations and hours of operation, inflexible work schedules, limited transportation, and other barriers that disproportionately affect economically distressed communities and communities of color.

Between 2015 and 2018, Greater New Haven adults' perceived ability to influence local government decisionmaking increased substantially, a trend also seen statewide. The share of residents believing they had at least a little influence on local government increased by 11 percentage points—from 62 percent to 73 percent for Greater New Haven (and from 62 percent to 70 percent statewide).³⁶⁸ This jump may reflect the recent surge in political energy and interest across the nation, and particularly among younger voters; voter turnout for adults ages 18 to 29 increased a whopping 79 percent between the 2014 and 2018

midterm elections nationwide.³⁶⁹ Similarly, the share of Greater New Haven residents ages 18 to 34 who felt they had at least a little influence on local government increased 17 percentage points between 2015 and 2018 to 75 percent.³⁷⁰

Highlight: Community Design

The design of neighborhoods and public spaces impacts residents' civic health. Cycling, walking, and access to nature and green spaces are all connected to civic trust and participation; urban parks are particularly important, as they promote inclusion and strengthen social networks across diverse groups of people.^{371, 372} Individuals residing in walkable neighborhoods report higher levels of civic trust and participation, while those with access to parks and green space are more likely to trust their neighbors and believe community members are willing to help one another.^{373, 374}

Research has shown that even the presence of a community garden in easy walking distance is associated with increased participation in public life and more informed local voting.³⁷⁵ Access to well-maintained green spaces, safe sidewalks, and quality cycling infrastructure are positively associated with many indicators that promote well-being, like increased physical activity, lower levels of stress, stronger social connections, and even reduced mortality.^{376, 377, 378, 379} Investment in well-designed and equitable communities is not simply about making neighborhoods more visibly desirable, but about using the built environment as a tool to deliver increased well-being to residents. **DH**

“The 2018 DataHaven Community Wellbeing Survey showed that 83 percent of Greater New Haven adults agreed that people in their neighborhood could be trusted.”



A festival on the New Haven Green. Photo Credit: Judy Sirota Rosenthal

CHAPTER 5

Conclusion and Endnotes

Behind every number in this document are people, families, and communities that are far more complex than a few summary statistics. Human beings never match all the averages used to describe them.

Data can help us tell stories, but they cannot tell complete stories on their own.

THE 2020 CENSUS

- “With \$10.7 billion dollars in annual federal funding to the state on the line, an accurate count of the people living in Connecticut is crucial.”
Susan Bysiewicz, Lieutenant Governor of Connecticut
 - “The Constitution requires that every ten years, the nation undertakes what is arguably its most essential task: ensuring a fair and valid count of every single one of its now 330 million residents.... The products of these efforts are data sets that characterize our population, create political districts, and enable virtually all other ongoing data collection efforts.”
Aparna Nathan and Mark Abraham, DataHaven. (2017, October 2). At Risk: Fair and Valid Census Data for Connecticut. *The Connecticut Mirror*.
-

Conclusion

Connecticut is changing: our population is growing older and more diverse, our neighborhoods are becoming more stratified, our coastline faces rising sea levels. Data help us understand these changes, and increased data literacy brings more people and new approaches into that work. But the undercurrents of inequality and segregation that define much of life in Connecticut are not absolute. Our neighborhoods are always more than just two-dimensional places of either never-ending hardship or trouble-free affluence. Our attempts at presenting a more nuanced view are nowhere near perfect. Any researchers, ourselves included, have blindspots that influence what we prioritize and what we leave out of our analysis.

Data are never truly objective, either. They might help identify patterns and connect bits of information, but every decision that goes into how data are defined, measured, interpreted, and acted upon is subject to the same bias we know exists in our society. In a time of climate change denial, re-politicization of the Census, and fake news—both the accusation used to deflect criticism and the actual, webclick-optimized phenomenon—dry facts are not enough in pushing for a more just, equitable, and sustainable society.

Data are even used in ways that deepen inequality. Mortgage approvals and bail amounts are made by black-box algorithms that their subjects do not even know about. Data tools, such as the Constitutionally-mandated Census count or the geographical demarcation of where you vote and how much your vote matters, can be used to include and support people, or to render them uncouneted, unheard, and invisible. The fact that data can be used in these ways shows just how powerful they can be, and why it is important to understand that social prejudice is often reflected in something presented as impartial.

Our hope is that you will help make this document more whole. Critique it. Find its blind spots, take its conclusions in different directions, and use it to think more critically about the world around you. Share an interesting fact you read here with your neighbor, and see how you might both relate to it differently. Fill in the gaps between data points with your stories. Work with neighbors to help ensure a more equitable and complete population count during the 2020 Census.

Above all, not everything important can be measured. Take what is on the pages here and bring it to life and to action. **DH**

SECTION 1. NOTES ON FIGURES AND TABLES

GENERAL NOTE ON DATAHAVEN COMMUNITY WELLBEING SURVEY

One of the major sources used in this report is the DataHaven Community Wellbeing Survey (CWS). This survey was most recently carried out from March to November 2018, during which 16,000 randomly-selected adults were interviewed, including residents from all 169 towns in Connecticut; the 2015 iteration had a similar sample size and scope. Questions on the CWS are compiled from local, national, and international sources and best practices, and are developed with input from an advisory committee of leading experts in survey research. All reported CWS estimates are weighted in order to accurately represent the underlying adult population within each region, town, or neighborhood. For more information and crosstabs of data, see <https://ctdatahaven.org/reports/datahaven-community-wellbeing-survey>

GENERAL NOTE ON GEOGRAPHY

Greater New Haven is made up of 13 towns within New Haven County: Bethany, Branford, East Haven, Guilford, Hamden, Madison, Milford, New Haven, North Branford, North Haven, Orange, West Haven, and Woodbridge. Within this, we often compare New Haven to its Inner Ring suburbs (East Haven, Hamden, and West Haven) and its Outer Ring suburbs (Bethany, Branford, Guilford, Madison, Milford, North Branford, North Haven, Orange, and Woodbridge). When possible, we also highlight larger individual towns, often New Haven, the Inner Ring towns, and Milford.

Analysis of U.S. Census Bureau public use microdata sample (PUMS) data is done for combinations of public use microdata areas (PUMAs), the smallest geographic unit for which PUMS data is available. No combination of PUMAs line up with the town boundaries of Greater New Haven exactly. Instead, we use a proxy of the Connecticut PUMAs with FIPS codes 00903, 00904, 00905, and 00906. This proxy adds the nearby towns of Ansonia, Derby, and Seymour, and loses the Greater New Haven town of North Haven, but is demographically similar enough to the 13-town Greater New Haven region used elsewhere.

Chapter 1

FIG 1.1. COMPONENTS OF THE DATAHAVEN COMMUNITY INDEX, 2017

DataHaven analysis (2019). The 12 indicators used in the Community Index include: (1) Opportunity youth, or the share of people ages 16 to 19 who are neither in school nor working, (2) the unemployment rate, (3) the overall poverty rate, (4) the share of children ages 0 to 5 living in poverty, (5) the share of adults with a high school education or more, (6) the share of people with health insurance, (7) severe housing cost burden, or the share of households paying 50 percent or more of their income towards housing costs, (8) the share of three- and four-year-olds enrolled in preschool, (9) average life expectancy, (10) the share of workers whose commutes are 30 minutes or less, (11) youthful workforce, or the share of the population ages 25 to 44, and (12) median household income.

The Community Index assigns each of the 12 component indicators a relative value from 0 to 1,000, where 1,000 is assigned to the best/preferred outcome. In other words, the value is generated relative to the areas with the highest and lowest indicator values. This helps to control for the different distributions of each indicator, but may exaggerate the effect of outliers. Colors indicate how each area ranks relative to other locations in the analysis as better or worse than average. Data tables contain “N/A” where information is not available. In addition to major geographic regions, the larger towns or regions with the best and worst values are displayed to the right of the chart.

Because the data used for these indicators are available at different geographic levels nationwide, local neighborhoods, towns, and regions in Connecticut were compared not just to each other, but to U.S. averages and metropolitan areas. [SEE FIG 1.2 FOR DETAILS ON METROPOLITAN AREAS](#)

Data are from two main sources: The National Center for Health Statistics, U.S. Small-Area Life Expectancy Estimates Project (USALEEP): Life Expectancy Estimates Files, 2010–2015, and U.S. Census Bureau American Community Survey (ACS) 2012 and 2017 5-year estimates, Tables B01001, Sex by Age; B08303, Travel Time to Work; B14003, Sex by School Enrollment by Type of School by Age for the Population 3 Years and Over; B14005, Sex by School Enrollment by Educational Attainment by Employment Status for the Population 16 to 19 Years; B15001, Sex by Age by Educational Attainment for the Population 18 Years and Over; B17001, Poverty Status in the Past 12 Months by Sex by Age; B18135, Age by Disability Status by Health Insurance Coverage Status; B19001, Household Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars); B19013, Median Household Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars); B19127, Aggregate Family Income in the Past 12 Months (in 2017 Inflation-

Adjusted Dollars); B23025, Employment Status for the Population 16 Years and Over; B25070, Gross Rent as a Percentage of Household Income in the Past 12 Months; B25091, Mortgage Status by Selected Monthly Owner Costs as a Percentage of Household Income in the Past 12 Months. ACS tables available at <https://factfinder.census.gov>. USALEEP data available at <https://www.cdc.gov/nchs/nvss/usaleep/usaleep.html>.

Life expectancy is a prediction of the number of years a person born today might expect to live given the mortality rate among all age groups in the area in which they are born. Because of the interrelated nature of health and socioeconomic status, life expectancy can be understood as a measure of health and a measure of social well-being. The latest available data for life expectancy covers the period from 2010 to 2015 and is summarized here as the population-weighted average life expectancy for each geographic area based on the census tracts within that area. [SEE FIG 3.1 FOR MORE GRANULAR ANALYSIS OF LIFE EXPECTANCY DATA](#)

The Community Index uses Census ACS estimates for health insurance coverage to allow for nationwide comparisons at many geographic levels. Elsewhere in this report, health insurance coverage is reported from the DataHaven Community Wellbeing Survey.

The average (mean) of the 12 scaled indicators represents the area's Community Index score. Five-year averages for 2008–2012 and 2013–2017 were used because they represent non-overlapping estimate ranges; only the 2013–2017 values are shown in figures. [SEE TABLE 1A FOR 2008–2012 VALUES](#)

FIG 1.2. COMPOSITE SCORE OF THE DATAHAVEN COMMUNITY INDEX BY AREA, 2017

[SEE FIG 1.1 FOR METHODOLOGY BEHIND THE COMMUNITY INDEX](#) Metropolitan areas are defined by the federal Office of Management and Budget. While metropolitan areas from around the country were used in ranking values, only those in New England states with at least 300,000 people, and New York, NY, are displayed here.

Within New Haven, Census tracts were clustered into neighborhood groups, with New Haven lower-income neighborhoods as tracts 140200, 140300, 140400, 140500, 140600, 140700, 141300, 141400, 141500, 141600, 142300, 142400, 142500, and 142601; and New Haven other neighborhoods as tracts 140100, 140800, 140900, 141000, 141100, 141200, 141800, 141900, 142000, 142100, 142200, 142603, 142604, 142700, 142800, 361401, and 361402. Index components were then calculated for these clusters with the same methods as for towns and other regions. All tracts are within New Haven County (FIPS code 09009).

FIG 1.3. COMPONENTS OF THE DATAHAVEN COMMUNITY INDEX BY RACE/ETHNICITY, 2017

SEE FIG 1.1 Many American Community Survey subtables are available for individual racial/ethnic groups; these were used to calculate Community Index indicators by race/ethnicity. For indicators not available through American Community Survey tables (severe housing cost burden, and the share of workers with short commutes), additional DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year public use microdata sample (PUMS) data was conducted. Analysis of PUMS data involves weighting survey responses to reflect overall population demographics. For life expectancy, results are reported as the population-weighted life expectancy for tracts by racial/ethnic group comprising the largest share of population in that tract. Due to low sample sizes, age ranges for preschool enrollment differ between population-level tables and subtables. Since the two are not comparable, that indicator is removed from this Index.

PUMS data accessed via IPUMS. Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas and Matthew Sobek. IPUMS USA: Version 9.0 2013–2017 ACS 5-year Census microdata. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D010.V9.0>

FIG 1.4. DATAHAVEN PERSONAL WELLBEING INDEX VS COMMUNITY INDEX; DATAHAVEN PERSONAL WELLBEING INDEX VS NEIGHBORHOOD ASSETS INDEX

SEE FIG 1.1 FOR COMMUNITY INDEX DETAILS / SEE TABLE 1C FOR PERSONAL WELLBEING INDEX DETAILS The Neighborhood Assets Index is an aggregate of 2018 DataHaven Community Wellbeing Survey participants' positive ratings on 6 indicators about the area where they live: (1) condition of local parks, (2) quality of the area as a place to raise children, (3) responsiveness of local government, (4) availability of recreation facilities, and the presence of (5) safe places to bike and (6) safe sidewalks and crosswalks. Likert-style responses (e.g. "excellent," "good," "fair," "poor") were converted to scaled numeric values, averaged, and used for factor analysis to get a single composite score for each location and demographic group. These scores were then scaled to range from 0 (lower ratings of assets) to 1,000 (higher ratings of assets).

SEE TABLE 4B

TABLE 1A. DATAHAVEN COMMUNITY INDEX SCORES FOR LARGE U.S. METROPOLITAN AREAS AND LOCAL CITIES, TOWNS, AND NEIGHBORHOODS, 2012 AND 2017

SEE FIG 1.1 FOR METHODOLOGY AND DETAILS

The top-ranking 35 metropolitan areas are reported, along with the seven bottom-ranking areas and select areas in New England. Metropolitan areas' boundaries change periodically, most recently in 2015. This analysis considers all U.S. metropolitan areas using 2015 geographic boundaries with populations of at least 500,000 in 2017.

TABLE 1B. DATAHAVEN COMMUNITY INDEX AND ITS COMPONENTS BY AREA AND NEIGHBORHOOD, 2017

SEE FIG 1.1

TABLE 1C. DATAHAVEN INDEX SCORES BY DEMOGRAPHIC GROUP AND TOWN, 2017

DataHaven analysis (2019) of questions from 2018 DataHaven Community Wellbeing Survey. The Personal Wellbeing Index is an aggregate of survey participants' positive ratings on four indicators about their health: (1) current anxiety, (2) current happiness, (3) satisfaction with their life, and (4) overall self-rated health. Likert-style responses (e.g. "excellent," "very good," "good," "fair," "poor") were converted to scaled numeric values, averaged, and used for factor analysis to get a single composite score for each location and demographic group. These scores were then scaled to range from 0 (lower ratings of health) to 1,000 (higher ratings of health).

Chapter 2

FIG 2.1. POPULATION AND CHANGE BY AGE GROUP, 1990–2035

DataHaven analysis (2019). 1990 and 2000 figures are from the U.S. Census Bureau Decennial Census; for 1990, SF1 Table P11; and for 2000, SF1 Table P12, Sex by Age. 2015 figures are from U.S. Census Bureau American Community Survey 2015 5-year estimates Table B01001. 1990 figures accessible via Census Data API; all other above tables available at <https://factfinder.census.gov>. 2035 projected figures are from the Connecticut State Data Center (2017) 2015–2040 Population Projections—Town Level. Available at <https://data.ct.gov/resource/hxnh-2e3k>

FIG 2.2. POPULATION BY AGE AND RACE, 2010

DataHaven analysis (2019) of U.S. Census Bureau Decennial Census SF1 Table P12; and subtables P12B, Sex by Age (Black or African-American Alone); P12H, Sex by Age (Hispanic or Latino); and P12I, Sex by Age (White Alone, not Hispanic or Latino). Available at <https://factfinder.census.gov>

FIG 2.3. NON-WHITE SHARE OF POPULATION, 1990–2017

DataHaven analysis (2019). 1990 figures are from U.S. Census Bureau Decennial Census SF1 Tables P1 and P8, accessible via Census Data API. 2017 figures are from U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B03002, Hispanic or Latino Origin by Race. Available at <https://factfinder.census.gov>

FIG 2.4. FOREIGN-BORN SHARE OF POPULATION, 1990 AND 2017

DataHaven analysis (2019). 1990 figures are from U.S. Census Bureau Decennial Census SF3 Table P42, accessible via Census Data API. 2017 figures are from U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B05001, Nativity and Citizenship Status in the United States. Available at <https://factfinder.census.gov>

FIG 2.5. FOREIGN-BORN SHARE OF POPULATION, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B05001. Available at <https://factfinder.census.gov>

FIG 2.6. HOUSEHOLDS BY TYPE, 1990–2017

DataHaven analysis (2019). 1990 and 2000 figures are from the U.S. Census Bureau Decennial Census; for 1990, SF1 Table P16; and for 2000, SF1 Table P18, Household Size, Household Type, and Presence of Own Children. 2010 and 2017 figures are from U.S. Census Bureau American Community Survey 2010 and 2017 5-year estimates Tables B11001, Household Type (Including Living Alone); and B11003, Family Type by Presence and Age of Own Children Under 18 Years. 1990 figures accessible via Census Data API; all other above tables available at <https://factfinder.census.gov>

FIG 2.7. LOW-INCOME RATE BY AGE, 2000–2017

DataHaven analysis (2019). 2000 figures are from U.S. Census Bureau Decennial Census SF3 Tables P88, Ratio of Income in 1999 to Poverty Level; and PCT50, Age by Ratio of Income in 1999 to Poverty Level. U.S. Census Bureau American Community Survey 2017 5-year estimates, Tables B17024, Age by Ratio of Income to Poverty Level in the Past 12 Months; and C17002, Ratio of Income to Poverty Level in the Past 12 Months. Available at <https://factfinder.census.gov>. As described in the report text, “low-income” is defined here as individuals living in households where the household income is less than twice (200 percent of) the federal poverty level.

FIG 2.8. MEDIAN HOUSEHOLD INCOME BY TOWN, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B19013. Available at <https://factfinder.census.gov>

FIG 2.9. MEDIAN HOUSEHOLD INCOME BY QUANTILE, 2016

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2016 5-year public use microdata sample (PUMS) data. Analysis of PUMS data involves weighting survey responses to reflect overall population demographics. Values shown here represent the 20th, 50th (median), 80th, and 95th percentiles of total household incomes. [SEE NOTE ON GEOGRAPHY AT THE BEGINNING OF THIS SECTION](#) PUMS data accessed via IPUMS. Ruggles et al. 2012–2016 ACS 5-year Census microdata.

FIG 2.10. MEDIAN INCOME OF FULL-TIME ADULT WORKERS, 2016

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2016 5-year public use microdata sample (PUMS) data. Analysis of PUMS data involves weighting survey responses to reflect overall population demographics. To enable comparison between groups, as well as comparison with other related analyses, adults here are filtered to only include those ages 25 and over working full-time. In this and other analyses, we define full-time workers as workers with positive earnings who, over the previous 12 months, were employed at least 50 weeks

and worked an average of at least 35 hours per week. Median income is defined as each group's median earnings from work, excluding other non-work sources of income. [SEE FIG 2.9 FOR DETAIL ON CONSTRUCTION OF GEOGRAPHIES FOR PUMS ANALYSIS](#)

PUMS data accessed via IPUMS. Ruggles et al. 2012–2016 ACS 5-year Census microdata.

FIG 2.11. DISTRIBUTION OF POPULATION BY NEIGHBORHOOD INCOME LEVEL, 1980–2017

DataHaven analysis (2019) of household income and population data by census tract. Due to changes in census tract boundaries over time, in order to allow comparability to current census tract data, the 1980, 1990, and 2000 figures from the U.S. Census Bureau Decennial Census are provided by Neighborhood Change Database (NCDB) created by GeoLytics and the Urban Institute with support from the Rockefeller Foundation (2012), a dataset that is designed to hold neighborhood-level geographic boundaries constant over time. 2017 values are calculated from U.S. Census Bureau American Community Survey 2017 5-year estimates Tables B01003, Total Population; B19101, Family Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars); and B19127. Available at <https://factfinder.census.gov>. Neighborhood income categories are determined by comparing average family income by census tract to the state average family income, using ratios described in table. The percent of total population living in each neighborhood income category is compared across decades to illustrate change in neighborhood inequality. [SEE TABLE 2D FOR DEFINITIONS OF INCOME BRACKETS](#)

FIG 2.12. MEDIAN HOUSEHOLD INCOME, 1990–2017

DataHaven analysis (2019). 1990 figures come from U.S. Census Bureau Decennial Census SF3 Table P80A, accessible via Census Data API. 2017 figures are from U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B19013. Available at <https://factfinder.census.gov>. Inflation adjustment for 1990 incomes was done using the Bureau of Labor Statistics' Consumer Price Index, Urban Consumers, Research Series (CPI-U-RS), available at <https://www.bls.gov/cpi/research-series/home.htm>

FIG 2.13. MEDIAN HOUSING VALUE BY TOWN, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B25077, Median Value (Dollars). Available at <https://factfinder.census.gov>

FIG 2.14. COST-BURDEN AND SEVERE COST-BURDEN RATES BY TENURE, 2005–2017

DataHaven analysis (2019). All figures are from U.S. Census Bureau American Community Survey. 2005 values are from Tables B25070 and B25091. 2010 and 2015 figures are from 5-year estimates, Tables B25074, Household Income by Gross Rent as a Percentage of Household

Income in the Past 12 Months; and B25091. Available at <https://factfinder.census.gov>

2005 ACS data is only available for the largest towns in Connecticut; as such, values here are for New Haven County for each year shown.

FIG 2.15. MEDIAN RENTER HOUSEHOLD INCOME AND MINIMUM HOUSEHOLD INCOME TO AFFORD 2BR HOUSING, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Tables B25031, Median Gross Rent by Bedrooms; B25042, Tenure by Bedrooms; and B25119, Median Household Income the Past 12 Months (in 2017 Inflation-Adjusted Dollars) by Tenure. Available at <https://factfinder.census.gov>. For comparison, we only studied two-bedroom apartments, both for median rent and median household income. Because some towns have few renters, leading to larger margins of error, values were filtered to only include towns with relatively small margins of error compared to median rent and where at least 20 percent of households were renter-occupied. Rent is considered affordable based on Federal Department of Housing and Urban Development (HUD) guidelines that housing costs total no more than 30 percent of a household's total income. We calculated the minimum household income needed for the median rent of a two-bedroom apartment to be affordable under this guideline, and consider the shortfall to be the difference between this minimum household income and the median income of a renter household in a two-bedroom apartment.

See also HUD, “Defining Housing Affordability,” <https://www.huduser.gov/portal/pdredge/pdr-edge-featd-article-081417.html>

FIG 2.16. HOMEOWNERSHIP RATE BY HISTORIC REDLINING GRADE, 2010

DataHaven analysis (2019). To calculate current demographics data of areas by HOLC grade, we used digitized versions of historical HOLC maps from Mapping Inequality [SEE REFERENCE BELOW](#) and overlaid these shapefiles with shapefiles of current blocks from U.S. Census Bureau TIGER/Line shapefiles, available at <https://www.census.gov/programs-surveys/geography/geographies/mapping-files.html>. We then aggregated 2010 Decennial Census data, the most recent data available at the block level, for each of these graded areas. Homeownership data comes from U.S. Census Bureau 2010 Decennial Census SF1 Table H4, Tenure, available at <https://factfinder.census.gov>. [SEE FIG 2.18 FOR LOCAL RECREATION OF HOLC MAPS](#)

See Robert K. Nelson, LaDale Winling, Richard Marciano, Nathan Connolly, et al., “Mapping Inequality,” American Panorama, ed. Robert K. Nelson and Edward L. Ayers, available at <https://dsl.richmond.edu/panorama/redlining>

FIG 2.17. WHITE SHARE OF POPULATION BY HISTORIC REDLINING GRADE, 2010

DataHaven analysis (2019) of U.S. Census Bureau 2010 Decennial Census SF1 Table P5, Hispanic or Latino Origin by Race, available at <https://factfinder.census.gov>; and Nelson, et al. Mapping Inequality. White population is defined as non-Hispanic white residents of each area. [SEE FIG 2.16 FOR SPATIAL ANALYSIS METHODOLOGY / SEE FIG 2.18 FOR LOCAL RECREATION OF HOLC MAPS](#)

FIG 2.18. HOLC REDLINED AREAS, 1937

DataHaven recreation of Robert K. Nelson, LaDale Winling, Richard Marciano, Nathan Connolly, et al., "Mapping Inequality," American Panorama, ed. Robert K. Nelson and Edward L. Ayers, available at <https://dsl.richmond.edu/panorama/redlining>

FIG 2.19. NET INFLOW OF WORKERS BY TOWN AND WAGE, 2015

DataHaven analysis (2019) of U.S. Census Bureau Longitudinal Employer-Household Dynamics (LODES) to construct a directional network of workers moving between pairs of towns in the region. LODES data reports the census block in which workers live and the census block in which they are employed, though employer locations are based on the location of payroll and other financial offices, rather than physical place of employment. Presumably, workers work in the same town as the financial office that represents the employer. The analysis includes people who 1) both live and work in Connecticut; 2) live in New York, New Jersey, Rhode Island, Massachusetts, or Pennsylvania but work in Connecticut; or 3) live in Connecticut but work in New York, New Jersey, Rhode Island, Massachusetts, or Pennsylvania. This should capture most workers with interstate commutes, but may miss small numbers of people working remotely and either living or working in Connecticut. In this analysis, high-wage jobs are those paying more than \$3,333 per month, or \$39,996 annually, while low-wage jobs are those paying \$39,996 or less annually. Block-level LODES files are available at <http://lehd.ces.census.gov/data>

FIG 2.20. NUMBER OF JOBS BY SECTOR, 2000–2017

DataHaven analysis (2019) of U.S. Census Bureau Quarterly Workforce Indicators, available at <http://qwexplorer.ces.census.gov> at the county level. Industries are categorized based on the North American Industry Classification System (NAICS); those shown are sectors in which there were an average of at least 10,000 workers in the region in 2017. Job trends displayed are actually quarterly counts adjusted with the LOESS method to show changes within years while smoothing out sharp fluctuations. In a few cases, quarterly counts were unavailable and thus annual averages were not reported; in these cases, annual values are the mean of that year's available quarters. Numbers shown at

each endpoint are their respective years' annual averages, not quarterly counts. QWI data is only available at county levels; therefore, numbers here are for all of New Haven County.

FIG 2.21. COUNT OF K–12 STUDENTS BY RACE, PER 100 STUDENTS, 2018–2019

DataHaven analysis (2019) of 2018–2019 school year enrollment data from the Connecticut State Department of Education, accessed via EdSight at <http://edsight.ct.gov>. For this and other indicators based on public school districts, regional districts were included as parts of regions to which their sending towns belong; in some cases, these towns also run their own districts for elementary school, but send middle and/or high school students to the regional district. Greater New Haven values include Regional School District 5, commonly known as Amity and comprised of middle and high school students from the towns of Bethany, Orange, and Woodbridge.

FIG 2.22. PERCENTAGE OF STUDENTS SUSPENDED OR EXPELLED AT LEAST ONCE, K–12 DISTRICTS, 2017–2018

DataHaven analysis (2019) of 2017–2018 school year discipline data from the Connecticut State Department of Education, accessed via EdSight at <http://edsight.ct.gov>. Numbers here represent the share of students who have been suspended (in-school or out-of-school) or expelled in the past school year, not deduplicated suspension rates. [SEE FIG 2.21 FOR DETAILS ON REGIONAL DISTRICTS](#)

FIG 2.23. SHARE OF PUBLIC K–12 STUDENTS MEETING ACHIEVEMENT MEASURES, 2017–2018

DataHaven analysis (2019) of data from the Connecticut State Department of Education, accessed via EdSight at <http://edsight.ct.gov>. Graduation rates presented are four-year cohort graduation rates, giving the percentage of students in the graduating class of 2017 who earned a high school diploma alongside the cohort with which they started 9th grade. A student is considered chronically absent if they miss at least 10 percent of the school days for which they were enrolled in a year for any reason; the chronic absenteeism rate is then the percentage of enrolled students who are chronically absent in a year. The Smarter Balanced Assessment Consortium (SBAC) standardized test is the Common Core-aligned test used in Connecticut since 2015 for both English/language arts (ELA) and math. Students are considered to pass a test if they score as meeting or exceeding grade-level goals; proficiency rates here are the share of students taking each test who passed. Chronic absenteeism and SBAC proficiency rates are from the 2017–2018 school year. [SEE FIG 2.21 FOR DETAILS ON REGIONAL DISTRICTS](#)

FIG 2.24. NUMBER AND SHARE OF STUDENTS ENROLLING IN, PERSISTING IN, AND GRADUATING FROM COLLEGE

DataHaven analysis (2019) of data from the Connecticut State Department of Education, accessed via EdSight at <http://edsight.ct.gov>. Enrollment rates are defined as the percentage of students from a given graduating class who enroll in college within one year of graduation. Persistence rates are defined as the percentage of students who, after enrolling in college within one year of high school, continue into a second, consecutive year of college. Attainment rates are the percentage of students who earn a two- or four-year degree within six years of graduating high school, out of the entire high school graduating class. The most recent available data is shown here, which is the high school graduating class of 2014 for graduation, enrollment, and persistence rates, and the class of 2010 for degree attainment rates. [SEE FIG 2.21 FOR DETAILS ON REGIONAL DISTRICTS](#)

FIG 2.25. SHARE OF ADULTS RATING AS ALMOST CERTAIN OR VERY LIKELY THAT YOUNG PEOPLE IN THEIR AREA HAVE THE FOLLOWING EXPERIENCES, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Indicators show percentage of survey participants who believe the chances of each experience are almost certain or very likely, disaggregated by location, self-reported race/ethnicity, and income. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE START OF THIS SECTION](#)

FIG 2.26. PROBABILITY (%) OF REACHING TOP 20% OF HOUSEHOLD INCOMES AS ADULTS BY RACE AND CHILDHOOD HOUSEHOLD INCOME

DataHaven analysis (2019) of data from Chetty, R., Friedman, J. N., Hendren, N., Jones, M. R., & Porter, S. R. (2018). The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility. Table 5: All Outcomes by County, Race, Gender and Parental Income Percentile. See paper and data at <https://opportunityinsights.org/paper/the-opportunity-atlas>. Chetty et al. used deidentified Census data to model the upward mobility of people of different demographic groups, based on the percentile of household income of the household in which they grew up. Percentages here represent the share of children of each racial group born between 1978 and 1983 whose childhood household was low-income (at the national 25th percentile), middle-income (50th percentile), or high-income (75th percentile) who then lived in households with incomes in the top 20 percent nationally in 2014 and 2015.

TABLE 2A. POPULATION AND GROWTH, 1990 AND 2017

DataHaven analysis (2019). 1990 population figures are from the U.S. Census Bureau Decennial Census, SF1 Table P1, accessible via Census Data API. 2017 population figures are from U.S. Census Bureau American Community Survey 2017 5-year estimate, Table B01003. 2000 median age is from U.S. Census Bureau Decennial Census, SF1 Table P13, Median Age by Sex. 2017 median age is from U.S. Census Bureau American Community Survey 2017 5-year estimate, Table B01002, Median Age by Sex. All above tables available at <https://factfinder.census.gov>. Population density is based on 2017 population (above) and land area calculated from U.S. Census Bureau TIGER/Line shapefiles, available at <https://www.census.gov/programs-surveys/geography/geographies/mapping-files.html>

TABLE 2B. CHARACTERISTICS BY RACE AND ORIGIN, 2017

DataHaven analysis (2019). Populations by race and ethnicity are from U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B03002. Foreign-born population comes from U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B05001. Tables available at <https://factfinder.census.gov>

TABLE 2C. HOUSEHOLD STRUCTURE, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Tables B11001 and B11003. Tables available at <https://factfinder.census.gov>

TABLE 2D. GROWING NEIGHBORHOOD INCOME INEQUALITY, 2017

SEE NOTE FOR FIG 2.11

TABLE 2E. LOW-INCOME POPULATION, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Tables B17024; and C17002. Tables available at <https://factfinder.census.gov>. As described in the report text, “low-income” is defined here as individuals living in households where the household income is less than twice (200 percent of) the federal poverty level.

TABLE 2F. FINANCIAL INSECURITY, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. For share “just getting by,” survey participants, when asked how well they were managing financially, responded that they were just getting by, finding it difficult, or finding it very difficult. Less than two months savings is based on participants’ estimate. Negative net worth is based on participants’ estimates of whether they would have money left over were their household to liquidate its assets and major possessions and pay off all debts. Transportation insecurity is defined as the share of participants reporting that at some point in the past 12 months, they could not go somewhere due

to lack of reliable transportation. Likewise, food insecurity is defined as the share of participants reporting that at some point in the past 12 months, they were unable to afford to buy food they needed. Utility shutoffs are based on participants who reported having received a utility shutoff warning or completion during the past 12 months. Values are disaggregated by location and self-reported demographic groups. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 2G. HOMEOWNERSHIP, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Tables B25003, Tenure; B25003B, Tenure (Black or African American Alone Householder); B25003H, Tenure (White Alone, Not Hispanic or Latino Householder); and B25003I, Tenure (Hispanic or Latino Householder). Tables available at <https://factfinder.census.gov>

TABLE 2H. HOUSING UNITS AND NEW HOUSING PERMITS

DataHaven analysis (2019). Counts of housing unit types, and shares of all housing units, are from U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B25024, Units in Structure. Available at <https://factfinder.census.gov>. Data on housing permits from Connecticut Department of Economic and Community Development Export, Housing, and Income Data, available at https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/01_Access-Research/Exports-and-Housing-and-Income-Data. Numbers of permits are averaged over four-year periods to smooth out fluctuations in construction from year to year, for example when a single large building is built.

TABLE 2I. HOUSING COSTS, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Tables B25077, B25074, and B25091. Tables available at <https://factfinder.census.gov>. [SEE ALSO FIG 2.13 AND 2.14](#)

TABLE 2J. WAGE TRENDS BY SECTOR, 2000–2017

DataHaven analysis (2019) of U.S. Census Bureau Quarterly Workforce Indicators, available at <http://qwiexplorer.ces.census.gov> at county level. Average wages are given, and are calculated here as means of total annual payroll over annual average employment by sector. 2000 wages are adjusted for inflation in order to accurately calculate changes in average wages over time. Industries are categorized based on the North American Industry Classification System (NAICS); those shown are sectors in which there were at least 10,000 workers in the region in 2017. [SEE FIG 2.20 FOR DETAILS ON GEOGRAPHY](#)

TABLE 2K. CHANGING INDUSTRY FOOTPRINT, 2000–2017

DataHaven analysis (2019) of U.S. Census Bureau Quarterly Workforce Indicators, available at <http://qwiexplorer.ces.census.gov> at county level. Each share is given as that sector’s divided by the region’s total payroll across all sectors. This includes the sectors with fewer than 10,000 workers that were excluded from Fig 2.20. [SEE FIG 2.20 FOR DETAILS ON GEOGRAPHY](#)

TABLE 2L. ECONOMIC OPPORTUNITY, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Access to good opportunities for employment is the share of survey participants rating the ability of residents to obtain suitable employment as excellent or good. Youth opportunities for job advancement is the share of participants estimating that it is almost certain or very likely that young people in their area will get a job with opportunity for advancement. Car access is the share of participants saying they very often or fairly often have access to a car when they need it. Underemployment is calculated as the share of participants not working within the past 30 days but wanting to work, plus the share working part-time but preferring full-time work. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 2M. COLLEGE ENROLLMENT, PERSISTENCE, AND COMPLETION

[SEE FIG 2.24 / SEE FIG 2.21 FOR DETAILS ON REGIONAL DISTRICTS](#)

TABLE 2N. EDUCATIONAL ATTAINMENT, 2017

DataHaven analysis (2019) of U.S. Census Bureau American Community Survey 2017 5-year estimates, Table B15003, Educational Attainment for the Population 25 Years and Over. Available at <https://factfinder.census.gov>

Chapter 3

FIG 3.1. ESTIMATED LIFE EXPECTANCY IN YEARS, 2010–2015

DataHaven analysis (2019) of National Center for Health Statistics. U.S. Small-Area Life Expectancy Estimates Project (USALEEP): Life Expectancy Estimates Files, 2010–2015. National Center for Health Statistics. 2018. Available from <https://www.cdc.gov/nchs/nvss/usaleep/usaleep.html>. Town and regional averages were calculated as population-weighted means of available Census tract values. See also Arias, E., Escobedo, L. A., Kennedy, J., Fu, C., & Cisewski, J. (2018). U.S. Small-area Life Expectancy Estimates Project: Methodology and Results Summary. Vital and Health Statistics. Series 2, Data Evaluation and Methods Research, (181), 1–40.

FIG 3.2. YEARS OF POTENTIAL LIFE LOST BEFORE AGE 75 PER 100,000 RESIDENTS BY CAUSE OF DEATH, 2010–2014

DataHaven analysis (2019) of data from the Connecticut Department of Public Health. For Years of Potential Life Lost (YPLL), we created annualized YPLL rates (or “Premature Death Rates”) by cause using the 2010–2014 dataset at the town level; geographies presented here include the state, county, and selected individual towns. Data represent annualized averages over that five year period of time. We calculated the YPLL rate as the sum of the YPLL divided by (the total population under 75 years old*5)*100,000. The average YPLL under 75 years of age, or “Years Lost Per Death,” was calculated by taking the sum of the YPLL divided by the number of deaths under 75 years of age. For YPLL due to fetal/infant deaths (summed fetal deaths plus infant deaths), we used annualized CTDPH data and used an average age at death of 0.5 years, hence the average YPLL of 74.5 years per death computed for these deaths as the basis of the comparison to standard causes of death.

FIG 3.3. AGE-ADJUSTED AND RELATIVE AGE-ADJUSTED ENCOUNTER RATES PER 10,000 RESIDENTS, 2015–2017

DataHaven analysis (2019) of CHIME data. 2018. Data about residents’ visits to hospitals and emergency rooms may be used as a tool to examine variations in health and quality of life by geography and within specific populations. Unless otherwise noted, all information from this source is based on a DataHaven analysis of 2012–2014 and 2015–2017 CHIME data provided by the Connecticut Hospital Association upon request from and special study agreement with partner hospitals and DataHaven.

The CHIME hospital encounter data extraction included de-identified information for each of over 10,000,000 Connecticut hospital and emergency department encounters incurred by any residents of any town in Connecticut during the six year period studied. Any encounter incurred by any resident of these towns at any

Connecticut hospital would be included in this dataset, regardless of where they received treatment. Each encounter observation had a unique encounter ID and was populated with one or more “indicator flags” representing a variety of conditions. Each encounter could include multiple indicator flags. Because CHIME is Connecticut-based, only hospital encounters occurring in CT were captured; therefore, encounters for individuals residing in CT towns bordering other states are more likely under-reported in some cases.

Annualized encounter rates were calculated for the indicator flags assigned within the dataset including Asthma, COPD, Substance Abuse, and many other conditions. Analyses in this document describe data on “all hospital encounters” including inpatient, emergency department (ED), and observation encounters. Annualized encounter rates per 10,000 persons were calculated for the three-year period 2012–2014 and the three-year period 2015–2017 by merging CHIME data with population data. For each geographic area and indicator, our analysis generally included an annualized encounter rate for populations in each of six age strata (0–19, 20–44, 45–64, 65–74, 75–84, and 85+ years), and by gender, as well as a single age-adjusted annualized encounter rate. It is important to note that there is no way to discern the unique number of individuals in any zip code, town, area or region who experienced hospital encounters during the period under examination or the number of encounters that represented repeat encounters by the same individual for the same or different conditions. To better examine encounter rates for asthma, a more appropriate set of age groupings was used (0–4, 5–19, 20–44, 45–64, 65–74, and 75+ years), so age-adjusted rates were not calculated for asthma. Please contact DataHaven for further information.

FIG 3.4. CHRONIC DISEASE, ENCOUNTER RATES PER 10,000 RESIDENTS 2015–2017

SEE FIG 3.3

FIG 3.5. OTHER HEALTH ISSUES, ENCOUNTER RATES PER 10,000 RESIDENTS, 2015–2017

SEE FIG 3.3

FIG 3.6. CHRONIC DISEASE, AGE-ADJUSTED RATE OF HOSPITALIZATIONS AND ED ENCOUNTERS PER 10,000 RESIDENTS, 2012–2014 TO 2015–2017

SEE FIG 3.3

FIG 3.7. OTHER HEALTH ISSUES, AGE-ADJUSTED RATE OF HOSPITALIZATIONS AND ED ENCOUNTERS PER 10,000 RESIDENTS, 2012–2014 TO 2015–2017

SEE FIG 3.3

FIG 3.8. RESIDENTS’ RATING OF LIKELIHOOD THAT YOUTH IN THEIR AREA WILL ABUSE DRUGS OR ALCOHOL, BY RACE AND INCOME, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Indicators show percentage of survey

participants guessing that chances of each experience are of each likelihood shown, disaggregated by location and self-reported race/ethnicity and income. Unlike similar questions where the focus was the percentage of adults estimating each event as almost certain or very likely, on this indicator, we chose to focus instead on participants’ uncertainty, illustrating that the risk of drug and alcohol abuse is a problem seen across demographic groups. SEE FIG 2.25 FOR OTHER QUESTIONS IN THIS BANK, AND COMMUNITY WELLBEING SURVEY NOTE

FIG 3.9. AGE-ADJUSTED MONTHLY RATE OF DRUG OVERDOSE DEATHS PER 1 MILLION RESIDENTS, 2012–2018

DataHaven analysis (2019) of data from the Connecticut Office of the Chief Medical Examiner, available at <https://data.ct.gov/resource/rybz-nyjw>. Data is given for each individual to have died in Connecticut of a drug overdose from 2012 to 2018. For this analysis, data was filtered to only include people with a Connecticut town listed as their place of residence at the time of death and with their age on record. Monthly counts by age were used to calculate crude rates of overdose deaths per 1 million residents of each age group. To get age-adjusted rates, crude rates by age group were then weighted with the U.S. Centers for Disease Control and Prevention (CDC) 2000 U.S. Standard Population 18 age group weights available at <https://seer.cancer.gov/stdpopulations>. The rates shown here are 6-month rolling averages; that is, the rate for any given point shown in the chart represents the age-adjusted overdose death rate for that month averaged with the rates of the five months preceding it.

FIG 3.10. COUNT OF DRUG OVERDOSE DEATHS AT 6-MONTH INTERVALS BY PRESENCE OF FENTANYL, WITH PERCENTAGE OF DEATHS THAT ARE FENTANYL-RELATED, 2012–2018

DataHaven analysis (2019) of data from the Connecticut Office of the Chief Medical Examiner, available at <https://data.ct.gov/resource/rybz-nyjw>. In data on drug overdose deaths, individuals are marked for several common substances that may be found by the medical examiner, and may also have a more detailed cause of death written out. The categories in the data include heroin, fentanyl, and generic names of several opioids, such as oxycodone and hydromorphone. We used text mining techniques to find additional names of opiates and opioids from the cause of death text in order to fill in cases where those substances were not checked off otherwise, relevant substances didn’t fit into a given category, or where substances were misspelled or abbreviated. In total, more than a dozen substances were included as search terms to mark a death as opiate- or opioid-related; these deaths may have involved non-opiates as well. Similarly, cases were marked as fentanyl-related if either checked categories or text fields reported fentanyl or any fentanyl-analogues being found. SEE ALSO FIG 3.9

FIG 3.11. PERCENT OF ADULTS REPORTING PERCEIVED REASONS FOR THEIR DISCRIMINATION, OF ADULTS CITING A REASON FOR EXPERIENCES OF DISCRIMINATION, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Survey participants were asked a bank of questions on experiences of discrimination, namely whether at any point in their lives participants had been discriminated against or treated unfairly in each of several settings, including workplace hiring and promotion; police encounters; ability to move into a neighborhood, based on access to renting or buying housing; and quality of health care services. If respondents answered that they had been discriminated against in one of these areas, they were then asked to identify the reasons why they thought this happened; those reasons are included here if at least 20 percent of respondents cited them. Note that respondents were allowed to identify more than one issue. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

FIG 3.12. PERCENT OF ADULTS REPORTING UNFAIR POLICE STOPS, SEARCHES, OR OTHER MISTREATMENT AND FREQUENCY OF INCIDENTS, BY RACE AND EDUCATION, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Survey participants were asked about whether they had ever been unfairly stopped, searched, or otherwise mistreated by police; if so, they were then asked about the frequency of these incidents within the past three years. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 3A. PREMATURE DEATH RATES BY GEOGRAPHY, 2010–2014

[SEE FIG 3.2](#)

TABLE 3B. BIRTH OUTCOMES, 2006–2010 AND 2011–2015

DataHaven analysis (2019) of data from the Connecticut Department of Public Health Vital Statistics for the 2006–2010 and 2011–2015 periods, available at <https://portal.ct.gov/DPH/Health-Information-Systems--Reporting/Hisrhome/Vital-Statistics-Registration-Reports>. Low birthweight is defined as 2,500 grams (roughly 5.5 pounds). Non-adequate prenatal care indicate that the mother attended fewer than 80 percent of expected prenatal care visits, or did not start attended visits until the second trimester. Both the low birthweight rate and non-adequate prenatal care rates are given as a percent of total births for each of the 5-year periods. Percent change in both indicators are given as a percent change in the rate of each.

TABLE 3C. ASTHMA PREVALENCE BY PUBLIC SCHOOL DISTRICT, 2012–2014

DataHaven analysis (2019) of data from the Connecticut Department of Public Health School-Based Asthma Surveillance Report of 2019, available at <https://portal.ct.gov/-/media/>

[Departments-and-Agencies/DPH/dph/hems/asthma/pdf/SBASS_2012_2014.pdf?la=en](#).

Asthma prevalence rates for regions are given as the weighted average of districts within the region based on the percent of students enrolled in that district in the 2018–2019 academic year. Very small school districts had suppressed values and were omitted from averages.

TABLE 3D. FREQUENT EMERGENCY ROOM USE AND HEALTH-RELATED SOCIAL NEEDS, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Respondents were asked to self-report the number of times in the past 12 months they visited the emergency room or urgent care clinic. We then looked at other responses provided by those adults to further reveal characteristics about their health and well-being, including whether, in the past 12 months, they chose to forego medical care for any reason; there had been times they were unable to afford food; they had access to a car less than “fairly often” when needed; were threatened with a utility shut-off notice; or whether they self-reported that they had been physically attacked or threatened.

TABLE 3E. BARRIERS TO HEALTHCARE, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. Survey participants were asked several questions about their access to and use of medical care, including whether at any point in the previous 12 months they postponed or did not receive medical care they needed, and whether they have any person or place they think of as their personal doctor or medical care provider. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#).

TABLE 3F. EXPERIENCES OF DISCRIMINATION, 2018

[SEE FIG 3.11](#)

TABLE 3G. HEALTH RISK FACTORS, 2018

DataHaven analysis (2019) of questions from 2018 DataHaven Community Wellbeing Survey. Adult respondents were asked to rate their overall health; report recent levels of depression and anxiety; and report whether they had even been told by a doctor or medical professional that they had diabetes or asthma. Participants reported their height and weight, from which their body mass index (BMI) was calculated; obesity in adults is defined as a BMI of 30 or higher. For food insecurity, participants were asked whether there had been times in the past 12 months that they did not have enough money to provide food for their families. Smoking rates were calculated based on the number of participants who estimated having smoked at least 100 cigarettes in their entire lives; those who said they had were then asked whether they smoked every day, some days, or not at all. Smoking prevalence for the entire population was then extrapolated from these two figures.

Participants were asked to self-report whether they currently have health insurance, and whether they had seen a dentist in the past 12 months. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 3H. OVERDOSE DEATHS BY SUBSTANCE, 2015–2018

DataHaven analysis (2019) of data from the Connecticut Office of the Chief Medical Examiner, available at <https://data.ct.gov/resource/rybz-nyjw>. Shown here are aggregated counts of accidental overdose deaths between 2015 and 2018, with annualized age-adjusted rates over that period. [SEE FIG 3.9 FOR DETAILS ON AGE-ADJUSTMENT / SEE FIG 3.10 FOR DETAILS ON CATEGORIZING OF SUBSTANCES](#)

TABLE 3I. OVERDOSE DEATHS BY RACE AND ETHNICITY, 2015–2018

DataHaven analysis (2019) of data from the Connecticut Office of the Chief Medical Examiner, available at <https://data.ct.gov/resource/rybz-nyjw>. Shown here are aggregated counts of accidental overdose deaths between 2015 and 2018 by race/ethnicity as given in their medical examiner record, with annualized age-adjusted rates over that period. [SEE FIG 3.9 FOR DETAILS ON AGE-ADJUSTMENT](#)

TABLE 3J. SELECTED HOSPITAL ENCOUNTERS AND HOSPITAL ENCOUNTERS BY AGE, 2015–2017

[SEE FIG 3.3](#)

Chapter 4

FIG 4.1. MEASURES OF PER-PERSON MUNICIPAL ASSETS AND SPENDING

DataHaven analysis (2019). Equalized net grand list (ENGL), total expenditures, and education spending data are from the fiscal years 2013–2017 municipal fiscal indicators database from the Connecticut Office of Policy and Management (OPM), available at <https://portal.ct.gov/OPM/IGP-MUNFINSR/Municipal-Financial-Services/Municipal-Fiscal-Indicators>. Each of these values included are for fiscal year 2017. ENGL is divided by 2017 town populations to get per-capita values. Education spending is divided by the number of enrolled public school students in each town; in cases of regional school districts that span more than one town, their pupils were allocated to towns by weighting by each town's population under age 18. OPM's website gives details on which types of expenditures are included or excluded in calculating education spending. Total expenditures are divided by towns' daytime population, calculated as a town's population plus the number of people who work in that town minus the number of residents who leave the town for work; this better captures the financial strains put on towns with large numbers of incoming commuters. Municipal gap/surplus comes from the New England Public Policy Center. Municipal surplus per capita is the difference between a town's municipal capacity per resident, or the amount of money from tax revenue available to that municipality, and municipal cost per resident, or the amount of money needed to cover the town's estimated public expenses. Negative values signify a gap in funding available to cover those costs. See Zhao, B., & Weiner, J. (2015). Measuring municipal fiscal disparities in Connecticut. Federal Reserve Bank of Boston, New England Public Policy Center Research Report, 15–1.

FIG 4.2. NEIGHBORHOOD ASSET INDEX VS MUNICIPAL SURPLUS PER CAPITA

DataHaven analysis (2019). [SEE FIG 1.4 FOR DEFINITION OF NEIGHBORHOOD ASSET INDEX / SEE FIG 4.1 FOR DEFINITION OF MUNICIPAL GAP/SURPLUS](#) Towns may have a negative surplus (i.e. a gap), in which case they are shown to the left of \$0 along the bottom axis. Towns to the right of \$0 operate on a surplus, or higher capacity than cost per person.

FIG 4.3. AVERAGE TOWN PUBLIC LIBRARY VISITS PER CAPITA AND CIRCULATION PER CAPITA VS TOTAL LIBRARY EXPENSES PER CAPITA, 2017–2018

DataHaven analysis (2019) of Connecticut State Library Statistical Profiles, available at <http://libguides.ctstatelibrary.org/dld/stats>. Data for fiscal years 2017 and 2018 were averaged to control for single-year major spending (such as on facility renovations). Expenses per capita is the average of the total expenditure divided by the total population, as given by the State

Library profiles. Similarly, averages of total units circulated and visits are divided by the population given by the State Library profiles.

FIG 4.4. PERCENT OF ELIGIBLE VOTERS WHO VOTED IN ELECTIONS, BY REGION AND WITH HIGHEST AND LOWEST TOWN RATES, 2016–2018

DataHaven analysis (2019) of voter turnout data from the Connecticut Secretary of the State, available at <https://ctemspubli.ccctg.net>. Voter turnout is defined as the percentage of officially registered voters who are documented as having voted. This includes overseas ballots but does not include absentee voters. Note that the years differ in which presidential, midterm, and local elections are held; as such, the most recent data for each type of election was used. As of 2019, this includes the 2018 state elections, including Congressional midterms; 2017 municipal elections, held in most but not all towns; and 2016 national elections, including votes for president. Participants in the 2018 DataHaven Community Wellbeing Survey also answered a question regarding their registration to vote.

TABLE 4A. MUNICIPAL EXPENDITURES AND FINANCIAL CAPACITY INDICATORS, FY2017

[SEE FIG 4.1](#)

TABLE 4B. PERCEIVED ACCESS TO AND QUALITY OF COMMUNITY RESOURCES, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. The indicators shown are the unscaled components of the Neighborhood Assets Index. [SEE FIG 1.4 FOR DETAIL ON THE NEIGHBORHOOD ASSETS INDEX / SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 4C. COMMUNITY TRUST AND APPRECIATION, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. The indicators shown here indicate the percentage of adults in each area who answered affirmatively to the questions shown. Data are disaggregated by geographic area, self-reported age group, and household income. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 4D. PARTICIPATION IN PUBLIC LIFE, 2018

DataHaven analysis (2019) of questions from the 2018 DataHaven Community Wellbeing Survey. The indicators shown here indicate the percentage of adults in each area who answered affirmatively to the questions shown. Data are disaggregated by geographic area, self-reported age group, and household income. Due to low sample sizes, only select disaggregations are provided. [SEE COMMUNITY WELLBEING SURVEY NOTE AT THE BEGINNING OF THIS SECTION](#)

TABLE 4E. RECENT VOTER TURNOUT, 2016–2018

[SEE FIG 4.4](#)

SECTION 2. TEXT ENDNOTES

- 1 Abraham, M. & Buchanan, M. (2016). *Greater New Haven Community Index 2016*. New Haven, CT: DataHaven. Available at <https://www.ctdatahaven.org/reports/greater-new-haven-community-index>
- 2 Barrington-Leigh, C. & Wollenberg, J. (2018). Informing policy priorities using inference from life satisfaction responses in a large community survey. *Applied Research in Quality of Life*. <https://doi.org/10.1007/s11482-018-9629-9>
- 3 Partington, R. (2019, May 24). Wellbeing should replace growth as 'main aim of UK spending.' *The Guardian*. Retrieved from <https://www.theguardian.com>
- 4 The New Zealand Treasury. (December 2018). Living Standards. Retrieved from <https://treasury.govt.nz/information-and-services/nz-economy/living-standards>
- 5 [SEE NOTES FOR FIG 1.1](#)
- 6 [SEE NOTES FOR FIG 1.2](#)
- 7 [SEE NOTES FOR FIG 1.1](#)
- 8 The Community Index uses Census American Community Survey estimates for health insurance coverage to allow for nationwide comparisons at many geographic levels. Elsewhere in this report, health insurance coverage is reported from Data Haven's Community Wellbeing Survey.
- 9 Inner Ring towns include East Haven, West Haven, and Hamden. Outer Ring towns include Bethany, Branford, Guilford, Madison, Milford, North Branford, North Haven, Orange, and Woodbridge.
- 10 U.S. Census Bureau. American Community Survey 2012 and 2017 5-year estimates, Table B14003, Sex by School Enrollment by Type of School By Age for the Population 3 Years and Over. This and all other Census tables available at <https://factfinder.census.gov> unless otherwise noted.
- 11 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Tables B25070, Gross Rent as a Percentage of Household Income in the Past 12 Months; and B25091, Mortgage Status by Selected Monthly Owner Costs as a Percentage of Household Income in the Past 12 Months.
- 12 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B19013, Median Household Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars).

- 13 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B17001, Poverty Status in the Past 12 Months by Sex by Age.
- 14 DataHaven analysis (2019) of data from the National Center for Health Statistics. U.S. Small-Area Life Expectancy Estimates Project (USALEEP): Life Expectancy Estimates Files, 2010–2015. Available at <https://www.cdc.gov/nchs/nvss/usaleep/usaleep.html>
- 15 For life expectancy, results are reported as the population-weighted life expectancy for tracts by the plurality of population by race/ethnicity in that tract.
- 16 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Tables B19013B, B19013D, B19013H, and B19013I, Median Household Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars). Census data used here references the race of the head of household, which may differ from other members of the household. For purposes of simplicity, “white households” means households with a white head of household.
- 17 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Tables B17020B, B17020D, B17020H, and B17020I, Poverty Status in the Past 12 Months by Age.
- 18 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B08303, Travel Time to Work.
- 19 U.S. Census Bureau. American Community Survey 2012 and 2017 5-year estimates, Table B15003, Educational Attainment for the Population 25 Years and Over.
- 20 [SEE NOTES FOR FIG 1.1](#)
- 21 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Tables C23002B, C23002D, C23002H, and C23002I, Sex by Age by Employment Status for the Population 16 Years and Over.
- 22 DataHaven analysis (2019) of Ruggles, S., et al. (2019). IPUMS USA: Version 9.0 American Community Survey 2017 5-year Census microdata. <https://doi.org/10.18128/D010.V9.0> [SEE ALSO NOTE ON GEOGRAPHY IN THE TABLE AND FIGURE NOTES](#)
- 23 Belfield, C. R., Levin, H. M., & Rosen, R. (2012). *The Economic Value of Opportunity Youth*. Retrieved from <https://files.eric.ed.gov/fulltext/ED528650.pdf>. For Connecticut-specific data on Opportunity Youth produced by The Parthenon Group, please see www.ctopportunityproject.org
- 24 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B01001, Sex by Age.
- 25 [SEE NOTES FOR TABLE 2A](#) Median age of the region is determined by taking the mean of all the towns' median ages weighted by town populations.
- 26 Ibid.
- 27 Ibid.
- 28 [SEE NOTES FOR FIG 2.1](#)
- 29 Ibid.
- 30 Ibid.
- 31 Ibid.
- 32 Ibid.
- 33 Ibid.
- 34 Ibid.
- 35 Ibid.
- 36 [SEE NOTES FOR FIG 2.3](#)
- 37 Ibid.
- 38 Ibid.
- 39 Ibid.
- 40 [SEE NOTES FOR FIG 2.2](#)
- 41 Ibid.
- 42 [SEE NOTES FOR FIG 2.4](#)
- 43 [SEE NOTES FOR FIG 2.5](#)
- 44 Ibid.
- 45 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B05006, Place of Birth for the Foreign-Born Population in the United States.
- 46 [SEE NOTES FOR FIG 2.5](#)
- 47 Ibid.
- 48 Ibid.
- 49 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B05001, Nativity and Citizenship Status in the United States.
- 50 Ibid.
- 51 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B05007, Place of Birth by Year of Entry by Citizenship Status for the Foreign-Born Population.
- 52 Ibid.
- 53 DataHaven analysis (2019) of Ruggles et al. American Community Survey 2016 5-year Census microdata. Because of changes the Census Bureau made to classification of languages, including Haitian Creole, values here may not be directly comparable to ACS tables. [SEE ALSO NOTE ON GEOGRAPHY IN THE TABLE AND FIGURE NOTES](#)
- 54 Ibid.
- 55 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B06007, Place of Birth by Language Spoken at Home and Ability to Speak English in the United States.
- 56 Ibid.
- 57 Reynolds, D. (2017, January 12). Gallup Poll: A Record Number of Americans Identify as LGBT. *Advocate*. Retrieved from <https://www.advocate.com>. While our preference, and what we use elsewhere, is the grouping “lesbian, gay, bisexual, transgender, or queer” (LGBTQ), we follow the language used in sources such as this one.
- 58 In data from the U.S. Census Bureau and represented here, a household is defined as one or more people who occupy a house, apartment, or other group of rooms with separate living quarters.
- 59 [SEE NOTES FOR FIG 2.6](#)
- 60 Ibid.
- 61 [SEE NOTES FOR TABLE 2C](#)
- 62 Ibid.
- 63 [SEE NOTES FOR FIG 2.8](#)
- 64 [SEE NOTES FOR FIG 2.12](#)
- 65 Berube, A. (2018, February 5). City and metropolitan income inequality data reveal ups and downs through 2016. Retrieved from <https://www.brookings.edu/research/city-and-metropolitan-income-inequality-data-reveal-ups-and-downs-through-2016>
- 66 [SEE NOTES FOR FIG 2.8](#)
- 67 [SEE NOTES FOR FIG 2.9](#)
- 68 [SEE NOTES FOR FIG 2.10](#)
- 69 Ibid.
- 70 DataHaven analysis (2019) of Ruggles et al. American Community Survey 2016 5-year Census microdata. [SEE ALSO NOTE ON GEOGRAPHY IN THE TABLE AND FIGURE NOTES](#)
- 71 Ibid.
- 72 Ibid.
- 73 Urban Institute. (2017, October 5). Nine Charts about Wealth Inequality in America. Retrieved from <https://apps.urban.org/features/wealth-inequality-charts>
- 74 Perry, A. M., Rothwell, J., & Harshbarger, D. (2018, November 27). The devaluation of assets in black neighborhoods: The case of residential property. Retrieved from <https://www.brookings.edu/research/devaluation-of-assets-in-black-neighborhoods>
- 75 [SEE NOTES FOR TABLE 2F](#)

- 76 Institute on Metropolitan Opportunity at the University of Minnesota Law School. (2019, April). Executive summary: American neighborhood change in the 21st century. Retrieved from <https://www.law.umn.edu/institute-metropolitan-opportunity/gentrification>
- 77 SEE NOTES FOR FIG 2.11
- 78 Ibid.
- 79 Berube, A. (2018).
- 80 SEE NOTES FOR FIG 2.11 AND TABLE 2D
- 81 Oishi, S., & Kesebir, S. (2015). Income inequality explains why economic growth does not always translate to an increase in happiness. *Psychological Science*, 26(10), 1630–1638. <https://doi.org/10.1177/0956797615596713>. See also Mikucka, M., Sarracino, F., & Dubrow, J. (2017). When does economic growth improve life satisfaction? Multilevel analysis of the roles of social trust and income inequality in 46 countries, 1981–2012. *World Development*, 93, 447–459. <https://www.sciencedirect.com/science/article/pii/S0305750X17300049>
- 82 Buttrick, N., Heintzelman, S., & Oishi, S. (2017). Inequality and well-being. *Current Opinion in Psychology*, 18, 15–20. <https://doi.org/10.1016/j.copsyc.2017.07.016>. See also Rothstein, B., & Ulsander, E. (2005). All for all: Equality, corruption, and social trust. *World Politics*, 58(1), 41–72. <https://doi.org/10.1353/wp.2006.0022>
- 83 Buttrick, N. Heintzelman, S., Oishi, S. (2017).
- 84 Chetty, R., Friedman, J., Hendren, N., Jones, M., & Porter, S. (2018). The Opportunity Atlas: Mapping the childhood roots of social mobility. Available at <https://www.opportunityatlas.org>
- 85 Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of opportunity? The geography of intergenerational Mobility in the United States. *The Quarterly Journal of Economics*, 129(4), 1553–1623. <https://doi.org/10.3386/w19843>
- 86 SEE NOTES FOR FIG 2.12
- 87 Ibid.
- 88 Ibid.
- 89 Ibid.
- 90 SEE NOTES FOR FIG 2.7
- 91 In 2017, approximately 12 percent of Greater New Haven's population lived below the federal poverty line, slightly above the statewide rate of 10 percent and below the nationwide rate of 15 percent. U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table C17002, Ratio of Income to Poverty Level in the Past 12 Months.
- 92 U.S. Department of Health & Human Services. 2017 poverty guidelines. Retrieved from <https://aspe.hhs.gov/2017-poverty-guidelines>
- 93 SEE NOTES FOR FIG 2.7
- 94 SEE NOTES FOR FIG 2.7 AND TABLE 2E
- 95 United Way of Connecticut. (2018). ALICE: A study of financial hardship in Connecticut. Retrieved from http://alice.ctunitedway.org/wp-content/uploads/2018/08/CT-United-Ways-2018-ALICE-Report-8.13.18_Hires-1.pdf
- 96 United Way of Connecticut. (2018). ALICE in New Haven County, 2016 Point-in-Time Data. Retrieved from <http://alice.ctunitedway.org/wp-content/uploads/2018/09/New-Haven-County-2018-ALICE-9.26.18.pdf>
- 97 SEE NOTES FOR TABLE 2F
- 98 SEE NOTES FOR TABLE 2G
- 99 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B25003, Tenure; and GeoLytics and Urban Institute. 2013. CensusCD Neighborhood Change Database (NCDB).
- 100 Ibid.
- 101 SEE NOTES FOR TABLE 2G
- 102 Ibid.
- 103 SEE NOTES FOR TABLE 2H
- 104 Ibid.
- 105 Ibid.
- 106 U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B25077, Median Value (Dollars). SEE ALSO FIG 2.14
- 107 DataHaven analysis (2019) of Ruggles et al. 2017 ACS 5-year Census microdata. SEE ALSO NOTE ON GEOGRAPHY IN THE TABLE AND FIGURE NOTES
- 108 DataHaven analysis (2019) of U.S. Census Bureau. American Community Survey 2017 5-year estimates, Table B25077; and U.S. Census Bureau. (1990). Decennial Census Summary File 3, Table H085.
- 109 Ibid.
- 110 DataHaven analysis (2019) of data from the Federal Financial Institutions Examination Council Home Mortgage Disclosure Act Loan Application Register datasets available at <https://www.ffiec.gov/hmda>. The subset of loans considered here are for 1- to 4-family homes. These were loans intended for a home purchase, not remodel, with the intent of being occupied by the owner.
- 111 For first-lien mortgages, the threshold is 1.5 percentage points above the average prime offer rate, or APOR, and for subordinate liens, 3.5 percentage points above APOR.
- 112 DataHaven analysis (2019) of data from the Federal Financial Institutions Examination Council Home Mortgage Disclosure Act Loan Application Register datasets, available at <https://www.ffiec.gov/hmda>
- 113 Ibid.
- 114 Ibid.
- 115 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN THE TABLE AND FIGURE NOTES
- 116 Guidance for housing affordability comes from the federal Department of Housing and Urban Development (HUD). See Defining Housing Affordability, <https://www.huduser.gov/portal/pdredge/pdr-edge-featd-article-081417.html>
- 117 SEE NOTES FOR FIG 2.14
- 118 Ibid. Note that due to availability in the 2005 ACS, values for cost burden trends are for New Haven County, not the 13-town region.
- 119 Ibid.
- 120 SEE NOTES FOR FIG 2.15
- 121 Ibid.
- 122 DataHaven analysis (2019) of data from The Eviction Lab at Princeton University, a project directed by Matthew Desmond and designed by Ashley Gromis, Lavar Edmonds, James Hendrickson, Katie Krywokulski, Lillian Leung, and Adam Porton. The Eviction Lab is funded by the JPB, Gates, and Ford Foundations as well as the Chan Zuckerberg Initiative. More information is found at evictionlab.org
- 123 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN THE TABLE AND FIGURE NOTES The DCWS asked adults about their experience with their last apartment, whereas the Eviction Lab data referenced above summarizes court-reported filings by address. These rates are therefore not directly comparable, but are provided to supplement our understanding of formal and informal evictions in the region.
- 124 Ibid.
- 125 See further SchoolHouse Connection. (2018). Positive School Discipline Practices for Students Experiencing Homelessness. Available at <https://www.schoolhouseconnection.org/positive-school-discipline-practices-for-students-experiencing-homelessness/>. See also American Psychological Association. Education and Socioeconomic Status. Available at <https://www.apa.org/pi/ses/resources/publications/education>

- 126 Nelson, R. K., Winling, L., Marciano, R., Connolly, N., et al. Mapping Inequality. American Panorama. Available at <https://dsl.richmond.edu/panorama/redlining>. SEE FIGURE 2.18 See also Seaberry, C. (2018). CT Data Story: Housing Segregation in Greater New Haven. Available at <https://ctdatahaven.org/reports/ct-data-story-housing-segregation-greater-new-haven>
- 127 Because the HOLC maps use very small geographical units, 2010 data was used because it is available at correspondingly small geographies.
- 128 SEE NOTES FOR FIG 2.16 AND 2.17
- 129 Thomas, J. R. (2019, May 22). Separated by design: How some of America's richest towns fight affordable housing. ProPublica. Retrieved from <https://www.propublica.org>
- 130 Connecticut State Department of Housing. (2018). 2018 Affordable Housing Appeals List. Retrieved from <https://portal.ct.gov/-/media/DOH/Final-Appeals-Summary-2018.pdf>. See also Partnership for Strong Communities. (2019). DOH Releases 2018 Affordable Housing Appeals List: Fewer Towns Exempt. Available at <http://ww2.pschousing.org/news/doh-releases-2018-affordable-housing-appeals-list-fewer-towns-exempt>
- 131 SEE NOTES FOR FIG 2.20
- 132 Ibid.
- 133 Bureau of Labor Statistics. (2019). Health Care and Social Assistance: NAICS 62. Available at <https://www.bls.gov/iag/tgs/iag62.htm>
- 134 Connecticut Department of Labor. (2018). State of Connecticut Industry Projections 2016–2026. Retrieved from <https://www1.ctdol.state.ct.us/lmi/ctindustry2016.asp>
- 135 SEE NOTES FOR FIG 2.20
- 136 SEE NOTES FOR TABLE 2J
- 137 Ibid.
- 138 Ibid.
- 139 SEE NOTES FOR TABLE 2K
- 140 SEE NOTES FOR FIG 2.19
- 141 SEE NOTES FOR TABLE 2L
- 142 Ibid.
- 143 Abraham, M. (2014). How transportation problems keep people out of the workforce in Greater New Haven. Greater New Haven Job Access and Transportation Working Group and DataHaven. Retrieved from <https://www.ctdatahaven.org/reports/how-transportation-problems-keep-people-out-workforce-greater-new-haven>
- 144 SEE NOTES FOR TABLE 2L
- 145 Ibid.
- 146 Slavin, P. (2014, September 10). Factoring transit costs into housing affordability. Urban Land. Retrieved from <https://urbanland.uli.org/news/factoring-transit-costs-housing-affordability>
- 147 SEE NOTES FOR FIG 1.1 AND 1.3
- 148 SEE NOTES FOR TABLE 2L
- 149 Ibid.
- 150 Ibid.
- 151 Connecticut Voices for Children. (2017). The changing state of early childhood 2016–2017. Retrieved from <http://www.ctvoices.org/publications/changing-state-early-childhood-2016-2017>
- 152 U.S. Census Bureau. 2000 Decennial Census Summary File 3 Table PCT23, Sex by School Enrollment by Age for the Population 3 Years and Over; American Community Survey 2017 5-year estimates, Table B14003; and DataHaven analysis (2019) of data from the Connecticut State Department of Education, Public School Enrollment, 2018–2019. Available at <http://edsight.ct.gov>
- 153 DataHaven analysis (2019) of data from the 2-1-1 Child Care Annual Capacity, Availability and Enrollment Survey. Available at <https://www.211childcare.org/reports/annual-survey-2018>
- 154 United Way ALICE Project. (2018). Greater New Haven ALICE report. Retrieved from <http://alice.ctunitedway.org/wp-content/uploads/2018/09/UW-GNH-2018-ALICE-Catchment-Page.pdf>
- 155 DataHaven analysis of 2-1-1 Child Care data (2019). Shared with DataHaven for the purposes of this report. See 2-1-1 Child Care. (2019). Average Childcare Cost. Available at <https://www.211childcare.org/reports/average-child-care-cost>
- 156 Ibid.
- 157 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN TABLE AND FIGURE NOTES
- 158 DataHaven analysis (2019) of data from the Connecticut State Department of Education. Public School Enrollment, 2018–2019. Available at <http://edsight.ct.gov>
- 159 SEE NOTES FOR FIG 2.21
- 160 DataHaven analysis (2019) of data from the Connecticut State Department of Education. Public School Enrollment, 2018–2019. Available at <http://edsight.ct.gov>
- 161 Ibid.
- 162 Ibid.
- 163 DataHaven analysis (2019) of data from the Connecticut State Department of Education. Smarter Balanced, 2014–2015 through 2017–2018. Available at <http://edsight.ct.gov>. SEE ALSO NOTES FOR FIG 2.23
- 164 Ibid.
- 165 DataHaven analysis (2019) of data from the Connecticut State Department of Education. Four-Year Graduation Rates. Available at <http://edsight.ct.gov>. SEE NOTES FOR FIG 2.23
- 166 DataHaven analysis (2019) of data from the Connecticut State Department of Education. Public School Enrollment, 2018–2019. Available at <http://edsight.ct.gov>
- 167 DataHaven analysis (2019) of data from the Connecticut State Department of Education. College-and-Career-Readiness Course-Taking, 2017–2018. Available at <http://edsight.ct.gov>
- 168 SEE NOTES FOR FIG 2.24
- 169 Brown, K. R., & Powers, S. R. (2019, May 22). Opportunities in health care: Evaluation of the Career Connections program at Norwalk Community College. Fairfield County's Community Foundation. Retrieved from <https://fccfoundation.org/publications/career-connections-white-paper>
- 170 New Haven Promise. (Jun 2019). Promise Institute Moneyball Summit 2019. Presented at the Promise Institute Moneyball Summit. Retrieved from <https://promiseinstitute.files.wordpress.com/2019/06/promise-numbers.pdf>
- 171 Ibid.
- 172 Ibid.
- 173 Ibid.
- 174 Boshara, R., Emmons, W. R., & Noeth, B. J. (2015). The Demographics of Wealth: How Age, Education and Race Separate Thrivers from Strugglers in Today's Economy. *Education and Wealth, Essay no. 2*. Federal Reserve Bank of St. Louis. Retrieved from <https://www.stlouisfed.org/-/media/files/pdfs/hfs/essays/hfs-essay-2-2015-education-and-wealth.pdf>
- 175 SEE NOTES FOR TABLE 2N
- 176 Romero, M., & Lee, Y.S. (2007). A national portrait of chronic absenteeism in the early grades. National Center for Children in Poverty, Mailman School of Public Health at Columbia University, New York, NY. Retrieved from http://www.nccp.org/publications/pdf/text_771.pdf
- 177 SEE NOTES FOR FIG 2.23

- 178 Lochmiller, C. (2013). Improving student attendance in Indiana's schools. Indiana University Center for Evaluation and Education Policy. Retrieved from <https://www.attendanceworks.org/wp-content/uploads/2017/08/Improving-Student-Attendance-in-Indianas-Schools-CEEP-Indiana-DOE-Oct-2013.pdf>. See also Burdick-Will, J., Stein, M., & Grigg, J. (2019). Danger on the way to school: Exposure to violent crime, public transportation, and absenteeism. *Sociological Science*, 6, 118–142. <https://doi.org/10.15195/v6.a5>
- 179 Steinberg, M. P., Allensworth, E., & Johnson, D. W. (2013). What conditions jeopardize and support safety in urban schools? The influence of community characteristics, school composition and school organizational practices on student and teacher reports of safety in Chicago. Retrieved from <https://escholarship.org/uc/item/2mx8c60x>
- 180 Rocque, M. (2010). Office discipline and student behavior: Does race matter?. *American Journal of Education*, 116(4), 557–581. <https://doi.org/10.1086/653629>
- 181 Okilwa, N. S., & Robert, C. (2017, February 6). School discipline disparity: Converging efforts for better student outcomes. *Urban Review: Issues and Ideas in Public Education*, 49(2), 239–262. <https://doi.org/10.1007/s11256-017-0399-8>
- 182 SEE NOTES FOR FIG 2.22 See also Rocque, M. (2010).
- 183 U.S. Department of Education Office for Civil Rights. (2016). 2013–2014 Civil rights data collection: A first look. Retrieved from <https://www2.ed.gov/about/offices/list/ocr/docs/2013-14-first-look.pdf>
- 184 Rocque, M. (2010).
- 185 SEE NOTES FOR FIG 2.25
- 186 Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014).
- 187 DataHaven analysis (2019) of data from Chetty, R., Friedman, J. N., Hendren, N., Jones, M. R., & Porter, S. R. (2018). The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility. Table 5: All Outcomes by County, Race, Gender and Parental Income Percentile. SEE ALSO NOTES FOR FIG 2.26
- 188 SEE NOTES FOR FIG 2.26
- 189 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN TABLE AND FIGURE NOTES
- 190 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). BRFSS Prevalence & Trends Data. 2017 data. Available at <https://www.cdc.gov/brfss/brfssprevalence>
- 191 DeSalvo, K. B., Bloser, N., Reynolds, K., He, J., & Muntner, P. (2006). Mortality prediction with a single general self-rated health question: A meta-analysis. *Journal of General Internal Medicine*, 21(3), 267–275. <https://doi.org/10.1111/j.1525-1497.2005.00291.x>
- 192 SEE NOTES FOR FIG 3.1
- 193 Hero, J., Zaslavsky, A. M., & Blendon, R. J. (2017). The United States leads other nations in differences by income in perceptions of health and health care. *Health Affairs*, 36(6), 1032–40. <https://doi.org/10.1377/hlthaff.2017.0006>
- 194 SEE NOTES FOR TABLE 3G
- 195 SEE NOTES FOR FIG 3.1 The tract with the lowest life expectancy (71.0 years) is 09009140200 in New Haven's Hill neighborhood; the tract with the highest (85.8 years) is 09009157300.
- 196 Ibid.
- 197 Ibid.
- 198 SEE NOTES FOR FIG 3.2, 3.3, AND TABLE 3A
- 199 American Cancer Society. (2015, June 16). Study: Smoking causes almost half of deaths from 12 cancer types. Retrieved from <https://www.cancer.org/latest-news/study-smoking-causes-almost-half-of-deaths-from-12-cancer-types.html>
- 200 Centers for Disease Control and Prevention, Division of Cancer Prevention and Control. (2019). What are the risk factors for lung cancer? Available at https://www.cdc.gov/cancer/lung/basic_info/risk_factors.htm
- 201 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2019). Division for Heart Disease and Stroke Prevention at a glance. Available at <https://www.cdc.gov/chronicdisease/resources/publications/aag/heart-disease-stroke.htm>
- 202 Central Intelligence Agency. (2016). Infant mortality rate. In *The World Factbook 2016–17*. Washington DC. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/fields/354.html>
- 203 SEE NOTES FOR TABLES 3A AND 3B Local data on the overall impact of fetal and infant deaths are included above, in the section on premature mortality.
- 204 Ibid.
- 205 National Institutes of Health, National Institute of Child Health and Human Development. (2017). How many people are affected by/at risk for birth defects? Retrieved from <https://www.nichd.nih.gov/health/topics/birthdefects/conditioninfo/risk>
- 206 Connecticut Department of Public Health, Lead and Healthy Homes Program. (2016). Annual lead surveillance report. Available at <https://portal.ct.gov/DPH/Environmental-Health/Lead-Poisoning-Prevention-and-Control/Screening--Surveillance-Data>
- 207 Ibid.
- 208 Agency for Toxic Substances and Disease Registry. (2016). Environmental triggers of asthma. Retrieved from <https://www.atsdr.cdc.gov/csem/csem.asp?csem=32&po=6>
- 209 DataHaven analysis (2019) of data from the Connecticut Department of Public Health. (2019). Connecticut school-based asthma surveillance report 2019. Retrieved from <https://portal.ct.gov/DPH/Health-Education-Management--Surveillance/Asthma/Asthma-Burden-Report>
- 210 SEE NOTES FOR FIG 3.4
- 211 Prevalence estimate not available for Bethany.
- 212 SEE NOTES FOR TABLE 3G
- 213 Ibid.
- 214 SEE NOTES FOR TABLE 3E
- 215 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN TABLE AND FIGURE NOTES
- 216 SEE NOTES FOR TABLE 3E
- 217 SEE NOTES FOR TABLE 3D
- 218 Ibid.
- 219 Ibid.
- 220 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN TABLE AND FIGURE NOTES
- 221 Ibid.
- 222 California HealthCare Foundation. (2009). Snapshot: Emergency department visits for preventable dental conditions in California. Retrieved from <https://www.chcf.org/wp-content/uploads/2017/12/PDF-EDUseDentalConditions.pdf>
- 223 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health. (2017). Explore oral health data by location. Retrieved from <https://www.cdc.gov/oralhealthdata/index.html>

- 224 DataHaven. (2018). DataHaven Community Wellbeing Survey. [SEE SURVEY NOTE IN TABLE AND FIGURE NOTES](#)
- 225 Williams, D. (2016). Measuring discrimination resource. Retrieved from https://scholar.harvard.edu/files/davidrwilliams/files/measuring_discrimination_resource_june_2016.pdf
- 226 Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: evidence and needed research. *Annual Review of Public Health*, 40, 105–125 <https://doi.org/10.1146/annurev-publhealth-040218-043750>
- 227 [SEE NOTES FOR TABLE 3F AND FIG 3.11](#)
- 228 Office of Disease Prevention and Health Promotion. Healthy People 2020: Lesbian, gay, bisexual, and transgender health. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health>
- 229 Kates, J., Ranji, U., Beamesderfer, A., Salganicoff, A., & Dawson, L. (2018). Health and access to care and coverage for lesbian, gay, bisexual, and transgender individuals in the U.S. Kaiser Family Foundation. Retrieved from <https://www.kff.org/report-section/health-and-access-to-care-and-coverage-lgbt-individuals-in-the-us-the-lgbt-community>
- 230 DataHaven. (2018). DataHaven Community Wellbeing Survey. [SEE SURVEY NOTE IN TABLE AND FIGURE NOTES](#)
- 231 National Center for Transgender Equality. (2017). 2015 U.S. Transgender Survey: Connecticut state report. Retrieved from <http://www.transequality.org/sites/default/files/docs/usts/USTSCTStateReport%281017%29.pdf>
- 232 Connecticut Department of Public Health. (2018). Adverse childhood experiences in Connecticut. Retrieved from <http://www.ct.gov/dph/BRFSS>
- 233 [SEE NOTES FOR FIG 2.25](#)
- 234 Alvarado, S. E. (2019). The indelible weight of place: Childhood neighborhood disadvantage, timing of exposure, and obesity across adulthood. *Health & Place*, 58, p. 102–159. <https://doi.org/10.1016/j.healthplace.2019.102159>
- 235 Robert Wood Johnson Foundation. (2018). The State of Obesity. Adult obesity in the United States. Available at <https://www.stateofobesity.org/adult-obesity>
- 236 DataHaven. (2018). DataHaven Community Wellbeing Survey. See also DataHaven. (2015). DataHaven Community Wellbeing Survey, available at <http://ctdatahaven.org/reports/datahaven-community-wellbeing-survey>
- 237 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). BRFSS prevalence & trends data. Available at <https://www.cdc.gov/brfss/brfssprevalence/index.html>
- 238 DataHaven. (2018). DataHaven Community Wellbeing Survey. See also DataHaven. (2015). DataHaven Community Wellbeing Survey, available at <http://ctdatahaven.org/reports/datahaven-community-wellbeing-survey>
- 239 Robert Wood Johnson Foundation. (2018). National and state by state obesity rates, youth ages 10–17 (Issue brief). Retrieved from https://media.stateofobesity.org/uploads/2018/10/RWJF_NSCHDataBrief.pdf. Data are from the National Survey of Children's Health (NSCH).
- 240 DataHaven. (2018). DataHaven Community Wellbeing Survey. [SEE SURVEY NOTE IN TABLE AND FIGURE NOTES](#) See also DataHaven. (2015). DataHaven Community Wellbeing Survey, available at <http://ctdatahaven.org/reports/datahaven-community-wellbeing-survey>
- 241 DataHaven. (2018). DataHaven Community Wellbeing Survey. [SEE SURVEY NOTE IN TABLE AND FIGURE NOTES](#)
- 242 Ibid.
- 243 Ibid.
- 244 National Institutes of Health, National Institute of Alcohol Abuse and Alcoholism. Alcohol's effects on the body. Retrieved from <https://www.niaaa.nih.gov/alcohol-health/alphabets-effects-body>
- 245 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2018). Marijuana: How can it affect your health? Retrieved from <https://www.cdc.gov/marijuana/health-effects.html>
- 246 Ankrah, J. (2018, September 3). Connecticut's opioid epidemic: A glimpse of the past five years. *CT Mirror*. Retrieved from <https://ctmirror.org>
- 247 [SEE NOTES FOR FIG 3.9 AND TABLE 3H](#)
- 248 Ibid.
- 249 Ibid.
- 250 Ibid.
- 251 Ibid.
- 252 Centers for Disease Control and Prevention. (2018). Opioid overdose: Understanding the epidemic. Retrieved from <https://www.cdc.gov/drugoverdose/epidemic/index.html>
- 253 Ibid.
- 254 [SEE NOTES FOR FIG 3.10](#)
- 255 [SEE NOTES FOR TABLE 3I](#)
- 256 DataHaven analysis (2019) of data from the Connecticut Department of Mental Health and Addiction Services. (2019). Opioid related treatment admissions by town in Department of Mental Health and Addiction Services programs. Available at <https://data.ct.gov/resource/4pv7-jhxb>
- 257 [SEE NOTES FOR FIGS 3.3, 3.4, 3.5, 3.6, AND 3.7](#)
- 258 DataHaven. (2018). DataHaven Community Wellbeing Survey. [SEE SURVEY NOTE IN TABLE AND FIGURE NOTES](#)
- 259 Ibid.
- 260 Manchester, J., & Sullivan, R. (2019). Exploring causes of and responses to the opioid epidemic in New England. New England Public Policy Center Reports Paper No. 19-2. Retrieved from <https://www.bostonfed.org/publications/new-england-public-policy-center-policy-report/2019-exploring-causes-of-and-responses-to-the-opioid-epidemic-in-new-england.aspx>
- 261 Kao, S. C., Tsai, H. I., Cheng, C. W., Lin, T. W., Chen, C. C., & Lin, C. S. (2017). The association between frequent alcohol drinking and opioid consumption after abdominal surgery: A retrospective analysis. *PLOS ONE* 12(3), e0171275. <https://doi.org/10.1371/journal.pone.0171275>
- 262 Zale L., Dorfman, M. L., Hooten, W. M., Warner, D. O., Zvolensky, M. J., & Ditre, J. W. (2014). Tobacco smoking, nicotine dependence, and patterns of prescription opioid misuse: Results from a nationally representative sample. *Nicotine & Tobacco Research*, 17(9), 1096–1103. <https://doi.org/10.1093/ntr/ntu227>
- 263 Zale, E. L., Maisto, S. A., & Ditre, J. W. (2015). Interrelations between pain and alcohol: An integrative review. *Clinical Psychology Review*, 37, 57–71. <https://doi.org/10.1016/j.cpr.2015.02.005>
- 264 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2019). Chronic diseases in America. Available at <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>
- 265 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2019). Health and economic costs of chronic diseases. Retrieved from <https://www.cdc.gov/chronicdisease/about/costs/index.htm>

- 266 Holt, J. B., Huston, S. L., Heidari, K., Schwartz, R., Gollmar, C. W., Tran, A., ... Croft, J. B. (2015, January 9). Indicators for chronic disease surveillance—United States, 2013. *Morbidity and Mortality Weekly Report: Recommendations and Reports*, 64(1), 1–246. Retrieved from <https://www.cdc.gov/mmwr/pdf/rr/rr6401.pdf>
- 267 Skinner, H. G., Blanchard, J., & Elixhauser, A. (2014, September). Trends in emergency department visits, 2006–2011: Statistical brief #179. Retrieved from <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb179-Emergency-Department-Trends.pdf>
- 268 Centers for Disease Control and Prevention, National Center for Health Statistics. (2017). Table 76. Visits to physician offices, hospital outpatient departments, and hospital emergency departments, by age, sex, and race: United States, selected years 2000–2015. Retrieved from <https://www.cdc.gov/nchs/data/abus/2017/076.pdf>
- 269 SEE NOTES FOR FIGS 3.4, 3.5, 3.6, AND 3.7
- 270 Jolly, S., Vittinghoff, E., Chattopadhyay, A., & Bibbins-Domingo, K. (2010). Higher cardiovascular disease prevalence and mortality among younger blacks compared to whites. *The American Journal of Medicine*, 123(9), 811–818. <https://doi.org/10.1016/j.amjmed.2010.04.020>
- 271 SEE NOTES FOR FIGS 3.4 AND 3.5
- 272 SEE NOTES FOR FIGS 3.6. AND 3.7
- 273 Shao, Z., Richie, W. D., & Bailey, R. K. (2015). Racial and ethnic disparity in major depressive disorder. *Journal of Racial and Ethnic Health Disparities*, 3(4), 692–705. <https://doi.org/10.1007/s40615-015-0188-6>
- 274 Grenard, J. L., Munjas, B. A., Adams, J. L., Suttrop, M., Maglione, M., McGlynn, E. A., & Gellad, W. F. (2011). Depression and medication adherence in the treatment of chronic diseases in the United States: a meta-analysis. *Journal of General Internal Medicine*, 26(10), 1175–1182. <https://doi.org/10.1007/s11606-011-1704-y>
- 275 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN TABLE AND FIGURE NOTES
- 276 Centers for Disease Control and Prevention. (2017). Injury prevention and control: Key data and statistics. Available at https://www.cdc.gov/injury/wisqars/overview/key_data.html
- 277 Centers for Disease Control and Prevention. (2017). Home and recreational safety: Important facts about falls. Available at <https://www.cdc.gov/homeandrecreationsafety/falls/adultfalls.html>
- 278 Centers for Disease Control and Prevention. (2016). Home and recreational safety: Costs of falls among older adults. Available at <https://www.cdc.gov/homeandrecreationsafety/falls/fallcost.html>
- 279 Centers for Disease Control and Prevention. (2017). Home and recreational safety: Important facts about falls. Available at <https://www.cdc.gov/homeandrecreationsafety/falls/adultfalls.html>
- 280 Centers for Disease Control and Prevention. (2017). Vital signs: Motor vehicle crash deaths. Available at <https://www.cdc.gov/vitalsigns/motor-vehicle-safety/index.html>
- 281 Ibid.
- 282 SEE NOTES FOR FIGS 3.4 AND 3.5
- 283 Connecticut Suicide Advisory Board. (2014). Connecticut Suicide Prevention Plan 2020 (PLAN 2020). Retrieved from <https://www.preventsuicide.org/wp-content/uploads/2015/04/Suicide-Prevention-Plan.pdf>
- 284 DataHaven analysis (2019) of data from the Connecticut Department of Public Health, STD statistics in Connecticut. Available at <https://portal.ct.gov/DPH/Infectious-Diseases/STD/STD-Statistics-in-Connecticut>. Rates were not calculated if fewer than 20 cases were reported.
- 285 Connecticut Department of Public Health. (2019). Infectious diseases statistics. Available at <https://portal.ct.gov/DPH/Infectious-Diseases-Statistics>. Current data on measles outbreaks nationally, as well as historical information about measles, are posted at the Centers for Disease Control and Prevention website, <https://www.cdc.gov/measles/cases-outbreaks.html>, and <https://www.cdc.gov/measles/about/history.html>, respectively.
- 286 This is a slightly abridged version of the definition used in Corporation for National and Community Service & National Conference on Citizenship. (2010). *Civic life in America: Key findings on the civic health of the nation* (Issue brief). Retrieved from <https://ncoc.org/wp-content/uploads/2015/04/2010AmericaIssueBrief.pdf>. See also Bringle, R. G., Hatcher, J. A., & Holland, B. (2007). Conceptualizing civic engagement: Orchestrating change at a metropolitan university. *Metropolitan Universities*, 18(3), 57–74.
- 287 Boarini, R., Comola, M., Smith, C., Manchin, R., & de Keulenaer, F. (2012). What makes for a better life?: The determinants of subjective well-being in OECD countries – evidence from the Gallup World Poll. *OECD Statistics Working Papers*, No. 2012/03, OECD Publishing. <https://doi.org/10.1787/5k9b9ltjm937-en>
- 288 Cullen, M., & Whiteford, H. (2001). The interrelations of social capital with health and mental health. Canberra: Commonwealth of Australia.
- 289 Buonanno, P., Montolio, D., & Vanin, P. (2009). Does social capital reduce crime? *The Journal of Law and Economics*, 52(1), 145–170. <https://doi.org/10.1086/595698>
- 290 Putnam, R. D. (2016). *Our kids: The American dream in crisis*. New York, NY: Simon and Schuster.
- 291 Guiso, L., Sapienza, P., & Zingales, L. (2011). Civic capital as the missing link. In J. Benhabib, A. Bisin, & M. O. Jackson (Eds.), *Handbook of Social Economics* (Vol. 1, pp. 417–480). Amsterdam: North Holland/Elsevier.
- 292 Adapted from the Center for Active Design's Four Key Civic Life Outcomes framework. Retrieved from <https://centerforactivedesign.org/assembly>
- 293 Organisation for Economic Co-operation and Development. (2018). Opportunities for all: A framework for policy action on inclusive growth. <https://doi.org/10.1787/9789264301665-en>
- 294 Phaneuf, K., & Silber, C. (2018, May 30). Invisible walls: Among Connecticut cities and towns, the wealthiest are the big spenders. *CT Mirror*. Retrieved from <https://ctmirror.org>
- 295 SEE NOTES FOR FIG 4.1 AND TABLE 4A
- 296 Thomas, J. R., & Kara, J. (2017, August 14). The state of CT's cities and towns in charts. *CT Mirror*. Retrieved from <https://ctmirror.org>
- 297 SEE NOTES FOR FIG 4.1
- 298 Zhao, B., & Weiner, J. (2015). Measuring municipal fiscal disparities in Connecticut. *Federal Reserve Bank of Boston, New England Public Policy Center Research Report*, 15–1. Retrieved from <https://www.bostonfed.org/publications/new-england-public-policy-center-research-report/2015/measuring-municipal-fiscal-disparities-in-connecticut.aspx>. Note that this analysis only takes into account “nonschool” public services.
- 299 The Coalition for a Livable Future, Portland State University. (2007). The Regional Equity Atlas: Metropolitan Portland's geography of opportunity.
- 300 SEE NOTES FOR FIG 4.1
- 301 Ibid.
- 302 Thomas, J. R., & Kara, J. (2017).
- 303 Ibid. SEE ALSO NOTES FOR FIG 4.1
- 304 Phaneuf, K., & Silber, C. (2018).

- 305 Connecticut Conference of Municipalities. (2018). The property tax: How over-reliance jeopardizes Connecticut's economic future. Retrieved from http://www.ccm-ct.org/sites/default/files/files/2016Bulletins_MunicipalFinance_final_rev.pdf
- 306 Connecticut Conference of Municipalities. (2017). Securing the future: Service sharing and revenue diversification for Connecticut municipalities. See Table 7.4. Retrieved from <https://www.ccm-ct.org/sites/default/files/files/ThisReportIsDifferent012317.pdf>
- 307 Connecticut School Finance Project. (2019). Obstacles to equitable funding—varying property taxes. Available at <http://ctschoolfinance.org/obstacles-to-equity/taxes>
- 308 Connecticut School Finance Project. (2019). Spending per student. Available at <http://ctschoolfinance.org/spending/per-student>
- 309 Phaneuf, K., & Silber, C. (2018).
- 310 SEE NOTES FOR FIG 4.1
- 311 State of Connecticut, Office of Policy and Management. (2018). FY 2019 mill rates. Retrieved from <https://portal.ct.gov/-/media/OPM/IGPP-Data-Grants-Mgmt/GL-2017-FY-2019-Mill-Rates-UPDATE.pdf>
- 312 Sullivan, K. (2014). Connecticut tax incidence. Hartford, CT: State of Connecticut, Department of Revenue Services. Retrieved from <http://ctstatefinance.org/assets/uploads/files/Tax-Incidence-Report-2014.pdf>
- 313 SEE NOTES FOR TABLE 4B
- 314 Ibid.
- 315 Ibid.
- 316 Ibid.
- 317 American Nutrition Association (2010). USDA defines food deserts. *Nutrition Digest*, 38(2). Retrieved from <http://americannutritionassociation.org/newsletter/usda-defines-food-deserts>
- 318 DataHaven. (2018). DataHaven Community Wellbeing Survey. SEE SURVEY NOTE IN TABLE AND FIGURE NOTES
- 319 Ibid.
- 320 SEE NOTES FOR FIG 4.3
- 321 Ibid.
- 322 Ibid.
- 323 Ibid.
- 324 Ibid.
- 325 Ibid.
- 326 City of Hartford (2017). Hartford Climate Action Plan. Retrieved from <https://hartfordclimate.files.wordpress.com/2017/12/cap1.pdf>
- 327 Irfan, U., Barclay, E., & Sukumar, K. (2019). Weather 2050. Retrieved from <https://www.vox.com/a/weather-climate-change-us-cities-global-warming>
- 328 Connecticut Institute for Resilience and Climate Adaptation (CIRCA). (2019). Sea level rise. Available at <https://circa.uconn.edu/sea-level-rise>
- 329 U.S. Geological Survey. The 100-Year flood. Retrieved from https://www.usgs.gov/special-topic/water-science-school/science/100-year-flood?qt-science_center_objects=0#qt-science_center_objects
- 330 Climate Central. (2016). Sea level rise and coastal flood exposure: Summary for New Haven County, CT. Surging Seas Risk Finder file created July 21, 2016. Available at <https://riskfinder.climatecentral.org/county/new-haven-county.ct.us>
- 331 Ibid.
- 332 Ibid.
- 333 UC Berkeley CoolClimate Network. (2013). Average annual household carbon footprint. Available at <https://coolclimate.org/maps>
- 334 Granovetter, M. (2002). Economic action and social structure: The problem of embeddedness. In N. W. Biggart (Ed.), *Readings in Economic Sociology* (pp. 63–68). <https://doi.org/10.1002/9780470755679.ch5>
- 335 Putnam, R. (1993). The prosperous community: Social capital and public life. *The American Prospect*. Retrieved from <https://prospect.org/article/prosperous-community-social-capital-and-public-life>
- 336 SEE NOTES FOR TABLE 4C
- 337 Ibid.
- 338 Ibid.
- 339 Ibid. SEE ALSO NOTES FOR FIG 3.12
- 340 Hodgson, J., & Pond, A. (2018). How community philanthropy shifts power. Foundation Center. Retrieved from https://grantcraft.org/wp-content/uploads/sites/2/2018/12/Community_Philanthropy_paper.pdf
- 341 Kübler, D., & Goodman, C. (2018). Newspaper markets and municipal politics: How audience and congruence increase turnout in local elections. *Journal of Elections, Public Opinion and Parties*, 29(1), 1–20. <https://doi.org/10.1080/17457289.2018.1442344>
- 342 Mitchell, A., Holcomb, J., Barthel, M., & Mahone, J. (2016, November 3). Civic engagement strongly tied to local news habits. *Pew Research Center*. Retrieved from <https://www.journalism.org/2016/11/03/civic-engagement-strongly-tied-to-local-news-habits>
- 343 Holder, S. (2019, April 11). Shrinking newsrooms means less local political engagement. *CityLab*. Retrieved from <https://www.citylab.com/life/2019/04/local-news-decline-journalist-news-desert-california-data/586759>. See also Rubado, M. E., & Jennings, J. T. (2019). Political consequences of the endangered Local watchdog: Newspaper decline and mayoral elections in the United States. *Urban Affairs Review*. doi:10.1177/1078087419838058
- 344 Hayes, D., & Lawless, J. L. (2018). The decline of local news and its effects: New evidence from longitudinal data. *The Journal of Politics*, 80(1), 332–336. <https://doi.org/10.1086/694105>
- 345 Capps, K. (2018, May 30). The hidden costs of losing your city's newspaper. *CityLab*. Retrieved from <https://www.citylab.com/equity/2018/05/study-when-local-newspaper-close-city-bond-finances-suffer/561422>
- 346 Bauder, D., & Lieb, D. A. (2019, March 11). Decline in readers, ads leads hundreds of newspapers to fold. *AP News*. Retrieved from <https://apnews.com>
- 347 Pew Research Center, Journalism & Media. (2019). What are the local news dynamics in your city? Available at <https://www.journalism.org/interactives/local-news-habits/35300>
- 348 Ibid.
- 349 DataHaven analysis (2019) of raw data on users by Connecticut town provided by Bruce Putterman, *Connecticut Mirror*, July 13, 2019.
- 350 Americans for the Arts. (2008). The arts and civic engagement: Strengthening the 21st century community. Retrieved from https://www.americansforthearts.org/sites/default/files/2008_NAPR_full_report.PDF
- 351 Cullinan, D. (2017, March 22). Civic engagement: Why cultural institutions must lead the way. *Stanford Social Innovation Review*. Retrieved from https://ssir.org/articles/entry/civic_engagement_why_cultural_institutions_must_lead_the_way
- 352 Buchanan, M., Pandey, E., & Abraham, M. (2016). 2016 Connecticut Civic Health Index. The Secretary of the State of Connecticut, National Conference on Citizenship, and Everyday Democracy. Retrieved from <http://ctdatahaven.org/reports/2016-connecticut-civic-health-index>
- 353 SEE NOTES FOR TABLE 4D
- 354 Ibid.

- 355 Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5328), 918–924. <https://doi.org/10.1126/science.277.5328.918>
- 356 DataHaven. (2018). DataHaven Community Wellbeing Survey. [SEE SURVEY NOTE IN TABLE AND FIGURE NOTES](#)
- 357 The Corporation for National and Community Service. (2018). Volunteering in U.S. hits record high; worth \$167 billion. Retrieved from <https://www.nationalservice.gov/newsroom/press-releases/2018/volunteering-us-hits-record-high-worth-167-billion>
- 358 Nowak, J. (2007). Creativity and neighborhood development: Strategies for community investment. The Reinvestment Fund in collaboration with the Social Impact of the Arts Project at the University of Pennsylvania. Retrieved from https://www.reinvestment.com/wp-content/uploads/2015/12/Creativity_and_Neighborhood_Development_Strategies_for_Community-Investment-Report_2008.pdf
- 359 Cullinan, D. (2017). Civic engagement: Why cultural institutions must lead the way. *Stanford Social Innovation Review*. Retrieved from https://ssir.org/articles/entry/civic_engagement_why_cultural_institutions_must_lead_the_way
- 360 Center for Active Design. (2016). Assembly: Shaping space for civic life. Research Brief 1. Retrieved from <https://centerforactivedesign.org/assemblyresearchbriefone>
- 361 [SEE NOTES FOR TABLE 4D](#)
- 362 Ibid.
- 363 [SEE NOTES FOR FIG 4.4](#)
- 364 Ibid.
- 365 Misra, J. (2019, April 23). Voter turnout rates among all voting age and major racial and ethnic groups were higher than in 2014. *The United States Census Bureau*. Retrieved from <https://www.census.gov/library/stories/2019/04/behind-2018-united-states-midterm-election-turnout.html>
- 366 [SEE NOTES FOR FIG 4.4](#)
- 367 Ibid.
- 368 DataHaven. (2018). DataHaven Community Wellbeing Survey. See also DataHaven. (2015). DataHaven Community Wellbeing Survey, available at <http://ctdatahaven.org/reports/datahaven-community-wellbeing-survey>
- 369 Misra, J. (2019).
- 370 DataHaven. (2018). DataHaven Community Wellbeing Survey. See also DataHaven. (2015). DataHaven Community Wellbeing Survey, available at <http://ctdatahaven.org/reports/datahaven-community-wellbeing-survey>
- 371 Peters, K., Elands, B., & Buijs, A. (2010). Social interactions in urban parks: Stimulating social cohesion? *Urban Forestry & Urban Greening*, 9(2), 93–100. <https://doi.org/10.1016/j.ufug.2009.11.003>
- 372 Rigolon, A., Derr, V., & Chawla, L. (2015). Green grounds for play and learning: An intergenerational model for joint design and use of school and park systems. *Handbook on Green Infrastructure*, 281–300. <https://doi.org/10.4337/9781783474004.00023>
- 373 Center for Active Design. (2017). The Assembly Civic Engagement Survey: Key findings and design implications. Retrieved from <https://centerforactivedesign.org/assembly>
- 374 Cohen, D. A., Inagami, S., & Finch, B. (2008). The built environment and collective efficacy. *Health & Place*, 14(2), 198–208. <https://doi.org/10.1016/j.healthplace.2007.06.001>
- 375 Center for Active Design. (2017).
- 376 Götschi, T., Tainio, M., Maizlish, N., Schwanen, T., Goodman, A., & Woodcock, J. (2015). Contrasts in active transport behaviour across four countries: How do they translate into public health benefits? *Preventive Medicine*, 74, 42–48. <https://doi.org/10.1016/j.ypmed.2015.02.009>
- 377 Zuniga-Teran, A., Orr, B., Gimblett, R., Chalfoun, N., Guertin, D., & Marsh, S. (2017). Neighborhood design, physical activity, and wellbeing: applying the walkability model. *International Journal of Environmental Research and Public Health*, 14(1), 76. <https://doi.org/10.3390/ijerph14010076>
- 378 Grahn, P., & Stigsdotter, U. A. (2003). Landscape planning and stress. *Urban Forestry & Urban Greening*, 2(1), 1–18. <https://doi.org/10.1078/1618-8667-00019>
- 379 Sugiyama, T., Leslie, E., Giles-Corti, B., & Owen, N. (2008). Associations of neighbourhood greenness with physical and mental health: do walking, social coherence and local social interaction explain the relationships? *Journal of Epidemiology & Community Health*, 62(5). <https://doi.org/10.1136/jech.2007.064287>

