Montefiore Nyack Hospital

Community Health Needs Assessment

Implementation Strategy Report

Rockland County

2019 - 2021

This document is available on-line at MontefioreNyack.org.
To access a physical copy of this document contact the front desk at 845-348-2000 or contact

Sandra Arevalo-Valencia
Director of Community & Patient Education
160 Midland Avenue
Nyack, New York 10960
845-348-2876 T
845-587-1318 M
arevalos@montefiorenyack.org

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Affordable Care Act requires hospitals to assess and address the health needs of the communities they serve. This Community Health Needs Assessment meets the first component of these requirements, providing a report of the process, methods and results of a comprehensive assessment of the needs of the community served by Montefiore Nyack Hospital (MNH). The second component encompasses the Implementation Strategy, which will further discuss the significant health needs of the community and describe the programs and strategies to address these significant health needs.

Montefiore Nyack Hospital is a medical leader in the community and is seeking to soon become a leader in population health developing innovative and culturally sensitive programs to best serve the changing needs of its community. Montefiore Nyack Hospital embraces its social responsibility and defines its role broadly, promoting wellness in addition to treating disease and addressing needs ranging far beyond medical care. We extend this responsibility to the care of our employees and medical staff, many of whom live in the surrounding community.

Housing, transportation, and nutrition have been identified to be the main social barriers to disease prevention. Although MNH isn't a direct provider of these services, we will continue to create partnerships that allow our patients and community members address these barriers to be able to maintain and continue to improve the name of Rockland as healthiest county in NYS. Behavioral health is also an area of concern due to an increased number of cases and lack of services. Montefiore Nyack already counts with a robust mental health team and diversity of services. However, conscious of the importance of this health issue we are seeking to create a countywide committee to help improve and expand services in the community to make sure that all of our community members have access and care of the best quality.

Services to the community are an explicit and essential component of our mission, it is our goal to reach far beyond the walls of the hospital to identify and meet the needs of the community and create and expand community-based services to prevent disease, enhance wellbeing and enact social change that go beyond the traditional health care system. It would be hard to meet these goals if it weren't for a variety of organized partnerships and collaboratives that have joined together in these efforts. Montefiore Nyack has partnered with RC Department of Health and Mental Hygiene, community-based organizations, and members of the community in planning and developing initiatives aimed at improving the health of the people of Rockland. Nurses and staff participation and dedication in these events are notable, as they volunteer their time in these events to help the community. Montefiore Nyack Hospital keeps seeking collaborations with other organizations in Rockland County to be able to address the unmet needs of the community.

For more information or questions regarding this plan please contact Sandra Arevalo-Valencia, Director of Community & Patient Education at Montefiore Nyack Hospital by e-mail at arevalos@montefiorenyack.org or by phone calling 845-348-2876.

INTRODUCTION

Organizational Background

Montefiore Nyack Hospital (MNH) is a 375-bed community acute care medical and surgical hospital, which was founded in 1895 and is located in Rockland County, NY and is affiliated with Montefiore Health System.

Mission and Strategy

MNH mission is to provide competent, innovative and accessible emergency and acute care services to the residents of Rockland County and surrounding areas. A partner with Touro College of Osteopathic Medicine, it provides clinical rotations to third-year medical students. All employees at Montefiore Nyack Hospital adhere to a strict code of conduct, known as the WE CARE Standards. All employees have received extensive training on these standards, and new employee orientation offers an overview of what is expected from each and every employee.

Statement of Executive Review

Montefiore Nyack Hospital's Community Health Needs Assessment (CHNA) process and secondary data was approved by the Board of Trustees on October 18, 2019. This document was finalized and submitted to the federal government on December 30th, 2019. The Community Health Needs Assessment (CHNA) report will be available on-line and at the Community Education Department on December 31, 2019.

COMMUNITY HEALTH ASSESSMENT

Description of Community / Service Area

The population of New York State is almost at 20,000,000, and when excluding New York City, the population is about 11,250,000. The Mid-Hudson region makes up 11.8% of New York State overall, and it is made up of the 7 counties of Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester.

Rockland County is located approximately 30 miles north of Manhattan on the west side of the Hudson River and bordered by Orange County to the north, and New Jersey to the South West. Home to 8 public school districts and 8 College/Universities, the 199-square mile area includes 5 towns, and 19 villages. This county of 120,000 acres is designated a Preserve America Community, containing more than 35,000 acres of preserved open space and parkland, just under one third of the county.

The County Health Rankings and Roadmaps program created a Food Environment Index which combines a variety of data measures (from 2015 and 2016) such as proximity to healthy foods, income, and food insecurity to create an index measuring 0-10, 0 being the worst and 10 being the best. According the Index, Rockland County has a score of 8.8.

County Population

Rockland County has 325,027 residents, representing 14.0% of the Mid-Hudson Valley residents, and 1.6% of New York State. Of these residents 49% are males and 51% females. The White Non-Hispanic population (63.2%) is the most predominant racial/ethnic group, followed by the Hispanic population (17.3%). Rockland county has the largest Jewish population per capita of any U.S. county, with 31.4%, or 90,000 residents, being Jewish, and the highest Asian, non-Hispanic population (6.0%). English is spoken predominantly in the area but there is a significant 38.4% of the population that speaks another language in addition to English. The majority of Rockland County residents are adults over 20 years of age (69.9%), 22.7% are 5 to 19 year olds and 7.6 % are under 5 years of age. The vastest group is in the 35-64 years old range (36.6%).

The majority of Rockland County's residents have an Associate's degree or higher and a significant portion of the population are high school graduates, as well as those who attended some college, but did not graduate with a degree. About 45% of residents have an income of $100,000 or higher. Less than 15% of the population makes less than $25,000 income. Rockland County had the lowest percent of inactive voters at 6.69% and is a popular residence for people who commute to jobs in nearby Westchester and Bergen Counties, as well as Manhattan. Veterans total 3.9% of the population.

Population Stratified by Race/Ethnicity

	Non-Hispanic White		Non-Hispanic Black		Non-Hispanic Asian		Hispanic		Non-Hispanic Other*	
	N	%	N	%	N	%	N	%	N	%
Dutchess	213,506	72.2	28,360	9.6	10,989	3.7	34,662	11.7	8,168	2.7
Orange	247,267	65.4	36,590	9.7	9,728	2.6	74,643	19.7	9,946	2.5
Putnam	79,747	80.2	2,204	2.2	2,201	2.2	13,684	13.8	1,628	1.6
Rockland	205,500	63.2	37,408	11.5	19,570	6.0	56,251	17.3	6,298	1.9
Sullivan	54,910	72.5	5,826	7.7	1,222	1.6	11,697	15.4	2,128	2.8
Ulster	143,781	79.8	9,317	5.2	3,802	2.1	17,714	9.8	5,515	3.2
Westchester	530,156	54.4	131,769	13.5	57,004	5.8	234,081	24.0	22,311	2.2
Mid-Hudson	1,474,867	63.3	251,474	10.8	104,516	4.5	442,732	19.0	55,994	2.4
NYS	11,071,563	55.9	2,842,869	14.4	1,639,345	8.3	3,726,238	18.8	518,213	2.5
NYS excl NYC	8,324,404	74.1	956,979	8.5	450,941	4.0	1,234,942	11.0	271,090	2.4

*: *Non-Hispanic Other includes American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, some other race alone, and two or more races.*

Source: U.S. Census Bureau, 2017 American Community Survey 5-year estimates

Process and Methods

In November of 2017, HealtheConnections, formerly known as the HealthlinkNY Community Network, aligning with the increased focus on collaboration between health departments and local hospitals, hosted a meeting with the hospitals, health systems, performing provider systems, and Local Health Departments (LHD) of Rockland County to discuss the benefits of collaborating on a Regional Community Health Assessment (RCHA). Through a series of meetings, Bon Secours Charity Health System, Greater Hudson Valley Health System, Health Alliance Hospital, Health Quest, Montefiore Hudson Valley Collaborative, Montefiore Nyack Hospital, St. Joseph's Hospital, and St. Luke's Cornwall Hospital, among others, joined the collaborative partnership to create the RCHA. For a full list of the 22 organizations that joined RCHA see Appendix 1.

Nyack Hospital working closely with the local Health Department and the other organizations as part of this collaboration were able to identify the health trends and challenges of the community and set the prevention agenda priorities.

The LHD PA contracted Siena College Research Institute (SRI) in December of 2017, to conduct a random sample **Community Health Survey of the Hudson Valley**, to assess the health status and concerns of residents of the Mid-Hudson region. From December 2017 to April of 2018, LHD PA members worked with SRI staff to create the Community Health Survey of the Hudson Valley Tool. The collaborative designed the survey questions to collect information around several initiatives and priorities put forward by New York State. This survey would contribute to the community health assessment and inform future health improvement efforts in the Mid-Hudson Region. These included the Prevention Agenda, the 8 Domains of Livability, and Age Across all policies.

The survey was granted approval from Siena College Institutional Review Board (IRB) on April 29, (See Appendix 2). A test run of 50 surveys was conducted during the first week of May, to determine response time, and ensure questions were understood by responders. Following the test run and necessary edits, the survey was rolled out in all seven counties in the region. Siena College Research Institute administered the survey randomly over the phone. Both land lines and mobile phones were used to reach participants.

For weighting and comparison purposes, each county was divided into two specific regions chosen by the county health departments. Half of the surveys for each county were collected in each region. Calls took place between April and September of 2018. Results were weighted by gender, age, race, and region according to the U.S. Census. In order to gauge the perception of residents surrounding health and resources in their communities, responses from 5,372 residents of the Mid-Hudson Region were collected.

Although this collected responses from a randomized sample of over 5,000 Hudson Valley residents, there are some populations that may not be fully accounted for in this survey. Some

of these underrepresented populations include those who are low-income, veterans, seniors, people experiencing homelessness, LGBTQ members, and people with a mental health diagnosis. In order to ensure that the needs of these populations were met, **Focus Groups** were conducted with providers that serve these populations in each of the seven counties. The term "providers" refers to those who offer services, such as mental health support, vocational programs, and programs for underserved populations.

The reason for doing **focus groups** with providers, rather than directly surveying the target populations through convenience sampling, was that a convenience sample risks only accounting for those who are already accessing services and care. The hope in surveying providers was that they would have an idea of what obstacles and barriers these populations face when accessing services. Before the focus groups took place, a survey was sent out to providers within each county in order to supply additional insight around local factors influencing community health. This survey covered several topics, including the populations the providers serve; the issues that affect health in the communities they serve; barriers to people achieving better health; and interventions that are used to address social determinants of health (see Appendix 3).

Throughout the seven counties in the Mid-Hudson Region, 285 surveys were completed by service providers. The answers to the survey varied throughout each county, and these differences were expanded upon in the focus groups. In the Mid-Hudson Region, 12 focus groups were conducted with various service providers. The participating providers serve a variety of clients, including children, adults with disabilities, low-income individuals, and people with substance use disorders. For the exact transcripts from the focus groups, please contact your local health department. In Rockland County, 66 responses were collected from providers that serve various populations [see Appendix 4]. The Rockland County Department of Health, along with HealtheConnections, conducted two focus groups at the Haverstraw Collaborative and the Spring Valley Collaborative. Several agencies were represented in this meeting, and the discussion was centered on the survey questions that were distributed prior to the focus group].

Along with the primary data collected through the survey and focus groups, secondary data was compiled to further supplement the data collected and show health indicators for the Region. The secondary data evaluation consists of two distinct approaches. First, data from the Statewide Planning and Research Cooperative System (SPARCS) was used to examine the leading causes of hospitalization, avoidable hospitalizations, and ED visits for Montefiore Nyack Hospital. Second, an assessment of secondary data for more than 20 core health indicators was pulled from several population-based data sources. An overview of the SPARCS Data, specifically the top 20 inpatient diagnoses and top 20 reasons for treat-and-release emergency department (ED) visits are included in Appendix 5 and 6 respectively.

To capture an up-to-date high-level view of the health status of Rockland County residents, there was an evaluation of temporal trends, differences between Rockland County and other Mid-Hudson Region Counties, New York State excluding New York City and New York City for more than 20 measures, including: obesity, preterm births, teen pregnancy rates, poverty, access to primary care, insurance status, smoking, flu immunizations, cancer screening, HIV incidence, lung, colorectal, prostate and breast cancer incidence rates, and hospitalizations for asthma, diabetes, heart attacks and falls. Whenever possible these measures aligned with

those used by the New York State Prevention Agenda Dashboard. A listing of the data sources used to complete the secondary data analysis that was used to identify the issues of concern beyond experience and direct observation are listed in Appendix 7. The data obtained is presented in the following pages.

LHDs and hospitals continued to collaborate and met regularly to complete the Regional CHA, which they utilized in preparation for their CHIPs and Community Service Plans (CSPs). Additionally, these meetings provided a forum to discuss regional interventions to target priority areas and improve population health. The group aimed to meet on a monthly basis with the primary purpose to set health care priorities for Rockland County. The health care priorities defined by this local group are aligned with New York State Prevention Agenda Priorities.

Moreover, Nyack Hospital conducts annual surveys at events throughout the year including our Diabetes Symposium, Stroke Awareness Prevention and Screening, and focus groups conducted at the Nyack Hospital Pre-Natal Center. Nyack Hospital Cancer Center receives feedback from cancer support groups. The Multiple Sclerosis Society sponsors two weekly support groups and feedback from these groups identifies targeted health needs. Our monthly diabetes support group and Lose to Win support groups are also sources of community feedback regarding health care needs identified within our service area.

Nyack Hospital's Community Health Education Department has regular contact with presidents of local Senior groups, Meals-on-Wheels, Rockland County Worksite Wellness companies, public libraries, colleges, and school districts, to name a few. The public contacts the department via the hospital website or by telephone. Under new leadership this department has also opened its doors to different community leaders to hear their main health concerns and take into account their ideas to improve the role of Montefiore Nyack as a community hospital. Leaders from Nyack Pride, Association for the Visually Impaired and Creative Aging of Nyack have expressed their health care concerns and have been pleased to have their voices heard and to count with new and improved services. All of the aforementioned request information, lectures, and screenings according to the needs of their members.

Nyack Hospital maintains an open line of communication through its attendance and representation on the Rockland County Emergency Services Committee that meets on a monthly basis. This group represents all ambulance corps in the county. Members share their concerns, make recommendations and develop plans of action to improve emergency care. Senior leadership of the hospital also onducts local meetings with different organizations to provide more opportunities for the public to interact with the health system, make needs known and form a more open and cohesive relationship. The hospital provides community health services at the request of the local health department (e.g. administering flu shots to seniors

throughout the county, including those residing at assisted living facilities) that help to inform the needs of the community. This is an attestation that Montefiore Nyack Hospital is listening and giving special attention to underserved communities.

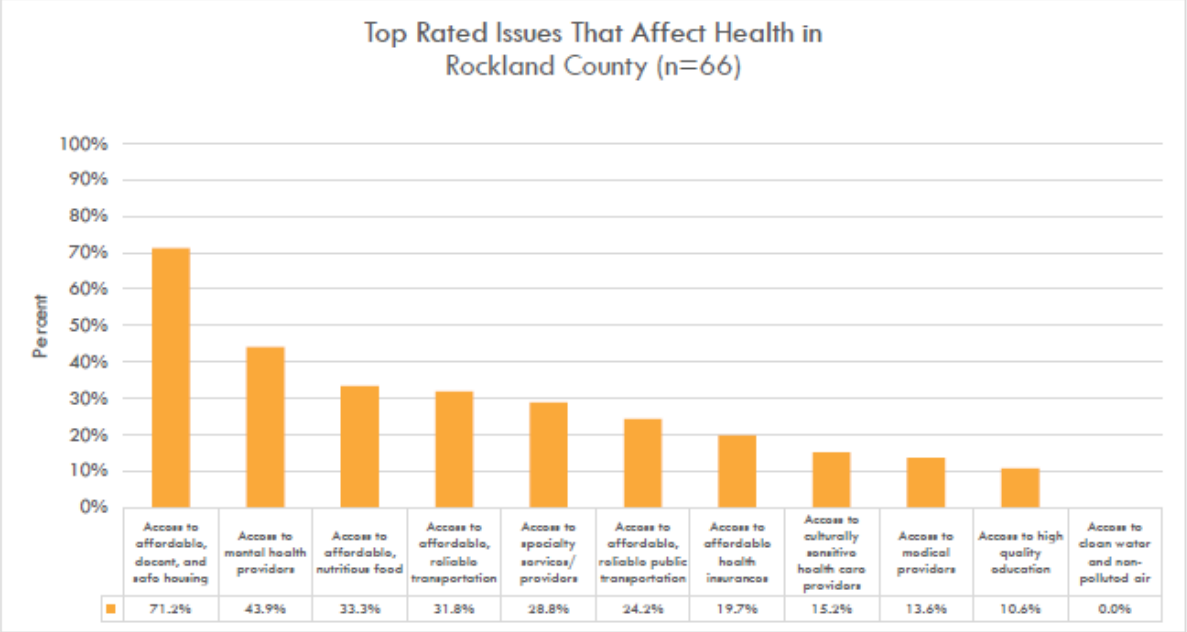
The final report submitted by HealtheConnections in September 2019, included qualitative and quantitative data from secondary and primary data sources, highlighting the needs of the community and populations at risk. Results are shown in the following pages.

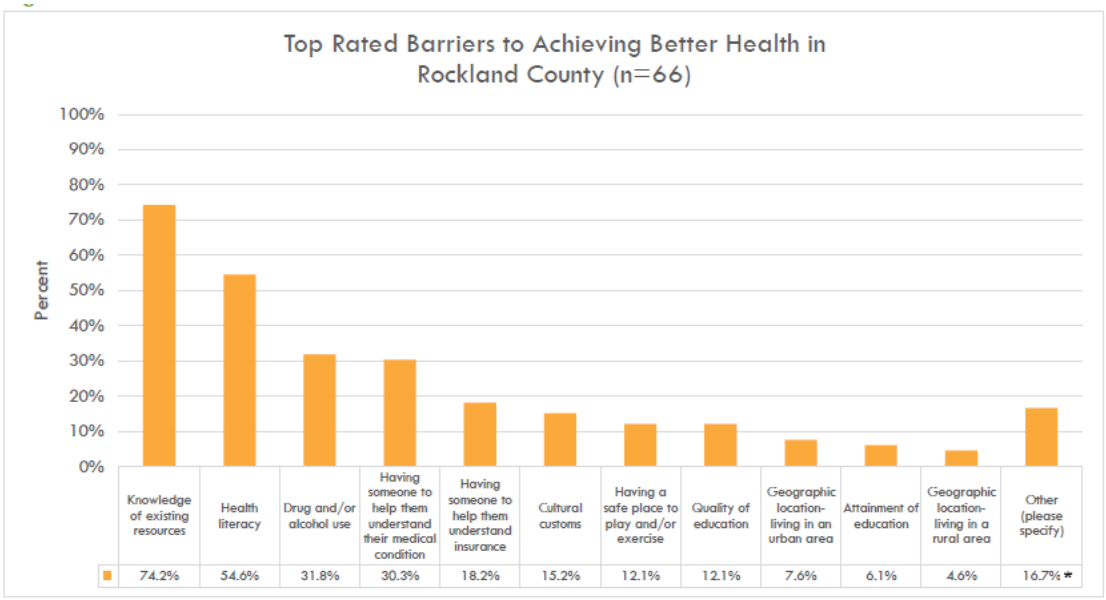
Key Findings – Primary Data

Results from the **Mid-Hudson Region Community Health Survey** showed that the top three issues that affect health in Rockland County are
1) Access to affordable, decent, and safe housing,
2) Access to mental health providers,
3) Access to affordable, nutritious food.

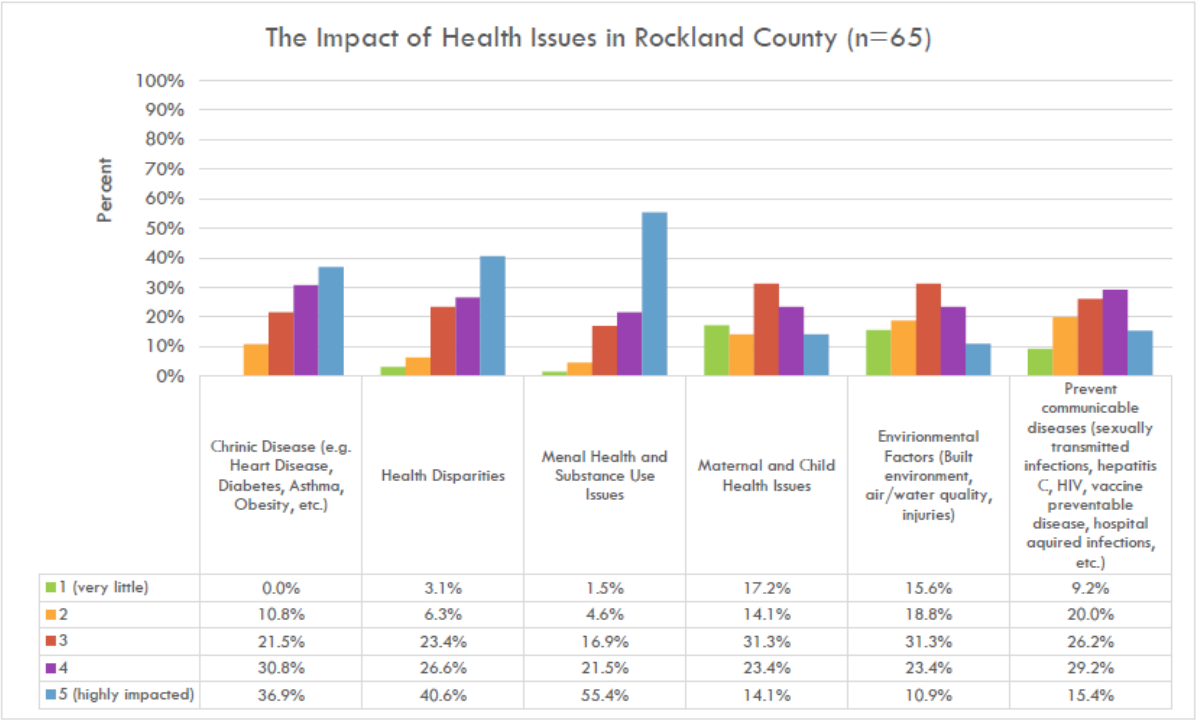
The survey also showed that the top three barriers to people achieving better health in Rockland County are:
1) Knowledge of existing resources,
2) Health literacy, and
3) Drug and/or alcohol use.

Issues highly impacting health in the communities as listed by the **Providers Focus Groups** include mental health and substance use issues, chronic diseases, and health disparities. The focus groups gave an opportunity for agency providers to expand upon these issues and barriers.





**Other (please specify): Some additional responses from participants include finding child care, access to health care providers who are trained in LGBTQ health care needs, mental health services, immigration issues, language and cultural barriers, and financial issues.*



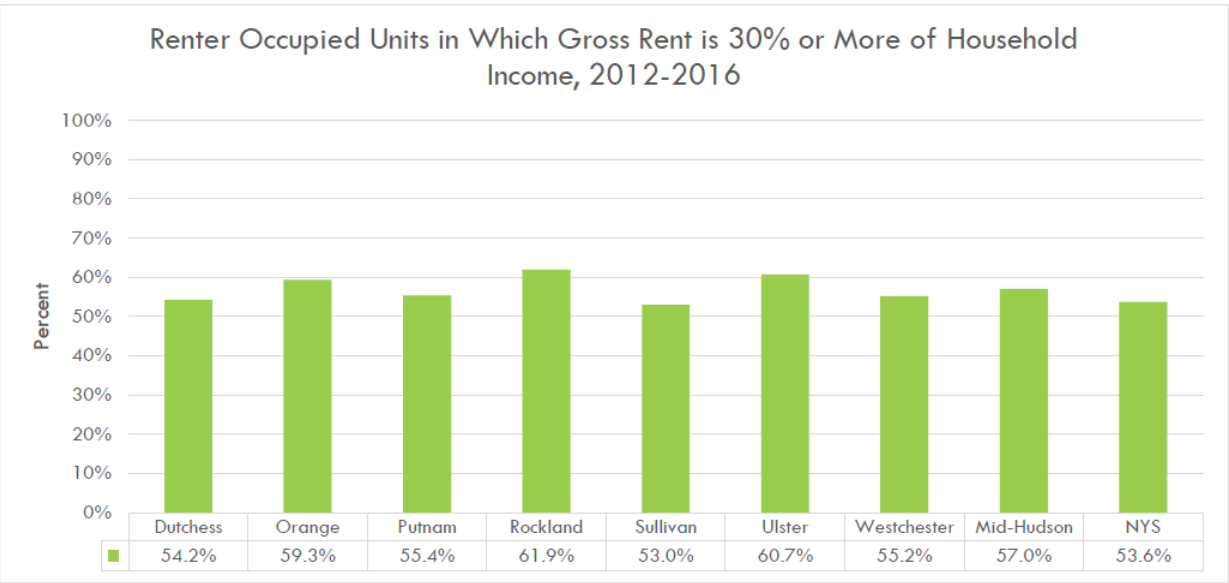
	Chrinic Disease (e.g. Heart Disease, Diabetes, Asthma, Obesity, etc.)	Health Disparities	Menal Health and Substance Use Issues	Maternal and Child Health Issues	Envirionmental Factors (Built environment, air/water quality, injuries)	Prevent communicable diseases (sexually transmitted infections, hepatitis C, HIV, vaccine preventable disease, hospital aquired infections, etc.)
1 (very little)	0.0%	3.1%	1.5%	17.2%	15.6%	9.2%
2	10.8%	6.3%	4.6%	14.1%	18.8%	20.0%
3	21.5%	23.4%	16.9%	31.3%	31.3%	26.2%
4	30.8%	26.6%	21.5%	23.4%	23.4%	29.2%
5 (highly impacted)	36.9%	40.6%	55.4%	14.1%	10.9%	15.4%

The providers **Focus Groups** were very instrumental in the identification of different risk factors affecting the health of Rockland County Residents.

Environmental Risk Factors

Housing

Lack of affordable housing in Rockland was brought up as a major issue. Of the total population 37.8% experience unstable housing, while 27% experience housing problems, the largest of the region. Rockland County has both the highest percent of renters spending more than 30% of their income on housing and the highest percent of severely cost burdened households in the region, at 61.9% and 23% respectively. People are paying a large share, often 50-75%, of their income on housing, and this leads to high levels of stress. It is difficult to come by affordable and accessible housing, and more is needed to support the needs of the aged population. Lack of affordable housing also leads to transition-of-care issues. For example, people who are eligible to be discharged from a nursing home deteriorate while waiting to transition into independent housing. Similar issues exist for those who have completed their substance use treatment and are awaiting discharge. People with mental illness were identified as a group that struggles particularly with housing.



Source: U.S. Census Bureau, American Community Survey, 2018
https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=%2FEBI%2FPHIG%2Fapps%2Fchir_dashboard%2Fchir_dashboard&p=sh&stop=14

Transportation

Access to public transportation is very limited and unreliable. There is no service that provides transportation specifically for seniors. Wait times for transportation services can be extremely long, especially when people are waiting for their return trip.

Health Care Access

There is a lack of insurance in certain communities, such as the undocumented population, which makes accessing care difficult. Mental health providers and psychiatrists are lacking. In addition, very few accept Medicaid. There are only two Spanish speaking substance use providers in Rockland County. Waiting times for appointments are extremely long and there is an overall lack of services available after 5:00 PM. The community often does not know about the resources available. Providers have a very difficult time tracking which resources are available, which organizations still have funding, and what services are offered

Socioeconomic Factors

In Rockland County 11% of residents live in poverty. About 6.3% of residents are unemployed. Rockland County has the lowest percentage of limited access to healthy food at 3%, but a food insecurity prevalence of 8.9%. Of the children receiving the school lunch program 37% benefit from reduced price or free lunch.

Behavioral Risk Factors

Different groups avoid seeking health care due to discrimination and stigma. People within the LGBTQ community and the elderly often fear discrimination or erasure when accessing medical care, which leads them to not seek care. Getting prescribed medication for people in the warming centers is difficult as the homeless are often neglected. Lack of cultural competency is a barrier that deters people from foreign cultures from seeking help. Strong moral believes impede communities to talk openly about sexual behaviors and chlamydia rates are rising particularly in teenagers, aged 13-15 years. Some schools are resistant to comprehensive health education, particularly around issues, such as teen pregnancy and STIs.

Policy Environment

Rockland County residents aren't very involved in policy and the county has the lowest percentage of inactive voters of the region at 6.7%. On the other side, there are community leaders and organizations that are very active and seek to improve the situation of particular groups in the community such as Nyack Pride that attends the LGBTQ community or Creative Aging of Nyack that advocates for the improvement of the quality of life of the elderly. Other organizations are listed later in this document.

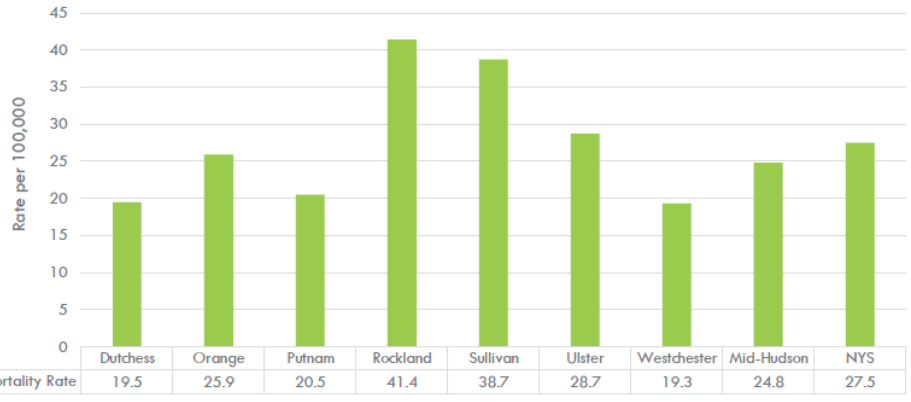
Direct Observation

Moreover, the Patient and Community Education Department at the Montefiore Nyack Hospital identified diabetes, pre-diabetes, cancer, obesity, maternal and infant care, and heart disease as concerns of the public from the requests this department receives for lectures in the community on specific topics. Surveys and focus groups conducted in different Hospital's community programs and departments identified access to quality healthcare, diabetes, heart disease, obesity and cancer as areas of health where people had concerns and would like more services.

Key Findings – Secondary Data

Even though Rockland County is known to be the healthiest county it still has room for improvement. The heart attack mortality rate in Rockland is the highest of the 7 counties: 41.4 per 100,000 population, vs Mid-Hudson region and New York State (24.8 and 27.5 per 100,000 population, respectively). The highest increase in HTN related hospitalizations and ER visits and the highest CHF rate increase between 2008 and 2015 at 8.3 to 11.9 per 100,000 is in Rockland, although it continues to be the lowest in the region. This community also has the highest incidence of prostate cancer mortality in the Mid-Hudson region (134 per 100,000 population respectively).

Figure : Age-Adjusted Heart Attack Mortality Rate per 100,000, 2014-2016

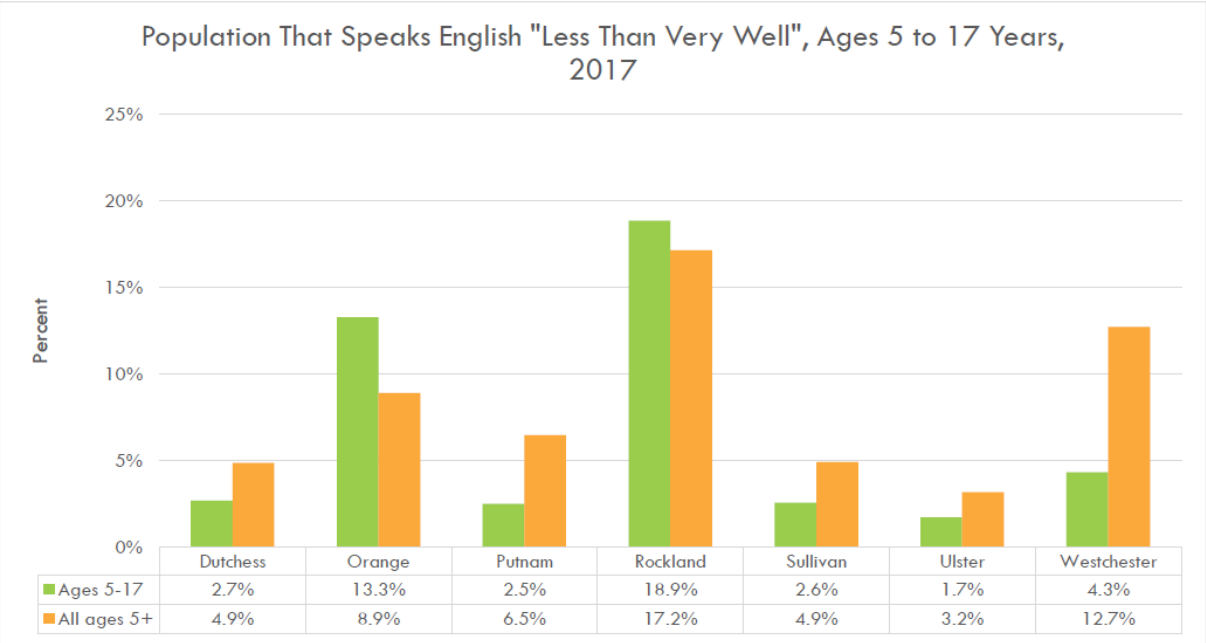


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Mortality Rate	19.5	25.9	20.5	41.4	38.7	28.7	19.3	24.8	27.5

Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When looking at health disparities in Rockland County Non-Hispanic Black adults have the highest rates of stroke hospitalizations. Non-Hispanic Black adults have the highest rates of diabetes hospitalizations. Hispanic adults have the highest rates of stroke mortality. Non-Hispanic White adults have the highest rates of CHD hospitalizations and Non-Hispanic White adults have highest rates of colorectal cancer incidence.

Communication can also be a barrier to health care access, prevention and care. People that don't speak English, or speak English less than well, avoid going to the doctor, have issues understanding prescriptions and recommendations for care or can misinterpret recommendations. Low literacy is a determinant of health. The highest percentage of children aged 5-17 years who spoke English less than very well (18.9%) is in Rockland County. Those who speak an Indo-European language account for the largest portion of this demographic in the County.



Source: U.S. Census Bureau, 2013-2017 American Community Survey, 5-Year Estimates
https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

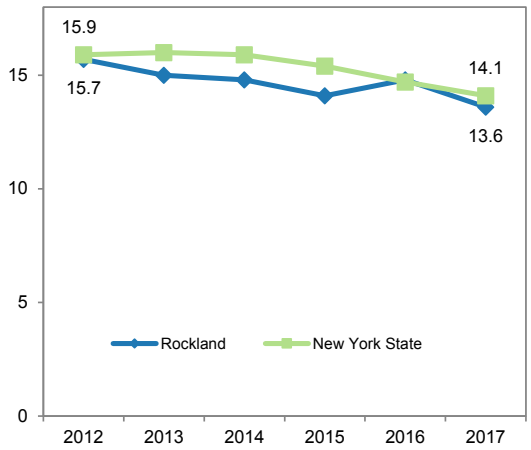
Presentation of Data

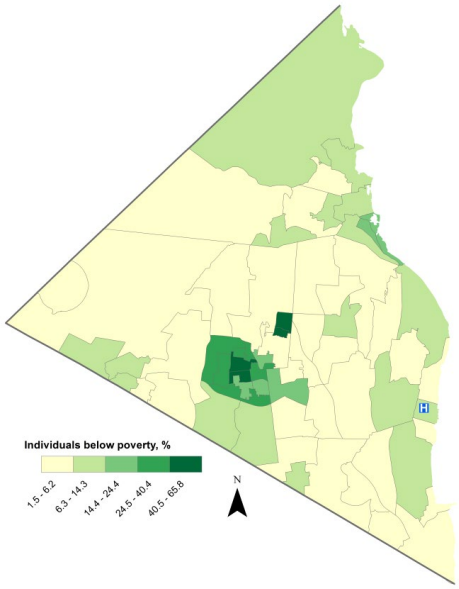
Secondary Data Results

DEMOGRAPHICS

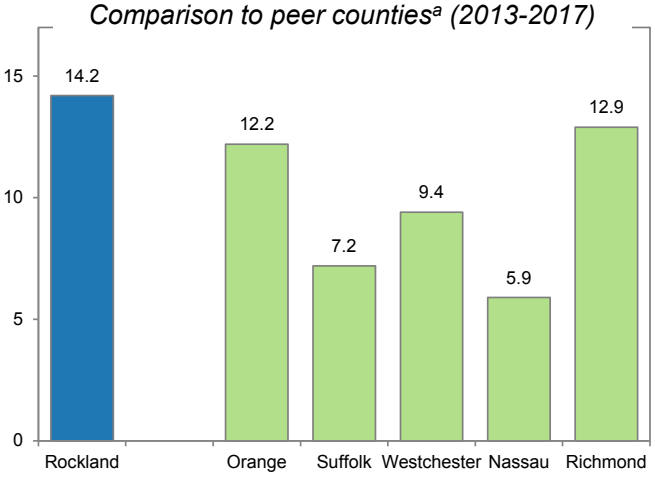
Individuals below poverty, %

Rockland County has a higher proportion of individuals living in poverty (13.6%) than its five peer counties. Those who are Hispanic (18.2%) and white (15.2%) are more likely to be living in poverty in Rockland County than those who are black (9.3%).

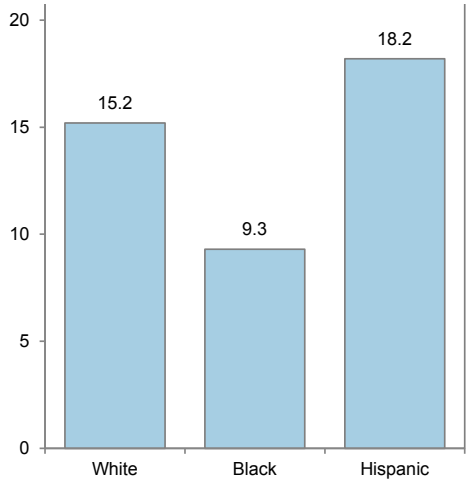




Comparison to peer counties[a] (2013-2017)



Racial/ethnic disparities[b](2013-2017)

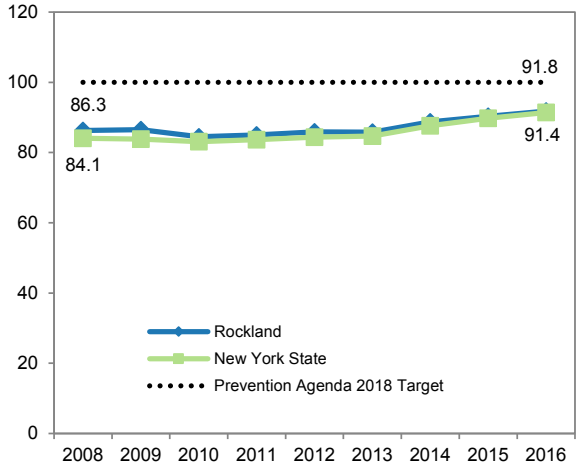


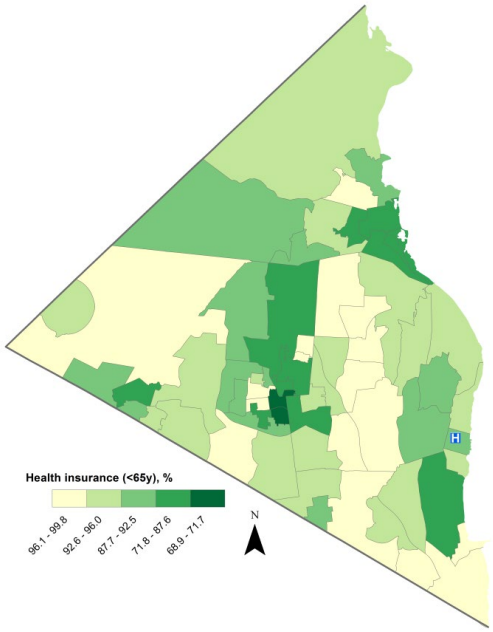
[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity. [b] The white and black population includes Hispanic individuals as data is not available by race/ethnicity separately.

Data source: 2013-2017 American Community Survey
Map is at the census tract level and reflect data from 2013-2017.

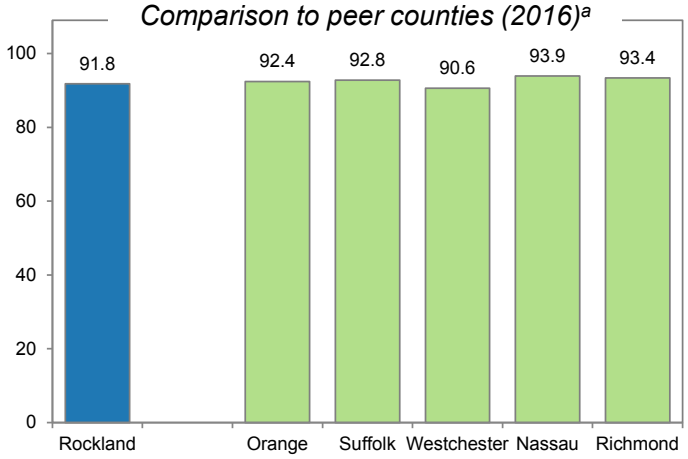
⇒ Adults (age 18-64) with health insurance, %

Despite an increase over the past decade, the percent of adults with health insurance in Rockland County (91.8%) is below the Prevention Agenda Target of complete coverage (100%). While most white (92.5%) and black (90.8%) adults have health insurance, only 69.5% of Hispanic adults do.



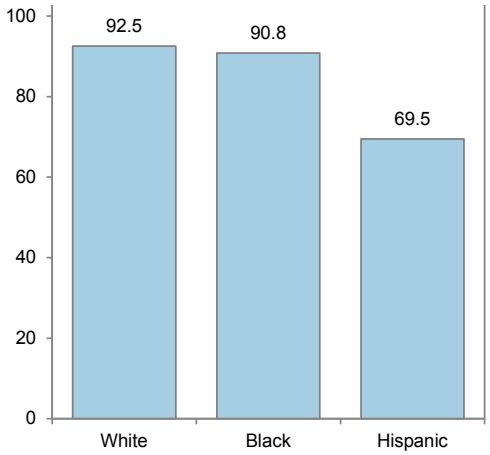


Comparison to peer counties (2016)[a]



[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity. [b] The white and black population includes Hispanic individuals as data is not available by race/ethnicity separately.

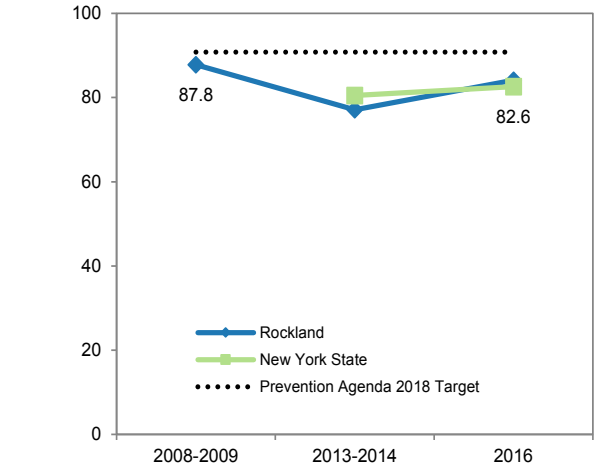
Racial/ethnic[b] disparities (2013-17)

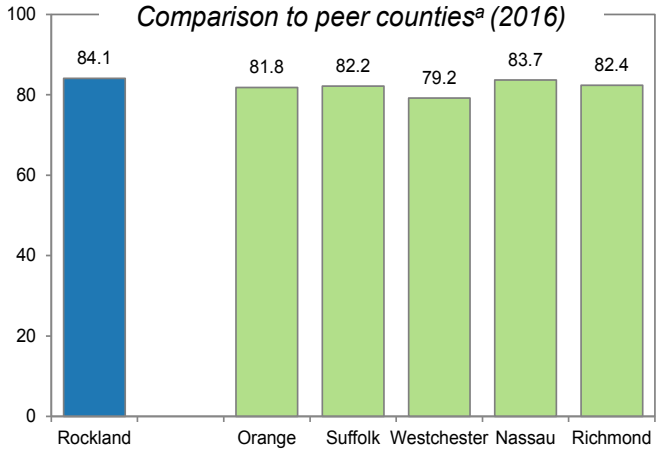


Data source: New York State Prevention Agenda Dashboard
Data for map and by race/ethnicity from 2013-2017 American Community survey.
Map is at the census tract level.

Adults (age ≥18y) who have a regular health care provider

In Rockland County, 84.1% of adults have a regular health care provider, which is below the Prevention Agenda 2018 Target of 90.8%. In comparison to its peer counties, Rockland County has the highest percentage of adults with a regular health care provider.



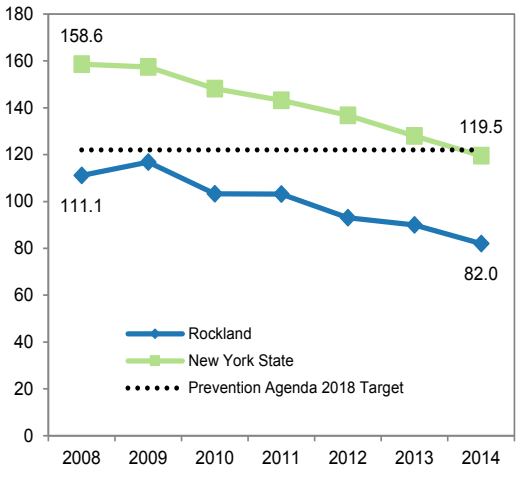


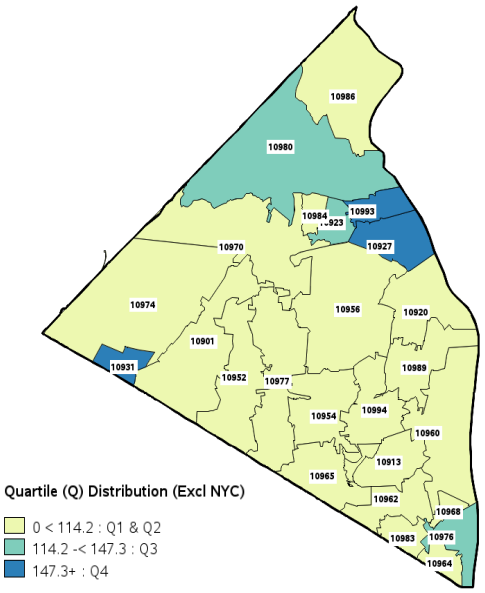
[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

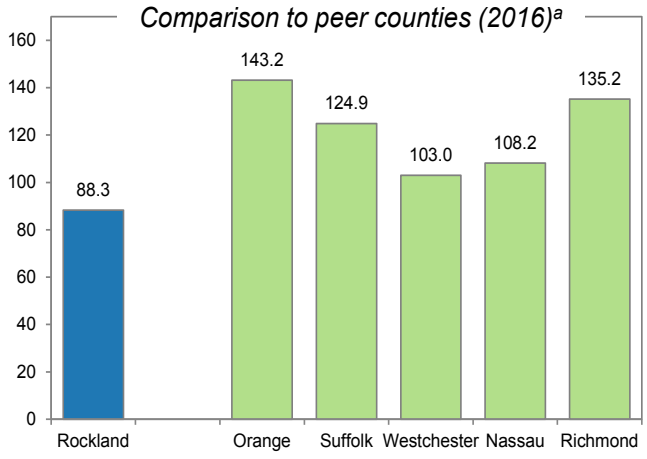
Data source: New York State Prevention Agenda Dashboard

Age-adjusted preventable hospitalization rate per 10,000 (adults age≥18y)

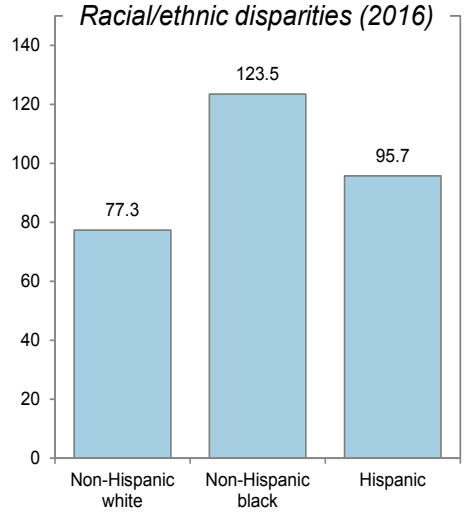
The age-adjusted preventable hospitalization rate declined from 122.0 to 82.0 per 10,000 between 2009 and 2014 in Rockland County and was lower than in its peer counties. The age-adjusted preventable hospitalization rate is much higher for non-Hispanic black adults (123.5 per 10,000) than non-Hispanic white and Hispanic adults (77.3 per 10,000 and 95.7 per 10,000, respectively).







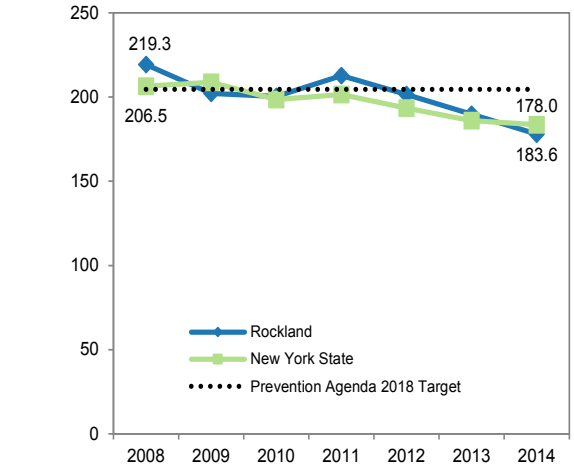
[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

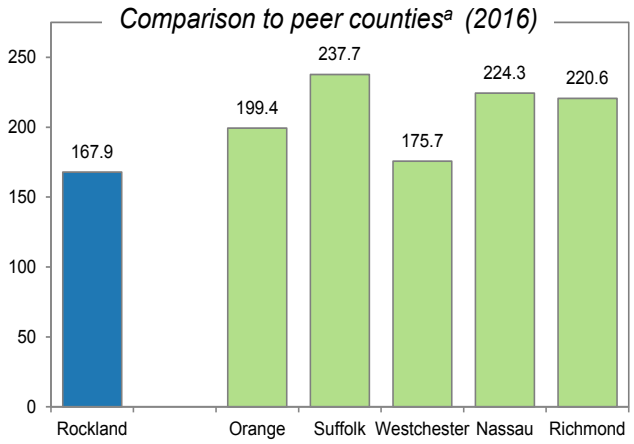


Data source: New York State Prevention Agenda Dashboard
Map is at the ZIP Code level and data are from 2010-2014.
Trend data not available past 2014 due to switch to ICD-10 in 2015.

Rate of hospitalizations due to falls per 10,000 (adults≥65y)

In Rockland County and New York State overall, the fall hospitalization rate for those ≥65y is declining and is below the Prevention Agenda Target. In comparison to peer counties, Rockland County has the lowest fall hospitalization rate for ≥65y.



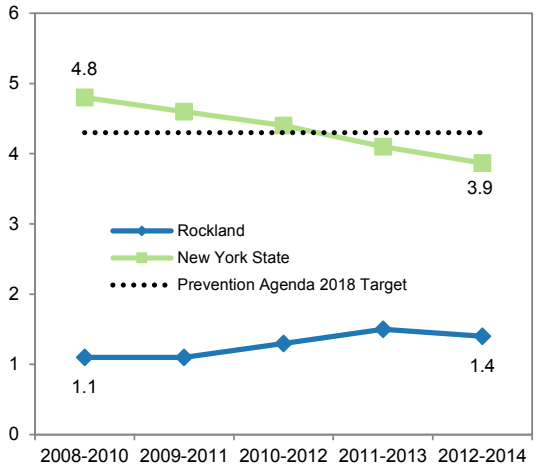


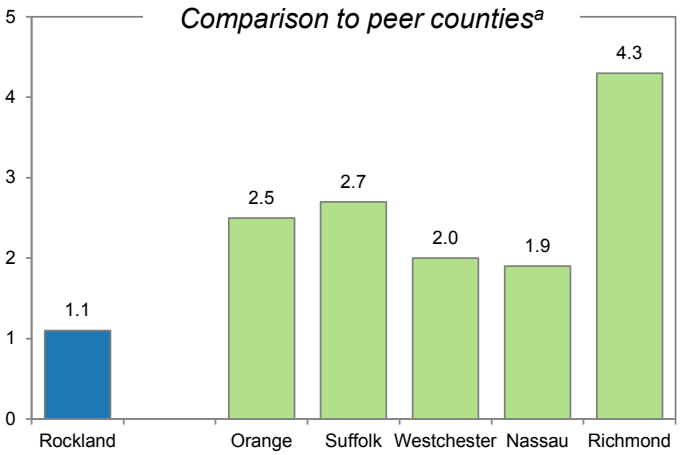
[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

Data source: New York State Prevention Agenda Dashboard
Trend data not available past 2014 due to switch to ICD-10 in 2015.

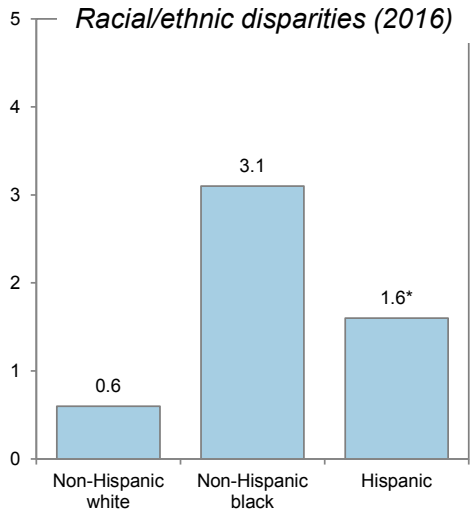
Assault-related hospitalizations per 10,000

The assaulted-related hospitalization rate is over 2.5 times lower in Rockland County (1.4 per 10,000) than in New York State overall (3.9 per 10,000) and is lower than in its peer counties. The assault-related hospitalization rate is significantly higher for non-Hispanic black residents (3.1 per 10,000) than non-Hispanic white (0.6 per 10,000) and Hispanic (1.6 per 10,000) residents.





[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.



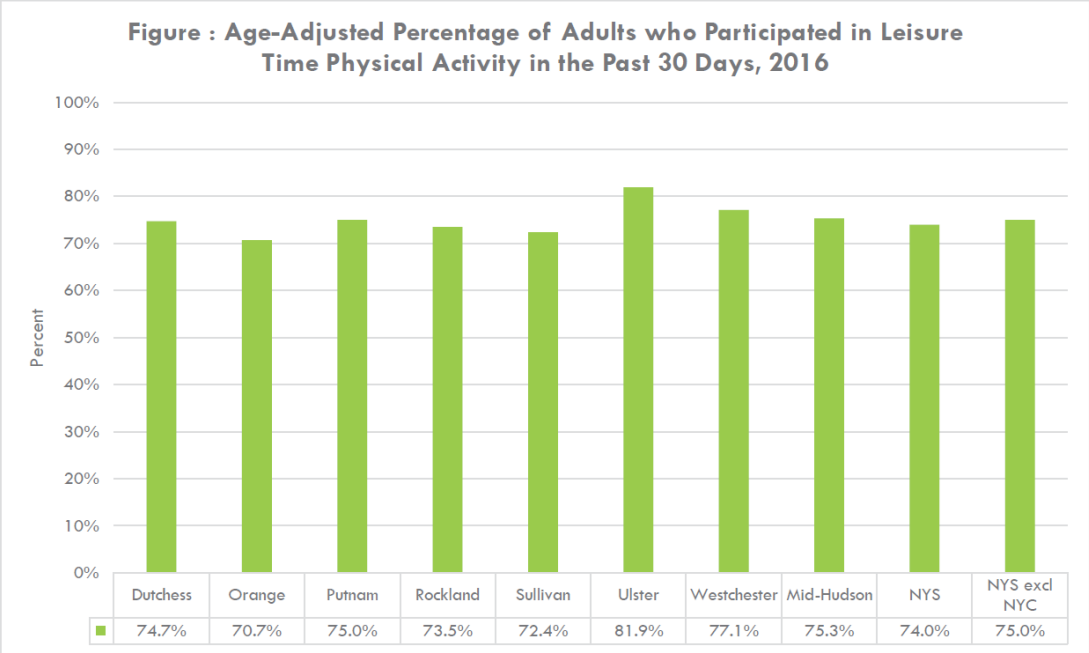
Data source: New York State Prevention Agenda Dashboard
** Indicates unreliable estimate; interpret with caution*

PHYSICAL ACTIVITY

The Physical Activity Guidelines for Americans state that to attain the most health benefits from physical activity, adults need at least 150 to 300 minutes each week of moderate-intensity aerobic activity, such as brisk walking or fast dancing. Adults also need at least 2 days of muscle-strengthening activities each week such as lifting weights or doing pushups.

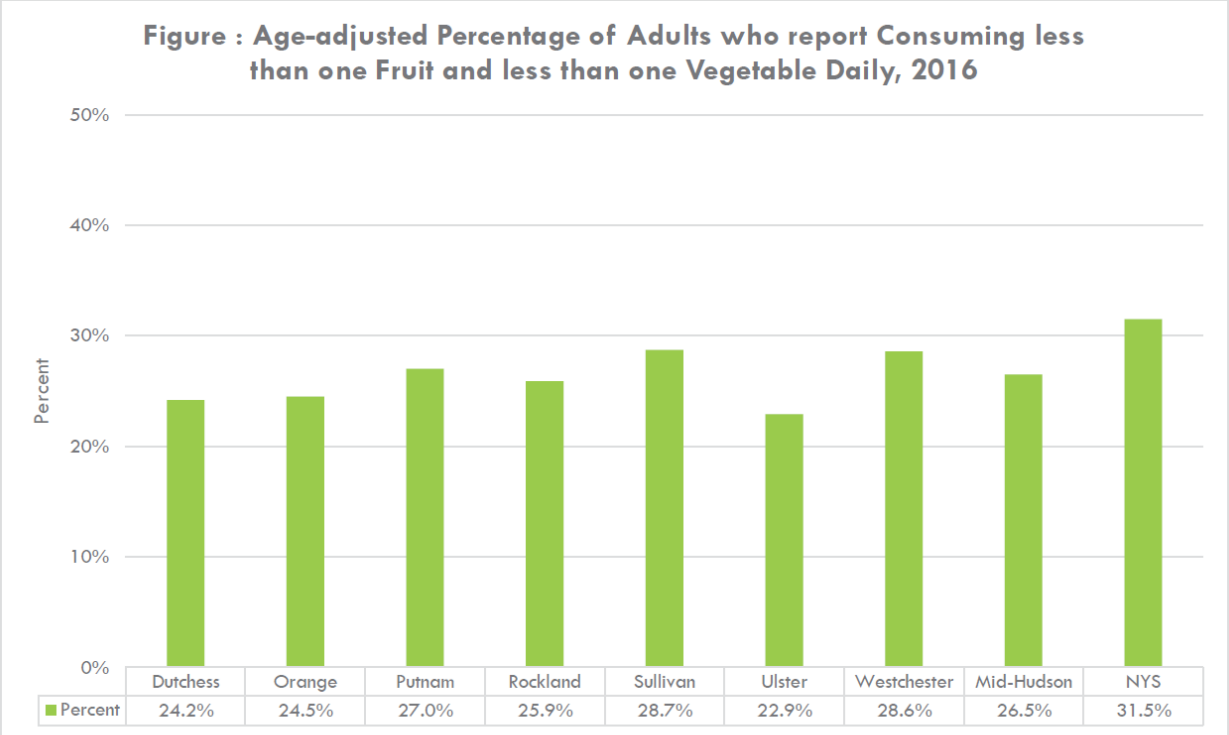
More than 80% of adults do not meet the guidelines for both aerobic and muscle-strengthening activities. Regular physical activity can improve both health and quality of life for people of all ages and abilities. Among adults and older adults, physical activity can lower the risk of early death, coronary artery disease, high blood pressure, type 2 diabetes, falls, and depression.

Healthy People 2020 has created objectives to reduce the proportion of adults who engage in no leisure time physical activity to 32.6%.2 The Mid-Hudson region has surpassed this target with only 24.7% of adults not participating in leisure time physical activity within the past 30 days ([Fig]).



Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/isy7-eb4n/data

NUTRITION - FRUIT & VEGETABLE CONSUMPTION



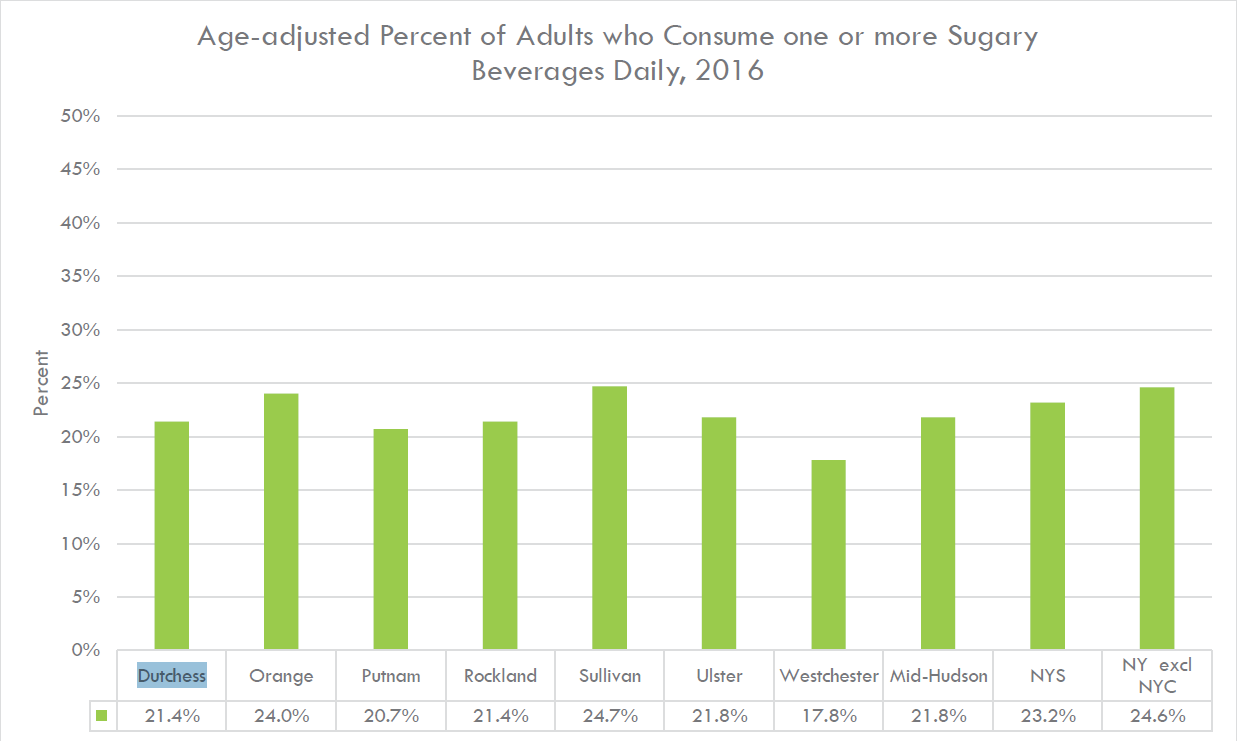
Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/jsy7-eb4n/data

Nutrition has a significant impact on health, and diet is one of the most powerful tools we have to prevent and reduce the burden of diseases such as high blood pressure, heart disease, and Type 2 diabetes. The Dietary Guidelines for Americans recommends following a healthy eating pattern across the lifespan, focusing on variety, nutrient density, and amount of food, limiting calories from added sugars and saturated fats, reducing sodium intake, shifting to healthier food and beverage choices, and supporting healthy eating patterns for all. To meet these guidelines, it is important that fruits and vegetables are accessible and affordable. The Dietary Guidelines for Americans recommends adults consume 1.5-2 cups of fruit and 2-3 cups of vegetables a day, yet only 1 in 10 U.S. adults eat this recommended amount of fruits or vegetables. In the Mid-Hudson region, 26.5% of adults eat less than one fruit and less than one vegetable daily, which is lower than the State percent, (31.5%).

NUTRITION - SUGARY BEVERAGES

Sugar-sweetened beverages are one of the main sources of added sugars in U.S. diets. Consumption of sugar sweetened beverages is linked to metabolic syndrome, cavities, and type 2 diabetes in adults. Foods and beverages high in calories from added sugar often provide few or no essential nutrients or dietary fiber, which therefore contributed to excess calorie intake without contributing to diet quality.3 Intake of sugar-sweetened beverages should be limited in a varied, healthy diet. According to the New York State Department of Health, Americans consume an average of 138 calories from sugary beverages on a given day. In Rockland

County 21.4% compared to 21.8% of adults in the Mid-Hudson region consume one or more sugary beverages daily.



Source: NYSDOH Behavioral Risk Factor Surveillance System, 2016
https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/jsy7-eb4n/data

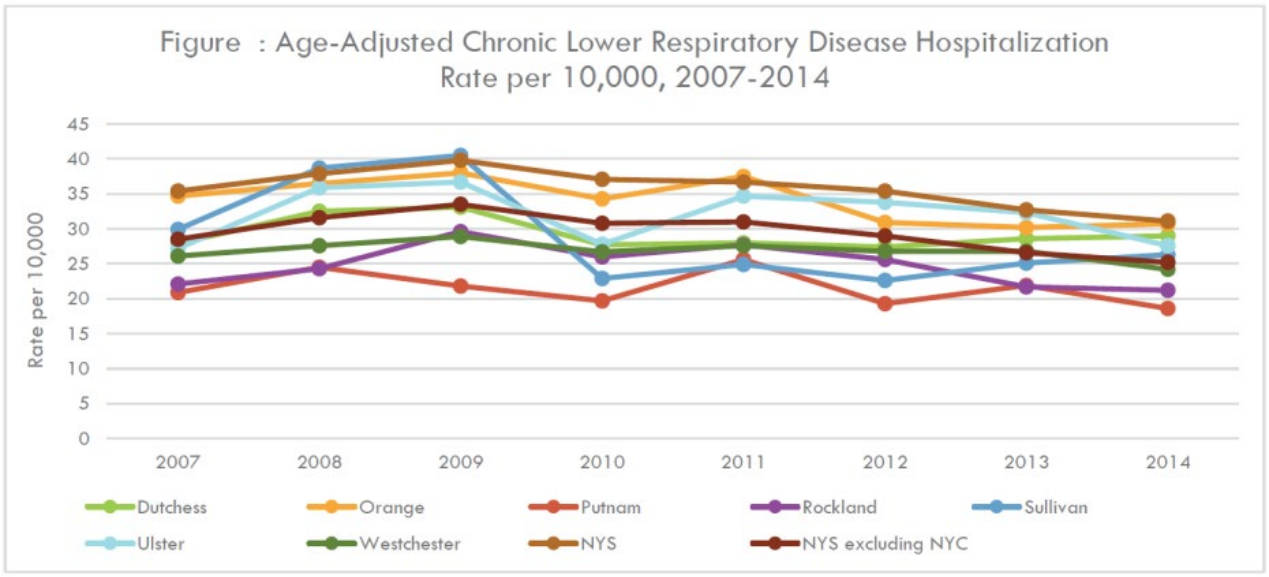
Health Indicators: Chronic Diseases

CHRONIC LOWER RESPIRATORY DISEASES

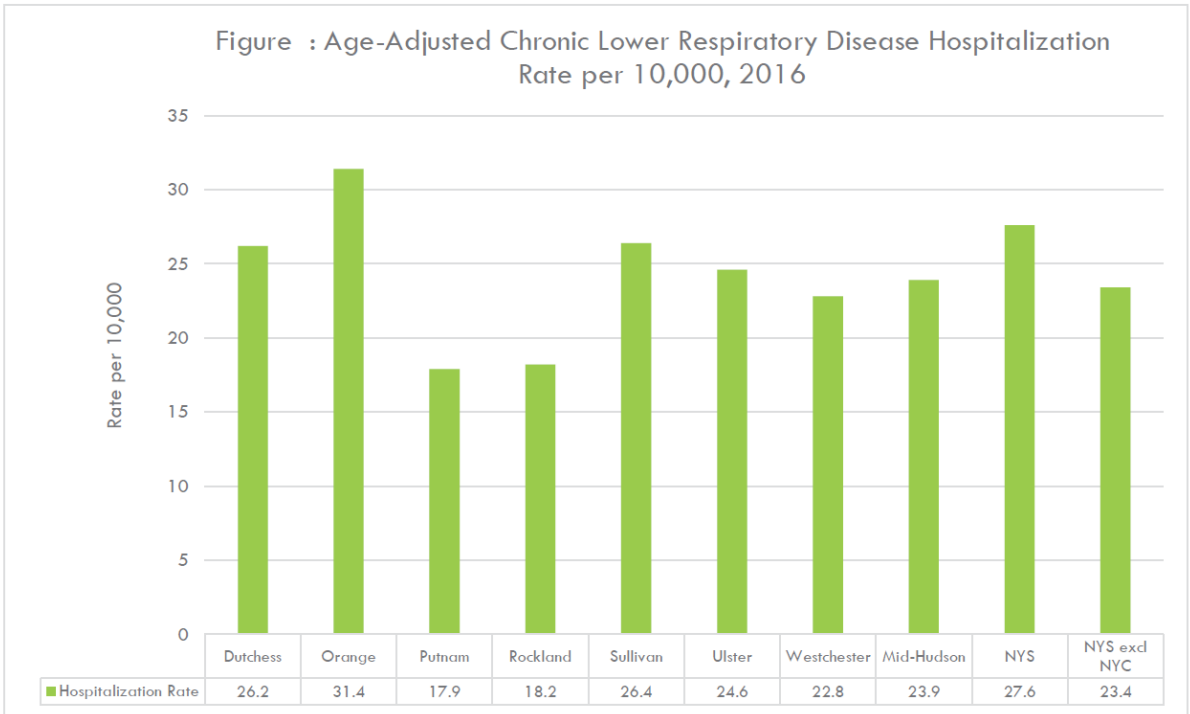
Chronic Lower Respiratory Diseases (CLRD) is a classification of diseases that affect the lungs and the respiratory tract. Some diseases include emphysema, bronchitis, asthma, and other chronic obstructive pulmonary diseases (COPD). Symptoms of CLRD include airflow constriction, leading to difficulty breathing.

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	27.9	34.7	20.9	22.1	29.9	27.2	26.1	35.4	28.5
2008	32.5	36.5	24.5	24.3	38.7	35.9	27.6	37.9	31.6
2009	33.1	38.0	21.8	29.6	40.5	36.7	28.9	39.8	33.5
2010	27.7	34.3	19.7	26.0	22.9	27.8	26.7	37.1	30.8
2011	28.0	37.5	25.6	27.7	24.9	34.7	27.6	36.7	31.0
2012	27.4	30.9	19.3	25.6	22.6	33.8	26.8	35.4	29.0
2013	28.6	30.2	21.9	21.7	25.1	32.3	26.8	32.7	26.6
2014	29.0	30.7	18.6	21.2	26.3	27.6	24.2	31.1	25.2

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



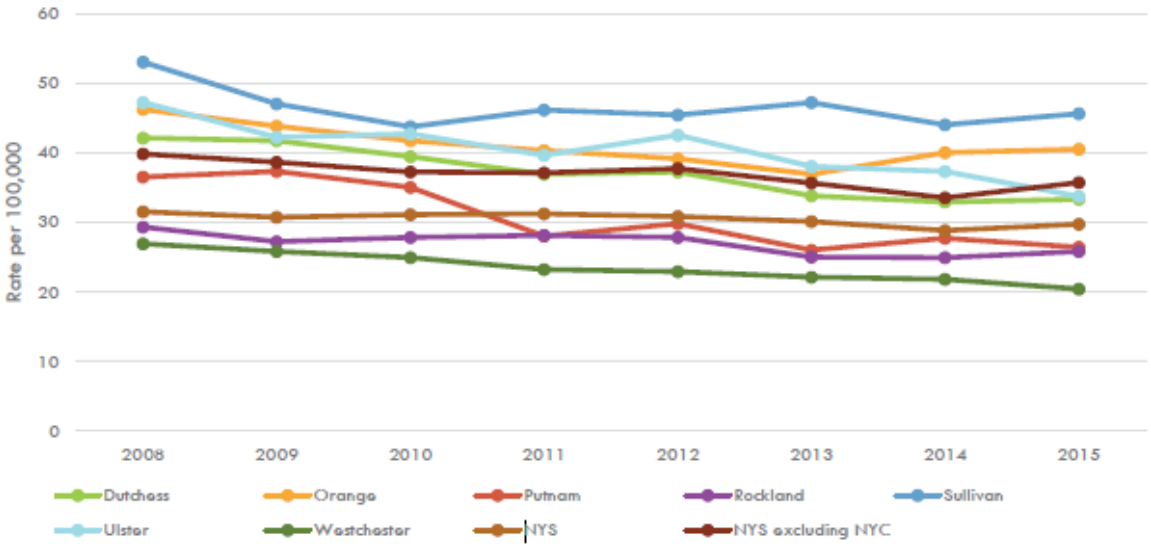
The rates of CLRD hospitalization from 2007-2014 have decreased in almost all counties and New York State overall. Putnam and Rockland counties have slightly lower rates than the Mid-Hudson region in 2016 at 17.9 and 18.2 per 10,000 population, respectively.



Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When looking over time, mortality rates across each county have generally decreased. There has been a slight increase in mortality rates between 2014-2015 in Dutchess, Putnam, Rockland, and Sullivan counties, as well as New York State overall and excluding New York City.

Figure : Age-Adjusted Chronic Lower Respiratory Disease Mortality Rate per 100,000, 2008-2015



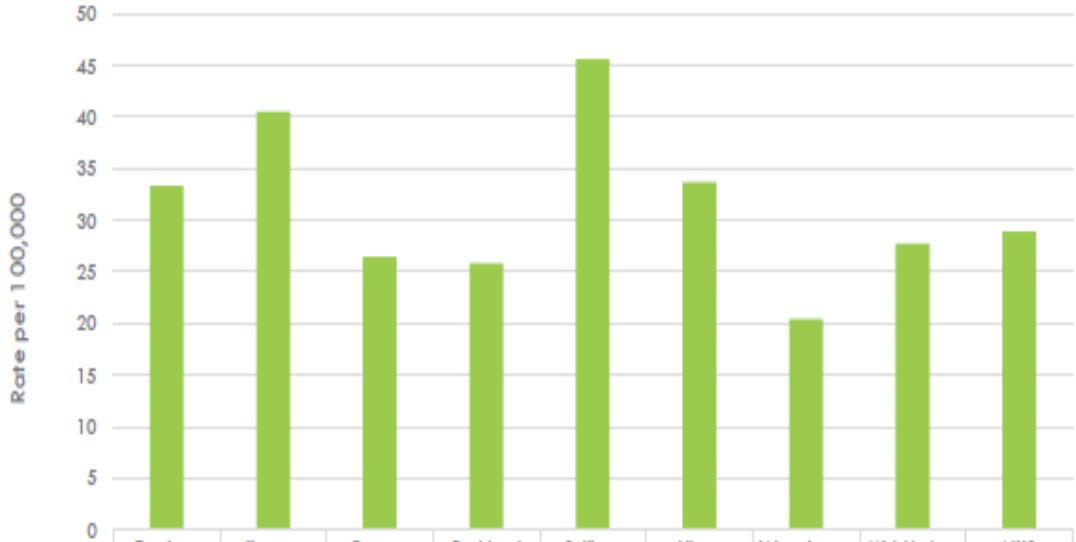
Note: Three-year averages for counties and single-year estimates for NYS and NYS excluding NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	42.1	46.2	36.5	29.3	53.0	47.2	26.9	30.4	39.8
2009	41.7	43.8	37.3	27.2	47.0	42.2	25.8	31.5	38.6
2010	39.4	41.7	35.0	27.8	43.7	42.7	24.9	30.7	37.2
2011	36.9	40.3	28.0	28.1	46.1	39.6	23.2	31.1	37.1
2012	37.2	39.1	29.8	27.8	45.4	42.5	22.9	31.2	37.7
2013	33.8	36.9	26.0	25.0	47.2	38.0	22.1	30.8	35.6
2014	32.9	40.0	27.7	24.9	44.0	37.3	21.8	30.1	33.5
2015	33.3	40.5	26.4	25.8	45.6	33.7	20.4	28.8	35.7

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

CLRD mortality rates vary across the 7 counties from 2014-2016, which is equivalent to the three-year average in 2015 at the county level, although the rate in the Mid-Hudson region is similar to the rate in New York State overall (27.7 vs 28.9 per 100,000 population, respectively).The Healthy People 2020 goal is calculated specifically for COPD alone, so it is not comparable to these data points.

Figure : Age-Adjusted Chronic Lower Respiratory Disease Mortality Rate per 100,000, 2014-2016

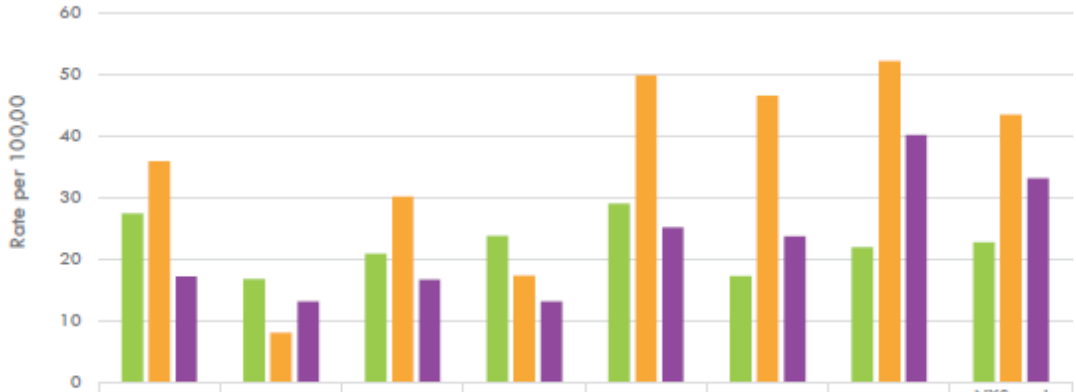


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Mortality Rate	33.3	40.5	26.4	25.8	45.6	33.7	20.4	27.7	28.9

Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When stratifying CLRD mortality rates by race/ethnicity, the disparities are not consistent among hospitalization and mortality rates. Non-Hispanic Black adults have higher CLRD hospitalization rates across New York State and the majority of the Mid-Hudson region counties, with the exception of Putnam and Sullivan counties (Putnam had a rate that was unstable). However, non-Hispanic White adults had the highest CLRD mortality rates across all of the 7 counties, which is also consistent with both New York State trends.

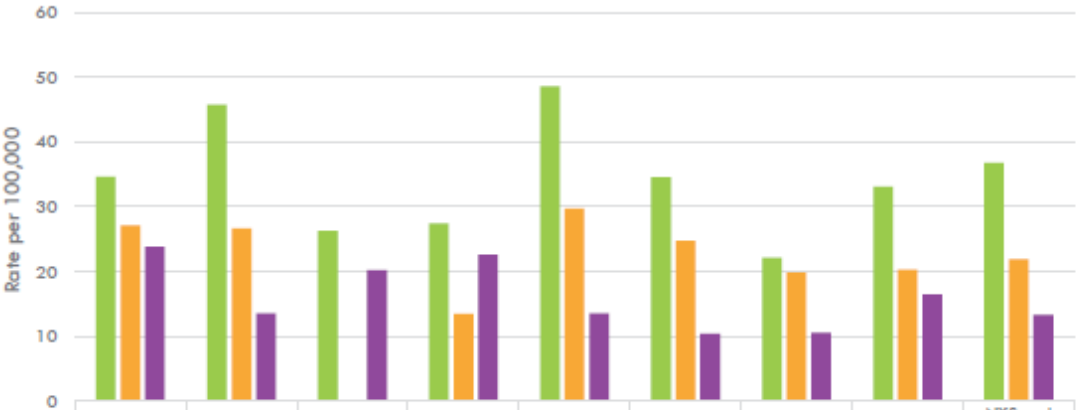
Figure : Age-Adjusted Chronic Lower Respiratory Disease Hospitalization Rates per 10,000 by Race or Ethnicity, 2012-2014



	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	27.4	16.7	20.8	23.7	29.0	17.2	21.9	22.7
Non-Hispanic Black	35.8	8.0 *	30.1	17.3	49.8	46.5	52.1	43.4
Hispanic	17.1	13.1	16.6	13.1	25.1	23.6	40.1	33.1

** The rate or percentage is unstable.*
Note: Dutchess County is not shown as data either did not meet the criteria for statistical reliability or data quality, or data is not available.
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

Figure : Age-Adjusted Chronic Lower Respiratory Disease Mortality Rate per 100,000 by Race or Ethnicity, 2014-2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	34.6	45.7	26.3	27.4	48.6	34.5	22.1	33.1	36.8
Non-Hispanic Black	27.1	26.6	0.0 *	13.4	29.7 *	24.7 *	19.8	20.3	21.9
Hispanic	23.8	13.5	20.2 *	22.6	13.5 *	10.4 *	10.5	16.4	13.3

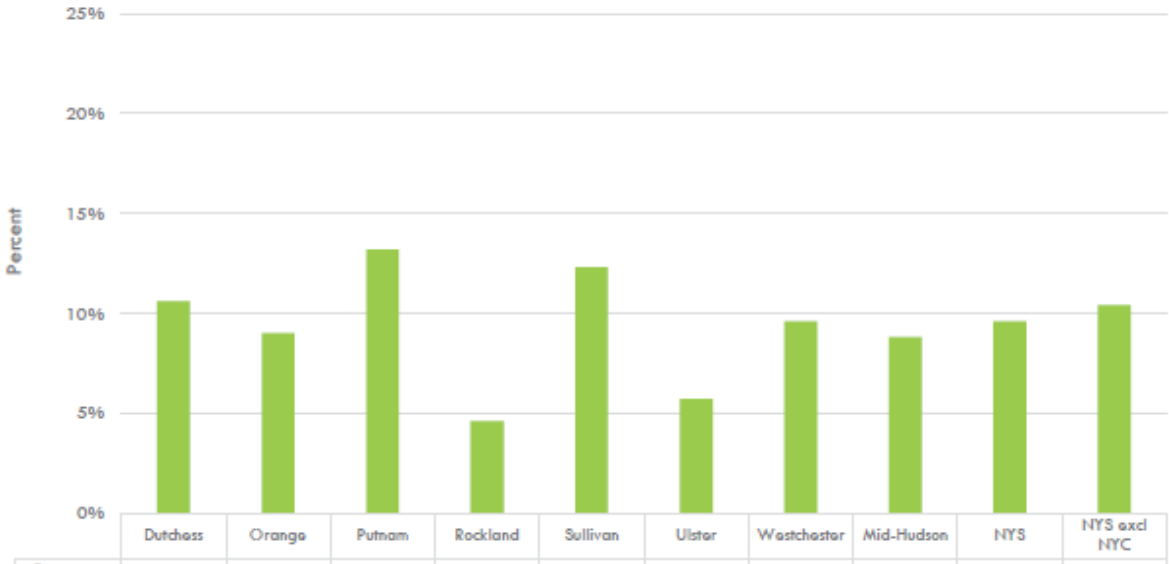
**: The rate or percentage is unstable.*
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

ASTHMA

Asthma is caused by airway restriction in the lungs resulting in difficulty breathing, wheezing, chest tightness, and coughing.71 It is one of the most common diseases found among children, but it can also be brought on during adult years. It can be caused by a variety of factors that may be genetic, environmental, or stress-related. In many cases, people are unaware they have asthma, and there is no definitive cure for the disease. However, there are ways to manage it with medical care by avoiding triggers such as allergens, intense physical activity, tobacco smoke, and air pollution. Asthma is a serious economic burden, costing the United States almost $56 billion a year in medical expenses and almost $1.3 billion annually in New York State.72 It is important that intervention starts in early childhood to avoid increased medical costs and fatal consequences.

In the United States, 7.9% of adults are currently living with asthma. This percent varies across the 7 counties in the Mid-Hudson region and New York State. Rockland County has even a lower rate (4.6%) and is the lowest in the Mid-Hudson region.

Figure : Age-Adjusted Percentage of Adults With Current Asthma, 2016

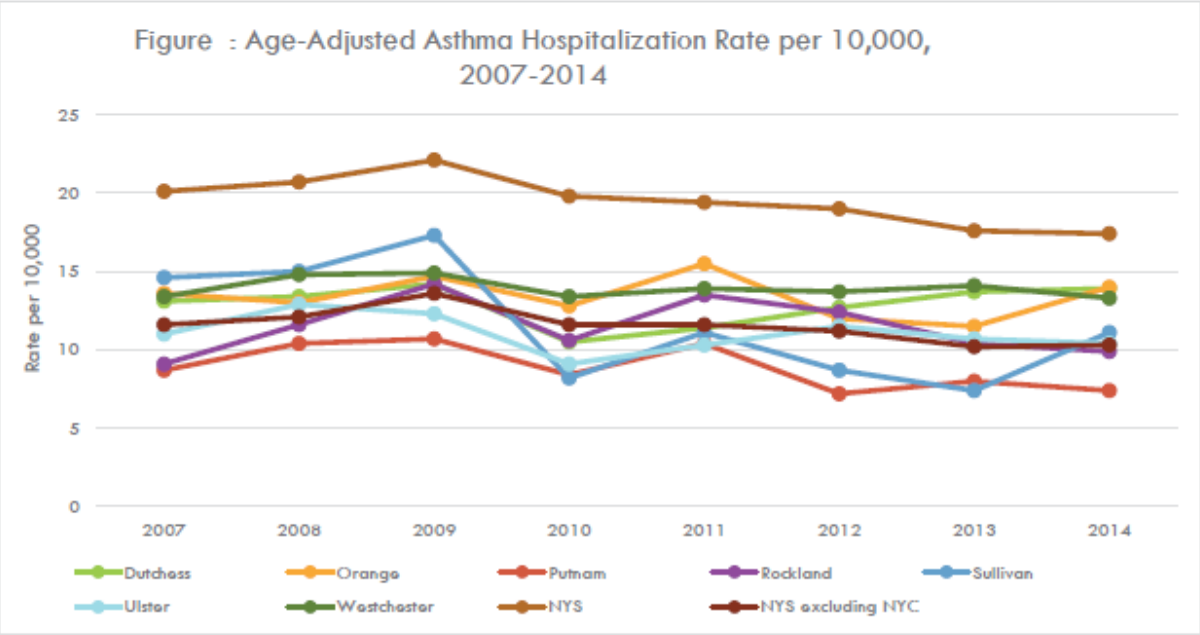


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percentage	10.6%	9.0%	13.2%	4.6%	12.3%	5.7%	9.6%	8.8%	9.6%	10.4%

Source: NYSDOH Behavioral Risk Factor Surveillance System, 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

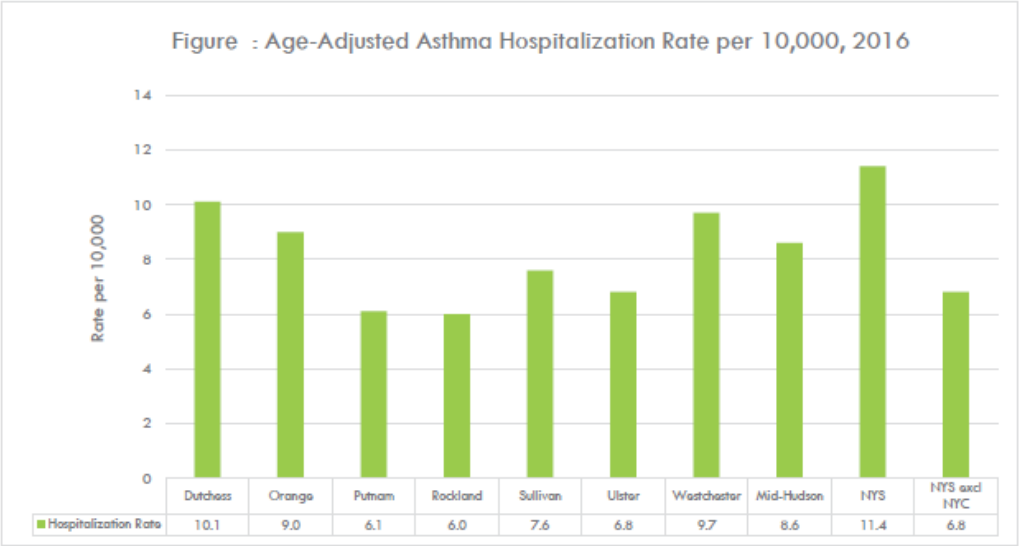
The rates of asthma hospitalization vary across the Mid-Hudson region and New York State overall. From 2007- 2014, asthma rates have stayed relatively constant across the 7 counties in the Mid-Hudson region and in New York State excluding New York City.

Rockland County currently has the lowest hospitalization rates for asthma, closely followed by Putnam (6.0 vs 6.1) and almost half the rates of NYS.



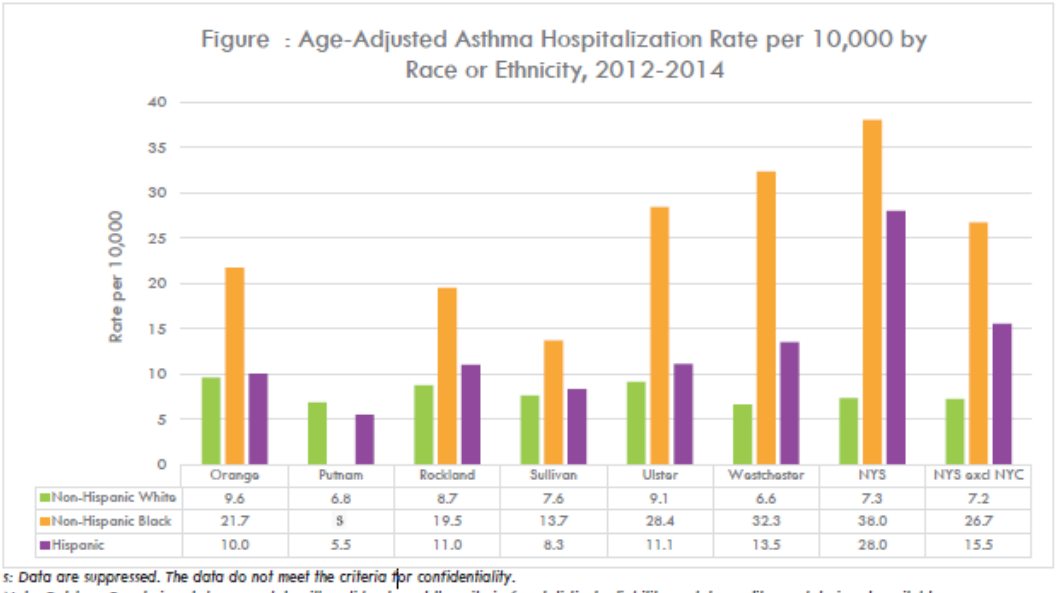
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	13.1	13.6	8.7	9.1	14.6	11.0	13.4	20.1	11.6
2008	13.4	13.0	10.4	11.6	15.0	12.9	14.8	20.7	12.1
2009	14.2	14.7	10.7	14.2	17.3	12.3	14.9	22.1	13.6
2010	10.5	12.8	8.4	10.6	8.2	9.1	13.4	19.8	11.6
2011	11.4	15.5	10.4	13.5	11.1	10.3	13.9	19.4	11.6
2012	12.7	12.0	7.2	12.4	8.7	11.5	13.7	19.0	11.2
2013	13.7	11.5	8.0	10.4	7.4	10.7	14.1	17.6	10.2
2014	13.9	14.0	7.4	9.9	11.1	10.4	13.3	17.4	10.3

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When stratifying the data by race/ethnicity, it is evident that non-Hispanic Black adults have higher rates of asthma hospitalization rates compared to non-Hispanic White and Hispanic adults. This is consistent throughout the Mid-Hudson region counties as well as New York State overall, excluding New York City.

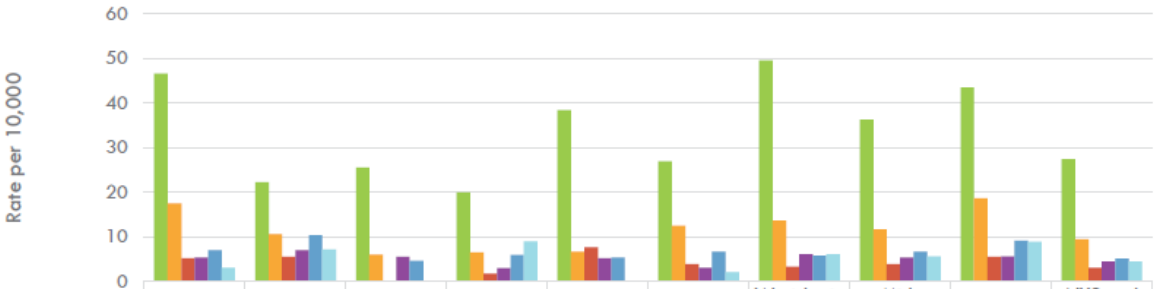


s: Data are suppressed. The data do not meet the criteria for confidentiality.
Note: Dutchess County is not shown as data either did not meet the criteria for statistical reliability or data quality, or data is not available.
Source: NYSDOH Statewide Planning and Research Cooperative System, 2016
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

When stratifying asthma hospitalization by age group, it is evident that rates are higher for the younger population, specifically the 0-4 age group. According to [Figure], in the 0-4 age group, asthma hospitalization rates are highest in Westchester County at 49.5 per 10,000 population

and lowest in Rockland County at 20.0 per 10,000 population. The Mid-Hudson region counties and New York State do not meet the Healthy People 2020 target of reducing hospitalizations for children under 5 years to 18.2 hospitalizations per 10,000.

Figure : Asthma Hospitalization Rate per 10,000 Stratified by Age Group, 2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
0-4	46.6	22.3	25.5	20	38.4	26.9	49.5	36.3	43.5	27.4
5-14	17.5	10.6	6	6.5	6.7	12.5	13.6	11.7	18.7	9.5
15-24	5.2	5.5		1.7	7.7	3.9	3.3	3.9	5.5	3.1
25-44	5.3	7.0	5.5	3.0	5.2	3.1	6.1	5.4	5.6	4.5
45-64	7.0	10.4	4.6	5.9	5.4	6.7	5.8	6.7	9.2	5.1
65 and older	3.1	7.2		9		2.1	6.1	5.6	8.9	4.4

	0-4	5-14	15-24	25-44	45-64	65 and older
Dutchess	46.6	17.5	5.2	5.3	7.0	3.1
Orange	22.3	10.6	5.5	7.0	10.4	7.2
Putnam	25.5	6.0*	s	5.5	4.6	s
Rockland	20.0	6.5	1.7*	3.0	5.9	9
Sullivan	38.4	6.7*	7.7*	5.2*	5.4	s
Ulster	26.9	12.5	3.9*	3.1	6.7	2.1*
Westchester	49.5	13.6	3.3	6.1	5.8	6.1
Mid-Hudson	36.3	11.7	3.9	5.4	6.7	5.6
NYS excl NYC	27.4	9.5	3.1	4.5	5.1	4.4
NYS	43.5	18.7	5.5	5.6	9.2	8.9

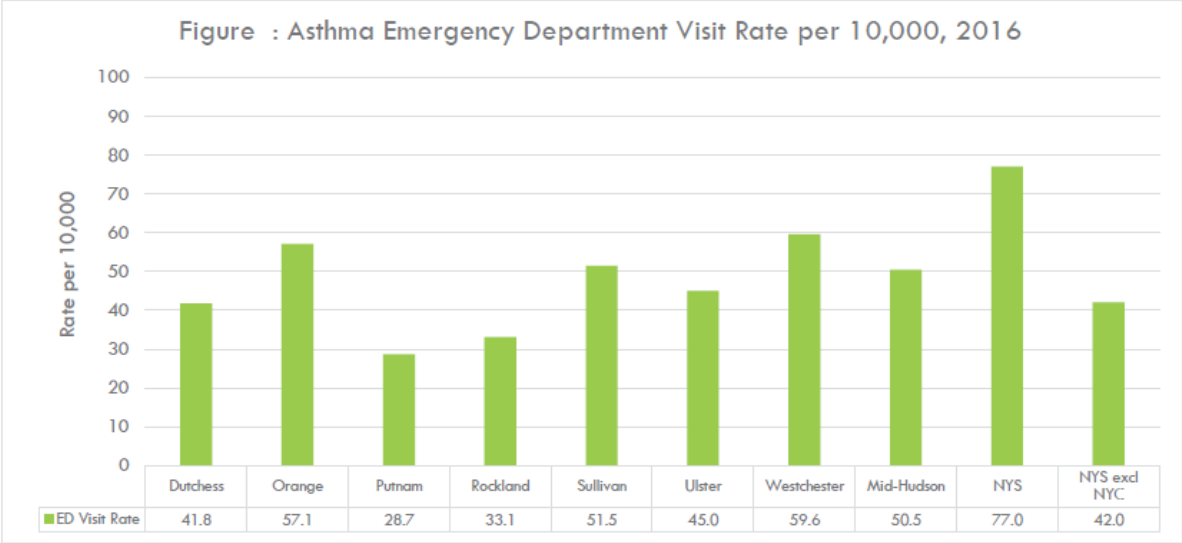
**: Fewer than 10 events in the numerator, therefore the rate/percentage is unstable.*

s: Data do not meet reporting criteria.

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017

NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

The emergency department (ED) is commonly used to treat asthma related complications as shown in [Figure]. The rates have stayed relatively constant across the seven counties, and New York State from 2008-2014, showing a slight decrease in Rockland County.

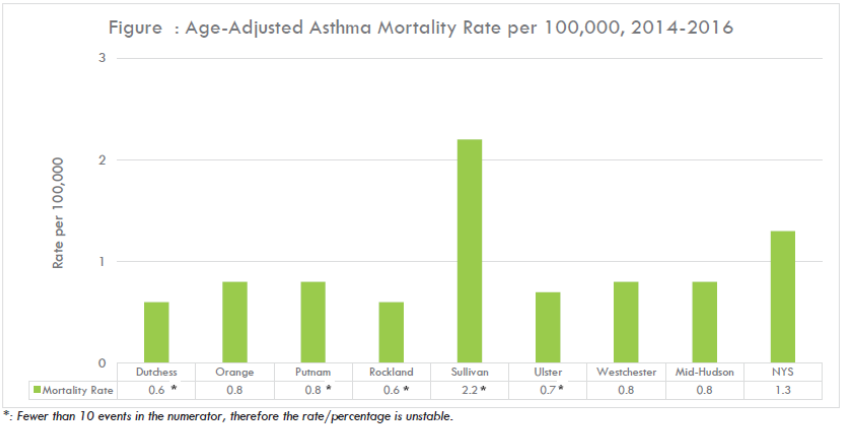


Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

Table : Asthma Emergency Department Visit Rate per 10,000 population, 2008-2014

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
2008	58.9	66.6	28.1	29.3	62.7	45.8	61.4	55.1	83.1
2009	54.7	67.8	27.8	36.5	57.2	44.3	61.3	55.4	85.6
2010	44.2	67.3	29.4	35.5	51.5	40.3	60.4	52.8	83.6
2011	49.9	66.9	31.6	36.0	52.4	45.9	61.7	54.6	85.7
2012	52.9	68.5	32.3	36.5	70.8	46.6	64.6	57.3	89.9
2013	45.1	66.2	26.9	34.1	60.5	43.4	61.9	53.6	86.3
2014	47.2	65.1	28.2	33.7	64.9	46.4	63.7	54.8	86.2

Source: NYSDOH Statewide Planning and Research Cooperative System, September 2016
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/



*: Fewer than 10 events in the numerator, therefore the rate/percentage is unstable.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

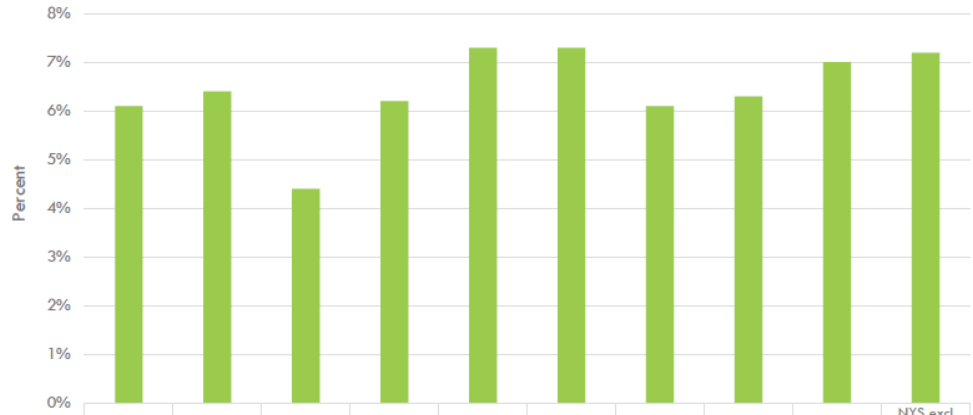
From 2014-2016, the rates of asthma mortality have stayed relatively low, with most of the counties having fewer than 10 cases in this time period.

CARDIOVASCULAR DISEASE

Cardiovascular disease (CVD) or heart disease is the leading cause of death in the United States, killing more than 600,00 people each year.73 It refers to a number of conditions that affect the heart and other components of the circulatory system. It involves blocked or hardened blood vessels (otherwise known as atherosclerosis) that can lead to diseases including (but not limited to) congestive heart failure, cerebrovascular disease or stroke, coronary artery disease, or a heart attack. The management, treatment, and lost productivity due to CVD costs the United States about $200 billion each year.

Some risk factors for CVD include genetics, age (as you get older, the risk for CVD becomes higher), unhealthy lifestyle behaviors (unhealthy diet, decreased physical activity, tobacco use, alcohol use), stress, and other health conditions (high blood pressure, high cholesterol, diabetes, and obesity).

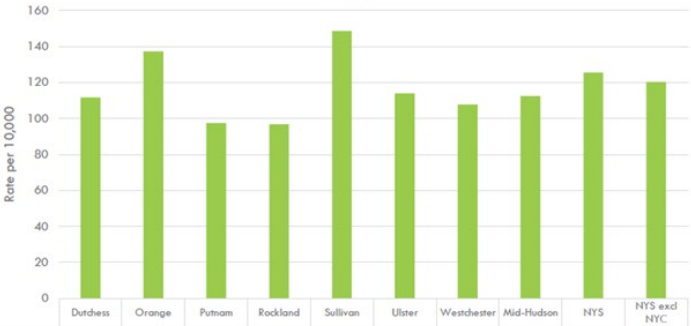
Figure : Age-Adjusted Percentage of Adults With Cardiovascular Disease (Heart Attack, Coronary Heart Disease, or Stroke), 2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percentage	6.1%	6.4%	4.4%	6.2%	7.3%	7.3%	6.1%	6.3%	7.0%	7.2%

Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

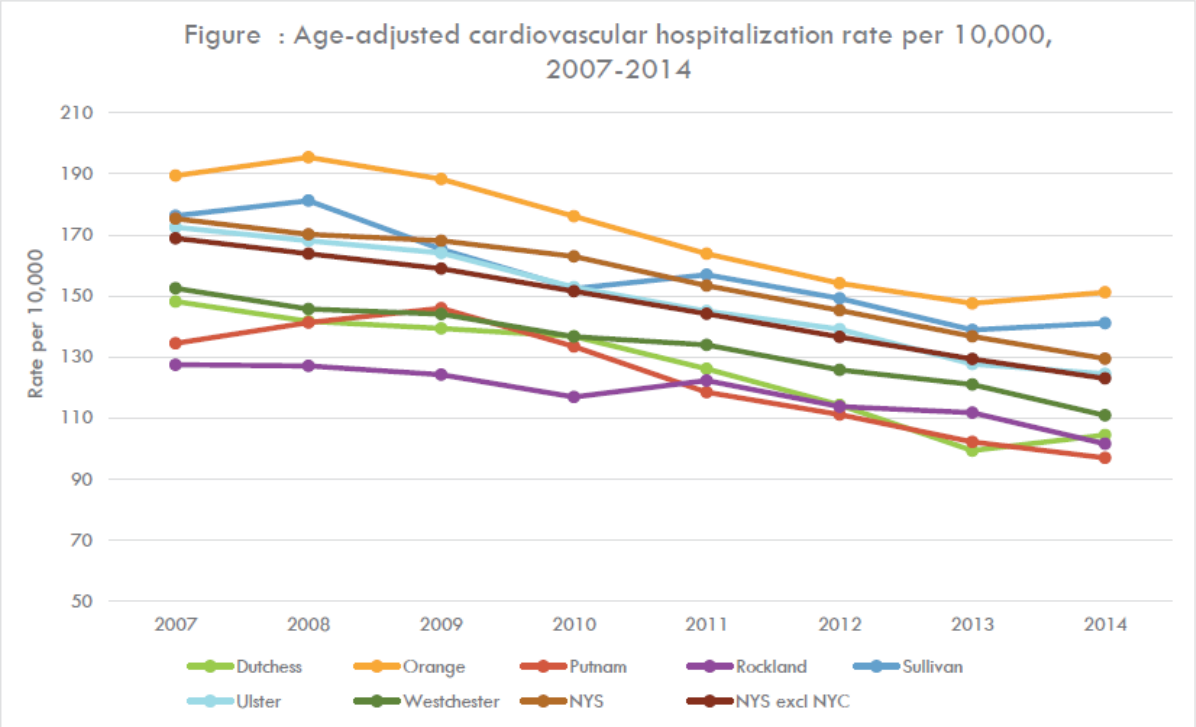
Figure : Age-Adjusted Cardiovascular Disease Hospitalization Rate per 10,000, 2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Hospitalization Rate	111.7	137.3	97.5	96.8	148.7	113.9	107.8	112.5	125.6	120.3

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When looking at cardiovascular hospitalization rates from 2007-2014, there has been a steady decline in Rockland County from 127.5 to 101.6 per ten thousand.



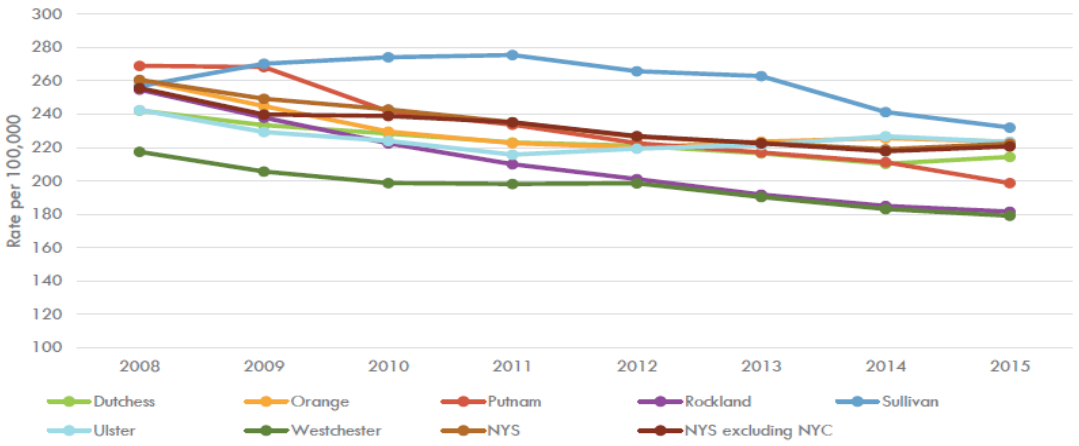
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	148.2	189.4	134.5	127.5	176.3	172.5	152.5	175.3	168.9
2008	141.7	195.4	141.3	127.1	181.2	168.1	145.7	170.2	163.8
2009	139.4	188.3	146.0	124.2	165.3	164.1	144.1	168.1	159.0
2010	136.8	176.1	133.5	116.9	152.4	152.9	136.7	163.0	151.6
2011	126.2	163.8	118.5	122.3	157.0	145.0	134.0	153.4	144.2
2012	114.3	154.2	111.2	113.8	149.2	139.1	125.8	145.3	136.6
2013	99.4	147.6	102.2	111.8	138.9	127.7	121.0	136.8	129.4
2014	104.5	151.2	97.0	101.6	141.1	124.5	110.9	129.5	123.0

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Most recent data indicates that the tendency of cardiovascular related hospitalizations continues to decrease. In 2016 the rate went from 101.6 to 96.8 per 10,000.

The mortality rates shadow this downward tendency, making Rockland County second lowest after Westchester County. This trend is confirmed looking at CVD mortality rates from 2014-2016 in [Figure], which is equivalent to the three-year average in 2015 at the county level.

Figure : Age-adjusted cardiovascular disease mortality rate per 100,000, 2008-2015

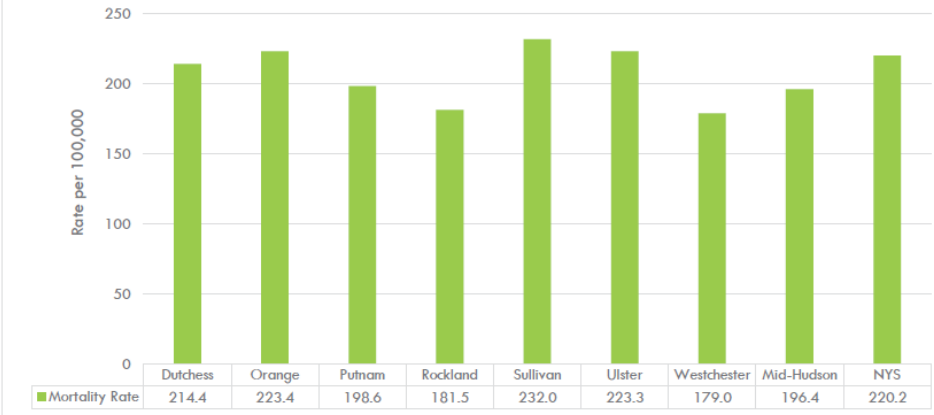


Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	242.2	260.3	269.0	254.7	256.7	242.5	217.4	260.6	255.7
2009	233.4	244.8	268.3	237.9	270.3	229.3	205.5	249.2	239.8
2010	228.3	229.6	241.6	222.5	274.2	223.9	198.7	242.8	238.8
2011	223.0	222.6	233.7	210.0	275.5	215.7	198.1	235.1	235.2
2012	221.0	220.0	222.6	201.0	265.8	219.3	198.5	226.3	226.9
2013	216.5	223.5	217.0	191.7	262.9	221.5	190.2	222.7	222.5
2014	210.2	225.5	211.2	184.9	241.3	226.8	183.1	218.9	217.7
2015	214.4	223.4	198.6	181.5	232.0	223.3	179.0	222.3	220.6

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Figure : Age-Adjusted Cardiovascular Disease Mortality Rate per 100,000, 2014-2016

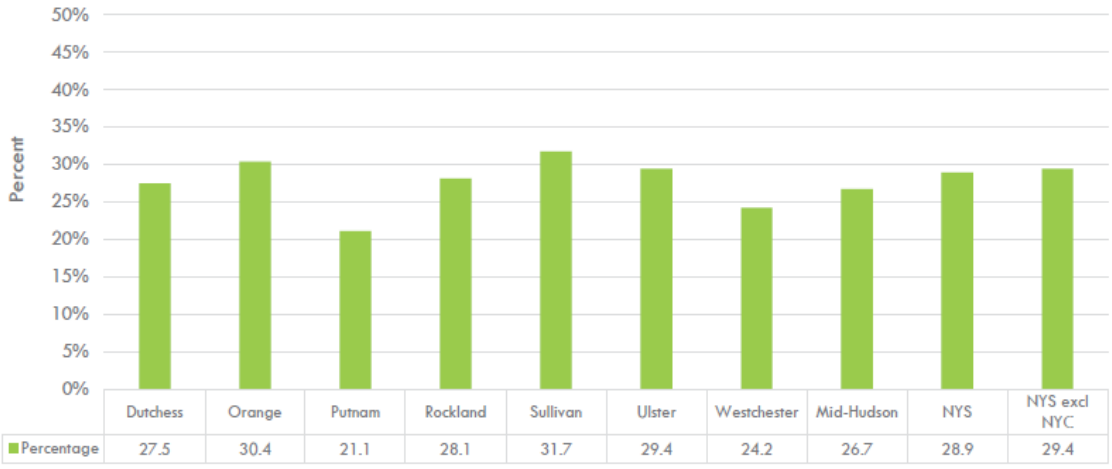


Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

HYPERTENSION

As mentioned previously, there are several risk factors of CVD, one of which includes hypertension. Hypertension, or high blood pressure, occurs when the force of blood against the arteries becomes high enough to cause diseases such as CVD. It is calculated based off of the amount of blood the heart pumps, and the amount of resistance to blood flow in the arteries.74 About 1 in 3 adults in the United States has hypertension, and only about half (54%) have it under control.75 It is important to control hypertension through lifestyle modifications as well as regular checkups with the doctor.

Figure : Age-Adjusted Percentage of Adults With Physician Diagnosed High Blood Pressure, 2016

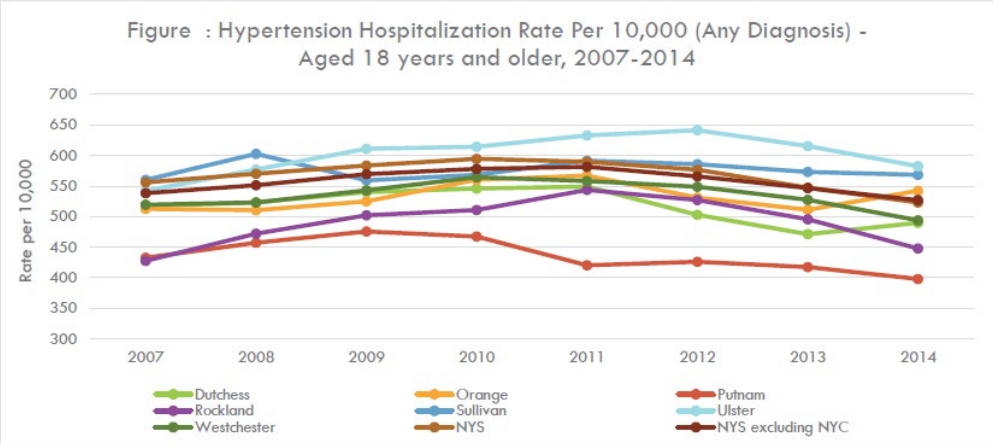


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percentage	27.5	30.4	21.1	28.1	31.7	29.4	24.2	26.7	28.9	29.4

Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

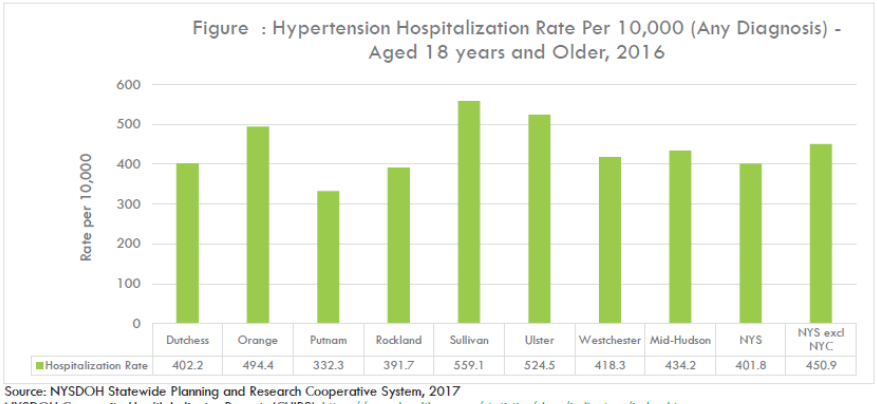
The age-adjusted percentage of adults with physician diagnosed with hypertension in 2016 is relatively constant across the counties in the Mid-Hudson region.

Hospitalization rates of hypertension have varied across the 7 counties in the Mid-Hudson region from 2007- 2014. The Mid-Hudson region as a whole is above the overall New York State rate (434.2 vs 401.8 per 10,000 population, respectively), but below the New York state rate excluding New York City (450.9 per 10,000). Some counties experienced a decrease in hospitalization rates, while most experienced an increase in hospitalization rates including Rockland, (see [Figure]). Rockland has the second lowest number of hospitalizations after Putnam (391.7 vs 332.6 per 10,000 respectively).



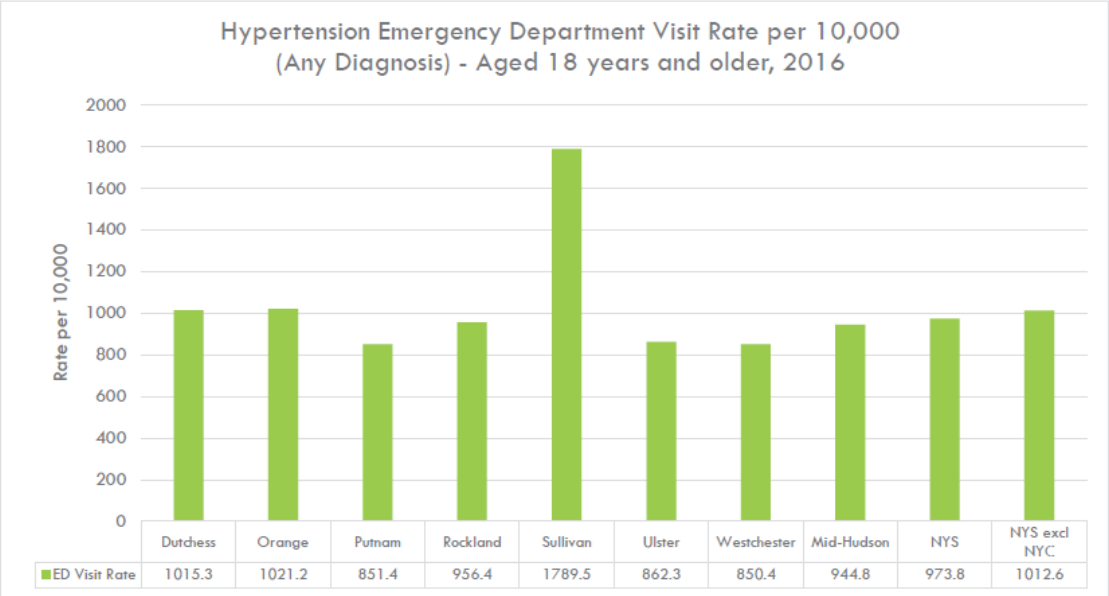
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	517.4	512.4	432.6	427.5	559.9	541.9	519.6	555.9	538.1
2008	522.9	510.4	457.3	471.9	602.6	577.0	523.0	570.2	551.3
2009	540.1	525.0	475.6	502.1	559.2	611.1	543.1	583.5	569.2
2010	546.0	560.2	467.5	510.8	568.3	614.2	564.4	594.5	578.2
2011	549.0	566.9	420.2	543.6	591.4	632.7	558.2	589.5	581.4
2012	502.9	530.9	426.2	527.1	585.7	641.2	548.7	576.6	565.7
2013	471.2	511.0	417.4	495.5	573.0	615.3	527.3	547.3	546.7
2014	489.9	542.3	397.9	447.8	568.2	582.5	493.9	523.0	526.9

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

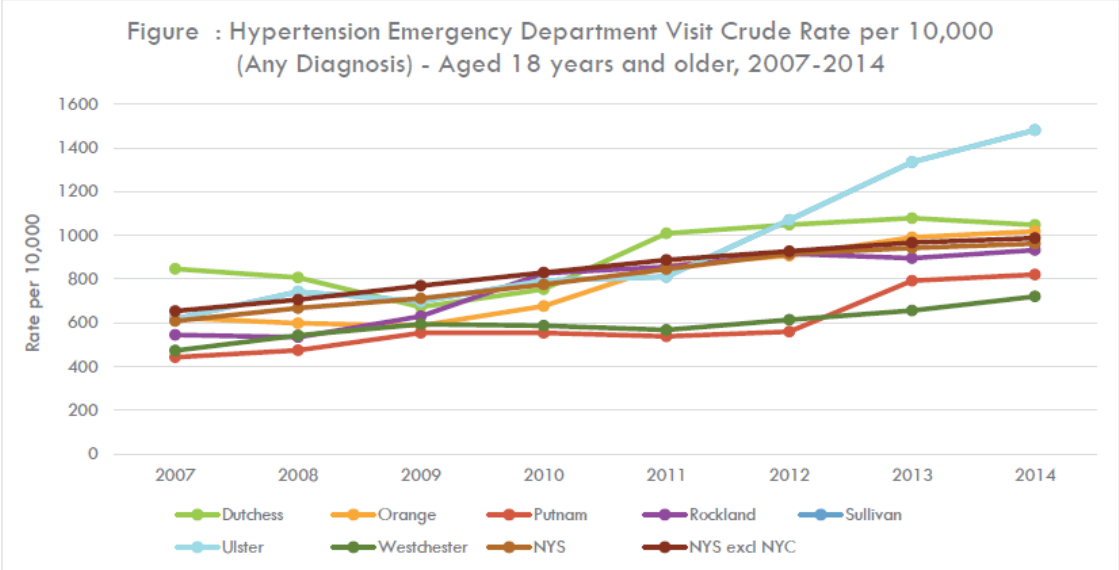


Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Emergency Department (ED) visits for hypertension have increased across every county in the Mid-Hudson region as well as New York state overall and excluding New York City from 2007-2014 as seen in [Figure]. In Rockland the number of ED visits raised from 545.2 to 932.6 per ten thousand. This tendency continues in 2016.



Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	846.4	622.9	442.7	545.2	617.4	617.4	472.9	608.4	653.9
2008	806.9	597.8	474.8	534.3	742.5	742.5	543.2	667.2	705.7
2009	672.6	587.4	553.9	630.6	698.5	698.5	593.8	712.1	769.6
2010	754.1	676.9	553.6	826.1	793.0	793.0	587.3	775.2	829.9
2011	1009.1	861.4	538.4	855.5	810.8	810.8	567.6	846.0	887.3
2012	1048.4	906.5	559.3	916.3	1070.9	1070.9	613.7	916.6	927.9
2013	1078.8	991.5	792.7	895.1	1334.9	1334.9	656.0	942.1	966.8
2014	1047.3	1018.3	820.9	932.6	1481.1	1481.1	720.3	962.3	987.5

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

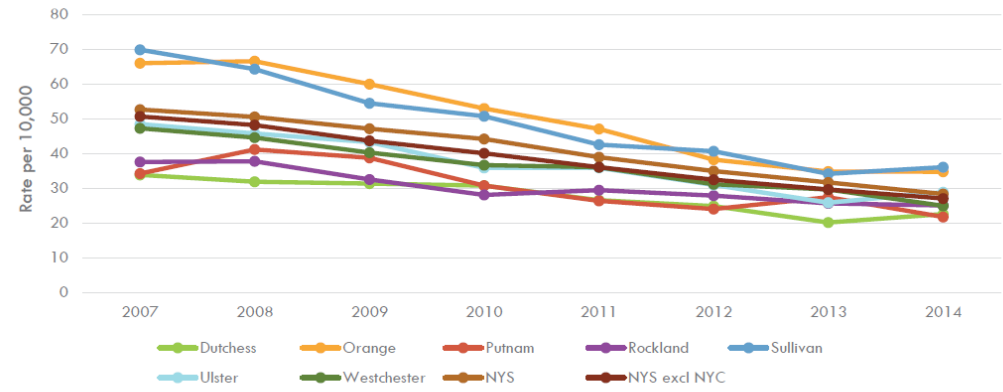
CORONARY HEART DISEASE

Coronary Heart Disease (CHD), also known as Coronary Artery Disease (CAD), is the most common type of CVD in the United States. It is caused by a buildup of plaque, which are deposits made up of substances such as fat, cholesterol, and calcium, in the arteries that supply blood to the heart. This can result in angina (chest pain) that usually occurs in the middle or left side of chest. Complete blockage of arteries can lead to a heart attack.

However, much can be done to prevent and treat this disease such as adopting a healthier lifestyle (dietary behaviors, physical activity, reduced or termination of tobacco use) and following up regularly with a medical provider to control conditions that can increase the risk of CHD (high blood pressure, cholesterol, diabetes).

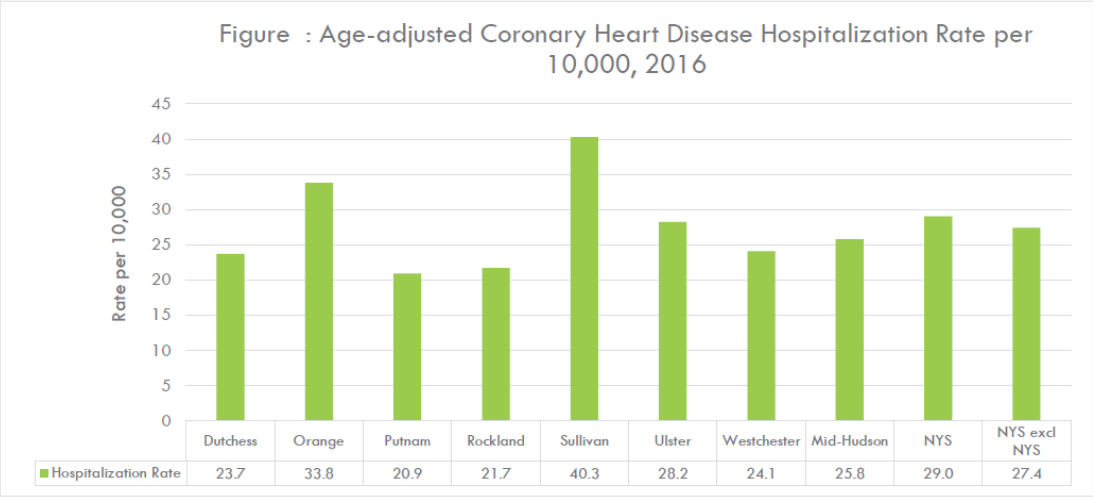
When looking at hospitalization rates of CHD from 2007-2014, it is evident that rates have steadily decreased over time. From 2007 to 2014 the rates in Rockland have reduced from 37.5 to 25 per ten thousand. In 2016, Rockland had the second lowest number of hospitalizations for coronary heart disease after Putnam (21.7 vs 20.9 per 10,000 respectively). Mortality rates have also decreased from 2008 – 2015 from 180.8 to 113.2 in a three-year average per 100,000 population.

Figure : Age-Adjusted Coronary Heart Disease Hospitalization Rate per 10,000, 2007-2014

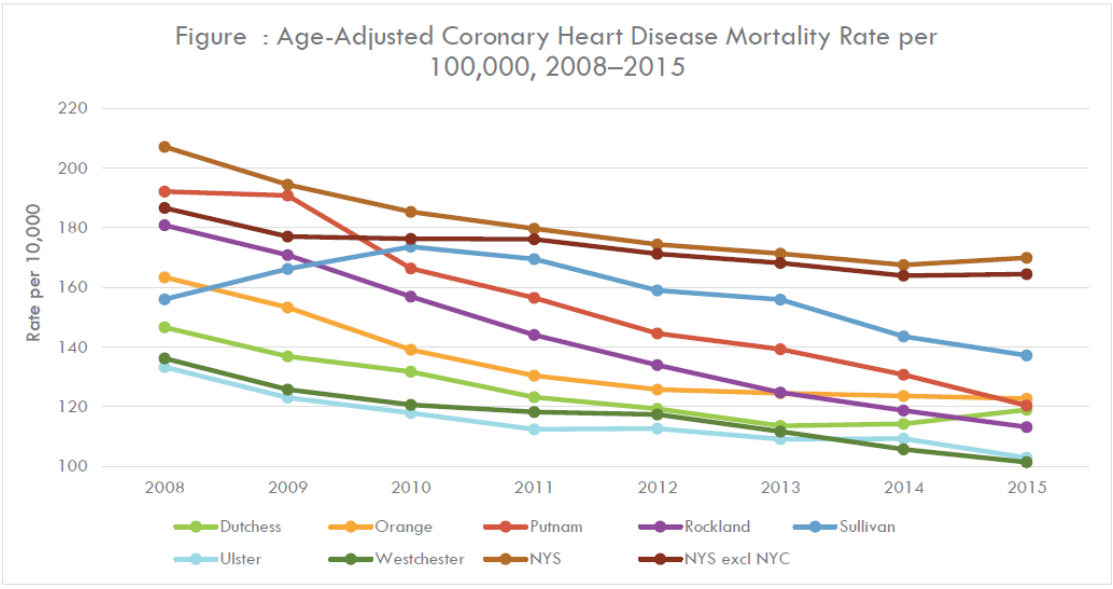


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	33.8	65.9	34.2	37.5	69.8	48.4	47.2	52.6	50.6
2008	31.8	66.5	41.1	37.7	64.2	45.7	44.5	50.5	48.1
2009	31.3	59.9	38.7	32.5	54.4	43.2	40.2	47.1	43.6
2010	30.7	52.9	30.7	28.0	50.7	35.8	36.6	44.1	40.0
2011	26.5	47.0	26.3	29.4	42.5	35.8	36.0	38.9	36.0
2012	24.8	38.2	24.0	27.8	40.6	30.9	31.1	34.9	32.4
2013	20.1	34.8	27.4	25.6	34.1	25.8	29.6	31.6	29.6
2014	22.5	34.7	21.7	25.0	36.0	28.8	24.9	28.3	27.0

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average								Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester		NYS	NYC excl NYC
2008	146.6	163.4	192.1	180.8	156.0	133.3	136.2		207.1	186.6
2009	136.9	153.3	190.8	170.8	166.2	123.0	125.8		194.4	177.0
2010	131.7	139.1	166.3	156.9	173.6	117.9	120.6		185.3	176.3
2011	123.2	130.4	156.5	144.1	169.5	112.4	118.2		179.7	176.1
2012	119.3	125.8	144.6	134.0	159.0	112.7	117.4		174.4	171.2
2013	113.6	124.5	139.3	124.8	155.9	109.1	111.7		171.3	168.2
2014	114.3	123.6	130.7	118.7	143.6	109.3	105.7		167.5	163.9
2015	119.0	122.7	120.4	113.2	137.2	102.9	101.4		169.9	164.4

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

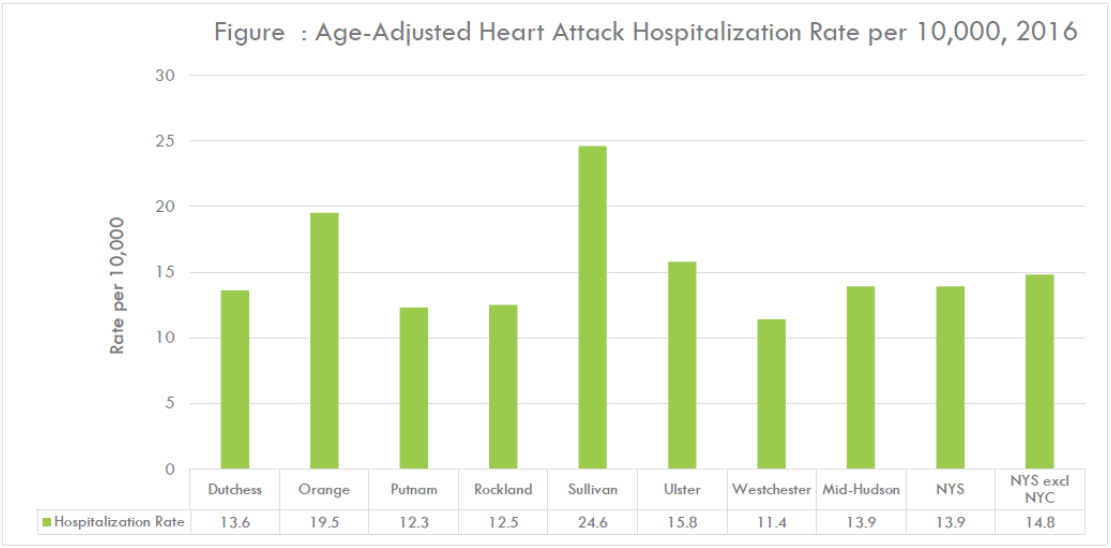
As mentioned previously, complete blockage of arteries can lead to a heart attack, otherwise known as a myocardial infarction. During a heart attack, part of heart muscle doesn't receive enough blood flow, and the more time that passes, the greater the damage to the heart muscle. Heart attacks can also be caused by a spasm of the coronary artery that may be induced by tobacco and illicit drug use. In the United States, 790,000 Americans have a heart attack, and 1 in 5 of these heart attacks are silent. Men aged 45 and older and women aged 55 and older are more likely to have heart attacks compared to other age groups. The 5 major symptoms of a heart attack include pain in the jaw, neck, or back; feeling weak or fatigued, chest pain, pain in arms or shoulder, and shortness of breath. Heart attack hospitalization rates have stayed relatively constant throughout the 7 counties in the Mid-Hudson region, with slight increases and decreases that vary by county.

Table : Age-Adjusted Heart Attack Hospitalization Rate per 10,000, 2007-2014

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	15.5	23.3	13.3	15.0	22.4	20.3	15.2	17.1	18.4
2008	13.9	25.0	15.2	15.7	15.9	19.0	14.6	16.8	18.0
2009	13.0	20.5	14.9	12.8	15.0	19.4	13.9	16.0	16.7
2010	13.1	21.1	15.0	13.9	13.3	16.0	13.3	15.8	16.3
2011	12.2	20.0	12.5	13.5	15.2	16.9	12.9	15.3	15.9
2012	13.0	18.2	11.8	13.3	24.4	14.9	13.4	15.3	16.2
2013	12.7	20.0	16.3	13.4	21.4	14.5	13.3	14.4	15.3
2014	14.8	20.7	14.1	13.7	24.3	17.6	12.5	14.0	14.8

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

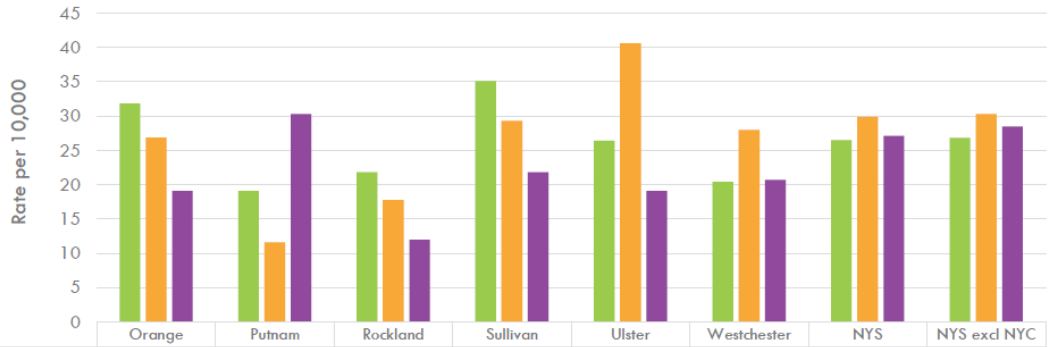
Figure : Age-Adjusted Heart Attack Hospitalization Rate per 10,000, 2016



Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Rockland has the third lowest hospitalization rate due to heart attacks as seen in graph, after Putnam and Westchester (12.5, 12.3 and 11.4 per 10,000 population respectively). When stratifying this data by race or ethnicity, trends are not consistent through each county. In Rockland, non-Hispanic White adults have higher CHD hospitalization rates compared to the other racial/ethnic groups.

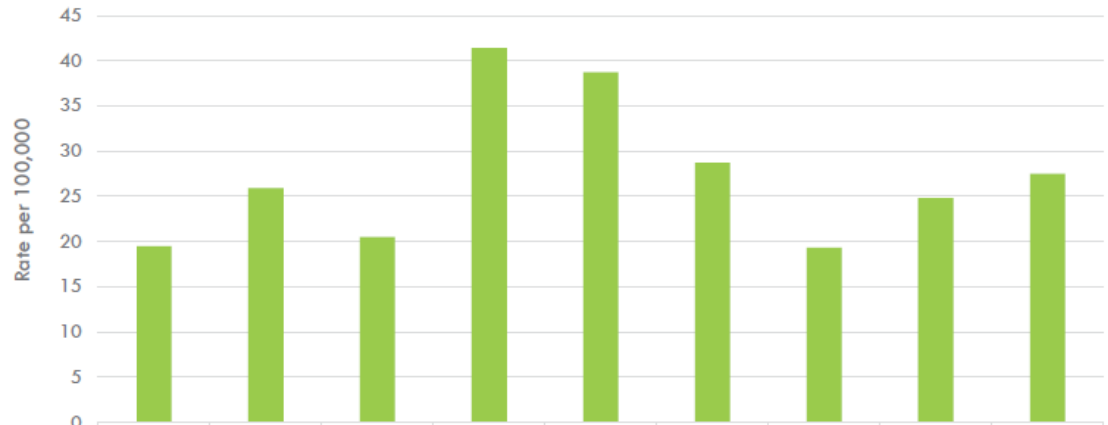
Figure : Age-Adjusted Coronary Heart Disease Hospitalization Rate per 10,000 by Race/Ethnicity, 2012-2014



	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	31.8	19.1	21.8	35.1	26.4	20.4	26.5	26.8
Non-Hispanic Black	26.9	11.6	17.8	29.3	40.6	28.0	29.9	30.3
Hispanic	19.1	30.3	12.0	21.8	19.1	20.7	27.1	28.5

Note: Dutchess County is not shown as data either did not meet the criteria for statistical reliability or data quality, or data is not available.
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

Figure : Age-Adjusted Heart Attack Mortality Rate per 100,000, 2014-2016

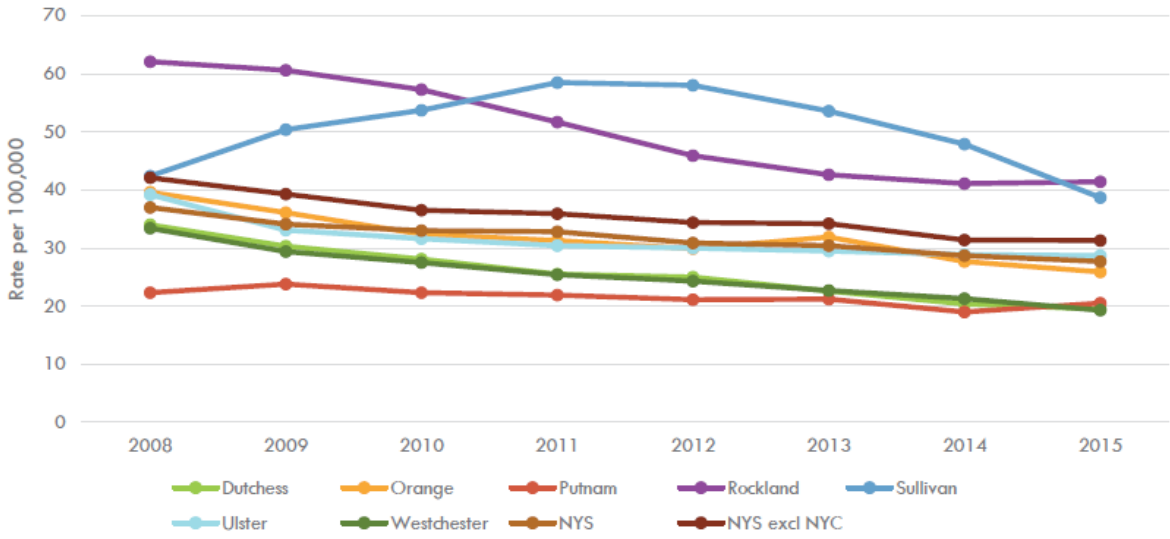


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Mortality Rate	19.5	25.9	20.5	41.4	38.7	28.7	19.3	24.8	27.5

Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

In average, mortality rates have decreased from 2008 to 2015 (62.1 vs 41.4 per 100,000 population). Unfortunately, in spite of the lowering trend from 2014-2016, which is equivalent to the three-year averages in 2015 at the county level, Rockland County has the highest heart attack mortality rate of the 7 counties (41.4 per 100,000 population), which is higher than the Mid-Hudson region as a whole and New York State (24.8 and 27.5 per 100,000 population, respectively).

Figure : Age-Adjusted Heart Attack Mortality Rate per 100,000, 2008-2015



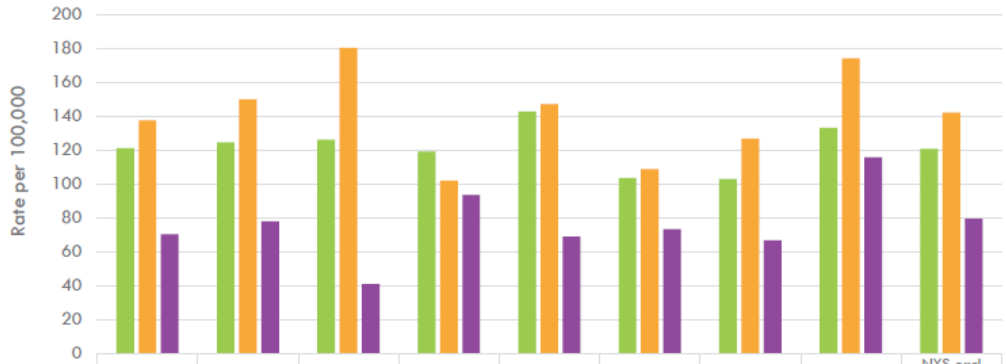
Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	34.0	39.6	22.3	62.1	42.4	39.2	33.4	37.0	42.1
2009	30.3	36.1	23.8	60.6	50.4	33.1	29.4	34.1	39.3
2010	28.1	32.4	22.3	57.3	53.7	31.6	27.5	33.0	36.5
2011	25.5	31.3	21.9	51.7	58.5	30.4	25.4	32.8	35.9
2012	25.0	29.9	21.1	45.9	58.0	30.0	24.3	30.9	34.4
2013	22.6	31.9	21.2	42.6	53.6	29.5	22.7	30.4	34.2
2014	20.4	27.7	19.0	41.1	47.9	28.9	21.3	28.7	31.4
2015	19.5	25.9	20.5	41.4	38.7	28.7	19.3	27.7	31.3

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Mortality rates stratified by race/ethnicity show a more consistent trend across the 7 counties in the Mid-Hudson region as well as New York State overall and excluding New York City. As seen in [Figure], non-Hispanic Black adults have higher mortality rates in most of the counties and at the state level, with the exception of Rockland County, where non-Hispanic White adults have higher CHD mortality rates.

Figure : Age-Adjusted Coronary Heart Disease Mortality Rate per 100,000 by Race/Ethnicity, 2014-2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	120.9	124.4	125.9	119.0	142.7	103.4	102.8	133.0	120.5
Non-Hispanic Black	137.3	149.6	180.2 *	101.7	146.9	108.6	126.7	173.9	142.0
Hispanic	70.3	77.8	40.7 *	93.4	68.9	73.2	66.5	115.7	79.4

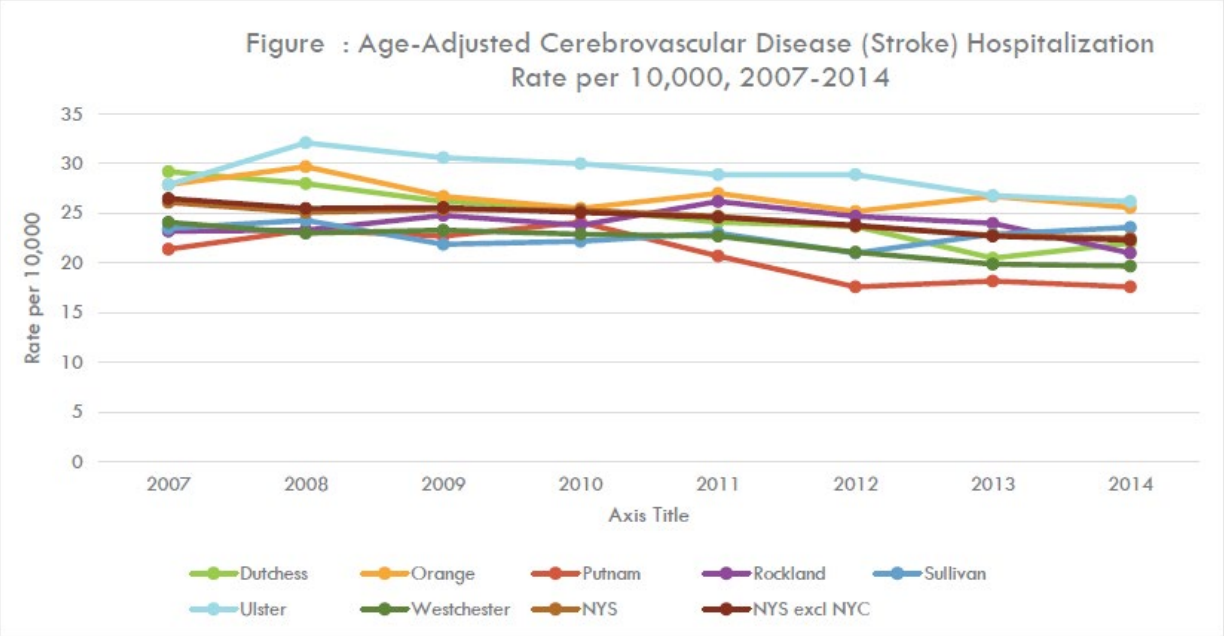
*: *The rate or percentage is unstable.*
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

CEREBROVASCULAR DISEASE

Cerebrovascular disease, also called a stroke, occurs when blood supply is blocked to the brain, which can lead to extensive damage to the brain and even death. There are three main types of stroke: ischemic stroke, hemorrhagic stroke, and transient ischemic attack (TIA). Ischemic stroke occurs when blood clots or plaques block the blood vessels to the brain, causing the brain to receive decreased oxygen. Almost 87% of strokes are ischemic strokes. A hemorrhagic stroke occurs when a blood vessel bursts inside the brain, and the blood building up in the tissues causes severe damage. A TIA, which is also called a mini-stroke, occurs when blood flow is blocked to the brain for a short period of time (usually 5 minutes or less). There is no permanent damage with a TIA, but follow-up with a medical provider to decrease the risk of having a major stroke.

It is important to recognize the signs and symptoms of a stroke in order for action to be taken quickly. Signs of a stroke include numbness in the face or extremities, often on one side of the body; confusion or difficulty understanding what someone is saying; vision problems; loss of balance or lack of coordination; or a severe headache. Some risk factors for a stroke include

lifestyle risk factors (unhealthy diet, decreased physical activity, use of illicit drugs) and other medical conditions including high blood pressure, high cholesterol, diabetes, other types of CVDs, family history, and old age (55 years and older).

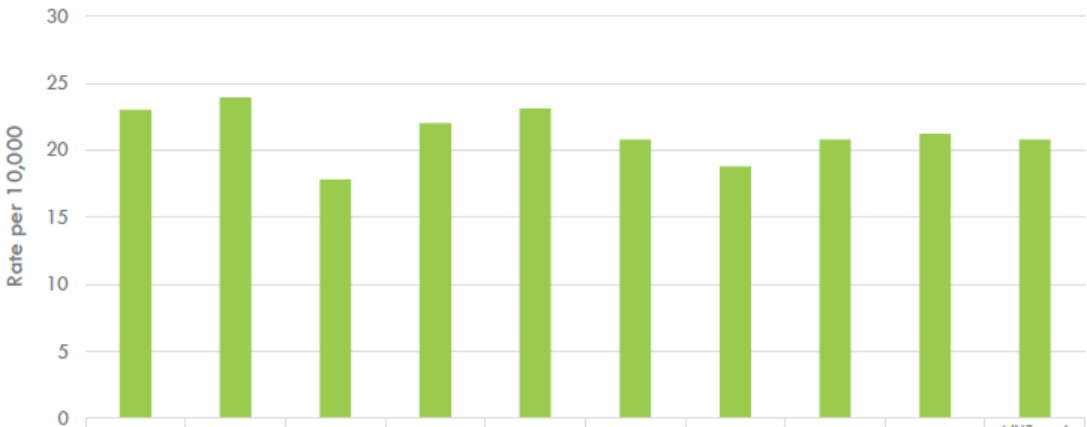


When looking at stroke hospitalization rates over time, they have generally decreased. In Rockland the biggest decrease has been in the last four years from 2011 to 2014 (26.2 vs 21.0 per 10,000 population).

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	29.2	27.9	21.4	23.2	23.5	27.9	24.1	26.1	26.5
2008	28.0	29.7	23.3	23.3	24.3	32.1	23.0	25.1	25.5
2009	26.2	26.7	22.7	24.8	21.9	30.6	23.3	25.4	25.6
2010	25.5	25.5	24.1	23.8	22.2	30.0	22.9	25.3	25.1
2011	24.1	27.0	20.7	26.2	23.0	28.9	22.7	24.7	24.6
2012	23.7	25.2	17.6	24.7	21.0	28.9	21.1	23.7	23.8
2013	20.5	26.7	18.2	24.0	22.9	26.8	19.9	22.8	22.7
2014	22.0	25.6	17.6	21.0	23.6	26.2	19.7	22.5	22.3

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Figure : Age-Adjusted Cerebrovascular Disease (Stroke) Hospitalization rate per 10,000, 2016

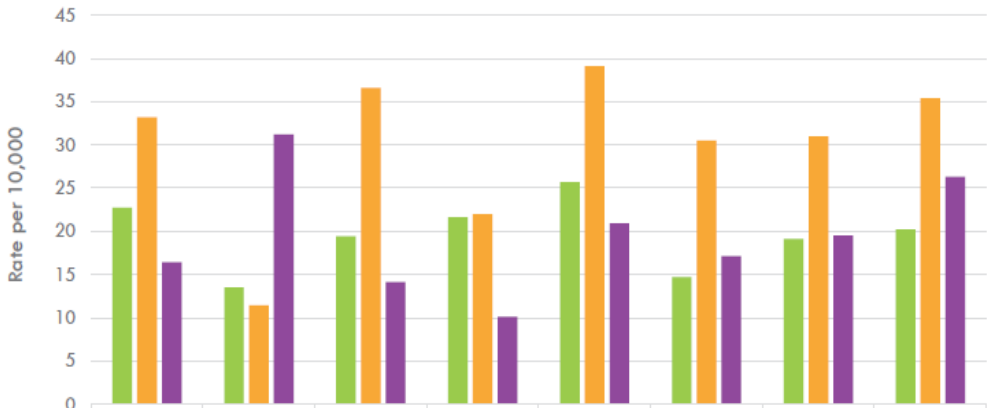


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Hospitalization Rate	23.0	23.9	17.8	22.0	23.1	20.8	18.8	20.8	21.2	20.8

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Hospitalization rate of Rockland County is 22.0 per 10,000 population. It is the fourth highest after Orange, Sullivan and Dutchess.

Figure : Age-Adjusted Cerebrovascular Disease (Stroke) Hospitalization Rate per 10,000 by Race/Ethnicity, 2012-2014

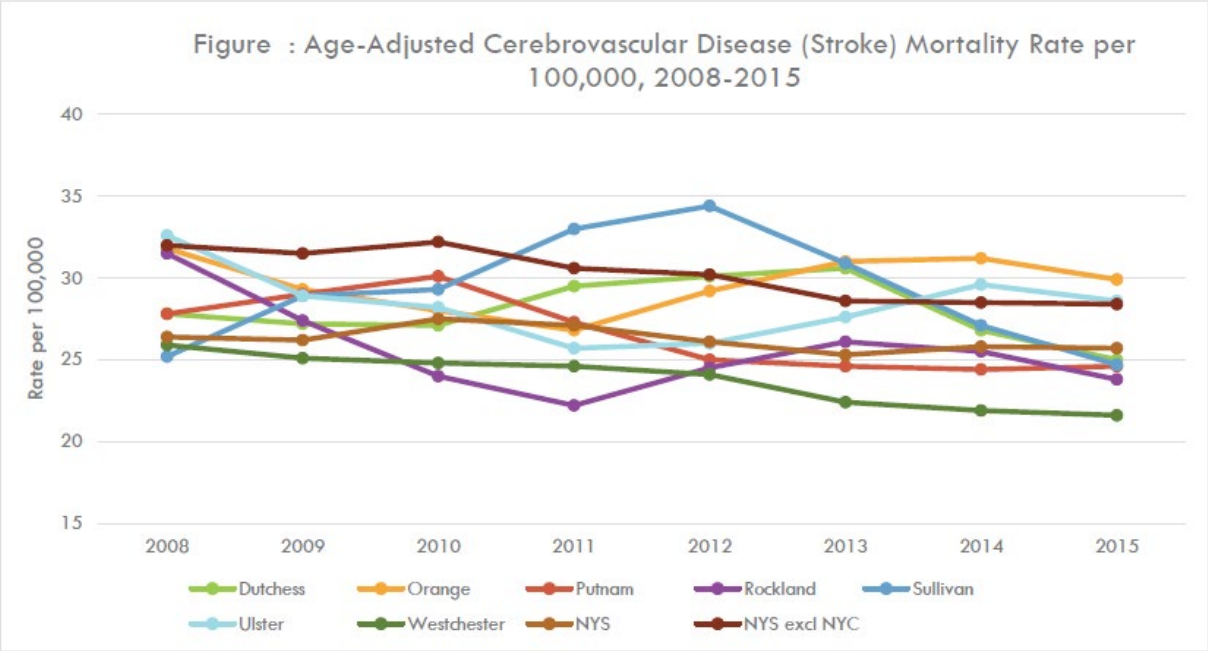


	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	22.7	13.5	19.4	21.6	25.7	14.7	19.1	20.2
Non-Hispanic Black	33.2	11.4 *	36.6	22	39.1	30.5	31	35.4
Hispanic	16.4	31.2	14.1	10.1	20.9	17.1	19.5	26.3

*: *The rate or percentage is unstable.*
Note: Dutchess County is not shown as data either did not meet the criteria for statistical reliability or data quality, or data is not available.
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

When stratifying this data by race/ethnicity, non-Hispanic Black adults have higher rates of stroke hospitalization compared to other racial/ethnic groups in the majority of the counties and NYS overall as well as excluding NYC. Mortality rates have decreased over time, with some move through different time periods for each county.

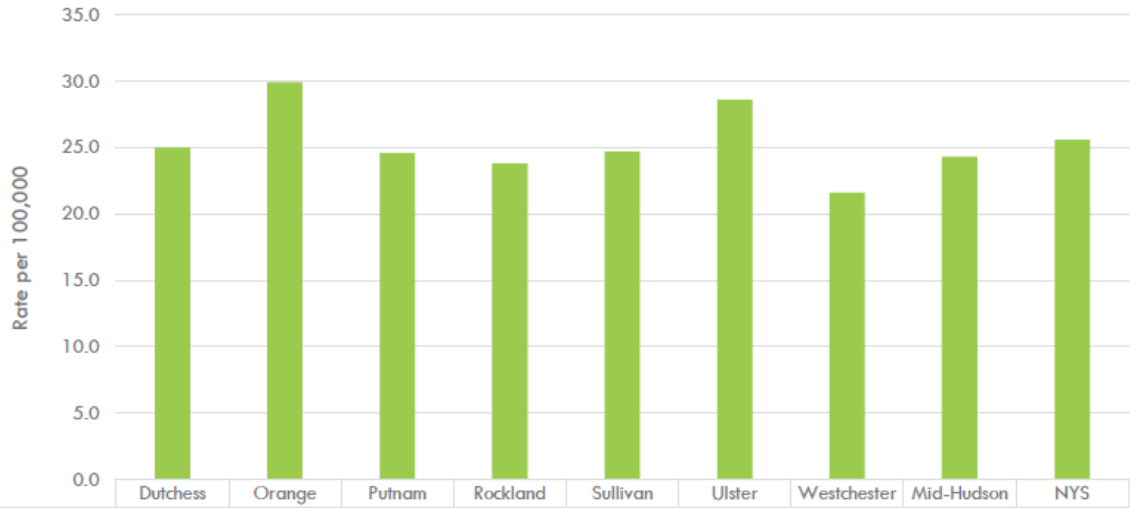
Recent data from 2014-2016, which is equivalent to the three-year average in 2015 at the county level, shows that Rockland's stroke mortality rate is second lowest (23.8 per 100,000 population), after Westchester (21.6 per 100,000 population). The Healthy People 2020 goal is to reduce stroke deaths in the United States to 34.8 deaths per 100,000 population, and all counties in the Mid-Hudson as well as New York State meet this target.



	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	27.8	31.8	27.8	31.5	25.2	32.6	25.9	26.4	32.0
2009	27.2	29.3	29.0	27.4	28.9	28.9	25.1	26.2	31.5
2010	27.1	28.0	30.1	24.0	29.3	28.2	24.8	27.5	32.2
2011	29.5	26.8	27.3	22.2	33.0	25.7	24.6	27.1	30.6
2012	30.1	29.2	25.0	24.5	34.4	26.0	24.1	26.1	30.2
2013	30.6	31.0	24.6	26.1	30.9	27.6	22.4	25.3	28.6
2014	26.8	31.2	24.4	25.5	27.1	29.6	21.9	25.8	28.5
2015	25.0	29.9	24.6	23.8	24.7	28.6	21.6	25.7	28.4

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Figure : Age-Adjusted Cerebrovascular Disease (Stroke) Mortality Rate per 100,000, 2014-2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Mortality Rate	25.0	29.9	24.6	23.8	24.7	28.6	21.6	24.3	25.6

Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When stratifying this data by race/ethnicity, the trends differ among each county. In Rockland County, the Hispanic population has a higher rate of stroke mortality.

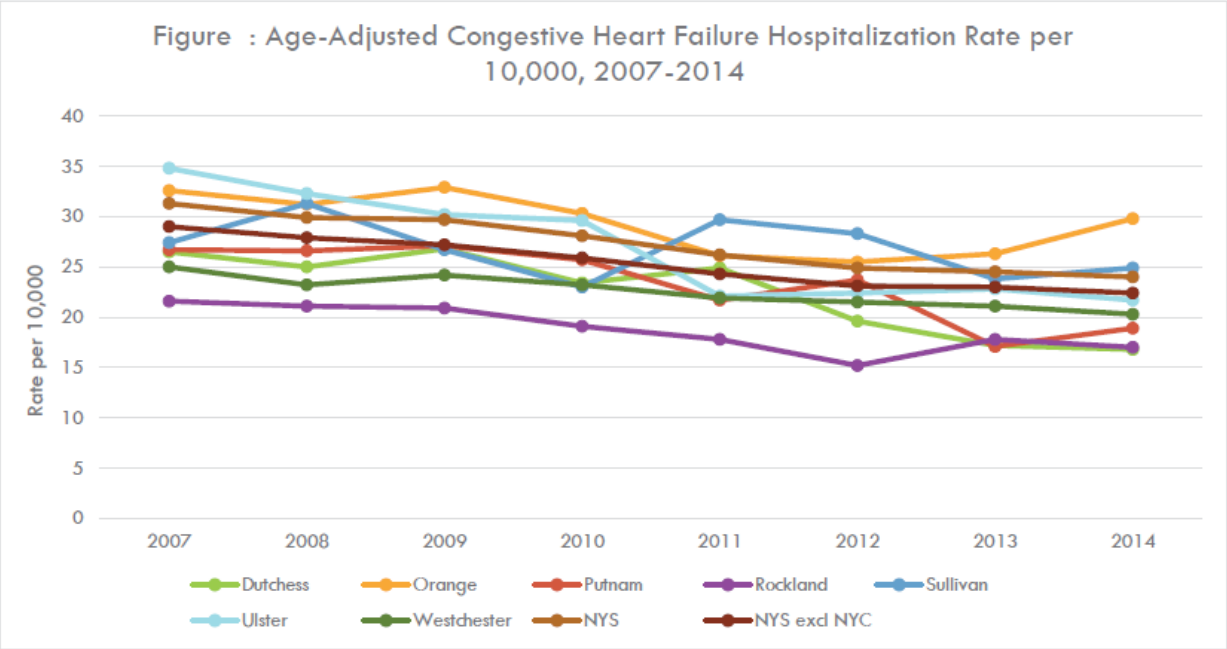
Figure : Age-Adjusted Cerebrovascular Disease (Stroke) Mortality Rate per 100,000 by Race/Ethnicity, 2014-2016

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	24.0	29.8	25.4	21.7	26.8	28.1	21.0	25.4	28.0
Non-Hispanic Black	40.4	42.1	14.1 *	24.7	23.3 *	48.8	24.1	27.8	34.2
Hispanic	20.8 *	19.9	8.9 *	37.3	4.1 *	25.9 *	17.2	20.7	21.6

*: *The rate or percentage is unstable.*
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

CONGESTIVE HEART FAILURE

Congestive heart failure (CHF) occurs because of fluid buildup in lungs, GI tract, and the upper and lower extremities. This leads to the heart not being able to pump enough blood to meet the body's needs. Some common symptoms of CHF include shortness of breath (dyspnea), edema in lower extremities (swelling), and chest pain. CHF hospitalization rates in Rockland County have decreased from 2007 to 2014 from 21.6 to 17.0 per 10,000 population respectively being second lowest in the region.



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	26.5	32.6	26.7	21.6	27.4	34.8	25.0	31.3	29.0
2008	25.0	31.2	26.6	21.1	31.3	32.3	23.2	29.9	27.9
2009	26.8	32.9	27.1	20.9	26.7	30.2	24.2	29.7	27.2
2010	23.4	30.3	25.7	19.1	23.0	29.6	23.2	28.1	25.9
2011	24.9	26.1	21.7	17.8	29.7	22.1	21.9	26.2	24.3
2012	19.6	25.5	23.7	15.2	28.3	22.4	21.5	24.9	23.1
2013	17.2	26.3	17.1	17.8	23.8	22.8	21.1	24.5	23.0
2014	16.8	29.8	18.9	17.0	24.9	21.7	20.3	24.0	22.4

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

CHF hospitalization rates were the lowest in Rockland County (13.9 per 10,000 population).

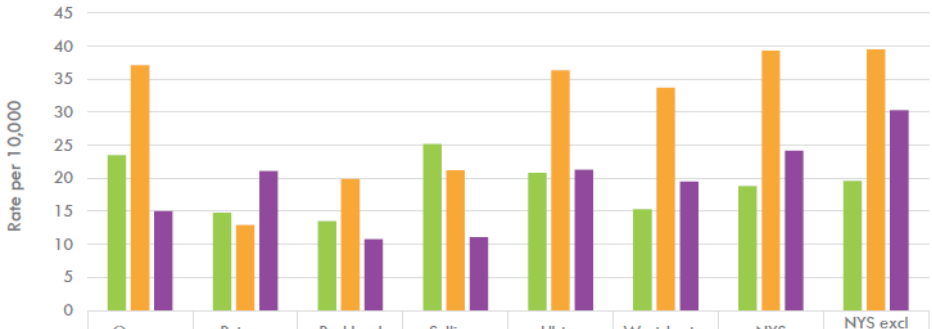
Figure : Age-Adjusted Congestive Heart Failure Hospitalization Rate per 10,000, 2016

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Hospitalization Rate	16.5	22.2	16.6	13.9	22.8	19.1	17.8	17.9	20.4	19.4

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When stratifying this data by race/ethnicity, the non-Hispanic Black population has the highest CHF hospitalization rates in Rockland County as well as in the majority of the Mid-Hudson region counties, New York State overall and excluding New York City.

Figure : Age-Adjusted Congestive Heart Failure Hospitalization Rate per 10,000 by Race/Ethnicity, 2012-2014

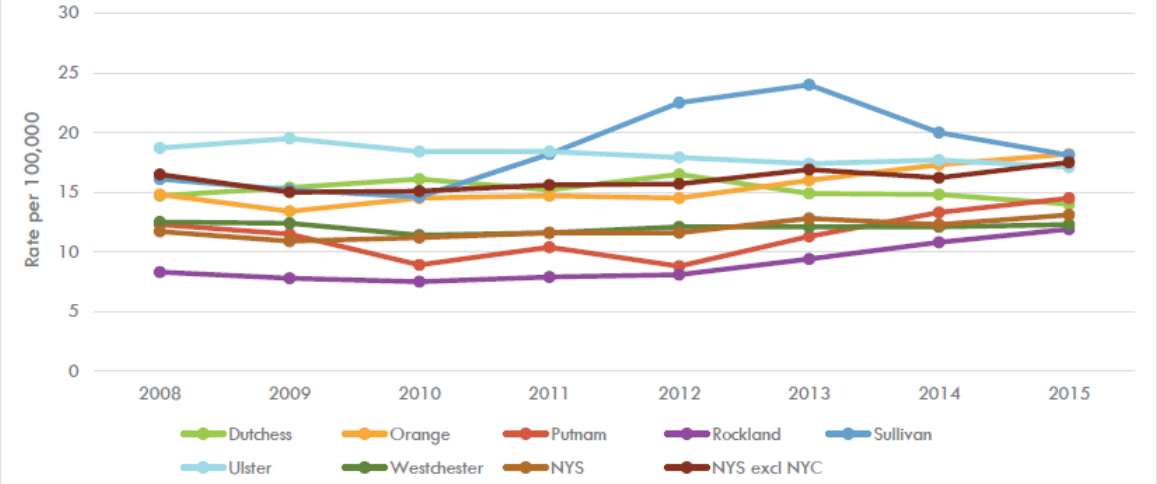


	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	23.5	14.8	13.5	25.2	20.8	15.3	18.8	19.6
Non-Hispanic Black	37.1	12.9 *	19.9	21.2	36.3	33.7	39.3	39.5
Hispanic	15.0	21.1	10.8	11.1	21.3	19.5	24.2	30.3

*: *The rate or percentage is unstable.*
Note: Dutchess County is not shown as data either did not meet the criteria for statistical reliability or data quality, or data is not available.
Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

When looking at CHF mortality rates over time, New York State overall and excluding New York City as well as most of the counties in the Mid-Hudson region have experienced a slight increase. Rockland County has suffered the highest rate increase between 2008 and 2015 at 8.3 to 11.9 per 100,000 but continues to be the lowest in the region.

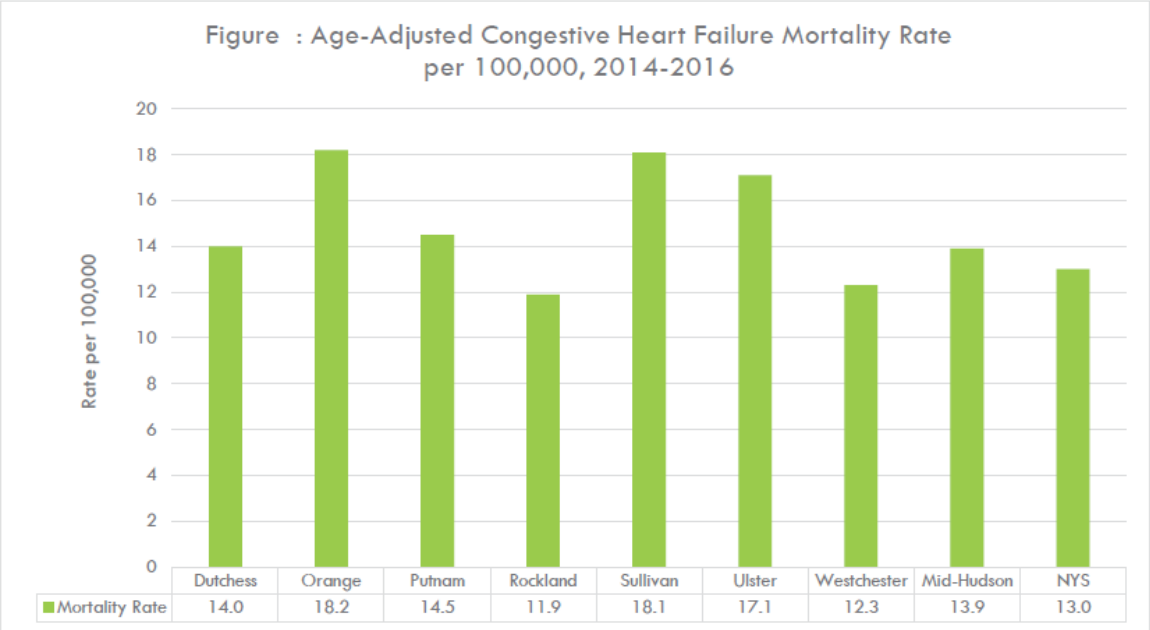
Figure : Age-Adjusted Congestive Heart Failure Mortality Rate per 100,000, 2008-2015



Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	14.7	14.8	12.3	8.3	16.1	18.7	12.5	11.7	16.5
2009	15.4	13.4	11.5	7.8	15.2	19.5	12.4	10.9	15.0
2010	16.1	14.5	8.9	7.5	14.6	18.4	11.4	11.2	15.1
2011	15.2	14.7	10.4	7.9	18.2	18.4	11.6	11.6	15.6
2012	16.5	14.5	8.8	8.1	22.5	17.9	12.1	11.6	15.7
2013	14.9	16.0	11.3	9.4	24.0	17.4	12.1	12.8	16.9
2014	14.8	17.3	13.3	10.8	20.0	17.7	12.1	12.3	16.2
2015	14.0	18.2	14.5	11.9	18.1	17.1	12.3	13.1	17.5

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



Source: NYSDOH Vital Statistics, 2018

NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

DIABETES

Diabetes is the seventh leading cause of death in the United States. It is a chronic condition that alters how the body breaks down glucose (sugar) for energy. Diabetes can be classified into two primary forms: insulin-dependent diabetes mellitus (type 1 diabetes) and non-insulin-dependent diabetes mellitus (type 2 diabetes). Type 1 diabetes occurs when the body attacks itself and does not make enough insulin, which is a hormone released from the pancreas to help break down glucose. Alternatively, type 2 diabetes occurs when the body is unable to use existing insulin to help control the amount of glucose released into the blood stream. According to the CDC, about 90% of people with diabetes have Type 2 diabetes.

Before people are diagnosed with diabetes, they are usually tested for prediabetes, which is when a person's blood sugar level is higher than normal, thereby putting them at a greater risk of developing diabetes. According to the NYSDOH, 15-30% of people with prediabetes will develop Type 2 diabetes within 5 years if they do not change their lifestyle behaviors.

Within the Mid-Hudson region in 2016, 8.5% of adults have been diagnosed with prediabetes by a physician, which is lower than New York State overall and excluding New York City (9.8% and 8.8%, respectively). According the U.S. Diabetes Surveillance System (USDSS), 8.5% of the United States population 18 years and older was diagnosed with diabetes in 2016. This is the same as the percent in New York State excluding New York City, although it is slightly higher in New York State overall at 9.8%. In the Mid-Hudson region, 7.7% of the population has been

diagnosed with diabetes. In Rockland, 9.1% of adults have been diagnosed with prediabetes, and 6.0% with diabetes, the lowest percentage of the region.

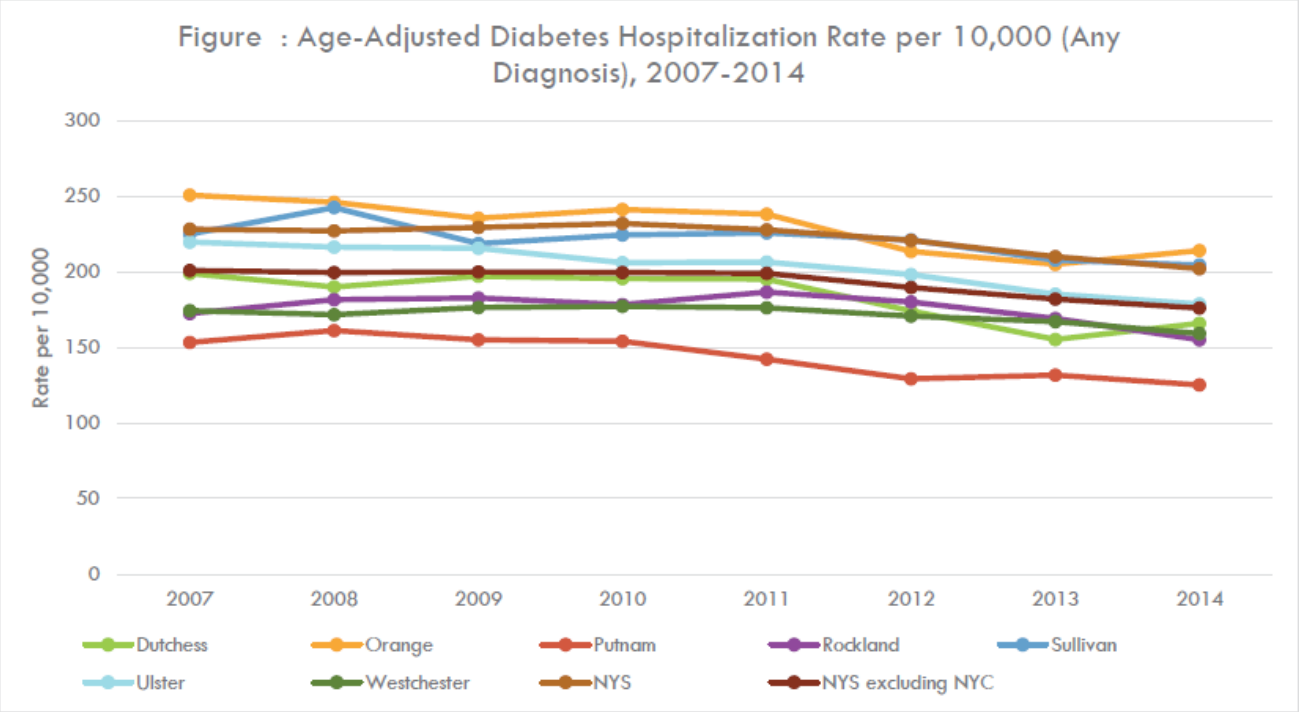
Figure : Age-Adjusted Percentage of Adults With Physician Diagnosed Prediabetes and Diabetes, 2016

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excluding NYC
Prediabetes	10.4	12.3	7.1	9.1	9.6	6.6	6.9	8.5	9.8	8.8
Diabetes	9.5	8.9	6.9	6.0	8.3	6.7	7.6	7.7	9.5	8.5

Source: NYSDOH Behavioral Risk Factor Surveillance System, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Some risk factors for diabetes include genetics, being overweight or obese, and negative health behaviors including tobacco or alcohol use, unhealthy diet, and decreased physical activity. Uncontrolled diabetes could result in serious morbidities over time including heart disease, loss of limbs, loss of vision (retinopathy), and kidney disease. According to the American Diabetes Association (ADA), the health care industry has attempted to manage the effects of diabetes, spending $237 billion in direct medical costs in 2017.

From 2007-2014, hospitalization rates have trended downward in the Mid-Hudson region counties as well as New York State overall and excluding New York City. Rockland County has the second lowest rate at 155.0 per 10,000 in 2014 and even more recently in 2016.



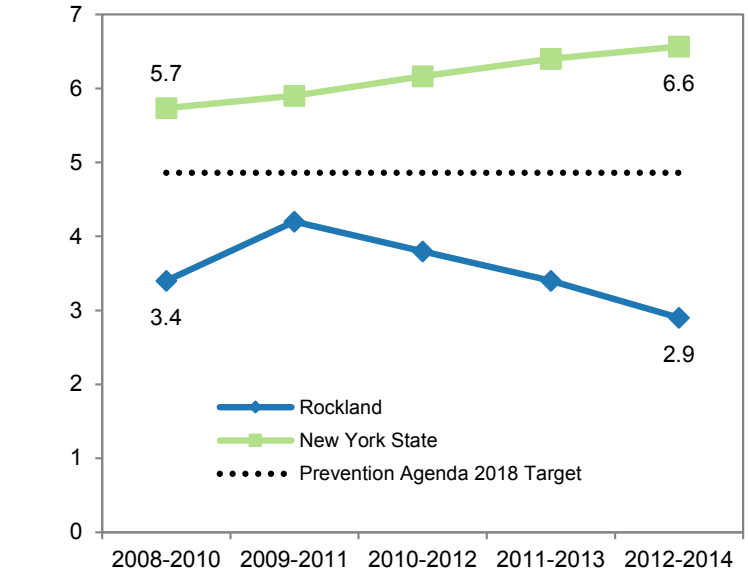
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	198.8	250.6	153.3	172.4	224.9	219.6	174.3	228.2	200.8
2008	190.0	245.8	161.1	181.5	242.4	216.3	171.5	227.0	199.5
2009	197.0	235.4	155.0	182.7	218.6	215.5	176.3	229.2	199.8
2010	195.5	241.1	153.9	178.3	224.3	205.9	177.1	231.9	199.4
2011	195.0	238.1	142.2	186.5	225.6	206.3	176.2	227.8	198.9
2012	174.0	213.5	129.2	180.0	221.0	198.1	170.7	220.7	189.6
2013	155.2	204.9	131.6	169.1	207.6	185.2	166.9	210.0	181.8
2014	165.9	213.9	125.1	155.0	204.4	178.6	159.1	202.0	175.9

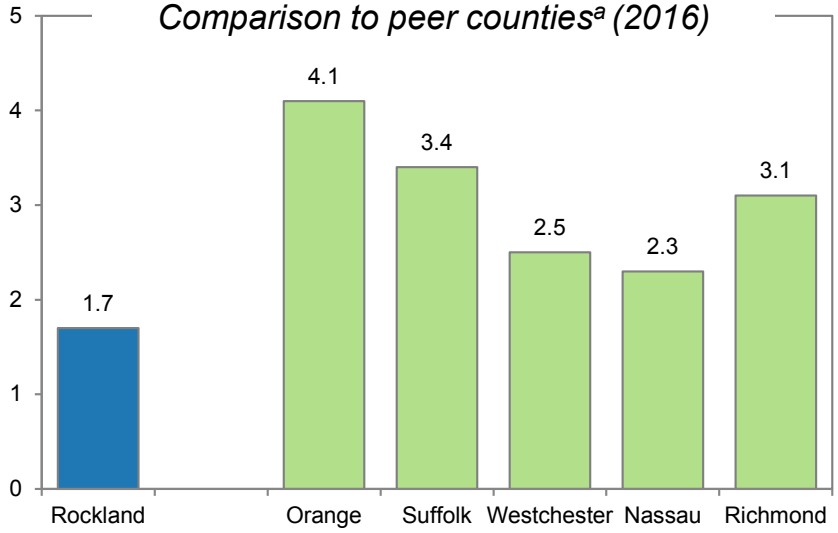
Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When stratifying this data by race/ethnicity, diabetes hospitalization rates are highest among the non-Hispanic Black population across New York State overall and excluding New York City, along with most of the counties in the Mid-Hudson region, including Rockland (261.0 per 10,000 population).

In order to avoid the consequences of uncontrolled diabetes, there are many adults who get their blood sugar tested by their medical provider. The percent of those having a test for high blood sugar or diabetes within the past 3 years in 2016 was very similar across New York State overall and excluding New York City, as well as the Mid-Hudson region and counties.

Rate of hospitalizations for short-term complications of diabetes per 10,000 - Aged 18+ years





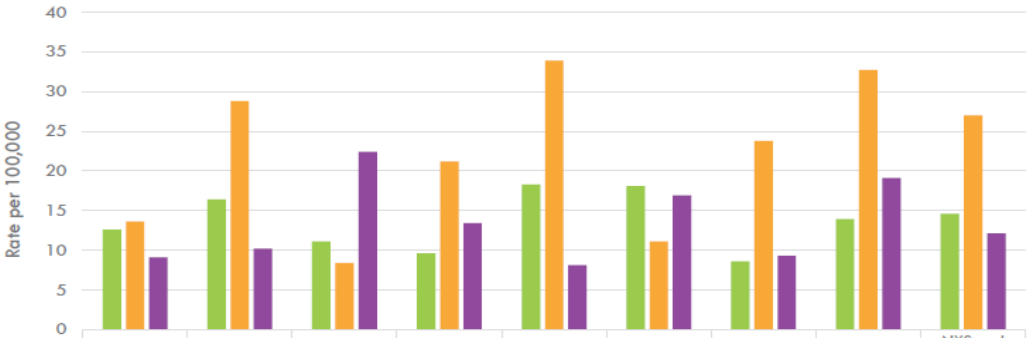
[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

Data source: New York State Prevention Agenda Dashboard.
Trend data not available past 2014 due to change in ICD coding.

In 2016, the adult hospitalization rate for short-term complications of diabetes per 10,000 was lowest in Rockland County compared to its 5 peer counties. Between 2009/2011 and 2012/2014, the adult hospitalization rate for short-term complications from diabetes decreased in Rockland County from 4.2 to 2.9 per 10,000, remaining below the Prevention Agenda 2018 Target.

When stratifying this data by race/ethnicity, diabetes mortality rates in Rockland are highest among the non-Hispanic Black population, as well as in New York State overall, excluding New York City, and most of the counties in the Mid-Hudson region. Hispanics are affected in second place.

Figure : Age-Adjusted Diabetes Mortality per 100,000 by Race/Ethnicity, 2014-2016

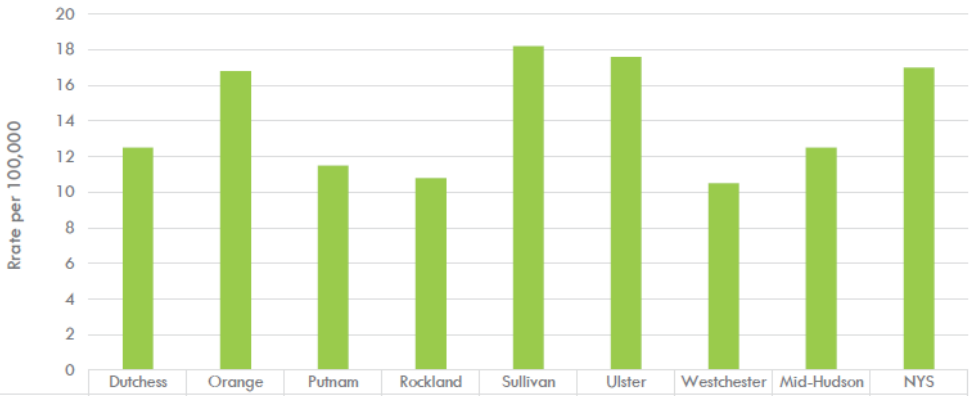


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	12.6	16.4	11.1	9.6	18.3	18.1	8.6	13.9	14.6
Non-Hispanic Black	13.6	28.8	8.4	21.2	33.9	11.1	23.8	32.7	27.0
Hispanic	9.1	10.2	22.4	13.4	8.1	16.9	9.3	19.1	12.1

Source: NYSDOH Vital Statistics, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

From 2014-2016, which is equivalent to the three-year average in 2015 at the county level, the lowest mortality rates are seen in Westchester and Rockland counties (10.5, 10.8 per 100,000 population, respectively). These rates are lower than the rates in the Mid-Hudson region and New York State overall (12.5 and 17.0 per 100,000 population, respectively). The Healthy People 2020 target of reducing diabetes mortality to 66.6 deaths per 100,000 covers all deaths related to diabetes, which cannot be compared to this data.

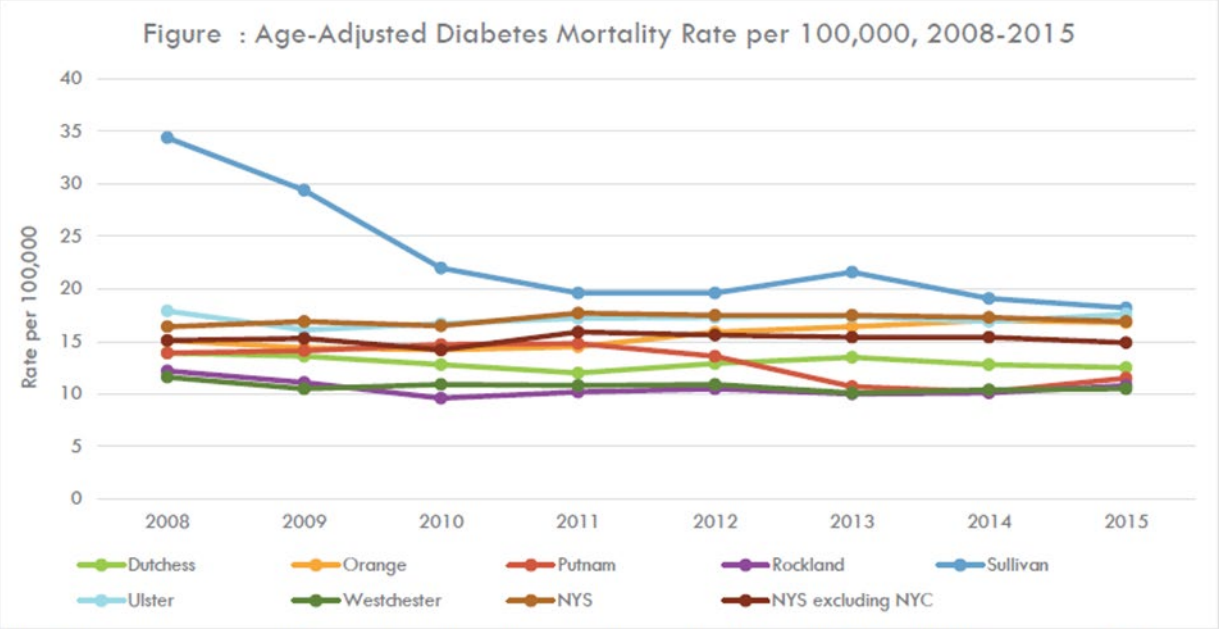
Figure : Age-Adjusted Diabetes Mortality Rate per 100,000, 2014-2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Mortality Rate	12.5	16.8	11.5	10.8	18.2	17.6	10.5	12.5	17.0

Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Diabetes mortality rates varied across the 7 counties in the Mid-Hudson region counties from 2008-2015. Rockland County has experienced a decrease in mortality rate from 12.2 to 10.8 per 100,000.



Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

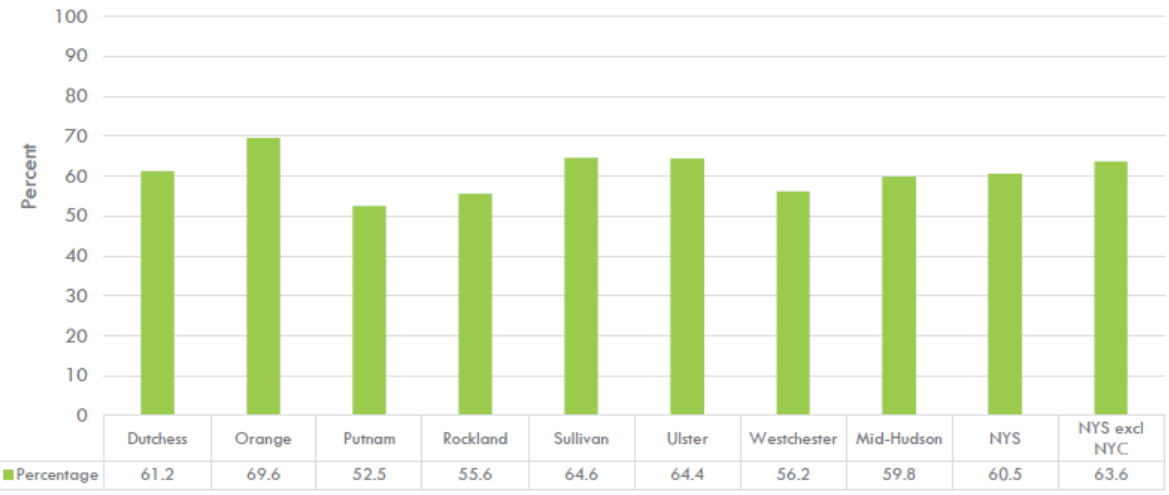
	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	13.9	15.1	13.9	12.2	34.4	17.9	11.6	16.4	15.1
2009	13.6	14.4	14.1	11.1	29.4	16.1	10.5	16.9	15.3
2010	12.8	14.2	14.7	9.6	22.0	16.7	10.9	16.5	14.2
2011	12.0	14.5	14.8	10.2	19.6	17.2	10.8	17.7	15.9
2012	12.9	15.9	13.6	10.5	19.6	17.3	10.9	17.5	15.6
2013	13.5	16.4	10.7	10.0	21.6	17.4	10.1	17.5	15.4
2014	12.8	17.0	10.2	10.1	19.1	16.9	10.4	17.3	15.4
2015	12.5	16.8	11.5	10.8	18.2	17.6	10.5	16.9	14.9

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

OBESITY

Obesity, which is a condition where an individual's weight is higher than what is considered normal for his/her height, has become a widespread epidemic in the United States over the past few years. Body Mass Index (BMI) is a screening tool used to measure weight to height ratio that can determine if individuals have a healthy weight for their height. The calculation consists of person's weight in kilograms divided by his/her height in meters squared. If individuals have a BMI between 25.0 to 29.9 kg/m2, they are considered to be overweight, and if they have a BMI of 30.0 or higher, they are considered to be obese.

Figure : Age-Adjusted Percentage of Adults Overweight or Obese (BMI 25 or Higher), 2016

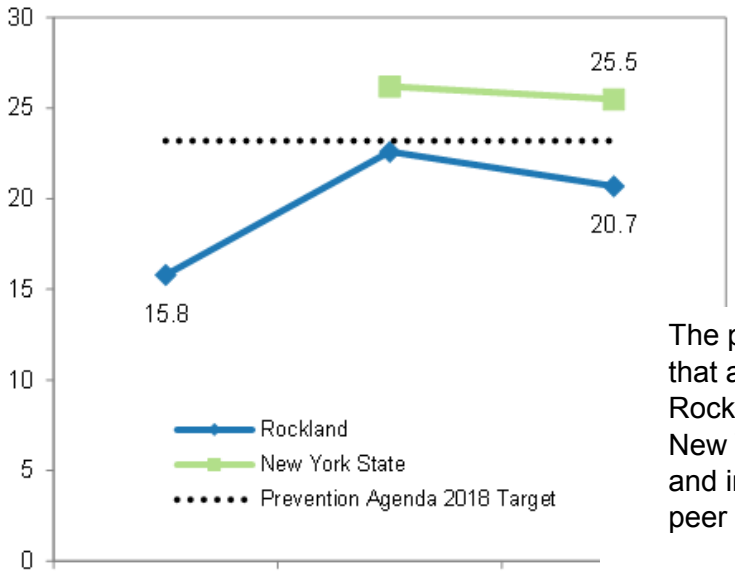


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percentage	61.2	69.6	52.5	55.6	64.6	64.4	56.2	59.8	60.5	63.6

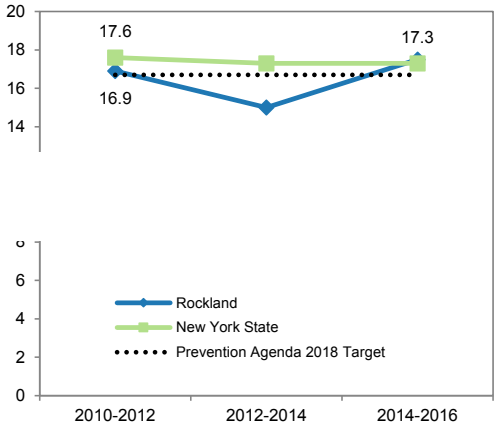
Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

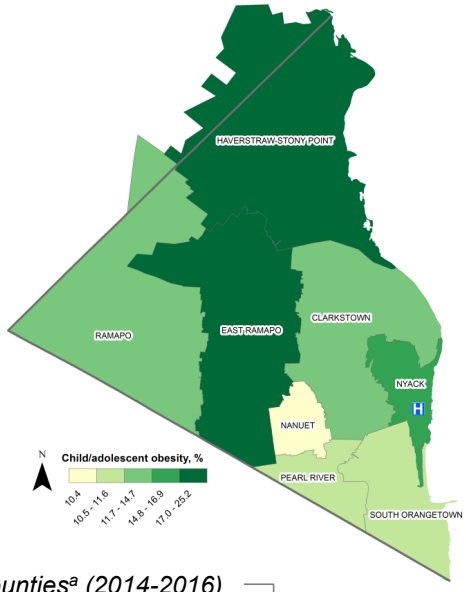
Of the 7 counties in the Mid-Hudson region, Putnam County has the lowest % of adults who are overweight or obese (52.5%) followed by Rockland (55.6%). The combined prevalence of overweight and obesity in the Mid-Hudson region (59.8%) was lower than the overall statewide average (60.5%) and excluding New York City (63.6%). Between 2008/2009 and 2016, the percent of obese adults increased in Rockland County from 15.8% to 20.7%.

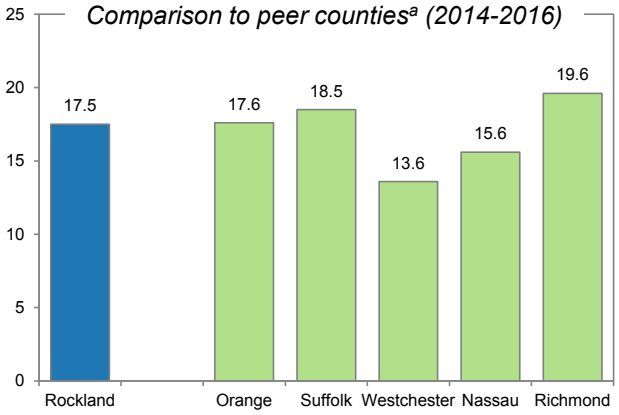
A similar proportion (17.5%) of children/adolescents are obese in Rockland county and in New York State overall (17.3%). Haverstraw-Stony Point and East Ramapo school districts have the highest prevalence of child/ adolescent obesity in Rockland County



The percentage of adults that are obese is lower in Rockland County than in New York State overall and in four of five of its peer counties.



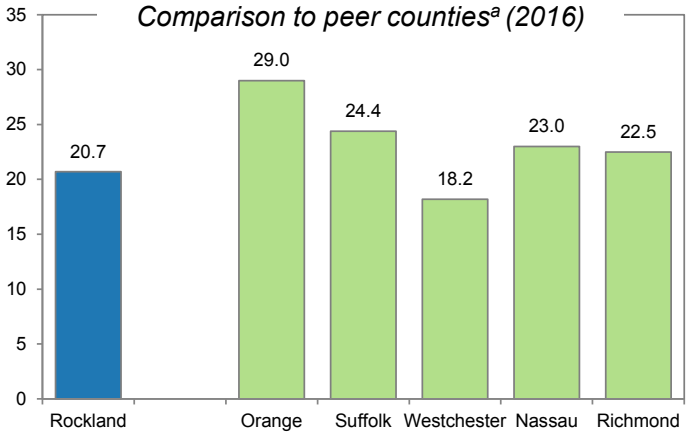




[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

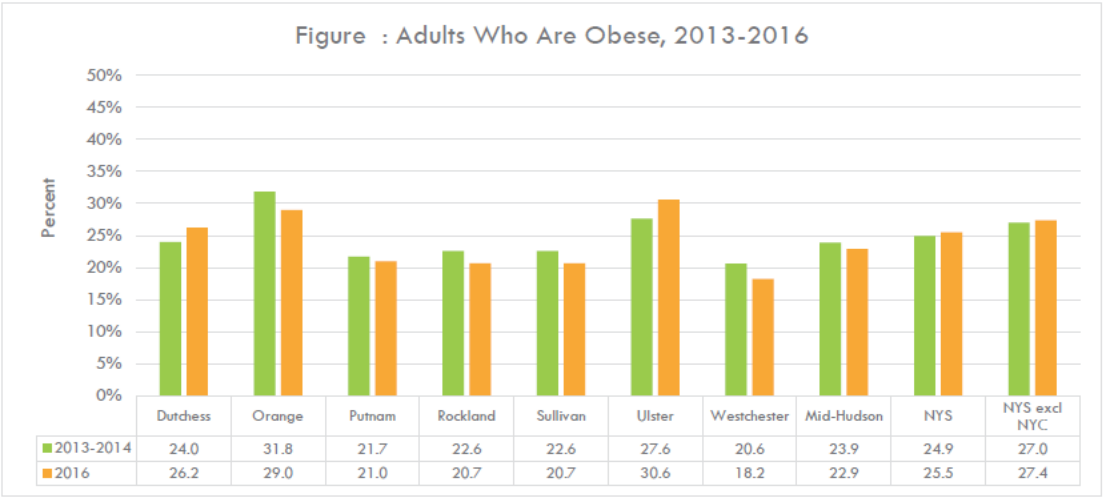
Data source: New York State Prevention Agenda Dashboard
Map is at the school district level and reflect data from 2014-2016.

Obesity poses a great health risk on the American population due to its linkage with higher mortality, reduced life span, and many chronic diseases. For instance, those who are obese are at a greater risk of developing other conditions including diabetes, heart disease, hypertension, cancer, and renal failure.87 Eating food high in sugar and fat content and having decreased physical activity can increase the risk of obesity. However, there are also multiple environmental, behavioral, and emotional factors that contribute to this disease, including stress. Stress has an indirect effect on obesity due to increased food consumption, alcohol intake, and pursuing a less active lifestyle, leading to increased weight gain.



[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

Data source: New York State Prevention Agenda Dashboard.
2008-2009 New York State data not available.

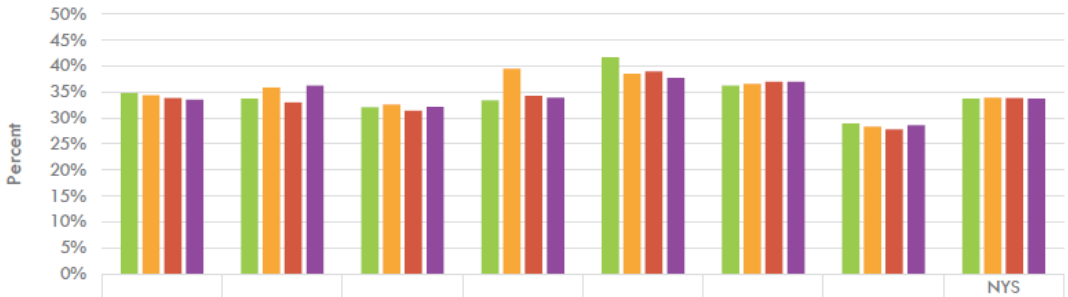


Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

Recent data shows that more than one third of adults in the United States are obese. When comparing data from 2013-2014 to 2016, Most counties experienced a decrease in their percent obese, including Rockland.

The Student Weight Status Category Reporting System (SWSCRS) was established by amendments to New York State Education Law in 2007 to help the state and counties address the increasing rates of obesity among school-aged children. When looking at the combined prevalence of overweight and obesity among school aged children from 2010-2018 in [Figure], the trend differs in each county. In Rockland there has been a slight increase.

Figure : School-Aged Children and Adolescents Who Are Overweight or Obese, 2010-2018

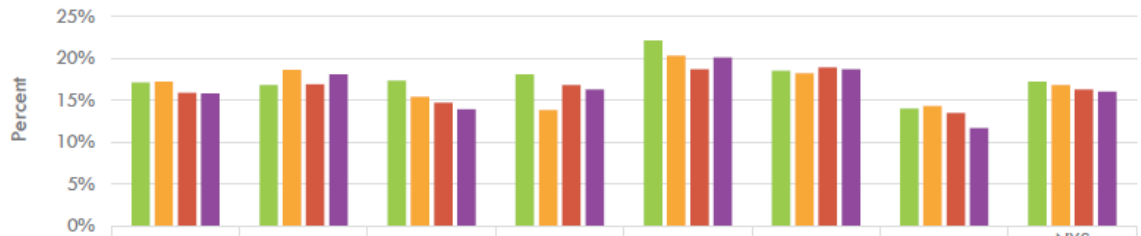


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS excluding NYC
2010-2012	34.8	33.7	32.0	33.4	41.7	36.2	28.9	33.7
2012-2014	34.4	35.8	32.6	39.5	38.5	36.6	28.3	33.9
2014-2016	33.8	33.0	31.4	34.2	39.0	37.0	27.8	33.8
2016-2018	33.5	36.2	32.1	33.9	37.7	37.0	28.6	33.7

Source: NYSDOH Student Weight Status Category Reporting System, 2019
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When this data is stratified to elementary and middle/high school children who are obese, the numbers vary across the age groups and the region. Healthy People 2020 has set its goal of reducing the proportion of elementary school children who are obese to 15.7%. As seen in [Figure], with the exception of Putnam and Westchester counties, all of the other Mid-Hudson region counties and New York State excluding New York City do not meet this target. In terms of middle and high school students, Healthy People 2020 has set its target to reduce the proportion of students who are obese to 16.1%. Rockland and Westchester counties, have met this target.

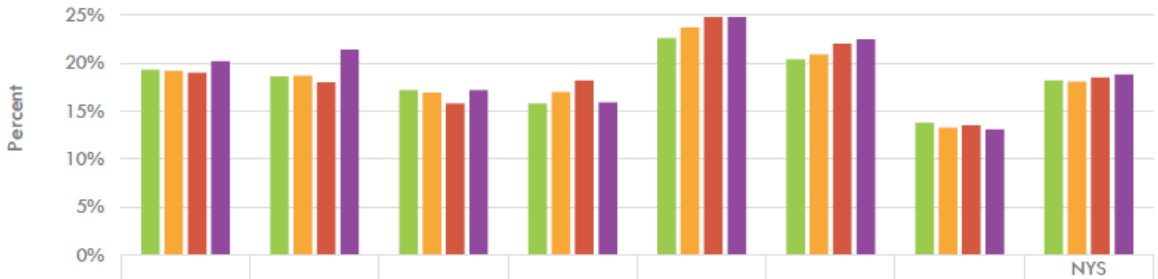
Figure : Elementary School Students Who Are Obese, 2010-2018



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS excluding NYC
2010-2012	17.1	16.8	17.3	18.1	22.1	18.5	14.0	17.2
2012-2014	17.2	18.6	15.4	13.8	20.3	18.2	14.3	16.8
2014-2016	15.9	16.9	14.7	16.8	18.7	18.9	13.5	16.3
2016-2018	15.8	18.1	13.9	16.3	20.1	18.7	11.7	16.0

Source: NYSDOH Student Weight Status Category Reporting System, 2019
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Figure : Middle and High School Students Who Are Obese, 2010-2018



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS excluding NYC
2010-2012	19.3	18.6	17.2	15.8	22.6	20.4	13.8	18.2
2012-2014	19.2	18.7	16.9	17.0	23.7	20.9	13.3	18.1
2014-2016	19.0	18.0	15.8	18.2	24.8	22.0	13.5	18.5
2016-2018	20.2	21.4	17.2	15.9	24.8	22.5	13.1	18.8

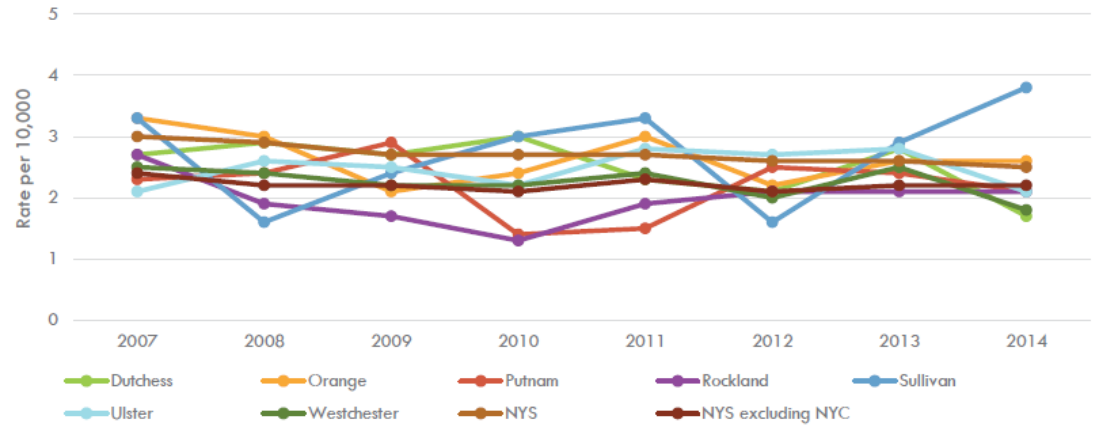
Source: NYSDOH Student Weight Status Category Reporting System, 2019
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

CIRRHOSIS OF THE LIVER

Cirrhosis is a condition in which the liver experiences scarring (fibrosis) that can lead to permanent damage. It is included in the top ten leading causes of death in United States. Causes of cirrhosis include (but are not limited to) chronic alcohol abuse, viral hepatitis (more commonly hepatitis B and C), and fatty liver disease. Symptoms also include fatigue, bleeding, edema (swelling) in lower extremities, and hepatic encephalopathy (loss of brain function due to the liver's inability to remove toxins from the blood).89 When looking over time, cirrhosis hospitalization rates vary across the 7 counties in the Mid-Hudson region. With the exception of Sullivan and Ulster counties, hospitalization rates have decreased across the 7 counties and New York State overall and excluding New York City from 2007 to 2014 with some variance throughout this time period.

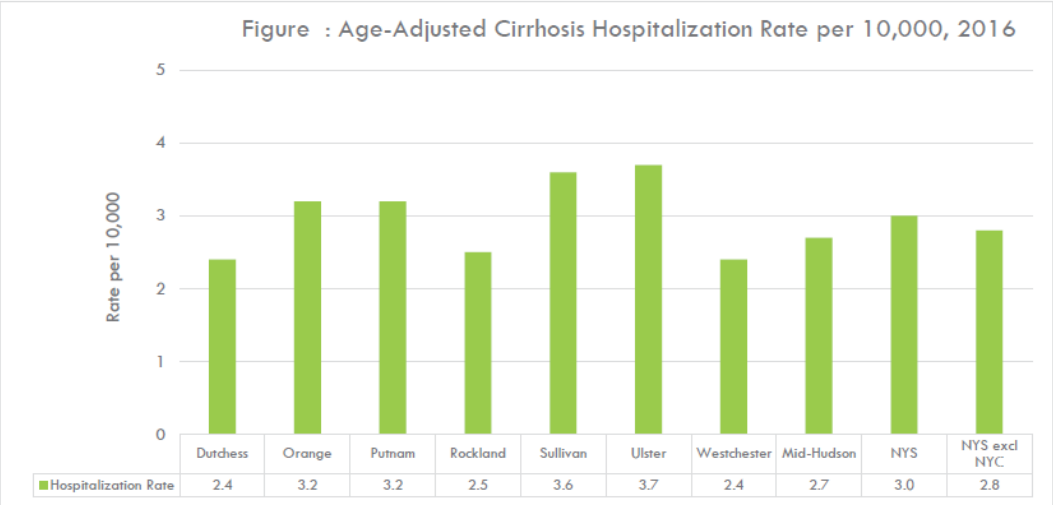
When looking specifically at recent data from 2016, the highest hospitalization rates are found in Ulster and Sullivan counties (3.7 and 3.6 per 10,000 population, respectively), while the lowest rates are in Dutchess and Westchester counties (2.4 per 10,000 population).

Figure : Age-Adjusted Cirrhosis Hospitalization Rate per 10,000, 2007-2014



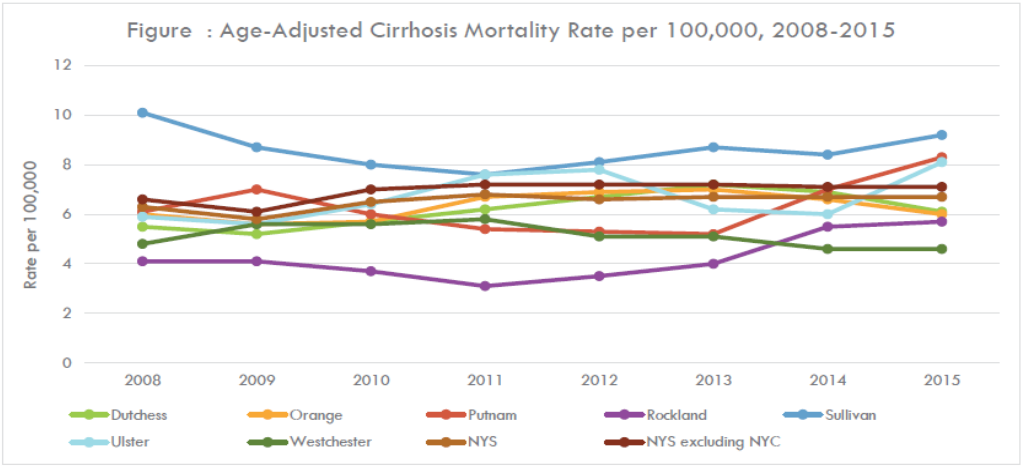
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	2.7	3.3	2.3	2.7	3.3	2.1	2.5	3.0	2.4
2008	2.9	3	2.4	1.9	1.6	2.6	2.4	2.9	2.2
2009	2.7	2.1	2.9	1.7	2.4	2.5	2.2	2.7	2.2
2010	3	2.4	1.4	1.3	3	2.2	2.2	2.7	2.1
2011	2.3	3	1.5	1.9	3.3	2.8	2.4	2.7	2.3
2012	2.1	2.2	2.5	2.1	1.6	2.7	2	2.6	2.1
2013	2.8	2.6	2.4	2.1	2.9	2.8	2.5	2.6	2.2
2014	1.7	2.6	2.1	2.1	3.8	2.1	1.8	2.5	2.2

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

The Healthy People 2020 goal is to reduce cirrhosis deaths to 8.2 deaths per 100,000. Most recent data from 2014-2016 indicates that Rockland County met this goal (5.7 deaths per 100,000 population).



Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	5.5	6.0	6.1	4.1	10.1	5.9	4.8	6.3	6.6
2009	5.2	5.6	7.0	4.1	8.7	5.6	5.6	5.8	6.1
2010	5.7	5.7	6.0	3.7	8.0	6.4	5.6	6.5	7.0
2011	6.2	6.7	5.4	3.1	7.6	7.6	5.8	6.8	7.2
2012	6.7	6.9	5.3	3.5	8.1	7.8	5.1	6.6	7.2
2013	7.2	7.0	5.2	4.0	8.7	6.2	5.1	6.7	7.2
2014	6.9	6.6	7.0	5.5	8.4	6.0	4.6	6.7	7.1
2015	6.1	6.0	8.3	5.7	9.2	8.1	4.6	6.7	7.1

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Vital Statistics, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

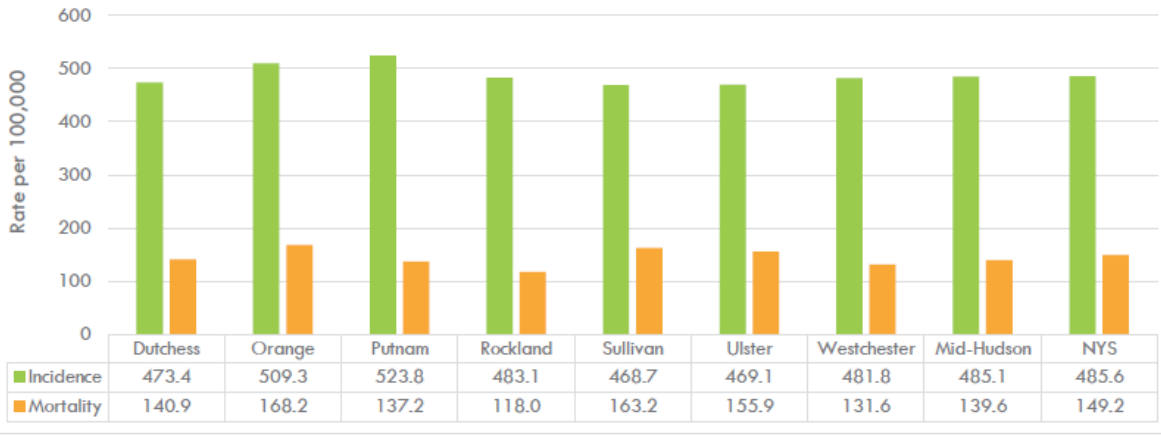
Mortality rates due to liver cirrhosis have stayed the same or increased in almost all of the counties, in the Mid-Hudson region and New York State overall and excluding New York City from 2008-2015, including Rockland (4.1 to 5.7 per 100,000 population).

CANCER

Cancer is a disease in which the cells of the body grow out of control and invade tissues in the body. Cancer can metastasize, or spread, from one part of the body to another. There are a variety of risk factors including genetics, environment, and behaviors such as smoking, drinking alcohol, diet, and physical activity.

Cancer is one of the leading causes of death across all seven counties in the Mid-Hudson region. According to [Figure], in the Mid-Hudson Region as a whole, the incidence and mortality rates of all cancer types are similar to that of New York State from 2013-2015 (incidence rates 485.1 vs 485.6 per 100,000; mortality rates 139.6 vs 149.2 per 100,000, respectively).

Figure : Age-Adjusted All Cancer Incidence & Mortality Rates per 100,000, 2013-2015



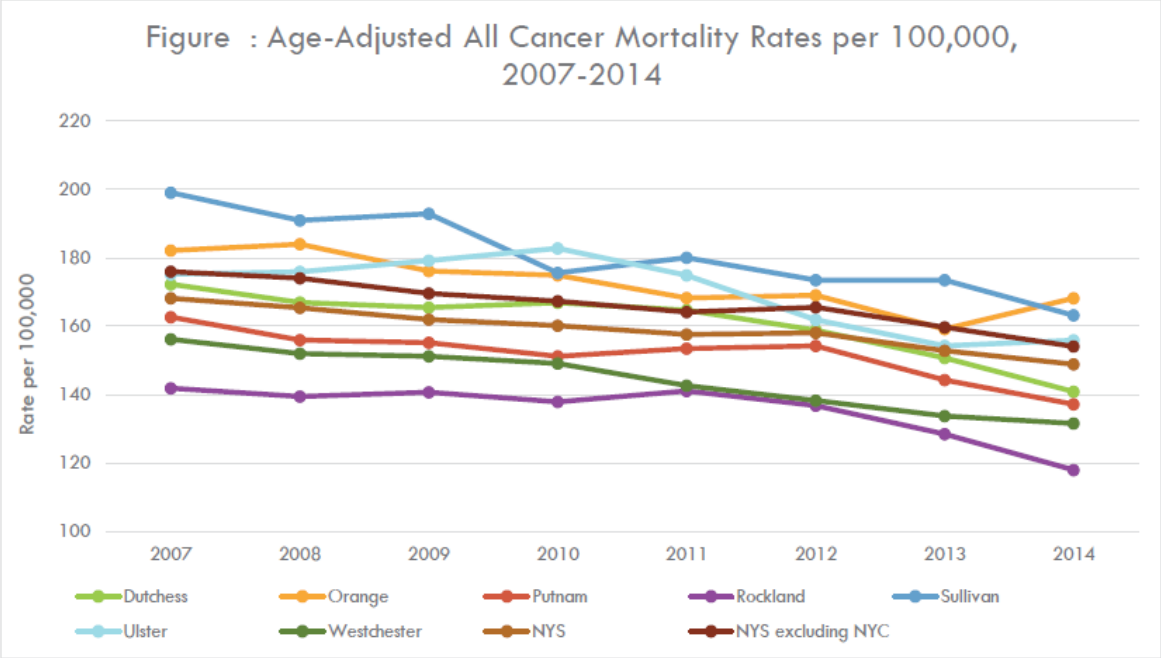
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Incidence	473.4	509.3	523.8	483.1	468.7	469.1	481.8	485.1	485.6
Mortality	140.9	168.2	137.2	118.0	163.2	155.9	131.6	139.6	149.2

Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

When looking over time, all cancer incidence rates have decreased across the 7 counties in the Mid-Hudson region, New York State excluding New York City, and New York State overall. The age-adjusted rate of cancer cases in the United States is 435.6 per 100,000, which is lower than rates in the Mid-Hudson region and New York State overall.

Overall, all cancer mortality rates have decreased across the 7 counties in the Mid-Hudson region, New York State excluding New York City, and New York State overall. Rockland County has had a decrease in cancer mortality rates from 2013 to 2014 of 141.9 to 118.0 meeting the

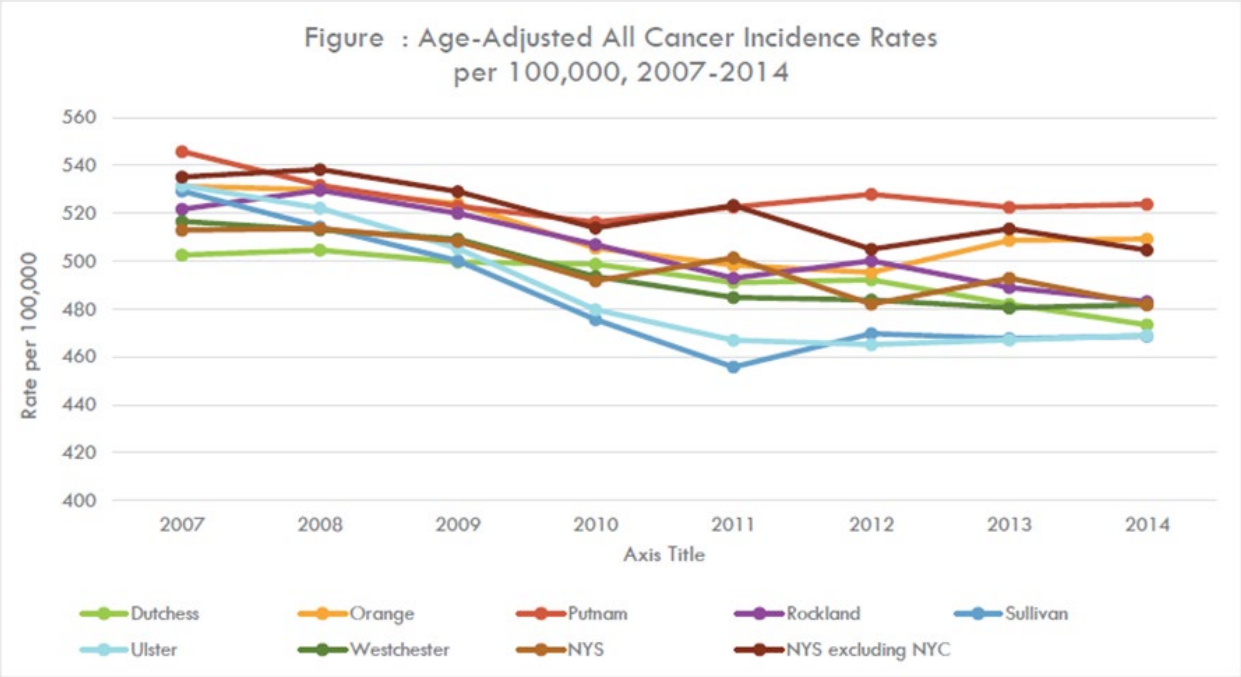
Healthy People 2020 target rate to reduce overall cancer deaths to 161.4 deaths per 100,000 population.



Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	172.3	182.2	162.7	141.9	199.1	175.2	156.2	168.2	176.0
2008	167.0	184.0	156.0	139.5	191.0	175.9	152.0	165.4	174.1
2009	165.5	176.2	155.2	140.7	192.9	179.2	151.2	162.0	169.6
2010	166.9	174.9	151.2	137.9	175.6	182.8	149.1	160.2	167.4
2011	164.7	168.3	153.5	141.1	180.1	174.9	142.7	157.6	164.2
2012	158.9	169.1	154.3	136.8	173.5	161.9	138.3	158.1	165.6
2013	150.8	159.2	144.3	128.5	173.5	154.3	133.8	152.9	159.7
2014	140.9	168.2	137.2	118.0	163.2	155.9	131.6	148.9	154.1

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



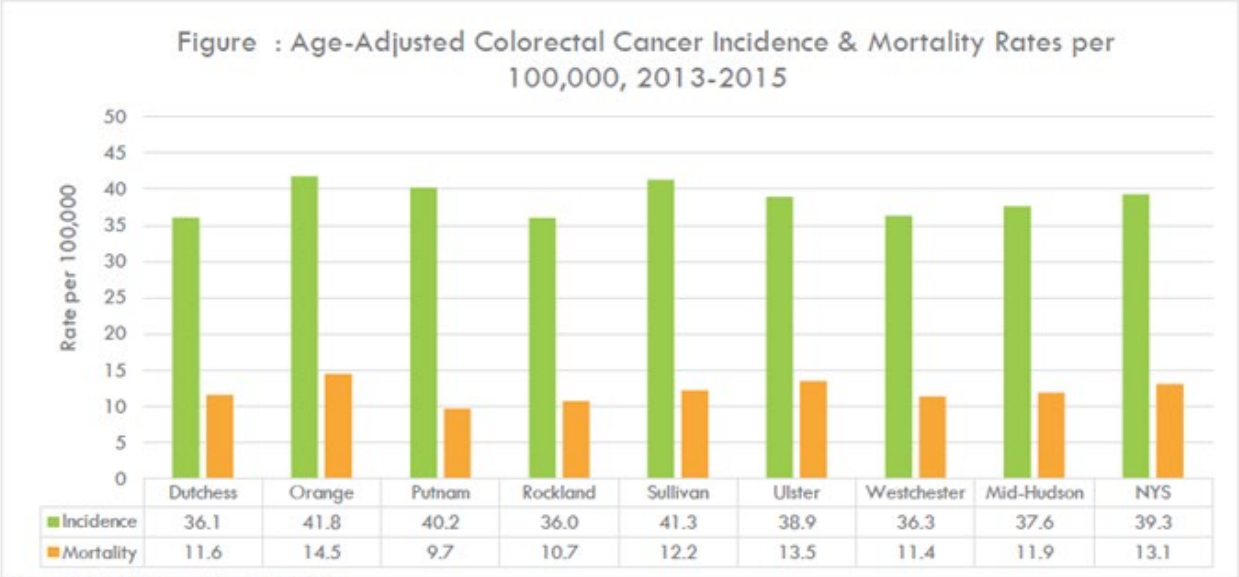
Note: Three-year averages for counties and single-year estimates for NYS and NYS excl NYC are graphed above.

	Three-year average							Single year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	502.6	531.3	545.8	521.7	529.3	531.6	516.6	512.9	535.2
2008	504.6	529.9	531.7	529.6	514.3	522.1	513.1	513.6	538.3
2009	499.6	524.0	523.0	520.0	500.2	505.3	509.3	508.3	529.1
2010	498.8	505.5	516.3	507.0	475.6	479.8	493.6	491.8	513.9
2011	491.1	498.3	522.6	492.9	455.8	467.0	484.8	501.4	523.3
2012	492.2	495.3	527.9	500.2	469.8	465.2	483.8	482.1	505.0
2013	482.1	508.7	522.5	489.0	467.7	467.1	480.5	492.9	513.5
2014	473.4	509.3	523.8	483.1	468.7	469.1	481.8	481.9	504.6

Note: Three-year average for counties and single-year estimates for NYS and NYS excl NYC were used.
Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

COLORECTAL CANCER

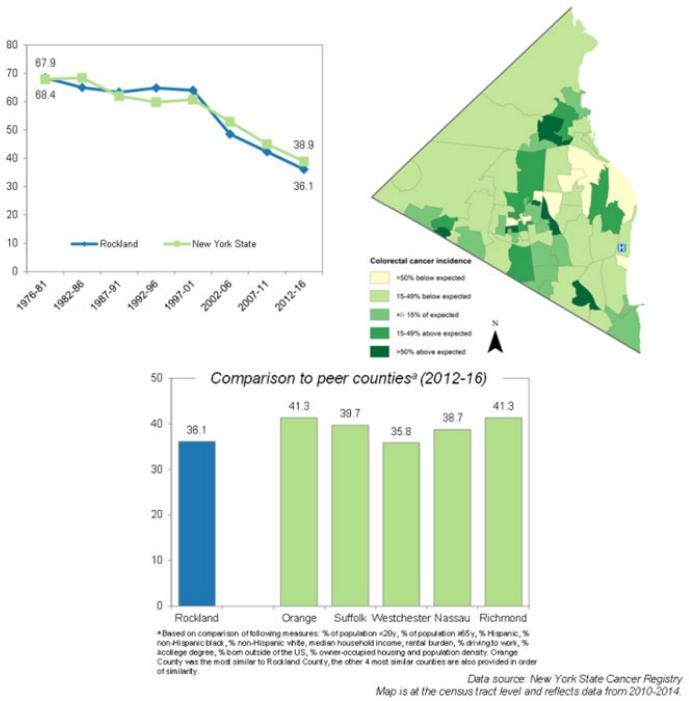
Colorectal cancer is a cancer that occurs in the colon or rectum. Some symptoms include blood in the stool, abdominal pains/aches, fatigue, and abnormal weight loss. In the United States, the rate of new colorectal cancer cases in 2016 was 37.4 per 100,000 people, while the mortality rate due to colorectal cancer was 13.7 per 100,00 people.



Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm
Note: Trend data for incidence and mortality rates can be found on NYS CHIRS.

Of the 7 counties in the Mid-Hudson region, Rockland has the lowest incidence and second lowest mortality rates (36.0 & 10.7 per 100,000, respectively).

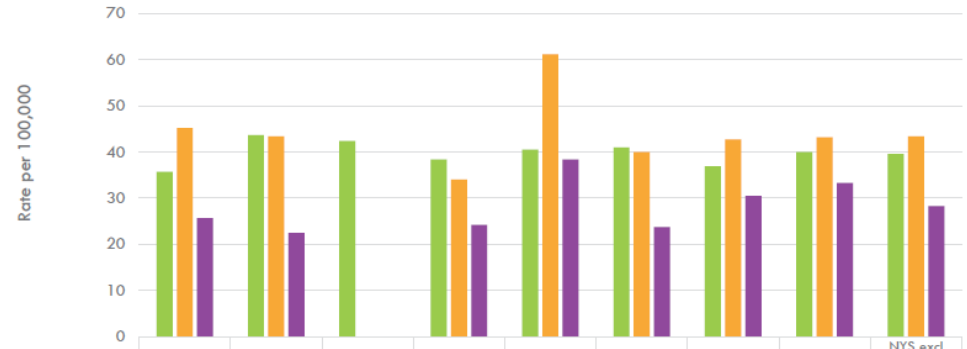
Incidence of Colorectal Cancer



In Rockland County, the incidence of age-adjusted colorectal cancer has declined over the past few decades and as of 2012-2016, it is slightly below the incidence rate for New York State overall (38.9 vs 36.1 per 100,000, respectively). When compared with 5 peer counties, Rockland County has the second lowest colorectal cancer incidence rate.

When stratifying this data by race/ethnicity, the rates differ in most of the counties. In Rockland County, the highest rates of colorectal cancer incidence can be seen in the non-Hispanic White population. In New York State, colorectal cancer incidence rates are slightly higher in the non-Hispanic Black population.

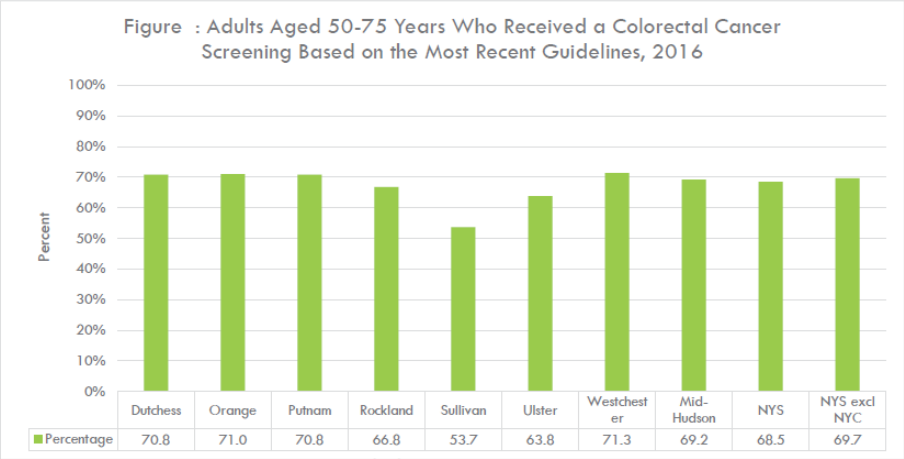
Figure : Age-Adjusted Colorectal Cancer Incidence Rate per 100,000 by Race/Ethnicity, 2013-2015



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	35.7	43.7	42.4	38.4	40.5	41.0	36.9	40.0	39.6
Non-Hispanic Black	45.2	43.4	s	34.1	61.2	40.0	42.7	43.2	43.4
Hispanic	25.7	22.5	s	24.2	38.4	23.8 *	30.5	33.3	28.3

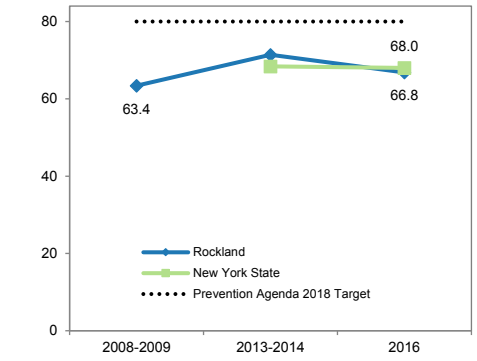
*: *The rate or percentage is unstable.*
s: *Data are suppressed. The data do not meet the criteria for confidentiality.*
Source: NYSDOH Cancer Registry, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

The U.S. Preventive Services Task Force recommends that adults who are between the ages of 50 and 75 should be screened for colorectal cancer. Some screening tests include colonoscopy, guaiac-based fecal occult blood test (gFOBT) which uses a chemical called guaiac to detect blood in the stool, or a fecal immunochemical test (FIT) which uses antibodies to look for blood in the stool. Healthy People 2020 has set its target for colorectal cancer screening rates to 70.5%. The Mid-Hudson region is just below this target with 69.2% of adults aged 50- 75 having received a colorectal cancer screening test based on the most recent guidelines in 2016, and Rockland is lower at 66.8%.

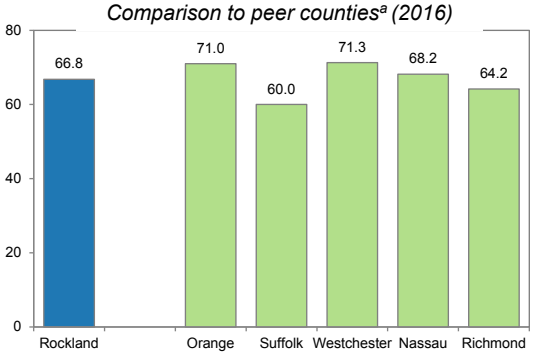


Source: NYSDOH Behavioral Risk Factor Surveillance System, 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-2024/

Of adults ages 50-75y, 66.8% received a colorectal cancer screening in Rockland County in 2016, which remains below the Prevention Agenda 2018 Target of 80%. When compared with 5 peer counties, Rockland County has a similar proportion of adults (ages 50-75y) receiving a colorectal cancer screening.



Comparison to peer counties[a] (2016)



[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.

Adults receiving colorectal cancer screening (age 50-75y), %

Data source: New York State Prevention Agenda Dashboard.
2008-2009 New York State data not available.

LUNG CANCER

Lung cancer is the primary cause of cancer deaths for both males and females in all of the Mid-Hudson region and New York state. Some symptoms of lung cancer include chest pain, coughing (sometimes with blood), and shortness of breath or wheezing. Healthy People 2020 has set its goal for lung cancer mortality to 45.4 deaths per 100,000 population. The Mid-Hudson region lies above this target, with 34.4 per 100,000 deaths caused by lung cancer.

The leading risk factor for lung cancer is tobacco use. According to the NYSDOH, smoking is responsible for 80% of lung cancers.95 Cigarette smoking is a risk factor for many other diseases, and it's important that people are educated about the risks involved with smoking (see [section] for more information). Rockland County has the lowest incidence and mortality per 100,000 population, 48.3 and 23.8 respectively).

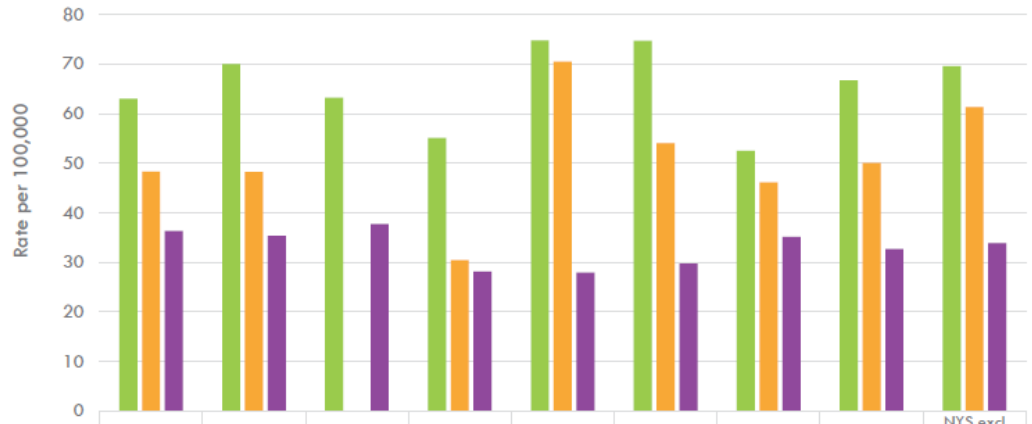
Figure : Age-Adjusted Lung Cancer Incidence & Mortality Rates per 100,000, 2013-2015

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Incidence	59.0	63.9	59.9	48.3	70.6	71.1	48.4	55.3	59.2
Mortality	35.8	45.2	35.2	23.8	44.4	45.7	30.7	34.4	36.9

Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm
Note: Trend data for incidence and mortality rates can be found on NYS CHIRS.

When stratifying this data by race/ ethnicity, the highest rate of lung cancer incidence is seen among non-Hispanic White adults in all 7 counties in the Mid-Hudson region as well as NYS.

Figure : Age-Adjusted Lung Cancer Incidence Rate per 100,000 by Race/Ethnicity, 2013-2015



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
Non-Hispanic White	63.0	70.0	63.2	55.1	74.8	74.7	52.5	66.7	69.6
Non-Hispanic Black	48.3	48.2	s	30.4	70.5	54.0	46.1	50.0	61.3
Hispanic	36.3	35.3	37.7 *	28.1	27.9 *	29.7	35.1	32.7	33.8

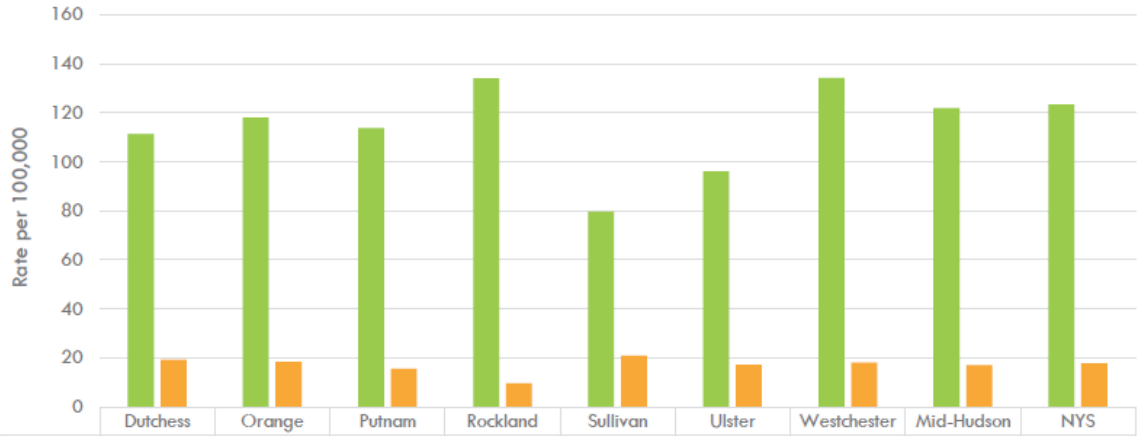
*: *The rate or percentage is unstable.*
s: *Data are suppressed. The data do not meet the criteria for confidentiality.*
Source: NYSDOH Cancer Registry, 2018
NYSDOH County Health Indicators by Race/Ethnicity (CHIRE): https://www.health.ny.gov/statistics/community/minority/county/index.htm

PROSTATE CANCER

Out of every 100 American men, about 13 will get prostate cancer during their lifetime.96 Some common symptoms of prostate cancer include difficulty urinating, frequent urination, blood in the urine or semen, and painful ejaculation.

Prostate cancer has a better prognosis compared to other cancers when people receive treatment early. Healthy People 2020 has set its goal to reduce prostate cancer mortality to 21.8 deaths per 100,000 population. The Mid-Hudson region and New York State overall lie above this target, with Rockland County having the highest incidence but lowest rate of prostate cancer mortality in the Mid-Hudson region (134 and 9.7 per 100,000 population respectively).

Figure : Age-Adjusted Prostate Cancer Incidence & Mortality Rates per 100,000, 2013-2015



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Incidence	111.3	118.1	113.7	134.0	79.7	96.1	134.2	121.9	123.4
Mortality	19.3	18.4	15.5	9.7	21.0	17.3	18.0	17.1	17.8

Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm
Note: Trend data for incidence and mortality rates can be found on NYS CHIRS.

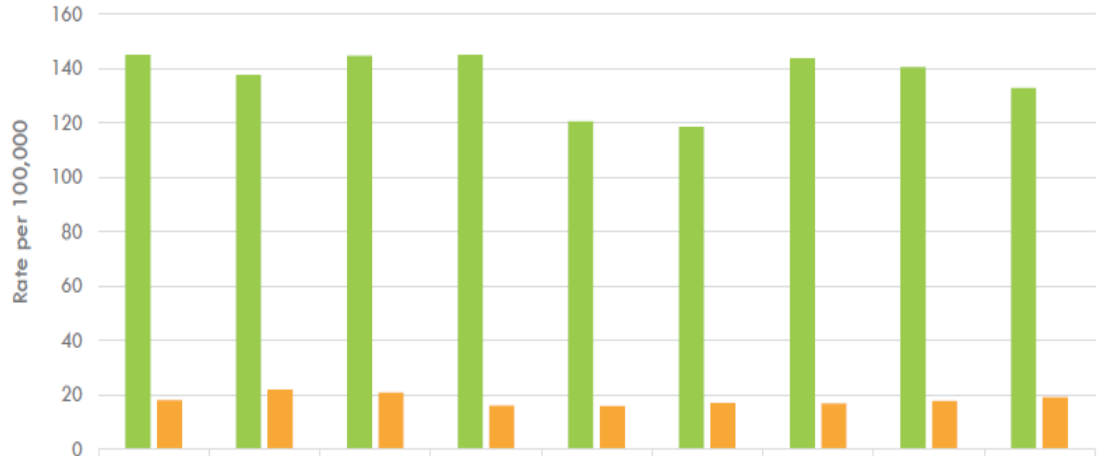
FEMALE BREAST CANCER

Breast cancer is the most prevalent cancer in American women. The most common symptom of breast cancer is a lump or mass found in the breast which can vary across each woman. The average risk of a woman in the United States developing breast cancer in her lifetime is about 12%. In the United States, the age-adjusted rate of breast cancer incidence in 2015 was 126.2 per 100,000 women. Public awareness, screening tests, and advancements in treatment options contribute to the decreased mortality rates. One of the most important screening tests for breast cancer is a mammogram, which is an X-ray picture of the breast, and this should start in women aged 40 and older.

When looking at the Mid- Hudson region and NYS overall, the highest rates of breast cancer incidence are found in Rockland County (145.0 per 100,000 women, respectively). When looking at mortality rate, Rockland is the second lowest at 16.2 per 100,000 women.

Healthy People 2020 has set its target of having at least 81.1% of the female population receiving a breast cancer screening. Rockland County hasn't met this target at 72.0% but data is unreliable due to large standard error.

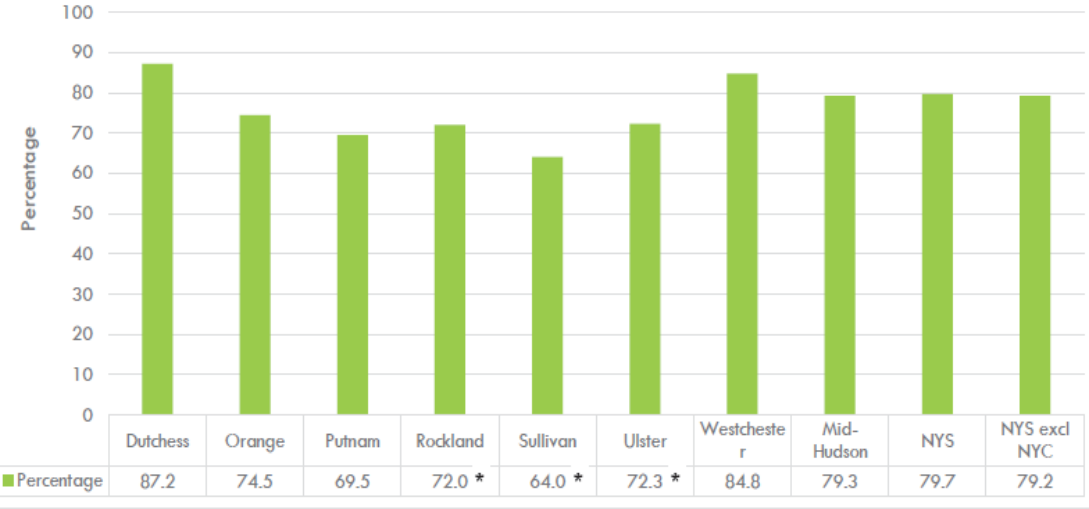
Figure : Age-adjusted Female Breast Cancer Incidence & Mortality Rates per 100,000, 2013-2015



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Incidence	144.9	137.6	144.7	145.0	120.6	118.5	143.8	140.5	132.8
Mortality	18.1	21.9	20.9	16.2	16.0	17.1	16.8	17.8	19.2

Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm
Note: Trend data for incidence and mortality rates can be found on NYS CHIRS.

Figure : Women Aged 50-74 Years Receiving Breast Cancer Screening Based on Recent Guidelines, 2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percentage	87.2	74.5	69.5	72.0 *	64.0 *	72.3 *	84.8	79.3	79.7	79.2

*: *Unreliable percentage due to large standard error.*
Source: NYS Department of Health Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

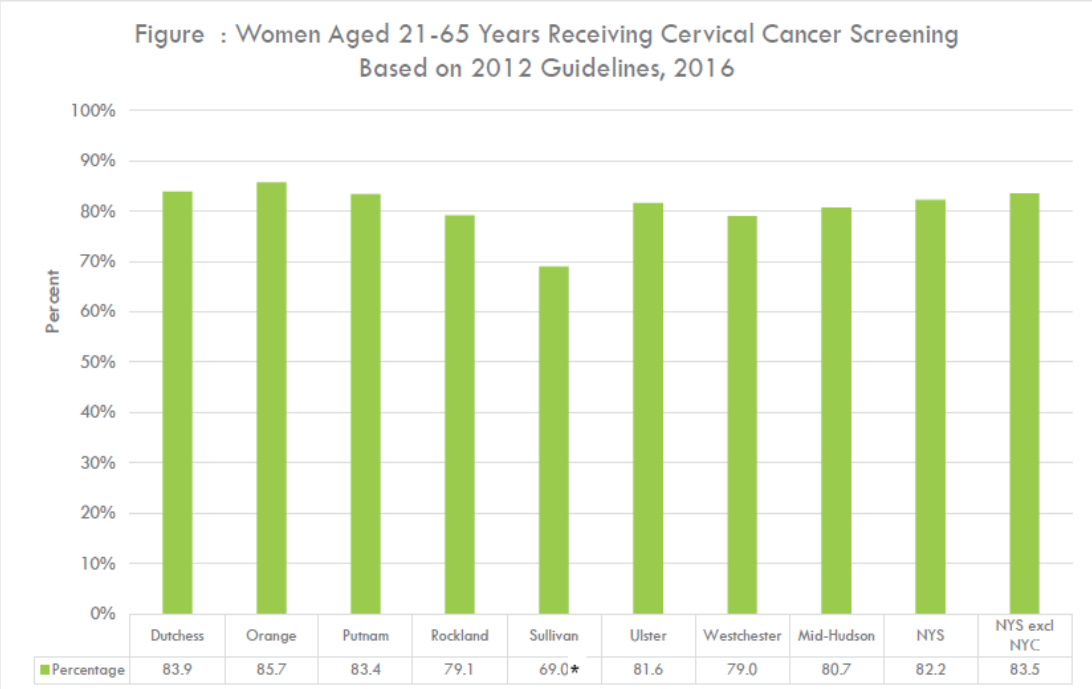
CERVIX UTERINE CANCER

Cervical cancer is a cancer that occurs most often in women over the age of 30 There are no early signs or symptoms for this disease, but advanced cervical cancer can lead to symptoms of abnormal bleeding and discharge from the vagina.

According to the American Cancer Society (ACS), some risk factors specific to cervical cancer include Human Papillomavirus (HPV) infection which can spread through sexual activity (vaginal, oral, and anal sex) and can sometimes present as warts on different parts of the body; Human immunodeficiency virus (HIV), which causes Acquired Immune Deficiency Syndrome (AIDS) and weakens the immune system, putting women at a higher risk for HPV infection; having multiple full-term pregnancies; and having a family history of cervical cancer.

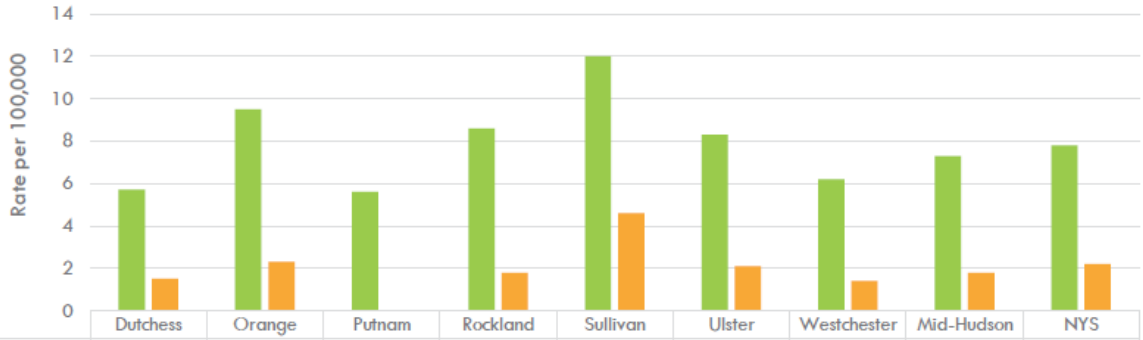
When looking at the incidence and mortality rates of cervical cancer, mortality rates are similar across the Mid-Hudson region. Rockland County meets the Healthy People 2020 target of reducing the death rate of cervical cancer to 2.2 deaths per 100,000 women.

Women should be screened for cervical cancer starting at the age of 21 through a pap smear or pap test. Healthy People 2020 has set its goal of increasing the proportion of women who receive a cervical cancer screening to 93.0%. New York State, the Mid-Hudson region, and the 7 counties do not meet this goal. Rockland is at 79.1%.



*: *Unreliable percentage due to large standard error.*
Source: NYSDOH Behavioral Risk Factor Surveillance System, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Figure : Age-Adjusted Cervix Uteri Cancer Incidence & Mortality Rates per 100,000, 2013-2015



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Incidence	5.7	9.5	5.6	8.6	12.0	8.3	6.2	7.3	7.8
Mortality	1.5 *	2.3	s	1.8	4.6*	2.1*	1.4	1.8	2.2

*: Fewer than 10 events in the numerator, therefore the rate/percentage is unstable.
s: Data do not meet reporting criteria.
Source: NYSDOH Cancer Registry, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm
Note: Trend data for incidence and mortality rates can be found on NYS CHIRS.

Health Indicators: Infectious Diseases

VACCINE-PREVENTABLE DISEASES

Infectious diseases are illnesses caused by disease-causing organisms that often spread from person to person. Life expectancy increased in the 20th century largely due to reductions in deaths due to infectious diseases that we now have vaccines for.

Despite these improvements, people in the United States continue to get diseases that are preventable. Approximately 42,000 adults and 300 children in the US die each year from vaccine preventable diseases. Communities with under-vaccinated populations are at increased risk for outbreaks of vaccine-preventable diseases.

CHILDHOOD IMMUNIZATION

The Advisory Committee on Immunization Practices recommends routine childhood vaccination by 2 years of age. The combined 4:3:1:3:3:1:4 vaccine series consists of 4 doses of DTaP, 3 Polio, 1 MMR, 3 Hib, 3 HepB, 1 Varicella, and 4 PCV vaccines. Appropriate vaccination coverage is linked to improved health outcomes and cost savings. Complying with age-appropriate receipt of vaccines is critical in providing maximum effectiveness against vaccine-preventable diseases.

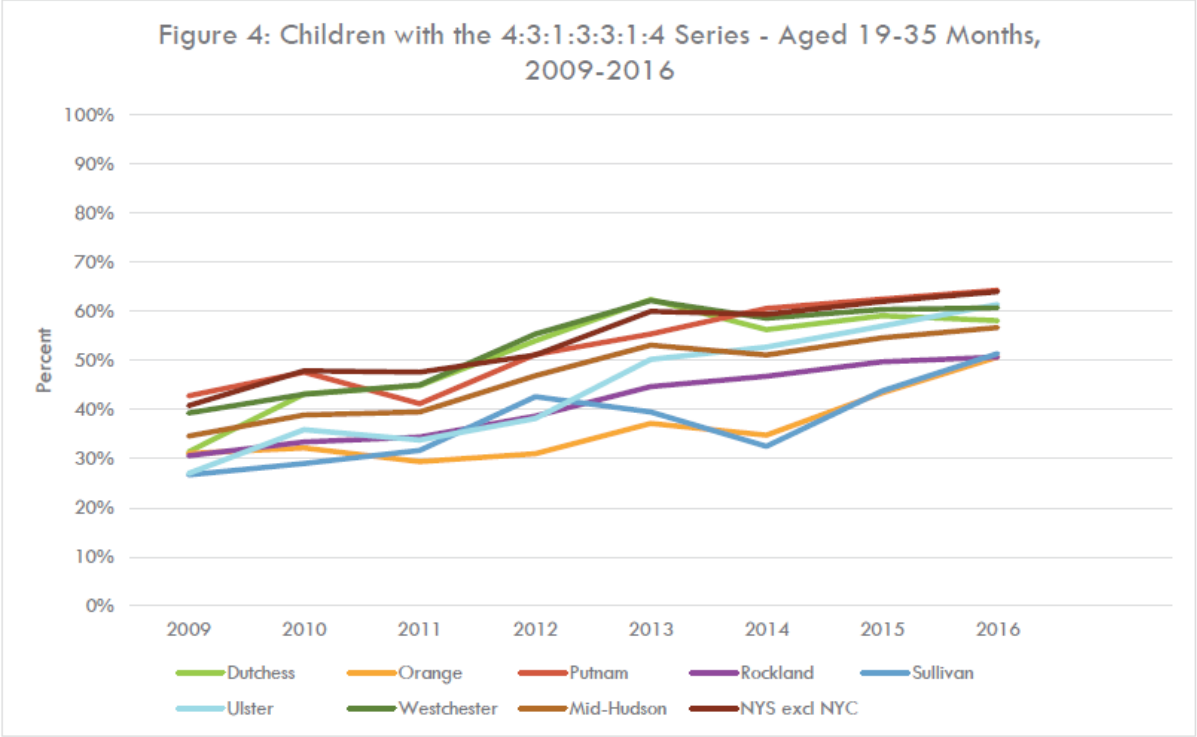
The Healthy People 2020 Immunization and Infectious Disease goals set a target that 80% of children should receive all doses in the 4:3:1:3:3:1:4 series by age 19 to 35 months to achieve and maintain effective vaccination coverage levels for universally recommended vaccines among children. While coverage has generally been trending up it remains suboptimal in the Hudson Valley with 56.7% coverage. Orange and Rockland Counties have the lowest coverage at 50.7%.

Figure : Percentage of Children with the 4:3:1:3:3:1:4 series - Aged 19-35 Months, 2016

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percent	58.10%	50.70%	64.30%	50.70%	51.40%	61.40%	60.70%	56.70%	72.30%	64%

Source: NYS Immunization Information System Data as of February 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

Despite an upward trend over the past decade, only half of children, ages 19-35 months, have received their full immunizations in Rockland County, which is far lower than in New York State overall (50.7 vs. 72.3% respectively).



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS excl NYS
2009	31.4%	31.1%	42.8%	30.6%	26.7%	27.0%	39.3%	34.6%	40.8%
2010	43.2%	32.2%	47.6%	33.4%	29.0%	35.9%	43.1%	38.9%	47.9%
2011	44.9%	29.4%	41.2%	34.4%	31.7%	33.8%	45.0%	39.5%	47.6%
2012	54.0%	31.0%	51.2%	38.7%	42.6%	38.2%	55.4%	46.9%	51.1%
2013	62.4%	37.2%	55.4%	44.7%	39.5%	50.2%	62.2%	53.1%	60.0%
2014	56.3%	34.8%	60.6%	46.8%	32.5%	52.7%	58.6%	51.1%	59.4%
2015	59.1%	43.4%	62.5%	49.7%	43.8%	57.0%	60.4%	54.6%	62.0%
2016	58.1%	50.7%	64.3%	50.7%	51.4%	61.4%	60.7%	56.7%	64.0%

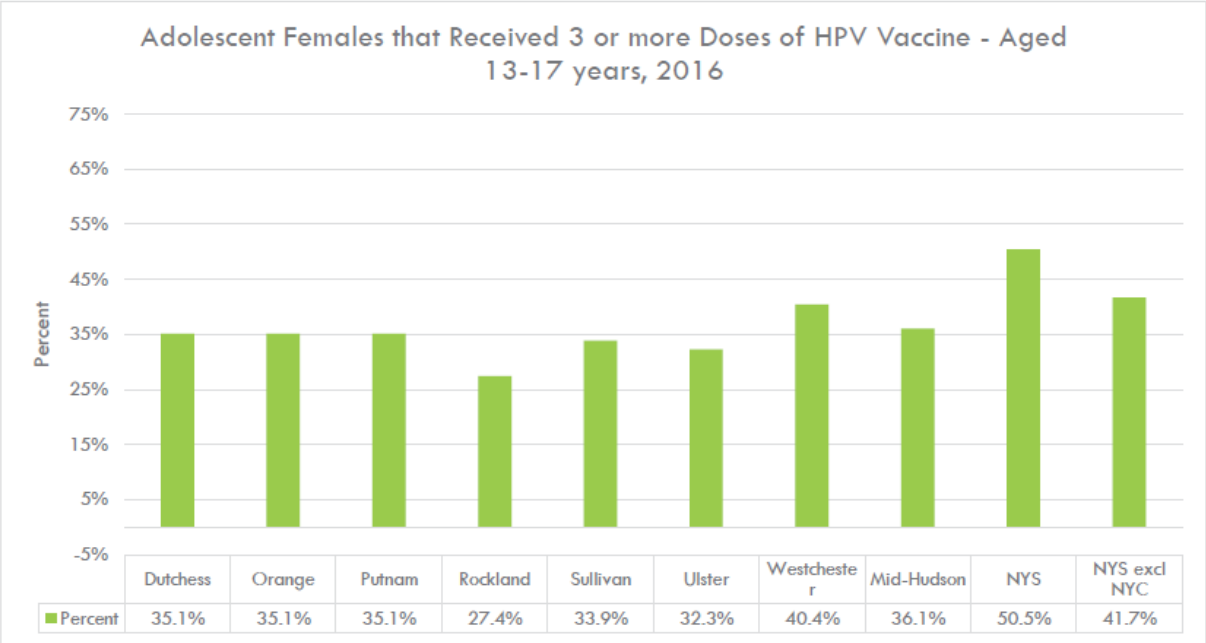
Source: NYSDOH Immunization Information System Data as of February 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

HUMAN PAPILLOMAVIRUS IMMUNIZATION

Human Papillomavirus Virus (HPV) is the most common sexually transmitted infection (STI) in the United States. Nearly 80 million Americans are infected with HPV, and it is most prevalent in teens and young adults. HPV is spread through or oral sex with someone who has the virus, even if they have no symptoms. Anyone who is sexually active can get HPV and symptoms may not develop until years after exposure. While HPV can often go away on its own without causing any health problems, when it does not go away it can lead to conditions such as genital warts and cervical cancer. There is no way to know which people who have HPV will develop cancer or other health problems.

The CDC recommends 11 to 12-year-olds get two doses of HPV vaccine to protect against cancers caused by HPV. Other actions you can take to lower your chances of getting HPV are getting screened for cervical cancer, using latex condoms during sex, and limiting your number of sexual partners.

Healthy People 2020 has set a target to increase the percentage of female adolescents aged 13-15 years who receive 2 or 3 doses of HPV vaccine as recommended to 80%. The overall percentage of adolescent females who received 3 or more doses of the HPV vaccine in Mid-Hudson Valley was below the 80% target (36.1%) in 2016. Rockland County has the lowest rate at 27.4%.



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percent	35.1%	35.1%	35.1%	27.4%	33.9%	32.3%	40.4%	36.1%	50.5%	41.7%

Source: NYSDOH Immunization Information System Data, 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

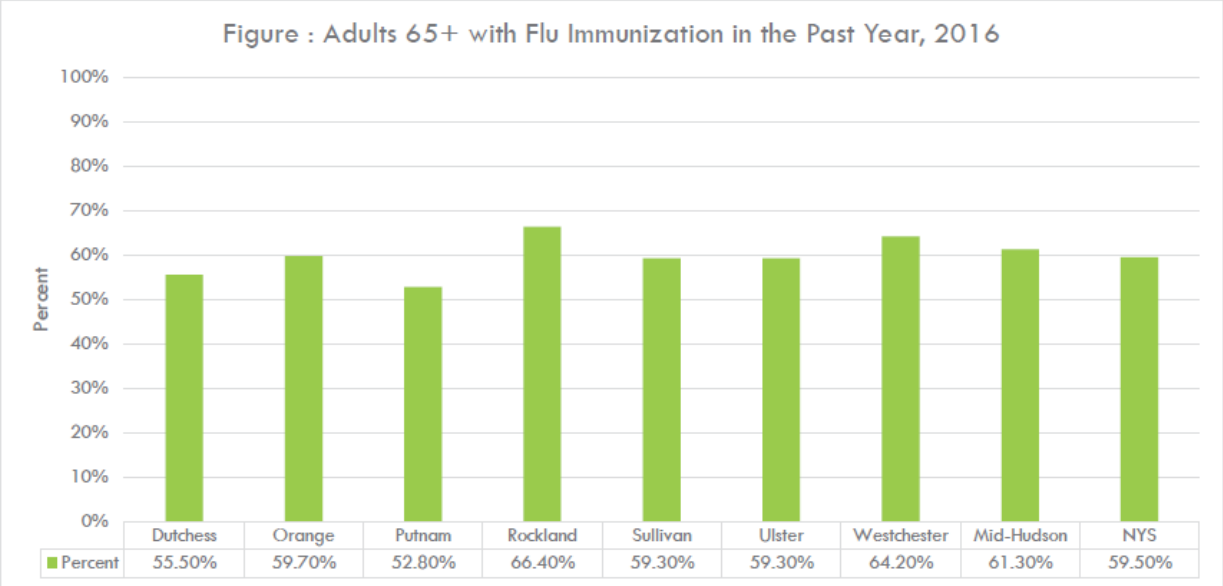
FLU IMMUNIZATION

Influenza (flu) is a contagious respiratory virus that can cause mild to severe illness. Severe illness from flu can result in hospitalization or even death. older people, young children, and people with certain health conditions are at higher risk for complications. An annual flu vaccine is the best way to help protect against the flu. Vaccination has been shown to reduce the risk of flu, hospitalizations, and risk of flu-related death in children. Healthy People 2020's set a target to increase the percentage of noninstitutionalized. In 2016, 38.7% of adults aged 18 and older and 66.4% of adults 65 and older living in Rockland County received a flu vaccine, not meeting the Healthy People standards.

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2009	12.0%	11.5%	19.2%	7.5%	11.9%	16.3%	22.0%	16.5%	24.8%
2010	15.6%	11.9%	18.1%	8.2%	11.9%	19.1%	23.0%	17.6%	26.0%
2011	18.1%	12.4%	15.7%	9.3%	12.5%	19.3%	23.3%	18.2%	26.0%
2012	21.9%	17.6%	12.4%	11.4%	21.7%	20.8%	25.2%	20.6%	26.4%
2013	23.3%	22.3%	15.0%	15.7%	21.5%	22.4%	27.4%	23.4%	28.1%
2014	24.5%	22.8%	19.4%	18.4%	21.3%	23.5%	28.8%	24.8%	30.3%
2015	31.3%	32.7%	28.7%	24.8%	31.5%	30.3%	36.0%	32.5%	38.2%
2016	35.1%	35.1%	35.1%	27.4%	33.9%	32.3%	40.4%	36.1%	41.7%

Source: NYSDOH Immunization Information System Data as of February 2018
NYS Prevention Agenda 2019-2024 Dashboard: https://www.health.ny.gov/prevention/prevention_agenda/2019-_2024/

The Advisory Committee on Immunization Practices (ACIP) recommends that everyone 6 months of age and older get a flu vaccine every flu season. This is most effective when you get the vaccine before the flu begins spreading in your community. Once the vaccine is received it takes about two weeks for the antibodies that protect against the flu to develop in the body. The CDC recommends that everyone get the flu vaccine by the end of October, however, getting vaccinated later can still be beneficial.

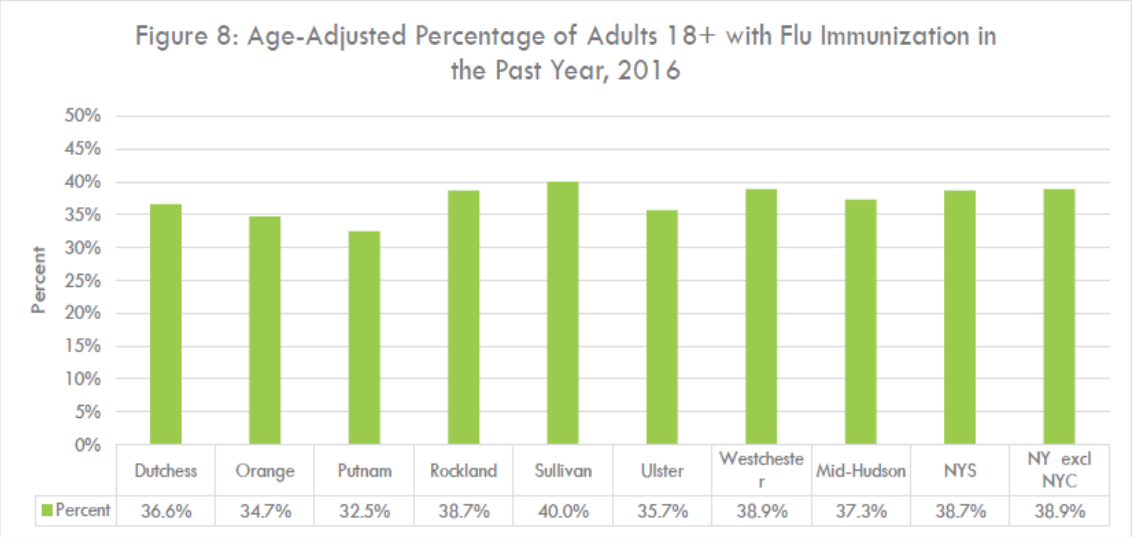


Source: NYSDOH Behavioral Risk Factor Surveillance System, 2016
NYSDOH BRFSS: https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/jsy7-eb4n/data

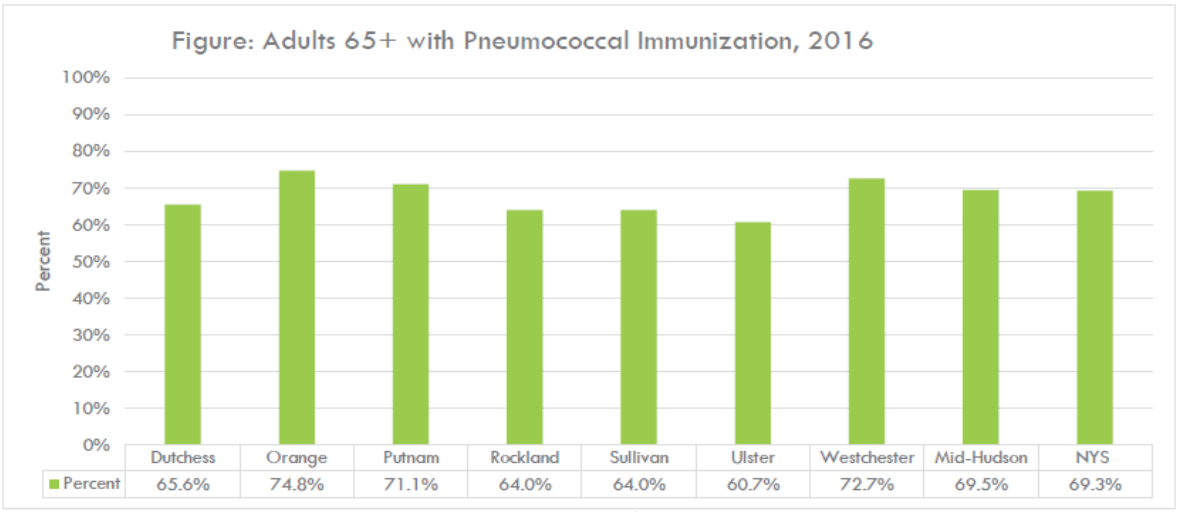
PNEUMONIA IMMUNIZATION

Pneumococcal disease is caused by a type of bacteria that can lead to pneumonia, meningitis, and bacteremia. Pneumococcal bacteria are spread through droplets in the air when someone who has the bacteria coughs or sneezes. You can help prevent pneumococcal diseases by practicing good hygiene, such as regular hand washing and disinfecting frequently touched surfaces. While pneumococcal disease is more common in children, it is more likely to cause serious complications in adults.105 Healthy choices, like quitting smoking and managing chronic illnesses, can also help prevent pneumonia. The CDC recommends two pneumococcal vaccines for adults aged 65 years and older.

Healthy people 2020 aims to increase the percentage of noninstitutionalized adults aged 65 years and older who are vaccinated against pneumococcal disease to 90%. In the Mid-Hudson region, 69.5% of adults 65 years of age and older received the pneumococcal immunization in 2016. Rockland county is even lower at 64.0%.



Source: NYSDOH Behavioral Risk Factor Surveillance System, 2016
NYSDOH BRFSS: https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/jsy7-eb4n/data



Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2019
NYSDOH BRFSS: https://health.data.ny.gov/Health/Behavioral-Risk-Factor-Surveillance-System-BRFSS-H/jsy7-eb4n/data

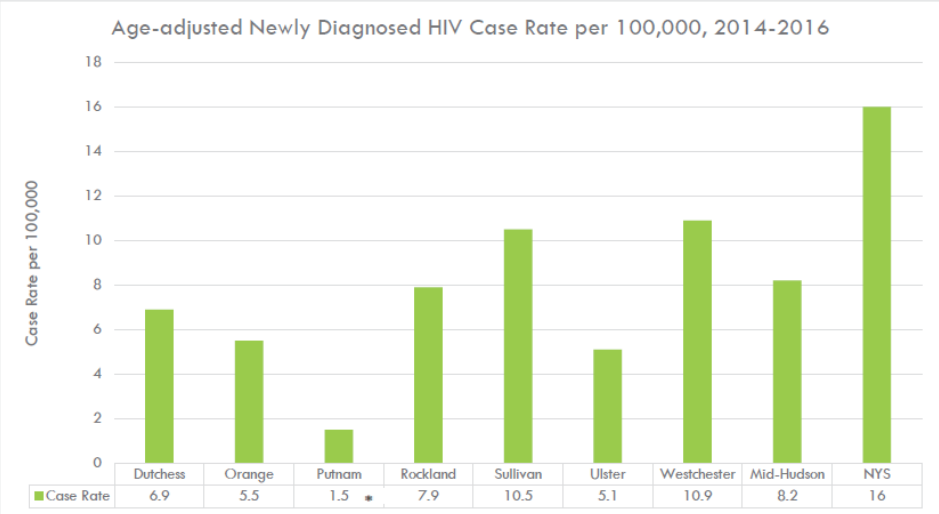
Health Indicators: Sexually transmitted Diseases

HIV/AIDS

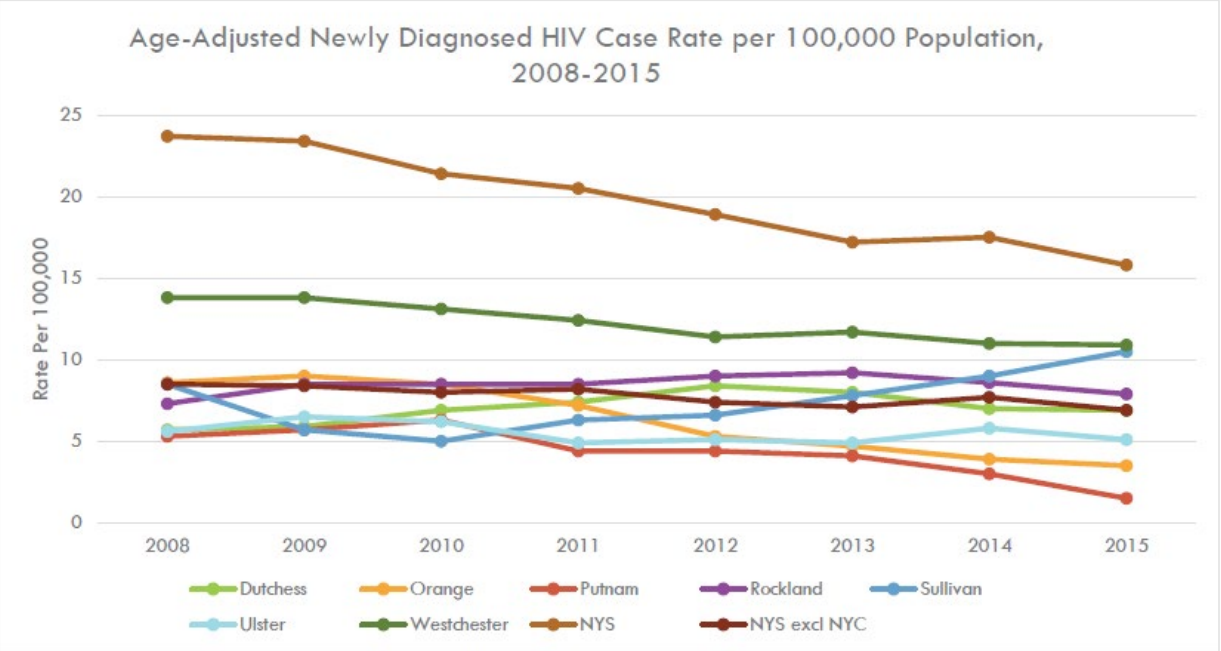
HIV (human immunodeficiency virus) is a virus spread through certain body fluids that attacks the body's immune system. An estimated 1.1 million people in the U.S. had HIV at the end of 2016, and 1 out of 7 do not know they have it. There are gender, race and ethnicity disparities in new HIV diagnoses. Young people aged 13 to 24 accounted for 21% of all new HIV infections in 2017. African Americans, Hispanic individuals, and LGBTQ male individuals bear an undue

burden of new HIV infections. The majority of people who receive an HIV diagnosis live in urban areas, and the Northeast U.S. makes up 16% of new diagnoses. AIDS (acquired immunodeficiency syndrome is the final stage of infection with HIV, but not everyone with HIV will develop AIDS. No effective cure for HIV exists, but HIV can be controlled with proper medical care. The only way to know whether you have HIV is to get tested for it. The CDC recommends that everyone between the ages of 13 and 64 get tested at least once as a part of routine healthcare.

HIV/AIDS infections continue to be a substantial public health issue in New York and the United States as a whole. HIV is a preventable disease, and people who get tested and learn they are HIV positive can make changes to significantly reduce the risk of transmitting it to their sexual or drug-using partners. It is estimated that 91% of new HIV infections in the U.S. are transmitted from people who are not diagnosed or who are diagnosed but not in care. Healthy People 2020 has set a target of no more than 3.3 deaths per 100,000 populations and wants to reduce the number of new HIV diagnoses a year from 43,806 to 32,855 a year in the U.S. The Mid-Hudson region's rate (8.2) of newly diagnosed HIV infections per 100,000 and Rockland (7.9) is half of the overall rate for the State of New York, which is 16 including New York City. Rates in New York have generally been falling between 2014-2015.



*The rate or percentage is unstable
Source: NYSDOH HIV Surveillance System Data, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

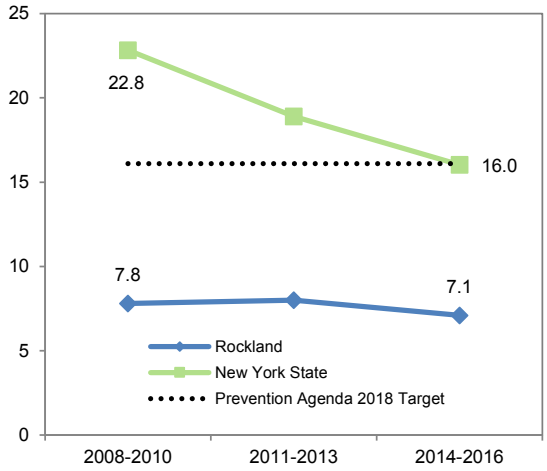


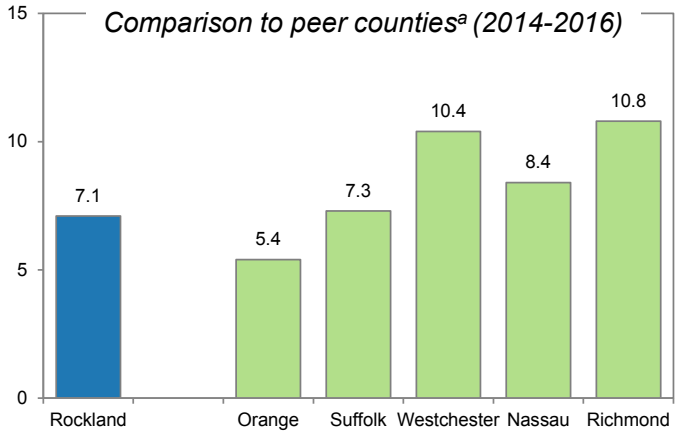
	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	5.7	8.6	5.3	7.3	8.5	5.6	13.8	23.7	8.5
2009	5.9	9	5.7	8.5	5.7	6.5	13.8	23.4	8.4
2010	6.9	8.5	6.3	8.5	5	6.2	13.1	21.4	8
2011	7.4	7.2	4.4	8.5	6.3	4.9	12.4	20.5	8.2
2012	8.4	5.3	4.4	9	6.6	5.1	11.4	18.9	7.4
2013	8	4.7	4.1	9.2	7.8	4.9	11.7	17.2	7.1
2014	7	3.9	3*	8.6	9	5.8	11	17.5	7.7
2015	6.9	3.5	1.5*	7.9	10.5	5.1	10.9	15.8	6.9

*: The rate for Putnam is unstable 2014 and 2015
Source: NYSDOH HIV Surveillance System Data, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

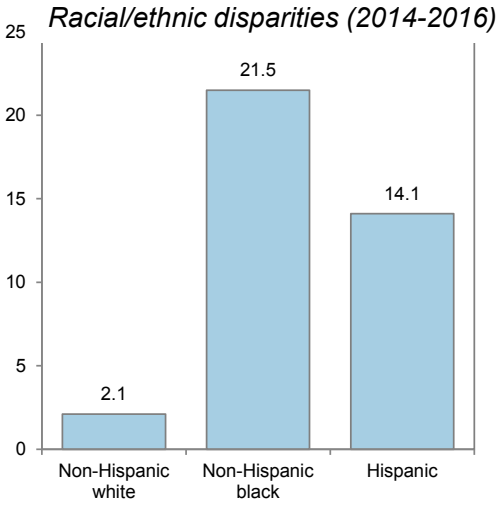
The incidence of HIV for the non-Hispanic black population and the Hispanic population were about 10.2 and 6.7 times higher than the incidence rate for the non-Hispanic white population, respectively.

Newly diagnosed HIV case rate per 100,000 population





[a] Based on comparison of following measures: % of population <20y, % of population ≥65y, % Hispanic, % non-Hispanic black, % non-Hispanic white, median household income, rental burden, % driving to work, % ≥college degree, % born outside of the US, % owner-occupied housing and population density. Orange County was the most similar to Rockland County, the other 4 most similar counties are also provided in order of similarity.



Data source: New York State Prevention Agenda Dashboard

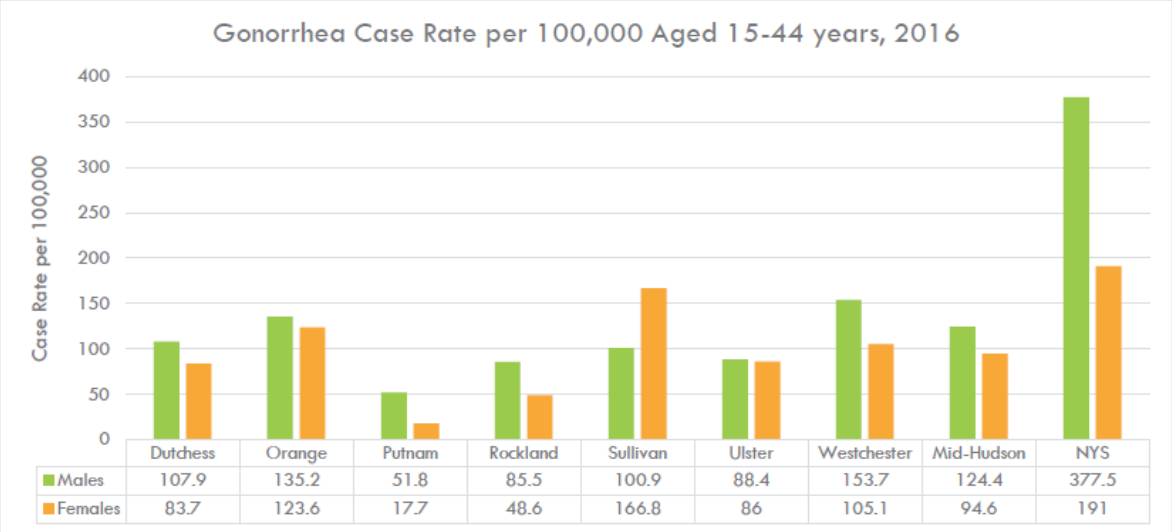
GONORRHEA

Gonorrhea is a sexually transmitted infection (STI) that can infect individuals of all genders. Gonorrhea can cause infections in the genitals, rectum, and throat. Gonorrhea can affect people of all ages, but is especially common among young people ages 15-24. Gonorrhea is spread via vaginal, anal, or oral sex with an infected partner. Pregnant women with gonorrhea can also give the infection to babies during childbirth.

Any sexually active person can get gonorrhea. The only way to avoid all STIs is to not have vaginal, anal, or oral sex. If you are sexually active, being in a monogamous relationship with a partner who has been tested can lower your risk of getting gonorrhea. Using latex condoms

correctly every time you have sex can also lower the risk of contracting gonorrhea. Some individuals may not have any symptoms at all, so it is important to get tested regularly if you are at risk.

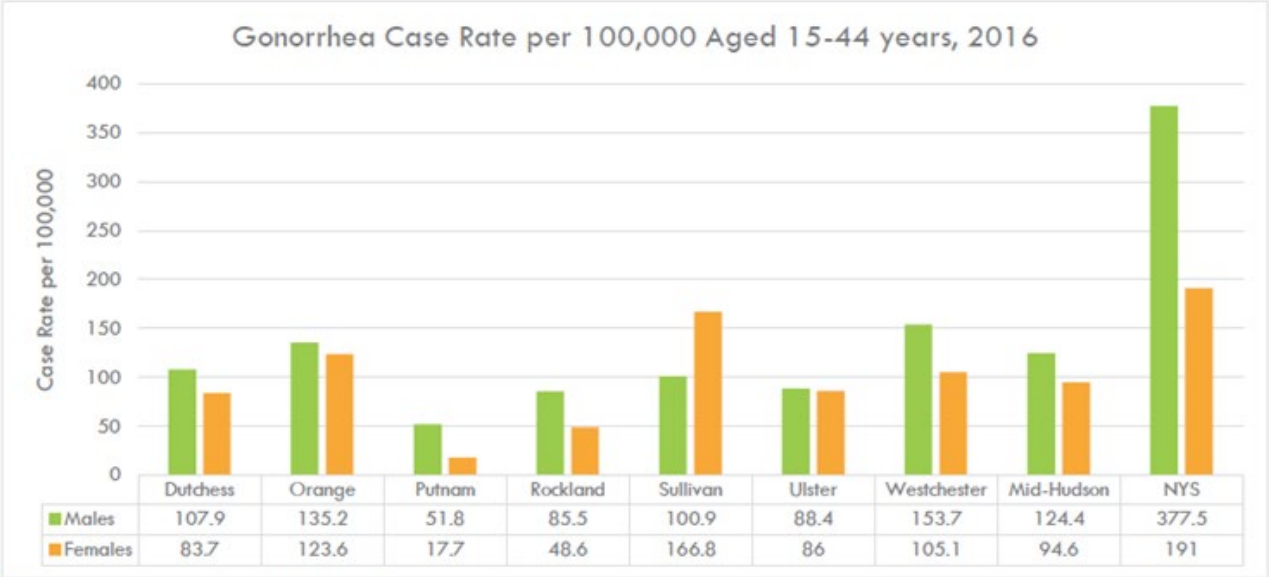
Healthy People 2020 aims to reduce gonorrhea rates among females aged 15-44 years of age to 251.9 cases per 100,000 females aged 15-44 years. Rockland has the second lowest rate of males with Gonorrhea (85.5 per 100,000) and has the lowest rate of female infections (48.6 per 100,000). There was an increase in infection in the majority of counties between 2016-2017, except for Rockland and Sullivan.



*: Rate or percentage unstable Putnam Females
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

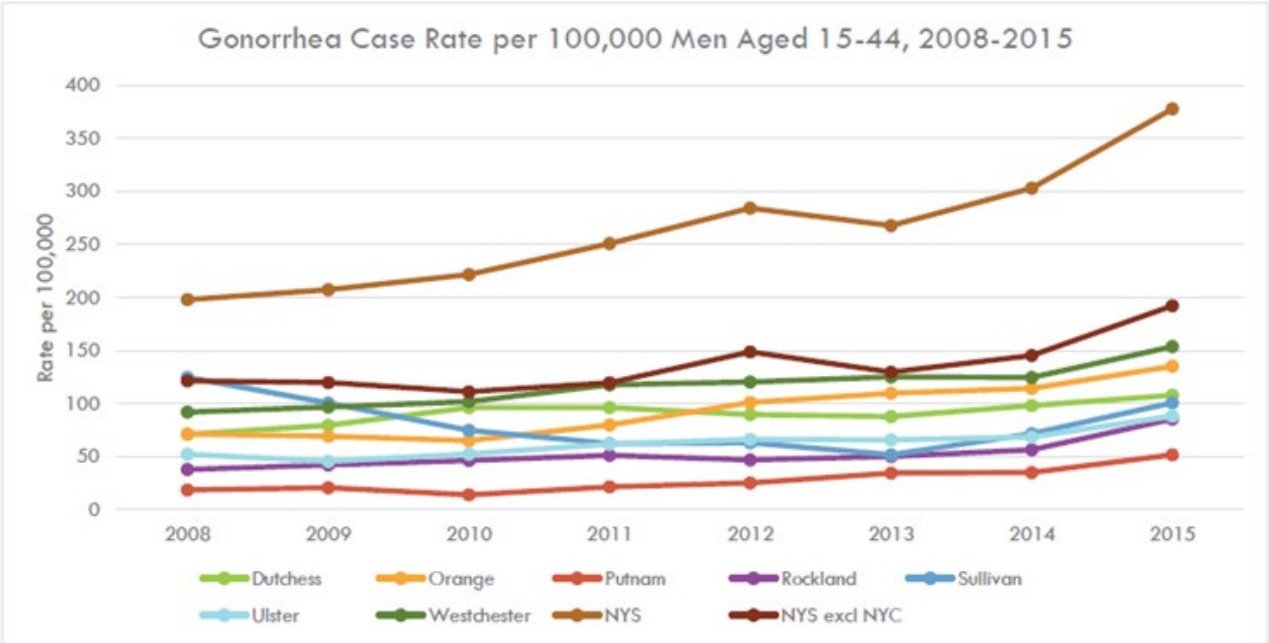
	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	71.1	71.4	18.6	38	124.8	52.4	92	198	121.5
2009	79.7	69.4	20.8	42.3	100.6	45.8	96.8	207.3	119.8
2010	96.4	65.2	14.1*	46.4	74.9	52.6	101.9	221.7	111.3
2011	96.4	79.9	21.6	51.3	62.5	61.9	117.7	250.7	119.7
2012	89.7	101	25.4	47.1	63.1	66.3	120.4	284.1	148.7
2013	87.9	109.9	34.7	50.1	51.9	65.9	125.3	267.7	129.7
2014	98.1	114.4	35	56.5	71.6	68.4	124.8	303.1	145.3
2015	107.9	135.2	51.8	85.5	100.9	88.4	153.7	377.6	192.2

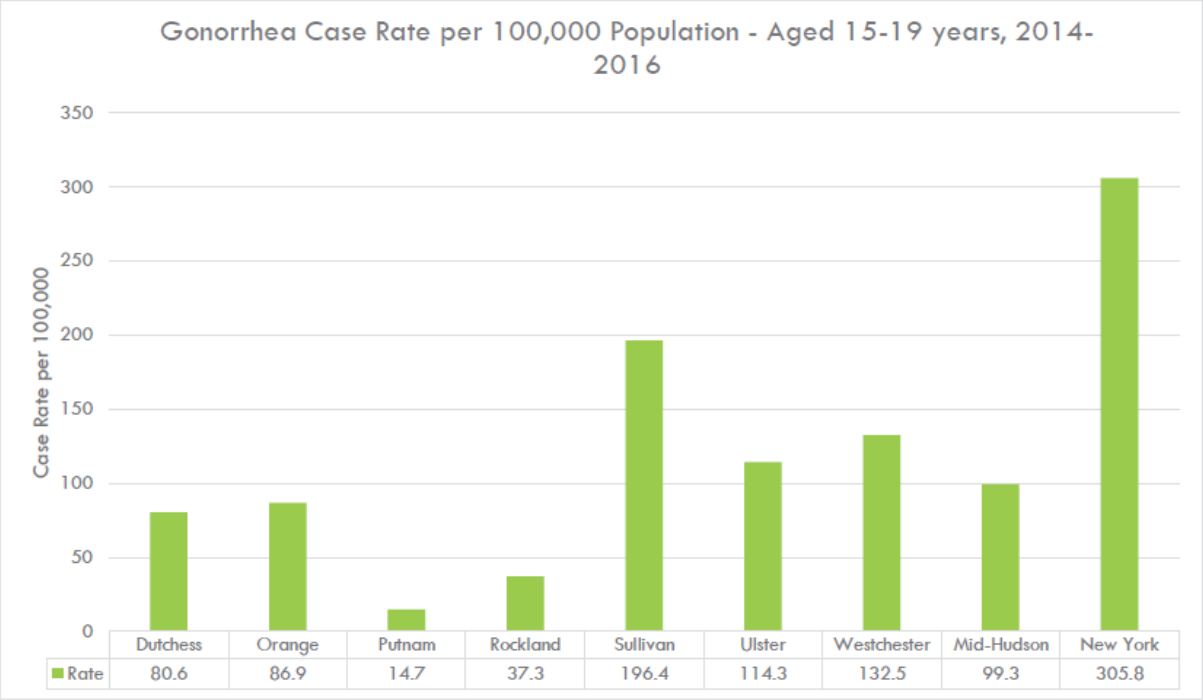
*Putnam rate unstable 2010
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



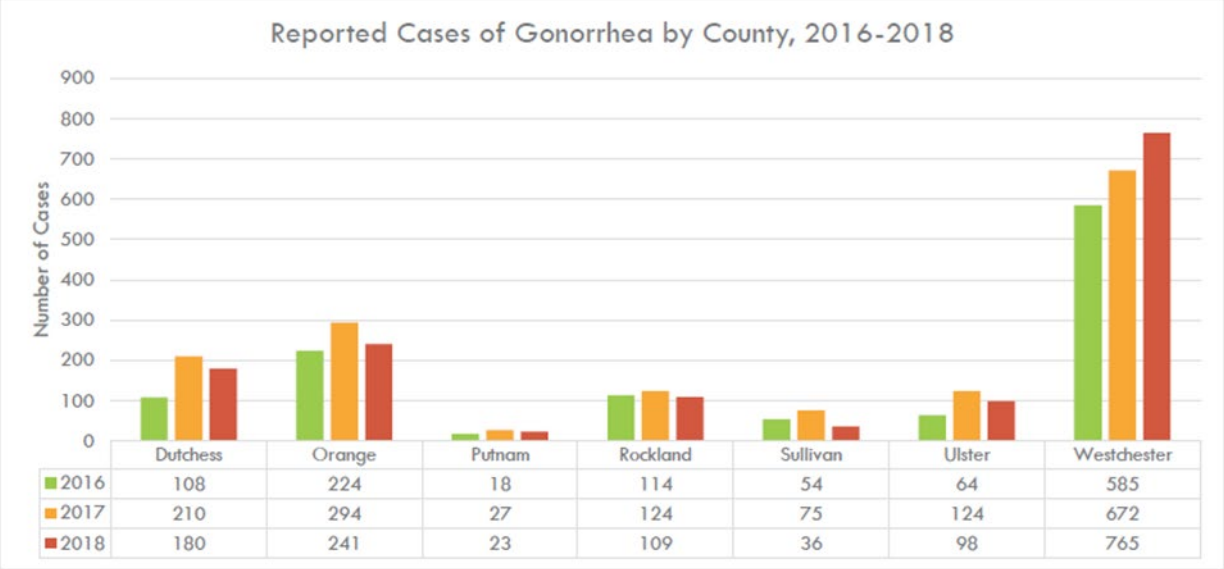
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
Males	107.9	135.2	51.8	85.5	100.9	88.4	153.7	124.4	377.5
Females	83.7	123.6	17.7	48.6	166.8	86	105.1	94.6	191

*: Rate or percentage unstable Putnam Females
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

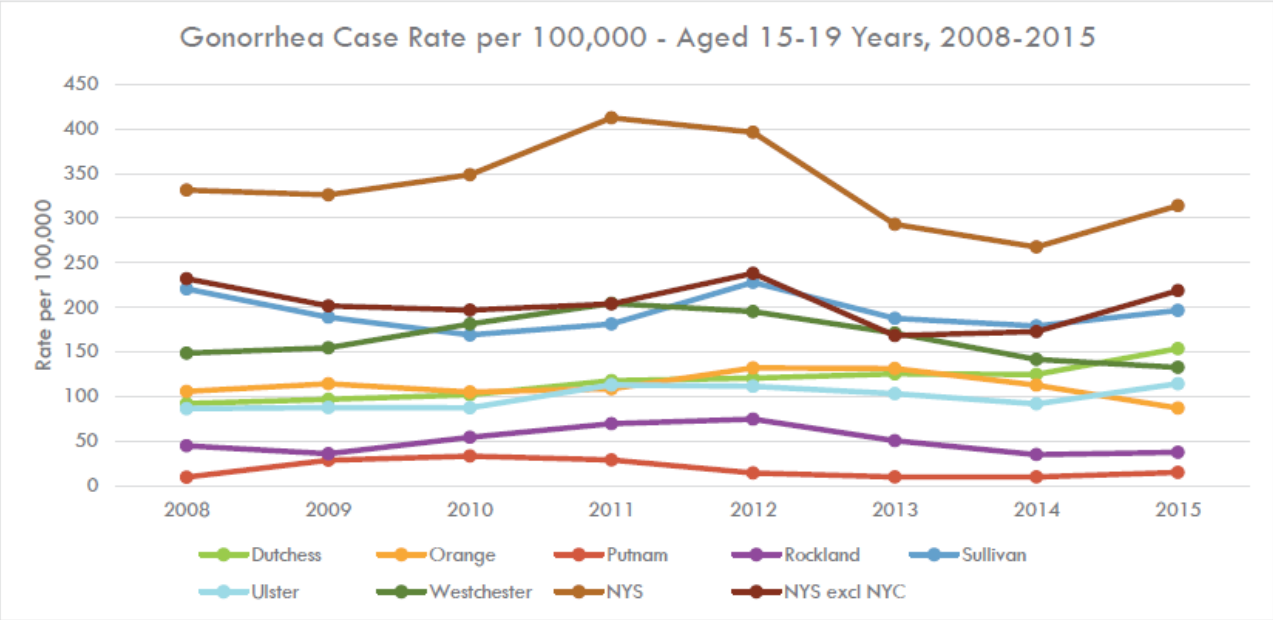




*: Rate or percentage unstable
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

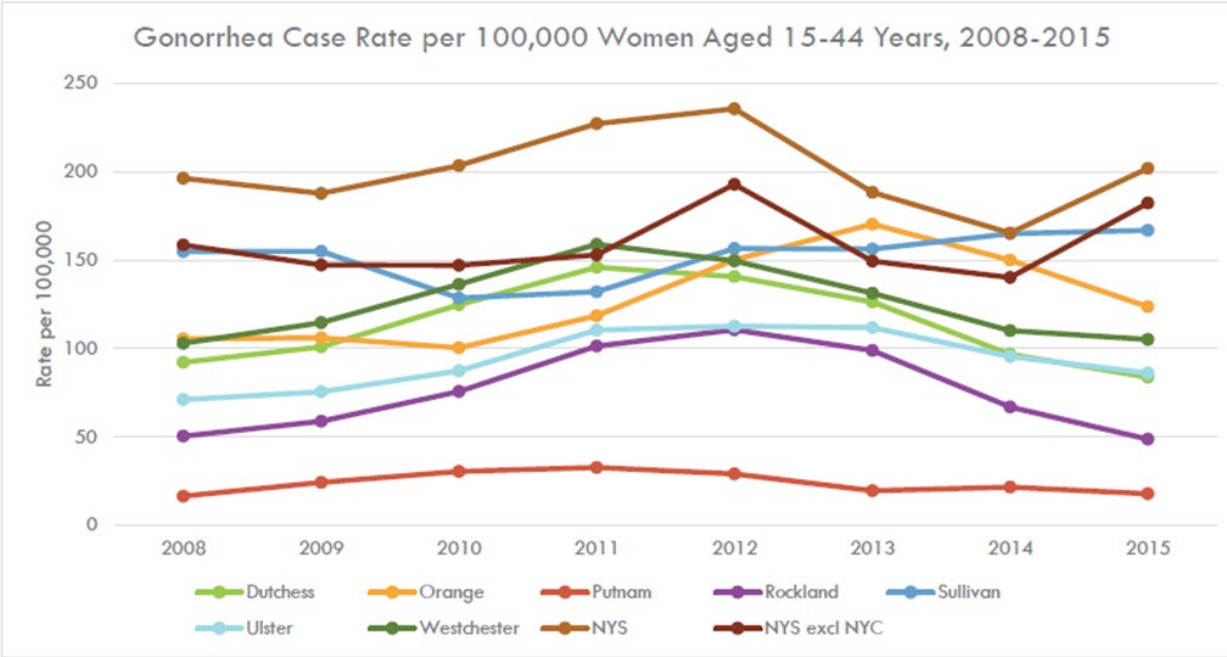


Source: Department of Health Communicable Disease Annual Reports
https://health.ny.gov/statistics/diseases/communicable/



	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	92	105.7	9.4*	44.6	220.8	86.3	148.5	331.7	232.1
2009	96.8	114.1	28.3*	35.8	188.8	87.5	154.4	326.2	201.5
2010	101.9	105	33*	54.2	169	87.2	181.2	348.8	196.9
2011	117.7	108.4	28.6*	69.3	181.1	112.9	204.3	412.6	203.8
2012	120.4	132	14.2*	74.5	228	111.3	195.2	396.3	238.1
2013	125.3	131.5	9.5*	50.3	187.5	103.2	171.1	293.2	168.3
2014	124.8	112.6	9.7*	34.6	178.9	91.7	141.6	267.6	172.6
2015	153.7	86.9	14.7*	37.3	196.4	114.3	132.5	314	218.8

*:Rate or percentage unstable
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	92.1	105.3	16.4*	50.4	154.8	71	102.9	198	158.6
2009	100.9	1.6	24.2	58.8	154.9	75.5	114.6	207.3	147.2
2010	124.7	100.3	30.3	75.6	128.5	87.3	136.3	221.7	147
2011	145.9	118.5	32.6	101.3	132.1	110.3	158.9	250.7	152.9
2012	140.6	150.1	29	110.5	156.5	112.6	149.5	284.1	192.8
2013	126.2	170.3	19.4	98.8	156.2	111.8	131.3	267.7	149.3
2014	96.6	149.9	21.5	66.9	165	95.4	110	303.1	140.1
2015	83.7	123.6	17.7*	48.6	166.8	86	105.1	377.6	182.3

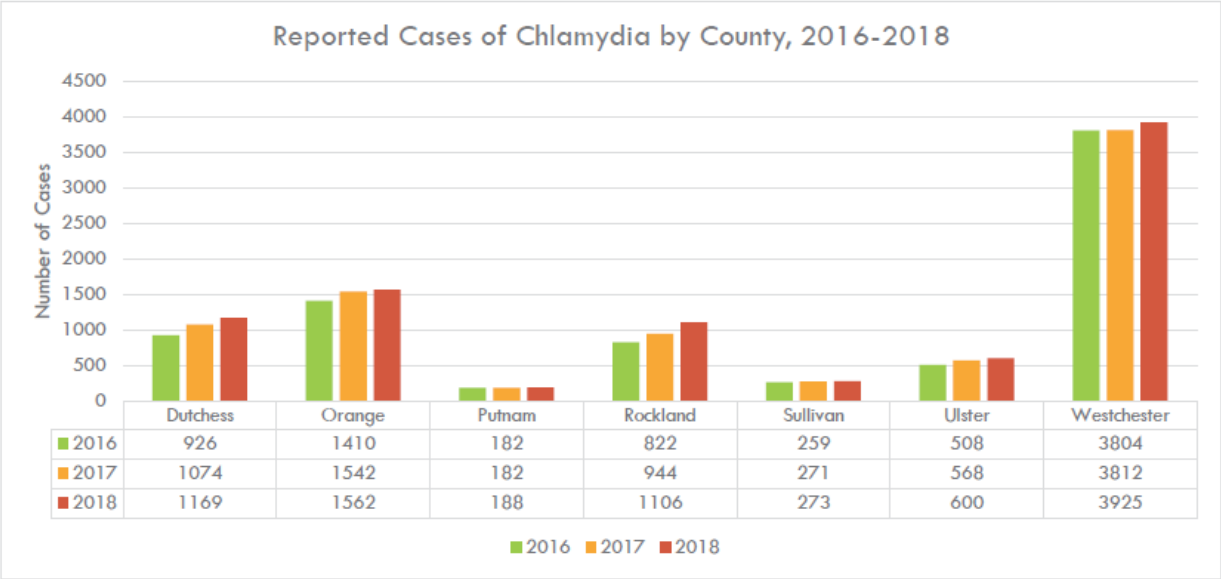
*:Putnam rate unstable 2008 and 2015
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

CHLAMYDIA

Chlamydia is a common STI that can infect people of all genders. While chlamydia can be treated easily, it can cause serious damage to the reproductive system if left untreated. Chlamydia is spread via vaginal, anal, and oral sex with a partner who has chlamydia. If someone has had chlamydia in the past and were treated, you can still get infected again if you have unprotected sex with someone who has chlamydia. Pregnant women can also give chlamydia to their babies during childbirth.

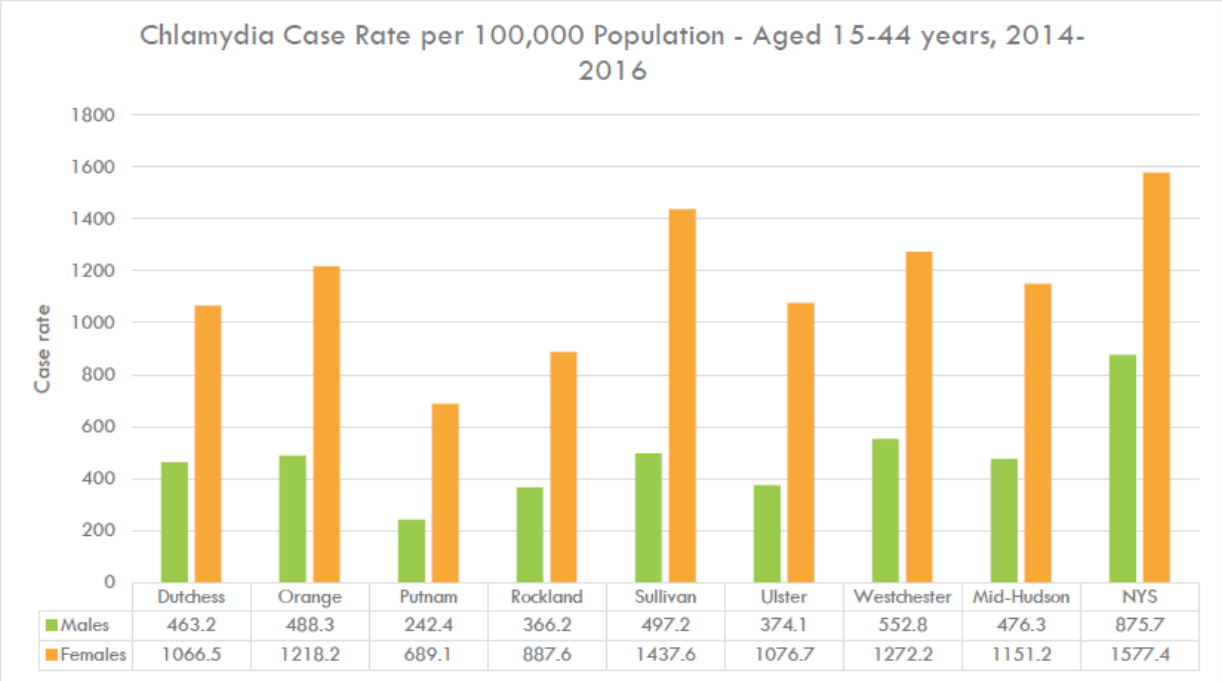
The only way to avoid STIs is not having vaginal, anal, or oral sex. Being in a monogamous relationship with a partner who has been tested may reduce your risk of chlamydia, as well as using a latex condom correctly every time you have sex. Most people who have chlamydia do not have any symptoms, and those with symptoms may not develop them until several weeks after sex with an infected partner.

Rockland has the second lowest rate of males and females between 15 and 44 years of age with Chlamydia (366.2 and 887.6 per 100,000 respectively). The number of cases has increased every year in most counties including Rockland between 2016-2018.

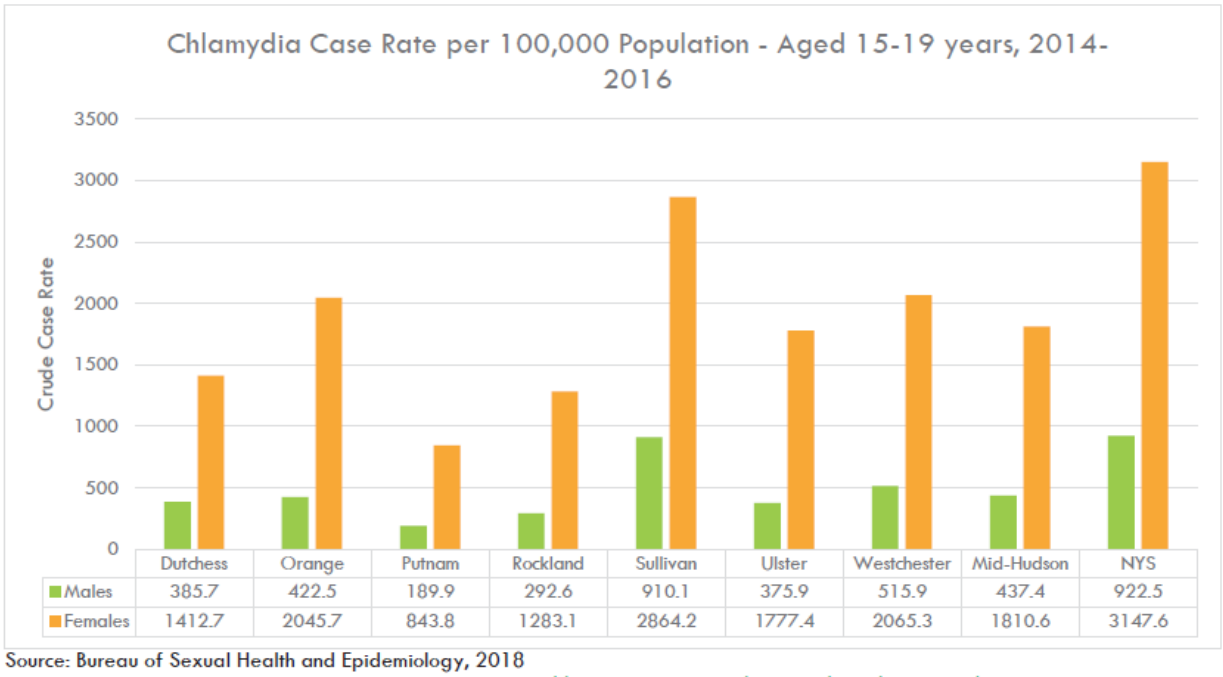


	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester
2016	926	1410	182	822	259	508	3804
2017	1074	1542	182	944	271	568	3812
2018	1169	1562	188	1106	273	600	3925

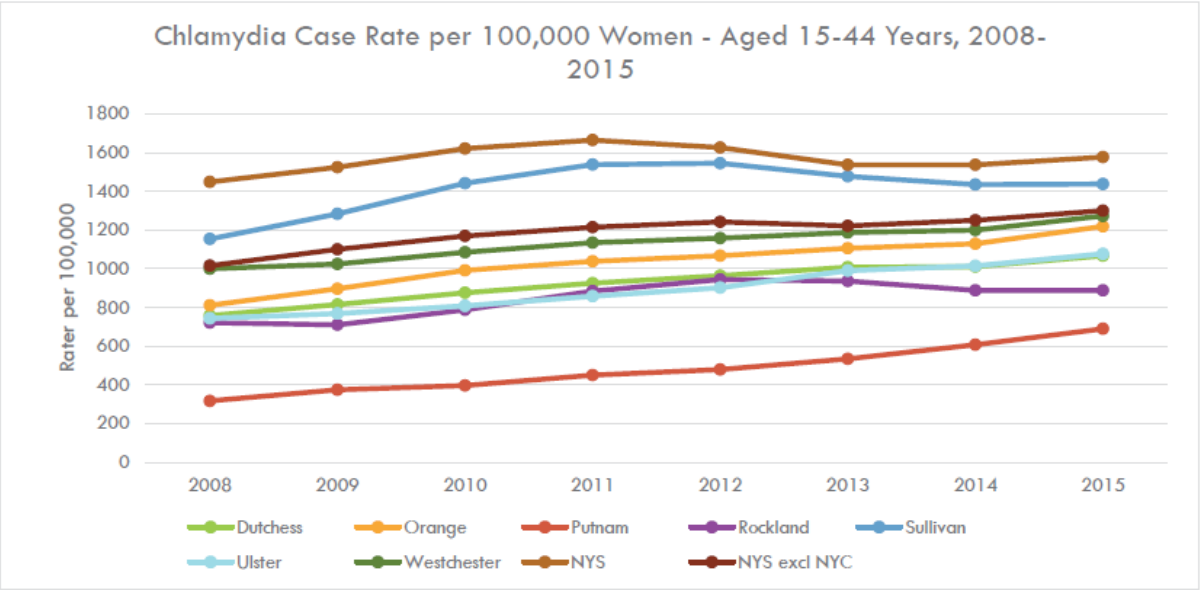
Source: Department of Health Communicable Disease Annual Reports
https://health.ny.gov/statistics/diseases/communicable/



Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

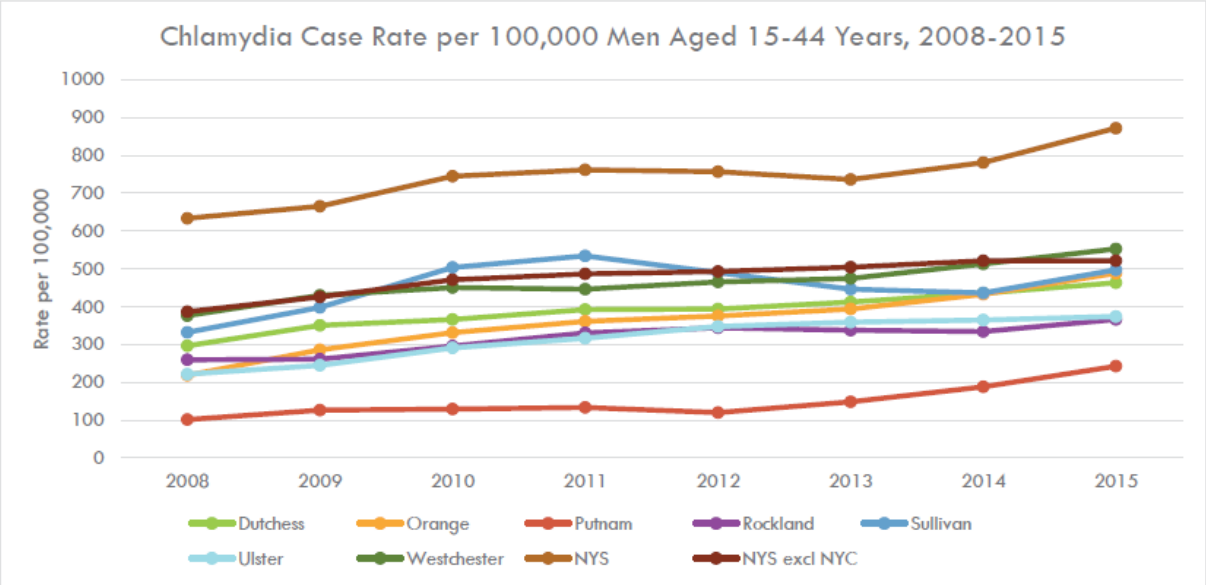


Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



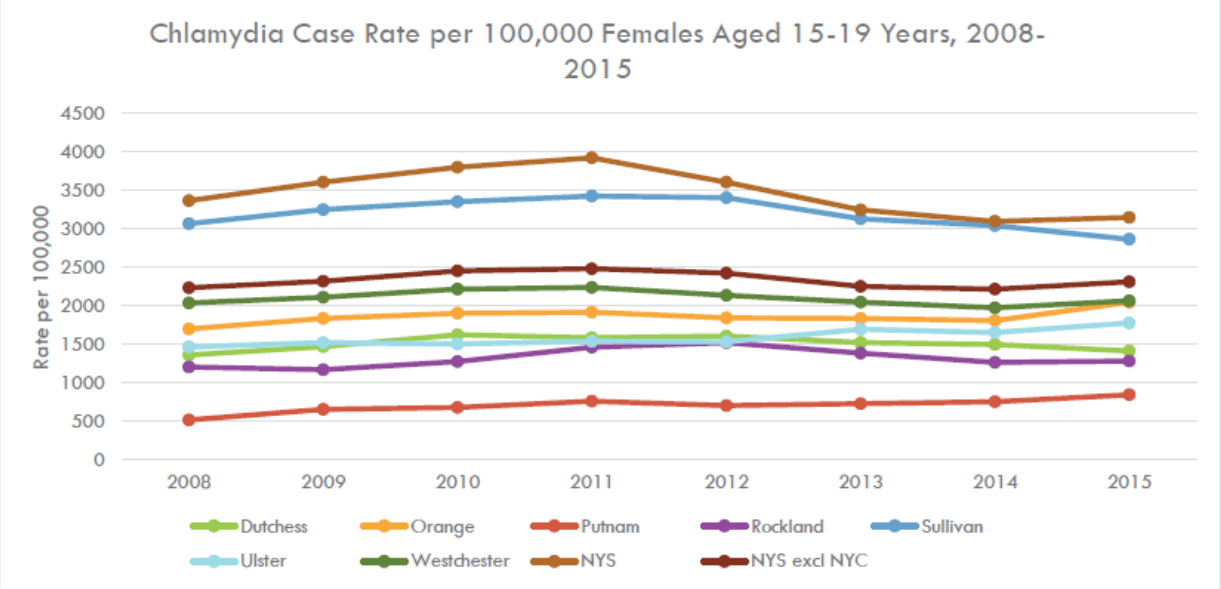
	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	757.8	810.7	317.1	720.9	1152.9	743.4	999.4	1447.7	1015.2
2009	815.3	895.7	374.2	709.6	1282.2	767.38	1024.4	1523.1	1099.3
2010	874.8	991.1	396.1	786.6	1440.6	808.2	1083.9	1619.8	1167.9
2011	924.4	1038.3	450.4	883	1537.3	857.7	1134.5	1663.6	1214.2
2012	963.9	1067.3	479.1	943.8	1544.6	901.2	1157.9	1625.1	1241.6
2013	1007	1104.6	534.3	936.6	1477.5	989.1	1186.4	1535.8	1220.3
2014	1010.1	1128.4	606.7	887.9	1433.9	1014.4	1199.5	1536.3	1249.6
2015	1066.5	1218.2	689.1	887.6	1437.6	1076.7	1272.2	1575.7	1299.8

Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



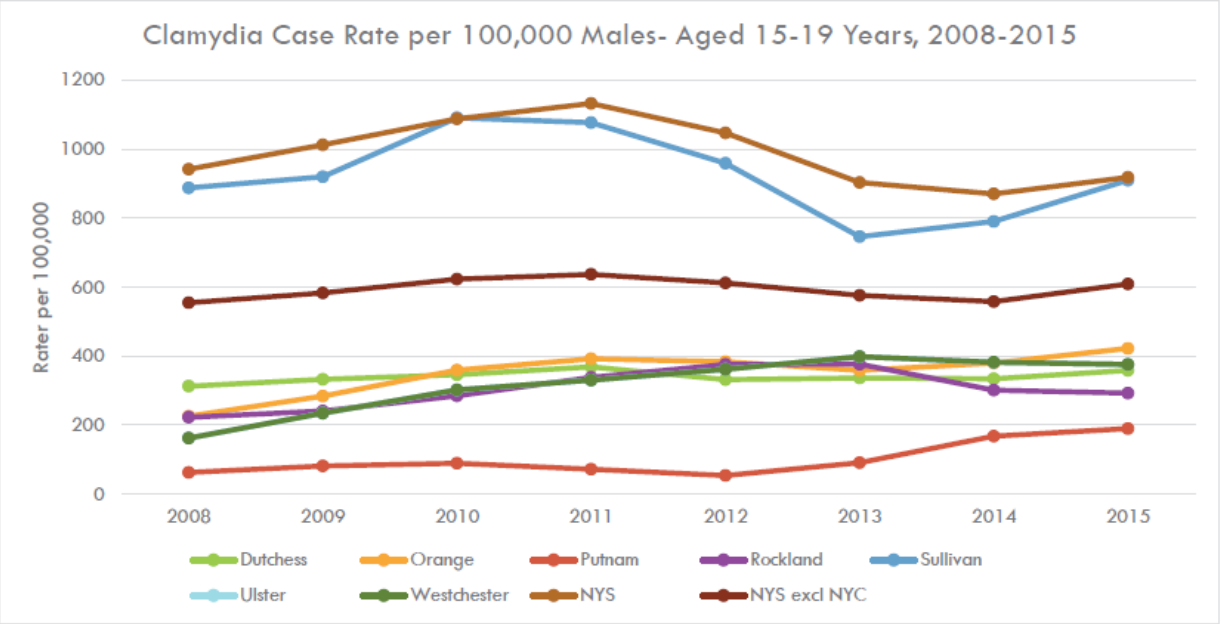
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	296.5	218.4	101.4	259.4	332.1	221.6	376.3	633.7	386.7
2009	350.6	285.7	126.3	261.2	398	245.1	430.2	665.3	425.8
2010	366	331.2	128.8	295.9	503.6	290.8	450.4	745	470.7
2011	392.2	361.3	133.3	330.3	534.3	316.2	446.1	762.1	486.8
2012	393.7	375.5	119.6	343.9	490.5	347.8	465.2	757.1	492.7
2013	412.3	393.8	148	338	445.9	359	474.8	736.1	504.3
2014	435.9	432.6	187.7	334.4	436.5	364.9	513	781.3	521.4
2015	463.2	488.3	242.4	366.2	497.2	374.1	552.8	872.1	521.4



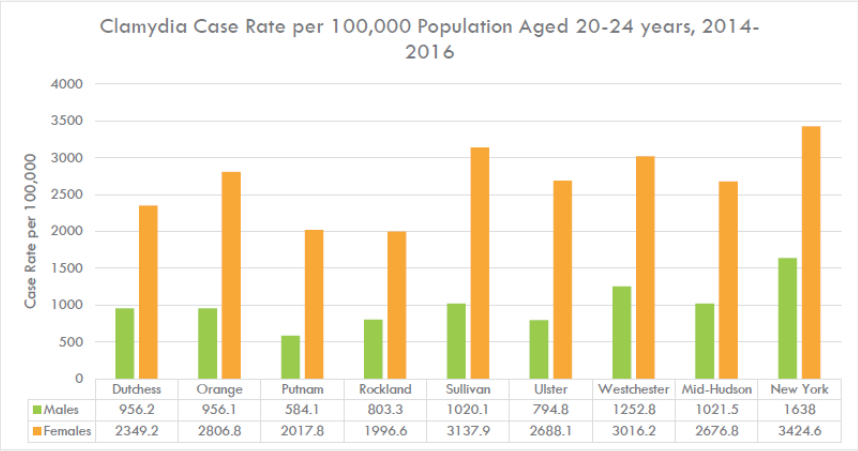
	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	1361.1	1699.8	517.7	1204.9	3068.2	1464.5	2036.8	3365.2	2234.2
2009	1469.8	1837.1	654.8	1170.2	3249.4	1521.1	2111.3	3605.7	2320.1
2010	1623.3	1902.5	679.8	1275.5	3352.3	1503.7	2216.3	3798.5	2452.4
2011	1586.4	1916.6	762.5	1463.3	3425.2	1539.8	2238.9	3922.3	2482.6
2012	1606.9	1844.2	703.1	1521.6	3404.7	1533.9	2134.1	3607.3	2423.6
2013	1522	1834.5	729.9	1386	3131.3	1695.8	2049.1	3246.7	2253.8
2014	1497.7	1808.6	752.1	1265.6	3042.2	1652.9	1974.4	3096.5	2215.5
2015	1412.7	2045.7	843.8	1283.1	2864.2	1777.4	2065.3	3146.3	2312.9

Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

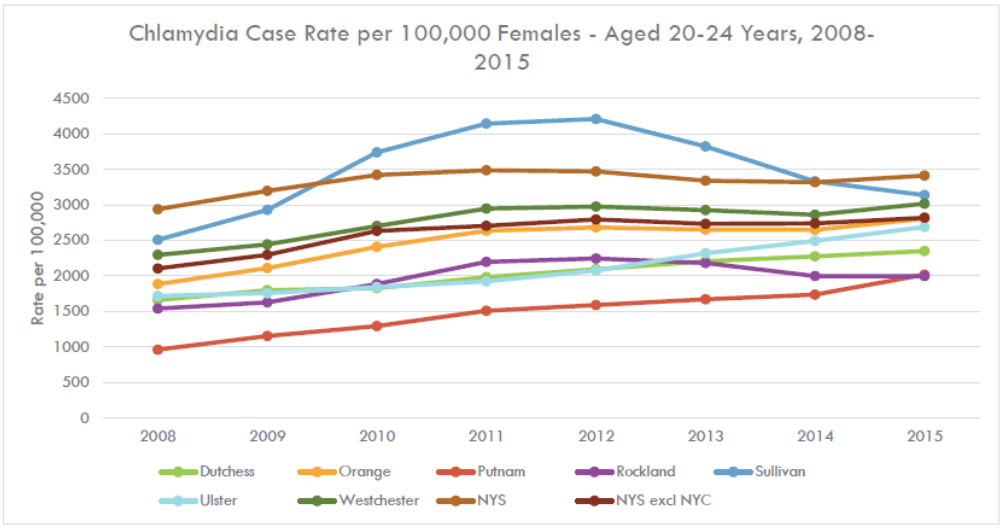


	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	312.7	225.8	63*	222.5	887.6	162.2	162.2	941.9	554.8
2009	332.4	284.4	81.2*	240.9	919.9	234.8	234.8	1012.8	583.5
2010	345.9	359.3	89.5	285	1090.8	302.1	302.1	1087.6	623.3
2011	368.8	392.2	71.8*	338.3	1077.3	330.6	330.6	1132.6	637
2012	332.2	384	53.8*	375.7	959.3	362	362	1046.8	612
2013	336.4	358.7	91	376.7	746.2	398.6	398.6	903.3	576.1
2014	333.9	379.9	167.5	301.5	790.5	382.4	382.4	870.3	558.1
2015	358.7	422.5	189.9	292.6	910.1	375.9	375.9	918.6	609.2

*: Rate unstable
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



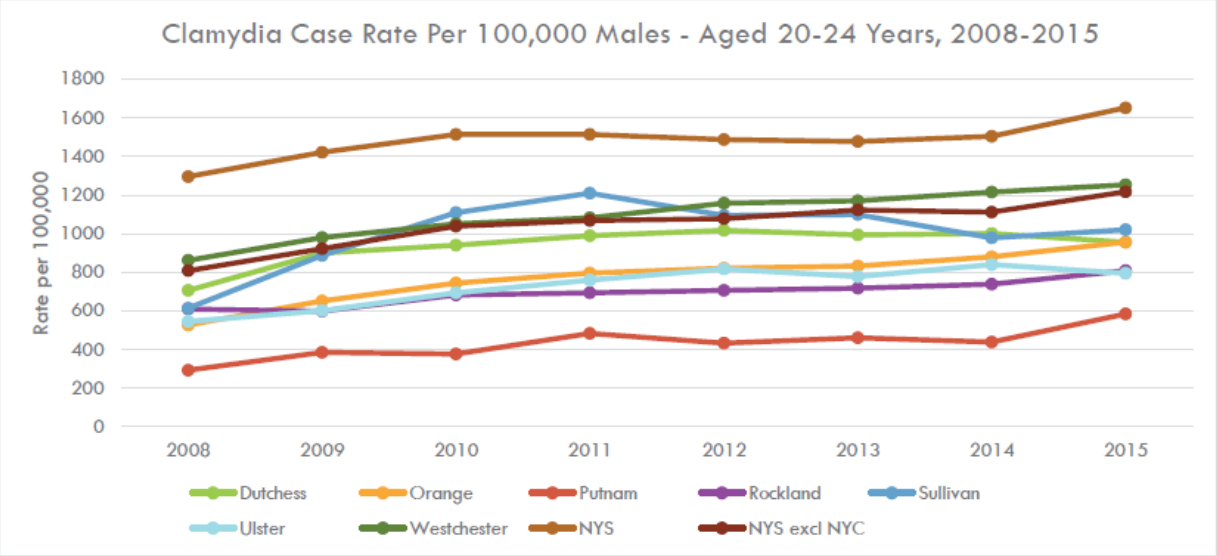
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



Source: Bureau of Sexual Health and Epidemiology, 2018

	Three-year average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	1659.9	1885.3	962.2	1540.5	2507.8	1717.9	2295.4	2937.9	2104.8
2009	1798.9	2109	1153.4	1626	2928.5	1758.6	2442.8	3197.9	2295.6
2010	1826.4	2408.9	1293	1884.6	3738	1841.6	2700.2	3421.1	2632.2
2011	1981.5	2635	1507.5	2196.8	4141.8	1924	2948.5	3486.1	2705.3
2012	2094.5	2681.3	1588.4	2245	4208.8	2075.4	2976.6	3470.2	2794.4
2013	2206.5	2652	1671.3	2182.4	3823	2317.8	2927	3340.8	2731.6
2014	2274.1	2648.4	1735.4	1997.9	3328.9	2494.2	2859.2	3318.2	2737.9
2015	2349.2	2806.8	2017.8	1996.6	3137.9	2688.1	3016.2	3411.1	2818.3

NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



	Three-Year Average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	706	527.2	293.3	609.9	614.2	545.3	861.6	1295.3	808.1
2009	900.2	652.1	385.8	598.5	887.5	601.4	978.9	1420.7	921.5
2010	939.9	744.2	377	683	1108.5	693.9	1051	1513.3	1038.3
2011	989.4	795.6	483.4	693.9	1209.2	758.9	1081.5	1513.3	1067.3
2012	1016.9	821	432.4	706.6	1094.3	817.1	1157.4	1486.7	1077.5
2013	994.1	832.2	460.6	717.1	1098.2	777.1	1169.6	1476.2	1121.7
2014	1000.2	879.8	438.6	739	977.9	839.7	1214.3	1503.4	1110.8
2015	956.2	956.1	584.1	808.3	1020.1	794.8	1252.8	1651.2	1216.6

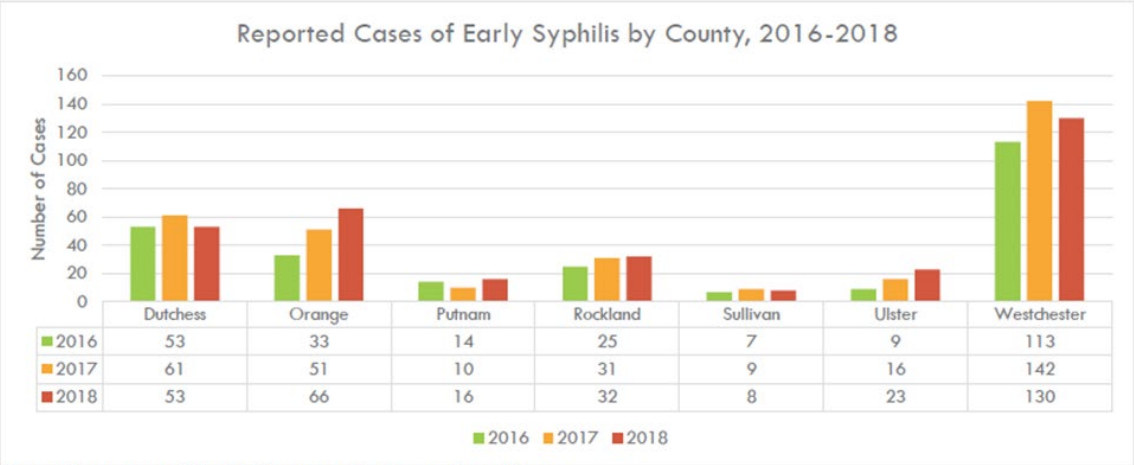
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

SYPHILIS

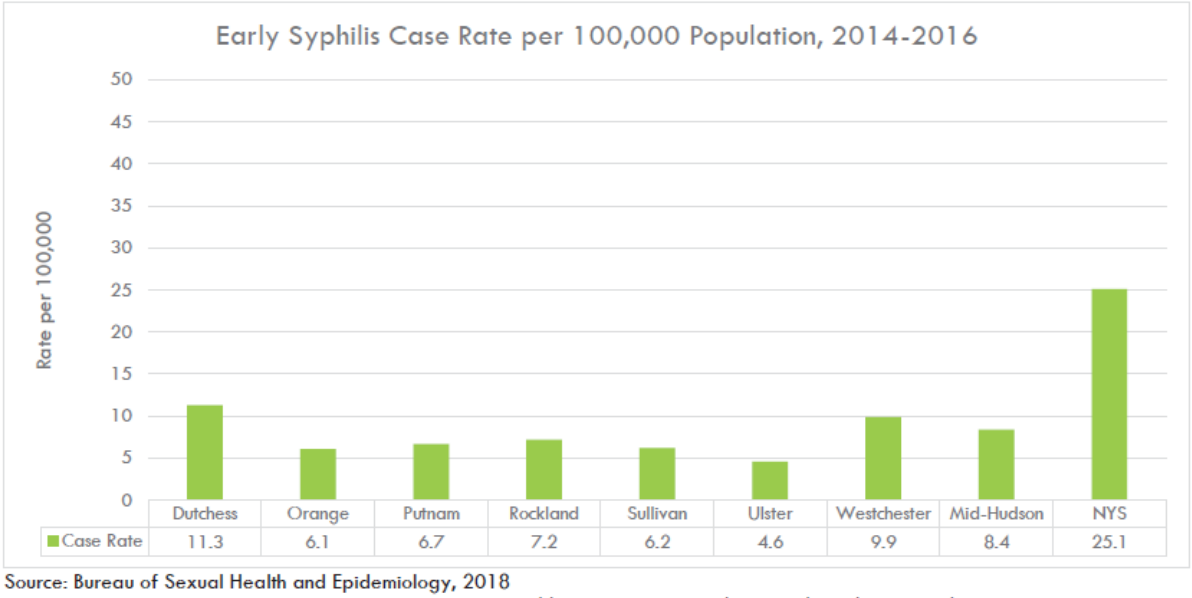
Syphilis is a curable STI that can have very serious complications when left untreated. Syphilis is spread via direct contact with a syphilis sore during vaginal, anal, or oral sex. Sores may be located on or around the penis, vagina, anus, lips, in the mouth, or in the rectum. Syphilis can spread from an infected mother to her fetus. Syphilis is divided into primary, secondary, latent, and tertiary stages. Any sexually active person can get syphilis through unprotected vaginal, anal, or oral sex. Limiting number of sexual partners and using latex condoms correctly every time you have sex can reduce the risk of syphilis. Additionally, the CDC recommends all pregnant women be tested for syphilis at their first prenatal visit.

Healthy People 2020 aims to reduce domestic transmission of primary and secondary syphilis among females from 1.5 new cases per 100,000 females to 1.3 new cases per 100,000 females

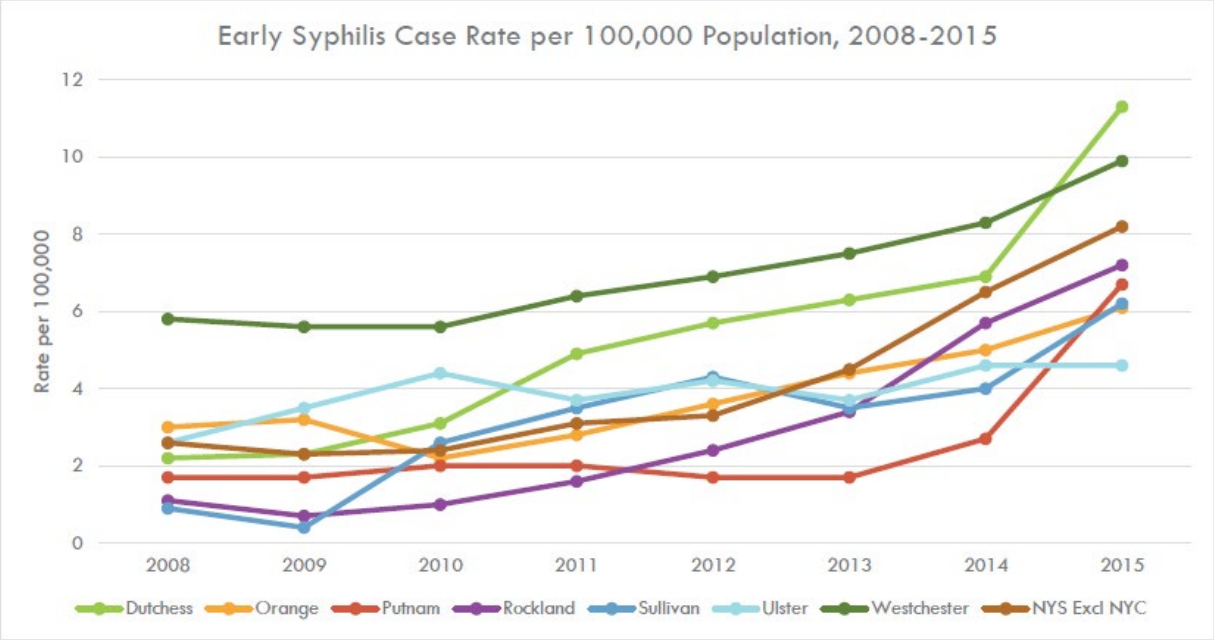
and reduce domestic transmission of primary and secondary syphilis among males from 7.5 new cases per 100,000 males to 6.7 new cases per 100,000 males. All counties had an increase in cases from 2016-2017.



Source: Department of Health Communicable Disease Annual Reports
https://health.ny.gov/statistics/diseases/communicable/



Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm



	Three-Year Average							Single Year	
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2008	2.2	3	1.7*	1.1	0.9*	2.6	5.8	13.2	2.6
2009	2.3	3.2	1.7*	0.7*	0.4*	3.5	5.6	12.5	2.3
2010	3.1	2.2	2*	1*	2.6*	4.4	5.6	12.7	2.4
2011	4.9	2.8	2*	1.6	3.5*	3.7	6.4	12.1	3.1
2012	5.7	3.6	1.7*	2.4	4.3	4.2	6.9	13.6	3.3
2013	6.3	4.4	1.7*	3.4	3.5*	3.7	7.5	17.4	4.5
2014	3.9	5	2.7*	5.7	4*	4.6	8.3	20.3	6.5
2015	11.3	6.1	6.7	7.2	6.2	4.6	9.9	24.5	8.2

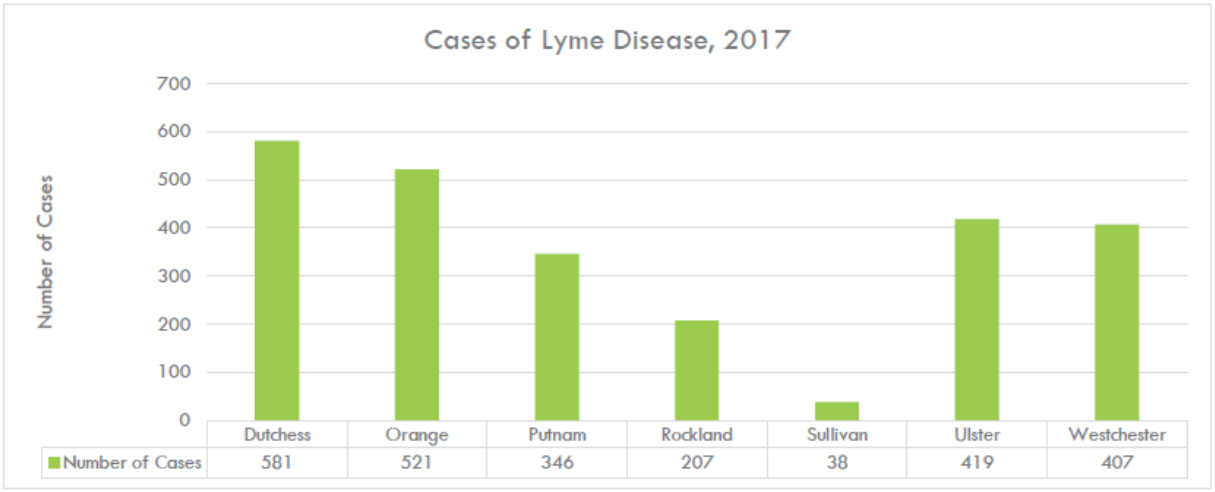
*: Rate or percentage unstable
Source: Bureau of Sexual Health and Epidemiology, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Health Indicators: Thick-Borne Diseases

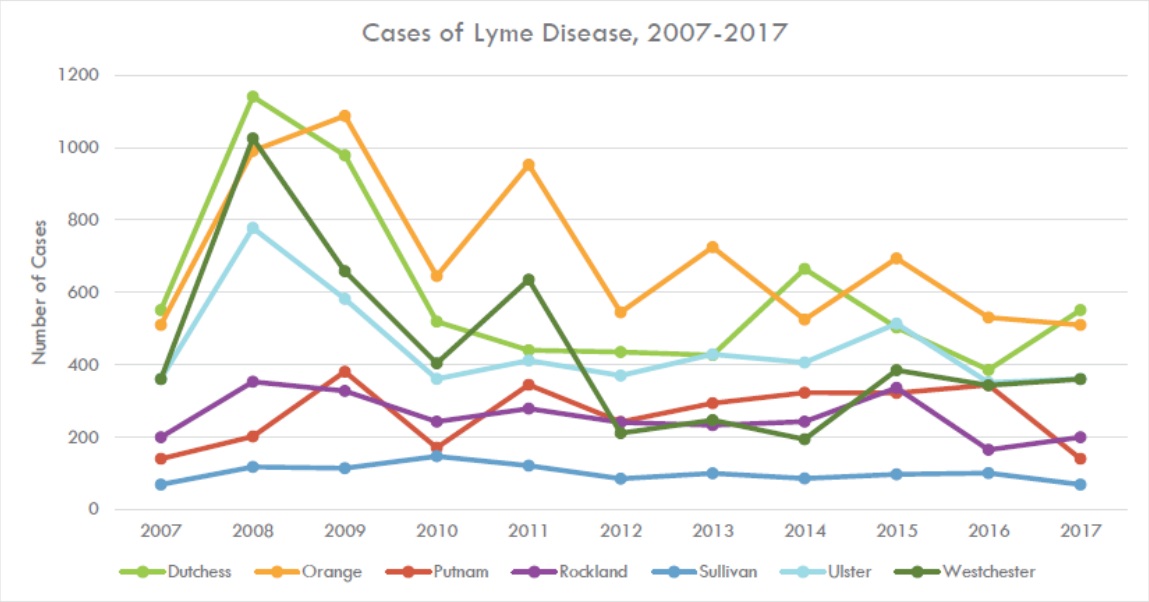
LYME DISEASE

Lyme disease is caused by the bacterium Borrelia burgdorferi, which is transmitted through the bite of infected blacklegged ticks. Symptoms of Lyme disease may include fever, headache, fatigue, and a rash characteristic of Lyme disease known as erythema migrans. Most cases of Lyme disease can be treated with antibiotics. Left untreated, Lyme disease can spread to joints, the heart, and the nervous system. Lyme disease is diagnosed based on symptoms, physical findings, and exposure to infected ticks. Laboratory testing can be helpful in diagnosing Lyme disease as well.

Each year, approximately 30,000 cases of Lyme disease are reported to the CDC by state health departments, though the actual number of infections per year is thought to be much higher; recent estimates suggest that this number is closer to 300,000. Steps to prevent Lyme disease include using insect repellent, removing ticks promptly, use of pesticides, and reducing tick habitats. Dutchess and Orange counties have the highest number of cases (581 and 521 respectively) while Sullivan County has the lowest number. The number of cases peaked in 2008 and has generally trended down. Rockland County has the second lowest number of cases in the region (207).



Note: The number of cases is extrapolated from samples of positive laboratory results to generate estimates of the total number of cases
Source: Department of Health Communicable Disease Annual Reports
https://health.ny.gov/statistics/diseases/communicable/



Note: The number of cases is extrapolated from samples of positive laboratory results to generate estimates of the total number of cases

Source: NYSDOH Communicable Disease Annual Reports

https://health.ny.gov/statistics/diseases/communicable/

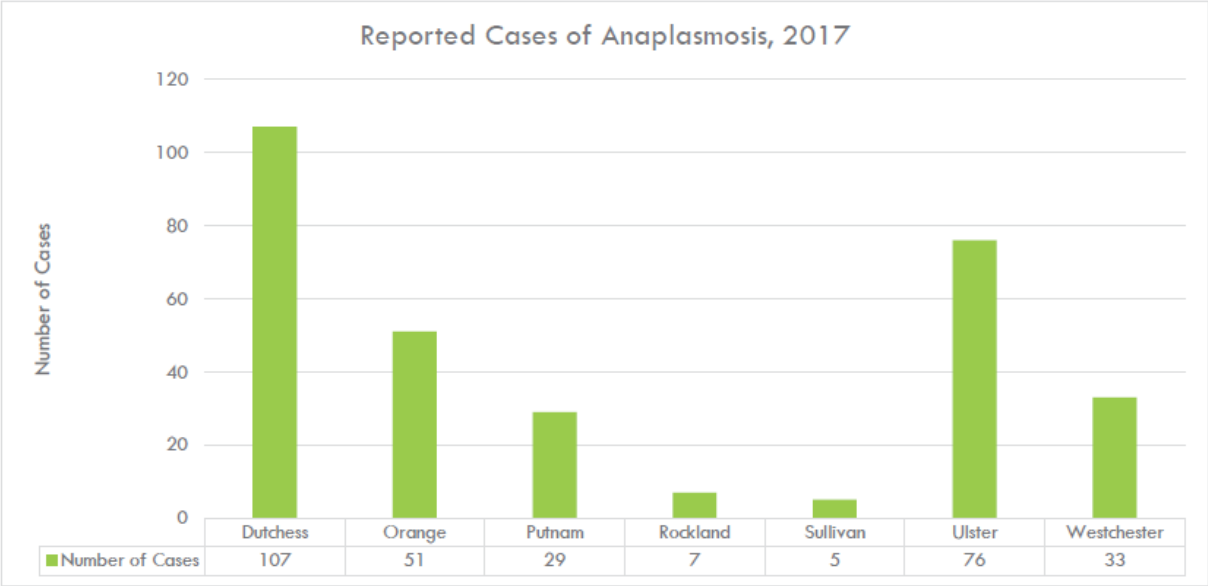
Cases of Lyme Disease, 2007-2017*									
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	551	510	140	200	69	361	360	4604	4187
2008	1141	991	202	353	118	778	1026	9152	8344
2009	979	1088	381	328	114	582	659	9279	8226
2010	519	645	171	243	147	361	404	6316	5589
2011	440	953	345	279	121	412	635	8007	7276
2012	435	545	242	241	85	370	211	5887	5344
2013	427	725	294	233	100	429	247	7587	6843
2014	665	525	323	243	86	406	194	6686	5838
2015	503	694	322	336	97	514	385	8272	7332
2016	386	531	344	165	101	351	343	7543	6597
2017	551	510	140	200	69	361	360	9803	8720

ANAPLASMOSIS

Anaplasmosis is a disease caused by the bacterium anaplasma phagocytophilum, which is transmitted to humans via the bite of infected black legged ticks and western black legged ticks. Early symptoms of Anaplasmosis may include fever, headache, chills, and muscle aches. If left untreated or if other medical conditions are present, anaplasmosis can cause more serious illness resulting in respiratory failure, bleeding problems, organ failure, and rarely, death.116 Anaplasmosis is diagnosed based on symptoms and blood tests. People with weakened immune system may be at increased risk of severe outcomes.

The number of reported anaplasmosis cases has been rising, and the incidence has increased from 1.4 cases per million persons in 2000 to 17.9 cases per million persons in 2017. The geographic range of anaplasmosis also appears to be increasing as Black legged ticks expand in range. Vermont, Rhode Island, Minnesota, Massachusetts, Wisconsin, New Hampshire, and New York account for 90% of all reported anaplasmosis cases. Reported cases are most frequent in males and people over the age of 40.

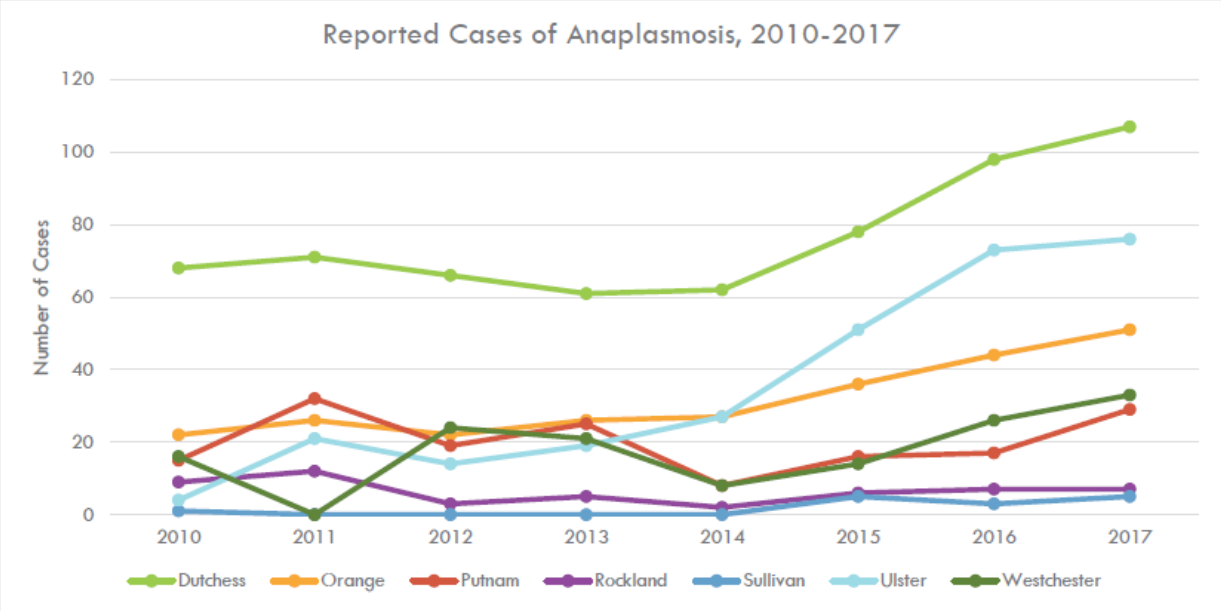
Dutchess county has the highest number of reported cases in 2017 while Rockland and Sullivan have the lowest number of cases (7 and 5 respectively). The number of cases has been increasing in most counties except Rockland since 2014.



Source: NYSDOH Communicable Disease Annual Reports

https://health.ny.gov/statistics/diseases/communicable/

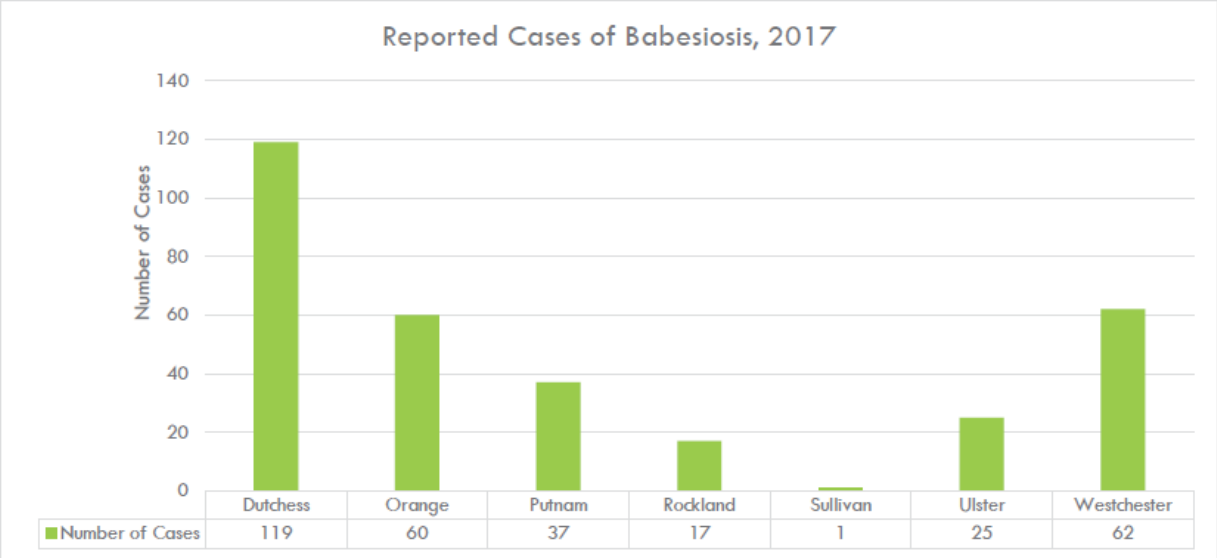
Reported Cases of Anaplasmosis, 2010-2017									
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2010	68	22	15	9	1	4	16	231	220
2011	71	26	32	12	0	21	0	350	314
2012	66	22	19	3	0	14	24	335	315
2013	61	26	25	5	0	19	21	477	454
2014	62	27	8	2	0	27	8	453	421
2015	78	36	16	6	5	51	14	533	116
2016	98	44	17	7	3	73	26	775	733
2017	107	51	29	7	5	76	33	1196	1112



Source: NYSDOH Communicable Disease Annual Reports
https://health.ny.gov/statistics/diseases/communicable/

BABESIOSIS

Babesiosis is caused by parasites that infect red blood cells and is spread by certain ticks. Tick-borne transmission is most common in parts of the Northeast and upper Midwest of the U.S. and usually peaks during warmer months. Many individuals infected with babesiosis do not experience any symptoms, but treatment is available for those who do. In those with symptoms, babesiosis is usually diagnosed by examining blood specimens to look for Bebesia parasites in the red blood cells. Since 2012, the number of reported cases have been trending upwards in the region. In Rockland it went from 0 cases in 2007 to 17 in 2017.



Source: NYSDOH Communicable Disease Annual Reports

https://health.ny.gov/statistics/diseases/communicable/

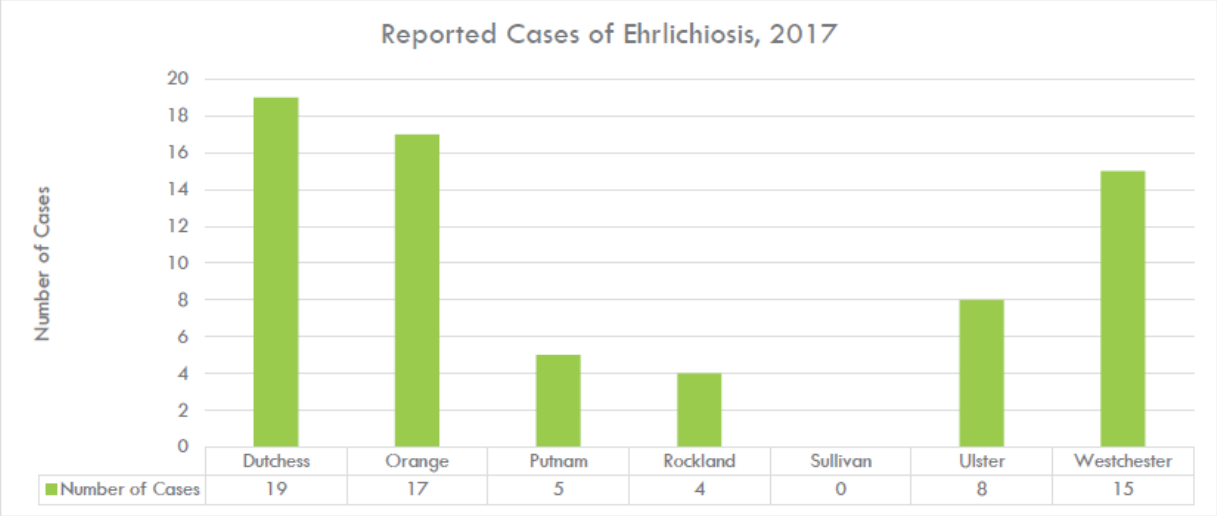
Reported Cases of Babesiosis, 2007-2017									
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	44	5	1	0	0	0	29	205	180
2008	62	7	6	3	1	4	36	261	222
2009	56	7	3	4	0	1	58	303	261
2010	38	6	8	1	1	3	40	269	233
2011	53	11	15	3	0	1	47	418	361
2012	21	9	14	1	0	4	13	254	226
2013	53	39	25	12	0	5	63	534	459
2014	71	34	22	12	0	14	21	471	421
2015	75	27	17	14	2	17	56	583	512
2016	56	42	16	9	1	16	43	481	430
2017	119	60	37	17	1	25	62	697	606

EHRLICHIOSIS

Ehrlichiosis describes the diseases caused by the bacteria Ehrlichia chaffeenis, E. ewingii, or E. muris eauclairensis in the U.S. Ehrlichiosis is spread to humans primarily through the bite of infected lone star and black legged ticks. People infected with ehrlichiosis often experience fever, chills, headache, muscle aches, and sometimes upset stomach. Although infection can occur any month of the year, most reported cases occur during the Summer months.

Geographically, ehrlichiosis is spread from the East Coast extending Westward toward Texas. Cases are more frequently reported in men than women and in people between 60 to 69 years of age. People with compromised immune systems may be at increased risk for severe disease. People who live, work, travel, or spend time in tick-infested areas can take certain steps to prevent tick bites that may result in infection such as walking on cleared trails and staying in the center of trails to minimize contact with leaves, brush, and overgrown grass, where ticks are most likely to be found. People can also minimize the amount of skin exposed by wearing socks, long pants, and long sleeved shirts. It helps to tuck pants into socks to ticks cannot crawl up inside the pants. Wearing light colored clothing also makes it easier to see and remove ticks before they attach to skin. You can also apply repellents to skin and clothing that contain DEET or apply Permethrin products to clothing/boots to kill ticks that come into contact with treated clothing.

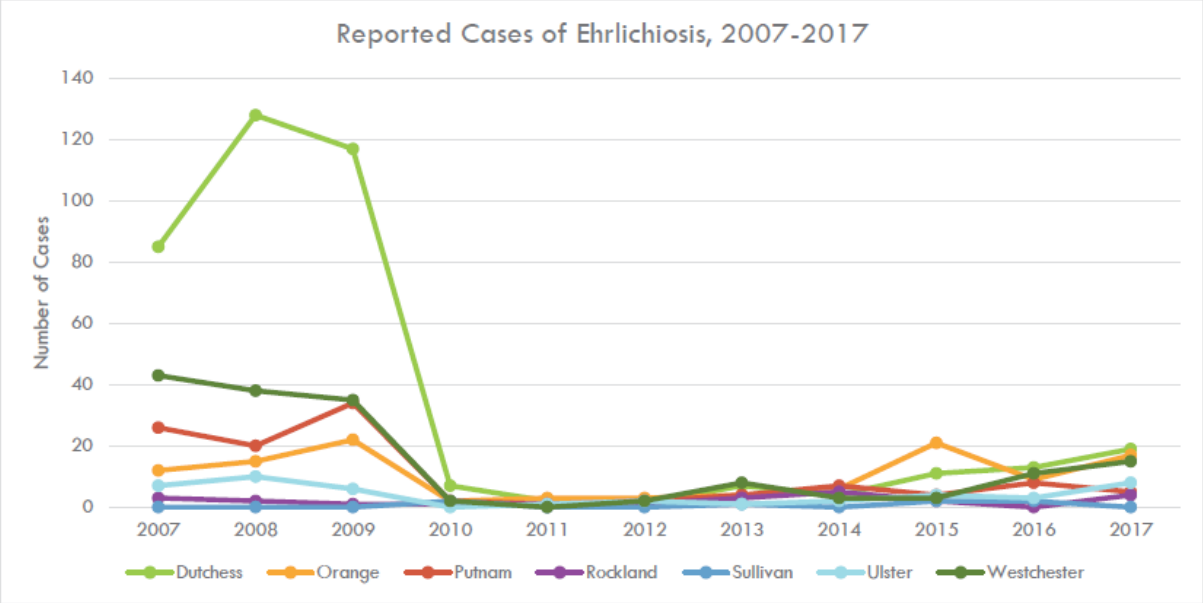
Rockland County reported 4 cases in 2017, second lowest after Sullivan County that reported no cases. The highest numbers of cases were reported in 2015 and then again in 2017 (5 and 4 cases respectively).



Source: NYSDOH Communicable Disease Annual Reports

https://health.ny.gov/statistics/diseases/communicable/

Reported Cases of Ehrlichiosis, 2007-2017									
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	NYS	NYS excl NYC
2007	85	12	26	3	0	7	43	316	272
2008	128	15	20	2	0	10	38	326	303
2009	117	22	34	1	0	6	35	339	319
2010	7	2	2	1	2	0	2	40	35
2011	2	3	1	1	0	1	0	45	41
2012	1	3	2	1	0	2	2	59	48
2013	7	4	4	3	1	1	8	107	92
2014	4	6	7	5	0	2	3	118	109
2015	11	21	4	2	2	4	3	116	109
2016	13	9	8	0	2	3	11	170	156
2017	19	17	5	4	0	8	15	170	155



Source: NYSDOH Communicable Disease Annual Reports

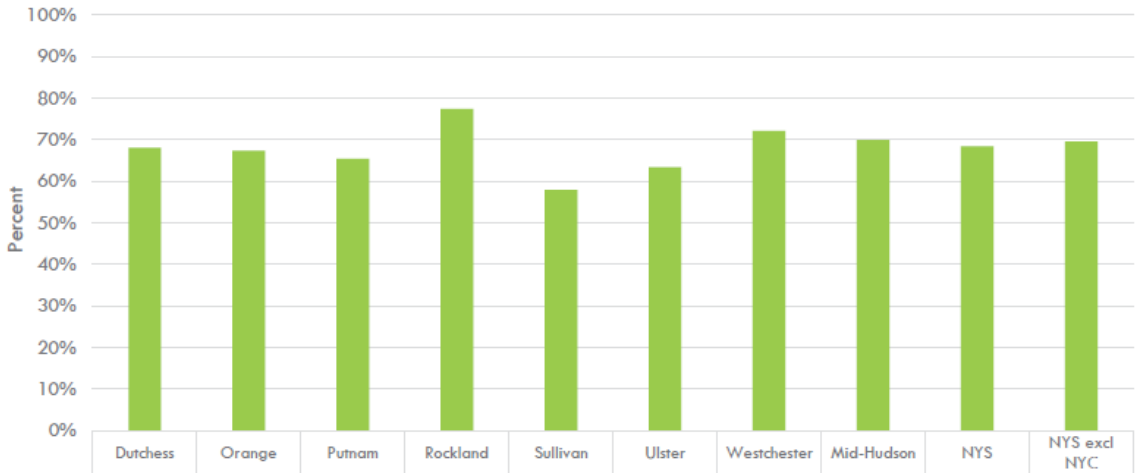
https://health.ny.gov/statistics/diseases/communicable/

Oral Health

Good oral health is an important part of attaining overall good health. It enhances a person's ability to speak, smile, chew, taste, and make facial expressions that show feelings and emotions. Oral diseases include caries (also known as cavities or tooth decay) to gum disease. It has been linked with other chronic diseases such as diabetes, as well as lifestyle behaviors including tobacco use and eating and drinking substances that are high in sugar content. In the United States, more than 80% of adults by the age of 34 have had at least one cavity in their lifetime. According to the CDC, the United States spends more than $124 billion per year on dental care.

The most common barriers to achieving good oral health include cost, geographic location, and poor health literacy. It is important that communities are educated about the importance of having good oral health and are given access to more affordable services. In order to combat poor oral health, people are encouraged to have a dental visit at least once a year for a routine checkup and cleaning. The Mid-Hudson region has a slightly higher percentage of adults who have had a dental visit within the past year (69.9%) compared to New York State overall (68.4%) and excluding New York City (69.6%). Of the 7 counties in the Mid-Hudson region, Rockland County has the highest percent of adults visiting the dentist (77.4%).

Figure : Age-Adjusted Percentage of Adults Who Had a Dentist Visit Within the Past Year, 2016



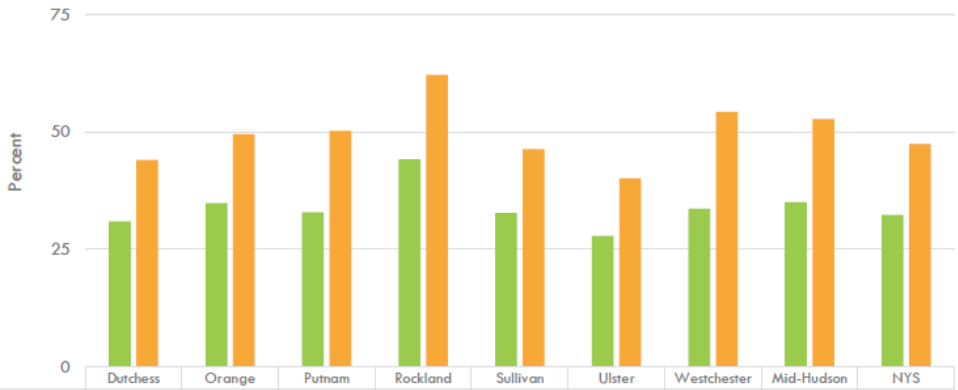
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Percentage	68.0	67.3	65.4	77.4	57.9	63.4	72.1	69.9	68.4	69.6

Source: NYSDOH Expanded Behavioral Risk Factor Surveillance System, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Dental care is harder to access for those who are low-income and cannot afford comprehensive dental coverage. In fact, low-income adults in the United States are 40% less likely to have a

dental visit in the past 12 months compared to those who are not low-income. This includes people enrolled in Medicaid insurance, where general health care coverage is limited compared to those with private or other forms of insurance. Even in New York where Medicaid does cover essential dental services, it is difficult to locate dentists who accept Medicaid coverage. There is a larger percentage of younger Medicaid enrollees (aged 2-20) who have visited their dentist compared to the overall percentage of Medicaid enrollees, with Rockland County having the highest percentage (62.2%). The Mid-Hudson region has a higher percentage of all Medicaid enrollees who have had a dentist visit within the past year compared to New York State overall (35.1% vs 32.4%, respectively). In general, dental visits for Medicaid enrollees have steadily increased throughout each county in the Mid-Hudson region and New York State overall from 2008 to 2017.

Figure : Medicaid Enrollees With at Least One Dental Visit Within the Last Year, 2015-2017



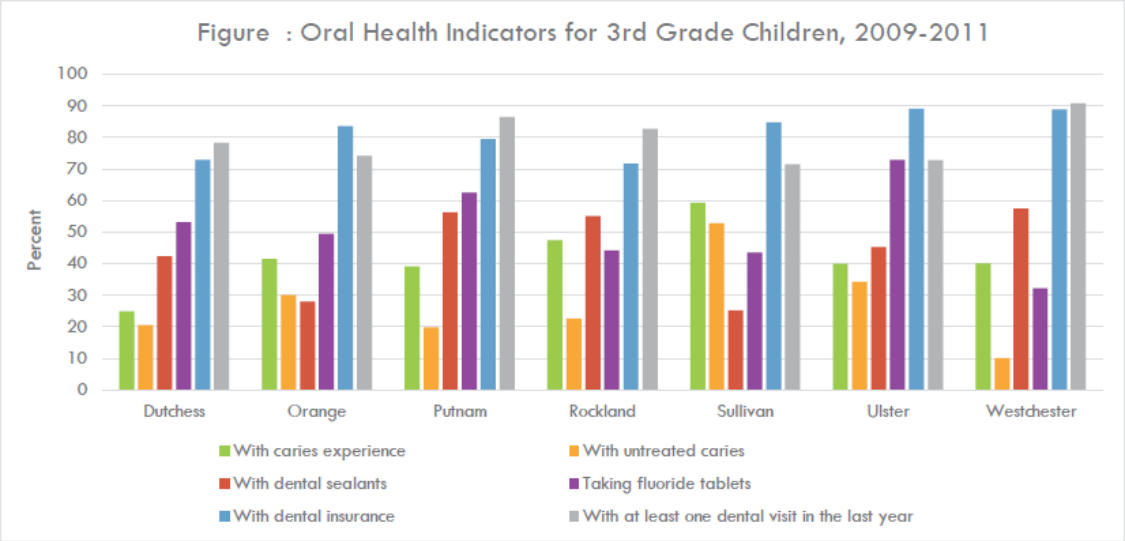
	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS
All Enrollees	31.0	34.9	32.9	44.2	32.8	27.9	33.7	35.1	32.4
Enrollees Aged 2-20	44.1	49.6	50.3	62.2	46.4	40.2	54.3	52.8	47.5

Source: NYSDOH Medicaid Program, 2018
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

It is important that oral health begins in childhood in order to start education early and prevent long term dental damage. Children with poor oral health are more likely to miss school and have lower grades in their classes compared to those who have good oral health.

Oral health has fortunately improved over the years due to community water fluoridation, which helps 7 out of 10 Americans who get water through the public water systems

.



	With caries experience	With untreated caries	With dental sealants	Taking fluoride tablets	With dental insurance	With at least one dental visit in the last year
Dutchess	24.9	20.5	42.4	53.1	72.9	78.2
Orange	41.4	30.0	28.0	49.5	83.5	74.2
Putnam	39.1	19.8	56.3	62.5	79.5	86.4
Rockland	47.4	22.6	55.1	44.2	71.6	82.7
Sullivan	59.2	52.8	25.1	43.5	84.7	71.5
Ulster	40.0	34.2	45.2	72.8	89.0	72.7
Westchester	40.1	10.1	57.5	32.2	88.8	90.8

Source: NYSDOH Bureau of Dental Health, 2012
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Child Health

Preventive health care is important across all age groups. However, it is especially important for children and adolescents to help them avoid preventable diseases and maintain good health throughout the course of their lives. Children are at risk for developing different diseases, some of which include ambulatory care sensitive (ACS) conditions, which are conditions where the use of the Emergency Department (ED) is thought to be avoidable by focusing on interventions in primary care. Some ACS conditions include asthma, otitis media, gastroenteritis, and pneumonia. According to the U.S. Census Bureau, 5.8% of the population in the Mid-Hudson region is under 5 years old and 20.1% of the population is between the ages of 5 and 19.

ASTHMA

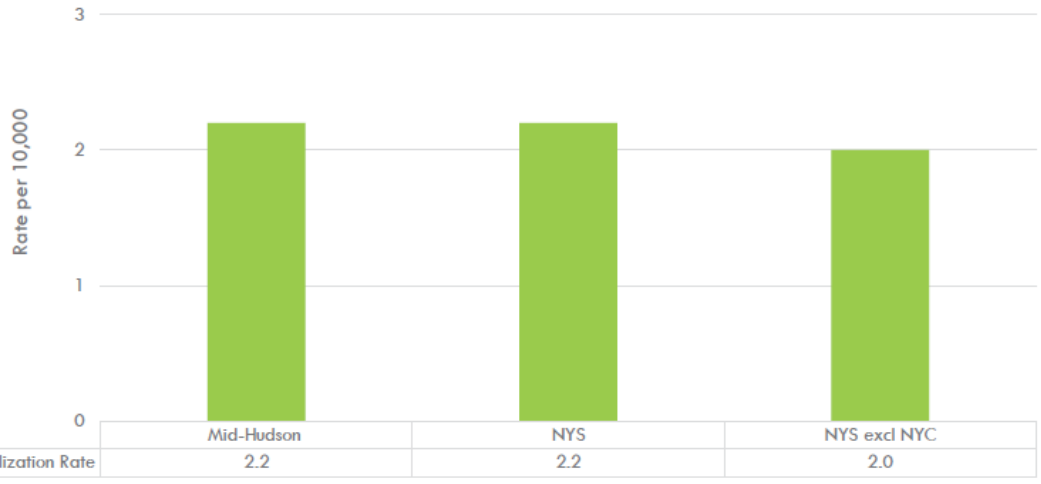
Asthma is caused by airway restriction in the lungs resulting in difficulty breathing, wheezing, chest tightness, and coughing. It is a condition commonly found among children, but it can be managed and treated with medical care.

OTITIS MEDIA

Otitis media is an infection that occurs in the middle ear and is most commonly diagnosed in children. Antibiotics are typically used to clear the infection, but some children are prone to having multiple ear infections. Common symptoms of otitis media include ear pain, tugging or pulling at the ear, crying more than usual, trouble hearing, fever, and drainage from the ear.

The hospitalization rates of otitis media for 0-4 year old children for most of the Mid-Hudson region counties are unstable or did not meet reporting criteria. However, when comparing the Mid-Hudson region as a whole to New York State overall and excluding New York City, hospitalization rates in 2016 are relatively the same.

Figure : Otitis Media Hospitalization Rate per 10,000 – Aged 0–4 Years, 2016

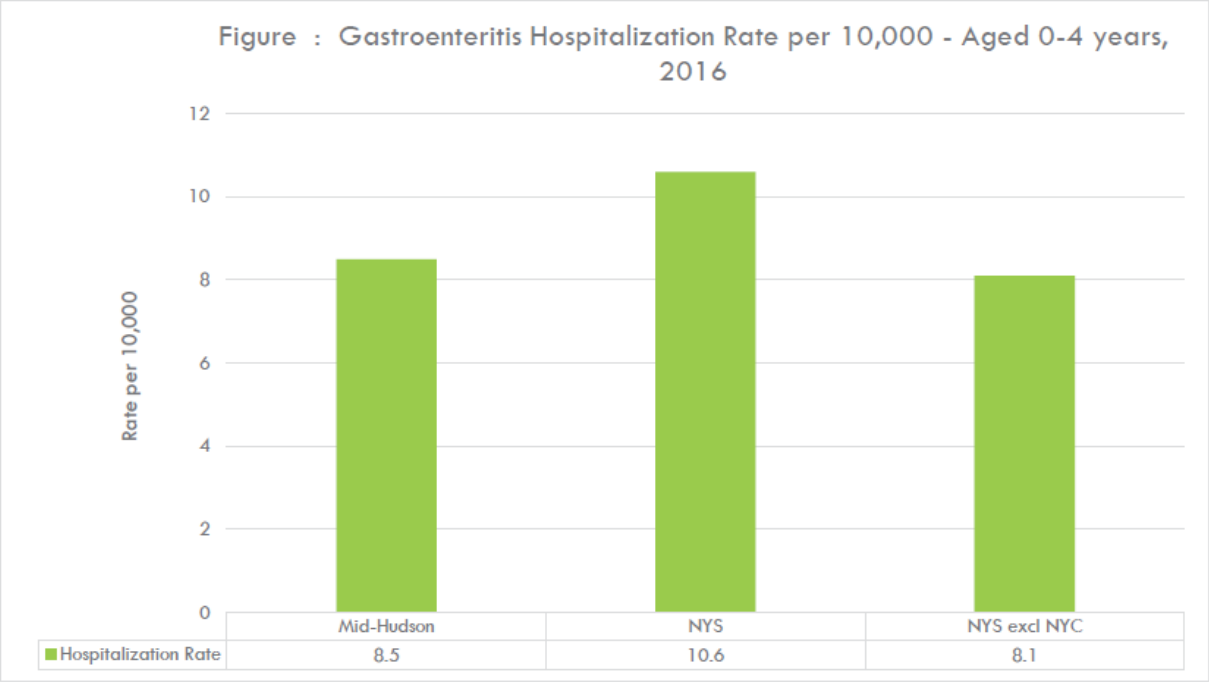


Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

GASTROENTERITIS

Gastroenteritis is an intestinal infection that can affect children starting at a young age. It is typically a viral infection that causes fever, watery diarrhea, nausea, vomiting, and abdominal pain. Viral infections are generally spread through contact with someone infected with the disease or ingesting substances contaminated with this infection. Children are especially at risk at day care centers or at schools, as they can get in contact with other infected classmates.

The hospitalization rates of gastroenteritis for 0-4 year old children for most of the Mid-Hudson region counties are unstable or did not meet reporting criteria. However, when comparing the Mid-Hudson region as a whole to New York State overall and excluding New York City, New York State overall has a slightly higher hospitalization rate compared to the Mid-Hudson region and New York State excluding New York City.



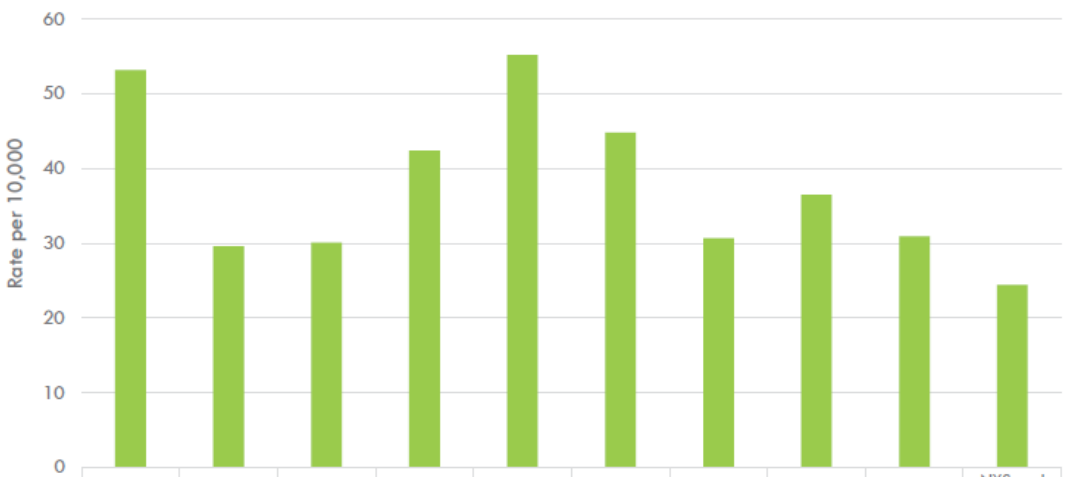
Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

PNEUMONIA

Pneumonia is an infection that causes inflammation in the air sacs in one or both lungs. Pneumonia can be caused by bacteria, viruses, and fungi, and it can lead to serious consequences in young children as well as people over the age of 65. Symptoms of pneumonia include fever, cough, chest pain, and shortness of breath. Hospitalization, tobacco use, or having a weakened immune system can put people at a greater risk of developing pneumonia.

When looking at pneumonia hospitalization rates in 2016 among children aged 0-4 years old, the Mid-Hudson region has a higher rate compared to New York State overall and excluding New York City (36.5 vs 30.9 and 24.4 per 10,000 population, respectively). There has been an overall decline in hospitalization rates from 2007 to 2014, with the exception of Dutchess County, where rates stayed relatively the same. It is important that children are vaccinated to prevent pneumococcal infection.

Figure : Pneumonia Hospitalization Rate per 10,000 – Aged 0–4 Years, 2016



	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson	NYS	NYS excl NYC
Hospitalization Rate	53.2	29.6	30.1	42.4	55.2	44.8	30.7	36.5	30.9	24.4

Source: NYSDOH Statewide Planning and Research Cooperative System, 2017
NYSDOH Community Health Indicator Reports (CHIRS): https://www.health.ny.gov/statistics/chac/indicators/index.htm

Environmental Indicators

FALLS

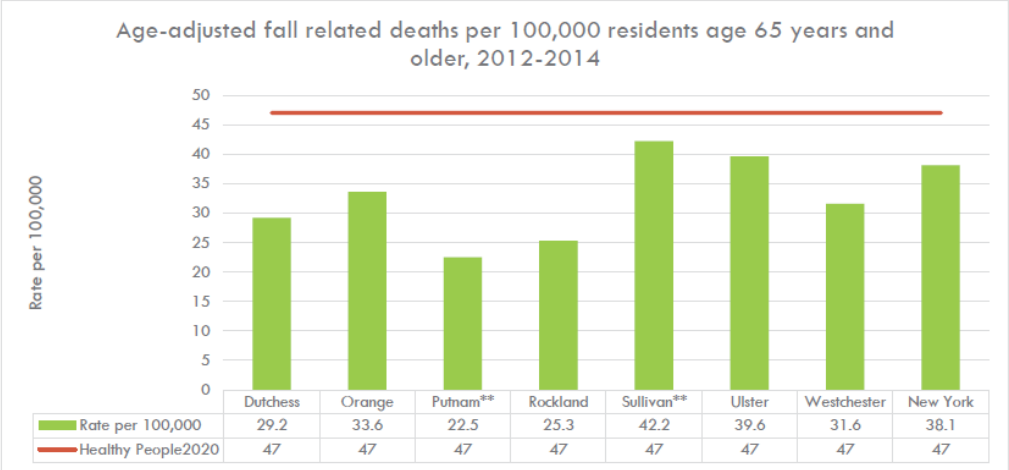
Falls account for a significant risk of injury for all age groups. Older adults, those 65 and older, are at the greatest risk for falls with more than one out of four experiencing a fall each year. Healthy People 2020 aims to prevent an increase in fall-related deaths among adults aged 65 years and over. Their 2020 target is 47 deaths per 100,000 populations. Currently New York State, the Mid-Hudson region, and every county in the region falls below the target. Rockland County is the lowest at 27.4 per 10,000.

Consequences of falls:

- 95% of hip fractures
- Fear (which leads to decreased physical activity)
- Most common cause of traumatic brain injury
- Accounted for $50 billion in medical costs (75% of which were covered by Medicare and Medicaid)

Risk factors:

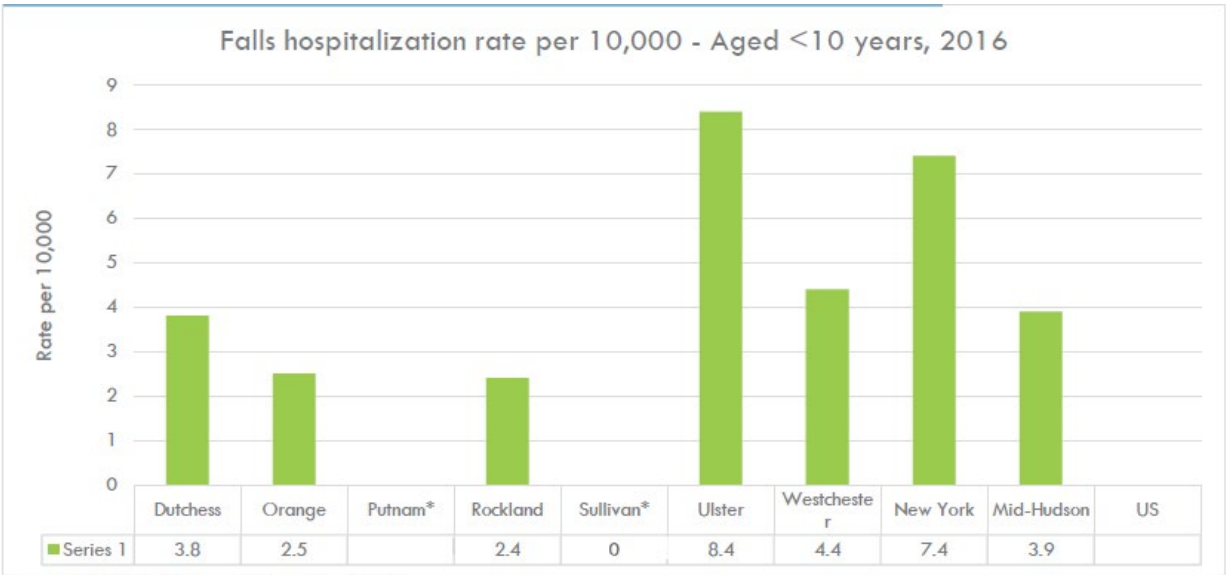
- Lower body weakness
- Certain medications
- Poor vision
- Environmental hazards such as broken steps, throw rugs, clutter
- Vitamin D deficiency



Source: NYSDOH, Bureau of Occupational Health and Injury Prevention
https://www.health.ny.gov/statistics/prevention/injury_prevention/docs/falls_deaths65+county.pdf
**Caution: Rates calculated using frequencies of less than 20 (three years total) are unstable

Young Children

For children ages zero through 14 years, falls are the number one cause of hospitalized injury. Fall related injuries for this age range are commonly connected to playground and sports activities. Rockland has the lowest number of hospitalizations due to falls at 2.4 per 10,000 in children younger than 10 years old in 2016.



Source: SPARCS data as of December 2017
https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=/EBI/PHIG/apps/chir_dashboard/chir_dashboard&p=sh

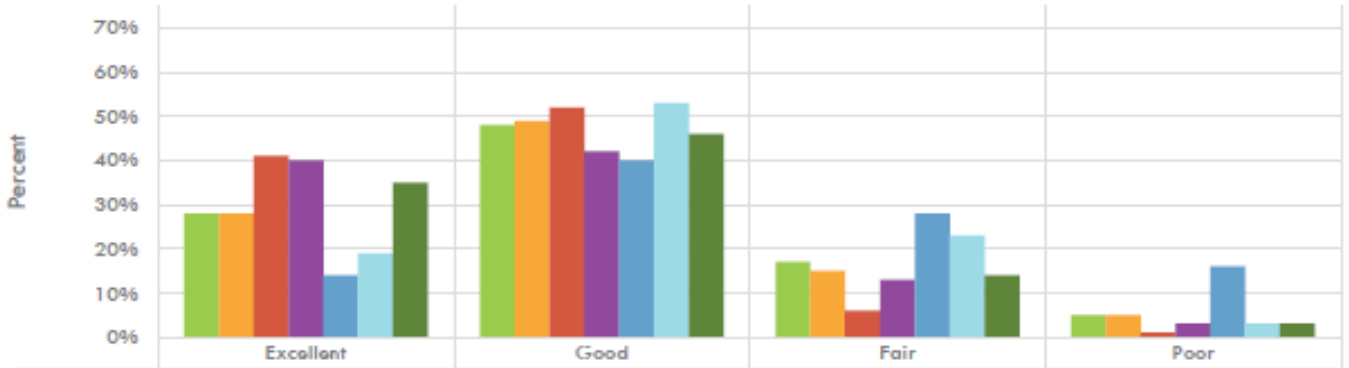
Primary Data Results

Demographics

	Dutchess	Orange	Putnam	Rockland	Sullivan	Ulster	Westchester	Mid-Hudson
Gender								
Male	39%	39%	41%	35%	38%	40%	42%	39%
Female	61%	61%	59%	65%	62%	60%	58%	61%
Transgender/Other gender	0%	0%	0%	0%	0%	1%	0%	0%
Age								
18 to 34	10%	11%	9%	21%	11%	7%	15%	12%
35 to 54	20%	24%	21%	24%	23%	24%	17%	22%
55 and older	70%	66%	70%	54%	67%	69%	68%	66%
Race/Ethnicity								
Caucasian/White	88%	80%	89%	79%	82%	84%	64%	80%
Hispanic/Latino	5%	7%	8%	10%	8%	7%	13%	8%
African American/Black	4%	8%	1%	6%	6%	5%	18%	7%
Asian	1%	1%	0%	2%	0%	0%	2%	1%
Other/Something else	2%	4%	3%	3%	3%	4%	3%	3%
TOTAL COUNT	787	850	521	812	752	802	848	5372

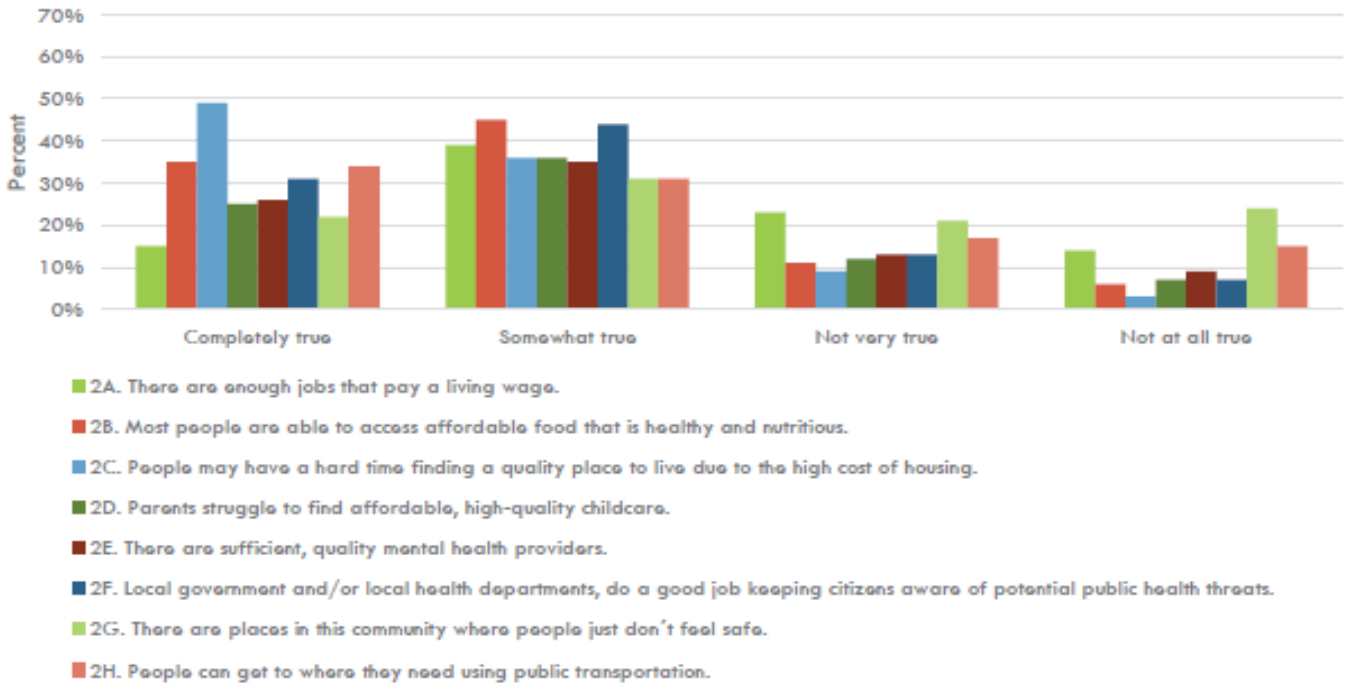
Perception of Community

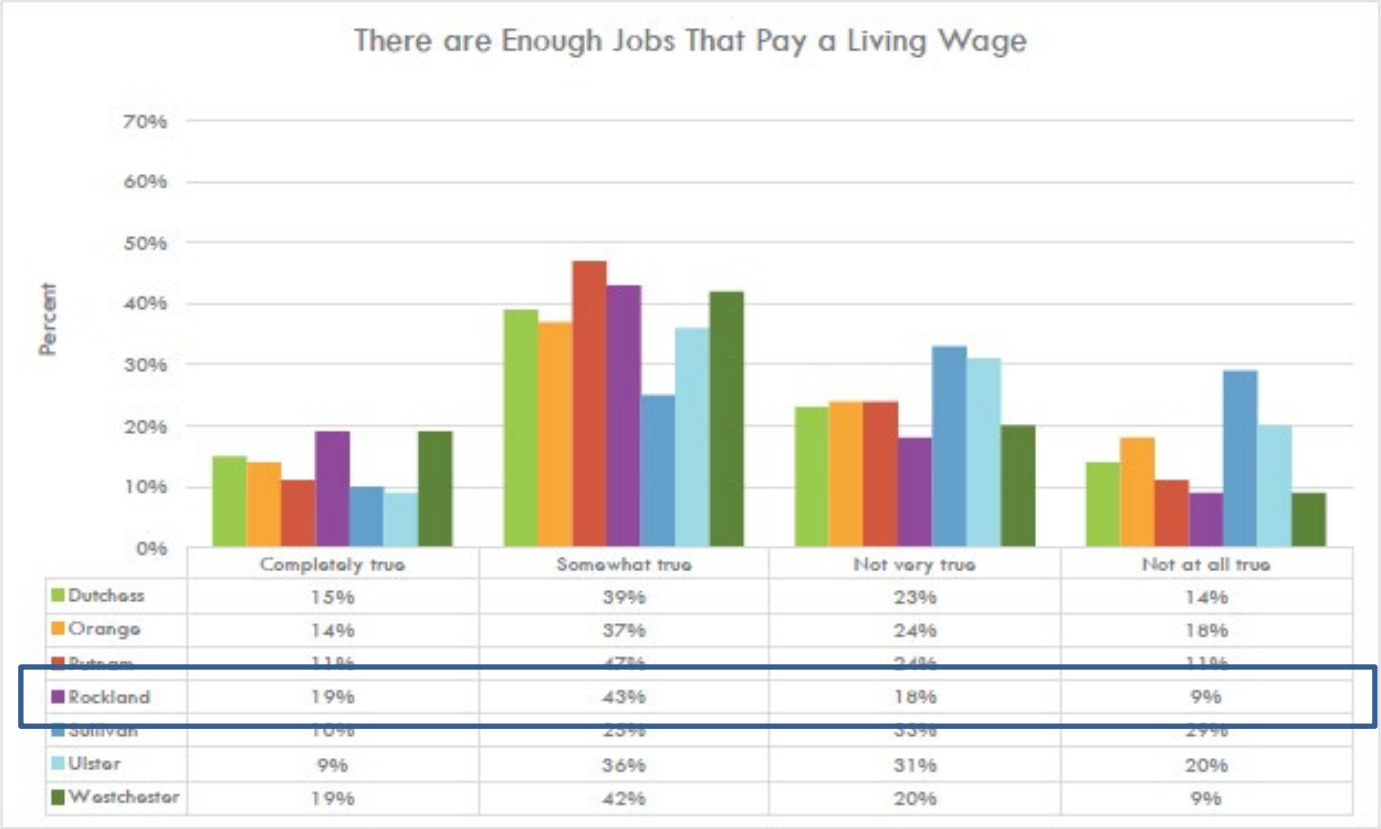
Overall, Would You Say That the Quality of Life in Your Community is Excellent, Good, Fair, or Poor?



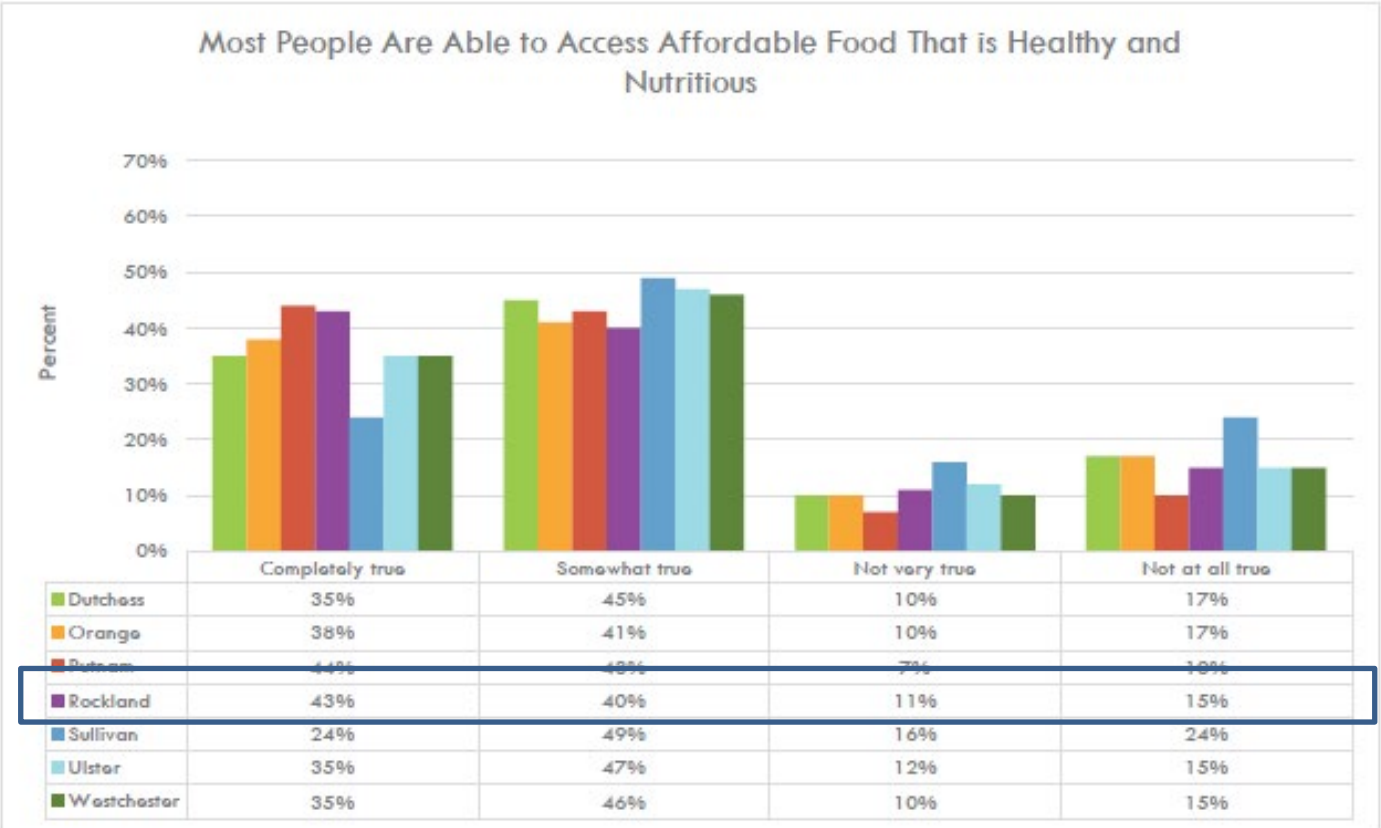
	Excellent	Good	Fair	Poor
Dutchess	28%	48%	17%	5%
Orange	28%	49%	15%	5%
Putnam	41%	52%	6%	1%
Rockland	40%	42%	13%	3%
Sullivan	14%	40%	28%	16%
Ulster	19%	53%	23%	3%
Westchester	35%	46%	14%	3%

In Your Community, Are the Following Statements Completely True, Somewhat True, Not Very True, or Not at All True



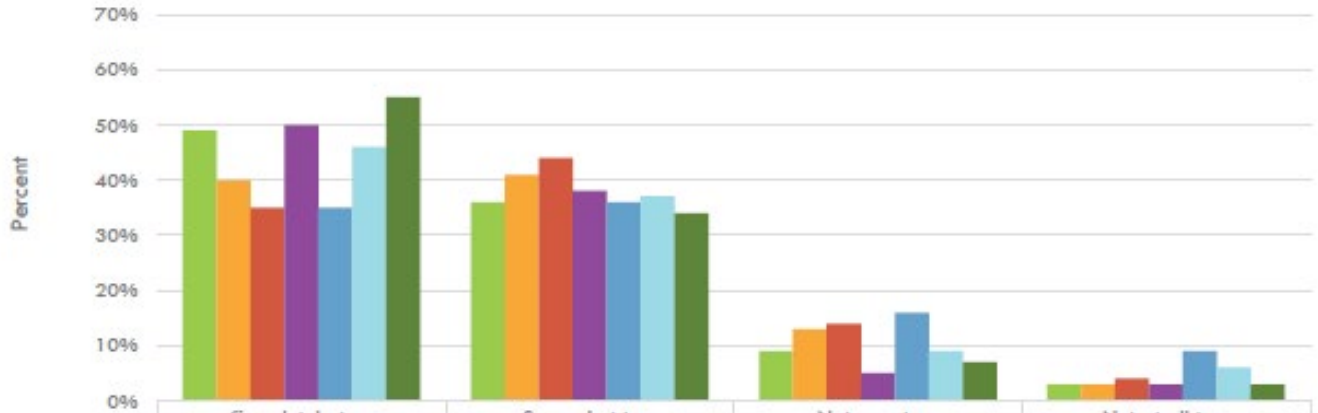


	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	15%	39%	23%	14%
Orange	14%	37%	24%	18%
Putnam	11%	47%	24%	11%
Rockland	19%	43%	18%	9%
Sullivan	10%	25%	33%	29%
Ulster	9%	36%	31%	20%
Westchester	19%	42%	20%	9%



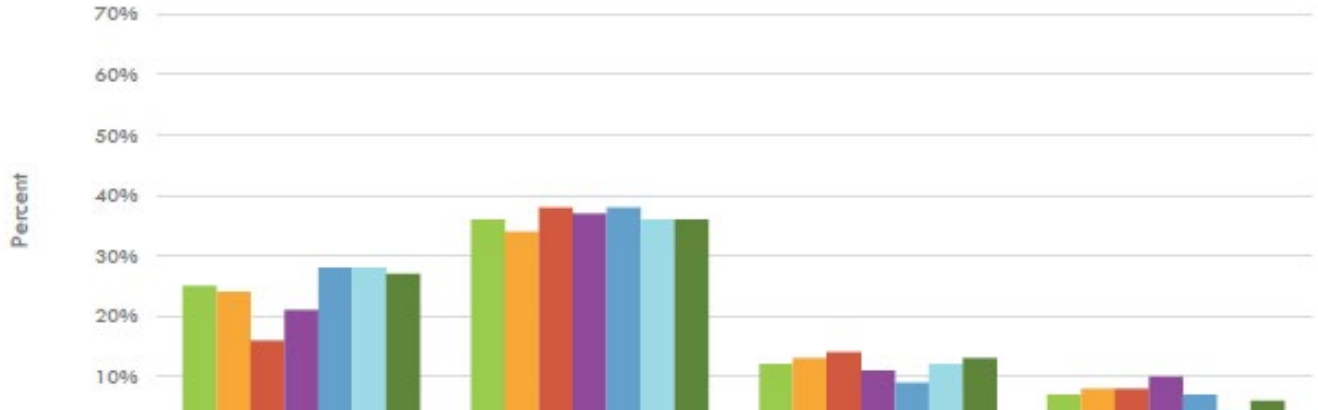
	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	35%	45%	10%	17%
Orange	38%	41%	10%	17%
Putnam	44%	48%	7%	10%
Rockland	43%	40%	11%	15%
Sullivan	24%	49%	16%	24%
Ulster	35%	47%	12%	15%
Westchester	35%	46%	10%	15%

People May Have a Hard Time Finding a Quality Place to Live Due to the High Cost of Housing

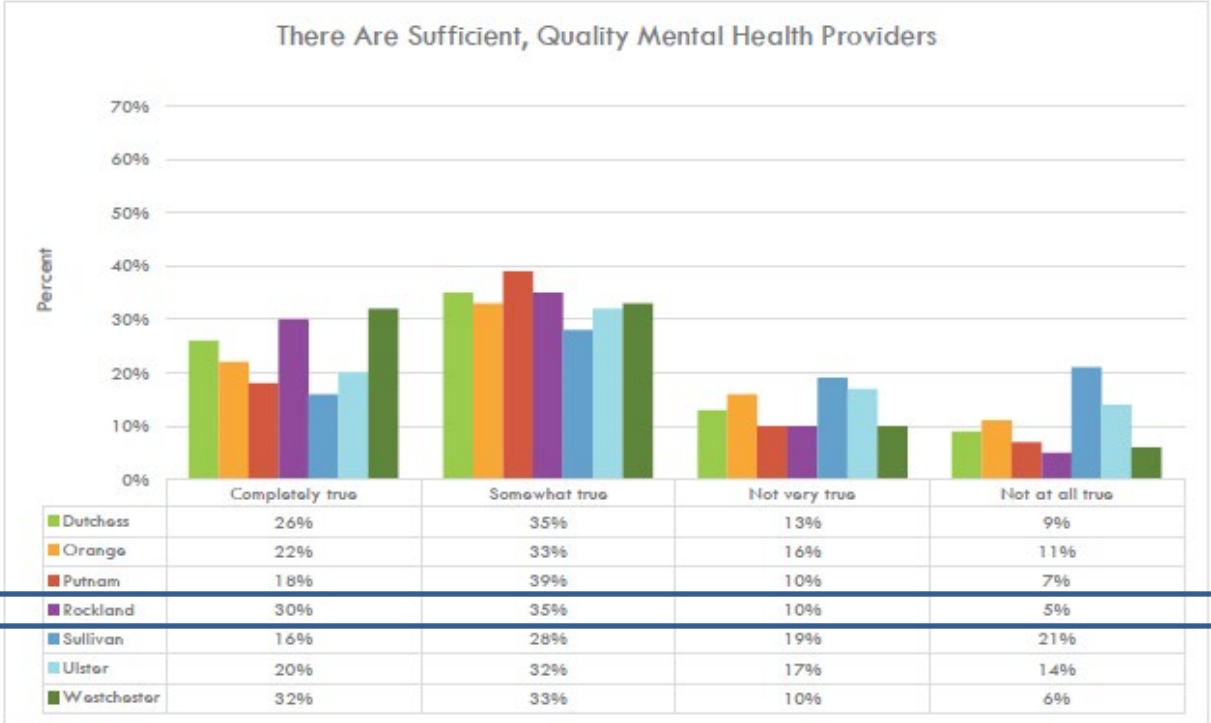


	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	49%	36%	9%	3%
Orange	40%	41%	13%	3%
Putnam	35%	44%	14%	4%
Rockland	50%	38%	5%	3%
Sullivan	35%	36%	16%	9%
Ulster	46%	37%	9%	6%
Westchester	55%	34%	7%	3%

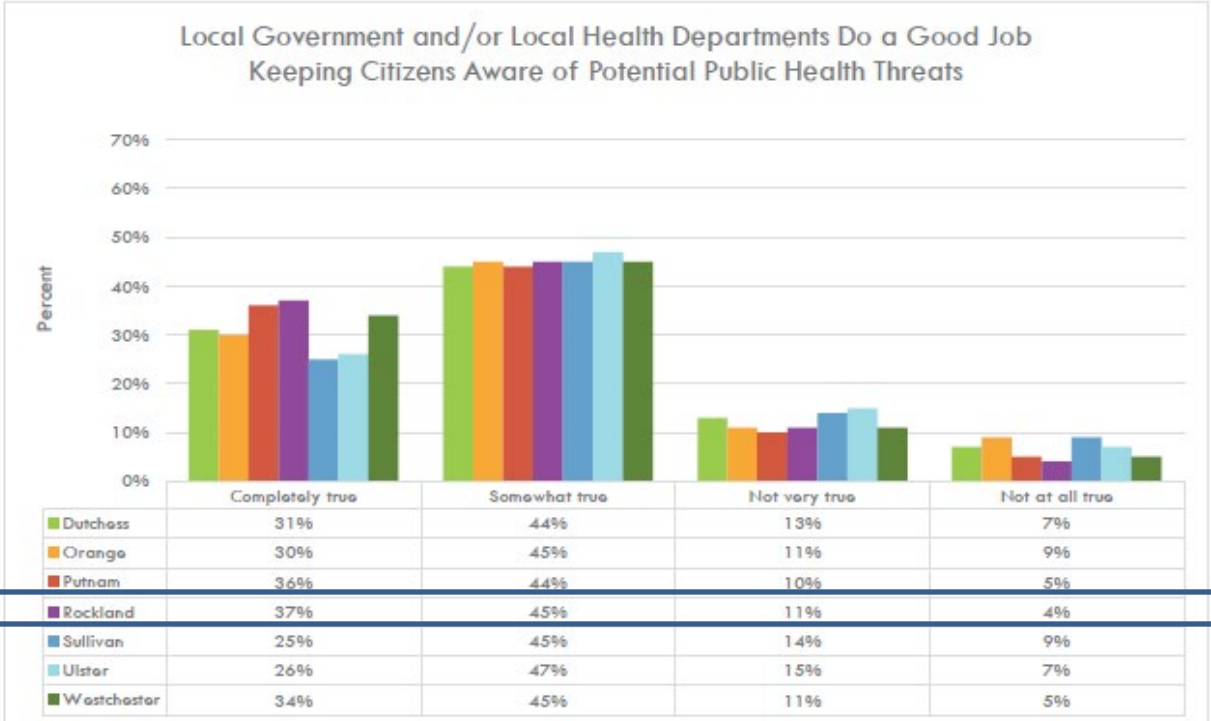
Parents Struggle to Find Affordable, High-Quality Childcare



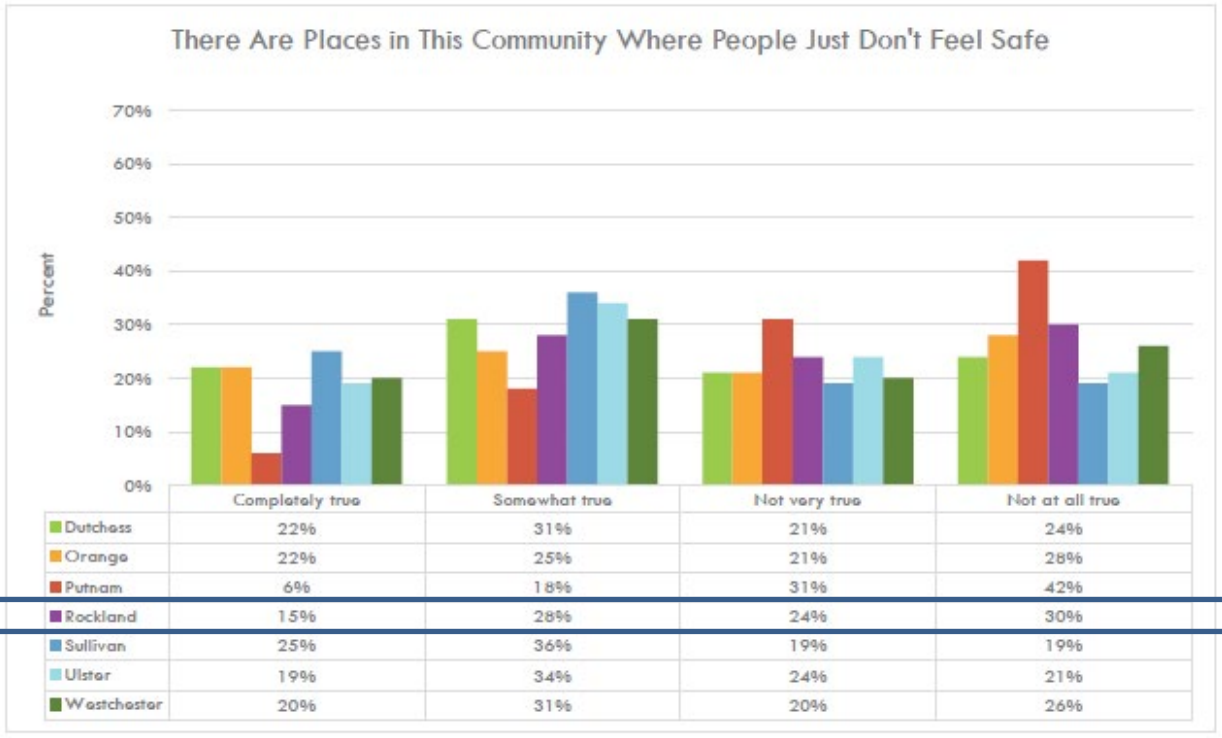
	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	25%	36%	12%	7%
Orange	24%	34%	13%	8%
Putnam	16%	38%	14%	8%
Rockland	21%	37%	11%	10%
Sullivan	28%	38%	9%	7%
Ulster	28%	36%	12%	4%
Westchester	27%	36%	13%	6%



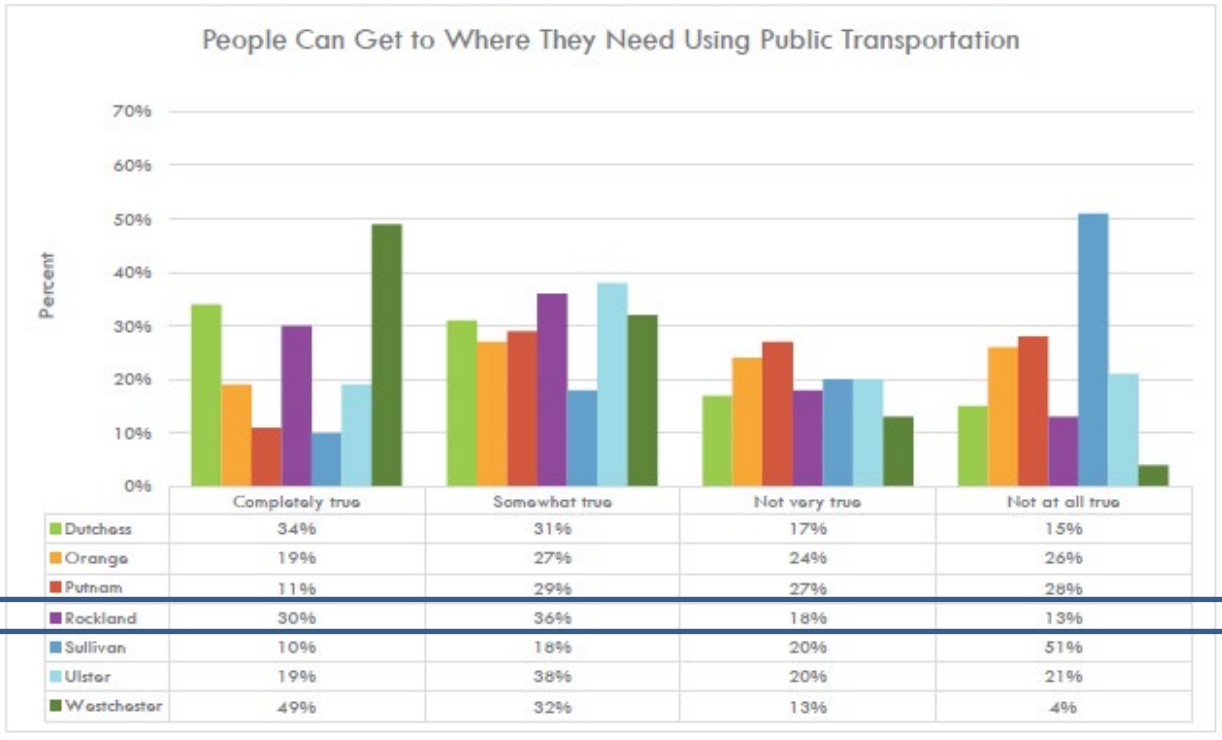
	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	26%	35%	13%	9%
Orange	22%	33%	16%	11%
Putnam	18%	39%	10%	7%
Rockland	30%	35%	10%	5%
Sullivan	16%	28%	19%	21%
Ulster	20%	32%	17%	14%
Westchester	32%	33%	10%	6%



	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	31%	44%	13%	7%
Orange	30%	45%	11%	9%
Putnam	36%	44%	10%	5%
Rockland	37%	45%	11%	4%
Sullivan	25%	45%	14%	9%
Ulster	26%	47%	15%	7%
Westchester	34%	45%	11%	5%

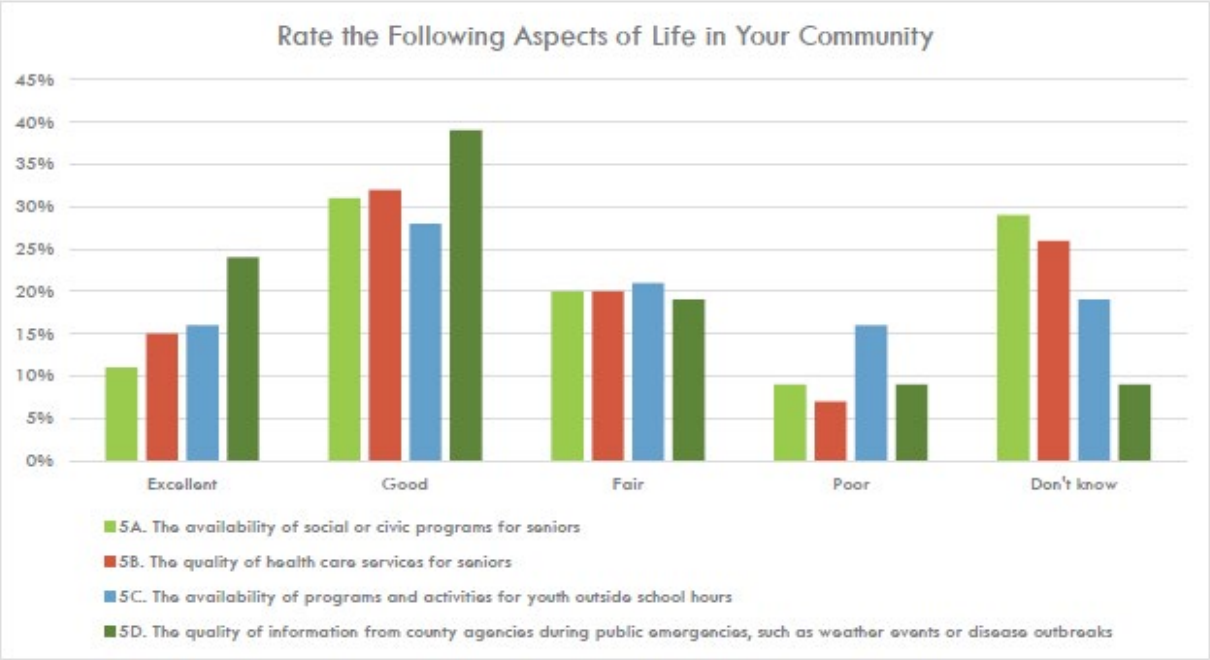


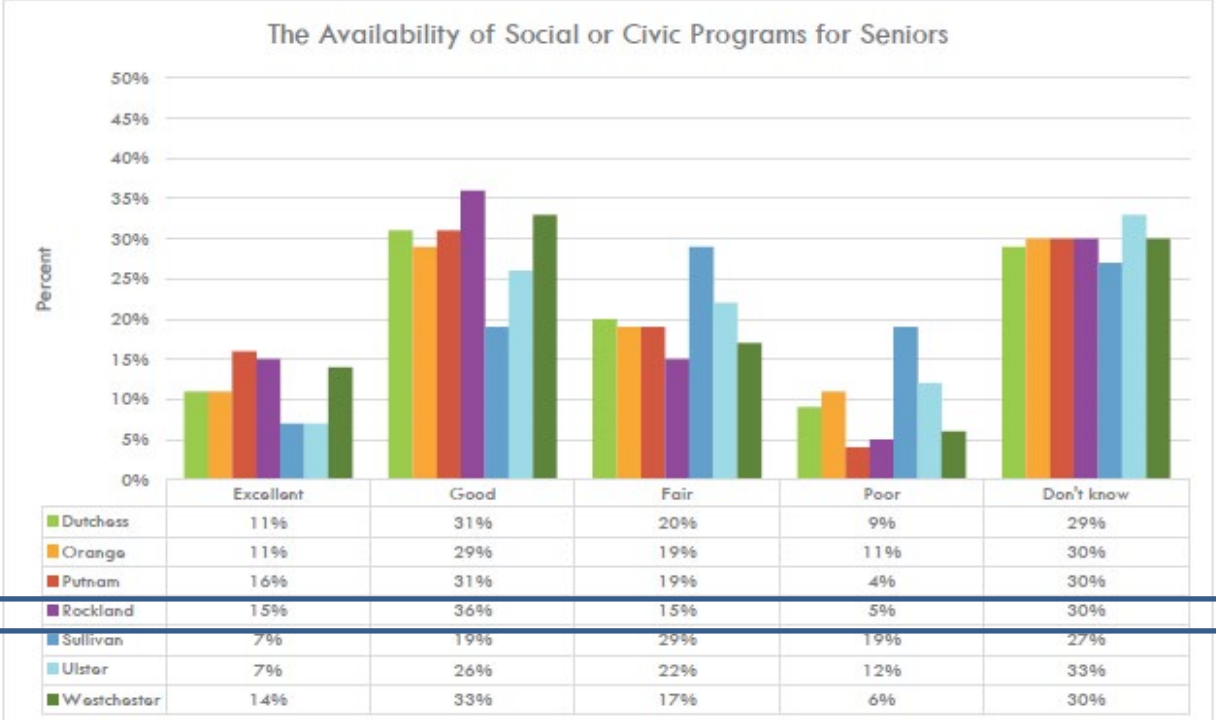
	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	22%	31%	21%	24%
Orange	22%	25%	21%	28%
Putnam	6%	18%	31%	42%
Rockland	15%	28%	24%	30%
Sullivan	25%	36%	19%	19%
Ulster	19%	34%	24%	21%
Westchester	20%	31%	20%	26%



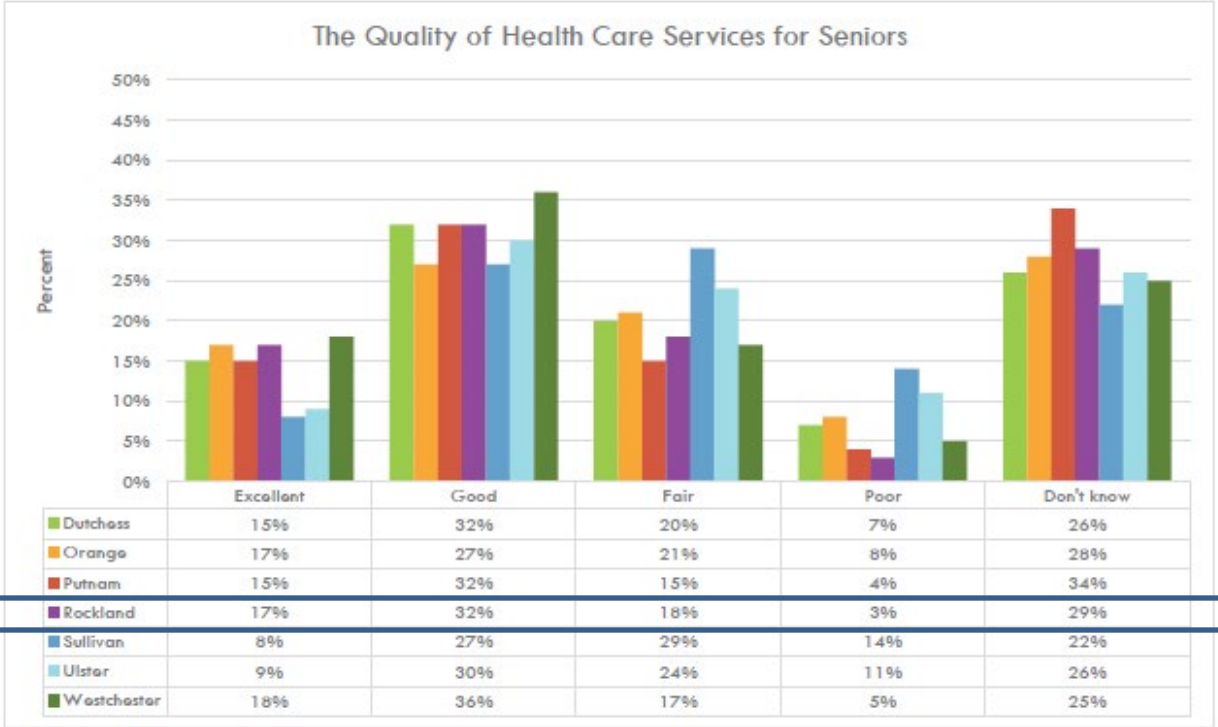
	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	34%	31%	17%	15%
Orange	19%	27%	24%	26%
Putnam	11%	29%	27%	28%
Rockland	30%	36%	18%	13%
Sullivan	10%	18%	20%	51%
Ulster	19%	38%	20%	21%
Westchester	49%	32%	13%	4%

Aspects of Community Life

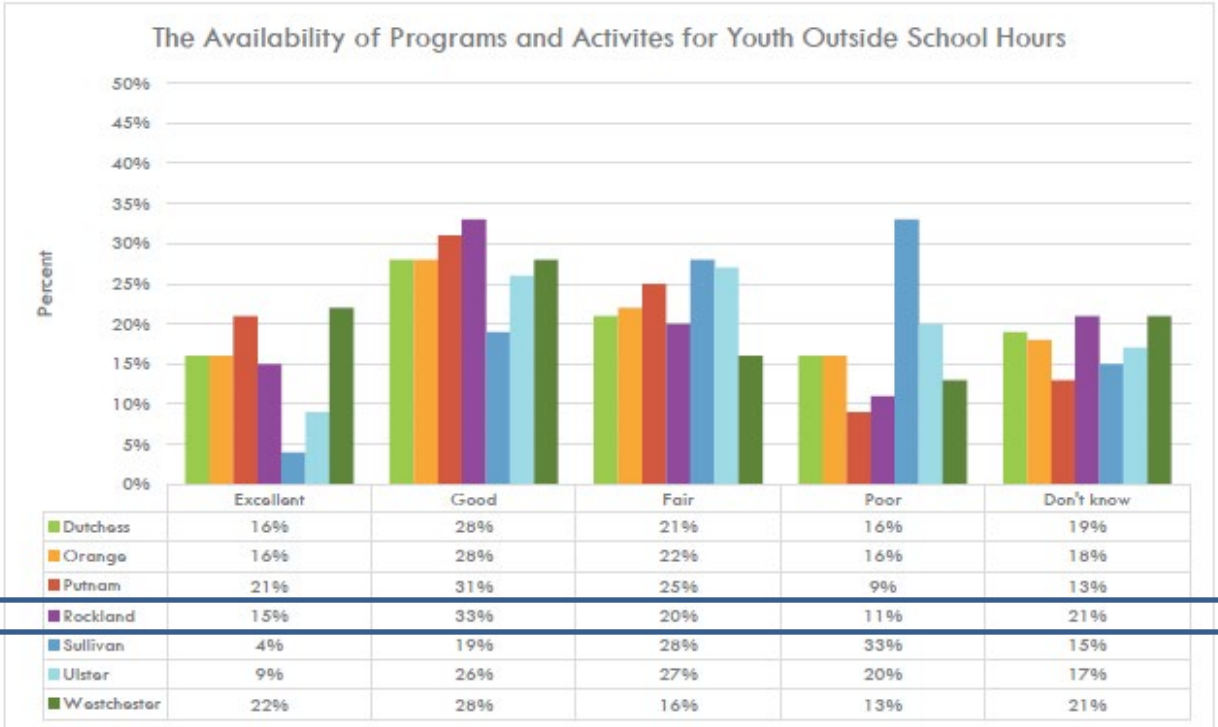




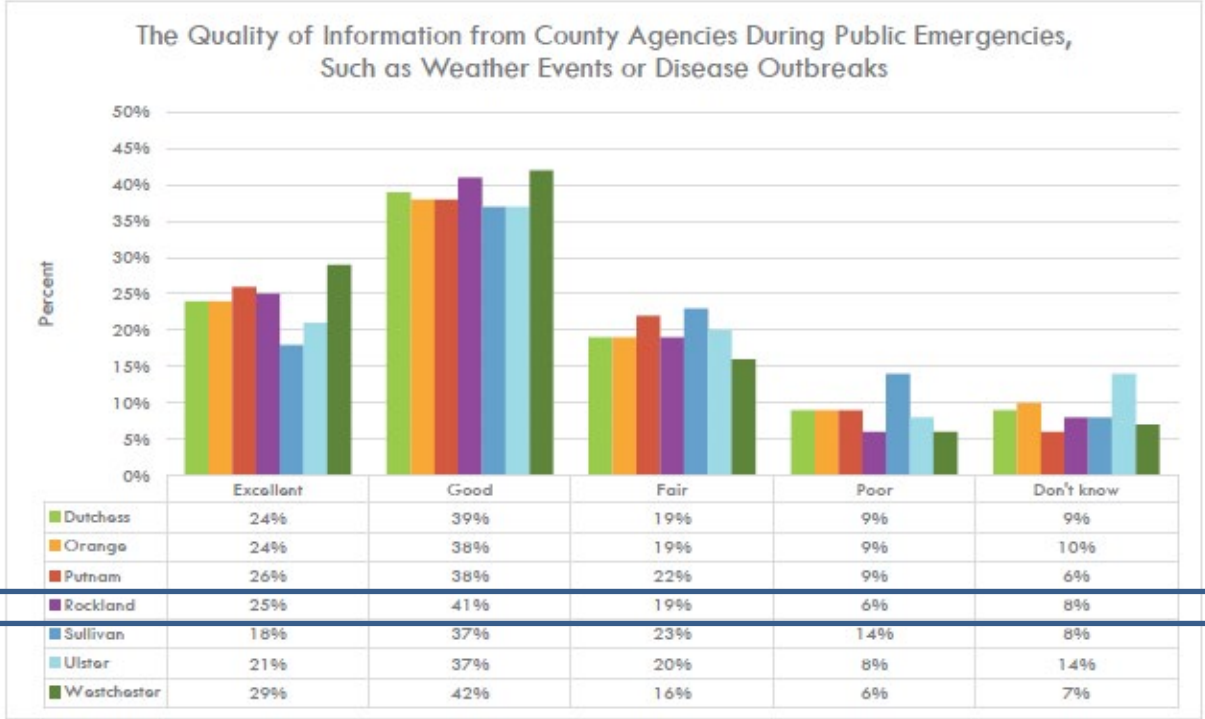
	Excellent	Good	Fair	Poor	Don't know
Dutchess	11%	31%	20%	9%	29%
Orange	11%	29%	19%	11%	30%
Putnam	16%	31%	19%	4%	30%
Rockland	15%	36%	15%	5%	30%
Sullivan	7%	19%	29%	19%	27%
Ulster	7%	26%	22%	12%	33%
Westchester	14%	33%	17%	6%	30%



	Excellent	Good	Fair	Poor	Don't know
Dutchess	15%	32%	20%	7%	26%
Orange	17%	27%	21%	8%	28%
Putnam	15%	32%	15%	4%	34%
Rockland	17%	32%	18%	3%	29%
Sullivan	8%	27%	29%	14%	22%
Ulster	9%	30%	24%	11%	26%
Westchester	18%	36%	17%	5%	25%

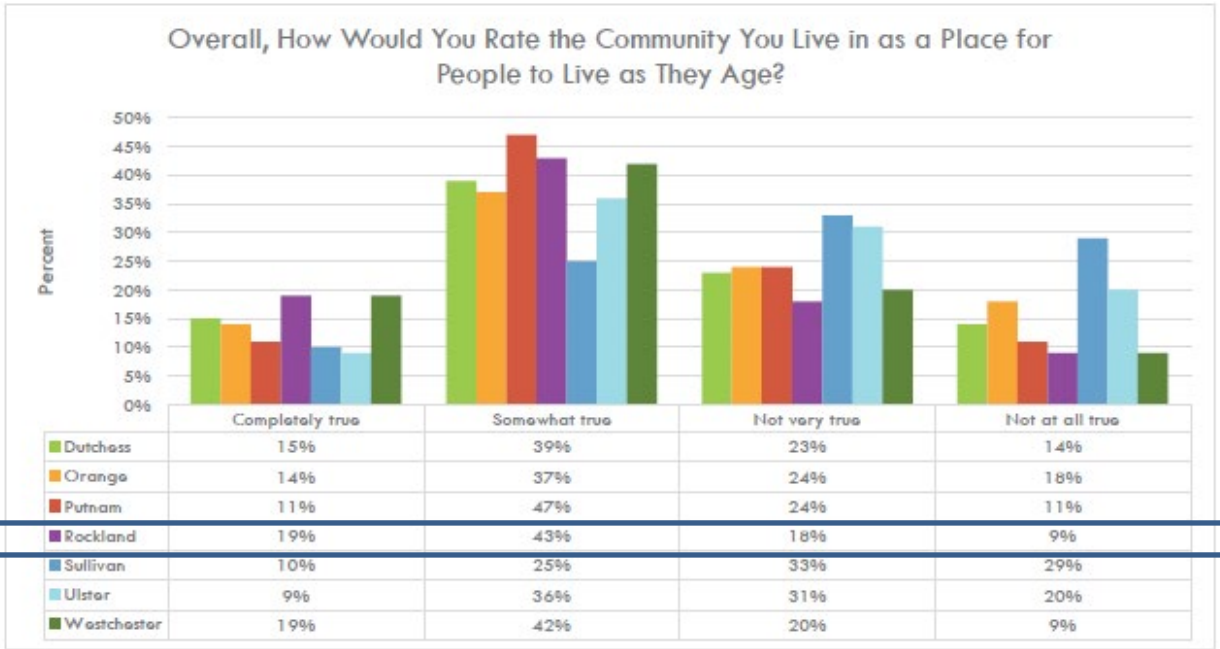


	Excellent	Good	Fair	Poor	Don't know
Dutchess	16%	28%	21%	16%	19%
Orange	16%	28%	22%	16%	18%
Putnam	21%	31%	25%	9%	13%
Rockland	15%	33%	20%	11%	21%
Sullivan	4%	19%	28%	33%	15%
Ulster	9%	26%	27%	20%	17%
Westchester	22%	28%	16%	13%	21%



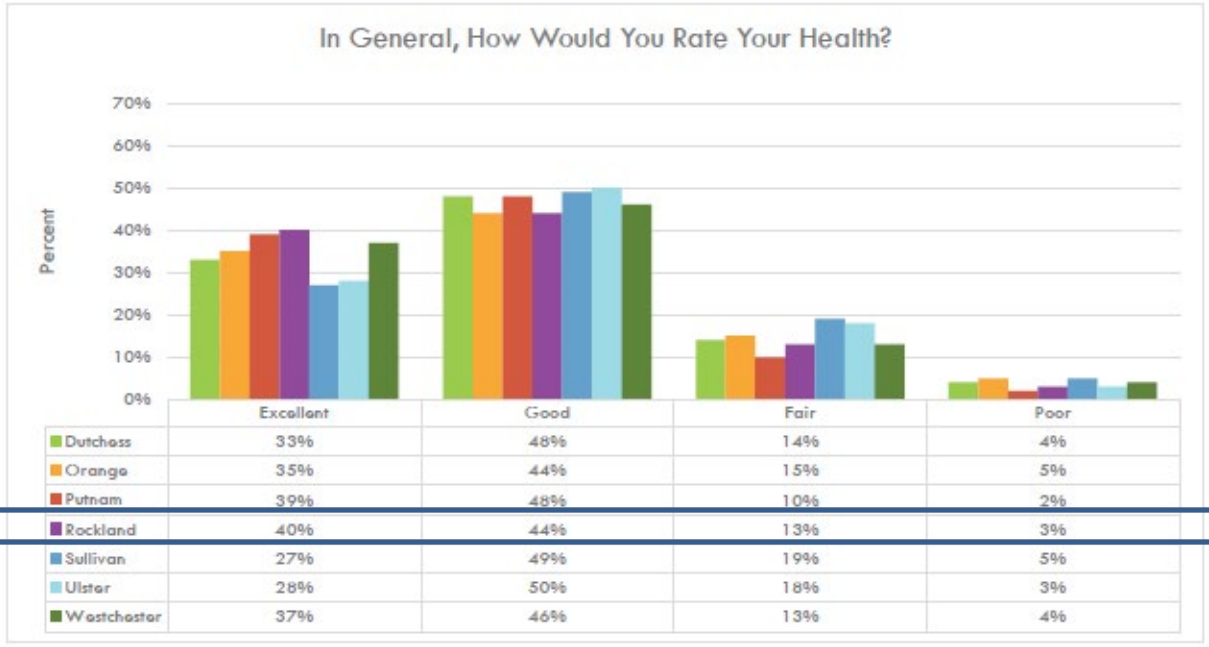
	Excellent	Good	Fair	Poor	Don't know
Dutchess	24%	39%	19%	9%	9%
Orange	24%	38%	19%	9%	10%
Putnam	26%	38%	22%	9%	6%
Rockland	25%	41%	19%	6%	8%
Sullivan	18%	37%	23%	14%	8%
Ulster	21%	37%	20%	8%	14%
Westchester	29%	42%	16%	6%	7%

Aging in Place

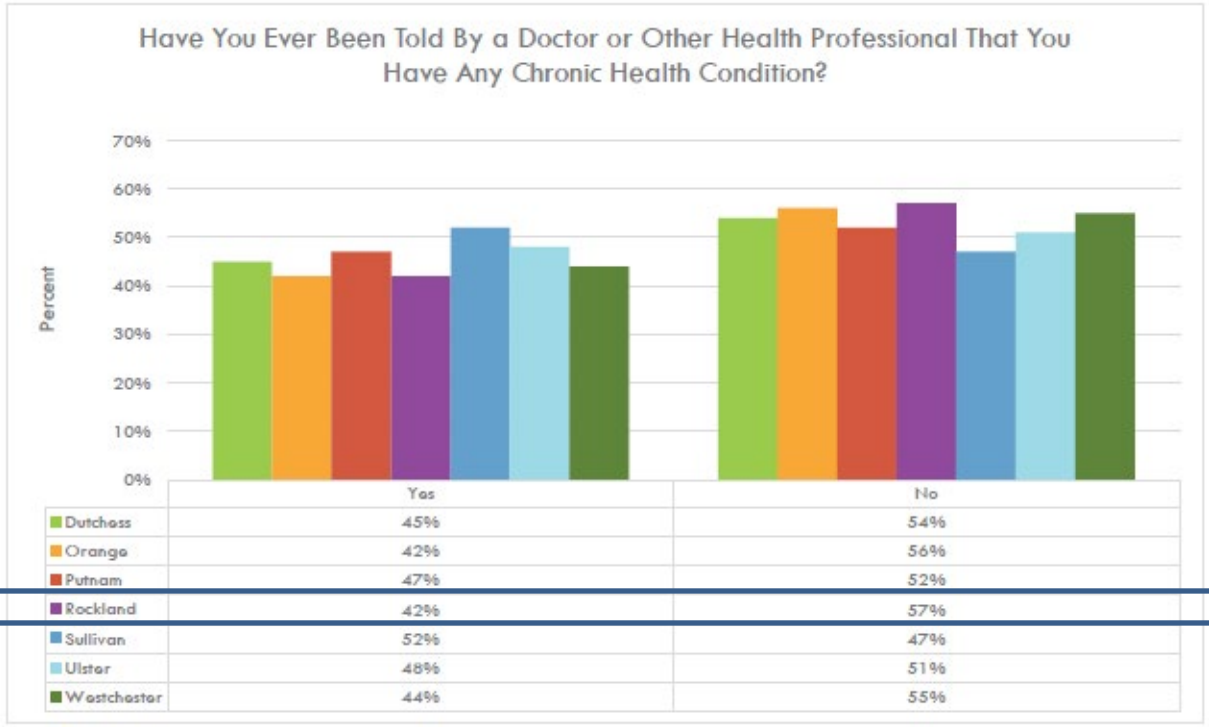


	Completely true	Somewhat true	Not very true	Not at all true
Dutchess	15%	39%	23%	14%
Orange	14%	37%	24%	18%
Putnam	11%	47%	24%	11%
Rockland	19%	43%	18%	9%
Sullivan	10%	25%	33%	29%
Ulster	9%	36%	31%	20%
Westchester	19%	42%	20%	9%

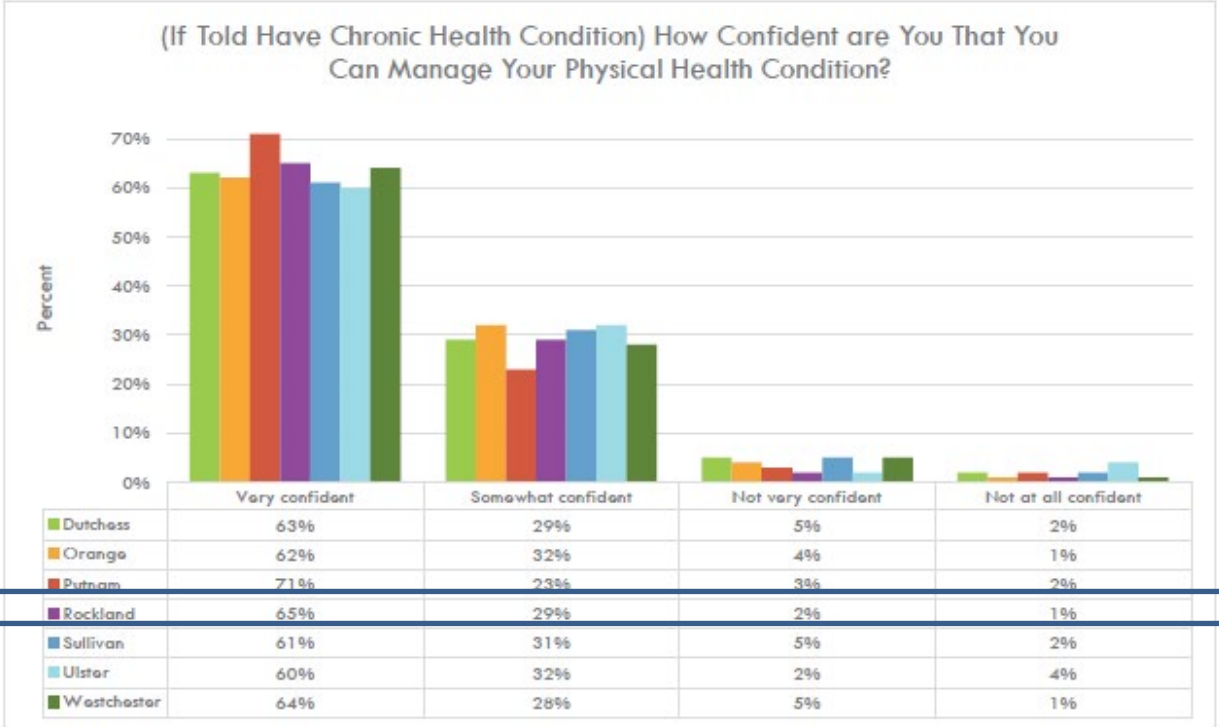
Physical Health



	Excellent	Good	Fair	Poor
Dutchess	33%	48%	14%	4%
Orange	35%	44%	15%	5%
Putnam	39%	48%	10%	2%
Rockland	40%	44%	13%	3%
Sullivan	27%	49%	19%	5%
Ulster	28%	50%	18%	3%
Westchester	37%	46%	13%	4%

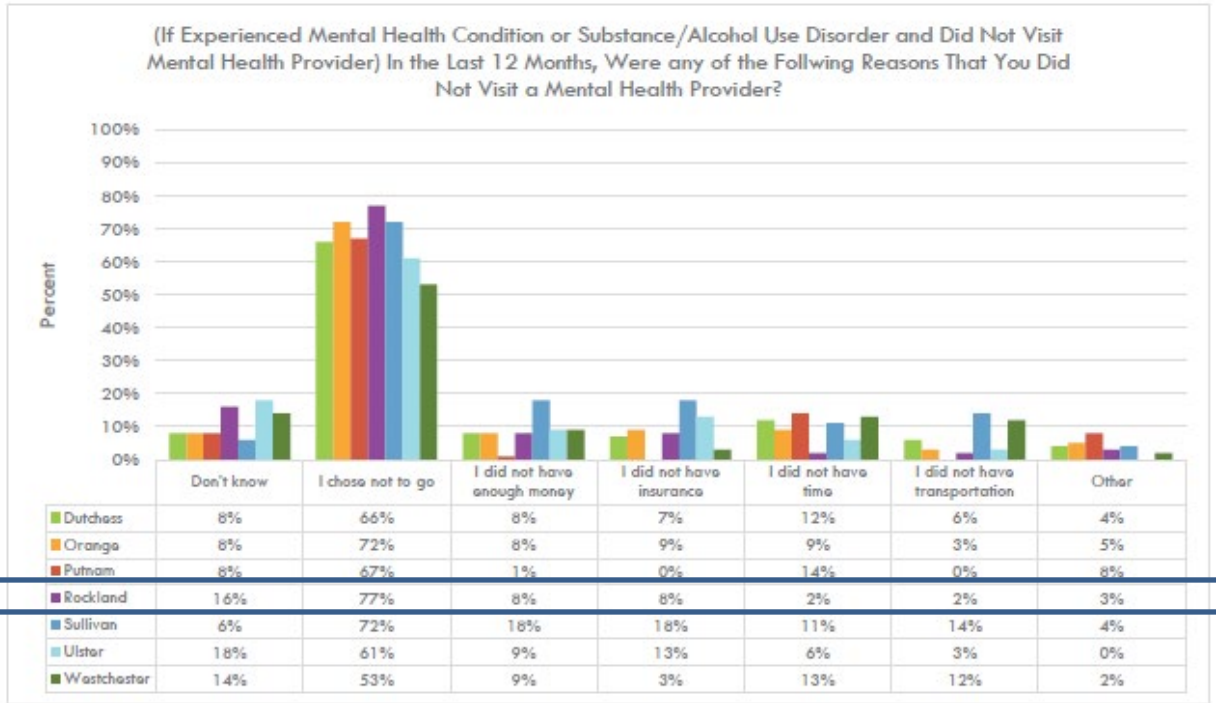


	Yes	No
Dutchess	45%	54%
Orange	42%	56%
Putnam	47%	52%
Rockland	42%	57%
Sullivan	52%	47%
Ulster	48%	51%
Westchester	44%	55%

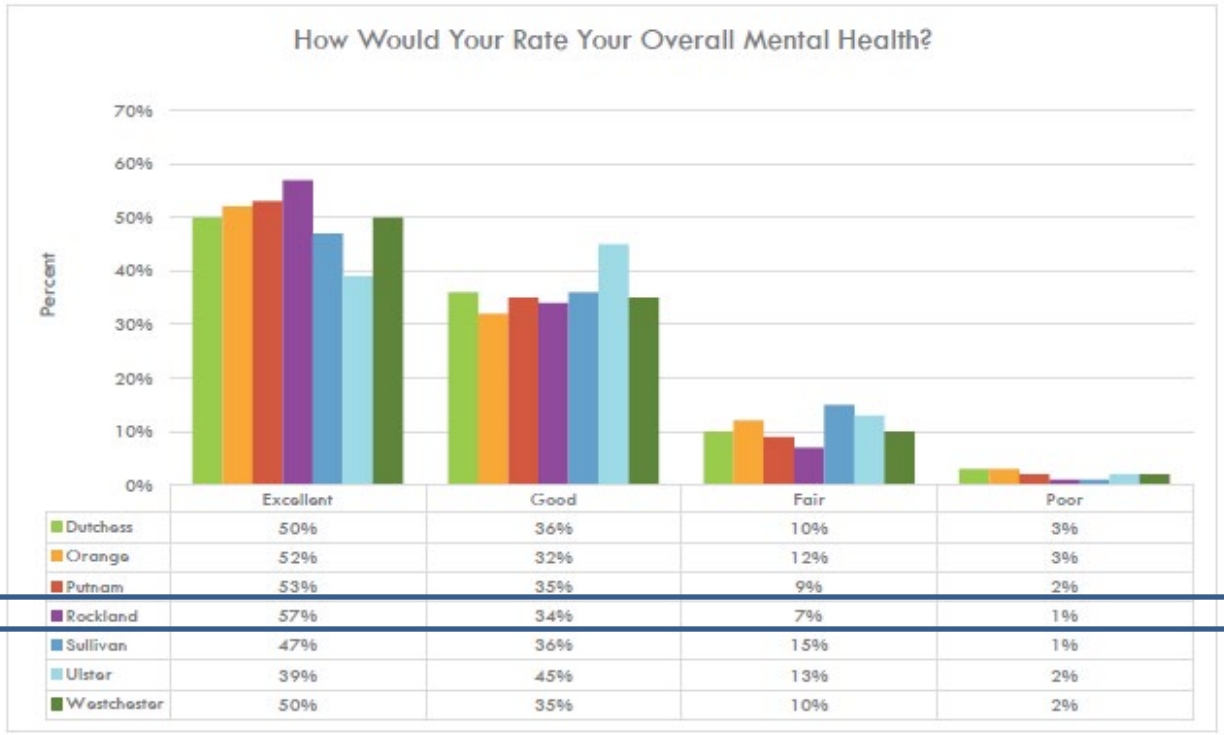


	Very confident	Somewhat confident	Not very confident	Not at all confident
Dutchess	63%	29%	5%	2%
Orange	62%	32%	4%	1%
Putnam	71%	23%	3%	2%
Rockland	65%	29%	2%	1%
Sullivan	61%	31%	5%	2%
Ulster	60%	32%	2%	4%
Westchester	64%	28%	5%	1%

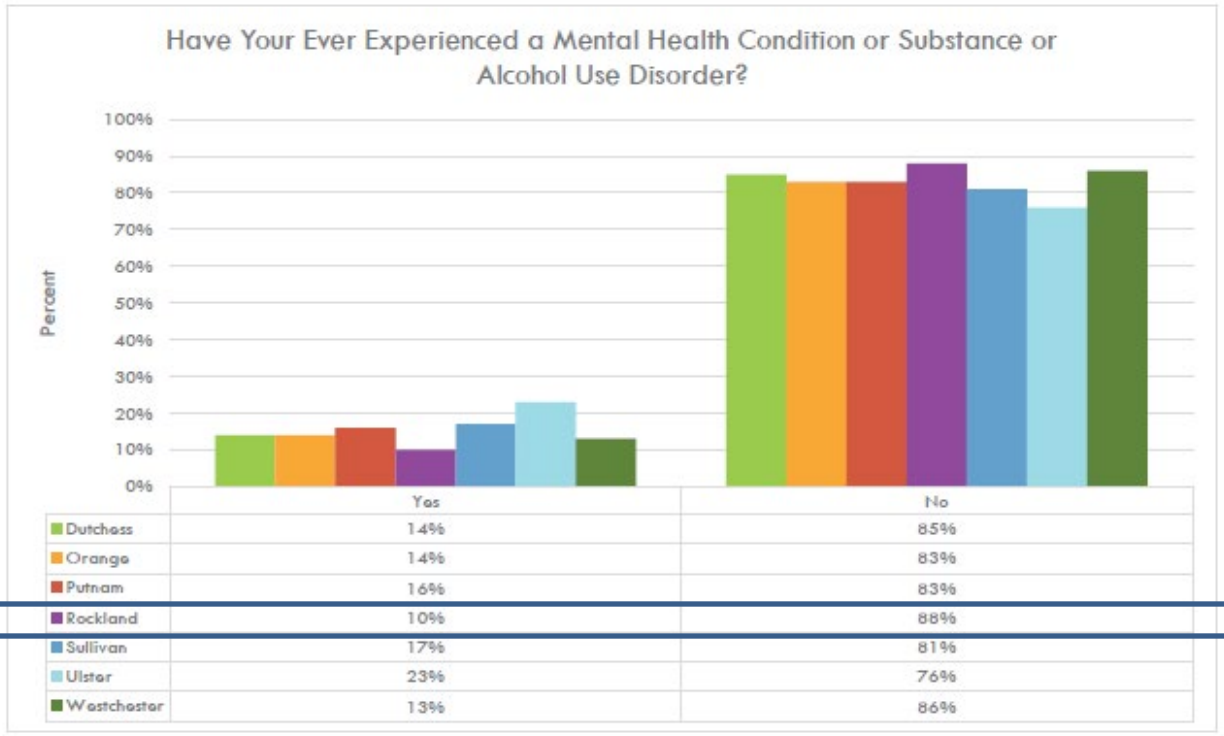
Mental Health



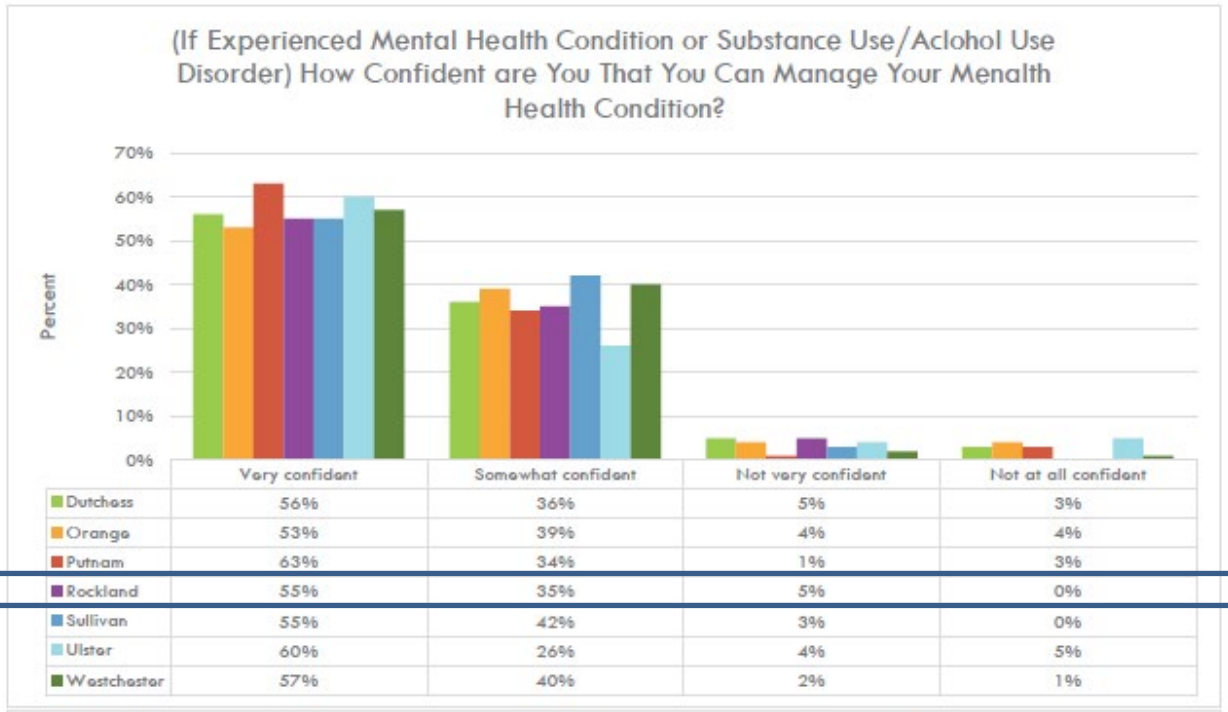
	Don't know	I chose not to go	I did not have enough money	I did not have insurance	I did not have time	I did not have transportation	Other
Dutchess	8%	66%	8%	7%	12%	6%	4%
Orange	8%	72%	8%	9%	9%	3%	5%
Putnam	8%	67%	1%	0%	14%	0%	8%
Rockland	16%	77%	8%	8%	2%	2%	3%
Sullivan	6%	72%	18%	18%	11%	14%	4%
Ulster	18%	61%	9%	13%	6%	3%	0%
Westchester	14%	53%	9%	3%	13%	12%	2%



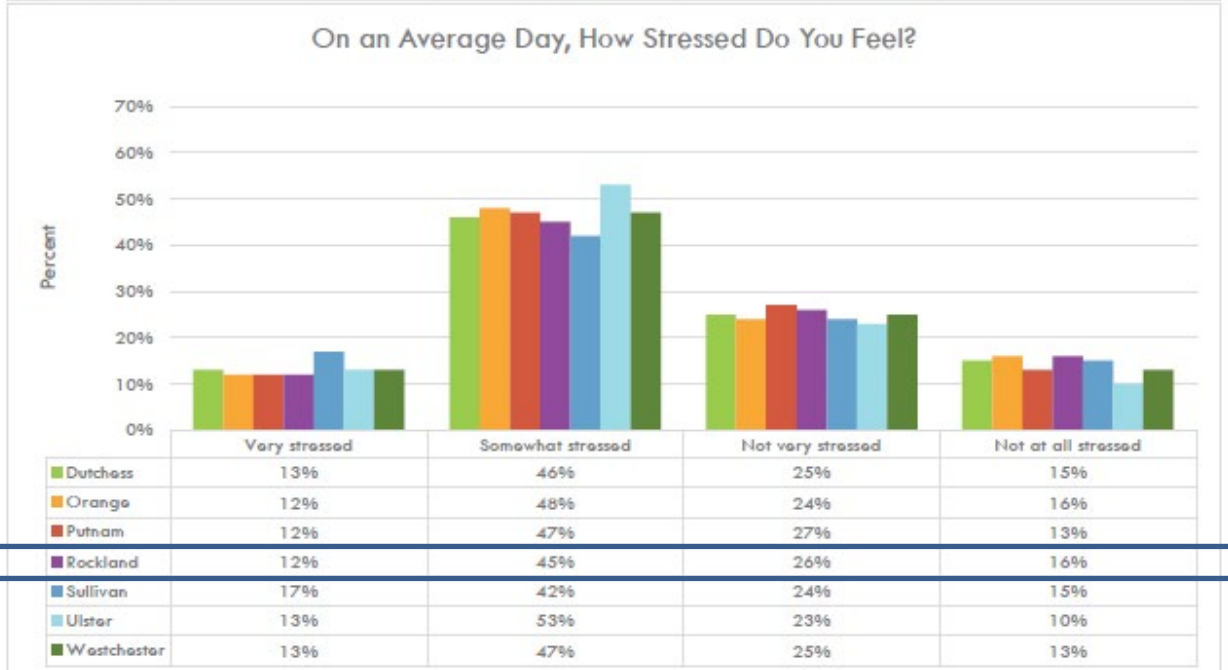
	Excellent	Good	Fair	Poor
Dutchess	50%	36%	10%	3%
Orange	52%	32%	12%	3%
Putnam	53%	35%	9%	2%
Rockland	57%	34%	7%	1%
Sullivan	47%	36%	15%	1%
Ulster	39%	45%	13%	2%
Westchester	50%	35%	10%	2%



	Yes	No
Dutchess	14%	85%
Orange	14%	83%
Putnam	16%	83%
Rockland	10%	88%
Sullivan	17%	81%
Ulster	23%	76%
Westchester	13%	86%

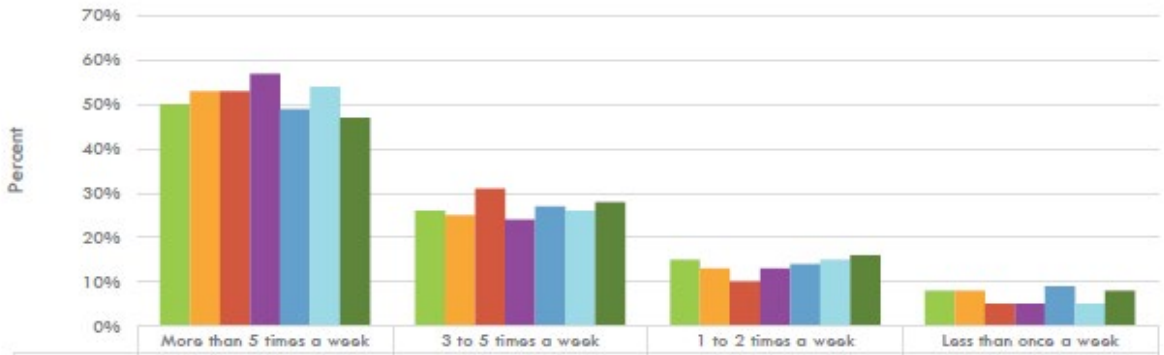


	Very confident	Somewhat confident	Not very confident	Not at all confident
Dutchess	56%	36%	5%	3%
Orange	53%	39%	4%	4%
Putnam	63%	34%	1%	3%
Rockland	55%	35%	5%	0%
Sullivan	55%	42%	3%	0%
Ulster	60%	26%	4%	5%
Westchester	57%	40%	2%	1%



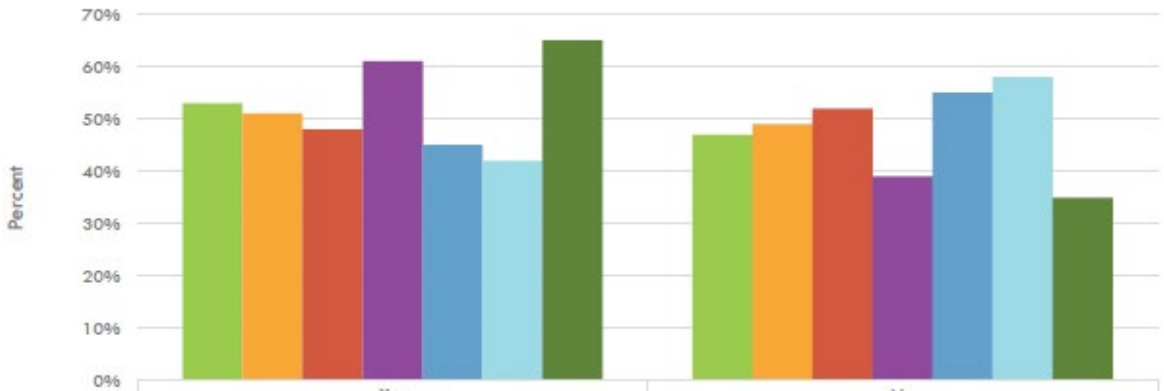
	Very stressed	Somewhat stressed	Not very stressed	Not at all stressed
Dutchess	13%	46%	25%	15%
Orange	12%	48%	24%	16%
Putnam	12%	47%	27%	13%
Rockland	12%	45%	26%	16%
Sullivan	17%	42%	24%	15%
Ulster	13%	53%	23%	10%
Westchester	13%	47%	25%	13%

In Your Everyday Life, How Often Do You Feel That Your Have Quality Encounters with Friends, Family, and Neighbors That Make You Feel That People Care About You?



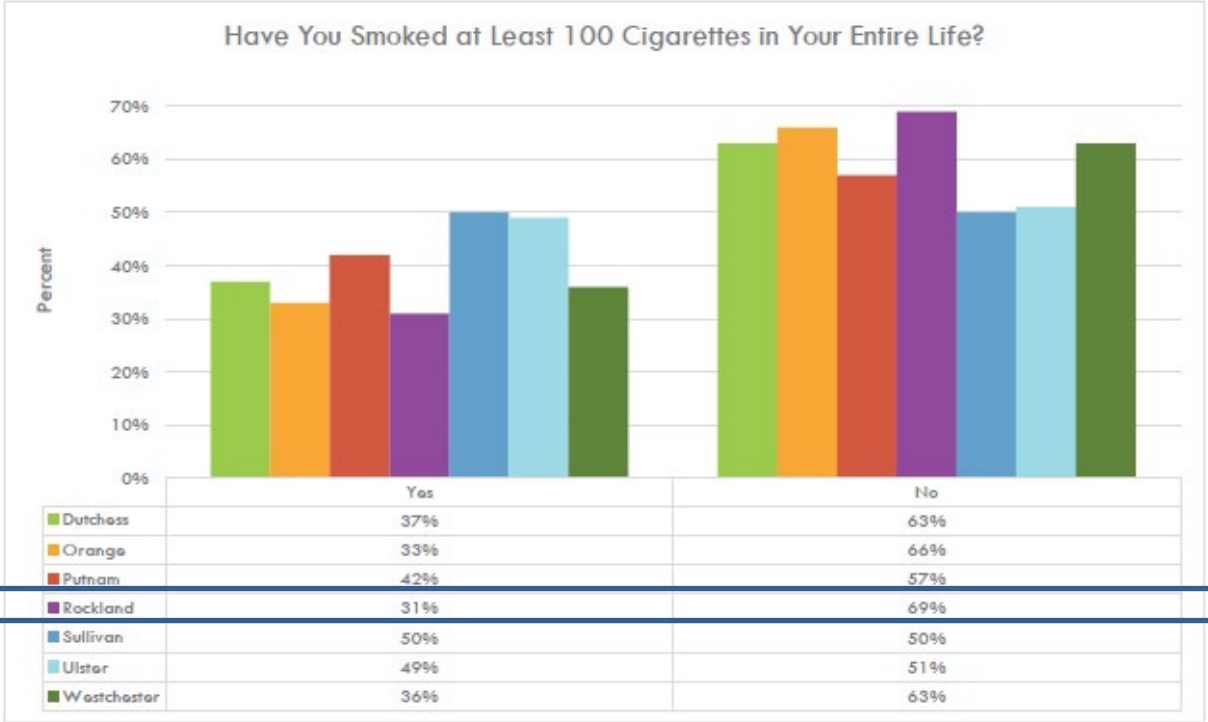
	More than 5 times a week	3 to 5 times a week	1 to 2 times a week	Less than once a week
Dutchess	50%	26%	15%	8%
Orange	53%	25%	13%	8%
Putnam	53%	31%	10%	5%
Rockland	57%	24%	13%	5%
Sullivan	49%	27%	14%	9%
Ulster	54%	26%	15%	5%
Westchester	47%	28%	16%	8%

(If Experienced Mental Health Condition or Substanc/Alcohol Use Disorder) Have You Visited a Mental Health Provider?

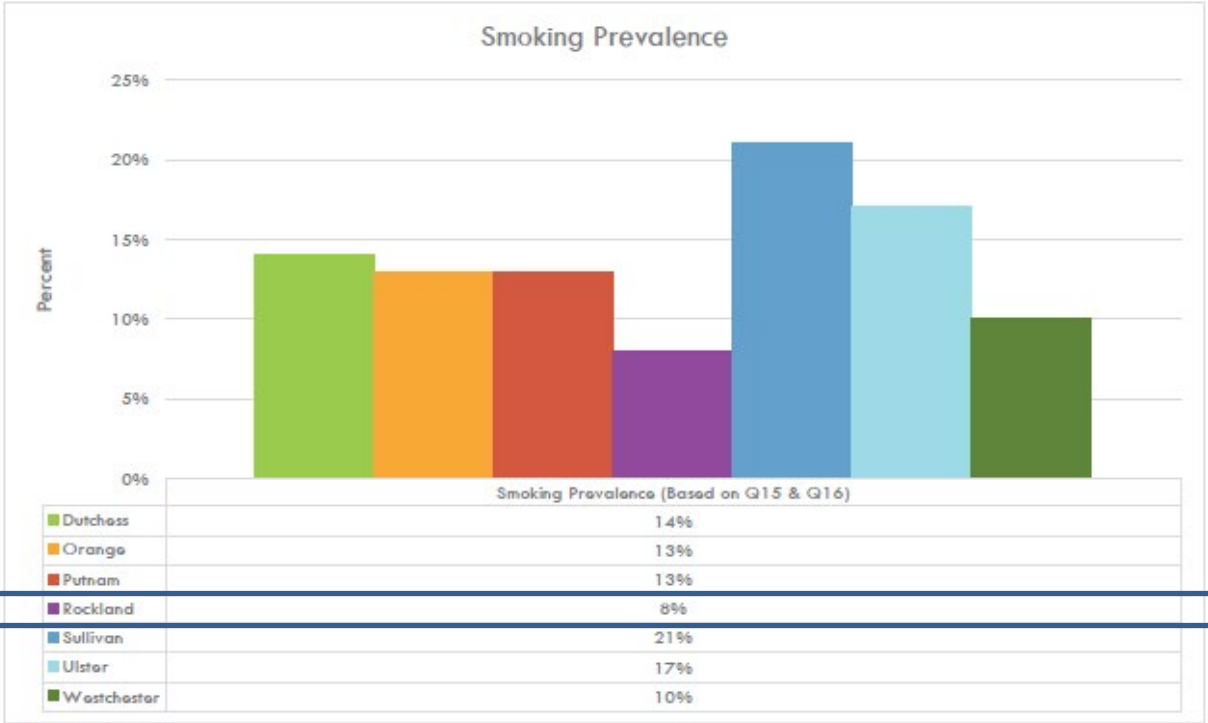


	Yes	No
Dutchess	53%	47%
Orange	51%	49%
Putnam	48%	52%
Rockland	61%	39%
Sullivan	45%	55%
Ulster	42%	58%
Westchester	65%	35%

Smoking

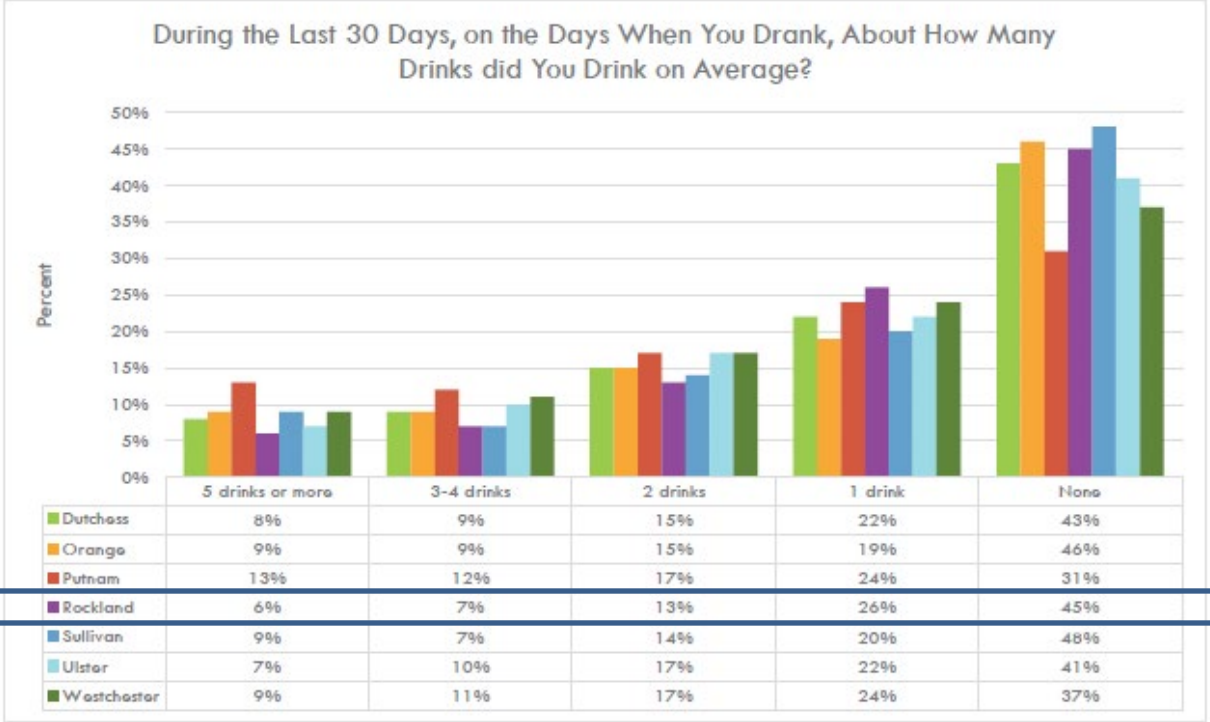


	Yes	No
Dutchess	37%	63%
Orange	33%	66%
Putnam	42%	57%
Rockland	31%	69%
Sullivan	50%	50%
Ulster	49%	51%
Westchester	36%	63%

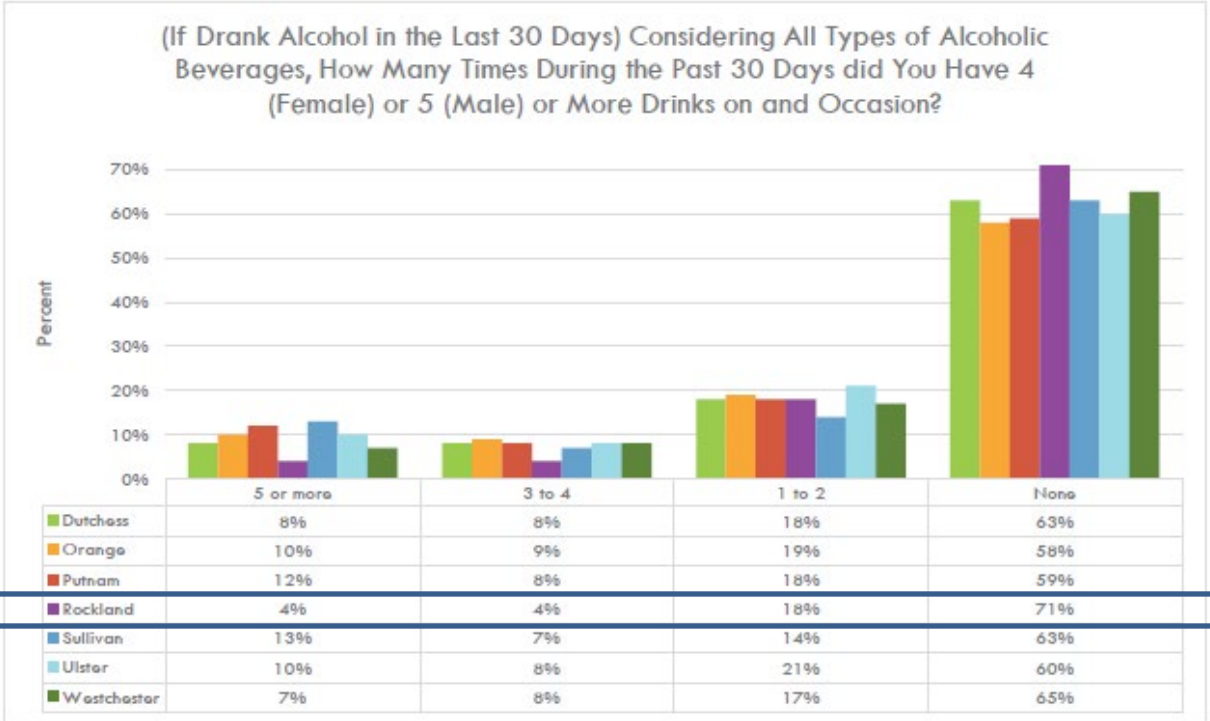


	Smoking Prevalence (Based on Q15 & Q16)
Dutchess	14%
Orange	13%
Putnam	13%
Rockland	8%
Sullivan	21%
Ulster	17%
Westchester	10%

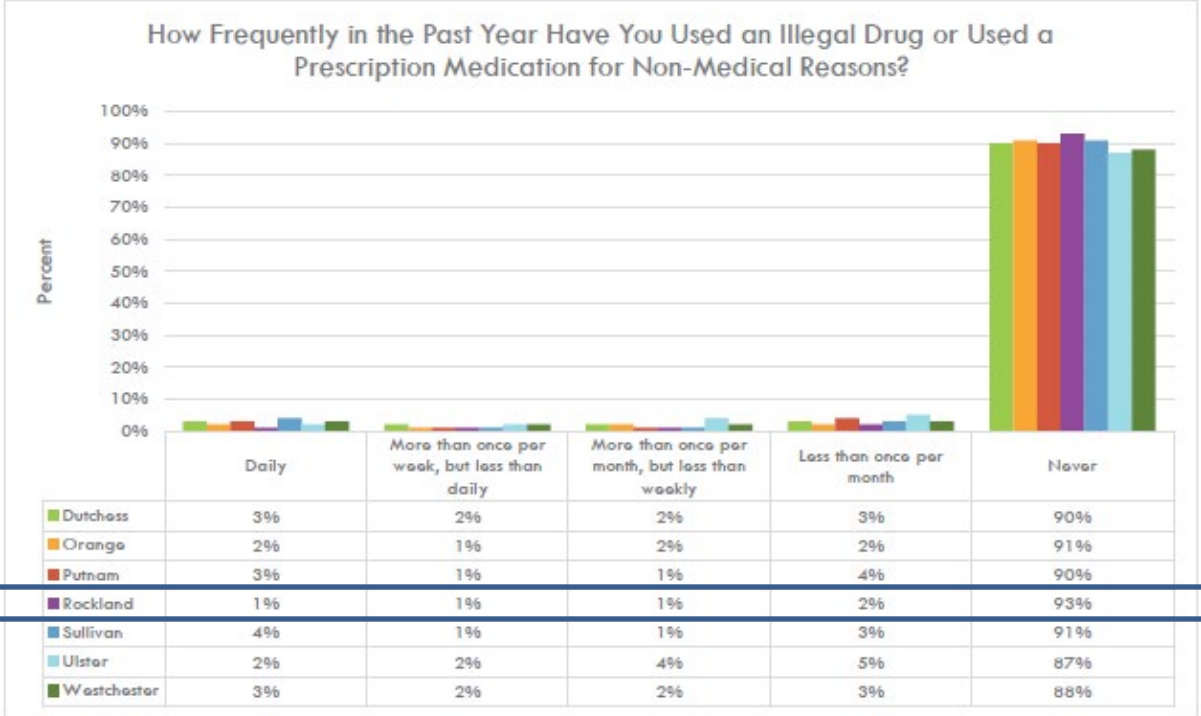
Alcohol and Substance Use



	5 drinks or more	3-4 drinks	2 drinks	1 drink	None
Dutchess	8%	9%	15%	22%	43%
Orange	9%	9%	15%	19%	46%
Putnam	13%	12%	17%	24%	31%
Rockland	6%	7%	13%	26%	45%
Sullivan	9%	7%	14%	20%	48%
Ulster	7%	10%	17%	22%	41%
Westchester	9%	11%	17%	24%	37%

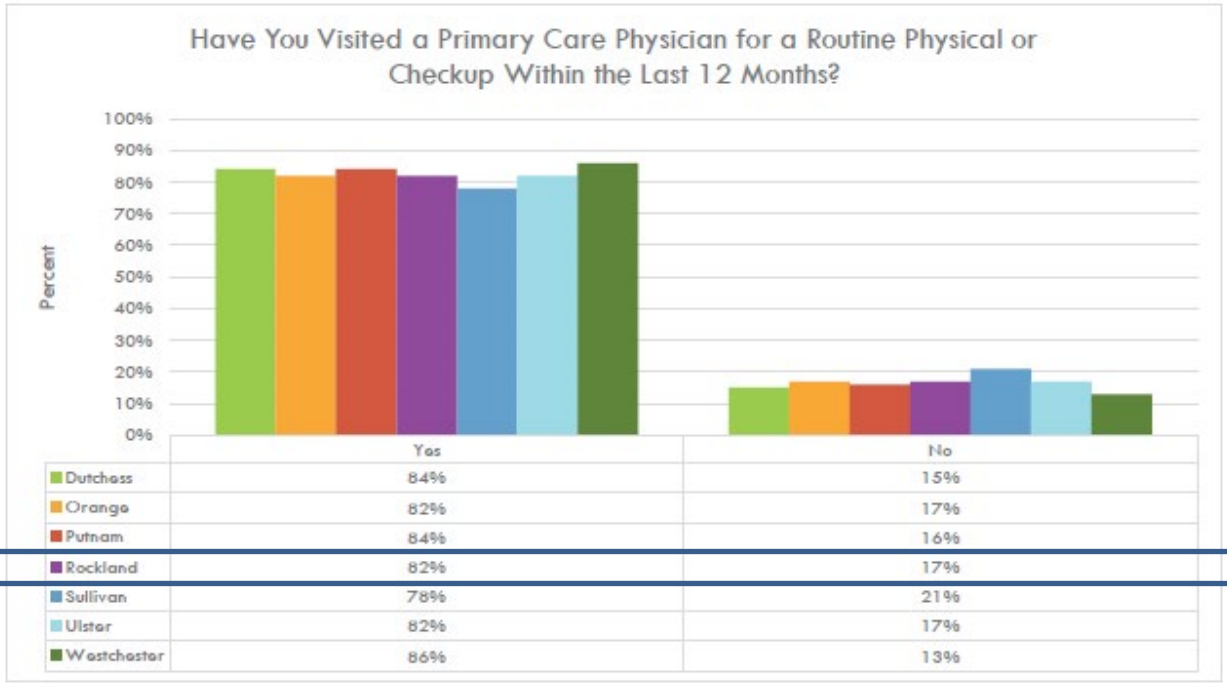


	5 or more	3 to 4	1 to 2	None
Dutchess	8%	8%	18%	63%
Orange	10%	9%	19%	58%
Putnam	12%	8%	18%	59%
Rockland	4%	4%	18%	71%
Sullivan	13%	7%	14%	63%
Ulster	10%	8%	21%	60%
Westchester	7%	8%	17%	65%

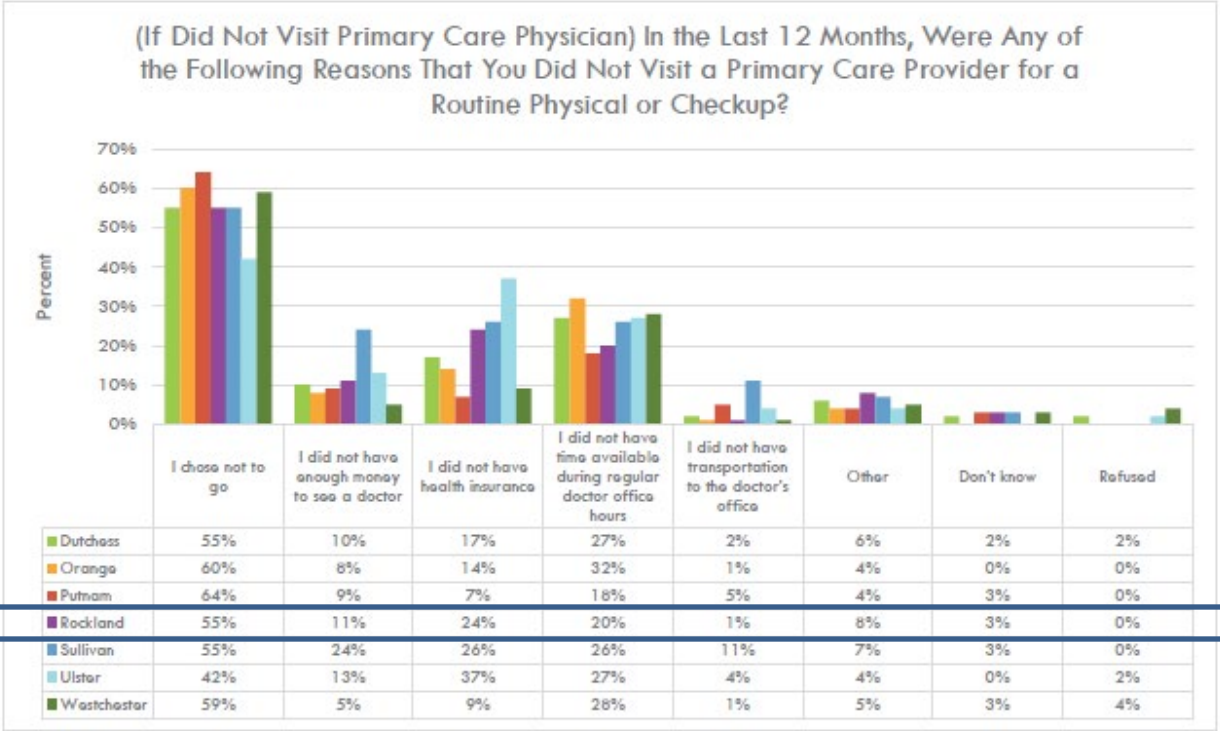


	Daily	More than once per week, but less than daily	More than once per month, but less than weekly	Less than once per month	Never
Dutchess	3%	2%	2%	3%	90%
Orange	2%	1%	2%	2%	91%
Putnam	3%	1%	1%	4%	90%
Rockland	1%	1%	1%	2%	93%
Sullivan	4%	1%	1%	3%	91%
Ulster	2%	2%	4%	5%	87%
Westchester	3%	2%	2%	3%	88%

Primary Care

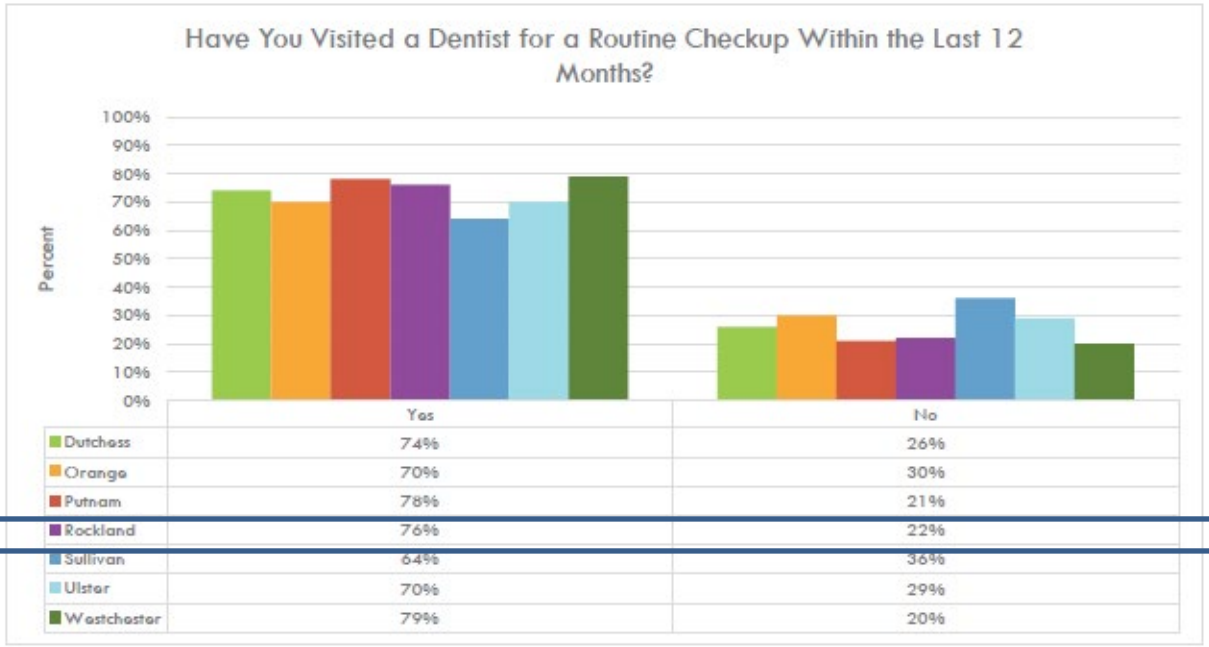


	Yes	No
Dutchess	84%	15%
Orange	82%	17%
Putnam	84%	16%
Rockland	82%	17%
Sullivan	78%	21%
Ulster	82%	17%
Westchester	86%	13%

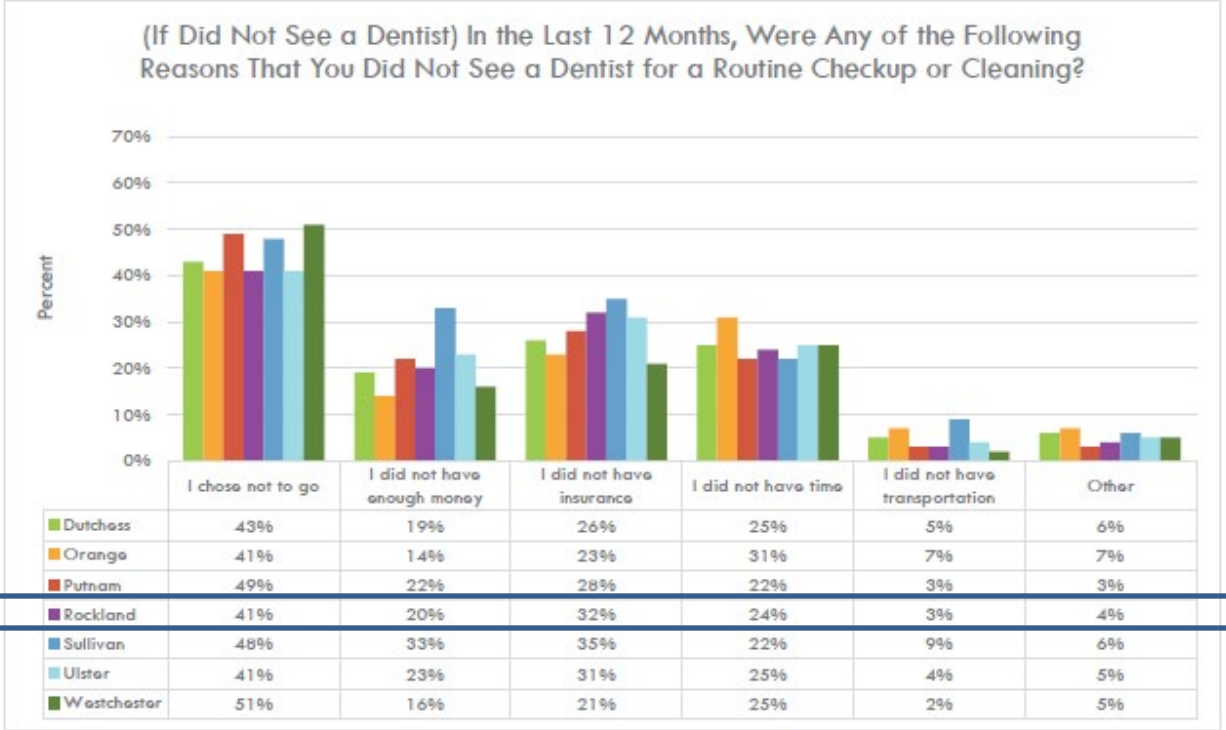


	I chose not to go	I did not have enough money to see a doctor	I did not have health insurance	I did not have time available during regular doctor office hours	I did not have transportation to the doctor's office	Other	Don't know	Refused
Dutchess	55%	10%	17%	27%	2%	6%	2%	2%
Orange	60%	8%	14%	32%	1%	4%	0%	0%
Putnam	64%	9%	7%	18%	5%	4%	3%	0%
Rockland	55%	11%	24%	20%	1%	8%	3%	0%
Sullivan	55%	24%	26%	26%	11%	7%	3%	0%
Ulster	42%	13%	37%	27%	4%	4%	0%	2%
Westchester	59%	5%	9%	28%	1%	5%	3%	4%

Dental Health

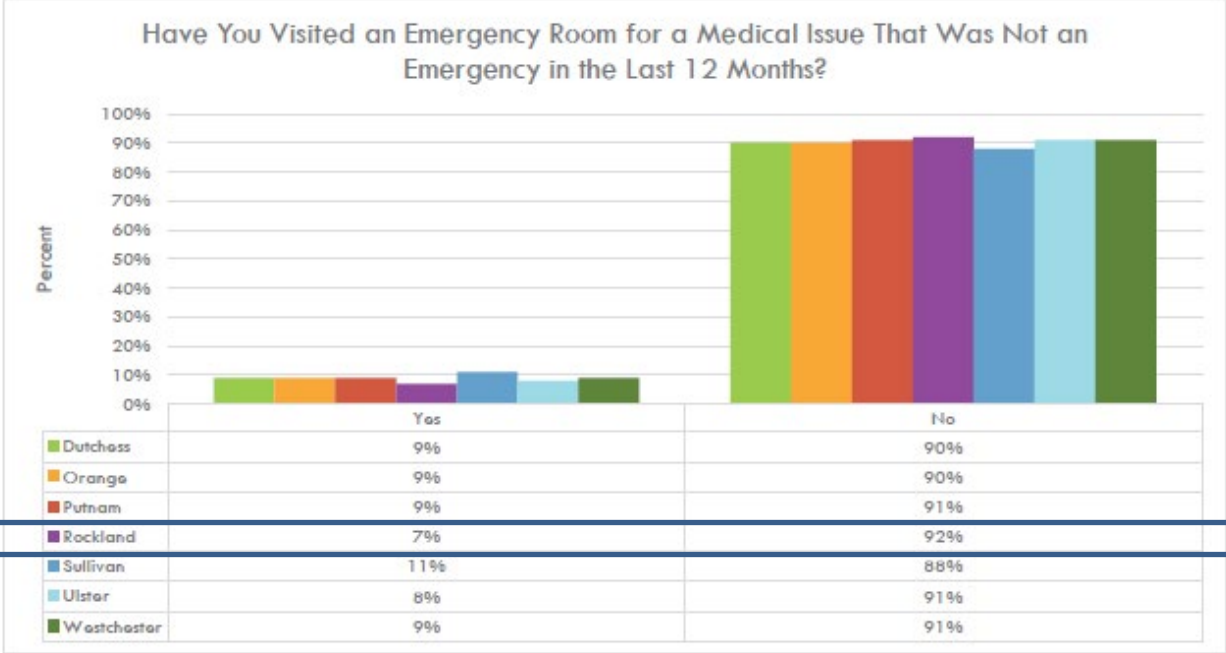


	Yes	No
Dutchess	74%	26%
Orange	70%	30%
Putnam	78%	21%
Rockland	76%	22%
Sullivan	64%	36%
Ulster	70%	29%
Westchester	79%	20%

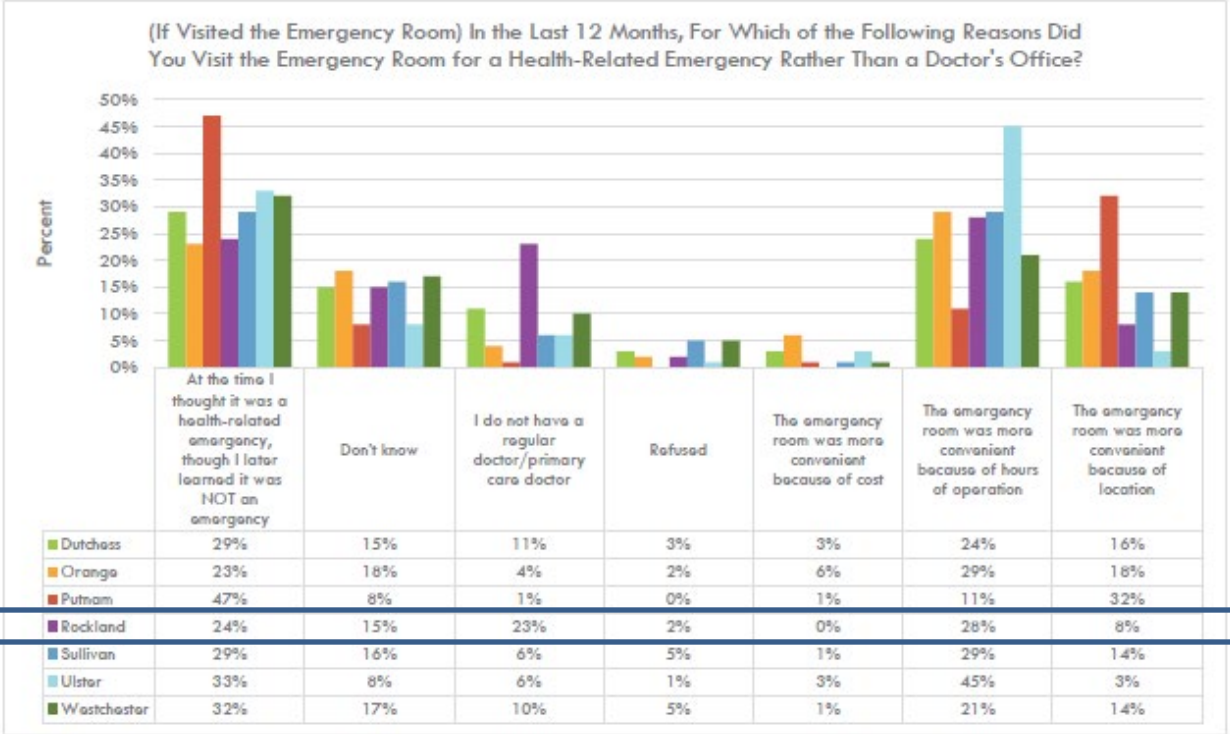


	I chose not to go	I did not have enough money	I did not have insurance	I did not have time	I did not have transportation	Other
Dutchess	43%	19%	26%	25%	5%	6%
Orange	41%	14%	23%	31%	7%	7%
Putnam	49%	22%	28%	22%	3%	3%
Rockland	41%	20%	32%	24%	3%	4%
Sullivan	48%	33%	35%	22%	9%	6%
Ulster	41%	23%	31%	25%	4%	5%
Westchester	51%	16%	21%	25%	2%	5%

Emergency Room Usage

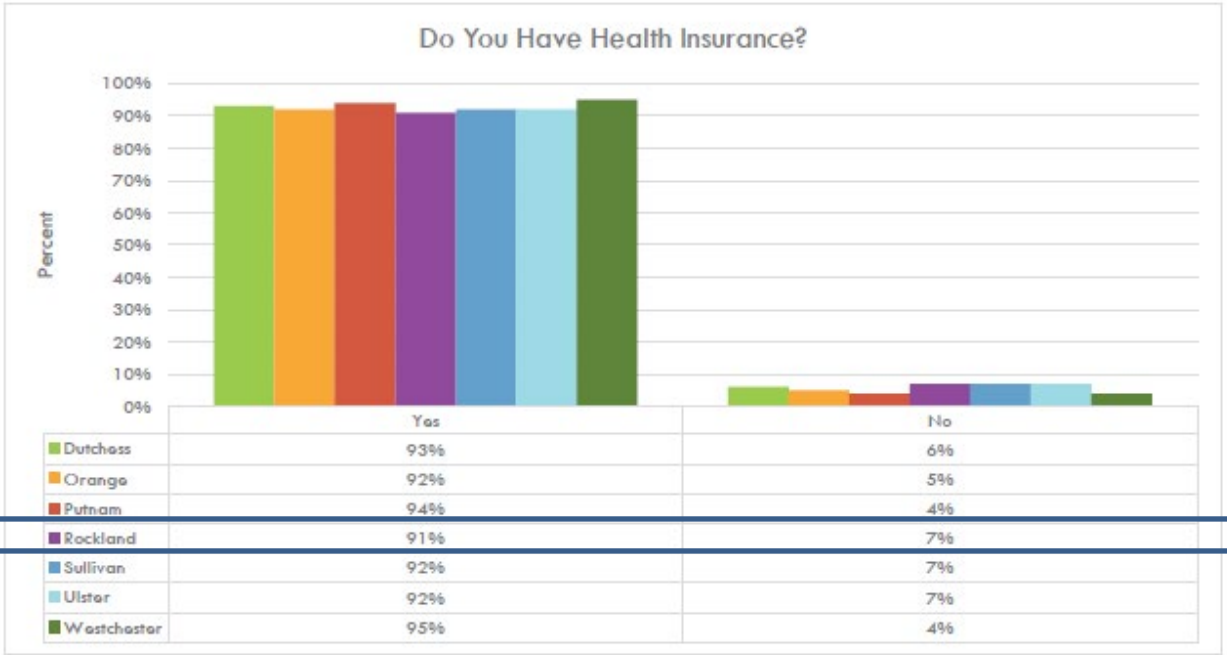


	Yes	No
Dutchess	9%	90%
Orange	9%	90%
Putnam	9%	91%
Rockland	7%	92%
Sullivan	11%	88%
Ulster	8%	91%
Westchester	9%	91%

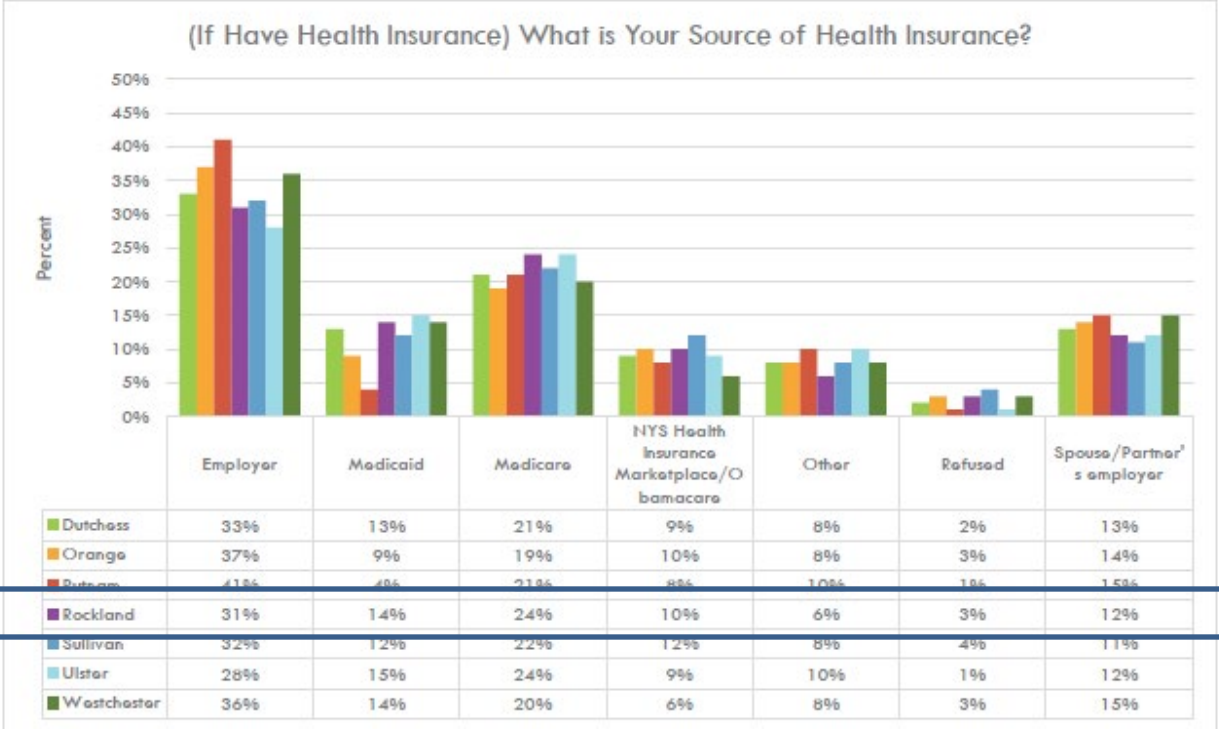


	At the time I thought it was a health-related emergency, though I later learned it was NOT an emergency	Don't know	I do not have a regular doctor/primary care doctor	Refused	The emergency room was more convenient because of cost	The emergency room was more convenient because of hours of operation	The emergency room was more convenient because of location
Dutchess	29%	15%	11%	3%	3%	24%	16%
Orange	23%	18%	4%	2%	6%	29%	18%
Putnam	47%	8%	1%	0%	1%	11%	32%
Rockland	24%	15%	23%	2%	0%	28%	8%
Sullivan	29%	16%	6%	5%	1%	29%	14%
Ulster	33%	8%	6%	1%	3%	45%	3%
Westchester	32%	17%	10%	5%	1%	21%	14%

Health Insurance

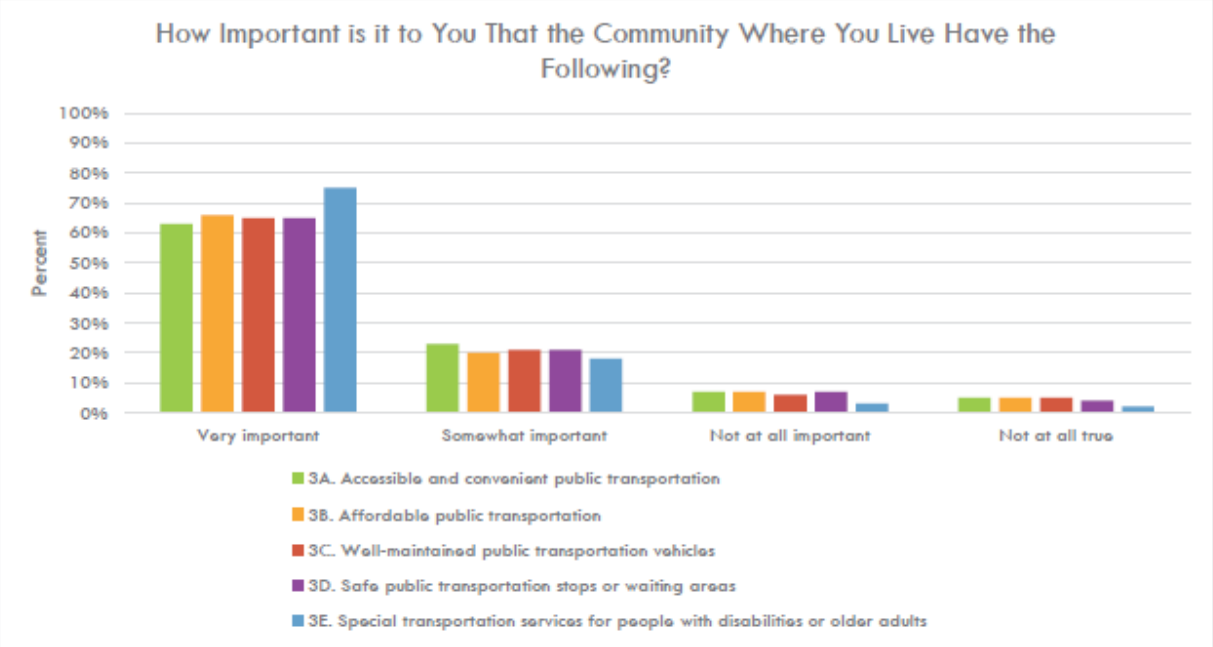


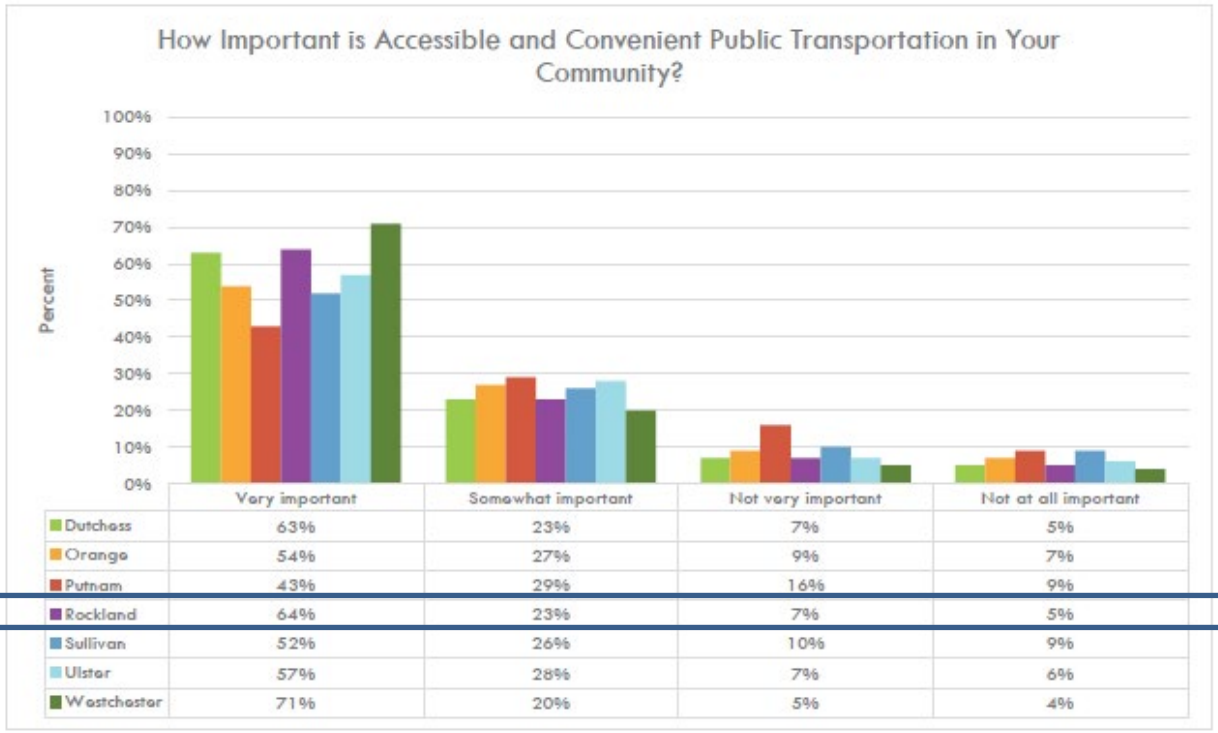
	Yes	No
Dutchess	93%	6%
Orange	92%	5%
Putnam	94%	4%
Rockland	91%	7%
Sullivan	92%	7%
Ulster	92%	7%
Westchester	95%	4%



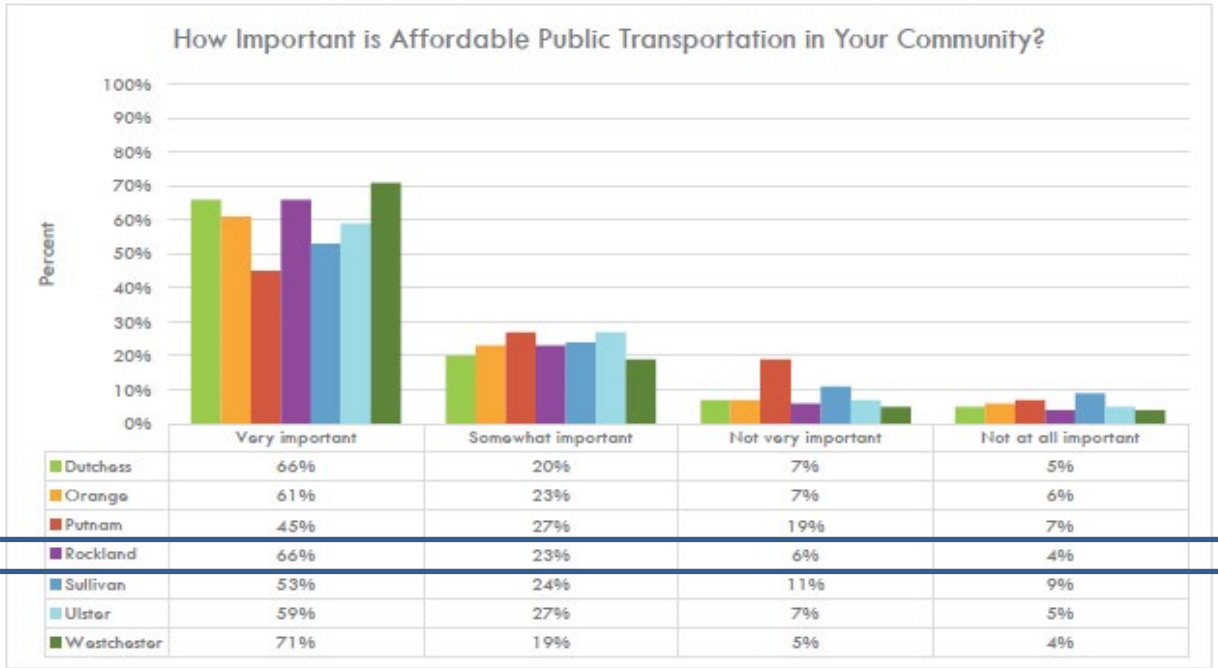
	Employer	Medicaid	Medicare	NYS Health Insurance Marketplace/Obamacare	Other	Refused	Spouse/Partner's employer
Dutchess	33%	13%	21%	9%	8%	2%	13%
Orange	37%	9%	19%	10%	8%	3%	14%
Putnam	41%	4%	21%	8%	10%	1%	15%
Rockland	31%	14%	24%	10%	6%	3%	12%
Sullivan	32%	12%	22%	12%	8%	4%	11%
Ulster	28%	15%	24%	9%	10%	1%	12%
Westchester	36%	14%	20%	6%	8%	3%	15%

Transportation

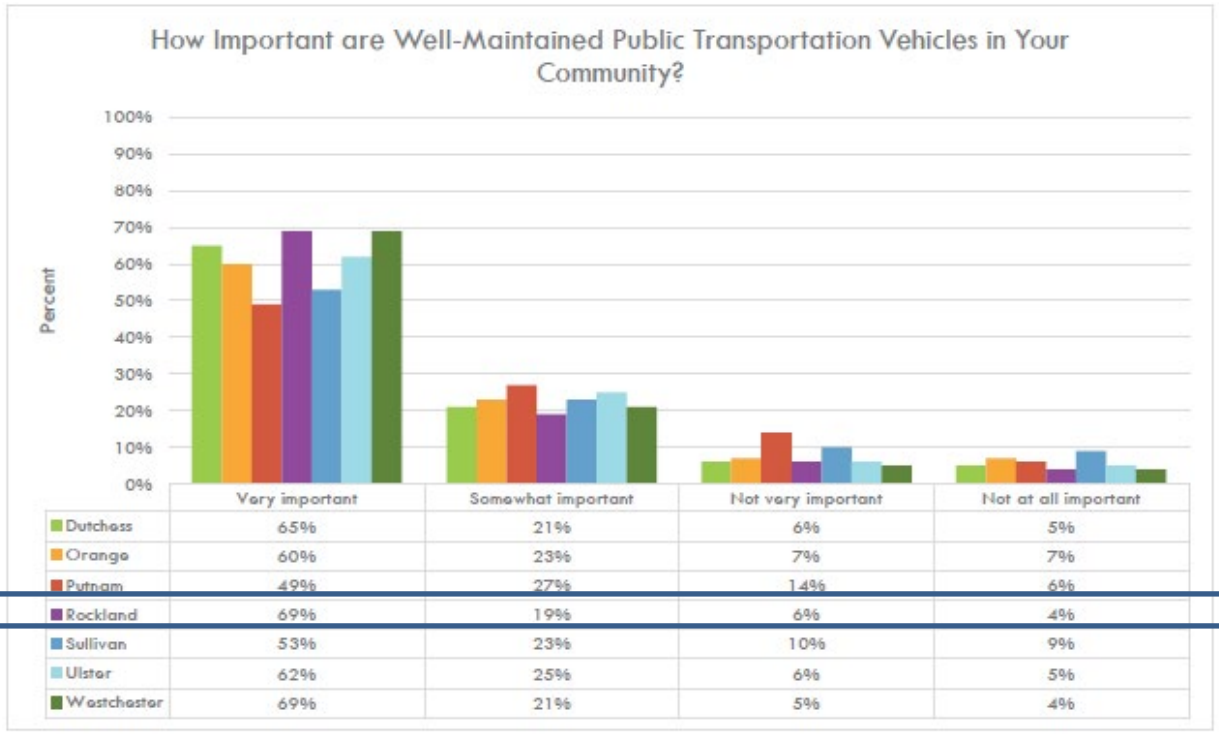




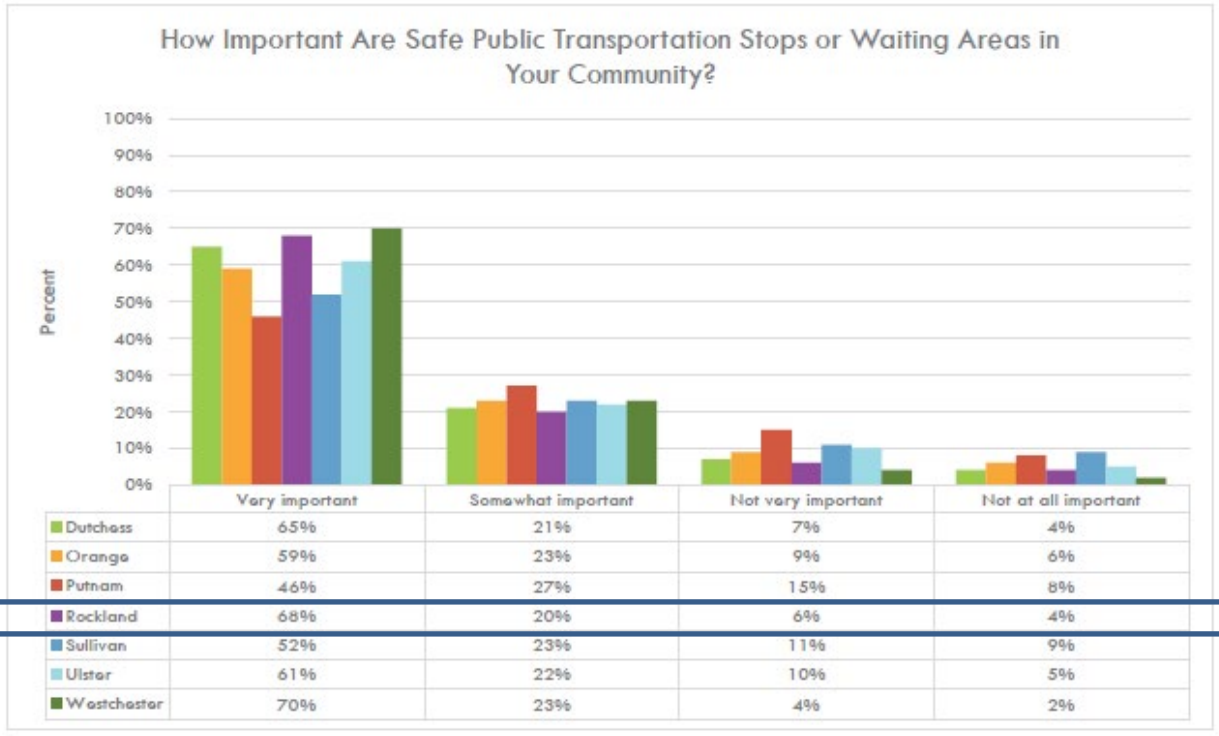
	Very important	Somewhat important	Not very important	Not at all important
Dutchess	63%	23%	7%	5%
Orange	54%	27%	9%	7%
Putnam	43%	29%	16%	9%
Rockland	64%	23%	7%	5%
Sullivan	52%	26%	10%	9%
Ulster	57%	28%	7%	6%
Westchester	71%	20%	5%	4%



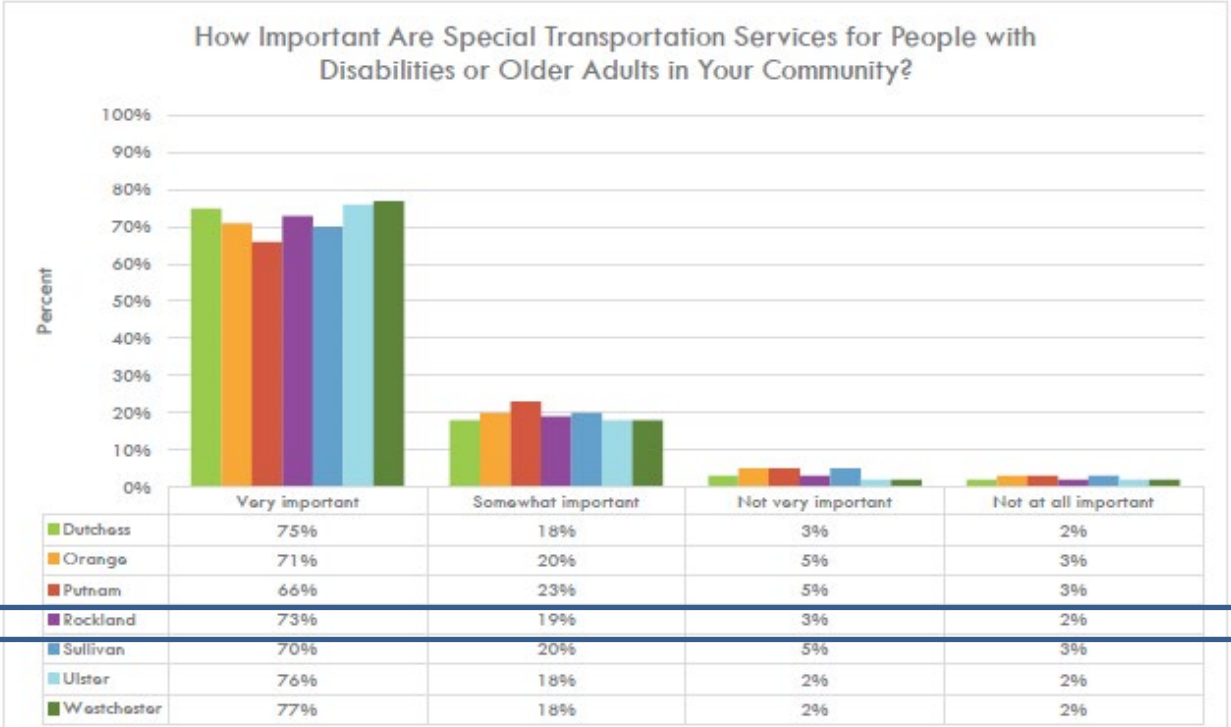
	Very important	Somewhat important	Not very important	Not at all important
Dutchess	66%	20%	7%	5%
Orange	61%	23%	7%	6%
Putnam	45%	27%	19%	7%
Rockland	66%	23%	6%	4%
Sullivan	53%	24%	11%	9%
Ulster	59%	27%	7%	5%
Westchester	71%	19%	5%	4%



	Very important	Somewhat important	Not very important	Not at all important
Dutchess	65%	21%	6%	5%
Orange	60%	23%	7%	7%
Putnam	49%	27%	14%	6%
Rockland	69%	19%	6%	4%
Sullivan	53%	23%	10%	9%
Ulster	62%	25%	6%	5%
Westchester	69%	21%	5%	4%

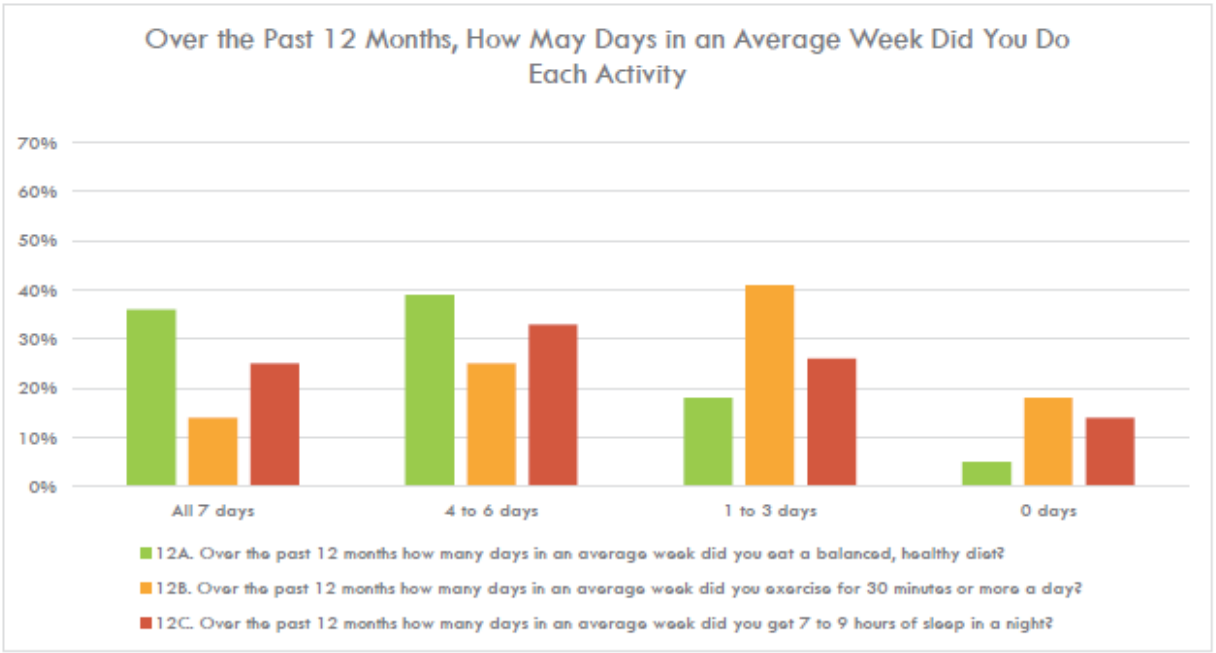


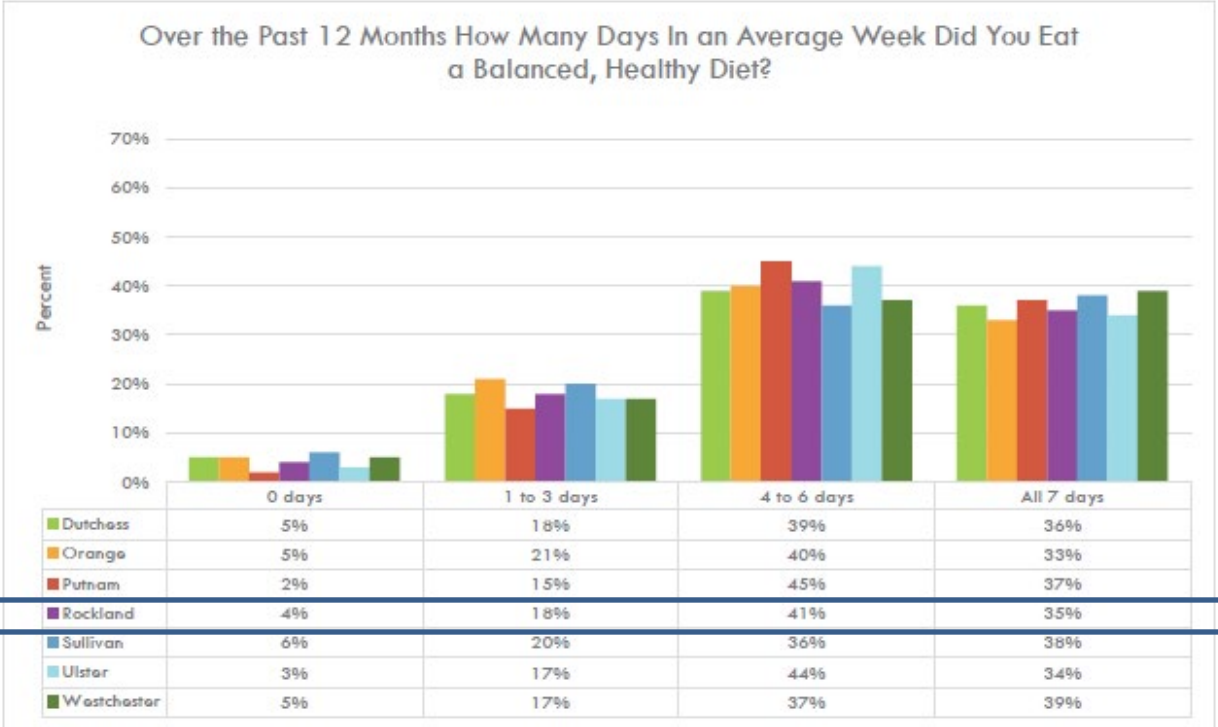
	Very important	Somewhat important	Not very important	Not at all important
Dutchess	65%	21%	7%	4%
Orange	59%	23%	9%	6%
Putnam	46%	27%	15%	8%
Rockland	68%	20%	6%	4%
Sullivan	52%	23%	11%	9%
Ulster	61%	22%	10%	5%
Westchester	70%	23%	4%	2%



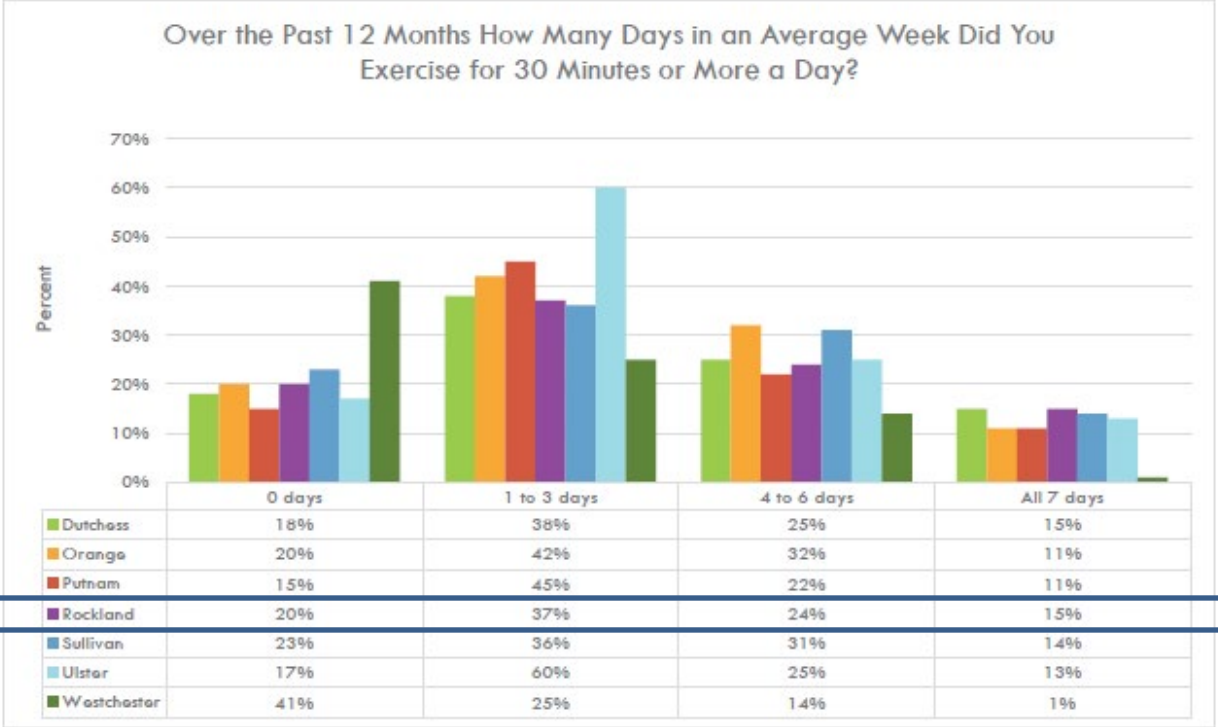
	Very important	Somewhat important	Not very important	Not at all important
Dutchess	75%	18%	3%	2%
Orange	71%	20%	5%	3%
Putnam	66%	23%	5%	3%
Rockland	73%	19%	3%	2%
Sullivan	70%	20%	5%	3%
Ulster	76%	18%	2%	2%
Westchester	77%	18%	2%	2%

Health Behaviors

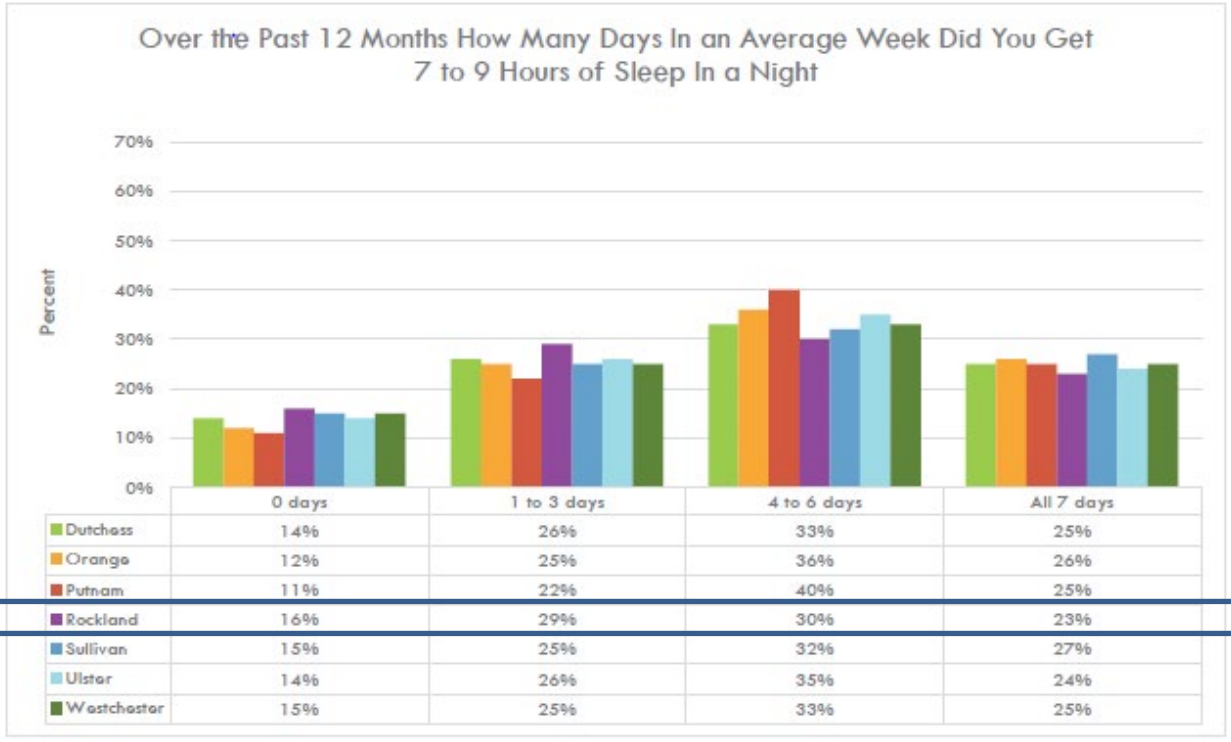




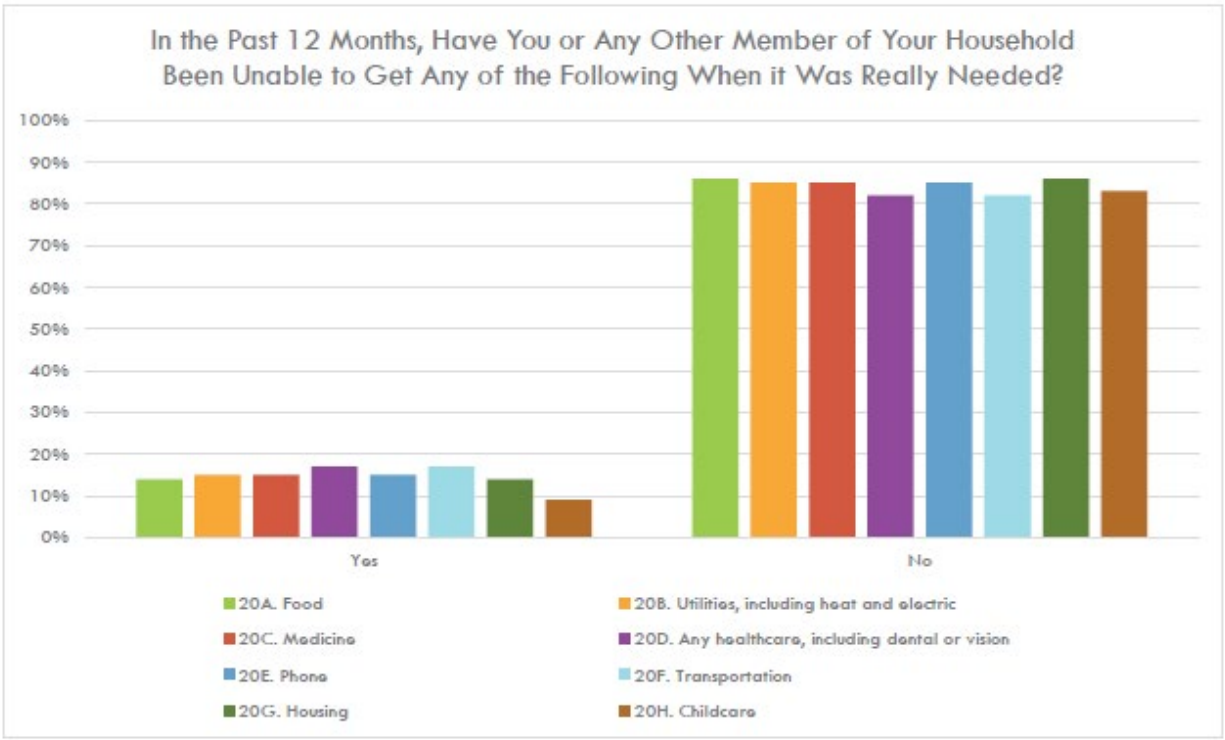
	0 days	1 to 3 days	4 to 6 days	All 7 days
Dutchess	5%	18%	39%	36%
Orange	5%	21%	40%	33%
Putnam	2%	15%	45%	37%
Rockland	4%	18%	41%	35%
Sullivan	6%	20%	36%	38%
Ulster	3%	17%	44%	34%
Westchester	5%	17%	37%	39%

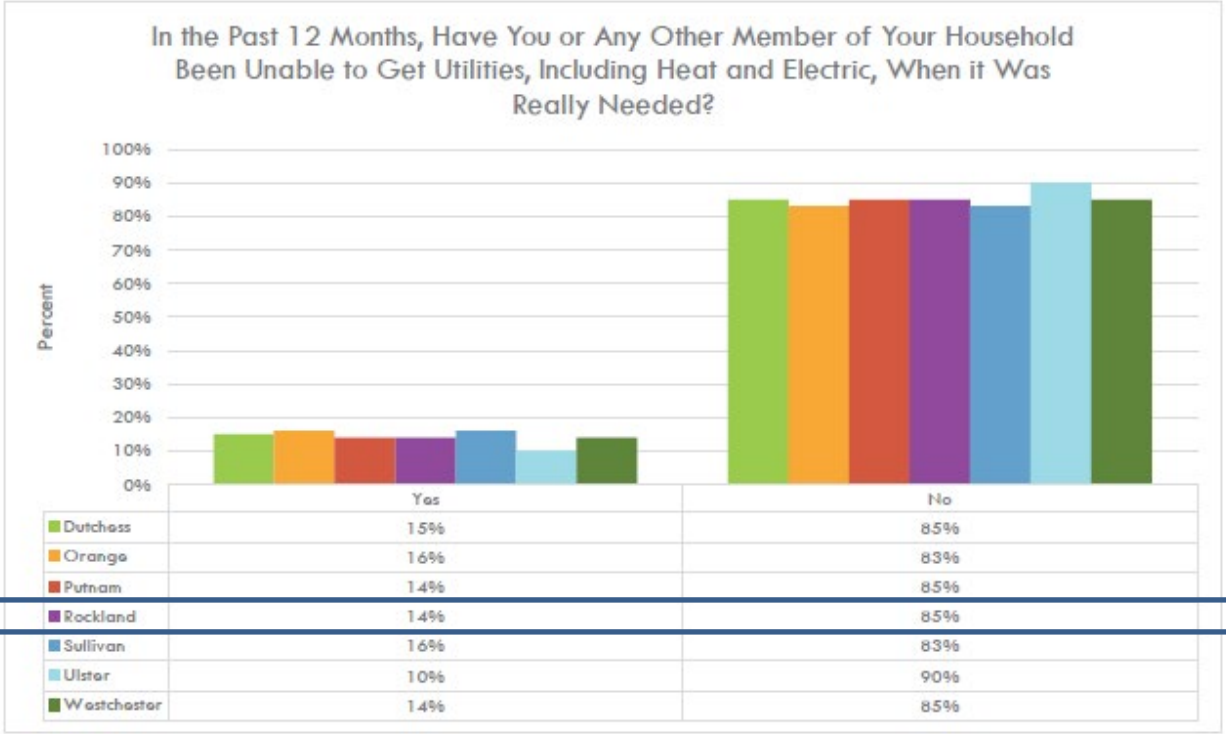


	0 days	1 to 3 days	4 to 6 days	All 7 days
Dutchess	18%	38%	25%	15%
Orange	20%	42%	32%	11%
Putnam	15%	45%	22%	11%
Rockland	20%	37%	24%	15%
Sullivan	23%	36%	31%	14%
Ulster	17%	60%	25%	13%
Westchester	41%	25%	14%	1%

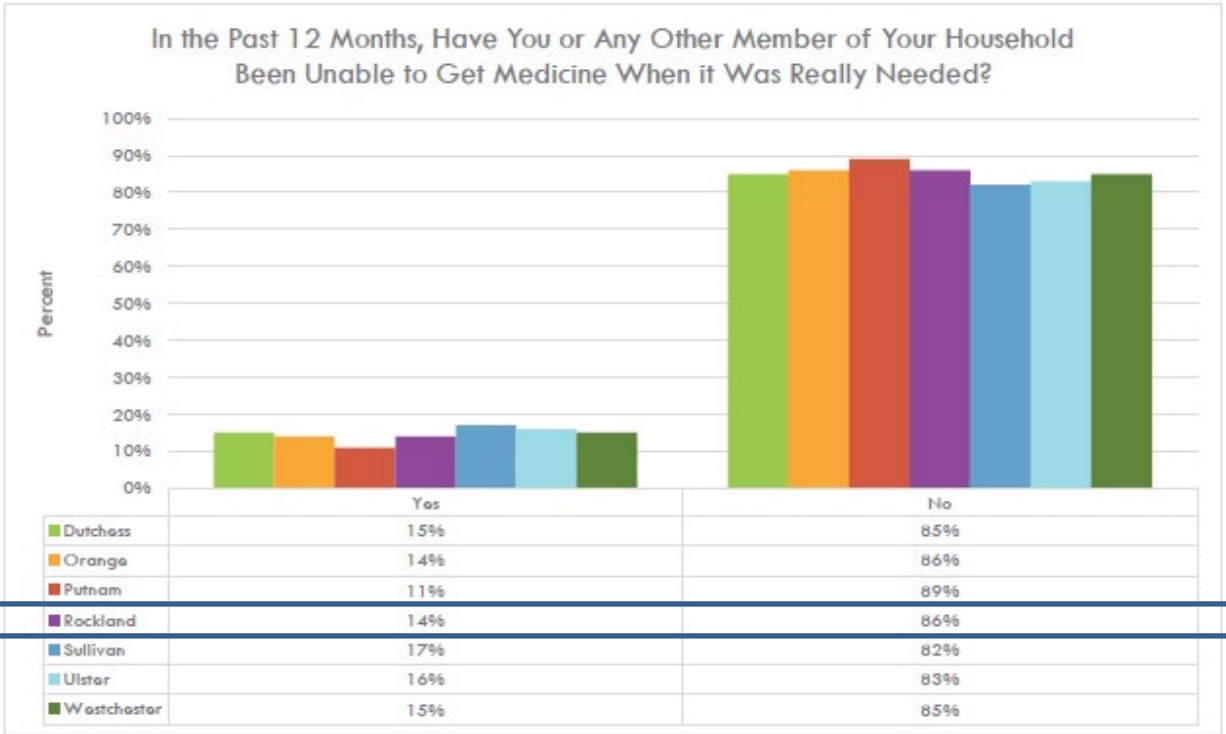


	0 days	1 to 3 days	4 to 6 days	All 7 days
Dutchess	14%	26%	33%	25%
Orange	12%	25%	36%	26%
Putnam	11%	22%	40%	25%
Rockland	16%	29%	30%	23%
Sullivan	15%	25%	32%	27%
Ulster	14%	26%	35%	24%
Westchester	15%	25%	33%	25%

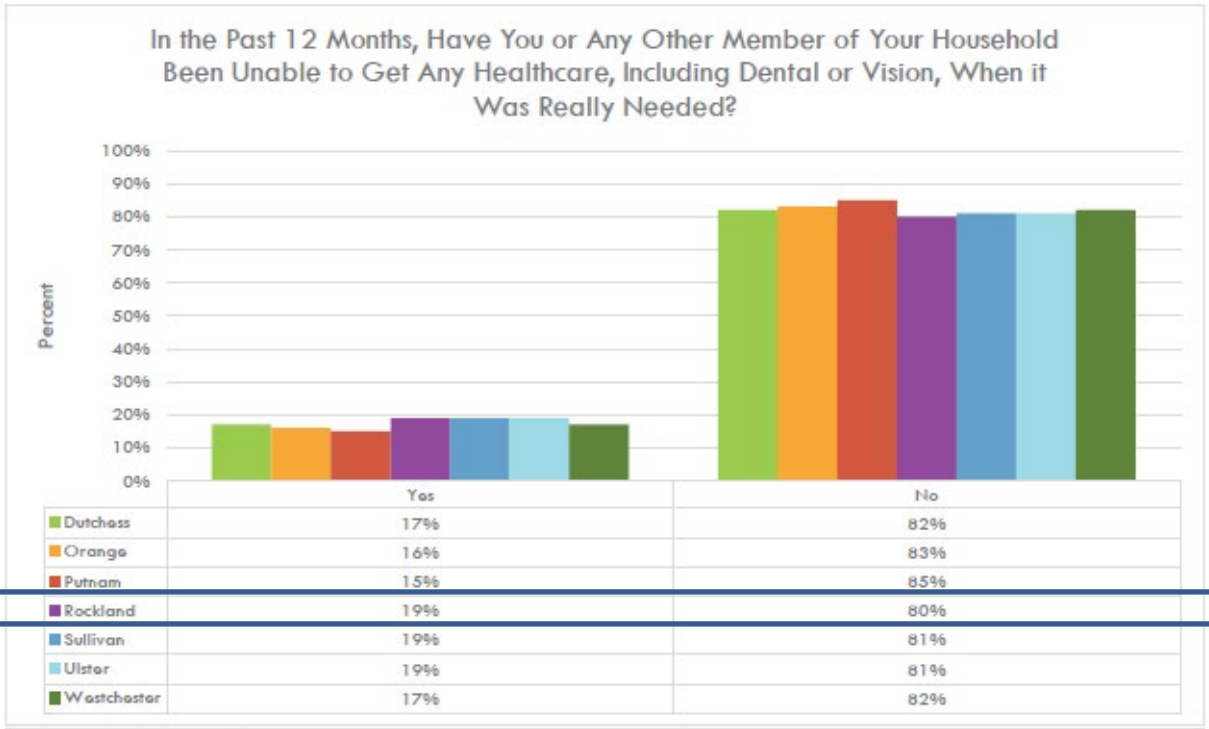




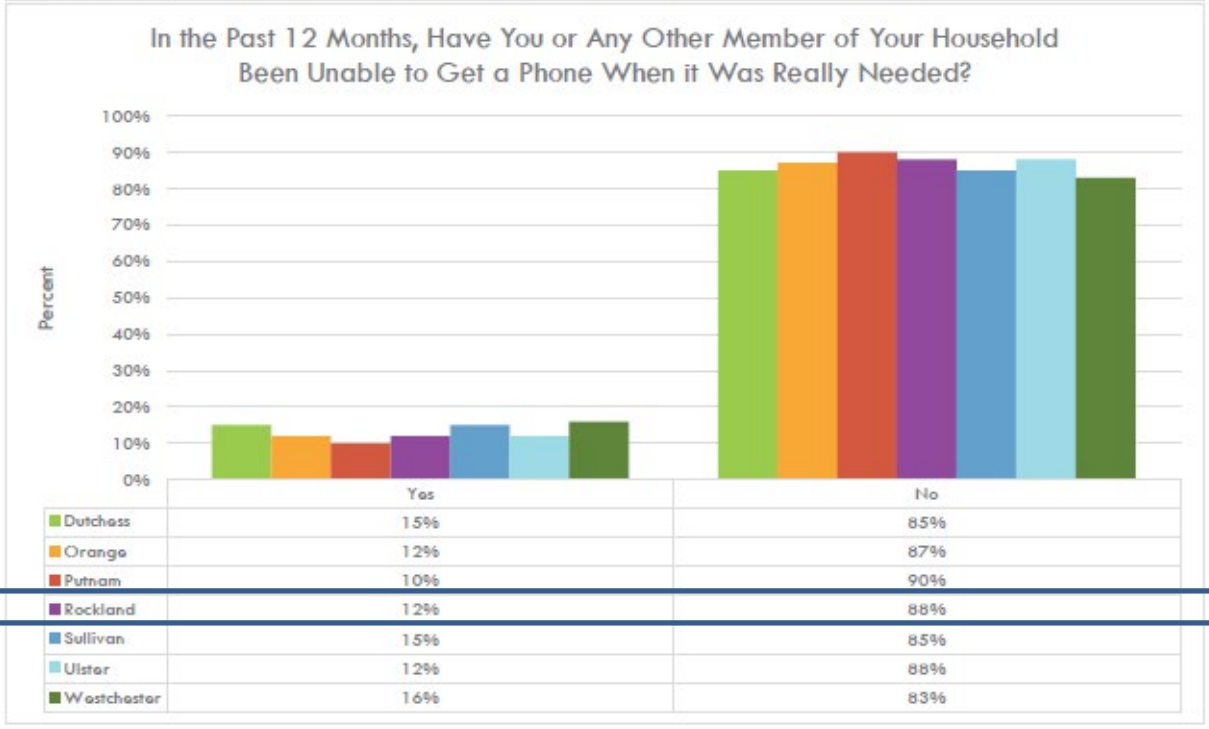
	Yes	No
Dutchess	15%	85%
Orange	16%	83%
Putnam	14%	85%
Rockland	14%	85%
Sullivan	16%	83%
Ulster	10%	90%
Westchester	14%	85%



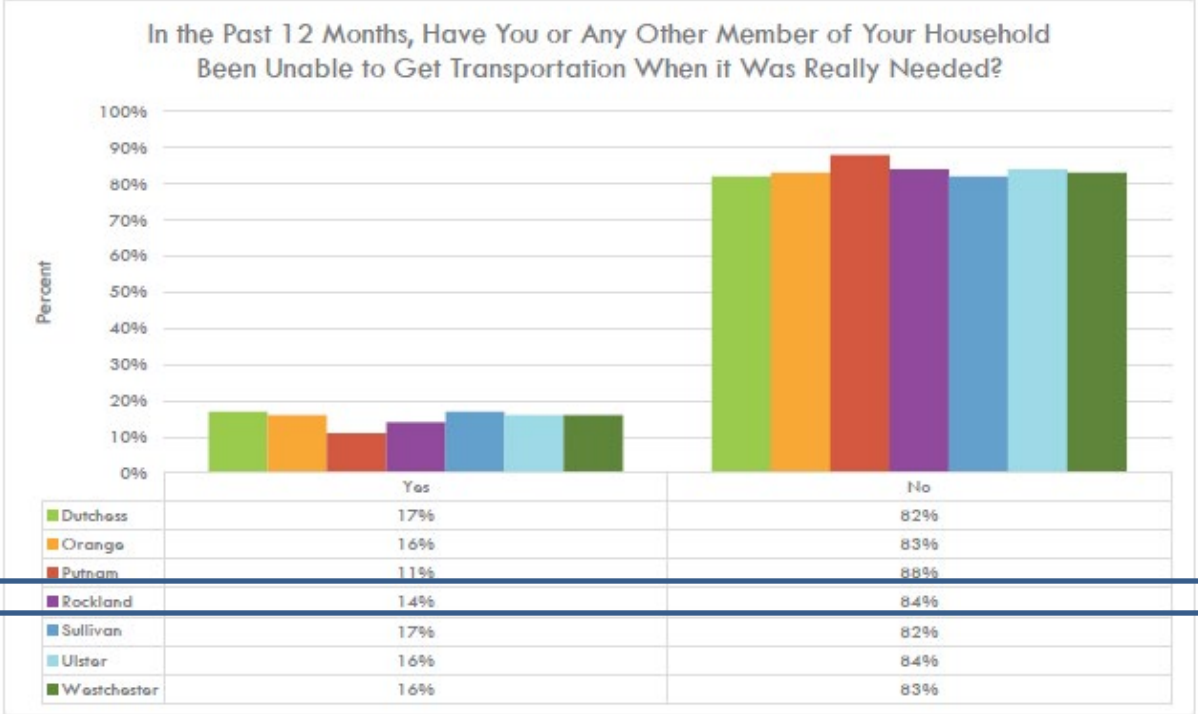
	Yes	No
Dutchess	15%	85%
Orange	14%	86%
Putnam	11%	89%
Rockland	14%	86%
Sullivan	17%	82%
Ulster	16%	83%
Westchester	15%	85%



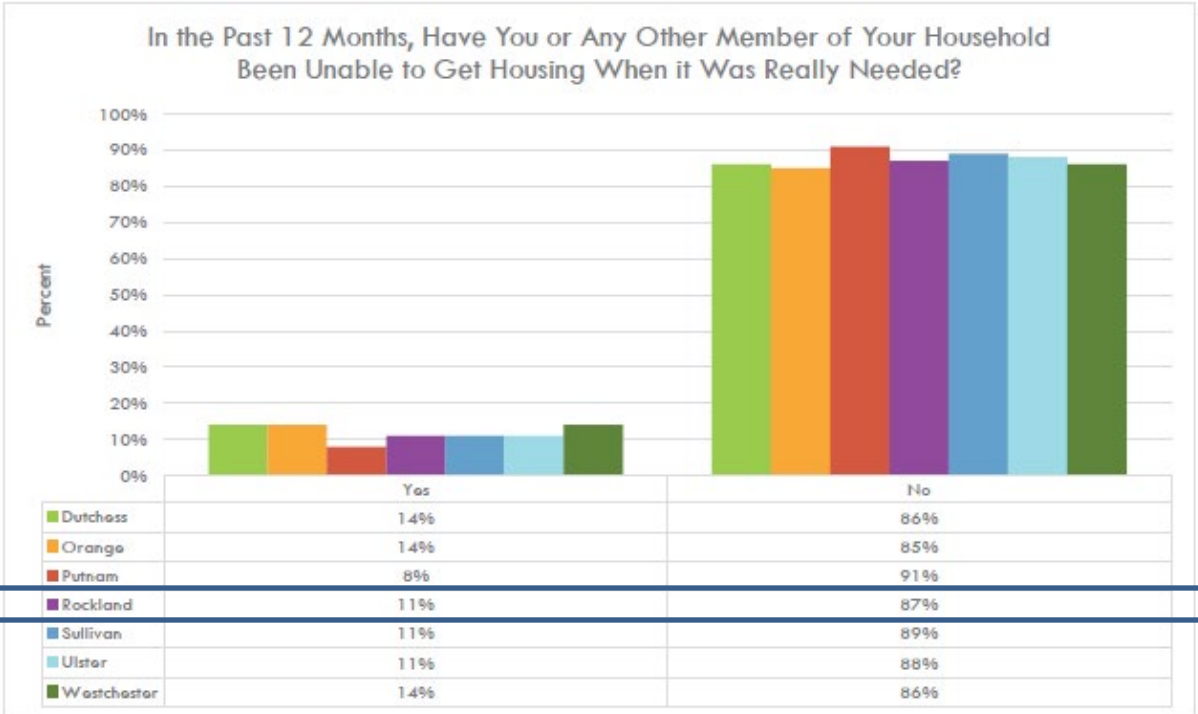
	Yes	No
Dutchess	17%	82%
Orange	16%	83%
Putnam	15%	85%
Rockland	19%	80%
Sullivan	19%	81%
Ulster	19%	81%
Westchester	17%	82%



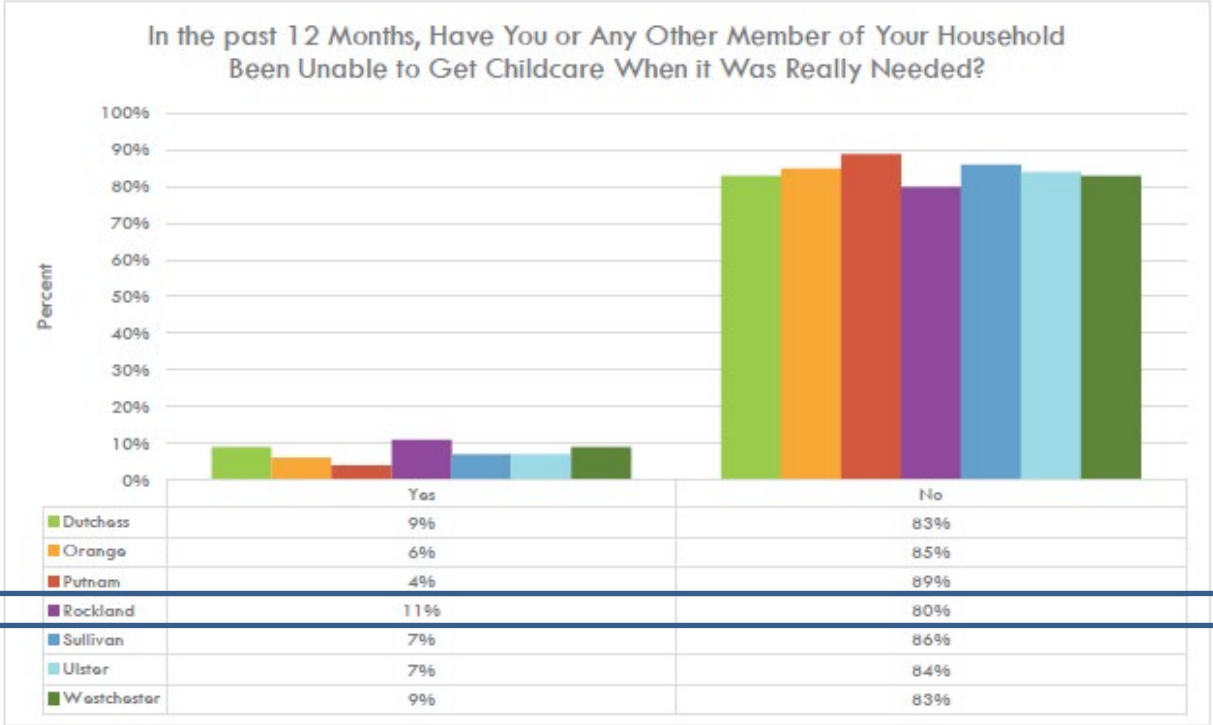
	Yes	No
Dutchess	15%	85%
Orange	12%	87%
Putnam	10%	90%
Rockland	12%	88%
Sullivan	15%	85%
Ulster	12%	88%
Westchester	16%	83%



	Yes	No
Dutchess	17%	82%
Orange	16%	83%
Putnam	11%	88%
Rockland	14%	84%
Sullivan	17%	82%
Ulster	16%	84%
Westchester	16%	83%

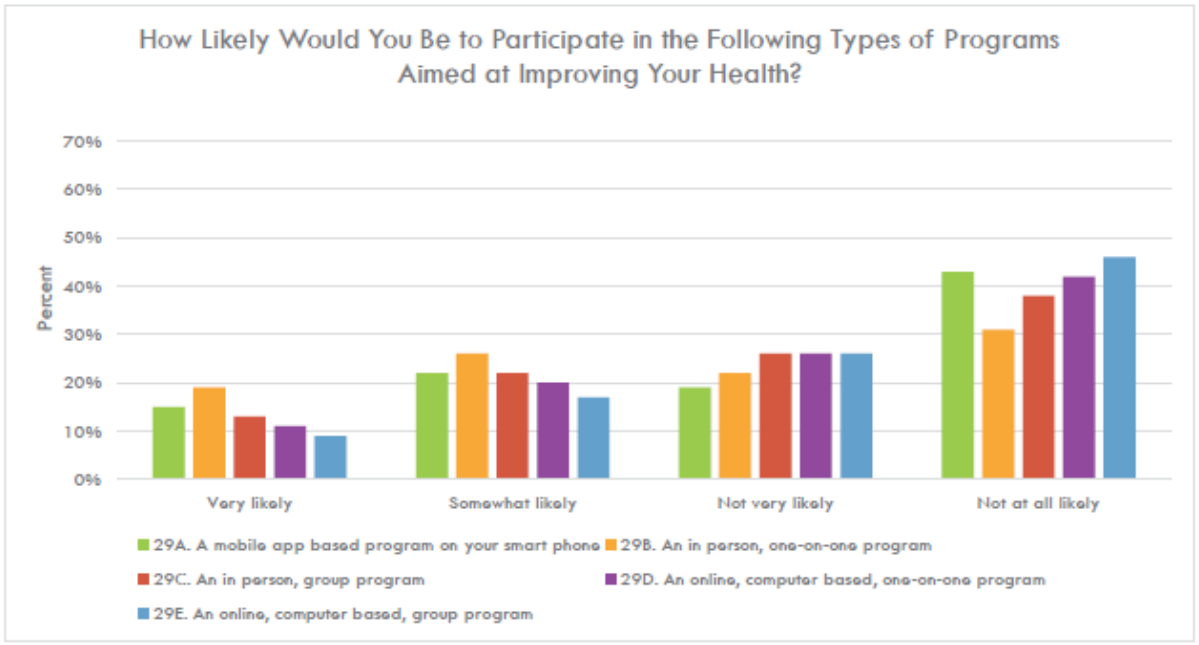


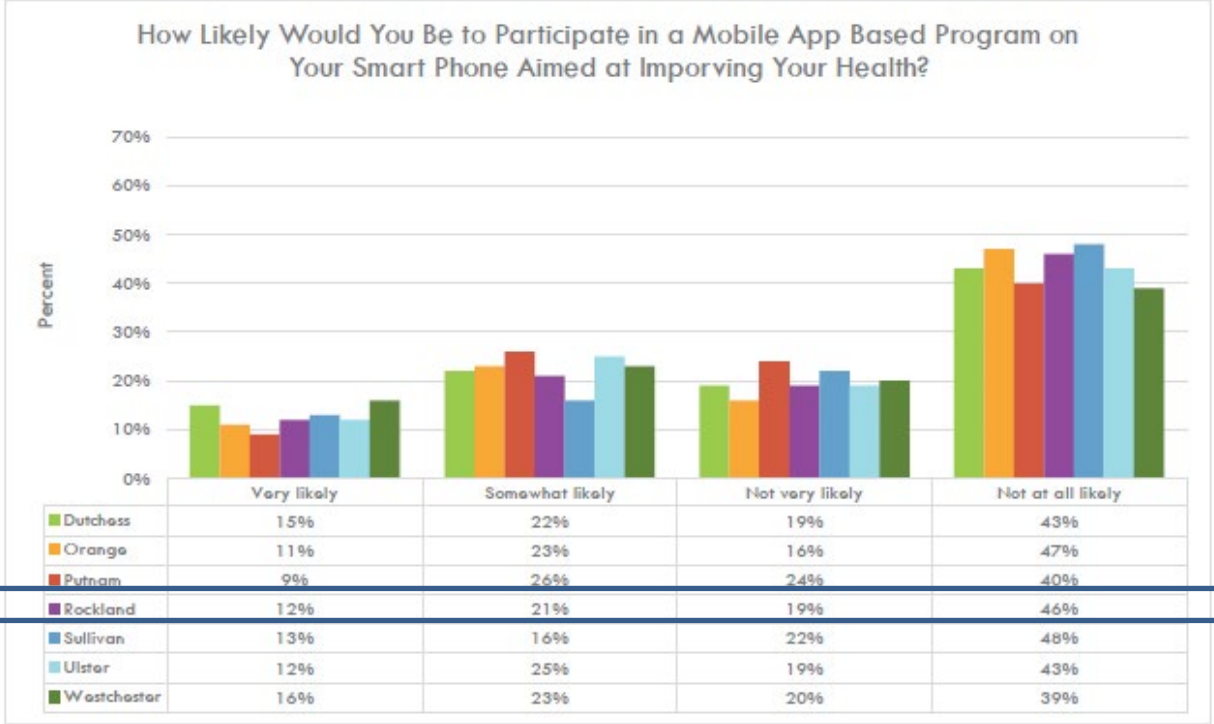
	Yes	No
Dutchess	14%	86%
Orange	14%	85%
Putnam	8%	91%
Rockland	11%	87%
Sullivan	11%	89%
Ulster	11%	88%
Westchester	14%	86%



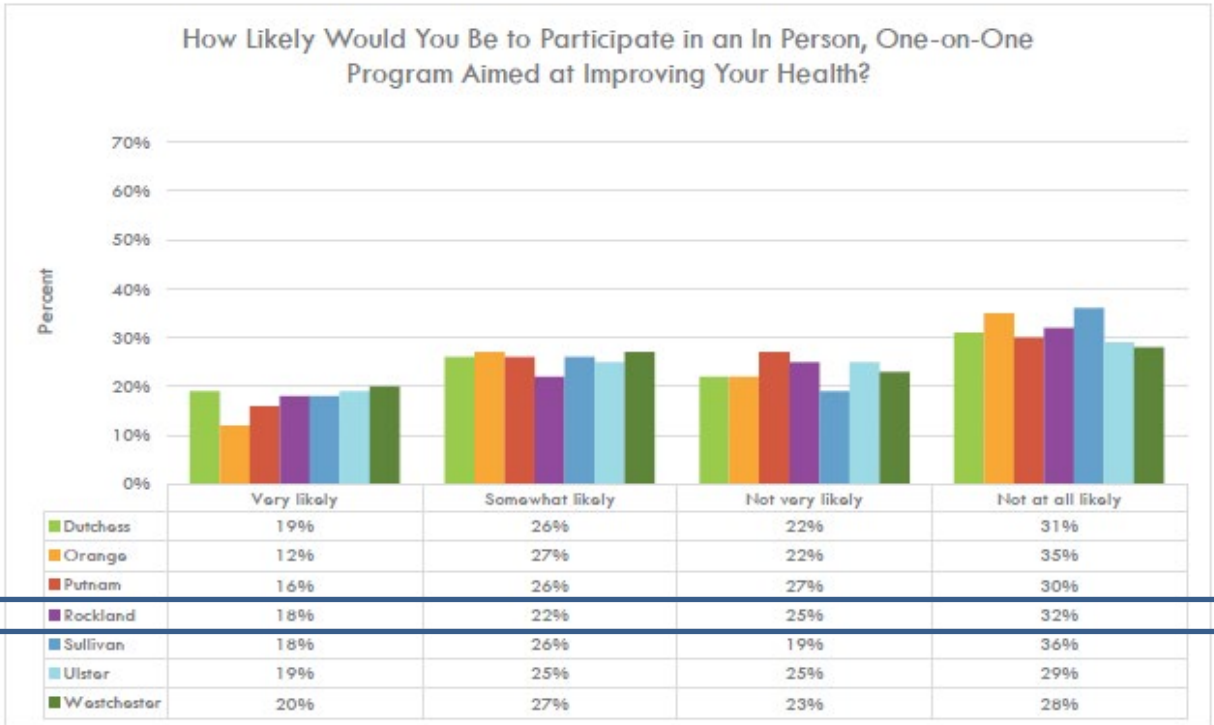
	Yes	No
Dutchess	9%	83%
Orange	6%	85%
Putnam	4%	89%
Rockland	11%	80%
Sullivan	7%	86%
Ulster	7%	84%
Westchester	9%	83%

Health Improvement Programs

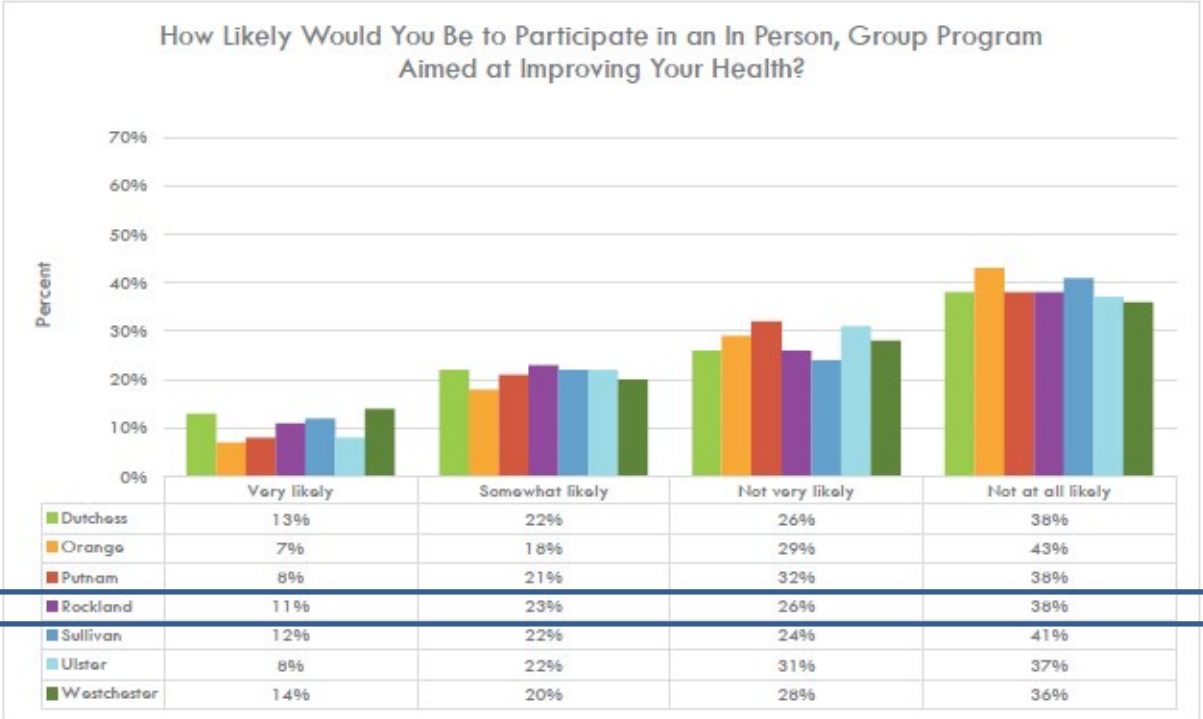




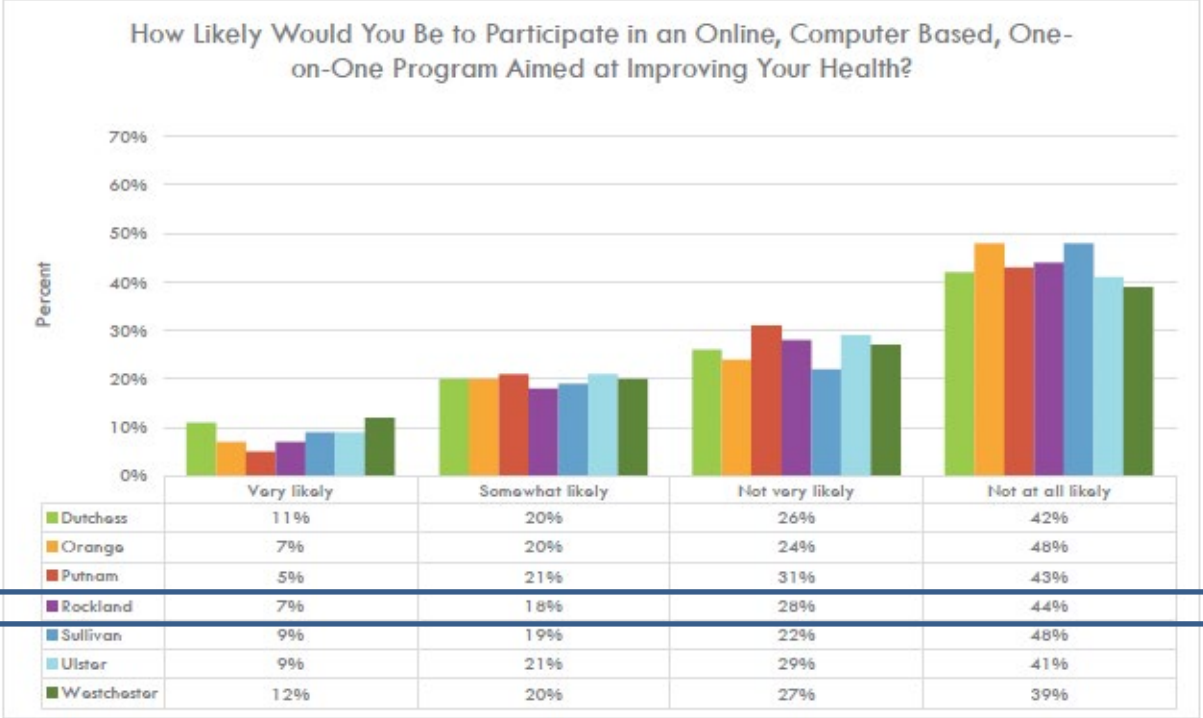
	Very likely	Somewhat likely	Not very likely	Not at all likely
Dutchess	15%	22%	19%	43%
Orange	11%	23%	16%	47%
Putnam	9%	26%	24%	40%
Rockland	12%	21%	19%	46%
Sullivan	13%	16%	22%	48%
Ulster	12%	25%	19%	43%
Westchester	16%	23%	20%	39%



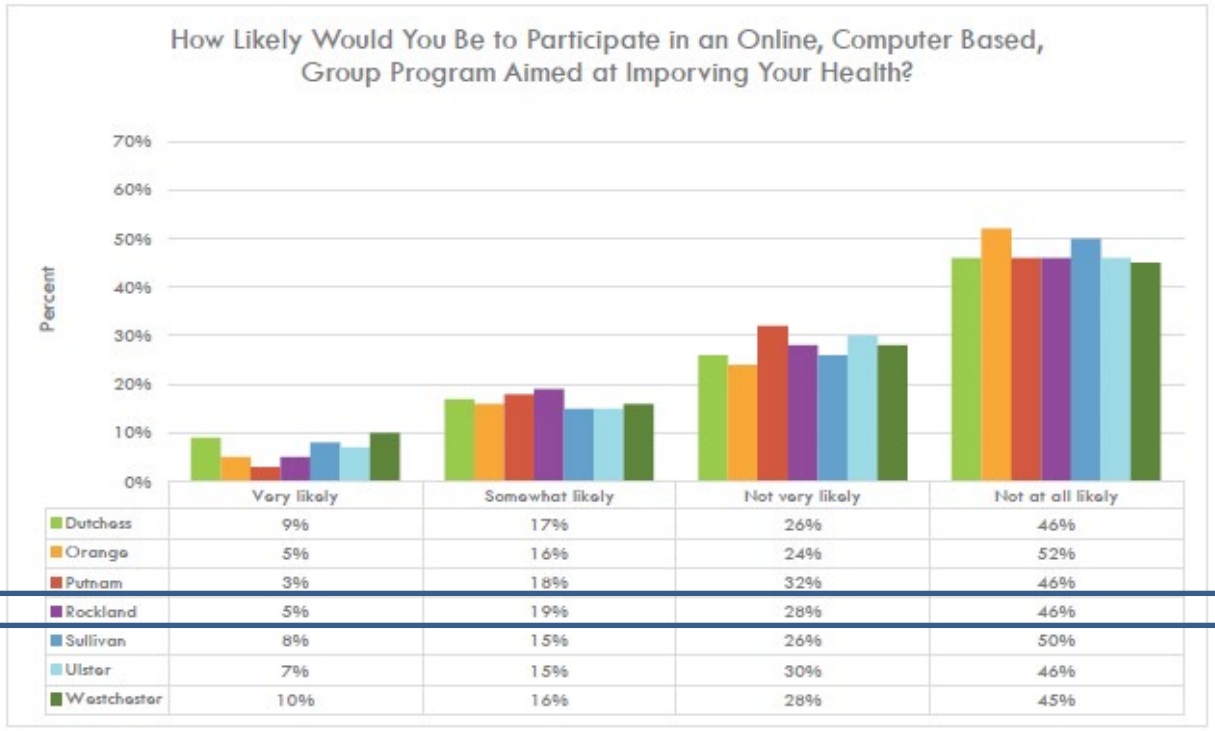
	Very likely	Somewhat likely	Not very likely	Not at all likely
Dutchess	19%	26%	22%	31%
Orange	12%	27%	22%	35%
Putnam	16%	26%	27%	30%
Rockland	18%	22%	25%	32%
Sullivan	18%	26%	19%	36%
Ulster	19%	25%	25%	29%
Westchester	20%	27%	23%	28%



	Very likely	Somewhat likely	Not very likely	Not at all likely
Dutchess	13%	22%	26%	38%
Orange	7%	18%	29%	43%
Putnam	8%	21%	32%	38%
Rockland	11%	23%	26%	38%
Sullivan	12%	22%	24%	41%
Ulster	8%	22%	31%	37%
Westchester	14%	20%	28%	36%



	Very likely	Somewhat likely	Not very likely	Not at all likely
Dutchess	11%	20%	26%	42%
Orange	7%	20%	24%	48%
Putnam	5%	21%	31%	43%
Rockland	7%	18%	28%	44%
Sullivan	9%	19%	22%	48%
Ulster	9%	21%	29%	41%
Westchester	12%	20%	27%	39%



	Very likely	Somewhat likely	Not very likely	Not at all likely
Dutchess	9%	17%	26%	46%
Orange	5%	16%	24%	52%
Putnam	3%	18%	32%	46%
Rockland	5%	19%	28%	46%
Sullivan	8%	15%	26%	50%
Ulster	7%	15%	30%	46%
Westchester	10%	16%	28%	45%

Resources & Community Programs & Events

Nyack Hospital is an active member of different community groups and steering committees. These committees include Rockland County Health Care Priorities (HCP), Rockland County Immunization Coalition, EMS of Rockland, Rockland County Emergency Response Team, Local Chapter of the American Cancer Society, and the Susan G. Komen Fund among others. The Rockland County Healthcare Priorities is a committee comprised of twenty-two organizations. This group is scheduled to meet monthly to discuss the needs of the local communities. Members of Healthcare Priorities bring not only needs and gaps in service but also the successes of programs. In this forum member agencies offer relevant advice, expertise, and assistance. The committee addresses current healthcare priorities, examines progress made, and determines if modifications are necessary. Health data taken from a variety of sources aids in the development of healthcare priorities for the county.

Without this partnership Montefiore Nyack Hospital wouldn't be able to address all the needs of the community. Although the hospital counts with an array of programs and resources to help address some of these needs these resources are essential to the success of the interventions in the Community Service Plan. Some of Montefiore Nyack's resources and external community resources are summarized below.

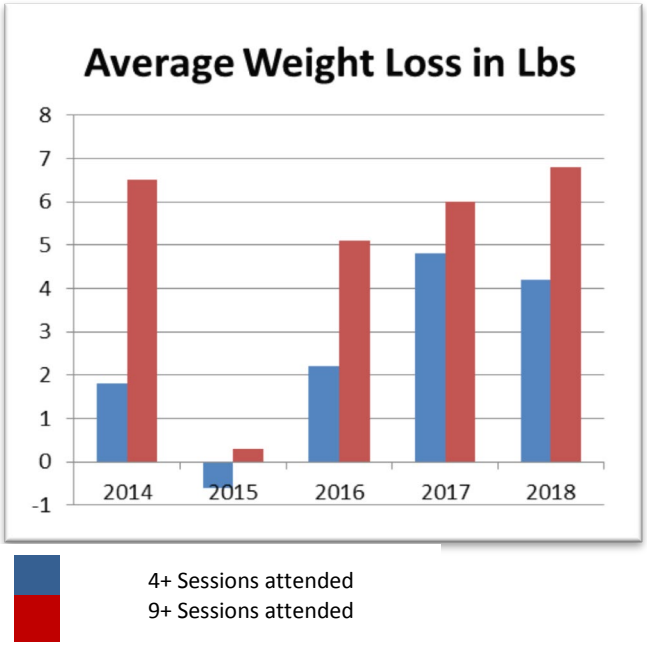
Pre-Diabetes, Diabetes, Obesity

Diabetes is a chronic disease increasing risk of heart disease, retinopathy, nephropathy, neuropathy, and sexual dysfunction to name just a few. Diabetes prevention and diabetes management have been identified by the CDC, New York State Department of Health, and Rockland County Department of Health as healthcare priorities. Diabetes is among the 20 most prevalent discharge diagnosis. Nyack Hospital addresses this healthcare priority across the continuum of care starting in the community through diabetes risk assessment screenings, Pre-Diabetes and Diabetes lectures, outpatient diabetes self-management training programs,

monthly day and evening diabetes support groups, the annual Diabetes Symposium, and inpatient diabetes counseling by certified diabetes educators. All patient rooms are also equipped with free interactive health education videos that include diabetes-self management content. The MNH Glycemic Control Committee, the Diabetes Resource Nurses and the Insulin Task Force, ensure that our patients receive the highest quality of diabetes care. Nyack Hospital conducts annual professional seminars for nurses, pharmacists, dietitians and physicians. To make sure staff is up to date with the most recent evidenced based science around diabetes management. Nyack Hospital's accredited American Association of Diabetes Educators (AADE DEAP) diabetes self-management program is covered by most health insurances including Medicare and is open to the whole community. Outcomes measures for AADE DEAP include A1C and behavior changes. In 2019, the hospital conducted a diabetes self-management training program for the blind, for the sixth year in a row. This is the only program of its kind in New York State. The program was conducted as part of the summer camp program for VISIONS, in Spring Valley. Nyack Hospital will continue its efforts to prevent and manage diabetes in our community.

Mamás Maravillosas received the HANYS Community Health Improvement Award in 2016 that recognizes outstanding initiatives aimed at improving the health and well-being of communities. The award is presented to member facilities for their programs that target specific community health needs, demonstrate leadership, collaborate among diverse groups, and, most importantly, achieve quantifiable results. Mamás Maravillosas is a community-based program for post-partum Latina women who have been identified as being at high risk for developing Type 2 diabetes and other chronic diseases. Mamás Maravillosas is based on the U.S. Centers for Disease Control and Prevention (CDC) Diabetes Prevention Program. This program is offered free of charge at a local community center and is presented in Spanish by bilingual healthcare professionals. While the program's main objective is to reduce the occurrence of

Type 2 diabetes, it also offers additional health information for both the participant and her family, including reinforcement to continue breastfeeding, caring for your baby, and the importance of having regular check-ups during the inter-conception period. The New York State Prevention Agenda is integral to this program, specifically targeting the "promote healthy women, infants, and children" objective. Diabetes prevention focusing on the inter-conception period reduces the risk of developing gestational diabetes and future Type 2 diabetes, and lowers the risk for miscarriages, stillborn babies, birth defects, birth injuries, complications, Cesarean sections, premature births, and obesity and diabetes in future children. A poster with results of this program was accepted for the Food & Nutrition Conference & Expo of the Academy of Nutrition & Dietetics 2019. The poster highlights the results of the program.



MAMAS MARAVILLOSAS RESULTS
Average weight loss per participant has increased from 1.8 lbs (1.1% change in total weight) in 2014 to 4.2 lbs (2.6% change in total weight) in 2018. Additionally, attendance has increased from 6 frequent participants (4 times or more) in 2014 to 23 frequent participants in 2018. Women with multiyear participation tend to lose weight while in the program (on average 2.5 lbs during each program period), but they tend to gain weight when not actively engaged in the program (on average 3.9 lbs in an off-program period.)

Smoking

Montefiore Nyack Hospital is committed to reducing tobacco use and the incidence of tobacco related diseases within the community. MNH provides education and resources to help patients quit smoking, including nicotine replacement therapy, when appropriate. MNH has public information on the website to help people connect and join the New York State Smokers' Quitline at 866-NY-QUITS (866-697-8487) or Put it Out Rockland at 845-364-2651.

Better Breathers Support Group meets monthly to provide support and education to individuals diagnosed with pulmonary disorders or have breathing difficulties. For more information, please call 845-348-2491.

Stroke

Stroke is one of the leading causes of death and serious long-term disability in the United States. Nyack Hospital is a designated “Stroke Center.” Nyack Hospital has been recognized by the American Heart Association/American Stroke Association’s Get with the Guidelines Stroke Gold Plus Quality Achievement Award, recognizing Nyack Hospital’s commitment and success in implementing excellent care for stroke patients according to evidence-based guidelines. Nyack Hospital is a recipient of the association’s Stroke Honor Roll for improving stroke care.

Nyack Hospital implements standards of care and protocols for treating stroke patients, a critical step in saving lives and improving outcomes. The Nyack Hospital Stroke Committee, which meets monthly, is dedicated to raise awareness of the need to seek medical attention F.A.S.T. when signs and symptoms of stroke are noted. In 2018 members of our medical staff and educational team delivered 13 lectures to more than 550 community members on stroke awareness and prevention and conducted 200 blood pressure screenings at 13 sites. Screenings include counseling on reducing risk of stroke through lifestyle changes including access to healthcare, blood pressure management, nutrition, and physical activity and recognition of stroke signs and symptoms. In 2019 Nyack Hospital continued with Stroke lectures and BP screenings and has started to deliver lectures to staff of different community based organizations in the county. Nyack Hospital will continue to reach out to local community based organizations, both for profit and not for profit to offer educational programs and screenings. Information on stroke symptoms and F.A.S.T. will be revised by the end of 2019 to deliver the most updated information to the public and placed on hospital website, included in free patient educational television for inpatients, in Nyack Hospital employee newsletters, along with health tips on hospital website, social media, and in public service announcements. For

2020 it is the goal of the Stroke Committee to start a CVA support group for patients and their caregivers.

Thru the staff wellness program MNH encourages employees and their families to enroll in gyms and other physical activity and healthy eating programs. MNH has partnered with gyms in the area to give membership discounts to staff members. MNH also sponsors runs and walks and encourages staff and community members to enroll as participants in these events to be healthier and prevent cardiovascular disease.

Breast Cancer

The Breast Center ay Nyack Hospital is a safe provider of screening, diagnostic and treatment services with an emphasis on cancer prevention, early detection, and personalized care. To address the health needs of an underserved population in Rockland County the Breast Center at Nyack Hospital provides free breast cancer screening mammograms to women who lack financial resources. Nyack Hospital collaborative partners include: The Greater NYC Affiliate of Susan G Komen for the Cure, the Cancer Services Program of the Hudson Valley and the Rockland County Department of Health. These collaborations allow MNH to improve community outreach to uninsured and underinsured women, to perform cancer screenings, and provide education and treatment. In 2018 The Breast Center at Nyack Hospital performed 612 mammogram screenings for medically underserved women. From January 1, 2019 - July 31, 2019, 356 medically underserved women were screened. Additionally 48 women had other testing diagnostics, 19 needed biopsies and 2 cancers were detected. The Breast Center at Nyack Hospital will continue to focus its efforts on re-screening and education to ensure that countywide, women are returning for annual mammograms and breast exams.

Healthy and Safe Environment

MNH is proud to connect adults and people with disabilities with evidence-based falls prevention programs and participate in all prevention awareness day yearly. During this event the hospital promotes screening for fall risk among older adults and people with disabilities and offers fall prevention tips. In 2019 more than 40 people participated in the Falls Prevention Fair.

The Volunteer Services department offers opportunities for children starting at 15 years old to volunteer in the hospital premises throughout the year. Each summer the number of opportunities more than doubles with the goal to provide apprenticeship initiatives and give children the opportunity to keep learning during the summer. In 2019 40 spaces were open and all filled, leaving behind another 164 young adults that had applied, which indicates the high need for similar projects in the community.

Children, ages 2-10, are invited to Teddy Bear Hospital celebrated in March each year, where children receive a donated teddy bear and learn about the care in Emergency Dept. while their new stuffed animal is examined by the Hospital's medical personnel. This is a great event that teaches children and their parents safety and injury prevention. In 2019 500 children participated in this event.

MNH works closely with the department of health and other community organizations to promote a healthy environment sponsoring and participating in streets, parks and wells cleaning events and fairs that promote safety education such as Family Health and Safety Fair with Head Start and Fall Waterways Cleanup in Garnersville in collaboration with Minisceongo Creek Watershead Alliance, among others.

Obesity

The obesity epidemic is a public health issue with serious health implications. This is particularly true for women of childbearing age. Pregnant women who are overweight or obese are at greater risk for adverse birth outcomes such as birth defects, fetal or infant death or other complications. Their off-springs are also at higher risk for childhood and adulthood obesity, diabetes, and heart disease. Appropriate nutritional intake before and during pregnancy for the moms and breastfeeding and proper introduction of solid foods for the babies reduce these risks. The Nyack Hospital Prenatal Center opened on January 2, 2013. It was previously known in the community as The Rockland County Department of Health Prenatal Clinic. It is a New York State Medicaid Prenatal Program that provides comprehensive perinatal care to low income, high risk women in a culturally sensitive and competent manner to all pregnant women including those with limited English proficiency and diverse cultural and ethnic backgrounds. Bilingual services are offered to patients whose primary language is not English to help reduce health disparities. The Community Education Department also counts with 2 Registered Dietitians that go out in the community to do nutrition workshops to organizations, schools and participate in health fairs educating the public how to eat right to help reduce obesity.

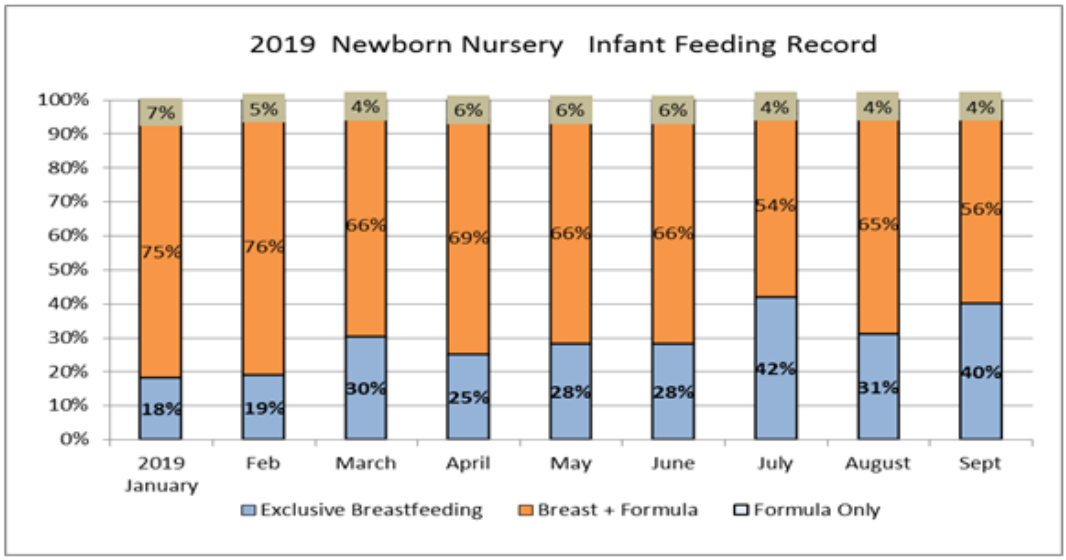
Healthy Women, Infants and Children

The Pre-Natal Center meets regularly with community partners to continually assess health and well-being needs of women of child-bearing age and their families across the continuum with adherence to all recommendations of CDC, NYSDOH, American Congress of Obstetricians and Gynecologists (ACOG). In an effort to prevent, recognize and treat conditions associated with maternal and infant mortality and morbidity, timely access to care is provided, including referral to appropriate levels of prenatal care based on client's assessed risk status. Additionally, bilingual health, nutrition, lactation, and childbirth education are provided by professional staff based on individual needs. Breastfeeding is highly encouraged and support for moms is provided pre- and post-partum. The Center is staffed by bilingual Registered Nurses, Prenatal Techs, a Nutritionist, a bilingual Board Certified Lactation Consultant, a Certified Diabetes Educator and a Social Worker as well as bilingual clerical and administrative personnel. Together with a team of experienced and dedicated Certified Nurse Midwives and an Obstetrician, the Pre-Natal Center provides optimum, cost-effective and culturally sensitive prenatal and postpartum care to at-risk residents of Rockland County.

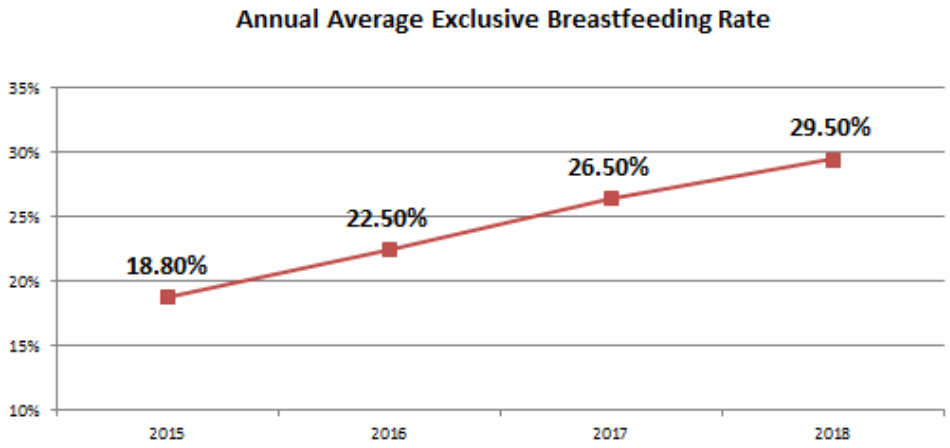
The Basics, called Nyack Basics, help mothers give their children their best support from 0-3 years old. All activities in the prenatal center are thought in English and Spanish to help reduce health disparities among Latino mothers. Board Certified Lactation Consultants are on staff to educate and support new mothers to achieve their breastfeeding goals. Monthly classes are

offered to provide expert advice on everything from the labor and delivery process to the care and feeding of a new baby. From January to September 2019 the breastfeeding rates in the hospital have more than doubled (from 18% to 40%) and the initiation of breastfeeding has increased from 18.8% in 2015 to 29.5% in 2018. Moreover staff from the Breast Center participates year round in health fairs and community events educating communities on importance of breastfeeding, prenatal and postnatal nutrition, introduction of solid foods and safe sex, among other topics.

Monthly 2019



Mothers at Montefiore Nyack Hospital who initiated breastfeeding



Community Assets and Collaborations

In addition to Nyack Hospital there are other existing healthcare facilities and resources within the community that are available to respond to residents' health needs. Good Samaritan Hospital, Helen Hayes Hospital, Rockland Psychiatric Center, Summit Park Hospital, and several federally funded community health centers including Hudson River Health Care and Refuah Health Center partner with MNH to address the needs of the community. Several collaborations help to address services and interventions not covered by Montefiore Nyack providing added value to the services rendered to our community.

Community members are invited to participate in all of these collaborations. The hospital will also continue to attend the Public Health Priorities Steering Committee meetings, the Montefiore Mid-Hudson Collaborative Committee meetings, and the Rockland County Immunization Coalition meetings. Nyack Hospital's Community Health Education department will continue to encourage community input via the hospital website nyackhospital.org and by phone at 845.348.2004 and by participating in towns collaborative and committees.

Montefiore Nyack Hospital has been able to engage with other organizations in the community to be able to provide the best quality of services to the most number of people and refer patients and community members to services not provided in-house. These alliances plus many other programs developed by Montefiore Nyack Hospital help to address all the health priorities identified in the NYS Prevention Agenda.

MNH is able to offer chronic care disease prevention and services in collaboration with the Rockland County Department of Health and other organizations in different ways. Organizations like the American Association od Diabetes Educators and the American Diabetes Association allow us to use their diabetes education curriculums and materials and they provide templates and methods to help keep track of patients progress. Some pharmaceuticals suck as Medtronics, Lilly and Sanofi provide us with discount coupons, free education materials and free samples that we can give away to our patients for education purposes. The Nyack Hospital Foundation also help us with resources to be able to develop health promotion programs. Collaborations with local pharmacies help provide medications to patients without insurance or self-pay that otherwise wouldn't be able to afford medications.

Collaborations with different organizations help MNH reduce stigma around mental health and provide timely treatment for community members. Organizations like Candle help to provide prevention education in schools. The Haverstraw Collaborative hosts education workshops for the community and they are very active spreading the word about services and events. Jawonio provides services for special needs individuals to help them achieve their independence and full potential while VCS and Nyack Consultation offers counseling services.

Other organizations involved that help meet the mental health goals of the community providing counseling or attending to emergency calls are Rockland County Department of Mental Health,

Rockland County Suicide Prevention Coalition, Rockland County Friends of Recovery Mental Health Association of Rockland, Rockland Council on Alcoholism and other Drug Dependence (RCADD), Behavioral Health Response Team, Orangeburg Service Center and Mobile Crisis Unit.

The Nyack Hospital Prenatal Center promotes the health and well-being of women of childbearing age and their families. Rockland County counts with these other organizations that share similar goals: WIC (Women, Infants and Children), FPS (Family Planning Services), Birthright of Rockland, March of Dimes, Lower Hudson Valley Perinatal Network and The Breastfeeding Coalition.

In order to ensure that families meet their nutritional needs Nyack Hospital is able to refer individuals and families to food pantries and other emergency food services in the community. Meals on Wheels is able to provide prepared meals to any Rockland resident who is unable to cook due to illness, physical handicap or advanced age, and who cannot shop or cook for themselves. (TOUCH) - Together Our Unity Can Heal – provides home delivery to people who are homebound and are HIV positive or have other chronic illnesses. Next to this programs, there are over 40 food pantries and feeding programs through Rockland County that serve over 300,000 meals per month.

Besides Montefiore Nyack's stellar program Lose To Win. Eat Smart New York offers free nutrition education programs through Cornell Cooperative Extension which enable income eligible participants to explore meal planning, smart food shopping, cooking, food safety and more. Just Say Yes to Fruits & Vegetables is a nutrition education initiative designed to prevent overweight/obesity and reduce long term chronic disease risks through the promotion of increased fruit and vegetable consumption to ensure low-income families to eat nutritious foods, make the most of their food budgets and prepare foods in a safe manner.

As for resources for physical activity the Rockland County Park System extends over 3,179 acres providing county residents ready access to local parks to exercise and enjoy nature's beauty. Free Guided park walks scheduled throughout the year offer visitors varied terrain, great scenery, interesting discussion points, and different levels of walking. Rockland also offers 70 children camps and counts with numerous privately owned gyms, ballet and martial arts academies, and 5 YMCAs. In the summer there are 10 pools open to the public.

Opportunities for Improvement

MNH is dedicated to address all the needs of the community. Various hospital committees, such as the Diabetes Self-Management Training Program Advisory Board, the Cancer Committee, and the Maternal Child Services Department, meet minimally on an annual basis to evaluate progress and make mid-course corrections as needed. Montefiore Nyack counts with a Quality Improvement Office that supervises the work being done by these committees indoors and the work done outdoors by other departments working with the community. The Department of Patient Experience makes sure that all patients visiting Montefiore Nyack have the best treatment. This department has united with the Community and Patient Education Department to improve the quality of services the community is receiving in terms of education, access, representation and more.

Mental Health and Prevent Substance Abuse

MNH is very aware of the shortage of behavioral health providers in Rockland County and also the lack of services. For that reason, a behavioral health committee integrated by key stakeholders of different specialties is being created to support behavioral health patients providing not only medical services but also creating community partnerships to be able to provide available resources for people in need. As many behavioral related issues might spring from lack of support and abundance of unmet social determinants of health this group aims to connect the whole community with the goal to be able to create a safety network for patients not only to treat but to avoid admissions and readmissions. Currently staff from MNH's Behavioral Health Department is very involved with the community offering their expert advice in the Chemical Dependency Committee, assisting the Substance Abuse Coordinator for Rockland County and the Department of Social Services' Substance Abuse Treatment Programs as well as serving as expert witness in drug courts and helping to provide therapy to help avoid incarcerations.

Mental Health is the top concern of residents of Rockland County. Mental, emotional, and behavioral (MEB) health promotion is an emerging field that uses a strengths-based developmental approach. MEB disorder prevention includes mental illness prevention and substance abuse prevention. Substance abuse prevention has more than two decades of etiological and program-outcome research, and evidence is emerging to show that mental illness can be prevented. The Behavioral Health Center at Nyack Hospital provides a full spectrum of acute psychiatric and medical care, focusing on the combined needs of the patient. The needs of the patient are provided throughout the continuum of care, including emergency treatment, hospitalization, and appropriate discharge.

The Recovery Center at Montefiore Nyack Hospital offers help and hope to those struggling with addiction providing a full range of treatment options in a culturally sensitive and judgment-free environment to assist individuals on their road to recovery. Staff includes Addiction Counselors, Licensed Social Workers and Mental Health Counselors, Medical and Psychiatric personnel that

are sensitive to the needs of the patients. The addiction services are tailored to the needs of the individual and administered with the dignity and respect patients deserve.

Community outreach includes educating general practitioners in discussing availability of mental health services to their clients, raising awareness of mental health issues in our community and taking steps to reduce the stigma, shame, and barriers in seeking help. Nyack Hospital provides screening tools and resources for depression awareness and Suicide Assessment Five-step Evaluation and Triage (SAFE-T). Promoting awareness and information on seeking help is also provided at health fairs and schools throughout our community.

A second layer to community outreach is to remove barriers that may prevent community members from accessing mental health services as well as being able to be fully integrated into the community without suffering stigma. A range of outpatient treatment services are available at the Hospital that include providing a full evaluation to determine if the individual is in need of a program.

Some of the organizations the hospital collaborates with in this effort are Rockland County Suicide Prevention Coalition, Mobile Crisis Unit, Rockland County Friends of Recovery, Mental Health Association of Rockland, Jawonio, VCS, Rockland County Department of Mental Health, Orangeburg Service Center, Nyack Consultation, and Behavioral Health Response Team. Currently Nyack Hospital is organizing a Behavior Committee that will include leaders from different specialties to create methods that aid in the identification of social determinants of health and the identification of community resources and services to improve the quality of life and behavioral health of our patients and people in the community. The committee is divided in sub-committes. The Perinatal group is also seeking to host trainings on maternal depression to increase the availability of these services in the community.

Communicable Diseases

Nyack Hospital offers screening, preventive services and counseling to all persons who are diagnosed with communicable diseases. Nyack Hospital partners with the Rockland County Office of the Aging conducting flu clinics throughout the area for Seniors of Rockland County and continues to collaborate with Senator Carlucci's office in providing flu shots to persons who are underinsured or uninsured. Flu shots are also distributed to an underserved population. In 2019 Nyack Hospital administered a record high 315 influenza vaccines to seniors at 11 sites throughout the county against the expectation that the need for this service would decrease as vaccines become more available at local pharmacies and grocery stores. This program is evaluated continually via steering committee of the Rockland County Department of Health Adult Immunization Committee, of which Nyack Hospital is a member.

Montefiore Nyack Hospital Employee Health Department conducts an on-site annual influenza vaccination program for staff, licensed independent practitioners, and volunteers. Education on diagnosis, transmission and potential impact of influenza, influenza vaccine and non-vaccinated

control measures are provided. MNH annually evaluates vaccination rates and reasons for nonparticipation in the hospital's immunization program and uses this information to plan for the next flu season with the goal of increasing compliance. During the 2017- 2018 flu season 86% of our staff was vaccinated. During the 2018-1019 flu season the number decreased to 84%. As about 70% of our employees are Rockland County residents, our employee health program makes a difference in the community. Our immunization rate among employees not only sets a good example for other residents to receive a flu shot but shows the commitment our staff has to keep Rockland County healthy. Our goal for the 2019-2020 influenza season is for 90% of our employees receive the flu shot.

Getting individuals vaccinated, not only with flu vaccines but other vaccines in general, continues to be a challenge in our community. More education is needed to help Rockland residents understand the importance of vaccination for disease prevention. The Community Education department working in collaboration with Infection Prevention will be offering education materials at health fairs and workshops in community organizations and schools to help increase awareness around this topic. The goal is to increase the number of people receiving vaccines every year while reducing the number of cases of flu and measles.

With the help of the Community Education Department Montefiore Nyack Hospital has participated in 64 events to date in 2019 reaching over 5,000 individuals. Fifty-two of these events were conducted since August when the new Community Education Director position was filled, after being vacant for several months. More events are already scheduled until the end of the year and entering 2020 with the goal to educate the community in topics of disease prevention and treatment of disease.

The following organizations are part of the Rockland County Public Health Steering Committee and as such participated in the community health needs prioritization process:

- Montefiore Nyack Hospital
- Good Samaritan Hospital
- Rockland County Department of Health
- ARC of Rockland
- Bon Secours
- Dominican College
- Fidelis Care
- HACSO Community Center
- Helen Hayes Hospital
- Hudson River Healthcare
- Immigration Coalition of Rockland
- Jawonio Inc
- Lower Hudson Valley Perinatal Network
- Mental Health Association of Rockland
- POW'R Against Tobacco

- Planned Parenthood
- Refuah Health Center
- Rockland Alliance for Health Services
- Rockland County Office of the Aging
- VCS, Inc

Subsequent meetings between leaders of the RCDOH and Good Samaritan helped to further determine the health priorities and interventions described below. The priorities follow the guidelines of the New York State Prevention Agenda (NYSPA) and were selected based on the results of the Community Health Assessment, the results of the NYSPA and data extracted from MNH databases and observation. This plan was presented to Montefiore Nyack Hospital Executive Board and approved on October 16th, 2019.

REFERENCES

1. Mid-Hudson Region Community Health Needs Assessment - HealtheConnections

2. http://rocklandgov.com/departments/health/programs-and-services/walking-program/guided-park-walks/. Last accessed 12/17/19

3. http://www.rocklandymca.org/locations/. Last accessed 12/17/19

4. http://rocklandgov.com/departments/health/programs-and-services/. Last accessed 12/17/19
5. http://www.rocklandhunger.org/food-pantries-feeding-programs/. Last accessed 12/17/19

APPENDICES

Appendix 1. Rockland County Partners in Health

Montefiore Hudson Valley Collaborative
Montefiore Nyack Hospital
Montefiore St. Luke's Cornwall
Bon Secours Charity Health System of the Westchester Medical Center Health Network
Good Samaritan Hospital
Bon Secours Community Hospital
St. Anthony Community Hospital
Dutchess County Department of Behavioral & Community Health
Catskill Regional Medical Center, a member of the Greater Hudson Valley Health System
HealthAlliance Hospitals, members of the Westchester Medical Center Health Network
Nuvance Health:
Northern Dutchess Hospital
Vassar Brothers Medical Center
Putnam Hospital Center
Orange County Department of Health
Orange Regional Medical Center, a member of the Greater Hudson Valley Health System
Putnam County Department of Health
Rockland County Department of Health
St. Joseph's Medical Center
Sullivan County Public Health Services
Ulster County Department of Health and Mental Health
Westchester County Department of Health
Additional assisting organizations:
Siena College Research Institute
The Foundation for Community Health

Appendix 2. Telephone Survey

Hello, this is _____ for the Siena College Research Institute. We are working with local health departments and hospital systems to survey Hudson Valley residents to better understand the health status and health-related values of people who live in the community.

IF NEEDED:
You've been selected at random to be included in this survey. Your individual responses are confidential and no identifiable information about you will be shared with anyone—all responses are grouped together. The questions I am going to ask you to relate to your health and to your thoughts about health-related resources in your community. Again, your responses may really help to strengthen health policies and services.

IF NEEDED:
In total, the survey takes approximately ____ minutes to complete and you may refuse to answer any question that you do not want to answer. Are you able to help us with this important project? (NOW IS ALSO A TIME TO OFFER A CALL BACK AT A SPECIFIC, REQUESTED TIME AND PHONE NUMBER)

1. Overall, would you say that the quality of life in your community is excellent, good, fair or poor?
A. Excellent
B. Good
C. Fair
D. Poor

2. What State do you live in? [If not NY or CT, terminate] County do you live in? [If not Dutchess, Orange, Rockland,
Putnam, Sullivan, Ulster Westchester or Litchfield CT (?), terminate]

3. What is your zip code? _____

4. How long have you lived in _____ County?
a. Less than 1 year
b. 1-5 years
c. More than 5 years

5. I'm going to read you a series of statements that some people make about the area around where they live, that is, their community. For each, tell me if that statement is completely true of your community, somewhat true, not very true or not at all true for your community. (ROTATE)

A. There are enough jobs that pay a living wage.
B. Most people are able to access affordable food that is healthy and nutritious.
C. People may have a hard time finding a quality place to live due to the high cost of housing.
D. Parents struggle to find affordable, high-quality childcare.
E. There are sufficient, quality mental health providers.
F. Local government and/or local health departments, do a good job keeping citizens aware of potential public health threats.

G. There are places in this community where people just don't feel safe.
H. People can get to where they need using public transportation.

6. How important is it to you that the community where you live have the following? [Insert scale to match others]
A. Accessible and convenient public transportation
B. Affordable public transportation
C. Well-maintained public transportation vehicles
D. Safe public transportation stops or waiting areas
E. Special transportation services for people with disabilities or older adults

7. Overall, how would you rate the community you live in as a place for people to live as they age?
A. Excellent
B. Good
C. Fair
D. Poor
E. I don't know

8. For each of the following aspect of life, please rate it as excellent, good, fair, or poor in your community. Please
let me know if you simply do not know enough to say.
A. The availability of social/civic programs for seniors
B. The quality of health care services for seniors
C. The availability of programs and activities for youth outside school hours
D. The quality of information from county agencies during public emergencies, such as weather events or disease outbreaks

9. In general, how would you rate your health? Would you say that your health is excellent, good, fair or poor?
A. Excellent
B. Good
C. Fair
D. Poor

10. Have you ever been told by a doctor or other health professional that you have any chronic health condition such as high blood pressure, diabetes, high cholesterol, asthma or arthritis?
A. Yes
B. No

11. If YES to 11--How confident are you that you can manage your physical health condition?
A. Very Confident
B. Somewhat Confident
C. Not Very Confident
D. Not at all confident

12. Mental health involves emotional, psychological and social wellbeing. How would you rate your overall mental health? Would you say that your mental health is excellent, good, fair or poor?

AS NEEDED: This includes things like hopefulness, level of anxiety and depression.
A. Excellent
B. Good
C. Fair
D. Poor

13. Have you ever experienced a mental health condition or substance or alcohol use disorder?
A. Yes
B. No

14. If YES to 14--How confident are you that you can manage your mental health condition?
A. Very Confident
B. Somewhat Confident
C. Not Very Confident
D. Not at all confident

15. Thinking back over the past 12 months, for each of the following statements I read, tell me how many days in an AVERAGE WEEK you did each. Over the past 12 months how many days in an average week did you… (responses are 0 days, 1-3 days, 4-6 days or all 7 days)
A. Ate a balanced, healthy diet
B. Exercised for 30 minutes or more a day
C. Got 7-9 hours of sleep in a night

16. On an average day, how stressed do you feel?
AS NEEDED: Stress is when someone feels tense, nervous, anxious, or can't sleep at night because their mind is troubled.
A. Not at all stressed
B. Not very stressed
C. Somewhat stressed
D. Very stressed

17. In your everyday life, how often do you feel that you have quality encounters with friends, family, and neighbors that make you feel that people care about you? (IF NEEDED: For example, talking to friends on the phone, visiting friends or family, going to church or club meetings)
A. Less than once a week
B. 1-2 times a week
C. 3-5 times a week
D. More than 5 times a week

18. Have you smoked at least 100 cigarettes in your entire life?
A. Yes
B. No

19. If YES to 19, Do you now smoke cigarettes every day, some days, or not at all?
A. Everyday
B. Some days

C. Not at all

20. Pertaining to alcohol consumption, one drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the last 30 days, on the days when you drank, about how many drinks did you drink on average? [If respondent gives a range, ask for one whole number. Their best estimate is fine. If they do not drink, enter 0.]
_____ drinks

21. [If Q21>0] Considering all types of alcoholic beverages, how many times during the past 30 days did you have **X [5 for men, 4 for women]** or more drinks on an occasion?
A. _____ number of times
B. None

22. How frequently in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?
A. Never
B. Less than once per month
C. More than once per month, but less than weekly
D. More than once per week, but less than daily
E. Daily

23. In the past 12 months, have you or any other member of your household been unable to get any of the following when it was really needed? Please answer yes or no for each item.
A. Food
B. Utilities, including heat and electric
C. Medicine
D. Any healthcare, including dental or vision
E. Phone
F. Transportation
G. Housing
H. Childcare

24. Have you visited a primary care physician for a routine physical or checkup within the last 12 months?
A. Yes
B. No

25. If NO to question 25, in the last 12 months, were any of the following reasons that you did not visit a primary care provider for a routine physical or checkup? (SELECT ALL THAT APPLY)
A. I did not have insurance
B. I did not have enough money (prompt if needed: for things like co-payments, medications, etc)
C. I did not have transportation
D. I did not have time
E. I chose not to go
F. Other_____

26. Have you visited a dentist for a routine check-up or cleaning within the last 12 months?

A. Yes
B. No
If NO to question 27, in the last 12 months, were any of the following reasons that you did not visit a dentist for a routine check-up or cleaning? (SELECT ALL THAT APPLY)
A. I did not have insurance
B. I did not have enough money (prompt if needed: for things like co-payments, medications, etc)
C. I did not have transportation
D. I did not have time
E. I chose not to go
F. Other_____

Sometimes people visit the emergency room for medical conditions or illnesses that are not emergencies; that is, for health-related issues that may be treatable in a doctor's office.
27. Have you visited an emergency room for a medical issue that was not an emergency in the last 12 months?
A. Yes
B. No
28. If YES to question 28, in the last 12 months, for which of the following reasons did you visit the emergency room for a non-health emergency rather than a doctor's office? (SELECT THE BEST (1) OPTION)
A. I do not have a regular doctor/primary care doctor
B. The emergency room was more convenient because of the location
C. The emergency room was more convenient because of the cost
D. The emergency room was more convenient because of the hours of operation
E. At the time I thought it was a health-related emergency, though I later learned it was NOT an emergency

If yes to 13 (behavioral health condition)
29. Have you visited a mental health provider, such as a psychiatrist, psychologist, social worker, therapist for 1-on-1 appointments or group-sessions, etc. within the last 12 months?
A. Yes
B. No

30. If NO to question 30, in the last 12 months, were any of the following reasons that you did not visit a mental health provider? (SELECT ALL THAT APPLY)
A. I did not have insurance
B. I did not have enough money (prompt if needed: for things like co-payments, medications, etc)
C. I did not have transportation
D. I did not have time
E. I chose not to go
F. Other_____

31. How likely would you be to participate in the following types of programs aimed at improving your health? Would you be very likely, somewhat likely, not very likely or not at all likely?
A. A mobile app based program on your smart phone
B. An in person, one-on-one program

C. An in person, group program
D. An online, computer based, one-on-one program
E. An online, computer based, group program

We are just about finished. These last few questions are about you.
32. Are you Hispanic?
A. Yes
B. No

33. What is your race?
A. White
B. Black
C. Asian
D. Other

34. Do you have health insurance?
a. Yes
b. No

35. What is your source of health insurance?
a. Employer
b. Spouse/Partner's employer
c. NYS Health Insurance marketplace/Obamacare
d. Medicaid
e. Medicare
f. None
g. Other

36. What is your living arrangement? Do you
A. Rent an apartment or home
B. Own your own
C. Other living arrangement

37. What is your employment status?
A. Employed full time
B. Employed part-time
C. Unemployed, looking for work
D. Unemployed, not looking for work
E. Retired

38. Are there children <18 living in your household?
A. Yes
B. No

39. Are you or anyone in your household a veteran or a member of active duty military service?
A. Yes

B. No
Mid-Hudson Region Community Health Assessment 64

40. Do you or anyone in your household have a disability?
A. Yes
B. No

41. About how much is your total household income, before any taxes? Include your own income, as well as your spouse or partner, or any other income you may receive, such as through government benefit programs. (READ THE FOLLOWING OPTIONS)

A. Less than $25,000
B. $25,000 to $49,999
C. $50,000 to $99,999
D. $100,000 to $149,999
E. $150,000 or more

42. What is your gender?
A. Male
B. Female
C. Transgender/other gender

APPENDIX 3. Stakeholder Interview Form

1. Name_____
2. Organization _____
3. Organization Website _____
4. Position_____

5. What is your service area?

☐ On website

_____
_____
_____
_____

6. Who do you serve? Please check all that apply

☐ Infants and toddlers
☐ Children
☐ Adolescents
☐ Adults
☐ Seniors
☐ Veterans
☐ English as a second language
☐ Women (services specifically for women)
☐ Men (services specifically for men)
☐ LGBTQ
☐ Those with a substance use disorder
☐ Those with a mental health diagnosis
☐ People with disabilities
☐ People experiencing homelessness
☐ Incarcerated or recently incarcerated
☐ Low income
☐ General population
☐ All the above

7. Thinking about the populations that you serve, what are the top 3 issues that affect health in the communities you serve?

☐ Access to affordable nutritious food
☐ Access to affordable, decent and safe housing
☐ Access to affordable, reliable transportation
☐ Access to affordable, reliable public transportation

☐ Access to culturally sensitive health care providers
☐ Access to affordable health insurances
☐ Access to clean water and non-polluted air
☐ Access to medical providers
☐ Access to mental health providers
☐ Access to high quality education
☐ Access to specialty services/providers
List of Appendices 330

8. Which of the following are the top 3 barriers to people achieving better health in the communities you serve?
☐ Knowledge of existing resources
☐ Geographic location – living in an urban area
☐ Geographic location – living in a rural area
☐ Health literacy
☐ Having someone help them understand insurance
☐ Having someone to help them understand their medical condition
☐ Having a safe place to play and/or exercise
☐ Quality of education
☐ Attainment of education
☐ Drug and/or alcohol use
☐ Cultural Customs
☐ Other (specify) _____

9. Besides lack of money, what are the underlying factors and barriers to solving the top 3 issues you identified in the communities you serve?

_____
_____
_____
_____
_____

10. What evidence-based interventions (if any) do you use that target your populations to address the social determinants of health?

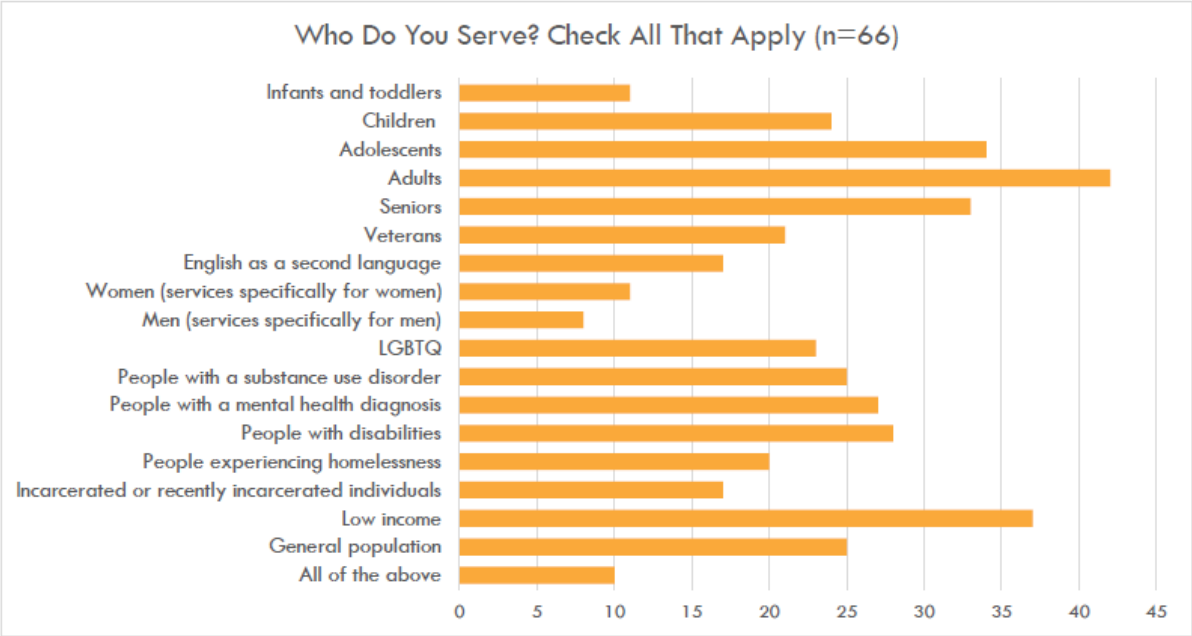
_____
_____
_____
_____
_____ List of Appendices 331

11. As we go through the following list of health issues, please rate from 1 to 5 the impact of the health issues in your service area with 1 being very little and 5 being highly impacted.

Chronic Disease (e.g. heart disease, diabetes, asthma, obesity, cancer, etc.)
(Very Little) 1 2 3 4 5 (Highly Impacted)
Health Disparities
(Very Little) 1 2 3 4 5 (Highly Impacted)
Mental Health and Substance Use Issues
(Very Little) 1 2 3 4 5 (Highly Impacted)
Maternal and Child Health issues
(Very Little) 1 2 3 4 5 (Highly Impacted)
Environmental Factors (e.g. built environment, air/water quality, injuries, falls, food safety)
(Very Little) 1 2 3 4 5 (Highly Impacted)
Prevent Communicable diseases (e.g. sexually transmitted infections, hepatitis C, HIV, vaccine preventable disease, hospital acquired infections, etc.)
(Very Little) 1 2 3 4 5 (Highly Impacted)

APPENDIX 4. Responses from Providers

ROCKLAND COUNTY



Appendix 5. Top 20 Inpatient Discharges at Montefiore Nyack Hospital, 2018

Top 20 inpatient discharges at Nyack Hospital, 2018

ICD-10 Code	Label	Discharges	% of total
Z38	Liveborn infants according to place of birth and type of delivery	1370	11.3%
A41	Other sepsis	1020	8.4%
F10	Alcohol related disorders	440	3.6%
F11	Opioid related disorders	340	2.8%
J18	Pneumonia, unspecified organism	279	2.3%
O34	Maternal care for abnormality of pelvic organs	234	1.9%
N39	Other disorders of urinary system	213	1.8%
L03	Cellulitis and acute lymphangitis	211	1.7%
N17	Acute kidney failure	195	1.6%
O99	Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium	179	1.5%
J44	Other chronic obstructive pulmonary disease	172	1.4%
S72	Fracture of femur	166	1.4%
J96	Respiratory failure, not elsewhere classified	156	1.3%
I63	Cerebral infarction	142	1.2%
E11	Type 2 diabetes mellitus	133	1.1%
O69	Labor and delivery complicated by umbilical cord complications	131	1.1%
M17	Osteoarthritis of knee	125	1.0%
F25	Schizoaffective disorders	124	1.0%
F20	Schizophrenia	123	1.0%
K56	Paralytic ileus and intestinal obstruction without hernia	123	1.0%
-	Other diagnoses	6,255	51.6%

Data source: Internal Montefiore Health System data, 2018

Appendix 6. Top 20 Emergency Room Diagnosis January – November 2019

Rank	I9/I10	Code	Description	Total
1	I10	N390	URINARY TRACT INFECTION SITE NOT SPECIFIED	762
2	I10	S0990XA	UNSPECIFIED INJURY OF HEAD INITIAL ENCOUNTER	695
3	I10	R51	HEADACHE	615
4	I10	B349	VIRAL INFECTION UNSPECIFIED	572
5	I10	R0789	OTHER CHEST PAIN	534
6	I10	J069	ACUTE UPPER RESPIRATORY INFECTION UNSPECIFIED	486
7	I10	Z4802	ENCOUNTER FOR REMOVAL OF SUTURES	465
8	I10	F10129	ALCOHOL ABUSE WITH INTOXICATION UNSPECIFIED	458
8	I10	J111	FLU DUE TO UNIDENTIFIED INFLUENZA VIRUS W OTH RESP MANIFES	458
9	I10	R079	CHEST PAIN UNSPECIFIED	450
10	I10	R42	DIZZINESS AND GIDDINESS	394
10	I10	R509	FEVER UNSPECIFIED	394
11	I10	M545	LOW BACK PAIN	390
12	I10	R1110	VOMITING UNSPECIFIED	377
13	I10	K529	NONINFECTIVE GASTROENTERITIS AND COLITIS UNSPECIFIED	376
14	I10	R109	UNSPECIFIED ABDOMINAL PAIN	365
15	I10	Z4801	ENCOUNTER FOR CHANGE OR REMOVAL OF SURGICAL WOUND DRE	344
16	I10	S161XXA	STRAIN OF MUSCLE FASCIA AND TENDON AT NECK LEVEL INIT	333
17	I10	J029	ACUTE PHARYNGITIS UNSPECIFIED	329
18	I10	R55	SYNCOPE AND COLLAPSE	319
19	I10	R1013	EPIGASTRIC PAIN	307
20	I10	J189	PNEUMONIA UNSPECIFIED ORGANISM	297
21	I10	F329	MAJOR DEPRESSIVE DISORDER SINGLE EPISODE UNSPECIFIED	286

APPENDIX 7. SECONDARY DATA SOURCES

To create this document, the following secondary data sources were utilized. There are available online and provide the most updated information for each location. The results in this document gather data as of June 2019. Websites were last accessed to check availability on 12/02/2019.

American Community Survey (ACS): A survey conducted nationally by the U.S. Census Bureau to gather information about the social and economic need of communities. https://www.census.gov/programs-surveys/acs

Behavioral Risk Factor Surveillance System (BRFSS): An annual national phone survey coordinated and funded by the Centers for Disease Control and Prevention (CDC) and conducted by each State's health department. Data includes health related behaviors, health conditions, and use of health services. https://www.cdc.gov/brfss/index.html

Comprehensive Housing Affordability Strategy Data (CHAS): Custom tabulations of ACS data about housing problems and housing needs from the U.S. Census Bureau sent to the U.S. Department of Housing and Urban Development (HUD). HUD and local governments use this data to plan how to distribute their funds. https://www.huduser.gov/portal/datasets/cp.html

County Business Patterns: An annual series from the U.S. Census Bureau which provides economic data by industry, such as number of establishments, employment during a certain week, and annual payroll. https://www.census.gov/programs-surveys/cbp.html

County Health Rankings & Roadmaps: A collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. County Health Rankings & Roadmaps pulls from a variety of sources to measure vital health factors in counties across the U.S. https://www.countyhealthrankings.org/

HRSA Data Warehouse: A website run by the Health Resources and Services Administration (HRSA) which provides maps, data, reports, and dashboards about HRSA's health care programs, including health Professional Shortage Areas, Health Resource Files, and Medically Underserved Populations. https://data.hrsa.gov/

Healthy People 2020: A collaborative process that reflects input from a diverse group of individuals and organizations. Healthy People2020 includes 10-year national objectives for improving the health of all Americans. Healthy People has established benchmarks and monitored progress over time. https://www.healthypeople.gov/

Map the Meal Gap: A county level analysis of food insecurity conducted by Feeding America using sources, such as the ACS, the Bureau of Labor Statistics, and the U.S. Department of Agriculture (USDA). https://map.feedingamerica.org/

Measure of America: A project of the Social Science Research Council that issues reports, briefs, and interactive data visualizations to provide an understanding of well-being and opportunity in America. https://measureofamerica.org/

National Environmental Public Health Tracking Network: A data hub provided by the CDC which brings together health and environmental data. https://ephtracking.cdc.gov/

New York State Board of Elections: Established as a bipartisan agency of New York State to administer and enforce all laws relating to elections within the State. Data tracked by the board includes election results and enrollment statistics for New York State. https://www.elections.ny.gov/

New York State Communicable Disease Annual Reports: Documents are released annually from NYSDOH containing mandated reports of suspected or confirmed communicable diseases. Secondary source. https://www.health.ny.gov/statistics/diseases/communicable/

New York State Bureau of Sexual Health and Epidemiology: A special projects unit responsible for conducting Sexually Transmitted Infection (STI) surveillance activities related to screening, disease morbidity, and HIV/STI Partner Services disease intervention activities. https://www.health.ny.gov/diseases/communicable/std/

New York State Cancer Registry: A registry which collects, processes, and reports information about New Yorkers diagnosed with cancer from all physicians, dentists, laboratories, and other health care providers, who are required to report all cancers to the NYSDOH. https://www.health.ny.gov/statistics/cancer/registry/

New York State Department of Health Rabies Laboratory: A system that contains monthly reports of the number of animals tested for rabies, as well as the number that tested positive for rabies in every New York State county. https://www.wadsworth.org/programs/id/rabies

New York State Division of Criminal Justice: A criminal justice support agency which provides resources and services that inform decision-making and improve the quality of the criminal justice system. https://www.criminaljustice.ny.gov/

New York State Education Department (NYSED): NYSED publicly reports educational data submitted by educational institutions on its website data.nysed.gov. http://www.nysed.gov/

New York State HIV Surveillance System: An HIV surveillance system conducted by the AIDS Institute Bureau of HIV/AIDS Epidemiology that facilitates and monitors HIV-related laboratory and clinician reporting in New York State. https://www.health.ny.gov/diseases/aids/general/statistics/annual/

New York State Hospital-Acquired Infection Program: A program developed to provide data on select hospital-acquired infections (HAI) that hospitals are required to report by law to the Department of Health. This law was created to provide the public with fair, accurate, and reliable HAI data to compare hospital infection rates and support quality improvement and infection prevention activity in hospitals. https://www.health.ny.gov/statistics/facilities/hospital/hospital_acquired_infections/

New York State Immunization Information System: A system that provides a complete, accurate, secure, real-time immunization medical record that is easily accessible and promotes public health by fully immunizing all individuals of appropriate age and risk. All health care providers are required to report all immunizations administered to persons less than 19 years of age, along with the person's immunization histories, to the New York State Department of Health.
https://www.health.ny.gov/prevention/immunization/information_system/

New York Statewide Planning and Research Cooperative System (SPARCS): A comprehensive all-payer data reporting system established as a result of cooperation between the health care industry and the government. The system currently collects patient level data on patient characteristics, diagnoses and treatments, services, and charges for each hospital inpatient and outpatient visit.
https://www.health.ny.gov/statistics/sparcs/

New York State Department of Transportation: A branch of the New York State government responsible for administering programs related to the maintenance, coordination, and development of transportation infrastructure. https://www.dot.ny.gov/index

New York State Student Weight Status Category Reporting System: A system that collects weight status category data on children and adolescents attending public schools in New York State outside of New York City.
https://www.health.ny.gov/prevention/obesity/statistics_and_impact/student_weight_status_data.htm

Safe Drinking Water Information System: An information hub from the Environmental Protection Agency (EPA) containing data about public water systems and violations of the EPA's drinking water regulations, as reported to the EPA from the states.
https://www3.epa.gov/enviro/facts/sdwis/search.html

Small Area Health Insurance Estimates (SAHIE): A program of the U.S. Census Bureau which estimates health insurance coverage for all states and counties nationally.
https://www.census.gov/programs-surveys/sahie.html

United for ALICE: Reports which use a standardized methodology that assesses cost of living and financial hardship on a county level calculated by United Way of Northern New Jersey.
https://www.unitedforalice.org/

Upstate New York Poison Center: A call center and research organization which provides poison emergency telephone management, poison information resources, public education, professional education, research and data collection, and toxic surveillance in real time. Its coverage area includes all New York State counties except Westchester, New York City, and Long Island.
https://www.upstate.edu/poison/

USDA Food Environment Atlas: An atlas from the USDA which assembles data regarding food environment factors, such as food choices, health and well-being, and community characteristics.
https://www.ers.usda.gov/foodatlas/

Vital Statistics of New York State: A registry of all births, marriages, divorces/dissolutions of marriage, deaths, induced termination of pregnancy/abortions, and fetal deaths that have occurred in New York State outside of New York City. It is maintained by the New York State Bureau of Vital Records, a branch of the NYSDOH. https://www.health.ny.gov/statistics/vital_statistics/