

Broome County Community Health Needs Assessment Report Update 2016-2018



Broome County Health Department



Sean J. Britton, NRP, CHP
Director of Public Health
Broome County Health Department

ACKNOWLEDGEMENTS

On behalf of the residents of Broome County, we are pleased to present the
Broome County Community Health Needs Assessment 2016-2018 Update

We hope that it serves to improve the health and well-being of all residents of Broome County.

With gratitude to the following individuals for their service on and contributions to the Broome County Community Health Assessment 2016-2018 Steering Committee:

Binghamton Housing Authority – Elaine Miller
Binghamton University – Leon Cosler, Diane Crews, Yvonne Johnston, Titlayoi Okoror
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Southern Tier Independence Center – Susan Ruff
SUNY Upstate Medical University Clinical Campus at Binghamton – Lenore Boris
Tioga County Health Department – Rebecca Kaufman, Heather Morgan
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This report was prepared and submitted by the Broome County Community Health Assessment Coordinator, Yvonne Johnston, DrPH, MPH, MS, RN, FNP. Questions or comments should be directed to:
Dr. Yvonne Johnston, Research Associate Professor
Decker School of Nursing, Binghamton University, PO Box 6000, Binghamton, NY 13902-6000
E-mail: johnston@binghamton.edu

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BROOME COUNTY
COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA)
COMMUNITY HEALTH IMPROVEMENT PLAN (CHIP)
AND COMMUNITY SERVICE PLAN (CSP)
2016 - 2018 UPDATE

County covered: Broome County

Participating Local Health Department: *Broome County Health Department*
225 Front Street, Binghamton, NY 13905
Phone: 607-778-3930 FAX: 607-778-2838
Web: www.gobroomecounty.com/hd

Participating Hospitals: *Our Lady of Lourdes Memorial Hospital, Inc.*
169 Riverside Drive, Binghamton, NY 13905
Phone: 607-798-5111
Web: www.lourdes.com

United Health Services Hospitals, Inc.

- *UHS Wilson Medical Center*
33-57 Harrison Street, Johnson City, NY 13790
Phone: 607-763-6000
- *UHS Binghamton General Hospital*
10-42 Mitchell Avenue , Binghamton, NY 13903
Phone: 607-762-2200
- *UHS Medical Group*
40 Arch Street, Johnson City, NY 13790
Phone: 607-763-6293
Web: <http://www.uhs.net/>

Coalition/entity completing assessment and plan: Broome County Health Department



EXECUTIVE SUMMARY

Over the past year, the Broome County Health Department, United Health Services (UHS) and Our Lady of Lourdes Hospital have conducted a systematic and comprehensive process that embraced community engagement, education, data retrieval and analysis, and a documented decision-making process in order to update the *Broome County Community Health Assessment (CHA)* and *Community Health Improvement Plan (CHIP)* for the 2016-2018 period. This endeavor relied on multisector collaboration. The process also was informed by analyzing the implementation efforts and performance measures for the 2013-2017 CHIP. This organized approach resulted in the Steering Committee voting to continue work on the same three Prevention Agenda priority areas:

- ***Promote a Healthy and Safe Environment***
- ***Prevent Chronic Disease***
- ***Promote Mental Health and Prevent Substance Abuse***

In addition, the Broome County CHA Steering Committee has chosen to focus on the health disparities encountered by the low income, Medicaid population and particularly on individuals who underutilize the preventive and disease management services within the health care system.

The process reaffirmed the need for continued efforts to address community priorities that were selected in 2013. Since the last priority setting phase, there has been an unprecedented healthcare system transformation underway generated by NYS Medicaid redesign and reform. This venture, the Delivery System Reform Incentive Program (DSRIP), allows New York State to reinvest billions in federal savings to alter the financing and delivery of health care with the goal of reducing hospitalizations from preventable conditions. This project targets low utilizers of the Medicaid system who do not endorse prevention, nor understand self-management aspects of chronic diseases, and who frequently use emergency rooms for preventive services. While this driving force in healthcare has not changed the priority areas per say, it has influenced the development of a new intervention strategy designed to impact the mental health priority area and align with the larger health system transformation.

Two additional emerging health issues in Broome County are highly linked to the social determinants of health: food insecurity and opioid abuse. These issues have been adopted by community “grass roots” taskforce groups. Members of these alliances continue to examine local data, explore evidence based interventions, consult with experts and knowledgeable professionals, and meet with community members personally affected by these problems. The common goal of these coalitions is to develop an evidence based, multifaceted approach that will inform the next five-year CHA/CHIP process. Many Broome County CHA Steering Committee Members serve in some capacity or have representation on these groups.

A broad set of data sources were reviewed to assess progress, identify ongoing or new health issues, and inform strategic prioritization of needs for this report including:

- **State and Federal:** US Census Bureau American Community Survey, NYS Prevention Agenda Dashboard, NYS Expanded Behavioral Risk Factor Surveillance System (eBRFSS) Survey, NYS Quality Assurance Reporting Requirements (QUARR), Network, NYS Community Health Indicators Reports, NYS Vital Statistics, NYS Sub-County Health Data Report for County Health Rankings-Related Measures
- **Foundations and Community Organizations:** Robert Wood Johnson Foundation County Health Ranking, Rural Broome Counts Needs Assessment, NYS Population Health Improvement Project (PHIP) Community Dashboard (HealthlinkNY)
- **Local Performance Measures:** (NYSDOH Grant Funded Programs): Older Adult Fall Prevention Program, Community Transformation Grant, Comprehensive Cancer Control Program, Creating Healthy Schools and Communities Grant
- **Local Agency Reports:** Broome County Women Infants and Children’s (WIC) Breastfeeding Initiation Report, Medicaid Health Home data (Catholic Charities and United Health Service), DSRIP (Care Compass Network) Community Health Needs Assessment, and various partner specific reports provided by Lourdes and United Health Services Hospitals.

As part of the ongoing process of Mobilizing Action for Planning and Partnerships (MAPP), the Broome County Health Department collaborated with a host of stakeholders who represent the county’s multiple sectors and priority populations. Each partner brings resources, expertise and perspective to specific priority areas.

- **Promote a Healthy and Safe Environment - Focus Area: Reduce Falls and Hospitalizations from Falls in Older Adults:** United Health Services and Lourdes provide data, technology, staffing, on-site evidence based community programming, referrals, and evaluation information. Independence Awareness, YMCA, Retired Senior Volunteer Program and Broome County Office for Aging, provide data, staffing resources, space, on-site evidence based community programming, earned media, and evaluation information. Excellus Blue Cross Blue Shield provides funding for the expansion of clinical and community based interventions.
- **Prevent Chronic Disease - Focus Area: Reduce Obesity in Children and Adults and Focus Area: Incorporate Access to High Quality Chronic Preventive Care and Management in Both Clinical and Community Settings:** Broome County WIC Program and Maternal Child Health, Mothers and Babies Perinatal Network, and the Southern Tier Breastfeeding Coalition provide data, conduct evidence based healthy lifestyle counseling, offer breastfeeding education for health care providers and families, and implement the breastfeeding peer counseling program. Lourdes, United Health Services, Binghamton University, Rural Health Network, Family Enrichment Network, Broome County Council of Churches, Broome County School Districts, Broome Tioga BOCES, Cornell Cooperative Extension, Binghamton Metropolitan Transportation Study, and the Southern Tier Independence Center provide data, technology, staffing, on-site evidence based community programming as well as policy development, implementation, evaluation, and sustainability activities.

- **Promote Mental Health and Prevent Substance Abuse - Focus Area: Strengthen Infrastructure Across Systems:** As part of the DSRIP Project 3ai, assessment assets were provided to assist with the CHA process and intervention selection. Lourdes is providing resources to assure training and staffing needs will be met to integrate behavioral health into primary care.

The community-at-large has been engaged in these efforts using various methods of outreach and program evaluation activities. The Broome County Health Department, hospital systems, and CHA Steering Committee members have also been involved with the DSRIP community engagement efforts. These engagement activities include intercept interviews, focus groups, telephone interviews and community forums. The demographic and geographic lenses from these activities proved invaluable for informing the CHA/CHIP process.

In general, the evidence-based interventions being implemented are a continuation of the original interventions selected by the Steering Committee in 2013. These interventions were selected based on potential impact, available resources, measurability, and sustainability.

- **Promote a Safe and Healthy Environment:** The Centers for Disease Control and Prevention's (CDC) *Compendium of Effective Fall Interventions Guide* represents a comprehensive array of evidenced based fall prevention interventions for older adults. Broome County chose to implement both community and clinical interventions. The community based interventions are Tai Chi Moving for Better Balance and the Stepping On Program. Clinical interventions are CDC's Stopping Elderly Accidents, Deaths and Injuries (STEADI) Clinical Fall Risk Assessment Program and a home based physical therapy program (OTAGO).
- **Prevent Chronic Disease:** Evidence based interventions were selected from the CDC *Recommended Community Strategies and Measurements to Prevent Obesity in the United States: Implementation and Measurement Guide*. The interventions consist of developing and implementing Complete Streets policies, breastfeeding and baby friendly policies, strengthening school wellness policies, reducing screen time and consumption of sugary beverages, integrating breakfast and physical activity in the classroom, adopting structured and age appropriate physical activity in daycare settings, implementing pediatric BMI screening and referral for nutrition and behavioral counseling and implementing breastfeeding peer support and education programs for WIC families, increasing diabetes/cardiovascular screening rates and disease management for Medicaid and disparate populations.
- **Promote Mental Health and Prevent Substance Abuse:** Integrating behavioral health into primary care practices was chosen for this priority area. The intervention was developed by New York State and approved by the Centers for Medicare and Medicaid for use by Performing Provider Systems to develop DSRIP Project Plans.

Community health improvement and progress are being monitored by monthly the CHA Steering Committee during monthly meetings. In addition, a CHA/CHIP tracking tool was developed using the process measures from each priority/focus area to inform progress. As the updated CHIP is implemented and evaluated, specific actions/interventions may be modified

and new ones added in a continuous and dynamic Plan, Do, Check, Act (PDCA) cycle. The CHIP process measures are as follows:

- **Promote a Safe and Healthy Environment:** System changes consist of implementing clinical fall risk assessments in health care setting and implementing a home based physical therapy program that integrates fall prevention activities. Process measures include: number of primary care sites and providers trained in clinical fall risk assessments, number of patients screened, number of patients at risk, number of patients with a fall plan of care, number of physical therapists trained in OTAGO, number of patients receiving in-home fall prevention services, number of Tai Chi and Stepping On community based programs.
- **Prevent Chronic Disease:** Process measures include: number of WIC participants counseled on healthy lifestyle and nutrition, number of WIC participants receiving low fat food packages, number of primary care providers conducting BMI screening, number of children screened, number of children referred and/or counseled for nutrition education and/or physical activity, number of WIC infants breastfed, percentage of women initiating breastfeeding and continuing at 3, 6 & 12 months, number of women attending breastfeeding classes, number of women receiving peer counseling services, number of healthcare providers trained, number of breastfeeding friendly provider sites/child care sites, number of child care sites and providers trained to provide structured physical activity, number of children receiving structured physical activity at child care sites, percentage of children age 2-5 reducing screen time, number of sites with health food procurement policies, number of complete streets policies developed, number of complete streets municipal trainings, number of residents covered by complete streets policies, number of school wellness policies strengthened, number of patients identified as having diabetes or pre-diabetes who receive follow up care at UHS, number of rural residents partaking in chronic disease self-management programs (CDSMP), number of patients receiving diabetes education, percentage of Medicaid members (African American) who receive all four screening tests for diabetes(A1C, cholesterol, retinal, and neuropathy) percentage of Medicaid members with cardiovascular condition, who had cholesterol checked once during the year, percentage Medicaid members whose cholesterol level was at or below recommended level, number of Lourdes associates and patients participating in the Healthy Hero 5,2,1,0 program who receive BMI screening, healthy nutrition, and physical activity counseling.
- **Promote Mental Health and Prevent Substance Abuse:** Process measures include: number of patients screened at participating sites, number of patients engaged with Behavioral Health Consultants, number of providers who complete a pre- and post-test on evidence based protocols.

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BROOME COUNTY COMMUNITY HEALTH ASSESSMENT (CHA) REPORT: 2016 – 2018 UPDATE

Introduction

Community health assessment is a process for examining the health of a community. In Broome County, this process served as the means by which we evaluated our progress toward achieving New York State’s *Prevention Agenda 2013-2018* goals, which were designed to improve the health of all New Yorkers. While completion of a community health assessment is required of local health departments, there are many benefits to doing so. As part of this process, many community organizations and health service agencies worked together. We examined data, explored issues, and developed a list of what we thought were the most pressing concerns. This report provides a brief review of the health status of Broome County residents and details the process for conducting this assessment and selecting public health priorities for Broome County.

Vision Statement

“By 2018, Broome County will be distinguished as a community that maximizes the opportunity for all people to take responsibility for their own well-being and achieve their optimal quality of life. The health of the community will also be enhanced by a community wide partnership of organizations that will assess, prioritize and take action on initiatives to improve specific public health indicators and measures of community health status.”

Community Health Assessment Leadership

A Steering Committee was reconvened in August 2015 and charged with providing leadership for conducting an update to the *Broome County Community Health Assessment (CHA)* for the period 2016–2018. The Steering Committee was chaired by the Broome County CHA Coordinator and its members included a diverse cross-section of community agencies in addition to area hospital system representatives directly involved in the development of their respective *Community Service Plans (CSPs)*. The core support team from the Broome County Health Department (BCHD) included the Director, Deputy Director, Medical Director, and CHA Coordinator as well as senior staff, administrative personnel, and other support team members.

The MAPP Model

The CHA Steering Committee used the Mobilizing Action for Planning and Partnerships (MAPP) process to assess and prioritize the health needs of the community as well as to strategize about ways to improve the health of Broome County residents.

The community health assessment not only is required for state aid reimbursement under Article 6, but also is a core public health function and critical step in health planning. Over the course of more than a year, the CHA Steering Committee again explored the health needs in our community and the resources available to address them. We used the MAPP model as a community-wide strategic planning tool for prioritizing key public health issues and identifying potential resources. These efforts culminated in an update to the previous 2013-2017 *Community Health Improvement Plan (CHIP)* which will be implemented and evaluated over the next two years.

Collaboration

The data obtained through the MAPP process informed the *Community Service Plans (CSPs)* required of hospital systems and the *Community Health Assessment (CHA)* required of our local health department. In addition, diverse representation from a wide array of community service organizations participated in this strategic planning process. This collaboration resulted in this report update. The Broome County CHA Steering Committee will continue to work together in this interim period, 2016-2018, to address the health priorities identified by this process and strategically direct interventions in the *Community Health Improvement Plan (CHIP)*.

Data Sources

The Community Health Status Assessment examines the health status, quality of life, and risk factors for disease present in the community. Access to online data has improved the ability to obtain relevant and meaningful local statistics, many of which are available through the NYS Department of Health website. Expansion of data that is geocoded and which can be mapped provides rich information for public health assessment and planning. In addition, the county provides Geographic Information System and Mapping Services through an online portal.

Thus, a broad set of data sources were reviewed to assess progress, identify ongoing or new health issues, and inform strategic prioritization of needs for this report including:

- **State and Federal:** US Census Bureau American Community Survey, NYS Prevention Agenda Dashboard, NYS Expanded Behavioral Risk Factor Surveillance System (eBRFSS) Survey, NYS Quality Assurance Reporting Requirements (QUARR), NYS Statewide Planning and Research Cooperative System (SPARCS), NYS Community Health Indicators Reports (CHIRs), County Health Assessment Indicators (CHAI), NYS County Health Indicators by Race/Ethnicity (CHIRE), NYS Vital Statistics, NYS Sub-County Health Data Report for County Health Rankings-Related Measures
- **Foundations and Community Organizations:** Robert Wood Johnson Foundation County Health Ranking, Rural Broome Counts Needs Assessment, NYS Population Health Improvement Project (PHIP) Community Dashboard (HealthlinkNY)
- **Local Performance Measures:** (NYSDOH Grant Funded Programs): Older Adult Fall Prevention Program, Community Transformation Grant, Comprehensive Cancer Control Program, Creating Healthy Schools and Communities Grant

- **Local Agency Reports:** Broome County Women Infants and Children's (WIC) Breastfeeding Initiation Report, Medicaid Health Home data (Catholic Charities and United Health Service), DSRIP (Care Compass Network) Community Health Needs Assessment, and various partner specific reports provided by Lourdes and United Health Services Hospitals.

Data were downloaded, analyzed, and reviewed by the Steering Committee with comparisons made to NYS Prevention Agenda 2017 goals and Healthy People 2020 objectives. Steering Committee members presented information about their agency, the populations they serve, the services they provide, and identified needs and gaps in services. Steering Committee members were asked to provide the group with recent assessments or data from their organization that would inform the process. Annual reports and other publications from community partners and agencies that service specific population sectors were compiled and reviewed. Steering Committee members readily shared materials and information.

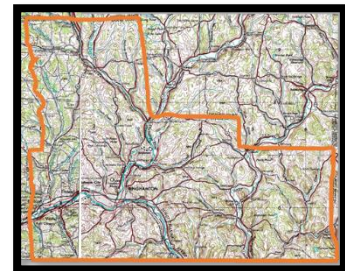
Section 1: Description of the Community Being Served

Geographic Region



The service area for this *Community Health Assessment* is Broome County. Broome County is located in the Southern Tier of New York State (NYS), which encompasses nine counties along the Pennsylvania border and it is one of three counties in the central New York region. Broome County includes the upper regions of the Appalachian Mountain Chain. Although the county is a small metropolitan area with a Rural Urban Continuum Code (RUCC) of 2, it is often referred to as rural particularly at the upper and eastern edges. The county has two large population centers with surrounding suburban areas and, for the largest portion of the land area, predominantly rural townships with small village centers.

The Chenango and Susquehanna rivers flow through the glacial valleys of the county with their confluence in Binghamton. While the western half of the county is hilly with wide valleys, the eastern half has more rugged terrain as it nears the Catskills. The highest elevation is in the Town of Sanford at 2087 feet above sea level and the lowest point is along the Susquehanna river at the Pennsylvania state line (864 feet above sea level).



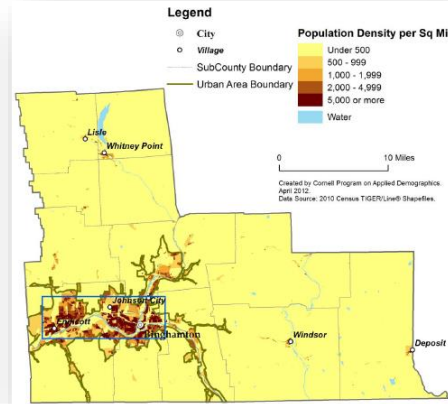
Topography and location influence the climate of Broome County. Broome County is primarily cool with an average annual temperature of 46° F. This area receives about 48% of the annual average available sunshine, primarily in the summer months, with approximately 212 cloudy days and 39 inches of precipitation per year.

Laws and Regulations

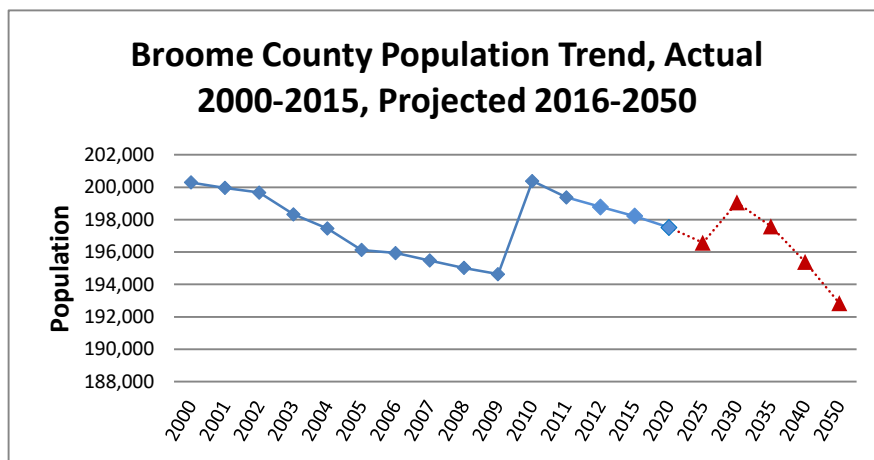
The Broome County Legislature is composed of 19 elected legislators representing county residents. The Legislature is the policy-making body and taxing authority of Broome County Government. Through its power is to legislate and approve appropriations, the County Legislature shapes the direction of Broome County Government. The Broome County Charter defines the duties and powers of the legislature. The County Legislature is responsible for the adoption of all local legislation and levy of property taxes. The county operates the county legal systems, handling the prosecution of crimes committed within the county with sole authority over felony trials and shares authority with local courts in misdemeanor cases. The county operates the sheriff's office and probation services; provides social services, maintains public records, is responsible for the delivery of public health, oversees the county landfill, maintains and constructs county highways, and provides public transportation.

Population

The estimated population of Broome County in 2015 was 196,567 persons. The county covers a land area of 705.77 square miles yielding a population density of 279 persons per square mile. The county is comprised of 16 towns, 7 villages, and 1 city. Three towns and one city have populations greater than 10,000 and 14 towns have populations less than 10,000. The largest concentrations of residents are located in the southwest section of the county, which includes the City of Binghamton and the towns of Vestal and Union. Broome County ranks 19th out of 62 counties in population size.



SOURCE: Cornell University, Program on Applied Demographics Projections, 2013



SOURCE: US Census Bureau, Population Estimates Program, 2000–2015; Cornell University, Program on Applied Demographics Projections, 2013

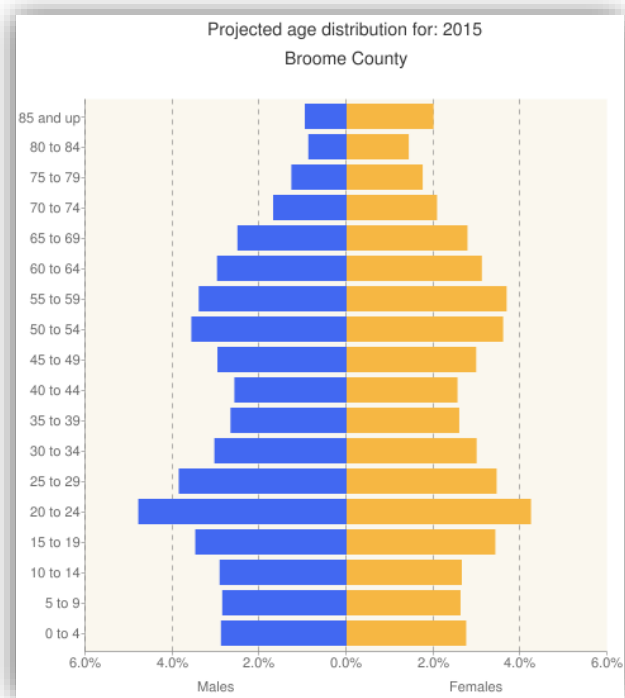
The population of Broome County grew steadily from 1810 to 1970, peaking at 221,815 persons in 1970. This growth was attributable to manufacturing opportunities offered by such businesses as Endicott-Johnson Shoe Company, International Business Machines (IBM), and Link Flight Simulation.

Since 1970, Broome County has experienced a net out-migration due to economic forces resulting in a reversal of this trend. Population projection estimates suggest that this decline is likely to continue through 2050 with a net population loss of approximately 5,000 persons over this time period. Flooding from severe storms particularly in September of 2004 and June 2006 may account for at least some of these population losses as well as population impacts from hurricane Irene and tropical storm Lee in 2011 and hurricane Sandy in 2012.

Age & Gender

For 2015, the median age in Broome County is estimated to be 37.7 years for males, 42.4 for females, and 40.3 overall, ranking it in the third quartile for NYS. In comparison, the median age is 38.3 years in NYS and 37.8 years in the US. Children under 18 years of age comprise 19.5% of the population; and adults age 65 and older, 17.7%, yielding a child dependency ratio¹ of 31.1, an old age dependency ratio² of 28.3, and an age dependency ratio³ of 59.4. These figures are 33.4, 23.5, and 56.9 for NYS, and 36.8, 23.9, and 60.7 for the US respectively. The lower concentration of youth and higher concentration of elderly relative to the rest of the state indicates that Broome County experiences a greater burden of care for their elderly than NYS or the US as a whole.

For the estimated 2015 population, 49.5% are male and 50.5% are female. The population pyramid depicts 5-year age groups or cohorts for both males (left side) and females (right side). Up to age 40, males outnumber females, but after age 50 women comprise the larger proportion of the total population. The sex ratio⁴ is 109.8 in the three youngest cohorts (ages 0 to 14) as compared to 62.1 in the three oldest cohorts (75 and older), which reflects the slightly higher birth rate and considerably greater mortality rate among older men. Because women tend to have less economic security than men, widows who live alone may require more services or assistance to remain in their home. The “bulge” in the young adult population likely reflects students attending area colleges while the narrowing among 30-39 year-olds suggests that graduates leave for job opportunities outside Broome County. The outmigration of young adults and an aging population are responsible for the higher observed old age dependency ratio, which places a greater burden of care on working families in order to support an aging population.



¹ The child dependency ratio = [(the number of people age <18) ÷ (the number of people age 18-64)] x 100. This ratio reflects the burden of care for children on the working population.

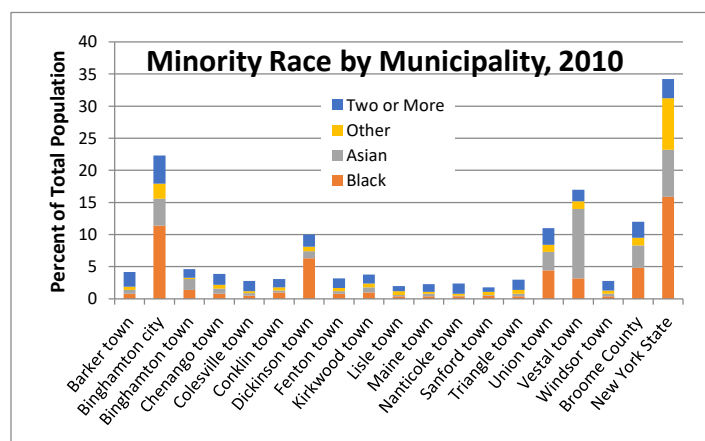
² The old age dependency ratio = [(the number of people age 65+) ÷ (the number of people age 18-64)] x 100. This ratio reflects the burden of care for elders on the working population.

³ The dependency ratio = [(the number of people age <18 + the number of people age 65+) ÷ (the number of people age 18-64)] x 100. This number reflects the care burden for the economically dependent members of society on the working population.

⁴ The sex ratio = [(the number males) ÷ (the number of females)] x 100

Race & Ethnicity

The majority of Broome County’s population is white (86.1%) and non-Hispanic (96.0%). Population estimates indicate that the proportions of Blacks/African Americans and Asians have increased between 2010 and 2015. For Blacks/African Americans, the population has increased from 5.1% to 5.8% and for Asians from 3.6% to 4.4%. The proportion of Hispanics/Latinos, regardless of race, has also increased from 3.4% in 2010 to an estimated 4.0% in 2015. Population trends for Blacks and Hispanics indicate a continuous near linear increase whereas Asians seem to have leveled off since 2008.



SOURCE: US Census Bureau, 2010

Rural areas of Broome County show less diversity than urban and in all areas, the proportion of non-white population is well-below NYS and US averages. Based on 2010 US census data, the municipalities with the highest percentage of Blacks included the City of Binghamton (11.4%) and the town of Dickinson (6.3%). The municipalities with the largest concentration of Asians were Vestal (10.8%) and the City of Binghamton (4.2%). The largest concentrations of Hispanics were in the City of Binghamton (6.4%) and the towns of Vestal (3.3%) and Union (3.2%).

Income & Poverty Level

The median household income was \$46,152 in Broome County, which was lower than both NYS (\$60,850) and the US (\$55,775). These figures were based on 2015 US census bureau estimates and expressed in 2015 inflation-adjusted dollars. Median income for nonfamily households (\$28,128) is 37% of that for married families (\$75,150). The median earnings for an individual were \$25,794. Female earnings (\$37,089) were 85% that of males (\$43,728). Importantly, there is a positive association between earnings and educational attainment. On average, each increase in education level yields a 30% increase in earnings.

In 2015, there were 33,262 individuals below poverty level in Broome County, which represents 17.8% of the population for whom poverty status was determined. For the period 2011-2015, the proportion of individuals below poverty was higher in Broome County (17.9%) than in NYS (15.7%) or the US (15.5%), and relates to the lower income levels observed for both individuals and households.

2015 Federal Poverty Guidelines

Family Size	Gross Yearly Income	Gross Monthly	Approximate Hourly
1	\$11,770	\$981	\$5.66
2	\$15,930	\$1,328	\$7.66
3	\$20,090	\$1,674	\$9.66
4	\$24,250	\$2,021	\$11.66
5	\$28,410	\$2,368	\$13.66
6	\$32,570	\$2,714	\$15.66
7	\$36,730	\$3,061	\$17.66
8	\$40,890	\$3,408	\$19.66
Over 8 add per child	+ \$4,160	+ \$347	+ \$2.00

Source: *Federal Register* vol. 80, no. 14, January 22, 2015, pp. 3236-7. Monthly and hourly data calculated by OCPP and rounded to the nearest dollar and cent, respectively. The hourly rate is based on 40 hours of work per week for a full year (2080 hours). These guidelines are for the 48 contiguous states and the District of Columbia.

poverty level and 43% of individuals who worked less than full-time year-round were below poverty level.

The differences in poverty level among type of household are particularly striking. Families in which the head of household is female with no husband present have poverty rates that are nearly six times higher than married-couple families (29% vs. 5%). These differences are compounded by significant racial and ethnic disparities. Almost 39% percent of families receiving Supplemental Security Income and/or cash public assistance were below poverty level. The poverty level was more than 50% for families with three or four children in which the head of household was female with no husband present, and was over 58% for families in which the householder had less than a high school education.

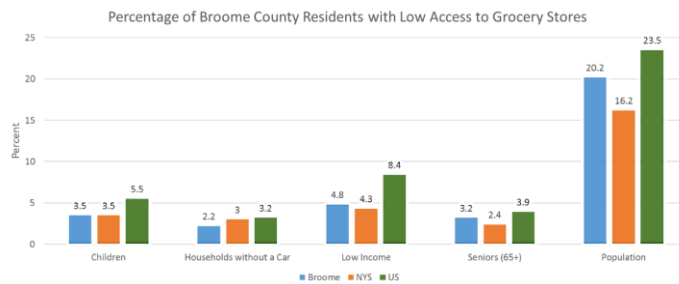
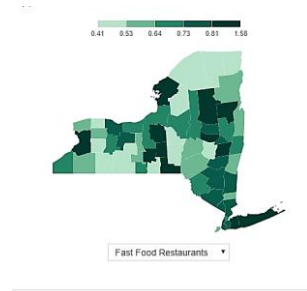
Poverty is not homogenously distributed across the geographic area. Based on 2010 census data, municipalities with the highest percentage of individuals or families below poverty level included the City of Binghamton and the towns of Dickinson, Conklin, Colesville, and Maine indicating that both rural and urban areas experience higher levels of poverty than suburban areas. In terms of healthcare access to services and transportation, the urban core of the county is considerably more resource rich than the outer lying rural areas so poverty levels for rural populations are more likely compound access issues.

In 2015, there were an estimated 8,467 children under the age of 18 who were living below poverty level (22.9 per 100). Data from the NYS Child Well-Being Report, indicate that 11,057 children ages 0- 17 who received Supplemental Nutrition Assistance Program (SNAP) benefits (2015) and 13,204 children in kindergarten through 12th grade who received free or reduced-price lunch in public schools (2015-2016). Between 2010 and 2015, a slight increase was observed for SNAP benefits (27.1% to 28.6%) however the increase was substantial for children who received free or reduced-price school lunch (38.0% to 50.4%). Poverty in childhood is associated with a wide range of social, educational, and health-related problems, and this indicator offers an important leverage point for primary prevention.

Based on 2015 estimates, the age group with the highest percentage below poverty level was children under 5 years of age (24.5%). Compared to white non-Hispanics, the proportion of individuals below poverty level was 2.7 times higher for Blacks/African Americans (39.5%) and 2.2 times higher for Asians (32.7%) as well as 1.8 times higher for Hispanics of any race (26.4%). The percent below poverty level increases with lower educational attainment consequently over 30% of individuals who have less than a high school education were below poverty level. Almost 22% of individuals who worked part-time or part-year were below poverty level whereas 42% of unemployed individuals were below

Food Insecurity

Food insecurity refers to the US Department of Agriculture’s measure for lack of access to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods (Feeding America, 2016). Such households are not necessarily food insecure at all times and often reflects a balance between meeting basic needs (e.g., housing) and purchasing nutritionally adequate foods.

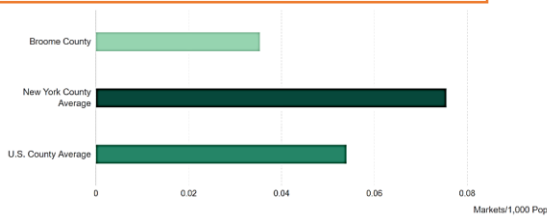


In 2013, an estimated 14.1% of Broome County adults and 24% of children were food insecure in Broome County. Food “deserts” and “swamps” are common in Broome County, particularly in the economically stressed areas of Binghamton, Johnson City, and Endicott (Cornell Cooperative Extension, 2016).

SOURCE: US Department of Agriculture Food Atlas, 2012 Data

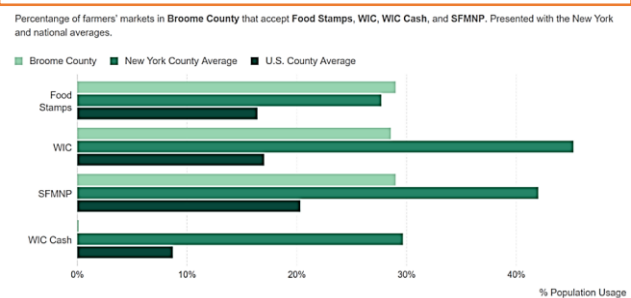
The number of fast food restaurants per 1,000 residents is higher in Broome County than other counties in the US (0.813 vs. 0.583). Sadly, children who live in households without access to nutritious foods are more likely to be malnourished compromising their ability to learn and employment potential as well as protracting the cycle of poverty.

Density of Farmer’s Markets



SOURCE: US Department of Agriculture Food Atlas, 2012 Data

Percentage of Farmer’s Markets that accept Nutrition Assistance Programs



Employment

For the period 2011–2015, the five-year unemployment rate for Broome County was 8.6%. Young adults had the highest unemployment rates, with 19.2% of 16–19 year olds and 12.5% of 20–24 year-olds unemployed. Unemployment rates for Asians, Blacks/African Americans, and Hispanics (any race) were 7.5%, 19.7%, and 18.1% respectively. The rates for Blacks/African Americans and Hispanics was approximately 2.3–2.5 times higher than the rate for whites (7.9%). More than 29% of the population 16 years of age or over and who were below poverty level were unemployed. Of those with any type of disability, 17.8% were unemployed. Trends in employment are indicators of economic vitality. The economic conditions in NYS have resulted in similar fluctuations in unemployment for both Broome County and NYS.

For the period 2010–2014, the five-year employment rate for Broome County was 53.7%. Employment rates were lowest for the elders (4.4% for adults age 75 or older) and youth (29.3% for young adults age 16-19), and highest for the age group 45-54 years (74.5%). Rates of employment were higher for whites (55.0%) than for Blacks/African-Americans (43.9%), Asians (43.9%), or Hispanics (46.7%). For those below poverty level, employment rates were 31.1% and for those with any type of disability 30.2%. Because insurance status is generally linked to employment, lower rates of employment are associated with lack of access to health care and health care coverage, which in turn are related to higher morbidity and mortality.

Based on 2010 US census data, municipalities with the highest employment among the population age 16 and older were the towns of Kirkwood (63.9%), Barker (63.7%) and Windsor (62.6%). The highest unemployment among municipalities included the towns of Sanford (7.8%), Nanticoke (6.1%), Lisle (5.7%), and Colesville (5.4%), as well as the city of Binghamton (5.4%). Labor force refers to the number of people available for work—both those who are employed and those who are unemployed, but looking for work. Individuals who are not in the labor force include those who are going to school or are retired, those whose family responsibilities keep them from working, and those who have given up trying to find a job. Municipalities with the largest proportion of the population age 16 and over who are not in the labor force were the towns of Dickinson (51.6%), Vestal (47.4%), and Sanford (40.1%) in addition to the city of Binghamton (42.4 %).

Education

In 2015, the percent population with less than a ninth-grade education among individuals 25 years of age and over was considerably lower for Broome County (2.2%) than for NYS (6.6%) or the US (5.5%). The percent population who were high school graduates or who had an associate degree was higher than state and national averages. These data indicate a somewhat more educated public. Although the percent population enrolled in college or graduate school was higher in Broome County than in NYS or the US, a lower percentage of the adult population who reside in the county have earned a bachelor's degree or higher. These data suggest that college graduates who earn their degree in Broome County may migrate out of the local area.

Based on 2010 US census data, the municipalities with the highest proportion of population who have less than a high school education were Dickinson (19.6%), Windsor (16.5%) and the City of Binghamton (16.5%). These municipalities represent both inner city (urban) and rural areas. The municipalities with the highest percent population having a bachelor's degree or better were the towns of Vestal (43.6%) and Binghamton (32.7%). These municipalities also had the highest enrollment in college (Vestal, 70.8%; and city of Binghamton, 40.8%). These suburban areas are located near two major educational institutions: Broome Community College and Binghamton University, which likely accounts for the more educated population in proximity.

In Broome County, the percent of children enrolled in preschool is lower than both state and national averages (5.0% vs. 6.2% and 6.0% respectively) whereas the percent population enrolled in college or graduate school is higher for Broome County than either the state or the nation (41.1% vs. 30.8% and 27.8% respectively). In Broome County, the average annual high school dropout rate for the three-year period 2013-2015 was 2.9%, which was lower than the 3.1% for NYS (NYS Community Health Indicator Reports – Socioeconomic Status, 2016).

Schools

There are 12 public school systems serving K-12 in Broome County in addition to Catholic and other religious related systems. These school systems serve parts of four counties in addition to Broome. The Board of Cooperative Educational Services (BOCES) serves 15 school districts in Broome and Tioga counties. Post-secondary education is offered in colleges and technical schools located in Broome County including: Binghamton University, State University of New York at Binghamton, Broome Community College, Davis College, and Ridley-Lowell Business and Technical Institute. Fourteen colleges and universities are located within a one-hour drive of Binghamton. Care and education of very young children is an important part of the community. Because child care is provided in both formal and informal settings, the ability to accurately determine service providers and service usage is limited. Preschools in NYS provide early childhood education, laying a solid foundation for future growth and learning. NYS is involved in an ongoing effort to have preschools approved by the Department of Education, and currently there are eight Broome County public preschools with this designation.

Disabilities

In 2015, an estimated 16.0% of individuals residing in Broome County had some type of disability: ambulation (8.3%), cognition (6.9%), independent living (6.1%), hearing (3.9%), self-care (3.0%), and vision (2.3%). The most common disability among children (under 18 years of age) was cognitive (9.1%). Almost 33% of the population age 65 and older reported some type of disability and a wider variety of disabilities are prevalent among older adults: ambulation (20%), hearing (14.6%), independent living (12.5%), cognition (7.8%), self-care (7.2%), and vision (5.6%).

Although overall prevalence of disabilities was similar for males and females (16.7% and 15.3% respectively), males with disabilities outnumbered females in the 5 to 17 age category (1,936 vs. 938), which is likely associated with high risk behaviors and traumatic injuries that are more prevalent in this age group. In contrast, females outnumbered males in the 65 and over age group (6,198 vs. 4,756), which likely relates to the longevity of women and increased risk for disability that comes with age.

For 2015, among adults age 18 or older with a disability and for whom poverty status was determined, the proportion who were below poverty level was 13.7% for Broome County, 13.0% for NYS, and 10.9% in the US. Based on 5-year estimates (2011-2015) for Broome County, one-fourth of adults who were below poverty level had some disability. This figure increases to almost 40% if the person has an employment disability (determined by asking individuals if they have a physical, mental, or emotional condition lasting 6 months or more that caused difficulty in working at a job or business).

Veterans

In 2015, 8.2% of the civilian population aged 18 or older in Broome County had veteran status (estimated 12,899 persons). The majority of these individuals were veterans of the Vietnam War (35.6%) and the Gulf War periods (20.0%) and to a lesser extent the Korean War (11.9%) and World War II (8.2%). Most veterans were white (87.6%), male (94.0%), and age 75 or older (30.4%). Compared to non-veterans, veterans were less than one-third as likely to be below poverty level (5.6% vs. 17.6%), but for those below the poverty level, they were nearly three times as likely to have a disability (45.2% vs. 16.3%). The prevalence of a disability was particularly high among veterans age 65 and older (76.8%) as compared to non-veterans (43.8%). As American veterans continue to age, the proportion of veterans from World War II is decreasing while the proportion from the Gulf Wars is increasing. In addition, the percentage of female and minority veterans are increasing. Because many veterans seek care in civilian healthcare settings, an understanding veterans' unique needs especially in the areas of post-traumatic stress disorder (PTSD) and depression are essential for ensuring delivery of quality care.

Housing

Between 2011 and 2015, Broome County had an estimated 90,139 housing units and an 88% occupancy rate. The majority of housing in Broome County (56%) was built before 1960 and only 10% of homes are newer (built since 1990). Of the total number of housing units, most are single-unit (63%), 32% are multi-unit, and 5% are mobile homes. Of the occupied housing units, 66% is owner-occupied and 34% are renter-occupied. The median value of an owner occupied home for the 2011 to 2015 period was \$109,900, which is 62% of the national median value (\$178,600) and only 39% of the median value of a home in NYS (\$283,400). Over 63% of occupied housing units use gas for heating, 12% use kerosene or fuel oil, 12% use electricity, 7% use propane, and 3.6% heat their homes with wood. Monthly owner costs for housing units with a mortgage were \$1,172; for those units without a mortgage, \$484, and for renters, \$703.

Almost 27% of housing units with a mortgage had owner costs that were 30% or more of the household income, and this figure was closer to 15% for housing units without a mortgage. In contrast, 55% of renters spent 30% or more of the household income on rent. For transportation, 12% did not have access to a private vehicle while 50% had two or more vehicles. Based on the 2013-2014 Expanded Behavior Risk Factor Surveillance Survey (eBRFSS), the percentage of adults who report being always, usually, or sometimes stressed about having enough money for their rent or mortgage (housing insecurity) was slightly higher in Broome County than in NYS or the US (38.3% vs. 36.6% and 43.4% respectively).

Households and Families

For the period 2011-2015, the total number of households in Broome County was estimated to be 79,132 and the average household size was 2.37 persons. The majority of households were comprised of families, both married-couple households (43.3%) and single head of household (16.1%, comprised of 11.0% female and 5.1% male). The remaining nonfamily households consisted of a person living alone (32.7%) or a person living with other non-related individuals (7.9%). Of those householders who live alone, 33.2% were over the age 65. These demographics represent an important consideration when planning for the delivery of care, particularly in relation to chronic disease management.

Grandparents

An estimated 2,722 grandparents lived with their own grandchildren under the age of 18. Of these grandparents, 30.2% had primary responsibility for care of the children. Of those grandparents who were responsible for the care of their own grandchildren under the age of 18, 70% were female, 69% were between the ages of 30 and 59 years, 55% were married, 31.2% had some disability, 8.3% spoke a language other than English, 76.1% did not speak English very well, and 30.9% were below poverty level. In 48.8% of cases, no parent was present.

Language & Nativity

Although fairly homogenous in its racial make-up, Broome County has become more diverse, owing to its use as a resettlement site for Asian/Pacific Islander, Middle Eastern, African, and Eastern European refugees. Despite this influx, only 6.6% of people living in Broome County were foreign-born. Broome County has relatively higher rates of non-English speaking residents than many other rural upstate New York counties. For the period 2011-2015, an estimated 9.4% of individuals five years of age or older spoke a language other than English in the home. Not surprisingly, individuals who speak a language other than English in the home are more likely to be foreign-born. Notably, these individuals are more likely to be below poverty level than those who are English-only speaking. Comparisons of educational attainment reveal an interesting dichotomy. Compared to those who speak English only, those who speak a language other than English in the home are more likely to have less than a high school education or to have a bachelor's degree or higher.

Transportation & Commuting

Of the workers in Broome County age 16 or over, an estimated 88% used a privately-owned car, truck, or van to get to work. Of these commuters, only 5.6% carpoled and 94.4% drove alone. Alternative modes of transportation reported include: 3.3% used public transportation (excluding taxicab), 4.5% walked to get to work, bicycle, and 1.1% taxicab, motorcycle, or other, 1.1%. Over 3.5% of workers age 16 or older worked at home. Fifteen percent reported travel time as a half-hour or more and the mean travel time to work was just over 20 minutes. The vast majority work in NYS (98.3%) and most worked in Broome County (87.4%). Because travel occurs predominantly by privately owned vehicle, those who live in rural areas, who are on fixed incomes, or who must travel distances may have difficulty accessing services in urban areas.

Environmental Barriers to Care

With the exception of the small villages, the roadways in most of the rural townships lack sidewalks. Many, if not most, of the residential suburban areas lack sidewalks as well. This deficit has made “walk-to-school” programs difficult. However, even in the more populated areas where sidewalks are present, traffic and safety issues often prevent parents from allowing their children to walk to school. Residents have also expressed concerns about sidewalk maintenance, particularly in the winter, due to snow and ice. The risk of falling is of particular concern among the elder population.

On the other hand, the community has made significant investment in a “Greenway” Project as well as walking trails such as can be found in Otsiningo Park, the “Rail Trail” in Vestal, and a newly completed trail in Whitney Point. The Greenway Project follows the natural contours of the area’s waterways and provides opportunities for both walking and bicycling in addition to beautifying the community and preserving green space. Most of these sites have the added benefit of being located in relatively flat areas in contrast to the surrounding hills. Creating alternative indoor options for walking such as schools that are readily accessible in rural areas was a major thrust of the Steps to a HealthierNY initiative.

Travel distances make accessibility to health services located largely in urbanized areas more difficult both for those who seek health care services as well as for those who deliver them such as home care, hospice, and emergency medical services. The northern climate with its mixture of snow and ice deters travel on roadways during winter and often late fall and early spring. Public transportation is available in urbanized areas, but there are limited transit services outside these areas, most of which are “on-demand.” BC Lift provides a transportation option for handicapped riders, though this service is also by request. These services may be cost-prohibitive for the rural poor. Public transportation in rural areas was rated as the second most important concern by emergency medical personnel. An intersection of two major highways, I-81 and the recently developed I-86, previously Highway 17, brings economic benefits as well as challenges such as traffic congestion and motor vehicle accidents.

Barriers to Care: The Uninsured

Not having health insurance is a substantial health issue as people are less likely to receive preventive care and more likely to be hospitalized for conditions that could have been prevented. The financial burden strains family as well as hospital budgets. Uninsured families, who already struggle financially to meet basic needs, may be financially devastated by medical bills, even for a minor problem; and hospital/provider systems bear the increasing cost of charitable care.

The estimated percentage of individuals under age 65 years who are uninsured in Broome County was 5.5%, which equates to 10,608 people; these figures are roughly half of the estimates in 2013. The proportion of uninsured was 4.6% among individuals under the age of 18 and 7.2% for those between the ages of 18 and 64 years. Individuals were more likely to be uninsured if they were Black or African American, had less than a high school education, were unemployed or worked less than full-time, or earned under \$25,000.

The US Census Bureau considers individuals to be “uninsured” if, for the entire year, they were not covered by any type of health insurance. However, the Kaiser Family Foundation notes that 27% of individuals without health insurance in 2006 were without health insurance for less than a year, suggesting rates may be even higher than reported by the U.S. Census Bureau. Multiple barriers exist to obtaining health insurance including opportunities for full-time employment in that offer such benefits. While improving, awareness of existing programs remains a barrier to accessing publicly-funded insurance. This issue is particularly relevant for uninsured children who live in working families. New York State has a variety of publicly funded programs and collaborates with employers to educate the community about existing programs. Additionally, with the advent of facilitated enrollment, access to locations where enrollment can occur has improved. Facilitated enrollment has also streamlined the process, but staff acknowledges that the form remains lengthy, questions can appear ambiguous, and obtaining the necessary written documents can be challenging.

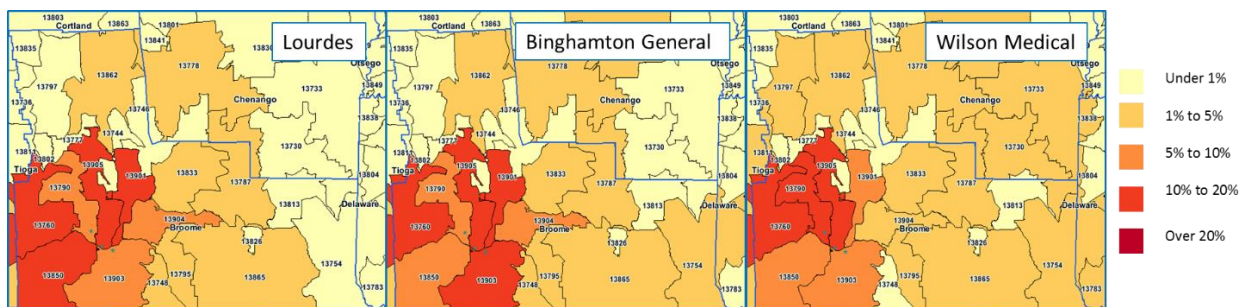
The Local Healthcare Environment

Broome County has two major hospital systems operating within Broome County: Our Lady of Lourdes Memorial Hospital (Lourdes) and United Health Services (UHS) Hospitals. The Lourdes system has one acute care facility with 242 licensed beds and UHS has two acute care facilities, Wilson Medical Center (Wilson) which has 280 licensed beds and Binghamton General Hospital (BGH) with 220 licensed beds. Both health care systems are well known and respected in the community. Both systems have multiple programs including community outreach education as well as primary care sites. Their primary service areas include Broome, Chemung, Chenango, Cortland, Delaware, and Tioga Counties, though each draws from different zip codes within the local area.

Lourdes is part of Ascension Health which is a Catholic not-for-profit system and has a main hospital campus that includes a Hospice program, regional cancer center, and ambulatory surgery center. Lourdes is also accredited as a Magnet Hospital by the American Nurses Credentialing Center (ANCC). This coveted designation indicates the facility has undergone a rigorous accreditation process of its nursing services and is seen as a way to recognize excellence in nursing, innovative nursing practice and quality patient care. The *2016-2018 Community Service Plan* provides details on their efforts and progress toward addressing the priorities identified by the *2016-2018 Broome County Community Health Assessment* (<https://www.lourdes.com/media/380888/2016-2018chnastrategy-sm.pdf>).

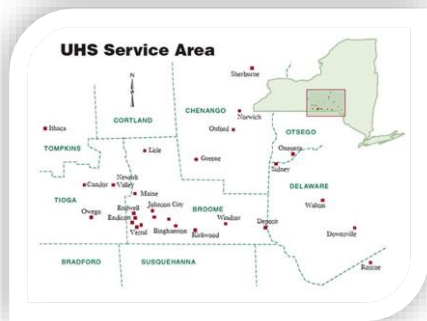
United Health Services (UHS) is a locally owned, not-for-profit healthcare system governed by an all-volunteer Board of Directors which includes community residents. Wilson Medical Center is a university affiliated teaching hospital and a Level II Trauma Center with Life Flight capability that serves as the Regional Trauma Center for South Central New York State and Northern Pennsylvania. In addition, this facility is a state-designated stroke center and offers state-of-the-art stereotactic radiosurgery at their Cyberknife Center of New York. The hospital is also designated by NYS as a Level 3 perinatal center. Binghamton General provides certified mental health services which includes rehabilitation for chemical dependence and withdrawal as well as a comprehensive psychiatric emergency program. The UHS 2015 Community Service Report provides details about changes in services to meet the needs of the local community (<http://www.uhs.net/app/files/public/2251/Community-Service-Plan-2015-Summary-Update.pdf>).

The catchment area served by both health care systems extends beyond Broome County into Tioga and surrounding counties (the percent of hospital discharges by zip code for 2008-2009 is shown below:



SOURCE: New York State Department of Health, Prevention Quality Indicators, 2008-2009

Lourdes operates 13 primary care offices, 10 of which are located in Broome County: Binghamton (6), Vestal (2), Endicott (1), Johnson City (1), and Windsor (1).



United Health Services operates 25 primary care locations, 12 of which are located in Broome County. Four primary care centers are located in Binghamton, two in Endicott, and one in each of the following: Deposit, Endwell, Johnson City, Kirkwood, Vestal, and Windsor. In addition, UHS operates four walk-in clinics with three located in the county (Chenango Bridge, Endicott, and Vestal). UHS also maintains two school-based health centers in two high-need elementary schools.

Specialty services in Broome County are available through both Lourdes and United Health Services. The UHS Medical Group, a multi-specialty practice with over 100 practitioners, offers a variety of medical and surgical specialties.

One additional healthcare system with regional operations in Tioga County and Northeastern Pennsylvania, Guthrie Medical, operates a clinic in Vestal. This clinic provides family care services and other specialty services including ophthalmology, endocrinology, audiology, cardiology, optometry, and urology. This location is one of the primary practice sites responsible for out-migration of health care services from the county, as patients from this practice generally are referred to Robert-Packer Hospital in Sayre, Pennsylvania.

A total of nine skilled nursing facilities are licensed to operate in Broome County with Willow Point as a county facility. Although occupancy rates vary, all nine facilities have consistently been at or above 90%. While all provide baseline services, Elizabeth Church Manor and James G. Johnston Memorial Nursing Home provide outpatient occupational, physical and speech therapy. Ideal Senior Living Center offers a clinical laboratory and radiology diagnostics on site. Susquehanna Nursing and Rehabilitation Center operates an Adult Medical Day Care on the premises.

In Broome County, the home care services available include three Certified Home Care Agencies serving Medicare and Medicaid clients. All three agencies provide similar services, with Lourdes at Home offering audiology and respiratory therapy in addition. Client census rates vary among the three. Broome County has a free standing hospice program operated by the Hospice at Lourdes.

Dr. Garabed A. Fattal Community Free Clinic

The Dr. Garabed A. Fattal Community Free Clinic is a sponsored activity of the Binghamton Campus, a branch of the College of Medicine of SUNY Upstate Medical University. The Free Clinic receives significant support from the Broome County Health Department and United Health Services. Additional support is provided by a network of physician specialists who see Free Clinic patients pro-bono along with community organizations who accept referrals of Free Clinic patients.

The passage of the Affordable Care Act in 2010 with the provision to expand eligibility for Medicaid and the 2014 opening of the New York State exchange marketplace, New York State of Health has impacted both the Free Clinic and the population it serves. A program to screen people for eligibility for government sponsored insurance was initiated in September 2011. This program expanded in 2013 to provide information and guidance to patients seeking to enroll in the New York State of Health. With these opportunities to obtain health insurance, the number of people seeking medical care and prescription medications at the Free Clinic on an ongoing basis has declined. The number of uninsured adults in Broome County has dropped to approximately 7% in 2015 (down from 16% in 2010) or roughly 9,000 people. Nevertheless, the need for a clinic to service the medical needs of the uninsured continues. The Free Clinic is open for business providing medical care to the uninsured as it has done for nearly 20 years.

The number of uninsured adults in Broome County was estimated to be 14% in 2010 or roughly 16,700 persons. Even when the Affordable Care Act is fully implemented, the percentages of residents who are anticipated to remain without health insurance are as high as 9.5%. A program to screen people for eligibility for government sponsored insurance was initiated in September 2011. This program has expanded in 2013 to provide information and guidance to patients seeking to enroll in the New York State Health Marketplace Exchange.

The major medical diagnosis of patients seen at the Free Clinic include diabetes, respiratory disorders especially asthma and COPD, and cardiac disorders (hypertension, congestive heart failure, high cholesterol). Approximately one third of patients experience depression or other mental health disorders and are on psychotropic medications. Since the uninsured often neglect health problems for lack of money to pay a doctor, a noticeable number present at the clinic with significant pathology. The intervention of the clinic in emergent situations is lifesaving to this subset of the population. Another group at major risk because of neglected medical problems is patients who cannot afford medications. Not being able to afford medications for a time-limited illness is stressful enough, but for patients who require continuous therapy or maintenance drugs for serious conditions, the lack of resources for medication can be disastrous.

The Free Clinic open on Thursday evenings using the clinic space at the Broome County Health Department. Patients are advised to seek care in local emergency rooms if their medical condition requires attention during other times. A physician staff member is contacted during hours that the clinic is closed to handle patient lab results that require immediate attention.

The Free Clinic is staffed by volunteers and a small paid core staff. The paid staff includes a part-time medical director, a part-time physician preceptor, a part-time medical records administrator, and a part-time pharmacist. In addition, administrative support is provided by SUNY Upstate Medical University - Binghamton Campus staff members, two of whom are assigned full time to the Free Clinic.

Since 2008, the Free Clinic has partnered with the Rural Health Network of South Central New York to place one or two Rural Health Service Corps members at the Free Clinic to serve as advocates to enroll patients in Prescription Assistance Programs. Approximately 50 Free Clinic patients are enrolled, at any given time, in the Prescription Assistance Programs that the pharmaceutical companies operate to provide free prescription medications to persons who cannot afford the medicine. This effort benefits the patients and is a cost savings for the Free Clinic.

Community support for the Free Clinic is strong. Local foundations, community organizations, churches, businesses and individuals donate money to assist with the purchase of small equipment, supplies, and medications. Monetary donations account for about one-third of the budget of the Free Clinic and the remaining two thirds of the budget represents the value of the in-kind support from volunteer work, clinic space, donations of supplies and so on.

A medical education component is an integral part of the clinic. Residents from the UHS Internal Medicine and Transitional Residency Programs are assigned to the Free Clinic for the ambulatory patient care experience required during residency training. Consequently, there are several residents available to see patients on Thursday nights. Faculty members supervise these residents. Binghamton University Decker School of Nursing and Broome Community College nursing students are frequently at the clinic and are supervised by a nurse preceptor. Upstate requires medical students to rotate through the Free Clinic and encourages students to volunteer at the clinic for additional experience.

The Free Clinic averages approximately 20-25 patient visits each session. In 2015, there were a total of 1,211 patient visits. Since the inception of the Free Clinic in 1997 more than 11,709 unduplicated patients have been seen at the Free Clinic.

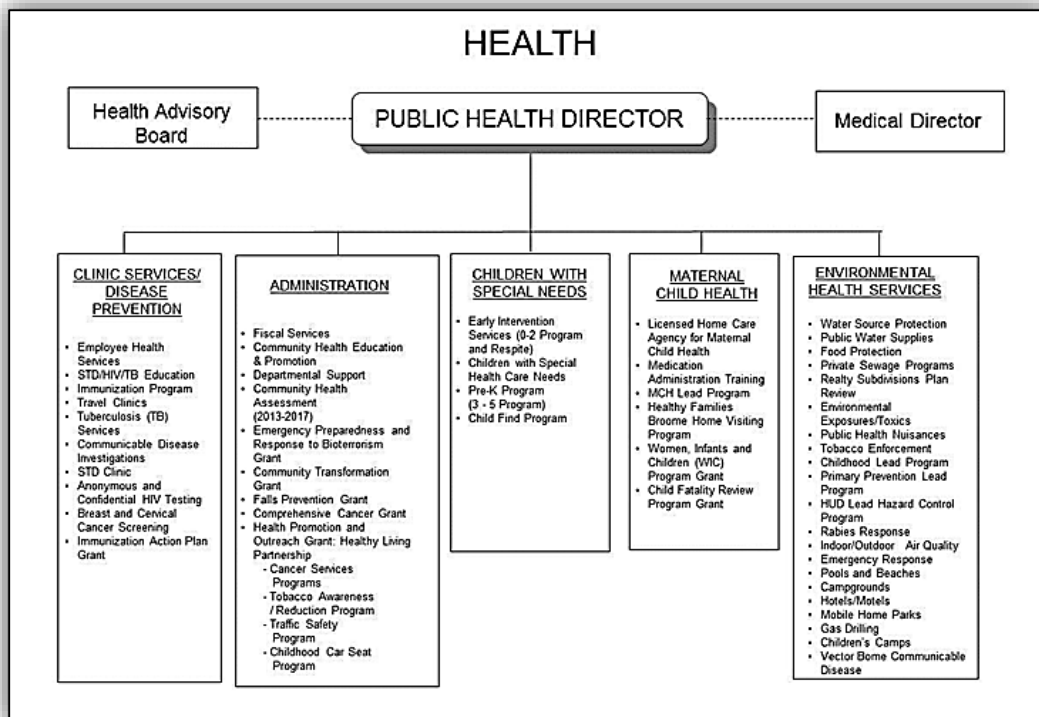
Local Health Department Profile

The Broome County Health Department is a full service health department. In addition to state-mandated core basic services, a range of preventive and population-based services is provided to ensure public health and wellness. The ability of the health department to provide preventive services and chronic disease support and education (e.g., breast cancer screening) strengthens the existing health care delivery system with the goal of taking a proactive role in helping to improve the overall health status of community residents. Divisions within the Broome County Health Department include Administration, Environmental Health, Clinics Services/Disease Prevention, and Maternal Child Health/ Children with Special Needs.

The Fiscal Services Unit and Health Promotion and Outreach (grants) are part of the Administration Division.

Local health departments in New York State are required by NYS Public Health Law to conduct Community Health Assessments as part of the application to obtain state aid for local public health services. Priorities and recommendations identified in the Community Health Assessment are also linked with the Municipal Public Health Services Plan required by county health departments, and are the basis for measuring and evaluating the array and quality of local public health services provided to county residents. Health Department administration is responsible for this important activity.

Broome County Health Department is committed to heightening public awareness of preventable health conditions through community health education and promotion. Lifestyle choices and personal health habits are important factors in the prevention of disease. A number of programs designed to assist and motivate individuals to voluntarily practice and sustain positive changes in their health-related behaviors are available. Staff specializing in health education and disease prevention within various Health Department Divisions are available to provide educational materials and presentations to the public on a variety of topics. Many programs offer health education and promotion throughout multiple counties. County taxes help support health department services. Although some services are free to Broome County residents, most services are for cost, with fees adjusted based on ability to pay. Medicaid, Medicare, and private insurance may be used to pay for care. Fees are also charged for most Environmental Health Division services.



Staffing & Skill Level

The health department is headed by a Public Health Director and staffed with approximately 90 full time-equivalent (FTEs) employees. The health department employs a part-time Medical Director and a Health Advisory Board provides administrative consultation. The Public Health Director is responsible for initiating and managing the local public health programs and has the general powers and duties specified in Section 352 of the NYS Public Health Law. The Director is responsible for maintaining a high standard of public health services in accordance with the general policies and objectives of the County Executive and County Legislature and with applicable State and local health laws and ordinances. General supervision is exercised over the environmental health, sanitation, medical and public and/or community health nursing services.

There are six division directors: Environmental Health Division Director, Director of Clinic Services, WIC Nutrition Services Director, Director of Children with Special Health Care Needs, Director of Maternal Child Health and Fiscal Services Administrator. In addition, there are Supervising Public Health Educators, Supervising Public Health Nurses, part-time physicians (practicing in the sexually transmitted disease clinic, chest clinic, and employee health), full-time and part-time Nurse Practitioners, Registered Professional Nurses in a variety of roles, Public Health Engineers, Senior Public Health Sanitarians Groundwater Management Specialists, and a Public Health Preparedness Coordinator. Descriptions of the administration and departments are detailed in the sections that follow.

Administration

Administrative services include: coordination of community health assessment; public health planning; annual reports; preparation and analysis of complex financial and statistical reports; provision of information and guidance in fiscal matters; coordination of departmental budget process; payroll and personnel processing; accounts payable/receivables; cash management; statistical and financial analysis; billing; claiming; grants management; representing the department to the public; general distribution of communications and written materials from Administration and the outside community to the department; and preparing departmental staff and the community to respond to public health emergencies. Health Department staff regularly participates in emergency preparedness drills/exercises designed to test response protocols and procedures. Staff routinely provides presentations to community groups on emergency preparedness and emerging public health topics. The Emergency Preparedness Program also oversees the development of the Broome County Medical Reserve Corps—a cadre of medical and non-medical professionals that have volunteered to provide various services during emergencies and disasters. In addition, the contracted services of the Public Health Medical Director are based in Administration.

Maternal Child Health and Development

The programs offered through the Maternal Child Health and Development Division help ensure physical, psychosocial and developmental health and well-being for childbearing and child-rearing families in Broome County. Some children may experience delays in their development. Early detection and treatment of these delays may make a difference for the child, the family, and the community. This division offers several programs designed to help families access the detection and treatment services they need.

WIC (Women, Infants, and Children Program): The Broome County Health Department has a strong commitment to the women, infants and children of Broome County who need nutrition education and referral to other health care and community services. The WIC Program provides nutrition assessments, nutrition education and counseling, as well as referrals and vouchers for healthy foods to pregnant, breastfeeding and postpartum women, infants, and children up to age five. Families must have specific financial and nutritional needs to be eligible.

- WIC Clinic sites are located throughout Broome County as determined by need. Throughout the Health Department, program integration efforts have been encouraged. WIC works with the Healthy Families Broome clients to meet mutual community needs to establish breastfeeding policies at worksites and with the Maternal Child Health and Development division to make referrals so that the needs of WIC clients can be met.

Environmental Health

The Division of Environmental Health conducts: routine inspections of approximately 1,500 regulated facilities; responds to complaints of public health nuisances; rabies control; enforces the Clean Indoor Air Act and the Adolescent Tobacco Use Prevention Act; reviews plans for public water and private sewage disposal systems; coordinates lead poisoning prevention efforts; conducts communicable disease outbreak investigations; educates facility operators with training courses; and educates the general public with appearances and media releases. The Division of Environmental Health also responds to emergencies and participates in other department emergency planning initiatives.

- Adolescent Tobacco Use Prevention & Clean Indoor Act: Staff enforces NYS Public Health Law requirements for the sale of tobacco products, provides community awareness on tobacco issues, and enforces the Clean Indoor Air Act prohibiting smoking in enclosed public areas.

Clinics & Disease Control

The Clinic Division provides specialized clinic services in an outpatient care setting. The primary site is located at 225 Front Street and immunization and outreach services are provided at several locations throughout the County. The division is comprised of six basic program areas:

Communicable Disease, Employee Health, HIV Testing, Immunization, Sexually Transmitted Diseases, and Tuberculosis. The Clinic Division currently manages three grants which enable the department to provide additional HIV testing, both anonymous and confidential, outreach and education on HIV counseling, testing, referral, and partner notification. The Immunization Action Plan grant is designed to increase immunization rates through surveillance and education of local health care providers as well as outreach to homeless shelters and the County corrections facility to improve Hepatitis A and B and Influenza immunization rates. The School-Based Preventive Dentistry grant supports the provision of services to Binghamton City elementary school children. Descriptions of the services previously listed are explained further in the following section. The addition of program Data will provide an understanding of the array of programs offered to the public and the impact that this division has on the community.

Cancer Services Program of the Southern Tier: The Broome County Health Department has been the lead agency for the Cancer Services Program, serving Broome and surrounding counties for over twenty years. Currently, the Cancer Services Program of the Southern Tier serves Broome, Chemung, Chenango, Schuylers, and Tioga Counties. This is a unique collaboration of government, community-based organizations and health care partners that promote healthy living through outreach, education, and access to services for the purpose of reducing the risk of chronic disease. The NYS Department of Health and the Centers for Disease Control and Prevention (CDC) provide funding for local community health care practitioners to offer clinical breast exams, mammograms, Pap tests/pelvic exams, colorectal screenings, and limited diagnostic follow-up procedures.

Tobacco Free Broome & Tioga: This program implements evidence-based practices to prevent youth from smoking, eliminate exposure to secondhand smoke and assist current smokers with cessation. With oversight and funding from the NYS Department of Health, Tobacco Free Broome & Tioga works to decrease the social acceptability of tobacco use at the community level by educating and engaging key stakeholders and elected officials to create policies that protect residents from secondhand smoke and discourage tobacco use. With support from the Tobacco Free Broome & Tioga Coalition, the program has assisted with the establishment of numerous tobacco free park/outdoor area and smoke-free housing policies and educated about effective interventions to protect youth from initiating tobacco use.

Home Health Services: Under the Maternal Child Health and Development division, the Broome County Health Department operates a Licensed Home Care Agency for Maternal Child Health. Under this program, registered nurses provide home visits to growing families. Home visiting services include: a skilled nursing assessment, provision of prenatal guidance and birthing information, assistance with obtaining health insurance, and linking families to resources in the community such as prenatal care, family planning, well-child exams, immunizations, breastfeeding, and child care. The nurses are trained to recognize if a child or family has special needs and promote optimal physical, psychosocial and developmental health and well-being for childbearing and child-rearing families. Thus, this program is designed to help families receive the evaluation and treatment services they need.

Stay Healthy Center: UHS Hospitals operates the Stay Healthy Center for Community Health located at the Oakdale Mall in Johnson City to assist area residents with health education needs and referrals to health care services. This center also collaborates with numerous community agencies and promotes healthy lifestyles. The Center is open to the public 9 am to 5 pm Monday through Saturday and is closed on Sundays. They offer access to computers for people to perform literature searches on health topics, have a lending health library, and have a Senior Security program that works with older individuals and groups.

The staff at Stay Healthy offers several programs and services to individuals, schools and businesses. These programs are designed to improve the health of the community and include many partnerships with local organizations. The center also provides insurance counseling. In addition, community groups in need of speakers with expertise in specific health-related areas can access this resource through the center. Programs are available for asthma, eating disorders, healthy living, cancer, and tobacco cessation among others. Services offered include lactation consultants to work with new mothers, child birth and parenting classes, Care-A-Van shuttle service, Stay Healthy Seniors and Stay Healthy Kids.

The Stay Healthy Center includes a Nurse Direct call center. This call center allows anyone to call in and talk to a nurse. Callers can request information about UHS programs or ask a health question. This service can be accessed either by phone or online. The center is staffed with nurses from 7 am to 9 pm, seven days a week and provides computer assisted: physician referral service, referral triage using nationally developed and locally reviewed guidelines, and health information for disease management of asthma, diabetes, and congestive heart failure as well as smoking cessation, weight management, and prenatal care. In addition to information, the registered nurses at Nurse Direct can provide referrals to other health education and community services.

Broome County Mental Health Department: The Broome County Mental Health Department is responsible for planning, developing, and evaluating mental hygiene services in Broome County. These mental hygiene services include alcoholism and substance abuse services, mental health programs, and services for mentally retarded and developmentally disabled citizens. Beyond its regulatory role as the local governmental unit, the Department of Mental Health is also licensed to operate mental health and chemical dependency programs.

The Broome County Department of Mental Health directly operates both mental health and chemical dependency programs. These programs include outpatient programs for adults, adolescents and children. The New York State Office of Mental Health (OMH) licenses the mental health programs. The New York State Office of Alcoholism and Substance Abuse Services (OASAS) licenses the addiction programs.

Three subcommittees advise the Mental Health Commissioner: Mental Health Subcommittee, Alcoholism/Substance Abuse Subcommittee, and the Mental Retardation/Developmental Disabilities Subcommittee. A number of programs operate in each of these three areas such as adult clinic, child and adolescent clinic, chemical dependency services unit, and the Keep Youth

Drug-free and Safe Coalition among others. In addition to its operations in the three service areas, the Broome County Department of Mental Health has established contracts with a number of area private, not-for-profit agencies including Catholic Charities of Broome County, Fairview Recovery Services, Family & Children's Society, Our Lady of Lourdes Memorial Hospital, and the Mental Health Association of the Southern Tier.

Elder Care Programs & Services: A number of programs and services are available through the Broome County Office for Aging. These programs and services include: caregiver services, foster grandparent program, health and wellness program, health insurance counseling, home delivered meals, home energy assistance, home repair, in-home services (including homemaker, personal care, shopping, and emergency response services for the home bound), resource assistance, legal services, and mental health services. In addition, 10 senior sites offer socialization, nutritious meals, and wellness activities. Transportation services are also available.

Broome County Chronic Disease Leadership Team

The Broome County Chronic Disease Leadership team is working subcommittee of the Broome County CHA Steering and is comprised of a diverse group of stakeholders who are representative of various community sectors and priority populations. This leadership team meets bi-monthly to assist and support with implementing, conducting, monitoring and evaluating the Community Health Improvement Plan (CHIP) activities. As well, the leadership team assists with the ultimate goal of creating a sustainable policy, while including system and environmental changes, for reducing and preventing the rate of chronic diseases.

Some of the representatives that serve on this leadership team include the Broome County Executive office, Broome County Legislature, the City of Binghamton Mayor's office, the Greater Binghamton Chamber, Broome County Council of Churches, the YMCA, United Health Services, Our Lady of Lourdes Hospital Services, Southern Tier Breastfeeding Coalition, Binghamton University-Decker School of Nursing, Rural Health Network of South Central New York, New York State Department of Transportation, Binghamton Metropolitan Transportation Study, Broome County Health Department, Broome County Planning Department, Broome County Urban League, Family Enrichment Network (Childcare Referral and Resource Agency), United Way, Healthy Lifestyle Coalition, Broome County Cornell Cooperative Extension, Broome-Tioga Board of Cooperative Education Services (BOCES), Broome County School Districts Wellness Team representatives, Broome County Office for Aging, Southern Tier Independence Center, health plan leaders, consumers and lay persons, along with other leadership members from organizations that serve minority or disparate populations within the county.

Broome County Chronic Disease Management/Medicaid Management & Health Home Team

The Broome County CHA Steering Committee representatives provides the necessary oversight of the objectives and interventions listed in the 2013-2016 CHIP that address chronic disease and mental health management. These representatives include United Health Services, Our

Lady of Lourdes Hospital, Catholic Charities, Broome County Mental Health Office, Free Clinic, Rural Health Network of South Central New York, Mothers and Babies Perinatal Network, Broome County Office for Aging, Retired Senior Volunteer Program, and the Department of Social Services Mental Health Clinic.

New York State Delivery System Reform Incentive Payment (DSRIP)

The Broome County Health Department (BCHD) is active in the New York State Delivery System Reform Incentive Payment (DSRIP) initiative through its involvement with Care Compass Network (CCN). CCN is the Performing Provider System (PPS) for a nine county region that includes Broome County. CCN has aggressively involved community based organizations and local government agencies in its efforts along with the five major health care systems in the CCN area. Representatives from the health department assisted with the initial Community Needs Assessment, participate on the Executive Committee of the Project Advisory Council, and provide input on a number of clinical committees.

The focus of CCN is to create an integrated delivery system within the nine county region. The transformed delivery system will emphasize collaboration and coordination of care at all levels of service delivery. Partnerships with community based health care organizations will help address social determinants of health. A focus on population health will help direct health care resources and efforts. Value based payments will help drive down costs. These changes in the way health care is delivered are intended to reduce disparities, improve quality and reduce costs.

The projects CCN selected to effectuate the transformation of the delivery system center on the same health issues of chronic disease management and mental health services that are on-going areas of interest to the BCHD. The CCN chronic disease management projects are targeted toward improving the management and treatment of COPD and cardiovascular disease. BCHD has identified prevention of chronic disease as a priority area. The BCHD focus areas track screening and treatment rates for cardiovascular disease and diabetes with a particular emphasis on activities intended to reduce obesity. The close association of obesity in the development and/or exacerbation of a constellation of chronic diseases are firmly established. Thus the work of the BCHD and CCN work synergistically on different aspects of chronic diseases identification, monitoring and treatment.

CCN mental health projects stress integration of primary care and behavioral health, crisis stabilization and strengthening the mental health and substance abuse infrastructure. Again, this focus aligns well with the BCHD priorities in the area of promoting mental health and preventing substance abuse. The local New York State Population Health Improvement Program (PHIP) initiative (which includes Broome County) has also selected mental health as a priority area.

BCHD is actively engages representatives of CCN, PHIP, hospital and community agencies in its Community Health Assessment and Community Health Plans. Similarly, representatives of the

BCHD are looked to for their expertise and participation by these other groups. The alignment of CCN DSRIP, PHIP and BCHD activities create a collaborative multi-pronged approach to addressing the most pressing health needs in Broome County.

Population Health Improvement Program (PHIP)

Initiated in 2015, the Population Health Improvement Program (PHIP) is a New York State Department of Health funded initiative aimed at improving population health and reducing healthcare disparities. In the Southern Tier, PHIP is known as the Community Network Southern Tier (formerly referred to as Health Action Priorities Network) and covers five counties: Broome, Chenango, Delaware, Tioga and Tompkins. HAPN convenes stakeholders from throughout the region to identify, share and disseminate best practices and strategies to improve health outcomes across the region. HAPN provides a neutral forum for local stakeholders to meet and accomplish these goals.

The organization strives to identify gaps in the landscape of regional population health and identify strategies to engage providers, moving the needle on various health issues. Additionally, HealthlinkNY is committed to innovative approaches to examining complex social determinants of health and health disparities through utilization of technology, analytics, and stakeholder engagement.

By selecting regional contractors and providing a neutral forum for identifying, sharing, disseminating, and helping implement best practice and strategies, the HealthlinkNY Community Network programs seek to promote population health and reduce health care disparities in their respective regions. HealthlinkNY Community Network, oversees PHIP activities in both the Southern Tier and Hudson Valley regions.

Section 2: Summary of Health & Other Data: Health Issues of Concern in the Community

The next section provides epidemiologic data for select areas of public health concern which were identified through the strategic planning process. In each section, comparisons between Broome County and NYS as well as Upstate NY were made as well as progress toward achievement of *Prevention Agenda 2013-2018* targets. Where possible, trend data were also examined.

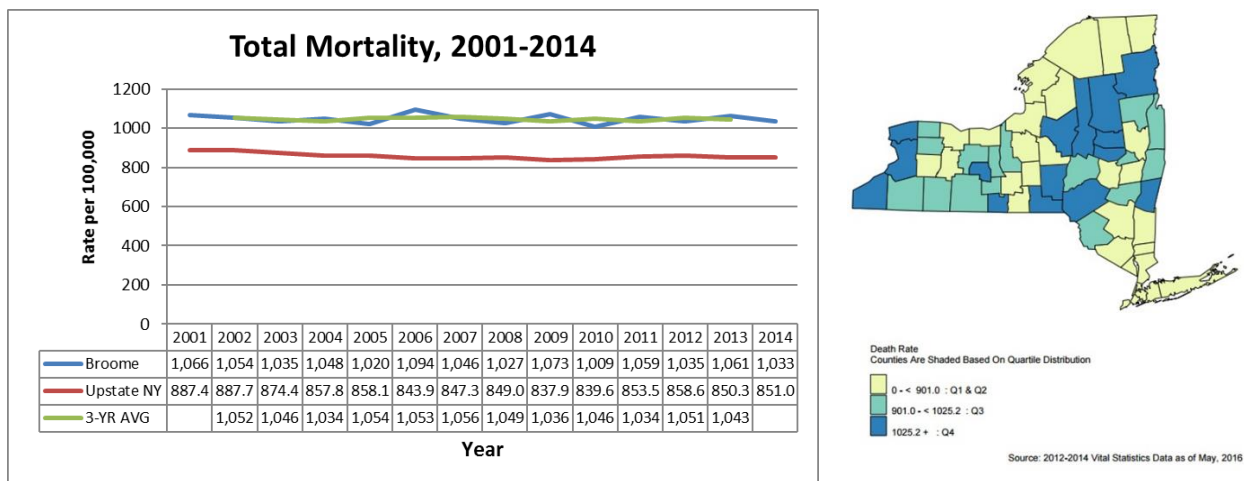
To determine quartile rankings, rates among NYS counties are sorted in ascending or descending order and subsequently divided into four equal groups so that each quartile represents one-fourth of the data. The first quartile includes the top 25% of the data and the fourth quartile includes the bottom 25%. New York State (NYS) is composed of a total of 62 counties. Upstate New York (Upstate NY) refers to the 57 counties outside of the New York City metro area and thus excludes the Bronx, Kings, New York, Queens, and Richmond Counties.

Mortality: Leading Causes of Death

Mortality relates to the occurrence of death in a population with the mortality rate being a measure of the number of deaths for a particular population, either due to a specific cause or in general. These rates are typically expressed as the number of deaths per 100,000 persons over a given year or number of years. Crude rates are a reflection of the disease burden in a population, that is the proportion of deaths, whereas adjusted rates are used to make comparisons of death rates between two different populations. These adjusted rates take into account differences in the distribution of demographic characteristics between them, most commonly controlling for age.

The crude mortality rate for Broome County in 2014 was 1,033 per 100,000 population, which has remained relatively stable over the past 15 years. For the period 2012-2014, the 3-year adjusted mortality rate for Broome County was 738.9 per 100,000, which was significantly higher than for both NYS (635 per 100,000) and Upstate NY (669.1 per 100,000), ranking Broome County in the third quartile for the state.

Total Mortality Rate per 100,000, Broome County (single year & 3-year average) & Upstate New York, 2001-2014 [Crude Rate]



SOURCE: New York State Department of Health, County Health Indicator Reports, 2001-2010, 2005-2014

The four leading causes of death in descending order are: heart disease, cancer, chronic lower respiratory diseases (CLRD), and unintentional injury. Over the course of five years, stroke moved from ranking third to fifth; CLRD moved from fourth to third, and unintentional injury moved into fourth. These changes reflect a substantial reduction in stroke mortality likely due to increased awareness of, preventive treatment for, and early intervention in stroke events. Premature deaths are deaths that occur at an earlier than expected age, which is usually considered to be before age 75. And from a public health perspective, many of these deaths are considered to be preventable. The three leading causes of premature death in descending order are: cancer, heart disease, and unintentional injury. The increase in the number of unintentional injuries is concerning. These deaths occur when the injury occurs as a result of an unpredictable circumstance (e.g., motor vehicle crash, fall, severe burn, drowning, or poisoning) and have increased in both genders but especially among males.

Leading Causes of Death, Broome County, Upstate New York, New York State, 2014

Cause of Death (adjusted rate per 100,000 population)	Broome County		Upstate NY	NYS
	Number	Rate	Rate	Rate
LEADING CAUSES OF DEATH				
Heart Disease	508	170	173	175
Cancer	437	158	155	149
Chronic Lower Respiratory Diseases	107	37	33	29
Unintentional Injury	92	43	31	26
Stroke	81	26	28	25
LEADING CAUSES OF PREMATURE DEATH (before age 75)				
Cancer	684	419	297	275
Heart Disease	509	263	179	180
Unintentional Injury	175	103	77	65
Chronic Lower Respiratory Diseases	127	70	40	33
Liver Disease	69	47	34	
Diabetes				28

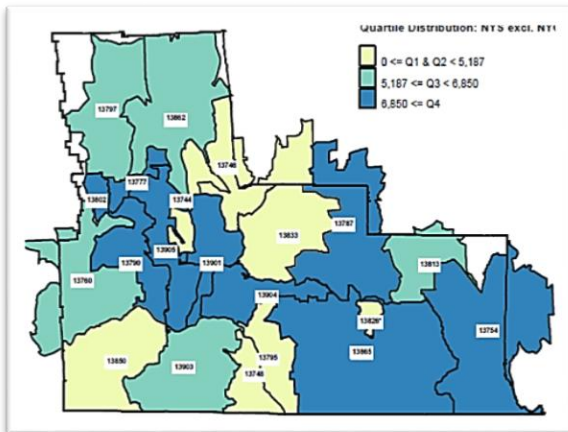
SOURCE: New York State Department of Health, Vital Statistics, 2014

Leading Causes of Premature Death, Broome County, Upstate New York, New York State, 2014

Cause of Death (adjusted rate per 100,000 population)	Broome County		Upstate NY	NYS
	Number	Rate	Rate	Rate
LEADING CAUSES OF DEATH - MALES				
Heart Disease	254	216	216	218
Cancer	213	178	183	177
Unintentional Injury	52	54	42	36
LEADING CAUSES OF DEATH - FEMALES				
Heart Disease	254	138	140	143
Cancer	224	144	135	130
Chronic Lower Respiratory Diseases	58	33	31	
Stroke				25
LEADING CAUSES OF PREMATURE DEATH - MALES				
Cancer	359	469	315	294
Heart Disease	348	448	248	248
Unintentional Injury	108	126	109	94
LEADING CAUSES OF PREMATURE DEATH - FEMALES				
Cancer	325	397	279	258
Heart Disease	161	194	112	115
Unintentional Injury	67	80		
Chronic Lower Respiratory Diseases			40	32

SOURCE: New York State Department of Health, Vital Statistics, 2014

Age-adjusted Years of Potential Life Lost Before Age 75 per 100,000 Population, Broome County, 2009-2013



SOURCE: New York State Department of Health, Sub-County Health Data Report for County Health Rankings-Related Measures, 2016

For any given death, the years of productive life lost (YPPL), as an indicator of premature death, is calculated as the number of years prior to age 75 that a death occurred. Deaths over age 75 neither add to nor subtract from the tally of YPLLs. Thus, the YPLLs for a county as a whole will increase a lot with the death of one child, although those cases are rare. A county's YPLLs will increase only a little with the death of one older adult, but the higher frequency of that occurrence can contribute much to total YPLLs. The conditions that account for the majority of YPPL include:

- Complications of prematurity in infants
- Injuries, both unintentional and intentional, among children
- Injuries, including self-inflicted ones, among teenagers and young adults
- Premature coronary artery disease and cancer deaths

For 2012-2014, the 3-year average for YPPL in Broome County was 12,961 years dividing by the average population for this time period yields a crude rate of 7,171 per 100,000. This rate places Broome County in the fourth quartile for NYS. Trend analysis indicated that the rates for years of productive life lost (YPPL) in Broome County, as in NYS, have relatively stable over time.

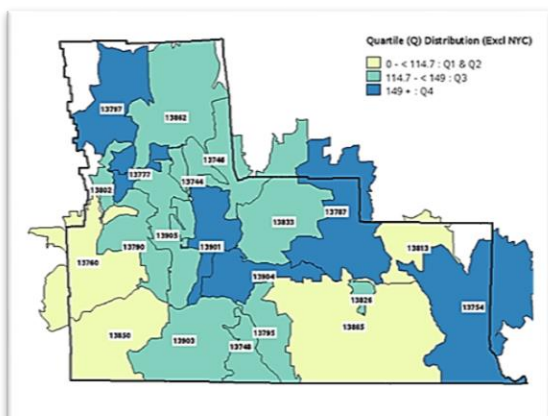
Morbidity: Diseases & Conditions with Major Health Impacts

Morbidity relates to the occurrence of a disease, disability, or condition in a population including the number of new or incident cases as well as the number of current or existing cases in a population. The term reflects not only the disease burden based on the number of cases but also the degree to which the health condition impairs function. Prevalence is calculated as a proportion expressed as the number of individuals with a defined disease or condition divided by the total population at a given point in time. Prevalence measures are useful for assessing the public health impact of a specific disease within a community and for projecting the medical care needs of affected individuals. Incidence refers to the number of new cases that develop in a given period of time divided by the total population at risk. This figure provides an estimate of the probability or risk that an individual will develop a disease and is useful for examining antecedent exposures.

The incidence and prevalence of disease as well as the number and rates of hospitalizations and emergency room visits reflect disease morbidity. These measures represent not only the occurrence of the various conditions but also exacerbations, complications, and sequelae. As a measure of disease morbidity, preventable hospitalizations include admissions to a hospital for acute illnesses or chronic diseases that might not have required hospitalization had these conditions been managed successfully

in outpatient settings.⁵ These hospital admission rates are viewed as useful indicators of potentially unmet community need since they can vary depending on primary care access, healthcare-seeking behaviors, and quality of care delivery. In addition, these rates are often monitored as an indicator of healthcare system efficiency since inpatient treatment for a chronic disease exacerbation is typically more expensive than prevention through appropriate outpatient clinical management.

Age-adjusted Preventable Hospitalization Rate per 10,000 Population Aged 18 and Over, Broome County, 2011-2013



SOURCE: New York State Department of Health, Sub-County Health Data Report for County Health Rankings-Related Measures, 2016

In 2014, there were 2,378 potentially preventable hospital admissions among adults age 18 and older in Broome County. The age adjusted hospitalization rate for was 125.8 per 10,000, which was higher than NYS (117.5), Upstate NY (106.1), and the Southern Tier region (100.1). Although trends in preventable hospitalization rates have declined over the most recent five-year period, Broome County was still above the *Prevention Agenda* target of 122.0 and ranked in the fourth quartile for this indicator. Stratification by group indicated revealed a monotonic increase in the crude rate preventable hospitalization rate across age groups. The hospitalization rate was 35.7 per 10,000 among adults age 18-34 (750 preventable hospital stays), 108.5 per 10,000 among adults age 45-64 (1,800 preventable hospital stays), and 529.7 per 10,000 among adults age 65 and older (5,354 preventable hospital stays).

Preventable hospitalization rates in Broome County were 1.71 times greater for Black non-Hispanics (214.8 per 10,000) than for White non-Hispanics, which was lower than NYS (2.11) and Upstate NY (1.94) but higher than in the Southern Tier region (1.58). Although these ratios have remained relatively stable since 2008 Broome County was below than the *Prevention Agenda* target of 1.74 and ranked in the first (best) quartile for this indicator.

Among Hispanics, the preventable hospitalization rate in Broome County was 92.5 per 10,000 and about three-fourths of the rate of White non-Hispanics. This rate was lower than NYS (146.0) and Upstate NY (149.2) but higher than in the Southern Tier region (59.8). Although Broome County ranked in the first quartile for this indicator, the ratio of Hispanic to White non-Hispanic hospitalization rates steadily increased between 2009 (0.44) and 2014 (0.74). Still, Broome County remains below the *Prevention Agenda* target of 2.22 for this ratio.

The prevalence rates for chronic diseases as well as condition-specific hospitalization and emergency department visit rates are presented in the sections that follow.

⁵ Moy, E., Chang, E., & Barrett, M. (2013). Potentially preventable hospitalizations – United States, 2001-2009. *Morbidity and Mortality Weekly Report (MMWR)* 62(03), 139-143.

Healthy & Safe Environment

Hospitalization Rates: Promote a Healthy and Safe Environment, Broome County, 2012-2014

Condition-Specific Hospitalization (rate per 10,000)	Number of Cases (3 years)	Crude Rate	Age-Adjusted Rate
Unintentional injury	4,889	82.5	67.0
Age < 10 years	91	14.8	
Age 10-14 years	43	12.7	
Age 15-24 years	199	19.6	
Age 25-64 years	1,611	55.0	
Age 65 years or older	2,945	287.0	
Falls	3,002	50.6	36.3
Age < 10 years	26	4.2	
Age 10-14 years	12	3.5	
Age 15-24 years	22	2.2	
Age 25-64 years	660	22.5	
Age 65-74 years	430	82.9	
Age 75-84 years	731	219.9	
Age 85 years or older	1,121	546.6	

Injury Prevention

Injuries refer to damage or trauma that occurs to the body as a consequence of excessive force. These injuries may result in temporary loss of function, prolonged disability, or even death. Injuries can be classified as being intentional (premeditated or planned) as in suicide or unintentional (unintended) as in a motor vehicle accident, though these distinctions are not always clear cut. Evidence suggests that most injuries are predictable and therefore potentially preventable. For this reason, even though the term “accident” is widely used for unintentional injuries, it is considered a misnomer. Injury prevention involves proactive measures directed toward removing hazards or mitigating risks to reduce the occurrence of harm. For example, suicide prevention may involve treating symptoms of depression, ensuring adequate social supports, or developing coping skills for at risk individuals. As another example, fall prevention may involve screening older adults for fall risk, removing environmental hazards in the home such as throw rugs, and improving gait and balance through training programs.

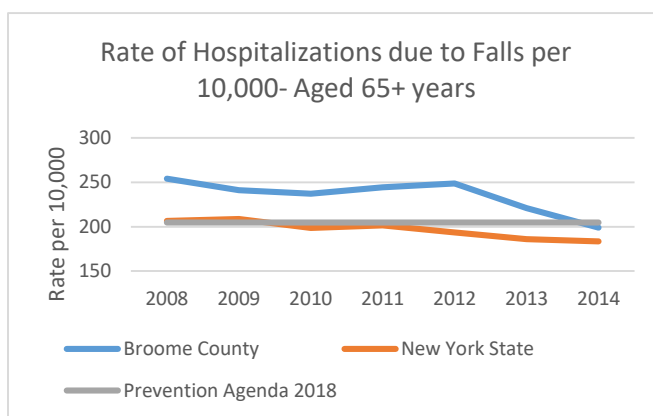
In Broome County, there are approximately 24 suicides per year. For the period 2012-2014, the crude suicide mortality rate was 12.1 per 100,000 population, and the age adjusted mortality rate (11.7) was significantly higher for both NYS (7.9) and Upstate NY (9.5) ranking the county in the third quartile within NYS counties. For the 15-19 age category, the suicide mortality rate was 4.4 per 100,000 population, which was similar to statewide averages. Suicide mortality rates for smaller geographic regions are considered unstable as there are typically fewer than 20 deaths creating sizeable variability in trends as a single event has an outsized effect on rates.

In Broome County, there are about 178 hospitalizations per year for self-inflicted injury. For 2012-2014, the crude hospitalization rate for self-inflicted injury in Broome County was 9.0 per 10,000 population, and the age-adjusted rate (9.5) was significantly higher than for NYS (5.7) or Upstate NY (6.8). For the 15-19 age category, the hospitalization rate for self-inflicted injury was 11.0 per 10,000. Similar rates were observed for both NYS and Upstate NY. Broome County was ranked in the fourth quartile overall and in the second quartile for the 15-19 age group. Trends in the three-year age-adjusted hospitalization rates for self-inflicted injury have remained relatively stable over the last ten years, though there is considerably more variability in rates for teenagers.

Unintentional injuries account for 86 deaths and 1,630 hospitalizations per year. For 2012-2014, the crude mortality rate from unintentional injuries in Broome County was 43.3 per 10,000, and the age-adjusted rate (40.4) was significantly higher than NYS (25.9) and Upstate NY (31.1). Broome County was ranked in the fourth quartile for this indicator. For 2012-2014, the crude hospitalization rate in Broome County was 82.5 per 10,000, and the age-adjusted rate (65.0) was significantly higher than NYS (60.6) and Upstate NY (60.0). Broome County was ranked in the fourth quartile for this indicator. The unintentional injury hospitalization rate was highest in the 65 years and older age category (287.0 per 10,000), which was significantly higher than both NYS (244.6) and Upstate NY (251.9). The unintentional injury hospitalization rate was also high in the 25–64 age group (55.0 per 10,000), and was statistically higher than statewide rates (NYS 45.1, Upstate NY 44.7). The unintentional injury hospitalization rate was lowest in the age less than 10 group (14.8 per 10,000) and significantly lower rates were observed for Broome County in the 15-24 age bracket (19.6 per 100,000 vs. 27.3 for NYS and 27.6 for Upstate NY) placing the county in the best quartile within NYS. Trends in three-year averages were similar across age groups increasing through around 2011, then slowly declining over the next three years with the decrease was most noticeable for 15-24 year olds.

Falls

Falls account for approximately 1,000 hospitalizations per year. For the period 2012-2014, the crude hospitalization rate related to falls was 50.6 per 10,000, and the age-adjusted rate (36.3) was significantly higher for Broome County than for NYS (34.0) and Upstate NY (33.8). Broome County rates for the three youngest age groups were lower than NYS. For the three oldest age groups (65–74, 75–84, and 85+ years), the age-adjusted hospitalization rates were higher than NYS, and these differences were significant for those 65-74 and 85+ years of age. Broome County ranked in the best quartile for fall-related hospitalizations among 10–14 year-olds. In contrast, the county ranked in the third quartile for those 75-84, and in the fourth quartile among 65-74 year-olds and those over the age of 85. In



general, no appreciable patterns in trends were observed for younger age groups. Slightly decreasing trends were evident for fall-related hospitalizations among older age groups including those ages 25-64 years, 65-74 years, 75-84 years, and 85 and older. Significant improvements in fall-related hospitalizations were noted for adults age 65 or older between 2012 and 2014 with rates dropping below the *Prevention Agenda* target of 204.6 per 10,000 in 2014.

Prevent Chronic Diseases

Hospitalization Rates: Prevent Chronic Disease, Broome County, 2012-2014

Condition-Specific Hospitalization (rate per 10,000)	Number of Cases (3 years)	Crude Rate	Age-Adjusted Rate
Hypertension (any diagnosis)	27,357	574.4	
Hypertension (primary diagnosis)	253	5.3	
<i>CARDIOVASCULAR DISEASE</i>			
Cardiovascular Disease	10,125	170.8	128.7
Diseases of the Heart	6,694	112.9	84.2
Coronary Heart Disease	2,289	38.6	29.2
Congestive Heart Failure	1,978	33.4	23.8
Acute Myocardial Infarction	1,508	25.4	18.9
Cerebrovascular Disease	267	45.0	29.3
<i>DIABETES</i>			
Diabetes (any diagnosis)	14,250	240.3	189.3
Diabetes (primary diagnosis)	950	16.0	14.2
Diabetes short-term complications			
Age 6-17 years	55	6.8	
Age 18 years and older	287	6.0	
<i>RESPIRATORY</i>			
Chronic Lower Respiratory Disease	1,824	30.8	26.0
Asthma	573	9.7	9.9
Age 0-4 years	89	29.6	
Age 5-14 years	56	8.6	
Age 0-17 years	149	12.8	
Age 5-64 years	356	7.7	
Age 15-24 years	39	3.8	
Age 25-44 years	96	7.4	
Age 45-64 years	165	10.1	
Age 65 years or older	128	12.5	

Asthma

Asthma is considered a chronic condition in which there is reversible limitation in airflow out of the lungs due to narrowing and inflammation of the airways. The duration, severity, and frequency of symptoms are highly variable and can range from mild symptoms of wheezing, chest tightness, and shortness of breath to severe respiratory distress. Although genetics plays

a role, limiting environmental exposures such as air pollution, molds, and other allergens can reduce its occurrence.

In Broome County, there are approximately 1.67 deaths and 573 hospitalizations per year due to asthma. For 2012-2014, the crude mortality rate for asthma in Broome County was 0.8 per 100,00 population, and the age-adjusted rate (0.6) was similar to NYS and Upstate NY. Asthma mortality rates for smaller geographic regions are considered unstable as there are typically fewer than 20 deaths creating sizeable variability in trends as a single event has an outsized effect on rates. Though the mortality is low, morbidity for this disease is relatively high as evidenced by the number of annual hospitalizations. For 2012-2014, the crude asthma hospitalization rate for Broome County was 9.7 per 10,000 population, and the age-adjusted rate (9.9) was significantly lower than NYS (17.6) but not Upstate NY (10.5). Stratification of asthma hospitalizations by age group shows the highest morbidity for the 0–5 age group (29.6 per 10,000) and the 65 and older age group (12.5 per 10,000). Broome County ranked in the third quartile for asthma hospitalizations overall as well as across most age groups, but ranked in the fourth quartile for ages 0-4 and ages 25-44. Trend data from 2003–2007 shows a gradual decrease in hospitalizations for asthma. In 2014, there were 1,065 emergency room visits due to asthma producing an Emergency Department (ED) visit rate of 54.0 per 10,000 population; and although this rate is well below the *Prevention Agenda* target of 75.1, ED visits due to asthma have significantly increased over the last five years. Among children age 0-4, there were 72 ED visits with an ED visit rate of 71.2 per 10,000 population, which is about one-third the rate for NYS (205.6). Broome County's hospitalization rate for this age group was well below the *Prevention Agenda* target of 196.5 per 10,000.

Based on 2013-2014 Expanded Behavioral Risk Factor Surveillance System (eBRFSS) data, the age-adjusted prevalence of asthma in Broome County was 9.7%, similar to the 10.1% for NYS and 11.0% for Upstate NY. Asthma prevalence was highest in the 25-34 year old age group (13.4%) and almost twice as common among females (12.5%) than males (6.9%). In relation to asthma prevalence, Broome County ranked in the third quartile. Asthma management has been a targeted focus for local community intervention and the success of these efforts is evident in the lower asthma morbidity experienced by residents of Broome County relative to the rest of the state.

Chronic Lower Respiratory Disease

Chronic lower respiratory disease (CLRD) refers to a condition of chronic airway obstruction associated with permanent remodeling of the airway as well as chronic symptoms and possible exacerbations. This condition includes the categories of chronic bronchitis and emphysema. Although many individuals with CLRD also experience asthma symptoms, pure asthma is defined by its reversible nature. While air pollution and genetics are contributors, the major modifiable risk factor is smoking with a greater number of pack-years directly proportional to higher risk of disease.

On average, CLRD accounts for about 116 deaths and approximately 608 hospitalizations per year in Broome County. For 2012-2014, the crude mortality rate for CLRD in Broome County was 58.7 per 100,000 population, and the age-adjusted rate (40.1) was significantly higher than both NYS (29.8) and Upstate NY (35.6). The crude hospitalization rate for CLRD in Broome County was 30.8 per 10,000, and the age-adjusted rate (26.0) was significantly lower than NYS (32.3) but not Upstate NY (26.7). Broome County ranked in the second quartile for both CLRD mortality and hospitalization rate. Although examination of trends for CLRD mortality revealed a relatively stable, gradual decline over the past 10 years, hospitalization rates have been more variable increasing from 2006 to 2008 and then declining from a peak of 40.2 per 10,000 to 26.6 per 10,000 in 2014. These declines may be attributable to lower pack-year smoking history among aging cohorts as smoking rates, in the long-term, have declined over time.

Cardiovascular Disease

Cardiovascular disease refers to a group of conditions that affects the heart and blood vessels. This category includes: diseases of the heart such as rheumatic heart disease, hypertensive heart disease, ischemic heart disease, pericarditis and endocarditis, as well as heart failure and cardiomyopathies. The underlying mechanisms of disease for each of these conditions vary. Coronary artery disease involves atherosclerosis and accounts for a large portion of CVD cases. Heart failure occurs when the heart is no longer able to effectively pump an adequate amount of blood to meet the oxygen and nutrient needs of vital organs. Common causes of heart failure include coronary artery disease, heart attacks, high blood pressure, atrial fibrillation, and valvular heart disease. Atherosclerosis results from the accumulation of fibrous, fatty plaques within the walls of the blood vessels narrowing the lumen size and increasing risk of clot formation. Both coronary heart disease and heart failure are associated with a number of risk factors including high blood pressure, smoking, diabetes, physical inactivity, obesity, high cholesterol, inadequate nutrition, and excessive alcohol intake. Lifestyle modifications as well as policy, systems, and environmental changes that make healthy choices the norm can significantly impact public health burden due to cardiovascular disease.

In Broome County, cardiovascular disease is responsible for an average of 691 deaths per year, which is more than all cancers combined, and is the leading cause of death. For 2012-2014, the crude mortality rate for cardiovascular disease in Broome County was 349.6 per 100,000 population, and the age-adjusted rate (233.9) was significantly higher than both NYS (221.9) and Upstate NY (222.1) ranking the county in the third quartile for the state. There are on average 110 premature deaths per year from cardiovascular disease among adults age 35-64. For 2012-2014, the mortality rate for premature deaths was significantly higher in Broome County (146.9 per 100,000) than NYS (99.1) and Upstate NY (97.5) ranking Broome County in the fourth quartile for the state. There are approximately 3,375 hospitalizations per year for cardiovascular disease. For 2012-2014, the crude hospitalization rate for cardiovascular disease was 170.8 per 10,000 population, and the age-adjusted hospitalization rate (128.7) was significantly lower than NYS (135.8) but not Upstate NY (129.1). Broome County ranked in the third quartile for this indicator. Trend analysis revealed relatively stable rates for cardiovascular

mortality and hospitalizations over the last 10 years, however premature death rates among adults age 35-64 have been gradually increasing over the most recent five-year period.

In Broome County, acute myocardial infarction (AMI), more commonly called a heart attack, is responsible for an average of 162 deaths per year and 503 hospitalizations. For 2012-2014, the crude mortality rate for AMI in Broome County was 82.0 per 100,000 population, and the age-adjusted mortality rate (56.3) was significantly higher than both NYS (29.9) and Upstate NY (33.3) ranking the county in the fourth quartile for the state. The crude hospitalization rate for AMI was 25.4 per 10,000 population, and the age-adjusted rate (18.9) was significantly lower than NYS (14.4) and Upstate NY (15.4) ranking the county in the third quartile for this indicator. Trend analysis revealed some variability in mortality and hospitalization rates for AMI over the last 10 years with lower rates in both for the most recent three to four years.

In Broome County, heart failure (HF) is responsible for an average of 45 deaths per year and 659 hospitalizations. For 2012-2014, the crude mortality rate for HF in Broome County was 22.9 per 100,000 population, and the age-adjusted rate (14.1) was significantly higher than NYS (12.2) and significantly lower than Upstate NY (16.3) ranking the county in the second quartile for the state. Premature death (age 35-64) from HF is relatively uncommon; and there were only 3 cases in Broome County over the 3-year period from 2012–2014. The crude hospitalization rate for HF was 33.4 per 10,000 population, and the age-adjusted rate (23.8) was similar to statewide averages ranking the county in the third quartile for this indicator. Although relative to the rest of the state Broome County experiences lower morbidity and mortality rates, trend analysis revealed a disturbing increase in both HF mortality and hospitalizations over the most recent four to five-year period.

Cerebrovascular Disease (Stroke)

The atherosclerotic mechanisms that underlie cerebrovascular disease are the same as those for cardiovascular disease. Cerebrovascular disease, more commonly referred to as a stroke, is essentially a “brain attack.” Like a heart attack, a stroke impairs blood flow, but in this case the defect deprives the brain of oxygen and essential nutrients. There are two major categories of stroke: hemorrhagic, in which a blood vessel ruptures and there is bleeding into brain tissue, and ischemic, in which blood flow to the brain is blocked by atherosclerotic plaques or a clot that has traveled through the blood from elsewhere in the body lodging in a cerebral blood vessel. One of the most modifiable risk factors contributing to development of strokes is hypertension. Symptoms of a stroke vary depending on the location of the affected blood vessel and the extent of the injury.

In Broome County, approximately 89 deaths per year are attributable to cerebrovascular disease and there is an average 648 hospitalizations each year. For 2012-2014, the crude mortality rate in Broome County was 45.0 per 100,000 population, and the age-adjusted mortality rate (29.3) was significantly higher than NYS (25.6) but not Upstate NY (29.0). Broome County ranked in the second quartile for age-adjusted cerebrovascular mortality. The premature (age 35-64) mortality rate for cerebrovascular disease in Broome County was 6.2 per

100,000 population, which was similar to statewide averages. Broome County ranked in the first quartile in the state for this indicator. The age-adjusted hospitalization rate for cerebrovascular disease in Broome County was 32.8 per 10,000 population, and the age-adjusted rate (24.7) was significantly higher than both NYS (22.8) and Upstate NY (22.9). Broome County ranked in the fourth quartile for this indicator. Trend analysis revealed some variability in mortality and hospitalization rates for AMI over the last 10 years with slightly lower rates in both for the most recent three to four years.

Hypertension

Hypertension, more commonly called high blood pressure, refers to a persistent elevation in arterial systolic or diastolic blood pressure. Consistent elevations in blood pressure over a long period of time is a major risk factor for coronary heart disease and heart failure, cerebrovascular disease, and chronic kidney disease as well as retinopathy and peripheral vascular disease. Most cases of hypertension occurring after adolescence are associated with a complex interplay of genetic and environmental factors. Behavioral improvements in physical activity and eating patterns can have a beneficial effect on blood pressure and reduce risk of complications resulting from uncontrolled hypertension. When lifestyle modifications alone do not result in blood pressures below current guideline recommendations, one or more prescription medications are used for blood pressure control.

Based on the 2013-2014 county-specific eBRFSS report from NYS, the age-adjusted prevalence of physician-diagnosed hypertension was 31.6%, which was similar to both NYS and Upstate NY ranking the county in the second quartile. In Broome County, the percentage of adults with diagnosed high blood pressure who were taking antihypertensive medications was 79.4%, and the age adjusted proportion (62.2%) was higher than NYS (57.9%) and Upstate NY (55.6%).

As a primary diagnosis, hypertension accounts for an average of 84 hospitalizations per year among adults and there are an estimated 9,119 hospitalizations per year in which an individual has a diagnosis of hypertension, though it may not be the primary reason for admission. Even when a hospital admission is not specifically for hypertension, it may complicate treatment and recovery. For 2012-2014, the hospitalization rate for adults with a primary (admitting) diagnosis of hypertension was 5.3 per 10,000 population, which was significantly lower than NYS (6.8) and somewhat higher than Upstate NY (4.7) ranking the county in the fourth quartile for this indicator. The hospitalization rate for adults with any diagnosis of diabetes was 574.4 per 10,000 population, which was significantly higher than NYS (541.5) and Upstate NY (543.7).

As a primary diagnosis, hypertension accounts for an average of 457 Emergency Department (ED) visits per year among adults and there are an estimated 20,414 ED visits per year in which an individual has a diagnosis of hypertension, though it may not be the primary reason for admission. For 2012-2014, the Emergency Department (ED) visit rate for adults with a primary diagnosis of hypertension was 29.4 per 10,000 population, which was significantly lower than NYS (32.7) and significantly higher than Upstate NY (25.6) ranking the county in the fourth quartile for this indicator. The ED visit rate for those with any diagnosis of hypertension was

1,285.8 per 10,000 population, which was significantly higher than both NYS (930.8) and Upstate NY (956.6) ranking the county in the fourth quartile for this indicator. While the hospitalization rates for hypertension (primary or any diagnosis) seem to have been on the rise, these rates appear to have either stabilized or declined slightly in the most recent two to three years. In contrast, ED visit rates for hypertension, whether primary or any diagnosis, have been steadily increasing for the most recent decade.

High Cholesterol

Cholesterol is a lipid (fat) molecule that is an essential component of human cells and serves as a precursor for the production of steroid hormones. Cholesterol is manufactured in the body and is also a component in food, especially foods that come from animals. To be transported in the blood, cholesterol takes a number of forms including high-density lipoproteins (HDLs), low-density lipoproteins (LDLs), and triglycerides (TGs). HDLs have a higher protein and lower lipid content making the molecule more dense, whereas LDLs contain less protein and more lipids. Having high HDLs has been shown to be cardio-protective, and is commonly referred to as the “good cholesterol;” this lipoprotein increases during physical activity. Having high LDLs has been demonstrated to increase risk of atherosclerosis and contribute to cardiovascular disease morbidity and mortality, hence it’s label as the “bad cholesterol.” TGs may be saturated or unsaturated depending on the extent of hydrogenation; highly saturated fats are solid at room temperature and are associated with cardiovascular risk. TGs can be reduced by moderate exercise and avoiding excessive alcohol use. Total cholesterol measures all three of these lipoproteins. Current recommendations for healthy eating include: avoid of trans-fats, limiting saturated fats, and replacing saturated fat with healthier monounsaturated or polyunsaturated fats. US Preventive Services Task Force (USPSTF) recommends routine screening for men beginning at 35 and women at 45 years of age, and a decade earlier if they have other cardiovascular risk factors with testing performed every four to six years.

Based on the 2013-2014 county-specific eBRFSS report from NYS, the crude prevalence of adults diagnosed with elevated cholesterol in Broome County was 39.7%, and the age-adjusted prevalence (34.5%) was similar to both NYS and Upstate NY. In Broome County, the age-adjusted percentage of adults diagnosed with elevated cholesterol who have had their cholesterol checked within the last 5 years was 79.9%, which was similar to proportions in NYS and Upstate NY. The percentage of adults with cholesterol checked increased in a monotonic fashion with age and was slightly higher for women than for men (85.3% vs. 77.5% respectively).

Diabetes Mellitus

Diabetes mellitus is a condition in which there is dysregulation of blood glucose (sugar) levels. There are two major forms of this disease. In Type 1 diabetes, damage to the pancreas, most often resulting from autoimmune processes, leads to a complete deficiency of the chemical messenger, insulin, which is responsible for lowering blood glucose levels after eating. Type 2

diabetes is associated with a complex mix of genetic and lifestyle factors associated with obesity. In this condition, there is an inadequate amount of insulin produced by the pancreas or the insulin is ineffective, a situation termed “insulin resistance.” In the short-term, diabetes can cause an episode of severely low blood sugar (hypoglycemia) or exceedingly high blood sugar levels (hyperglycemia). When the latter occurs, two complications can arise: ketoacidosis, a condition in which there is an accumulation of fatty acid waste in the blood (ketones) or a hyperosmolar hyperglycemic state without production of ketones. If left untreated, both conditions can result in death. As well, diabetes is a major contributing factor in long-term complications including cardiovascular disease, chronic kidney disease, retinopathy, and lower leg amputations. Diabetes is also associated with poor wound healing as well as an increased risk of urinary tract and other types of infections. Of these two categories of diabetes, Type 2 is far more prevalent. Primary prevention of diabetes is centered on improving lifestyle risk factors such as diet and nutrition, physical activity, and weight management.

In Broome County, there is an average of 59 deaths per year due to diabetes mellitus. For 2012-2014, the crude diabetes mortality rate was 30.0 per 100,000 population, and the age-adjusted mortality rate (21.3) was significantly higher than both NYS (17.4) and Upstate NY (15.5). Among NYS counties, Broome County ranked in the third quartile for diabetes. As a primary (admitting) diagnosis, diabetes accounts for an average 317 hospitalizations per year and there are about 4,750 hospitalizations per year in which an individual has a diagnosis of diabetes, though it may not be the primary reason for admission. Even when a hospital admission is not specifically for diabetes, it can and often does complicate treatment and recovery, extend hospital stays, and increase healthcare costs. The crude hospitalization rate for those with a primary (admitting) diagnosis of diabetes was 16.0 per 10,000 population, and the age-adjusted hospitalization rate (14.2) was significantly lower than NYS (17.1) but not Upstate NY (13.8). The crude hospitalization rate for those with any diagnosis of diabetes was 240.3 per 10,000 population, and the age-adjusted hospitalization rate (189.3) was significantly lower than NYS (207.9) and significantly higher than Upstate NY (181.4). While the hospitalization rates for diabetes as a primary diagnosis have been relatively stable over the time, the hospitalization rates for diabetes (any diagnosis) have been gradually increasing over the most recent five years.

Based on the 2013-2014 county-specific eBRFSS report from NYS, the age-adjusted prevalence of physician-diagnosed diabetes was 7.9% and 5.3% for prediabetes, these figures were similar to both NYS and the Southern Tier region. In relation to diabetes prevalence, Broome County ranked in the second quartile. The recognition of prediabetes can lead to early treatment and changes in lifestyle that can potentially mitigate risk of disease progression. New screening guidelines recommend testing for overweight adults who are overweight and have additional risk factors as well as all adults age 45 and older with repeat testing every three years if test results are normal. In Broome County, the percentage of adults who had a blood test for high blood sugar or diabetes within the past three years was 53.7% and the age-adjusted prevalence was slightly lower than NYS (59.1%) and Southern Tier region (54.2%). Based on *Prevention Agenda* indicators, the hospitalization rate for short-term complications of diabetes among 6-17 year-old children was 6.84 per 10,000 for Broome County for the period

2012-2014, which was double NYS (3.0), Upstate NY (2.9), and the *Prevention Agenda* target of 3.06 per 10,000. For short-term complications among adults age 18 or older, the hospitalization rate for short-term complications of diabetes was 6.03 per 10,000 as compared to 6.5 for NYS and 6.0 for Upstate NY, and was higher than the 4.86 *Prevention Agenda* target.

Physical Activity

Data for physical activity comes from the 2013-2014 Expanded Behavioral Risk Factor Surveillance System (eBRFSS) for adults. The *2008 Physical Activity Guidelines* recommend moderately intense physical activity for at least 150 minutes per week, vigorously intense physical activity for 75 minutes per week, or an equivalent combination distributed throughout the week. Moderate intensity is exemplified by brisk walking, and means working hard enough to raise heart rate and break a sweat, yet still being able to carry on a conversation. Vigorous intensity is exemplified by jogging, and causes rapid breathing and a substantial increase in heart rate. This recommendation applies to healthy adults aged 18-65 and is considered a minimum requirement for maintaining health and reducing the risk of chronic disease. Additional health benefits can be gained by increasing aerobic physical activity to 300 minutes per week of moderate intensity, or 150 minutes per week of vigorous intensity, or equivalent combination. Importantly, adults should avoid inactivity and perform muscle strengthening activities for all major muscle groups on 2 or more days per week.

In 2013-2014, the proportion of Broome County adults who reported engaging in leisure-time physical activity in the past month was 72.5% with age-adjusted rates similar to NYS, Upstate NY, and the Southern Tier region. Conversely, 26.8% of adults in Broome County reported that they did not participate in leisure-time physical activity in the past 30 days. Stratified analyses indicate that the proportion of women who reported engaging in leisure-time physical activity in the past month was lower than for men (69.6% for females vs. 75.7% for males). Data from the Institute for Health Metrics and Evaluation (IHME) based on novel small area estimation techniques indicated that between 2001 and 2011, there was an absolute increase in physical activity among females of 10.6 percentage points placing this improvement in the top 10% of counties nationally while the rates for males were unchanged. Individuals who were between the ages of 35 and 44 were the most active age group with only 78.2% reporting leisure-time physical activity. In addition, those with lower levels of both education and income are more likely to report no leisure-time physical activity.

For older adults who cannot perform 150 minutes per week of moderate intensity physical activity due to chronic health conditions, the *Physical Activity Guidelines* recommend that they be as physically active as the extent of their capabilities permit. In addition, older adults should perform physical activities to improve or maintain muscle strength and balance in order to reduce risk of falls.

For children and adolescents, the *Physical Activity Guidelines* recommend 60 minutes of physical activity daily including moderate or vigorous intensity aerobic activity (3 days a week of

vigorous intensity), muscle strengthening (3 days per week), and bone strengthening (3 days per week).

Recent county-level data for physical activity among children and adolescents is lacking. The Youth Risk Behavior Surveillance System (YRBSS) is a national school-based survey conducted by the Centers for Disease Control and Prevention and administered to high school students. Similar to the BRFSS, this survey is used to monitor health risk behaviors that contribute to the leading causes of death and disability. Data from this survey are available at the state, local (major municipalities) and territorial levels as well as for native populations, but are not available at the county level.

In 2011, almost 75% of students in grades 9 through 12 reported being physically active for at least 60 minutes per day on less than 7 days per week indicating that three-fourths of all adolescents are not meeting the current guidelines for physical activity. Nearly 55% reported being physically active for at least 60 minutes per day on less than 5 days per week and 13% of students were not physically active for 60 minutes on any day. Over 80% did not attend physical education classes five days per week, over 40% did not play on a sports team, and over 30% watched television or used computers more than 3 hours per day. A significantly larger proportion of females are not meeting current guidelines and they were less likely than males to play on sports teams. Trends in three or more hours of television viewing appear to be decreasing in NYS at a faster pace than the rest of the nation. Among WIC participants in Broome County, a significantly higher percentage of children had less than 2 hours of television viewing as compared to NYS (81.6% vs. 78.6%).

Diet & Nutrition

The *Dietary Guidelines for Americans 2015-2020* recommend balancing calories to manage weight, reducing/increasing specific foods and food components, and building healthy eating patterns. To manage body weight, the guidelines recommend controlling caloric intake, particularly for people who are overweight or obese, as well as increasing physical activity. In relation to specific foods to reduce, the guidelines recommend decreasing daily sodium intake to less than 2,300 mg/day, consuming less than 10% of calories from saturated fatty acids, consuming less than 300 mg/day of cholesterol, reducing intake of calories from solid fats and added sugar, and limiting consumption of refined grains. In relation to specific foods to increase, the guidelines recommend consuming more fruits and vegetables especially dark green and red/orange ones, whole grains, and low- or fat-free fat dairy products as well as eating a greater variety of protein sources including seafood, lean meats, beans/peas, soy products, and nuts/seeds. There is evidence to suggest that consumption of fresh fruits and vegetables not only provides important macro- and micro-nutrients for good health, but also decreases the risk for certain types of cancers, cardiovascular disease, and stroke as well as overweight and obesity. Attention to healthy eating patterns throughout the day can ensure that all of the foods and beverages that are consumed fit the caloric and nutrient needs of an individual over time.

The Expanded BRFSS data from 2009 revealed only 27.1% of adults in Broome County ate 5 or more servings of fruits and vegetables per day. This value was similar to NYS in which only 27.4% of adults consumed 5 or more servings of fruits and vegetables. Data from the revised eBRFSS survey indicated that the 27.2% of adults in Broome County consumed one or more sugary drinks per day with age-adjusted rates similar to those statewide. The age group consuming the highest percentage of one or more sugary beverages per day was adults in the 25-34 age bracket (40.9%) and older adults (65 or over) consumed the least (11.6%). A slightly higher percentage of males than females consumed sugary drinks on a daily basis (29.2% vs. 25.4%). In Broome County, 9.7% of adults reported consuming fast-food three or more times per week which was somewhat higher than NYS (5.9%) and the Southern Tier Region (6.1%) though not statistically significant. Young adults (age 25-34) had the highest prevalence on this indicator (19.1%) and older adults (age 65 or over) had the lowest (3.5%); and the proportion for males was higher than for females (11.7% vs. 7.8%).

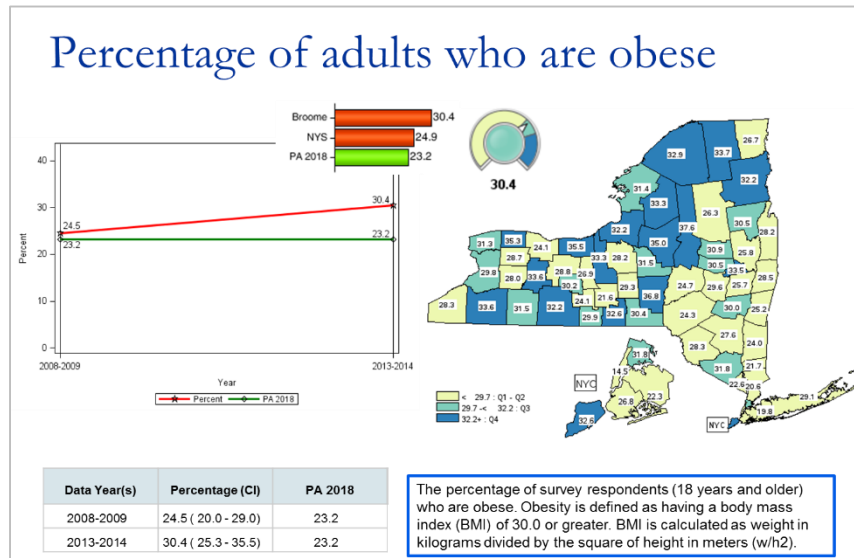
Like physical activity, county-level data for nutrition among children and adolescents is currently lacking. The Youth Risk Behavior Surveillance System (YRBSS) provides one of the few sources of data about dietary intake for adolescents; however, this survey is conducted only every two years with limited information for specific localities. In 2011, 74% of students in grades 9 through 12 reported eating fruit or drinking 100% fruit juice fewer than 3 times per day, 63% fewer than twice, and 35% less than once a day. Seventy-three percent reported drinking a can, bottle or glass of soda or pop within the past week, 21% drank soda/pop at least once a day, 14% twice a day, and 9% three times per day. Dietary consumption of fruits and vegetables as well as sugary drinks was similar across age groups and grade levels. Trend data indicate that, for the US, the proportion of students who report eating fruit or drinking 100% fruit juice less than three times per day has been decreasing since 2005.

Overweight & Obesity

A healthy weight for adults is defined as a Body Mass Index (BMI) greater than or equal to 18.5 but less than 25 kg/m². Overweight is defined as a BMI greater than or equal to 25 but less than 30 kg/m² and obesity is defined as a BMI greater than or equal to 30 kg/m². BMI is calculated as weight (in kilograms) divided by square height (in meters) and is used as a body weight standard and an indicator of the degree of adiposity. This index is also used to provide an estimate of relative risk for disease such as heart disease, diabetes, and hypertension.

For 2012-2014, the prevalence of overweight was 31.7% and the prevalence of obesity was 32.4%, yielding a combined total of 64.1%. The prevalence of both overweight and obesity in Broome County was similar to rates statewide and the county ranked in the third quartile for both indicators. The prevalence of obesity among adults in Broome County exceeded the *Prevention Agenda 2017* target of 23.2%. In 2009, only 23% of adults reported receiving advice about their weight by a health professional. Of those who reported receiving advice about their weight, 89% were advised to lose weight. Given that 64% of adults have increased risk based on weight status the percentage being counseled about losing weight seems disproportionately low. In the majority of cases when weight status is addressed however, clinicians seem to be

providing clear advice to lose weight. Based on 2013-2014 eBRFSS data, the prevalence of obesity was 30.4%, which is slightly lower than the two-year average. Stratification by age and gender revealed that the prevalence of obesity was highest among adults age 35-44 (40.8%) and lowest among young adults (22.8%); and obesity was somewhat higher in females than in males (33.6% vs. 27.5%). Between 2001 and 2011, IHME data revealed an absolute increase of 7.1 percentage points for females and 8.1 percentage points for males, and these trends were similar to those observed nationally.



In children, BMI standards are based on growth chart percentiles with overweight defined as a BMI at or above the 85th percentile but below the 95th percentile for BMI by age and gender, and obese as a BMI at or above the 95th percentile for BMI by age and gender.

Until recently, the Youth Risk Behavior Surveillance System data was the only

source of information about weight status for adolescents. BMI and weight category were based on self-reported height and weight. Biannual data was available at the state but not county level, and no data were available for children in elementary school. Now, weight category data can be drawn from the NYS Student Weight Status Category Reporting System (SWSCR). BMI data are collected for pre-kindergarten, kindergarten, second and fourth grade students from elementary schools, for seventh grade from middle schools, and for tenth grade from high schools. Data are reported in aggregate as weight status category and middle and high school data are reported together. These data from this new reporting system became available in 2010-2012. Because actual height and weight data are used to calculate BMI for SWSCR data reported by school, these data may provide a more valid estimate of prevalence than self-report. Although the YRBS includes data from high school students only, noticeable differences can be seen in the weight status categories for SWSCR as compared to the self-report measures from the YRBS for a similar time period. As might be expected, the data collected from the SWSCR reveals a higher prevalence of overweight and obesity than the self-reported data.

Among all school age children, the prevalence of overweight was 16.5% and the prevalence of obesity was 19.4% for a combined total of 36.0% in the overweight or obese category. For these indicators, Broome County was similar to Upstate New York and ranked in the third quartile for obesity and in the second quartile for both overweight and the combined overweight/obese categories. These data for obesity among elementary school children indicate that Broome County fell below the 19.4% target for the NYS *Prevention Agenda*. Analyses conducted in 2012 showed that four out of the six school districts with the highest rates of obesity (above the 50th percentile) were also categorized as high need to resource capacity.

Among elementary schools, the prevalence of overweight was 16.7% and the prevalence of obesity was 17.4% for a combined total of 34.1% in the overweight or obese category. For these indicators, Broome County was similar to Upstate New York and ranked in the second quartile for obesity and in the third quartile for both overweight and the combined overweight/obese categories.

Among middle/high schools, the prevalence of overweight was 16.3% and the prevalence of obesity was 22.5% for a combined total of 38.8% in the overweight or obese category. For these indicators, Broome County was similar to Upstate New York and ranked in the first quartile for overweight and in the third quartile for both the obese and the combined overweight/obese categories.

For 2012-2014, a significantly lower percentage of pregnant women participating in the Broome County WIC program were overweight prior to pregnancy as compared to NYS and Upstate NY (22.3% vs. 26.6% and 26.3% respectively) and Broome County was in the first quartile for this indicator. However, an appreciably higher percentage was obese prior to pregnancy for Broome County than for NYS and Upstate NY (33.5% vs. 24.2% and 28.0% respectively) and Broome County ranked in the fourth quartile for this indicator. For overweight among children aged 2-4 who participated in the WIC program, Broome County ranked in the first quartile for the state (12.9%). Though this figure was significantly lower than NYS (14.0%) and Upstate NY (15.0%).

The obesity epidemic, especially among youth, raises concerns about its health consequences including the metabolic syndrome, diabetes, and associated short- and long-term complications.

Overweight & Obesity Among Broome County Residents, 2012-2014

	Elementary Students	Middle & High School Students	All Students	Adults	Pregnant Women in WIC	Children in WIC
Overweight	16.7	16.3	16.5	32.4	22.3	
Obese	17.4	22.5	19.4	31.7	33.5	12.9
Overweight or Obese	34.2	38.8	36.0	64.1	55.8	

NOTE: Elementary students (pre-K, K, 2nd & 4th grades); Middle & high school students (7th & 10th grades); Adults (age 18 or older); Pregnant Women in WIC (pre-pregnancy weight); Children in WIC (age 2-4 years); Women, Infants, and Children (WIC)

SOURCE: New York State Community Health Indicators Reports, 2012-2014; New York State Expanded Behavioral Risk Factor Surveillance System (eBRFSS), 2013-2014

Tobacco Use & Smoking

Tobacco products can be consumed in a number of ways including chew and cigarettes. Tobacco use is regarded as one of the leading underlying causes of premature death affecting, in particular, the heart and lungs. In addition to lung cancer, smoking is a major risk factor for heart attacks, strokes, peripheral vascular disease, hypertension, and chronic lower respiratory disease (CLRD). Although genetics may have a role, there is a dose dependent increase in risk based on how much a person smokes and number of years as well as the amount of tar in the cigarette. In addition, second-hand exposure to environmental tobacco smoke has been shown to have adverse health effects regardless of age.

Based on the 2013-2014 county-specific eBRFSS report from NYS, the crude prevalence of adults who are current smokers in Broome County was 22.3%, and the age-adjusted prevalence (24.0%) was significantly higher than NYS (15.9%) and similar to the Southern Tier region (21.2%). Stratification by age and gender revealed that the prevalence of smoking was highest among young adults age 25-34 (31.1%) and lowest among adults age 65 and older (6.6%); and smoking prevalence was slightly higher in females than in males (23.3% vs. 21.1%). For 2012-2014, the three-year age-adjusted percentage of adults who smoke cigarettes in Broome County was 24.0%, which was significantly higher than NYS (15.9) but not Upstate NY (18.0) ranking the county in the third quartile. In Broome County, smoking prevalence among adults (current smoker) with an annual household income less than \$25,000 was 34.0% and the proportion of females in low income households (35.0) was slightly higher than for males (32.8%). In this income bracket, smoking prevalence was 43.2% among adults age 45-64. These percentages were similar to statewide averages. The age-adjusted percentage of adults living in homes where smoking is prohibited in Broome County was 79.3%, which was similar to proportions statewide and the county ranked in the second quartile for this indicator.

Chronic Disease Self-Management

Addressing chronic diseases requires strategies to minimize health deficits and improve functional abilities. Chronic Disease Self-Management Programs (CDSMPs) are designed to assist individuals with chronic diseases learn how to manage their symptoms and improve their self-care behaviors. These programs offer education, counseling, and skill-building sessions that focus on common problems associated with having a chronic disease such as pain management, nutrition, exercise, medication use, coping strategies, and communication with healthcare providers. Programs may be tailored to a specific health condition such as diabetes or be open to individuals with any number of chronic diseases. Programs may be offered as one-on-one sessions with a counselor, in a group setting, or through online forums. CDSMPs programs have been shown to be effective for helping individuals better manage their health conditions resulting in improved quality of life and reduced healthcare expenditures.

Based on the 2013-2014 county-specific eBRFSS report from NYS, the crude percentage of adults who have taken a course or class to learn how to manage their chronic disease or

condition in Broome County was 10.4%, and the age-adjusted percentage (10.6%) was similar to both NYS (9.7%) and the Southern Tier region (10.5%). Stratification by age and gender revealed that the percentage of adults who have engaged in this activity was 9.9% among adults 45-64 and 13.2% among adults age 65 or older; and was slightly higher in females (11.3%) than in males (9.2%).

Selected Chronic Disease & Health Behavior Indicators, Broome County, 2008–2009

Morbidity Indicator	Prevalence (%)
<i>CHRONIC DISEASE or CONDITION</i>	
Asthma (adult)	9.7
Diabetes (adult)	7.9
Prediabetes	5.3
High blood pressure (adult)	27.8
High Cholesterol (ever been told) (adult)	34.5
Cardiovascular disease (adult) [diagnosis of heart attack, stroke, or angina]	7.6
One fall in past year (age 65+)	31.0
One fall in past year with injury (65+)	40.3
<i>HEALTH BEHAVIORS</i>	
Leisure time physical activity past month	73.2
Walkable neighborhood	88.0
Consumes one or more sugary drinks per day	27.9
Consumes fast food three or more times per week	10.3
Current smoker	24.0
Binge drinking past month	20.2
Poor physical health	11.8
Poor mental health	11.6
Chronic disease education	8.8

Promote Mental Health and Prevent Substance Abuse

Based on the 2013-2014 Expanded BRFSS, 11.6% of Broome County adults reported 14 or more days with poor mental health. This proportion was 11.1% for NYS and 11.8% for Upstate NY. In contrast, roughly half of adults in Broome County (4.6%) reported that their physical health was not good for 14 or more out of the past 30 days. Over 56% of Broome County adults age 65 or older reported having arthritis. For these indicators, higher percentages were reported for those who were older (\geq age 65). Physical health and mental health share a dyadic relationship with reciprocal interactions. Individuals with chronic conditions often experience depression, and those with depression often have physical manifestations.

Substance Abuse & the Opioid Crisis

Based on SPARCS data, between 2012 and 2014, there were 210 alcohol-related motor vehicle injuries and deaths among adults equating to a mortality rate of 35.4 per 100,000, which is

somewhat higher than NYS (32.2) and significantly lower than Upstate NY (42.5). For this indicator, Broome County ranked in the first quartile. For this same time period, there were 123 hospitalizations among neonates due to drug related causes equating to a rate of 197.0 per 10,000 newborn discharges. This rate was significantly higher for Broome County than for both NYS (103.5) and Upstate NY (139.8). There was a 25% increase in the number of cases and a 2-fold increase in the case rate since the 2013-2016 CHA. For this indicator Broome County ranked in the fourth quartile. Broome County's three-year age-adjusted estimate for drug-related hospitalizations was 14.6 per 10,000, which was significantly lower than both NYS (22.6) and Upstate NY (20.7). Trend data show that for alcohol-related motor vehicle injuries and deaths in Broome County rates appear to be declining, however, and newborn drug-related hospitalization rates have seen a steep climb.

Data from the Expanded BRFSS for 2013-2014 indicate that 20.2% of adults in Broome County engaged in binge drinking (5 or more drinks in a row) compared to 19.2% for NYS and 17.7% for Upstate NY. For binge drinking, Broome County ranked in the fourth quartile. The prevalence of binge drinking is higher among males than females with males being nearly twice as likely to binge. Prevalence is also higher among adults age 35-44 (25.2%) than among adults age 65 and older (3.8). Men in the younger age group are 6.6 times more likely to binge than men 65 and older.

Heavy drinking in the past month is defined as an adult male having more than two drinks per day or adult female having more than one drink per day. Among adults in Broome County, 7.2% of adults report heaving drinking in the past month. Like binge drinking, heavy drinking is higher among males age 35-44 years. Trend data for heavy drinking follows a similar pattern to binge drinking with stable rates until 2010 followed by an upward tick. Between 55% and 60% of adults in NYS have had at least one drink in the past month without considerable variation in this indicator over time.

Hospitalization Rates: Promote Mental Health and Prevent Substance Abuse, Broome County, 2012-2014

Condition-Specific Hospitalization (rate per 10,000)	Number of Cases (3 years)	Crude Rate	Age-Adjusted Rate
Drug-related	848	14.3	
Newborn drug-related discharges	123	197.4	
Self-inflicted injury	533	9.0	9.5

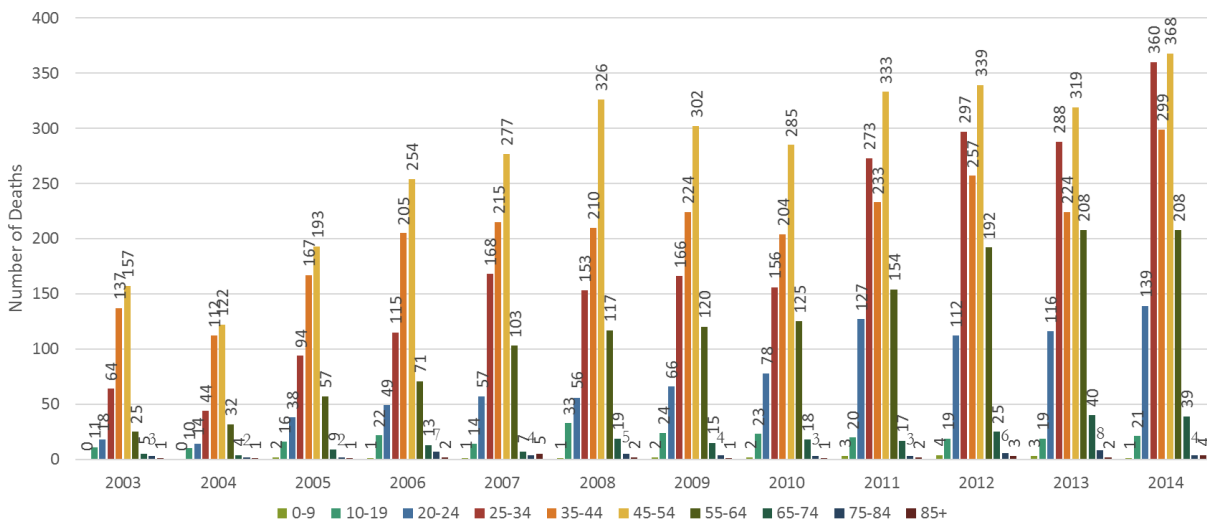
SOURCE: New York State, Community Health Indicators Reports, 2012-2014

In the United States, age adjusted mortality rates related to prescription opioids have increased contemporaneously with heroin drug poisoning over the 2000-2014 period. A similar pattern is evident in NYS with mortality rates increasing simultaneously with heroin drug overdose. The increase in opioid-related deaths has not been evenly distributed across age groups nor concentrated primarily among youth. In fact, middle-aged adults (25-34, 35-44, and 45-64 years

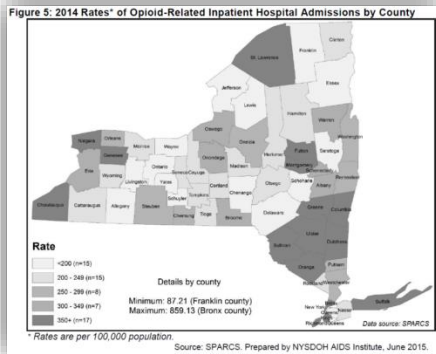
of age) have experienced a disproportionate share of this epidemic. Opioid-related emergency department visits and inpatient hospital admissions have across the state. Counties within NYS with core urban areas are in the worst quintile.

The Steering Committee recognizes the opioid epidemic as an emerging threat to the health and well-being of Broome County residents. A task force, the Broome Opioid Abuse Council (BOAC), was formed in December of 2014 to formally coordinate efforts directed toward addressing the opioid abuse crisis. The coalition is led by the Medical Director of the Broome County Health Department, Dr. Christopher Ryan, MD and comprised of multi-disciplinary team members who serve on four sub-committees: community education, treatment and prevention, law enforcement, and education of medical professionals. They are tasked with identifying critical priorities, developing a unified plan, and implementing solution-oriented strategies that will have a substantive impact. BOAC reports are available on the Broome County Health Department website. Though not selected as a priority for this interim Community Health Assessment, it is anticipated that opioid abuse will be a prominent issue when next full assessment is conducted.

Opioid-Related Deaths by Age Group, NYS, 2003-2014



New York State Department of Health. (2016). *Opioid-related deaths by age group, NYS, 2003-2014*. Retrieved from <https://health.data.ny.gov/Health/Opioid-Related-Deaths-by-Age-Group-Chart/434a-v67a>



Opioid-Involved Deaths in Broome County

	Opioid-involved deaths based upon local death certificates using Council of State and Territorial Epidemiologists (CSTE) guidance Last updated by BCHD on 10/14/16	Opioid-involved deaths based upon NYS DOH Vital Statistics data using Broome County Health Department definition Last updated by BCHD on 8/5/16	Opioid-involved deaths based upon NYS DOH Vital Statistics data using CDC Prevention for States definition Last updated by BCHD on 8/25/16	Opioid-involved deaths calculated by NYS DOH Division of Vital Statistics Last updated by NYS DOH on 8/8/16
2016	20	Source Data Not Yet Available	Source Data Not Yet Available	Data Not Yet Available
2015	30	Source Data Not Yet Available	Source Data Not Yet Available	Data Not Yet Available
2014	31	30	23	18
2013	20	27	17	12
2012	12	21	13	10
2011	10	20	Analysis Not Performed	3
2010	10	20	Analysis Not Performed	8

Broome County: Opioid overdoses and rates per 100,000 population (Data as of August, 2016)

Indicator	Location	Jan-Mar, 2015		Apr-Jun, 2015		Jul-Sep, 2015		Oct-Dec, 2015		2015 Total		Jan-Mar, 2016	
		Number	Crude Rate	Number	Crude Rate	Number	Crude Rate	Number	Crude Rate	Number	Crude Rate	Number	Crude Rate
Deaths¹													
All Opioid Overdoses	Broome	9	4.6	4	2.0	4	2.0	2	1.0	19	9.7	8	4.1
	NYS Excl. NYC	328	2.9	181	1.6	174	1.5	81	0.7	764	6.8	126	1.1
Heroin Overdoses	Broome	3	1.5	3	1.5	3	1.5	2	1.0	11	5.6	3	1.5
	NYS Excl. NYC	133	1.2	107	1.0	128	1.1	57	0.5	425	3.8	63	0.6
Overdoses Involving Opioid Pain Relievers ²	Broome	4	2.0	0	0.0	2	1.0	1	0.5	7	3.6	2	1.0
	NYS Excl. NYC	218	1.9	91	0.8	85	0.8	44	0.4	438	3.9	69	0.6
Outpatient Emergency Department Visits²													
All Opioid Overdoses	Broome	28	14.2	38	19.3	59	30.0	26	13.2	151	76.8	34	17.3
	NYS Excl. NYC	940	8.4	1,240	11.0	1,269	11.3	1,022	9.1	4,471	39.8	1,556	13.8
Heroin Overdoses	Broome	20	10.2	36	18.3	51	25.9	21	10.7	128	65.1	27	13.7
	NYS Excl. NYC	626	5.6	922	8.2	897	8.0	779	6.9	3,224	28.7	1,246	11.1
Opioid Overdoses Excluding Heroin ²	Broome	8	4.1	s	s	8	4.1	s	s	23	11.7	7	3.6
	NYS Excl. NYC	314	2.8	318	2.8	372	3.3	243	2.2	1,247	11.1	310	2.8
Hospitalizations²													
All Opioid Overdoses	Broome	9	4.6	9	4.6	11	5.6	8	4.1	37	18.8	12	6.1
	NYS Excl. NYC	403	3.6	511	4.5	508	4.5	385	3.4	1,807	16.1	398	3.5
Heroin Overdoses	Broome	s	s	s	s	s	s	s	s	18	9.2	7	3.6
	NYS Excl. NYC	141	1.3	158	1.4	156	1.4	161	1.4	616	5.5	193	1.7
Opioid Overdoses Excluding Heroin ²	Broome	s	s	s	s	6	3.1	s	s	19	9.7	s	s
	NYS Excl. NYC	262	2.3	353	3.1	352	3.1	224	2.0	1,191	10.6	205	1.8

¹ Indicators are not mutually exclusive. Decedents and patients may have multiple substances in their system. Thus, overdoses involving heroin and overdoses involving prescription opioid pain relievers will not add up to the overdoses involving all opioids.

² This indicator includes pharmaceutically and illicitly produced opioids such as fentanyl.

³ Indicators related to hospitalizations and emergency department data used ICD-9-CM codes prior to Oct 1st, 2015. ICD-10-CM codes are used from Oct 1st, 2015 and thereafter. Changes should be interpreted with caution due to the change in codes used for the definition.

s: Data for indicators related to hospitalizations and emergency departments are suppressed for confidentiality purposes if there are less than 6 discharges.

New York State Department of Health. (2016). *New York State - county opioid quarterly report for counties outside of New York City* Published: October, 2016. Retrieved from http://www.health.ny.gov/diseases/aids/general/opioid_overdose_prevention/docs/ros_2015_

Health Disparities

County Health Indicators by Race/Ethnicity (CHIRE) for 2011-2013 were made available by the New York State Department of Health. These indicators provide information about racial/ethnic differences in socio-demographic, general health, birth- and injury-related indicators as well as differences across multiple health conditions including respiratory diseases, heart disease and stroke, diabetes, cancer, and substance abuse/mental health.

Based on 2013 census data, non-Hispanic Blacks/African Americans comprised 5.5% of the county population, non-Hispanic Asian/Pacific Islanders comprised 4.1%, and Hispanics 3.8%. Income was lower and poverty was higher among these minority populations. Median household income (2011-2013) was \$22,856 for non-Hispanic Blacks/African Americans, \$36,370 for non-Hispanic Asian/Pacific Islanders, and \$25,619 for Hispanics as compared to \$47,731 for non-Hispanic Whites. The percent of families below the federal poverty level (FPL) was 2.5 times higher for non-Hispanic Blacks/African Americans (26.0% below FPL), 1.6 times higher for non-Hispanic Asian/Pacific Islanders (16.9% below FPL), and 2.6 times higher for Hispanics (26.8% below FPL) than for non-Hispanic Whites (10.5% below FPL). These data indicate that minority populations in the county face more difficult economic circumstances than Whites.

While total mortality rates were similar for non-Hispanic Blacks/African Americans and non-Hispanic Whites, the percentage of premature deaths (< 75 years) for non-Hispanic Blacks/African Americans was more than double that for non-Hispanic Whites (75.2% vs. 34.9%). The premature deaths among this minority group contributed to more years of productive life lost (8,185 vs. 7,401 per 100,000). And while the overall mortality rate for non-Hispanic Asian/Pacific Islanders was 2.6 times that of non-Hispanic Whites, the percentage of premature deaths among this minority group was 1.5 times that of non-Hispanic Whites (50.0% vs. 34.9%). For Hispanics, the total mortality was slightly lower than that for non-Hispanic Whites, but the percent of premature deaths was also more than double (71.0% vs. 34.9%). Based on the *Indicators for Tracking Public Health Priorities* (2014), the ratio of premature deaths (before age 65) was 2.84 for non-Hispanic Blacks and 2.22 for Hispanics as compared to non-Hispanic Whites. These ratios were higher than NYS and higher than the *2013-2018 NYS Prevention Agenda* target of 1.87 and 1.86 respectively.

With respect to disease morbidity, the number of events among specific minority populations is often less than 20, creating unstable rates even for three-year averages. Because of the small number of cases, comparisons for non-Hispanic Asian/Pacific Islanders and for Hispanics cannot be made. For non-Hispanic Blacks/African Americans, differences are evident in asthma hospitalizations. The age-adjusted hospitalization rate (all ages) for non-Hispanic Blacks/African Americans was 2.04 times the rate for non-Hispanic Whites (20.8 vs. 10.2 hospitalizations per 10,000 population). Among youth aged 0-17 years, the asthma hospitalization rate was 31.6 per 10,000 for non-Hispanic Blacks/African Americans compared to 13.4 per 10,000 for non-Hispanic Whites.

Similar differences exist for diabetes. The age-adjusted hospitalization rate for diabetes as a primary diagnosis was 37.3 per 10,000 for non-Hispanic Blacks/African Americans compared to 12.3 per 10,000 for non-Hispanic Whites. For hospitalizations in which diabetes was coded as a co-morbidity (any diagnosis), non-Hispanic Blacks/African Americans experienced higher hospitalization rates than non-Hispanic Whites (344.6 vs. 185.8 per 10,000). Further, the age-adjusted hospitalization rate for short-term complications secondary to diabetes among adults age 18 and older was likewise higher for non-Hispanic Blacks/African Americans than for non-Hispanic Whites (16.9 vs. 5.1 per 10,000).

Economic disadvantage, poverty, and minority status can affect health and well-being. These social determinants likely reflect disparities in mortality and morbidity within Broome County. Minority populations experience a disproportionate share of early deaths, poor birth outcomes, and disease burden due to asthma and diabetes.

The disproportionate ratios by race are evident in the table below in particular for diabetes and asthma among Blacks as compared to whites.

Age Adjusted Hospitalization Rates by Race, Broome County, NY, 2011-2013

Condition-Specific Hospitalization (rate per 10,000 population)	White	Black	All Races	Ratio
Diabetes Short-term Complications (age 18+, crude rate)	5.1	16.9	5.6	3.31
Diabetes (primary diagnosis)	12.3	37.3	13.7	3.03
Asthma (Age 0-17 years, crude rate)	13.4	31.6	15.1	2.36
Asthma	10.2	20.8	10.6	2.04
Congestive Heart Failure	22.6	43.9	23.3	1.94
Diabetes (any diagnosis)	185.8	344.6	192.4	1.85
Drug-related	13.9	20.7	14.0	1.50
Chronic Lower Respiratory Disease (CLRD)	28.3	39	28.8	1.38
Diseases of the Heart	84.8	108.1	85.7	1.27
Coronary Heart Disease	31.1	35.8	31.2	1.15
Cerebrovascular	22.6	25.8	23	1.14
Unintentional Injury	68.5	57.9	68.3	0.85
Falls (age 65+, crude)	238.2	78.6	237.8	0.33

SOURCE: NYSDOH, Broome County Health Indicators by Race Ethnicity, 2011-2013

Section 3: Prevention Agenda Priorities

The Prevention Agenda 2013-2018 is New York State's health improvement plan which advances a vision for making New York the healthiest state in the nation. This ambitious plan addresses five health priority areas:

- Promote a Healthy and Safe Environment
- Prevent Chronic Diseases
- Prevent HIV, Sexually Transmitted Diseases, Vaccine-Preventable Diseases, and Healthcare-Associated Infections
- Promote Healthy Women, Infants, and Children
- Promote Mental Health and Prevent Substance Abuse

Local health departments and hospital systems were asked to work together to address community health priorities tied to this *Prevention Agenda*. Although a new comprehensive health assessment was not required for the 2016-2018 cycle, each local health department and hospital system was tasked to collaborate with community partners, to review community health indicators, and to identify two Prevention Agenda Priorities and one health disparity to be addressed in a Community Health Improvement Plan (CHIP). To this end, the Broome County Community Health Assessment (CHA) Steering Committee conducted a strategic planning process that prioritized and selected areas to be addressed. This section provides details about the process for prioritizing and selecting these areas.

Prevention Agenda Priorities Selected

The following New York State Prevention Agenda 2013-2017 priority areas and goals were identified by the Broome County Community Health Assessment Steering Committee as the local health priorities for the *Broome County Community Health Assessment 2013–2017*:

1. **Priority Area:** Promote a Healthy and Safe Environment
Focus Area: Injuries, Violence and Occupational Health
Goal #1: Reduce falls risks among older adults
2. **Priority Area:** Prevent Chronic Disease
Focus Area: Reduce Obesity in Children and Adults
Goal #1: Create environments that promote and support healthy food and beverage choices
Goal #2: Prevent childhood obesity through early child care and schools
Goal #3: Expand the role of health care and health service providers and insurers in obesity prevention
Goal #4: Support breast feeding initiation and duration in health care programs and policies
3. **Priority Area:** Prevent Chronic Disease
Focus Area: Increase Access to High Quality Chronic Disease Preventive Care and Management in Clinical and Community Settings
Goal #1: Increase screening rates for cardiovascular disease and diabetes especially among disparate populations

Health Disparity Being Addressed

In addition, the Broome County CHA Steering Committee has chosen to focus on the health disparities encountered by the low income, Medicaid population and particularly on individuals who underutilize the preventive and disease management services within the health care system

4. **Priority Area:** Promote Mental Health and Prevent Substance Abuse

Focus Area: Strengthen Infrastructure Across Systems

Goal #1: Strengthen the infrastructure for collaboration between mental, emotional, and behavioral (MEB) health and chronic disease prevention professionals

Community Engagement Process

The Community Health Assessment (CHA) process for development of the Broome County Community Health Improvement Plan for the 2016-2018 period involved a diverse set of partners from a broad cross-section of community and human service agencies in Broome County (Appendix A). Over the past seven years, this committee has benefitted from a stable membership of dedicated leaders as well as from inclusion of new members who bring fresh perspectives to the work group.

In collaboration with the Director of the Health Department and the CHA Coordinator, these Steering Committee members provided the leadership for conducting the MAPP process and guiding selection of mutually derived priorities. Health department senior staff, which includes division directors and department supervisors, were updated about ongoing CHA activities. As well, they provided input by making in-house data available and keeping the CHA Coordinator apprised of relevant changes to programs or services. The core support team consisted of the Broome County Health Department Director, Deputy Director, and Medical Director as well as administrative staff and technical support team members. The Deputy Director (former Supervising Public Health Educator) continues to lead the chronic disease risk reduction interventions.

Following submission of the *2013-2017 Community Health Assessment*, the Broome County CHA Steering Committee met quarterly to monitor progress on implementation; to inform members of policy, system, or personnel changes; to address issues as they arose; and to revise plans and activities as needed. Since August 2015, the Steering Committee has met on a monthly basis to resume the assessment and planning phases of the quality improvement cycle. The Steering Committee serves as an active workgroup which continuously seeks new opportunities for collaboration as well as funding for evidence based and promising strategies that address community needs.

Meetings focused on re-evaluating the health status of the county and conducting specific activities to inform the *2016-2018 Community Health Assessment* report update. The meetings were chaired by the CHA Coordinator and attendance averaged about 10 members per meeting. Minutes were taken by an administrative support team member. Agendas and meeting minutes were e-mailed to committee members. As a formal record, all agendas, meeting minutes, and materials are retained at the BCHD in both electronic and paper formats.

Informal meetings were held at least monthly between the CHA Coordinator and the BCHD Deputy Director to assess progress and plan for upcoming CHA meetings and activities. Between meetings, Steering Committee members oversaw implementation of CHIP activities in their organization, submitted data for monitoring CHIP progress, and completed assessment tools. During meetings, members presented updates and information about progress on specific activities, contributed to interpretation of data analyses, and networked with colleagues as well as identified issues, shared ideas, and raised concerns from their organization's perspective and from the populations that they serve.

Representatives from both area hospital systems served on the CHA Steering Committee. During the August 2015 meeting, the MAPP process was reviewed and the vision statement was reaffirmed. Subsequent meetings focused on assessment information and data analyses, which were presented and discussed in detail during committee meetings. Representatives from area agencies on the Steering Committee also presented information specific to their target populations and service sector. This process included quantitative reports of local data as well as qualitative evidence derived from personal experience and expert knowledge.

As previously described in Section 1, many members of the CHA Steering Committee also serve in various roles and capacities within the Delivery System Reform Incentive Payment (DSRIP) and Population Health Improvement (PHIP) programs, creating linkages between these NYS funded initiatives that support healthcare system improvements in order to achieve *Prevention Agenda* goals. Regional as well as county-specific findings from the Community Needs Assessment conducted by Research & Marketing Strategies, Inc. (RMS) were shared with the Steering Committee. These data included both qualitative and quantitative information collected via online surveys, in-depth interviews, and focus groups from both patients and providers. This investment in outreach by the regional DSRIP organization, Care Compass Network, also served to inform the CHA process. In total, the information resources and rich discussions provided context for examining the public health priorities for the county.

For the May 2016 meeting, the CHA Steering Committee electronically voted to continue use of the priority setting tool that was developed for the 2010-2013 Community Health Assessment. With input from the Steering Committee, minor modifications were made and the revised tool used to rate, rank, and select priority areas for the county. Notably, the Steering Committee voted to remove the rating factor, "Work Time Lost or Disability," as there is little if any information available for determining its health impacts. Local public health priorities were identified by the Steering Committee for the Community Health Assessment at the July 2015 meeting and final selection was approved during the August meeting.

Method for Selection of Priority Areas

The tool, *Setting Priorities for the Broome County Community Health Assessment 2016-2018*, lists potential health priorities vertically down the left column and factors by which to rate their importance horizontally across the top row. The tool included forty-five (45) goals organized by the five (5) New York State Prevention Agenda Priority Areas and stratified by nineteen (19) Focus Areas. Steering Committee Members were asked to complete this tool by placing a score (from 1 to 3) in each box. Each assigned score reflected the importance of that factor in relation to the specific goal. A score of 1 indicated an area of high concern (low performance); a score of 2 indicated an area of moderate concern (moderate performance); and a score of 3 indicated an area of low concern (high performance). To the greatest extent possible, Steering Committee Members were asked to base their responses on data. Where data was not available, they were asked to derive the rating intuitively based on their knowledge and experience. Alternatively, Steering Committee Members could choose a score of “0” or leave the item blank if they did not know or were not sure of its importance. Zero scores were treated as missing data and were not included when calculating means. Members of the committee had access to numerous documents and health indicator data with which to make judgments about the health status of the county.

The following **Rating Factor definitions** were provided for clarification purposes:

PERFORMANCE INDICATORS

- **Total Health Care Costs** – potential cost to the healthcare system. Potential costs include diagnostic and treatment expenses over the lifetime of affected Broome County residents (e.g., inpatient and outpatient costs including hospitalizations, medical office visits, medications, medical transport, durable medical equipment, and home care). These costs will be different if the priority area is an acute self-limiting episode versus a lifelong chronic condition. These costs are viewed as direct costs to the healthcare system.
- **Absolute Number of Individuals Affected** – the total number of persons in Broome County affected by the priority area. This indicator reflects the public health burden or impact within the local (county) population.
- **Worsening Trend over the Past 5 Years** – the extent to which there has been a significant or meaningful increase or decrease in the priority area resulting in a worsening pattern over the time period in Broome County.
- **Underperforming US / NYS Health Goals** – the extent to which Broome County is not currently meeting Healthy People 2020 Goals and/or New York State 2013-2017 Prevention Agenda Goals in the priority area.
- **Health Disparities Present** – the extent to which the priority area demonstrates evidence of age, disability, gender, geographic, racial, sexual orientation, socioeconomic status, or other types of disparities among residents of Broome County.

ORGANIZATIONAL CAPACITY

- **Measurability – Indicators to Monitor Change** –the extent to which outcomes can be readily measured for local interventions directed toward achieving improvements in the priority area.
- **Opportunity to Continue Prior Intervention Focus** – this factor considers prior work in an area based on selection during the previous Community Health Assessment.
- **Feasibility for Potential Intervention** –the extent to which the priority area can be reasonably addressed by interventions at the local (county) level.
- **Availability of Funding for Initiative** – reflects the extent to which public and/or private funding can be sought at the local (county) level for the priority area.

SCORING

As previously noted, each criterion was scored on a scale of 1 to 3, with a 1 indicating an area of high concern (low performance) and a 3 indicating an area of low concern (high performance).

COLOR CODE: Red (1) = Area of High Concern (Low Performance)
Yellow (2) = Area of Moderate Concern (Moderate Performance)
Green (3) = Area of Low Concern (High Performance)

In addition, the “importance” of each Rating Factor (as a criterion) was also scored on a scale of 1 to 3, with 1 being “most important” and 3 being “least important.” Rating Factor scores were tallied and weights were assigned to each based on its proportionate contribution to the total number of points. Partial weights were calculated for the Assessment Factor and Intervention Factor sub-categories separately. In addition, full weights were calculated based on the total points for all Rating Factors.

For each of the 45 goals, the mean score for a given rating factor was multiplied by its partial weight. The weighted ratings were then summed to obtain an “Performance Indicator Score” and an “Organizational Capacity Score.” Similarly, the mean score for each rating factor was multiplied by its corresponding full weight and were summed across each goal to calculate a “Total Score.” The scores for goals grouped by priority area were averaged to obtain a “Priority Area” score. The weighted scores were subsequently ranked in ascending order to determine the highest priority items.

Finally, the Priority Setting Tool asked respondents to rank order the Prevention Agenda Priority Areas from 1 to 5 in order of importance. A score was computed for each priority area based on its average relative rank.

Rating Factor and Scoring Summary Table

	Rating Factors		Score for Rating Factors	
	1	2	3	
Performance Indicators	Total Healthcare Costs	High total healthcare costs	Moderate total healthcare costs	Low total healthcare costs
	Absolute Number of Individuals Affected	Many individuals affected	Moderate amount of individuals affected	Few individuals affected
	Worsening Trend over the Past 5 Years	Trend has significantly worsened over the last 5 years	Trend has only slightly changed or not changed at all in the last 5 years	Trend has significantly improved in the last five years
	Underperforming US/ NYS Health Goals	Broome County significantly underperforms US/ NYS health goals	Broome County performs at or slightly above or below US/ NYS health goals	Broome County performs significantly better than US/ NYS health goals
	Health Disparities Present	Large health disparities exist between groups in Broome County for this condition	Moderate health disparities exist between groups in Broome County for this condition	No health disparities exist between groups in Broome County for this condition
Organizational Response Capacity	Measurability- Indicators to Monitor	Appropriate measures are frequently	Measures related to this condition are	No monitoring currently performed on this
	Opportunity to Continue Prior Intervention Focus	Ample opportunity to continue prior intervention focus which has had demonstrable success	Ample opportunity to continue prior intervention focus without demonstrable success, or moderate opportunity to continue prior intervention focus with demonstrable success	No opportunity to continue prior intervention focus, regardless of demonstrable success
	Feasibility of Potential Intervention/ Initiative	Potential intervention/ initiative is highly feasible, given current intra- and inter-organizational capacity	Potential intervention/ initiative would be feasible with moderate changes to current intra- and inter-organizational capacity	Potential intervention/ initiative would not be feasible without major changes to intra- and inter-organizational capacity
	Availability of Funding for Initiative	Funding is currently available for initiative, and Broome County is a competitive applicant	Funding will be available in the near future for initiative, or funding is currently available for initiative and Broome County is a moderately competitive applicant	Funding is not available in the near future for initiative, or funding is currently available for initiative and Broome County is not a competitive applicant.

Priority Setting Results

The tool was completed by Broome County Steering Committee Members and division/department leaders at the Broome County Health Department. A total of 15 completed or partially completed tools were submitted and tallied. The highest ranking priority items were brought forward to the July 2015 Steering Committee meeting for discussion. Results from these analyses were tabulated so that the rankings achieved through the use of the weighted Rating Factors and the average relative rank score could be compared.

Analysis of the “importance” assigned to each Rating Factor was used to generate the partial and full weights which appear in the table below. The Assessment Factors that were identified as most important were, “Underperforming US/NYS Health Goals,” “Health Disparities Present,” and “Total Healthcare Costs.” These results clearly reflect the value placed on the *NYS Prevention Agenda* in determining priority areas. The weighting for the Intervention Factors was more evenly distributed with “Opportunity to Continue Prior Intervention Focus,” “Measurability of Indicators to Monitor Change,” and “Feasibility of Potential Intervention/Initiative” were identified as most important. These results reflect the practical experience with the last CHA process and the Steering Committee’s intention to select realistic priorities and set measurable objectives.

Partial Weights and Full Weights for Rating Factors

GROUPING	RATING FACTOR	Partial Weight (%)	Full Weight (%)
Performance Indicators	Total healthcare Costs	20.7	11.6
	Absolute Number of Individuals Affected	16.4	9.2
	Worsening Trend (over past 5 years)	15.7	8.8
	Underperforming US/NYS Health Goals	24.0	13.5
	Health Disparities Present	23.1	12.9
	TOTAL	100.0	
Organizational Capacity	Measurability of Indicators to Monitor Change	25.9	11.4
	Opportunity to Continue Prior Intervention Focus	29.4	12.9
	Feasibility of Potential Intervention/Initiative	23.5	10.4
	Availability of Funding for Initiative	21.2	9.3
	TOTAL	100.0	100.0

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2016

The results for ranking priority areas based on the weighted rating factors are presented below. “Prevent Chronic Diseases” was identified as the highest priority area followed by “Promote Mental Health and Prevent Substance Abuse” and “Promote Healthy Women, Infants, and Children.” The priority area “Prevent Chronic Disease” had the lowest Performance Indicator and Organizational Capacity Scores.

Priority Area Rankings Based on Weighted Total Score, Broome County, 2016

PRIORITY AREA	PERFORMANCE INDICATORS	ORGANIZATIONAL CAPACITY	TOTAL SCORE
Prevent Chronic Diseases	1.47	1.46	1.47
Promote Mental Health & Prevent Substance Abuse	1.68	1.75	1.71
Promote Healthy Women Infants & Children	1.91	1.71	1.82
Prevent Infectious Diseases	2.09	1.90	2.01
Promote a Healthy & Safe Environment	2.06	1.96	2.04

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2016

The results for the relative ranking of the priority areas are presented in the table below.

Priority Area Rankings Based on the Average Relative Rank Score, Broome County, 2016

PRIORITY AREA	AVERAGE RELATIVE RANK SCORE
Prevent Chronic Diseases	1.7
Promote Healthy Women Infants & Children	1.8
Promote a Healthy & Safe Environment	1.9
Promote Mental Health & Prevent Substance Abuse	2.1
Prevent Infectious Diseases	2.5

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2016

The results for ranking focus areas/goals based on the weighted rating factors are presented in the table that follows. Of the top ten goals, six were in the priority area “Prevent Chronic Diseases,” two in “Promote a Healthy and Safe Environment,” and one each in “Promote Mental Health and Prevent Substance Abuse” and “Prevent Infectious Diseases.”

Top Rated Focus Areas & Goals Ranked by Weighted Total Score, Broome County, 2016

FOCUS AREA & GOAL	PRIORITY AREA	PERFORMANCE INDICATORS	ORGANIZATIONAL CAPACITY	TOTAL SCORE
Create community environments that promote and support healthy food and beverage choices and physical activity	PCD	1.14	1.13	1.16
Promote use of evidence-based care to manage chronic diseases	PCD	1.24	1.24	1.23
Expand the role of health care and health service providers and insurers in obesity prevention	PCD	1.31	1.31	1.32
Reduce fall risks among the most vulnerable populations.	ENV	1.63	1.83	1.38
Prevent childhood obesity through early child care and schools	PCD	1.34	1.29	1.41
Promote healthy lifestyles, sustainability and adaptation to climate change.	ENV	1.52	1.59	1.44
Improve childhood and adolescent immunization rates	PID	1.64	1.79	1.44
Increase screening rates for cardiovascular disease, diabetes and breast/cervical/colorectal cancer, especially among disparate populations	PCD	1.40	1.35	1.45
Prevent initiation of tobacco use by New York youth and young adults, especially among low socioeconomic status (SES) populations	PCD	1.48	1.49	1.46
Prevent underage drinking, non-medical use of prescription drugs by youth, and excessive use of alcohol consumption by adults	MHSA	1.52	1.55	1.48

PCD = Prevent Chronic Disease

ENV = Promote a Healthy and Safe Environment

PCD = Prevent Infectious Diseases

MHSA = Promote Mental Health and Prevent Substance Abuse

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2016

Priority Area: Prevent Chronic Diseases

The top three goals all related to chronic disease prevention: “Create community environments that promote and support healthy food and beverage choices and physical activity,” “Promote use of evidence-based care to manage chronic diseases,” and “Expand the role of health care and health service providers and insurers in obesity prevention.” These results are consistent with current efforts in the area of obesity prevention and the management of chronic disease. Obesity prevention with its emphasis on healthy lifestyles offers primary prevention of cardiovascular disease and diabetes. Increasing screening rates for these conditions particularly among disparate populations offers the advantage of early detection and treatment that can reduce short- and long-term consequences, lower associated morbidity, and reduce disparities in cardiovascular and diabetic outcomes. Furthermore, tertiary prevention is improved through the use of evidence based care to manage these chronic diseases.

Cardiovascular disease and diabetes are common chronic diseases responsible for a large proportion of hospitalizations that result in excess morbidity for individuals and place a heavy cost burden on the healthcare system. A common underlying and potentially modifiable risk factor for both conditions is obesity. Thus, interventions directed at reducing overweight and obesity among both youth and adults can prevent the onset of these conditions and therefore offer an opportunity for primary prevention. For individuals with existent disease, efforts are tertiary in nature and seek to maximize health and minimize short-term and long-term complications that can result in expensive hospitalizations. Weight management can also have beneficial effects as tertiary prevention of disease morbidity for both cardiovascular disease and diabetes.

Priority Area: Promote a Healthy and Safe Environment

The two highest rated goals in the priority area of healthy and safe environment were “Reduce fall risks among the most vulnerable populations” and “Promote healthy lifestyles, sustainability and adaptation to climate change.” The aging population within the county, the high rate of fall-related hospitalizations among individuals age 65 and older, the significant impact that current interventions have had on hospitalization rates, and the ongoing work among community partners in the area of falls prevention supported selection of this specific focus within the “Promote a Healthy and Safe Environment” priority area. Furthermore, additional grant funding was recently awarded to BCHD from the Centers for Disease Control and Prevention to continue work in this area.

Priority Area: Promote Mental Health and Prevent Substance Abuse

The most important goal in the priority area of promoting mental health and preventing substance abuse was “Prevent underage drinking, non-medical use of prescription drugs by youth, and excessive use of alcohol consumption by adults.” There was considerable discussion at Steering Committee Meetings about the disproportionate number of individuals with chronic disease who simultaneously experience mental health distress and emotional disorders such as anxiety or depression. Mental health disorders affect cognition, mood, social relationships, coping, and functional ability. The strong association between the chronic disease and mental health has been recognized for some time. Both chronic disease and mental health disorders are common conditions with more than half of all adults living with at least one chronic condition and over a quarter of all adults having a diagnosable mental health disorder. Moreover, chronic disease and mental health conditions often co-occur. The

presence of a chronic disease can have a powerful impact on a person's mental and emotional state and conversely mental health conditions such as depression can impair coping, make self-management more difficult, and result in poor outcomes. Despite a limited understanding about the bidirectional nature of this relationship, modifiable risk factors related to lifestyle such as engaging in physical activity, eating a healthy diet, and avoiding substance use can improve both physical and mental well-being. In addition, opioid abuse has gained prominence as a critical issue for communities across the country as they experience untimely deaths attempt and the average lifespan of individuals is shortened for the first time in generations.

Health Disparity

As part of the community health assessment and community health improvement process, counties have been asked to address at least one health disparity. Considerable differences in hospitalization rates for cardiovascular disease as well as short- and long-term complications from diabetes among African Americans were evident in the Prevention Quality Indicators. This finding strongly suggests that improved outpatient management may help to reduce disparities in these chronic diseases outcomes. Thus, the Steering Committee selected chronic disease preventive care and management as a third priority with a particular focus on co-morbid mental health issues among vulnerable populations. The Steering Committee certainly appreciated that these two priority areas, infectious diseases and maternal-child health, involve very important public health issues. Even as we recognized their significance to the health of a community, other areas were given higher priority for reasons described below.

Development of Community Health Improvement Plan (CHIP)

Several activities supported development of the Community Health Improvement Plan (CHIP) and Community Service Plans (CSPs). Once the Steering Committee determined the priority areas on which to focus, a template was developed for the Community Health Improvement Plan (CHIP). The template was populated with information solicited from members of the Steering Committee and included identification of intervention strategies to be used, potential activities or action items, key stakeholders, and possible metrics to use for measuring process and outcomes. This information provided the data elements for the initial draft of the CHIP. The draft document was distributed prior to the next Steering Committee meeting and discussed. The plan was refined over the course of several Steering Committee meetings as the hospital representatives simultaneously developed their respective CSPs in an iterative process. The final version of the CHIP was unanimously approved by the Steering Committee. This CHIP will serve as the basis for ongoing Steering Committee meetings during which it will likely undergo further refinement. As the CHIP is implemented and evaluated, specific actions/interventions may be modified and new ones added in a continuous and dynamic plan, do, check, act (PDCA) cycle. The Steering Committee will continue to meet on a monthly basis to assess progress to date and adapt the CHIP as circumstances direct.

Section 4: Community Health Improvement Plan

Broome County role in the Community Health Improvement Plan:

- Broome County Health Department will serve as lead agency, provide resources & technical assistance, assist with data collection under Healthy & Safe Environment priority area (p.3-4, CHIP Objectives 2013-2018)
- Broome County Health Department WIC Program will oversee & implement WIC breastfeeding work plan, provide breastfeeding support under Prevent Chronic Disease priority area (p.7, 11, CHIP Objectives 2013-2018)
- Broome County Health Department will provide resources & technical assistance as needed in relation to its Creating Healthy Schools and Communities grant and in relation to local baby-friendly hospital designations under the Prevent Chronic Disease priority area (p.9, 13, 14, CHIP Objectives 2013-2018)
- Broome County Department of Social Services will coordinate data collection and collaborate with partner agencies to implement and enforce policy change under the Prevent Chronic Disease priority area (p.10, CHIP Objectives 2013-2018)
- Broome County Maternal Child Health Division will coordinate public health nurse home visits and provide breastfeeding support under Prevent Chronic Disease priority area (p.11, 14, CHIP Objectives 2013-2018)
- Broome County Planning Department will provide technical assistance to municipalities for CS policies under the Prevent Chronic Disease priority area (p.17, CHIP Objectives, 2013-2018)
- Broome County Office for Aging will provide classes in chronic disease management through RSVP under the Prevent Chronic Disease priority area (p.21, CHIP Objectives, 2013-2018)
- Broome County Health Department's administration will facilitate with the Promote Mental Health & Prevent Substance Abuse priority area (p.22, CHIP Objectives, 2013-2018)

Priority Area: Healthy & Safe Environment

Focus Area: Injuries, Violence and Occupational Health

Background

In 2009, the National Council on Aging (NCOA) stated that more than 20,000 older Americans died from injuries related to unintentional falls. According to CDC reports, the death rate from falls among older adults has increased by 42% from 2000 to 2006. In 2010, over 2.3 million older Americans were treated in emergency departments for nonfatal injuries from falls and more than 650,000 were hospitalized. The total cost of fall injuries for older Americans was estimated to be \$30 billion (in 2010 dollars). By 2020, it is predicted that the annual direct and indirect cost of fall injuries is expected to reach \$54.9 billion.

In Broome County, more than 17% of the population is over the age 65 and 49% of the senior population is 75 years and older. During the community health assessment process, it was

noted that Broome County's rate of hospitalizations due to falls was 199.0 per 10,000 (NYS SPARCS 2016). This rate is higher than NYS at 183.6 per 10,000 (NYS SPARCS 2016). Broome County ranked in the 4th quartile which translates to being in the bottom 25% of all NYS counties. The NYS Prevention Agenda 2018 target is to maintain the rate of hospitalizations due to falls.

The Broome County Health Department was awarded a 5 year Fall Prevention Grant from the New York State Department of Health in 2010. This initiative has provided a foundation for planning, implementing and evaluating evidence based fall prevention initiatives for Broome County.

Overview

Goal 1- Decrease fall and fall-related hospital admissions among older adults

In order to decrease falls, fall related injuries, and deaths of older adults due to falls, Broome County has chosen to work with key stakeholders and partners in order to implement evidence based interventions that are incorporated into the organizational, healthcare and community sectors. The CDC and the NCOA both recommend strategies that include systems changes of incorporating fall risk assessments in the healthcare setting and the employment of community based programs that engage older adults in opportunities to promote exercising regularly to improve leg strength and balance. Decreasing falls will be accomplished through the adoption of evidence-based fall risk assessment and prevention programs and community settings.

Objective 1.1a

Fourteen UHS Primary Care practices have been a pilot site for a program called STEADI (Stopping Elderly Accidents Deaths and Injuries) that was created for clinicians in response to the lack of awareness of the American and British Geriatrics Society's clinical guidelines for prevention of falls in older adults. Clinicians have voiced a need for standardized information and materials related to fall risk assessments. The STEADI program was designed by the CDC in order to assist health care providers and institutions served by clinicians and other health care personnel involved in older adult care. The STEADI program enforces the US Preventive Services Task Force recommendations for falls risk assessments and involves the use of a clinician tool kit that guides providers through a multifunctional falls risk assessment. STEADI will be expanded to Lourdes Primary Care Practices, as well. This expansion will unfold at a rate of at least two additional provider sites per year to a total of 24 sites. To accomplish this, both Lourdes and UHS will continue to modify their EHRs to capture risk assessment and the fall plan of care for patients screening at-risk for falls, and to follow-up monthly with provider sites to assess implementation process (QA). UHS will expand its current practices to the surrounding counties of Tioga, Chenango and Delaware. Lourdes will need to establish baseline data in year one, identify internal trends of fall risk assessments performed and fall plans of care developed, and work with community

partners to identify strategies to increase the number of patients referred to community programs.

Objective 1.1b

Broome County will further integrate hospital-based home care physical therapy programs into practice, which integrate evidence-based exercise and fall prevention activities in order to decrease falls and related hospitalizations. In addition to the STEADI program, the CDC also promotes the use of OTAGO. Broome County is working with healthcare provider partners to use OTAGO as a healthcare fall prevention intervention that provides physical therapists with training on individually tailored, home-based, strength and balance programs for high risk individuals 80 years and older. Hospital based programs will expand from zero hospital-based programs to two at a rate of one program per year. Lourdes and UHS home care and physical therapy programs; both will develop implementation plans, train staff on fall prevention exercises, train physical therapists to use the OTAGO intervention; and follow up monthly with PT administration.

Objective 1.2

The current evidence based community interventions for fall prevention include the following: Matter of Balance Program which is designed to reduce the fear of falling and increase activity levels among older adults, Tai Chi Moving for Better Balance which is designed to improve muscle strength, balance, and postural control, and Stepping On is designed for older adults who have fallen multiple times and are at risk for falling and/or have a fear of falling. The Stepping On program also includes home safety, home fall risk assessments, education on vision, medications and pedestrian safety. These activities will continue in the community through 2018 at least. These evidence based interventions will be sustained and supported within the infrastructure of the Broome County YMCA, Lourdes Hospital, United Health Services and Independence Awareness, LLC.

Measures

The process measures for these objectives are implementation of fall risk assessments and hospital-based home care physical therapy programs; number of primary care and physical therapy staff trained; number of Medicare patients screened; number of at-risk patients with a fall plan of care; number of referrals to physical therapy and community programs; and assessment/ monitoring of programs. Outcome measures for these objectives include implementation of screening and physical therapy programs; percent of older adults screened; percent of at-risk patients receiving fall risk plan of care; and hospitalization rate due to falls.

Priority Area: Prevent Chronic Disease

Focus Area: Reduce Obesity in Children and Adults

Background

According to the Centers for Control and Prevention (CDC), obesity and overweight are the second leading cause of preventable death in the United States (US) which may quickly top tobacco as the leading preventable cause of death. The CDC also states by the year 2050, if obesity trends continue as they are, life expectancy in the US is predicted to be shortened by 2-5 years. Obesity is a risk factor for many chronic conditions including type high blood pressure, high cholesterol, stroke, heart disease, 2 diabetes, asthma, some cancers, and osteoarthritis. Alarming, these conditions are now appearing in adolescents and children.

Currently, the percent of adults who are obese in Broome County is 30.4% which is higher than the rest of the state and the NYS Prevention Agenda 2018 target. The percent of children and adolescents who are obese in Broome County is 19.4% which is higher than the rest of the state and the NYS Prevention Agenda 2018 target (2013-2014 NYS Expanded Behavioral Risk Factor Surveillance System).

To reduce the incidence, prevalence and burden of obesity and chronic disease, it is necessary for communities to create environments that support healthier behaviors and make healthy choices, easier choices. This involves engaging and mobilizing key stake holders, decision makers, and community partners to work within all levels of the health impact pyramid and across all sectors to promote “health in all policies.” Focused efforts in this area include: increasing physical activity and nutrition, reducing tobacco use and secondhand smoke exposure, improving and increasing access to quality care and the use of evidence based care to manage chronic diseases - while collectively working to eliminate racial/ethnic and socioeconomic health disparities.

Overview & Measures

Goal 1- Reduce the percentage of children who are obese in Broome County

Objective 1.1

The Broome County CHIP aims to reduce the prevalence of obesity of children ages 2-4 enrolled in the WIC program. The 2018 goal is a childhood obesity rate of 13.9% among the target demographic, a reduction from the baseline of 14.6%. To accomplish this, the Broome County Health Department WIC Program will advocate for decreased fat in WIC food packages, provide education once a year for children ages 2-4 about healthy lifestyles including diet and exercise, and measure BMIs for children receiving nutrition counseling.

Progress towards this objective will be evaluated based on self-report measures gathered from WIC participants regarding their knowledge and consumption of healthy foods and beverages, in addition to their BMI data.

Objective 1.2

The Broome County CHIP aims to increase the number of children ages 3-17 who receive a BMI screening in Primary Care. The 2018 goal is a screening rate of 69.5% among the target demographic; an increase from the baseline of 63%. This will be accomplished with assistance from United Health Services and Lourdes Hospital. These organizations will ensure that primary care providers are engaged in obesity prevention measures on a yearly basis, which will include expanding the use of EMRs for assessing pediatric BMI screenings, generating referrals for nutrition and physical activity, and training providers in adequate measures to identify, assess, and treat childhood obesity.

Progress towards this objective will be evaluated based on the number of primary care providers who conduct BMI screenings and the amount of hospital systems who implement childhood BMI screenings. The percentage of children screened and percentages of children who are overweight and obese will also be evaluated.

Objective 1.3

The Broome County CHIP aims to reduce the percentage of school-age children who are obese among of children in Broome County public schools. The 2018 goal is a reduction of childhood obesity to 17.7% among the target demographic, a decrease from the baseline of 18.6%. This will be accomplished with partners on the Creating Healthy Schools and Communities grant, including Broome County School Districts, Broome-Tioga BOCES Food Services and Professional Development, and the Broome County Health Department. To reach the goal, school wellness policies will be adjusted to establish higher nutrition standards, such as the inclusion of Universal Breakfast and Breakfast in the Classroom programs. Additionally, wellness policies will address mandatory time for active recess and increased opportunities for physical activity, as well as activities related to safe routes to school.

Progress towards this objective will be evaluated based on the number of school districts that adopt healthier food and beverage options in school wellness policies and will also consider the percentage of children who are overweight and obese.

Objective 1.4

The Broome County CHIP aims to increase the proportion of obese children enrolled in a Medicaid Managed Care Plan, ages 3-17 years, who were counseled on nutrition and physical activity or referred by their healthcare provider. The 2018 goal is to increase nutrition referrals to 74.4% and physical activity referrals to 70.4% among the target

demographic, an increase from the baseline of 74% nutrition referrals and 64% physical activity referrals. This will be accomplished with support from United Health Services, the Broome County Department of Social Services, and Medicaid Managed Care Organizations. This will be accomplished by assessing pediatric BMI screenings, training providers to properly identify, assess, and treat childhood obesity, generating referrals for nutrition and physical activity, and following up with providers to address any challenges they may be facing.

Progress towards this objective will be evaluated based on the percentage of children who are referred for nutrition and physical activity education by a healthcare provider. This data will be compared to the percentage of children who are at a healthy weight, overweight, or obese.

Goal 2- Increase Breastfeeding

Objective 2.1

The Broome County CHIP aims to increase the percentage of women on the Broome County WIC Program who initiate breastfeeding. The 2018 goal is to increase breastfeeding to 71.4% among the target demographic, an increase from the baseline of 68%. Supporting partners include the Broome County Health Department WIC Program, the Broome County Maternal Child Health Division, Lourdes Hospital, and United Health Services. The goal will be accomplished by building enhanced support systems including early breastfeeding education and promotion efforts and the initiation of a peer counseling plan to assist with initiation of breastfeeding as soon as possible after birth. Additionally, free breastfeeding classes will be offered to WIC prenatal patients, and fathers of WIC children will be educated on the benefits of breastfeeding.

Progress towards this objective will be evaluated based on the percentage of women on WIC who consider breastfeeding in the prenatal phase, WIC mothers who fully breastfeed and who return to work and continue to breastfeed, and infants who get 1 hour of skin-to-skin contact in the hospital.

Objective 2.2

The Broome County CHIP aims to increase the percentage of WIC infants who continue to be breastfed until 6 months. The 2018 goal is to increase breastfeeding until six months to 27.5% among the target demographic, an increase from the baseline of 25%. Supporting partners include the Broome County Health Department WIC Program, the Broome County Maternal Child Health Division, United Health Services, and Lourdes Hospital. The goal will be accomplished by providing WIC mothers with breast pumps, Public Health Nurse home visits, and peer counseling. Additionally, there will be an effort to increase the number of MCH nurses and WIC staff to be Certified Lactation

Counselors. Lourdes and UHS will also strive to identify women appropriate for referral to the WIC program.

Progress towards this objective will be evaluated based on the percentage of WIC women who continue to breastfeed for six months and the number of fully breastfeeding women.

Objective 2.3

The Broome County CHIP aims to have the two local hospital systems make progress towards designation as baby friendly hospitals with an increase of private outpatient providers in the community adopting breastfeeding policies. The 2018 goal is to have both hospitals participate in Great Beginnings by adopting the first three steps to become baby friendly. This is an increase from the baseline of zero hospitals and outpatient providers with breastfeeding-friendly policies. In addition to United Health Services and Lourdes Hospital, supporting partners include the Broome County Health Department, the Southern Tier Breastfeeding Coalition, and the Mothers and Babies Perinatal Network. The goal will be accomplished by submitting a letter of intent to NYSDOH to participate in Great Beginnings, creating a local breastfeeding resource guide for healthcare providers, garnering earned media, and developing, adopting, and implementing policies.

This objective will be evaluated by looking at the progress that has been made for facilities seeking designation as baby friendly.

Goal 3- Prevent childhood obesity through interventions in early childcare

Objective 3.1

The Broome County CHIP aims to increase the number of early childcare settings in areas of high need that adopt policies designed to support breastfeeding, improve nutrition, increase physical activity, and reduce screen time in early childcare settings. The 2018 goal is to establish 15 early childcare settings with policies, an increase from the baseline of zero. The supporting partners will be the Family Enrichment Network (FEN) Child Resource & Referral (CCR&R), the Broome County Health Department, and the Broome County Department of Social Services. The goal will be accomplished by recruiting and training a physical activity specialist, who will deliver physical activity curricula to childcare providers. Additionally, the benefits of the Child and Adult Care Food Program (CACFP) will be promoted.

To evaluate this objective, data regarding the number of childcare centers who provide physical activity breaks, time spent engaging in physical activity, and factors such as percentages of infants who are breastfed in the childcare setting, children who view ≤ 2 hours of TV per day, and obesity rates of children will be studied.

Goal 4: Create community environments that promote and support healthy food and beverage choices and physical activity

Objective 4.1

The Broome County CHIP aims to decrease the percentage of adults ages 18 years and older who consume one or more sugary drink per day. The 2018 target is to decrease sugary beverage consumption to 21.8% among the target population, a decrease from the baseline of 23%. Supporting partners include the Broome County Health Department, Broome County Cornell Cooperative Extension, the Broome County Government, the City of Binghamton, Broome County Central Foods, Broome County School Districts, Lourdes Hospital, and United Health Services. The goal will be accomplished by conducting presentations at schools, community sites, and businesses to increase knowledge about healthy beverage choices. Additionally, technical assistance will be provided to any organization or school wanting to make changes.

To evaluate this objective, data regarding the number of buildings that change procurement and vending policies, along with the content of beverages available for sale will be studied. The attitudes and perceptions surrounding sugary drinks will also be taken into consideration.

Objective 4.2

The Broome County CHIP aims to increase the percentage of adults 18 years and older who participate in leisure-time physical activity. The 2018 target is to increase leisure-time physical activity to 78.7% among the target population, an increase from the baseline of 73.7%. Supporting partners include the Broome County Health Department, United Health Services Hospital, Lourdes Hospital, WSKG, Binghamton University, the Binghamton Metropolitan Transportation Study, Broome-Tioga BOCES, and Broome County School Districts. The goal will be accomplished by revitalizing the BC Walks program and website, establishing joint-use agreements with schools for community members to use the gymnasiums, as well as working to garner earned media to promote healthy programs.

To evaluate this objective, the number of residents participating in the BC Walks program will be utilized to determine the percentage of adults participating in leisure-time physical activity.

Objective 4.3

The Broome County CHIP aims to increase the number of municipalities that have passed Complete Streets policies. The 2018 target is to establish 4 municipalities with Complete Streets policies, an increase from the baseline of 1 municipality. Supporting

partners include the Broome County Health Department, the City of Binghamton, the Broome County Planning Department, the Binghamton Metropolitan Transportation Study, the New York State Department of Transportation (NYSDOT) Region 9, and the Healthy Lifestyles Coalition. The goal will be accomplished by conducting Complete Streets trainings, working with various municipalities to develop Complete Streets policies, and implementing the Broome County Comprehensive Plan which includes action items that encourage Complete Streets for all municipalities.

To evaluate this objective, data will be reviewed on the number of municipalities that implement Complete Streets initiatives, the number of presentations on Complete Streets, and the number and demographics of residents in municipalities covered by Complete Streets initiatives.

Priority Area: Prevent Chronic Disease

Focus Area: Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings

Background

The CDC estimates that 7 of the 10 leading causes of death in the United States are chronic diseases, and nearly 50% of all Americans live with at least one chronic disease or illness. The productivity and quality of life for people living with a chronic disease such as diabetes, heart disease, stroke and cancer is limited which in turn impacts their families as well. Most chronic diseases are preventable and can be managed successfully with healthy behavior changes.

In Broome County, some populations suffer disproportionately from preventable chronic disease conditions. Non-Hispanic and Black populations have significantly higher levels of mortality and hospitalizations associated with heart/stroke and diabetes indicators. In addition, other health determinants such as poverty and lower education status increase the need for chronic disease management models, especially for many enrollees of Medicaid Managed Care plans who consistently rely on hospital emergency rooms for emergent care of preventable health conditions.

It is critical that chronic diseases and their risk factors are addressed and managed appropriately in order to reduce the complications, burden of morbidity, hospitalizations, poor function status and mortality that comes with chronic disease. Necessary collaborations with healthcare systems and other community sectors need to ensure that successful strategies exist for chronic disease management opportunities, especially where the most vulnerable and high risk populations are concerned.

Overview

Goal 1- Increase screening rates and treatment for cardiovascular disease and diabetes, especially among disparate populations.

The Broome County CHIP objectives that address increasing access to high quality chronic disease preventive care and management in clinical and community settings reflect several screening and treatment based clinical system changes. The focus of these clinical system changes are primarily early detection, treatment and quality management of diabetes and cardiovascular disease, including hypertension within disparate priority populations. These disparate populations are identified as residents enrolled in Medicaid Managed Care and black adults enrolled in Medicaid Managed Care programs.

The interventions and strategies that will result in sustained clinical systems changes are multifaceted in their approach and rely heavily on Broome County's two largest hospital system partners, United Health Services and Lourdes Hospital; particularly expanding the use of electronic medical records for assisting in screening, treatment, case management, and data collection. Clinical system changes also involve educating healthcare providers, including EMTs, with the latest clinical guidelines and recommendations for chronic disease screening, treatment and management. Interventions additionally relay on community based chronic disease management programs sponsored by the Broome County Office for Aging, Retired Senior Volunteer Program (RSVP), YMCA and the Rural Health Network of South Central New York (RHNSCNY).

Objective 1.1

The first objective under this priority area is to increase the percentage of adults in Medicaid Managed Care aged 45 years or older who had a test for high blood sugar or diabetes within the past three years by 5%. This reflects an annual increase of 2% from a baseline rate of 58.8%. United Health Services and Lourdes Hospital will implement standards of medical care for diabetes into their primary care practices; track referrals to the UHS Stay Healthy Center; provide individual education and group self-management education for diabetes; modify their EHRs; and advertise their services. Rural Health Network will help identify underserved groups and provide health professionals with training.

Objective 1.2a

The second objective under this priority area is to reduce the age-adjusted hospitalization rate for heart attacks by 10%. This reflects a 2% annual decrease from 15.5 per 10,000 residents to 14 per 10,000 residents. Lourdes Hospital will expand case management interventions, expand the discharge process, hold monthly heart failure meetings and consistently provide client education for self-care at all levels. UHS will modify its HER; meet the Silver Six Award for heart failure; educate and work with EMTs

to gather pre-hospital data; expand cardiac rehab services; evaluate outcome tracking and collaborate with UHS health homes.

Objective 1.2b

The third objective under this priority area is to increase the percentage of Medicaid Managed Care plan members with diabetes who received all four screening tests for diabetes by 5% among all adults with diabetes, and by 10% among Black/ African American adults with diabetes. This reflects an annual increase of 1% for all adults and 2% for Black/ African American adults with diabetes. This increase is in line with target screening rate increases from 50% to 55% among all adults and from 45% to 55% among Black/ African American adults with diabetes. To accomplish this objective, Broome County Office for Aging, will release media regarding diabetes control. Rural Health Network will promote enrollment in diabetes self-management programs. Lourdes and UHS will target diabetes education services in Black/ African American communities, provide facilitated enrollment sites for health insurance; and monitor primary care diabetic screening practices.

Measures

Process measures for this objective include the percentage of patients with diabetes or a cardiovascular disease, percentage of patients receiving screenings for chronic illness; number of patients with chronic illness following up with referral programs; number of patients attending chronic disease self-management and education classes; and an evaluation of rural disease management program. Outcome measures include screening rates for chronic illness and age-adjusted hospitalization rates for chronic illness-related conditions.

Priority Area: Promote Mental Health and Prevent Substance Abuse

Focus Area: Strengthen Infrastructure Across Systems

Background

Around mental health, Broome County aims to complete the integration of behavioral health into primary care. This strategy promotes expanded access of mental health and behavioral health services. This approach will include mental health throughout the community continuum of care to identify behavioral health diagnoses early, allowing rapid treatment; to ensure treatment of medical and behavioral health conditions are compatible and do not cause adverse effects; and to de-stigmatize the behavioral health diagnosis.

Overview

Goal 1- Expand access to mental health/ behavioral health services by integrating behavioral health into primary care and throughout the Lourdes Hospital and Community continuum of care.

Objective 1.1

The objective under the Mental Health and Substance Abuse priority area is to complete the integration of behavioral health into primary care as prescribed by Lourdes Hospital/ DSRIP project 3ai and to inform the expansion of the process to UHS and Guthrie Health Care Systems. Progress towards this objective will be measured by the number of primary care sites integrating these practices. From a baseline of one site, one Lourdes Primary Care site will be added annually to reach the 2018 goal of three Lourdes Primary Care sites providing access to mental and behavioral health services.

To accomplish this objective, Lourdes Hospital and DSRIP will conduct pilot program, expanding screening criteria and developing a sound referral process for two Lourdes practices in order to integrate behavioral health and primary care. Broome County Health Department will assist Lourdes and DSRIP in recruiting and training behavioral health consultants, who will serve in the primary care practices.

Measures

Process measures for this objective include number of patients screened at participating sites; number of patients engaged with behavioral health consultants; and number of providers completing pre- and post-tests with patients. Outcome measures include percent of patients receiving screening; percent of patients engaged with a behavioral health consultant who need it; avoidable ER visits by Medicaid beneficiaries with a behavioral health diagnosis; and provider training.

Section 5: Process to Maintain Engagement with Partners & to Track Progress

Over the coming year, the Steering Committee plans to meet quarterly to evaluate progress on achievement of objectives detailed in the *Community Health Improvement Plan (CHIP)*. On a quarterly basis, community partners will complete a performance monitoring tool that tracks all CHIP related activities and process measures as well as incremental gains made on outcome objectives. Meetings will focus on successes and setbacks encountered as stakeholders implement the CHIP, and will serve as a forum for brainstorming and networking to ensure success of or make modifications to the plan based on changing circumstances. Beginning in August, the Steering Committee will resume monthly meetings to re-enter a new assessment phase in preparation for the next Community Health Assessment. At that time, meetings will focus on planning for an in-depth assessment of community health status, designing instruments to obtain input from community residents about issues of concern to them, examining community assets and resources that can be leveraged, and identifying emergent forces that create an ever-changing context as well as analyzing the functionality, responsiveness, and capacity of the community-health systems-government partnership to address public health needs. New members are always welcome to join the Steering Committee. As part of ongoing analysis of performance, the Steering Committee will seek representation from community organizations and residents. A formal gap analysis of committee membership will be undertaken in August with subsequent outreach and engagement.

Section 6: Plans for Dissemination

The Broome County Health Department plans for dissemination include the following:

The executive summary will be sent by e-mail to all local health and human service agencies. The email will include a URL address to access the Broome County Health Department's website where the *Broome County Community Health Assessment (CHA) 2016-2018* will be posted. In addition, Broome County Health Department will issue a press release and hold a media conference to inform the public about the *Broome County Community Health Assessment (CHA)* process, provide a summary of the findings, and explain how the information garnered from the process will be used to improve health outcomes for county residents. As well, a presentation will be given to the local county legislature on the CHA process and findings. Finally, community presentations will be provided upon request.

Documents submitted in compliance with New York State Department of Health requirements will be made publicly available on agency websites:

- The *Broome County Community Health Assessment (CHA) 2016-2018 Update* including the *Broome County Community Health Improvement Plan (CHIP) 2016-2018* will be available on the Broome County Health Department website
<http://www.gobroomecounty.com/hd/cha>
- The *Community Service Plan* for Our Lady of Lourdes Memorial Hospital, Inc. is available on their website to which the Broome County Health Department will create a link.
<https://www.lourdes.com/media/380888/2016-2018chnastrategy-sm.pdf>
- The *Community Service Plan* for United Health Services Hospitals, Inc. will be available on their website to which the Broome County Health Department will create a link.
<https://www.uhs.net/about-us/community-service-reports/>

In addition, the following items will be made publicly available on the Broome County Health Department website:

- Slide sets created for presentation of health status indicators
- Quick reference guides for county level performance indicators related to *2013-2018 New York State Prevention Agenda*
- Fact sheets summarizing key information about each priority area being addressed
- Data tables, charts, and maps prepared as part of the CHA process

Partnering community agencies and organizations will be encouraged to link to these pages from their websites. Specific requests will be made to partner stakeholders who have a role in the implementation of the CHIP including Care Compass Network (regional DSRIP organization), Healthlinkny Community Network Southern Tier (regional PHIP organization), Our Lady of Lourdes Memorial Hospital, Inc., and United Health Services Hospitals, Inc.

The Community Health Improvement Plan (CHIP) for the Broome County Community Health Assessment 2013-2018

PRIORITY AREA: HEALTHY & SAFE ENVIRONMENT	PAGE
FOCUS AREA: Injuries, Violence and Occupational Health	
1. Decrease falls and fall-related hospital admissions among older adults (age 65 and older)	3
1.1 By December 31, 2018, decrease the number of hospitalizations from falls among older adults (age 65+) from 244/10,000 to 224/10,000	3
1.1a By December 31, 2018, increase the number of provider sites screening older adults using evidence-based Fall Risk Assessments by 50%	4
1.1b By December 31, 2018, increase to two, the number of hospital-based home care physical therapy programs that integrate evidence-based exercise and fall prevention activities	5
1.2 By December 31, 2018, increase the number of community sites providing evidence-based intervention programs for older adults: Tai Chi Moving for Better Balance, Matter of Balance and Stepping On	6
PRIORITY AREA: PREVENT CHRONIC DISEASE	PAGE
FOCUS AREA: Reduce Obesity in Children and Adults	
1. Reduce the percentage of children who are obese in Broome County	7
1.1 By December 31, 2018, reduce the percentage of children who are obese in Broome County by 5% among WIC children ages 2-4 years	7
1.2 By December 31, 2018, increase by 10% the number of children, ages 3-17 years, who receive a BMI screening in Primary Care	8
1.3 By December 31, 2018, reduce the percentage of school-age children who are obese by 5% among children in Broome County public schools	9
1.4 By December 31, 2018, increase by 10% the proportion of obese children enrolled in a Medicaid Managed Care Plan, ages 3-17 years, who were counseled on nutrition and physical activity or referred for nutrition/physical activity by their healthcare provider	10
2. Increase breastfeeding	11
2.1 By December 31, 2018, increase the percentage of women on the Broome County WIC Program who initiate breastfeeding (infants put on breast during first 48 hours of life) by 5%	11
2.2 By December 31, 2018, increase by 10% WIC infants who continue to be breastfed until 6 months	12
2.3 By December 31, 2018, hospital systems will make progress toward designation as a baby friendly hospitals with 25% of private outpatient providers in the community adopting breastfeeding policies	13
3. Prevent childhood obesity through interventions in early childcare	14
3.1 By December 31, 2018, Increase by 25%, the number of early childcare settings (childcare centers or family providers) located in high need areas, that adopt policies designed to support breastfeeding, improve nutrition, increase physical activity and reduce screen time in early childcare settings	14
4. Create community environments that promote and support healthy food and beverage choices and physical activity	15
4.1 By December 31, 2018, decrease the percentage of adults ages 18 years and older who consume one or more sugary drink per day by 5% from 23% to 21.85% among all adults	15
4.2 By December 31, 2018, increase the percentage of adults 18 years and older who participate in leisure-time physical activity including those people living with disabilities and those who have less than a high school education by 5% from 73.7% to 78.7% among all adults	16
4.3 By December 31, 2018, increase the number of municipalities that have passed Complete Streets policies from one to four.	17
4.4 By December 31, 2018, implement a program similar to "5210 Be a Healthy Hero Program" at Lourdes Clinical Practices	18

PRIORITY AREA: PREVENT CHRONIC DISEASE		PAGE
FOCUS AREA: Increase access to high quality chronic disease preventive care and management in both clinical and community settings		
1.	Increase screening rates and treatment for cardiovascular disease and diabetes, especially among disparate populations	19
1.1	By December 31, 2018, increase the percentage of adults in Medicaid Managed Care, age 45 years and older, who had a test for high blood sugar or diabetes within the past three years by 5%	19
1.2a	By December 31, 2018, reduce the age-adjusted hospitalization rate for heart attacks by 10% from 15.5 per 10,000 residents to 14.0 per 10,000 residents of all ages	20
1.2b	By December 31, 2018, increase the percentage of Medicaid Managed Care plan members with diabetes who receive all four screening tests (A1c testing, lipid profile, dilated eye exam and nephropathy monitoring): <ul style="list-style-type: none"> • By 5% from 50% (2009) to 52.5% among all adults with diabetes • By 10% from 45% (2009) to 49.5% among Black/African American adults with diabetes 	21
PRIORITY AREA: PROMOTE MENTAL HEALTH AND PREVENT SUBSTANCE ABUSE		PAGE
FOCUS AREA: Strengthen Infrastructure Across Systems		
1.	Expand access to mental health/behavioral health services by integrating behavioral health into primary care and throughout the Lourdes Hospital and community continuum of care	22
1.1	By December 31, 2018, complete pilot of integration of behavioral health into primary care at one Lourdes practice and develop an implementation plan supportive of: expanding integration of evidence-based recovery and the medical model; a uniformed approach to provider education and patient education; the development of tools to engage patients; and addressing social determinants with an emphasis on transportation and continue expansion of behavior health into primary care throughout the Broome County's Health Care Systems and community continuum of care.	22

The Community Health Improvement Plan (CHIP) for the Broome County Community Health Assessment 2013-2018

PRIORITY AREA:	HEALTHY & SAFE ENVIRONMENT			
FOCUS AREA:	Injuries, Violence and Occupational Health			
GOAL 1:	Decrease falls and fall-related hospital admissions among older adults (age 65 and older)			
OBJECTIVE 1.1:	By December 31, 2018, decrease the number of hospitalizations from falls among older adults (age 65+) from 244/10,000 to 224/10,000			
IMPROVEMENT STRATEGY:	Decrease falls, falls related injuries and deaths by incorporating fall prevention into organizational, healthcare and community plans/policies/practices Implement healthcare system fall risk assessment prevention and physical therapy based programs, e.g., STEADI, Otago			
EVIDENCE-BASE (source):	http://www.ncoa.org/improve-health/falls-prevention/ ; http://www.cdc.gov/HomeandRecreationalSafety/Falls/index.html http://www.health.ny.gov/statistics/prevention/injury_prevention/information_for_action/docs/2011-7_ifa_report.pdf			
PERFORMANCE MEASURE (source):	Hospitalization rate for falls among adults age 65+ (SOURCE: SPARCS)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	2013: 244/10,000 (2008 SPARCS)		
	ANNUAL TARGET:	2014: 239/10,000 2015: 234/10,000 2016:229/10,000		
	2018 TARGET:	2018: 224/10,000		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Lourdes: (1) Establish Baseline Data during first quarter of year 1 for hospitalizations due to falls (2) Develop program, interventions and referral process for Primary Care Network practices (3) Increase appropriate utilization of PT resources during inpatient stay for prevention of post discharge falls UHS: (1) Conduct fall risk assessments and prepare plan of care with CPT codes (2) Identify number of Medicare patients found to be at risk for falls (3) Monitor all outpatient providers to ensure fall risk assessments are done annually (65+)	Broome County Office For Aging	Director and Wellness Coordinator <i>Role: Coordinate workgroup, oversee implementation of falls prevention work plan</i>	Systems Change: Implementation of fall risk assessment practice in healthcare setting , as determined by stakeholders, e.g., STEADI, Otago Systems Change: Implementation of hospital-based home care physical therapy programs that integrate evidence-based exercise and fall prevention activities	Hospitalization rate due to falls among older adults (age 65+) Percent of fall prevention clinical risk assessments conducted for older adults age 65+ (Hospital CPT Code Data) Percent of fall prevention plan of care completed for older adults age 65+ determined to be at risk for falls (Hospital CPT Code Data)
	Broome County Health Department	Public Health Director, Supervising Public Health Educator, Health Program Specialist <i>Role: Lead agency, provide resources & technical assistance, assist with data collection</i>		
	Lourdes Hospital - Home Health - Physical Therapy - Primary Care	Lourdes Hospital Department Representatives <i>Role: Oversee & implement falls prevention work plan within the organization</i>		
	United Health Services Hospitals - In Balance - Physical Therapy	United Health Services Fall Prevention Representative <i>Role: Oversee & implement falls prevention work plan within the organization</i>		

PRIORITY AREA:	HEALTHY & SAFE ENVIRONMENT			
FOCUS AREA:	Injuries, Violence and Occupational Health			
GOAL 1:	Decrease falls and fall-related hospital admissions among older adults (age 65 and older)			
OBJECTIVE 1.1a:	By December 31, 2018, increase the number of provider sites screening older adults using evidence-based Fall Risk Assessments by 50%			
IMPROVEMENT STRATEGY:	Healthcare providers will adopt policies that support fall risk assessment testing and screening to assist with reducing the morbidity and mortality associated with falls			
EVIDENCE-BASE (source):	http://www.cdc.gov/homeandrecreationalafety/Falls/steady/index.html			
PERFORMANCE MEASURE (source):	Number of provider sites screening older adults using evidence-based Fall Risk Assessments			
	BASELINE:	14 provider sites		
INTERVENTION STATUS	ANNUAL TARGET:	Increase 2 provider sites per year to 24 total sites		
<input checked="" type="checkbox"/> Current <input type="checkbox"/> New	2018 TARGET:	24 provider sites		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Common activities:</p> <p>(1) Work with HIT to implement/modify EMR to capture risk assessment and fall plan of care</p> <p>(2) Follow up monthly with provider sites to assess implementation process (QA)</p> <p>Lourdes:</p> <p>(1) Establish baseline data in year 1</p> <p>(2) Identify internal trends:</p> <ul style="list-style-type: none"> - Number of fall risk assessments - Number of fall plans of care <p>(3) Work with community partners to identify strategies to increase the # of patients referred to community programs</p> <p>UHS:</p> <p>(1) Expand fall risk assessments to 3 surrounding counties—Tioga, Chenango, Delaware</p>	<p>Broome County Office For Aging</p> <p>Broome County Health Department</p> <p>Lourdes Hospital - Home Health - Physical Therapy - Primary Care</p> <p>United Health Services Hospitals - In Balance - Physical Therapy</p>	<p>Broome County Office For Aging Director and Wellness Coordinator</p> <p><i>Role: Coordinate workgroup, oversee implementation of falls prevention work plan</i></p> <p>Broome County Health Department Public Health Director, Supervising Public Health Educator and Health Program Specialist</p> <p><i>Role: Lead agency, provide resources & technical assistance, assist with data collection</i></p> <p>Lourdes Hospital Department Representatives</p> <p><i>Role: Oversee & implement falls prevention work plan within the organization</i></p> <p>United Health Services Falls Prevention Representative</p> <p><i>Role: Oversee & implement falls prevention work plan within the organization</i></p>	<p>Number of hospital primary care sites that have received training</p> <p>Number of healthcare providers in primary care sites trained</p> <p>Number of Medicare patients evaluated per unit time frame</p> <p>Number of clinical risk assessments performed per unit time frame</p> <p>Number of patients with fall prevention plan of care per unit time frame</p> <p>Number of referrals to</p> <ul style="list-style-type: none"> - physical therapy programs - community programs 	<p>Systems Change:</p> <p>Implementation of fall risk assessment practice in healthcare setting, as determined by stakeholders, e.g., STEADI, Otago</p> <p>Number of provider sites screening older adults using evidence-based Fall Risk Assessments</p> <p>Percent of fall prevention clinical risk assessments conducted for older adults age 65+ (Hospital CPT Code Data)</p> <p>Percent of fall prevention plan of care completed for older adults age 65+ determined to be at risk for falls (Hospital CPT Code Data)</p>

The Community Health Improvement Plan (CHIP) for the Broome County Community Health Assessment 2013-2018

PRIORITY AREA:	HEALTHY & SAFE ENVIRONMENT			
FOCUS AREA:	Injuries, Violence and Occupational Health			
GOAL 1:	Decrease falls and fall-related hospital admissions among older adults (age 65 and older)			
OBJECTIVE 1.1b:	By December 31, 2018, increase to two, the number of hospital-based home care physical therapy programs that integrate evidence-based exercise and fall prevention activities			
IMPROVEMENT STRATEGY:	Integrate evidence-based fall prevention exercises and fall prevention education activities into hospital based home care physical therapy programs to enhance fall prevention support for older adults receiving physical therapy services			
EVIDENCE-BASE (source):	http://www.cdc.gov/HomeandRecreationalSafety/Falls/compendium/1.2_otago.html			
PERFORMANCE MEASURE (source):	Number of hospital based home care physical therapy programs incorporating evidence-based exercise fall prevention activities			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	0		
	ANNUAL TARGET:	1 hospital based program per year		
	2018 TARGET:	2 hospital based programs		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Meet with hospital administrators to develop implementation plan Set up training on fall prevention exercises Train physical therapists Follow up with monthly contacts to PT administration	Lourdes Hospital - Home Health - Physical Therapy - Primary Care United Health Services Hospitals - In Balance - Physical Therapy	Lourdes: Appropriate Department Representative <i>Role: Oversee implementation of falls prevention work plan in respective departments</i> United Health Services Fall Prevention Team <i>Role: Oversee implementation of falls prevention work plan in respective departments</i>	Number of Physical Therapists & aides trained in evidence-based fall prevention exercise program activities Number of patients receiving evidence-based exercise fall prevention activities Assessment of utilization of physical therapy resources and tracking of referrals	Systems Change: Implementation of hospital-based home care physical therapy programs that integrate evidence-based exercise and fall prevention activities Number of hospital-based home care physical therapy programs

PRIORITY AREA:	HEALTHY & SAFE ENVIRONMENT			
FOCUS AREA:	Injuries, Violence and Occupational Health			
GOAL 1:	Decrease falls and fall-related hospital admissions among older adults (age 65 and older)			
OBJECTIVE 1.2:	By December 31, 2018, increase the number of community sites providing evidence-based intervention programs for older adults: Tai Chi Moving for Better Balance, Matter of Balance, and Stepping On			
IMPROVEMENT STRATEGY:	Provide training opportunities to increase capacity for educating older adults regarding fall prevention through the use of community-based education Increase community based fall prevention programs: Tai Chi/Moving For Better Balance, Matter of Balance, Stepping On			
EVIDENCE-BASE (source):	http://www.ncoa.org/improve-health/falls-prevention/ ; http://www.cdc.gov/HomeandRecreationalSafety/Falls/index.html			
PERFORMANCE MEASURES (source):	Number of evidence-based community intervention programs for older adults			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	6 programs		
	ANNUAL TARGET:	Increase 2 programs per year for 5 years		
	2018 TARGET:	16 programs total		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Recruit leaders Train leaders Obtain community sites Implement training programs Evaluate training programs Implement fall prevention programs in the community Evaluate fall prevention programs	Broome County Office For Aging Broome County Health Department Lourdes Hospital - Home Health - Physical Therapy - Primary Care United Health Services - In Balance - Physical Therapy YMCA Independence Awareness	Director and Wellness Coordinator <i>Role: Coordinate workgroup, oversee implementation of falls prevention work plan</i> Public Health Director, Supervising Public Health Educator and Health Program Specialist <i>Role: Lead agency, provide resources & technical assistance, assist with data collection</i> Lourdes Hospital Department Representatives <i>Role: Oversee & implement falls prevention work plan within the organization</i> United Health Services Fall Prevention Team <i>Role: Oversee & implement falls prevention work plan within the organization</i> YMCA Tai Chi instructor and Chronic Disease Director <i>Role: Oversee & implement falls prevention work plan within the organization</i> Independence Awareness Stepping On Master Trainers <i>Role: Implement falls prevention work plan</i>	Number of training programs - by program name Number of leaders trained - by program name Satisfaction with training program Number of fall prevention programs at community sites - by program name - rural / urban / suburban - name of site Evaluation of fall prevention program - Consumer knowledge of fall prevention (pre/post-tests) - Timed Up and Go Test results (pre/post-tests) - Source of referral	Number of evidence-based community intervention programs for older adults

The Community Health Improvement Plan (CHIP) for the Broome County Community Health Assessment 2013-2018

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 1:	Reduce the percentage of children who are obese in Broome County			
OBJECTIVE 1.1:	By December 31, 2018, reduce the percentage of children in Broome County who are obese by 5% among WIC children ages 2-4 years			
IMPROVEMENT STRATEGY:	Provide reduced fat WIC food package, necessary nutrition education, and healthy lifestyle messages to reduce the incidence and prevalence of obesity among WIC children ages 2-4 years			
EVIDENCE-BASE (source):	http://www.cdc.gov/obesity/downloads/community_strategies_guide.pdf http://www.cdc.gov/nccdphp/dnpao/ http://www.thecommunityguide.org/index.html http://www.health.ny.gov/prevention/obesity/preventing_childhood_obesity.htm			
PERFORMANCE MEASURE (source):	Prevalence of obesity among WIC children ages 2 to 4 years (SOURCE: NYS PedNSS)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	14.6%		
	ANNUAL TARGET:	2013; 14.4% 2014; 14.3; 2015 14.18; 2016 14.04; 2018 13.9%		
	2018 TARGET:	13.9%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Continue to advocate for a decreased fat WIC food package</p> <p>Healthy lifestyle education about increased consumption of fruits and vegetables, decreased portions, and increased physical activity for all WIC children once each year for 2-4 year olds</p> <p>Height, weight and BMIs measured for children ages 2-4 with nutrition counseling provided</p> <p>Encourage increased milk consumption and decreased fruit juice and other empty calorie liquid consumption to 4 oz.</p>	Broome County Health Department WIC Program	Broome County Health Department WIC Supervisor and Nutritionists <i>Role: Oversee & implement WIC breastfeeding work plan</i>	<p>Number of WIC participants receiving reduced fat WIC food package</p> <p>Number of WIC participants receiving general nutrition education and active learning information</p> <p>Number of WIC participants measured for height weight and BMI with associated counseling based on BMI outcome</p> <p>Number of WIC participants educated on importance of milk consumption and decreased consumption of sugary drinks and excessive fruit juice</p>	<p>Percentage of WIC children aged 2-4 years who are overweight [defined as having an age and gender specific BMI at ≥85th to 95th percentile]</p> <p>Percentage of WIC children aged 2-4 years who are obese [defined as having an age and gender specific BMI at ≥95th percentile]</p>

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 1:	Reduce the percentage of children who are obese in Broome County			
OBJECTIVE 1.2:	By December 31, 2018, increase by 10% the number of children, ages 3-17 years, who receive a BMI screening in Primary Care			
IMPROVEMENT STRATEGY:	Encourage primary care providers' participation in the screening, prevention and treatment measures for obesity at least yearly as part of a comprehensive approach for the prevention of childhood overweight and obesity			
EVIDENCE-BASE (source):	http://www.cdc.gov/obesity/downloads/community_strategies_guide.pdf http://www.cdc.gov/nccdphp/dnpao/ http://www.health.ny.gov/prevention/obesity/preventing_childhood_obesity.htm http://www.ama-assn.org/ama1/pub/upload/mm/433/ped_obesity_recs.pdf http://www.uspreventiveservicestaskforce.org/uspstf/uspschobes.htm http://www.aap.org/obesity/index.html			
PERFORMANCE MEASURE (source):	Number/percent of children with BMI screening in primary care (SOURCE: Quality Assurance Reporting Requirements [QARR], local healthcare data)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	63% (2012 QARR-Central Region)		
	ANNUAL TARGET:	1.3% per year		
	2018 TARGET:	69.5%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Common activities: (1) Assess status of pediatric BMI screening capability in the EMR (2) Train providers in identification, assessment & treatment protocol for childhood obesity [USPSTF] (3) Facilitate referrals for nutrition & physical activity (4) Follow up with providers to address implementation challenges Lourdes: (1) Implement documentation of BMI screening in primary care record UHS: (1) Identify & track children at risk for obesity (2) Use changes in BMI to identify need for nutrition consult (3) Increase percentage of children with a nutrition assessment (4) Modify EMR screens	Lourdes Hospital	Hospital Administration Lead Physicians Appropriate Department Representative <i>Role: Oversee implementation of BMI screening intervention within organization</i>	Number of primary care providers conducting BMI screening Number & percent of children screened	Systems Change: Number of hospital systems implementing childhood BMI screening policy/system change Percentage of children who are overweight [defined as having an age and gender specific BMI at ≥85th to 95th percentile] Percentage of children who are obese [defined as having an age and gender specific BMI at ≥95th percentile]
	United Health Services	Hospital Administration Lead Physicians Appropriate Department Representative <i>Role: Oversee implementation of BMI screening intervention within organization</i>		

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PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 1:	Reduce the percentage of children who are obese in Broome County			
OBJECTIVE 1.3:	By December 31, 2018, reduce the percentage of school-age children who are obese by 5% among children in Broome County public schools			
IMPROVEMENT STRATEGY:	Adopt policies and practices that incorporate time into the school day so that students have adequate time to eat a nutritious lunch/snack and engage in physical activity			
EVIDENCE-BASE (source):	http://www.cdc.gov/obesity/downloads/community_strategies_guide.pdf http://www.cdc.gov/nccdphp/dnpao/ http://www.thecommunityguide.org/index.html http://www.health.ny.gov/prevention/obesity/preventing_childhood_obesity.htm			
PERFORMANCE MEASURE (source):	Percentage of children in public schools who are overweight or obese (SOURCE: NYS Student Weight Status Category Reporting System [SWSCRS])			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	18.6%		
	ANNUAL TARGET:	1% per year		
	2018 TARGET:	17.7%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>School Wellness Policies: Establish strong nutrition standards for food sold in schools Establish policies that address mandatory time for active recess and healthier food and beverage options</p> <p>Universal Breakfast: Incorporate Universal Breakfast (UB) as part of school learning time</p> <p>Breakfast in the Classroom: Adopt Breakfast in the Classroom (BIC) for school districts with high free and reduced lunch rates</p> <p>Learning in Motion / BC Walks: Work with school leadership to ensure increased opportunities for physical activity outside of physical education classes</p> <p>Safe Routes to Schools: Education activities and practices adopted in school wellness policies</p>	<p>Broome County School Districts <i>Creating Healthy Schools/Communities Grant</i></p> <p>Broome Tioga BOCES Food Services <i>Creating Healthy Schools/Communities Grant</i> <i>Child Hunger Taskforce</i></p> <p>Broome Tioga BOCES Professional Development <i>Creating Healthy Schools/Communities Grant</i> <i>Child Hunger Taskforce</i></p> <p>Broome County School Districts <i>Creating Healthy Schools/Communities Grant</i></p> <p>Broome County Health Department <i>Creating Healthy Schools/Communities Grant</i></p>	<p>School District Superintendents <i>Role: Implement policies, provide administrative support for programs</i></p> <p>BT-BOCES Food Service Director <i>Role: Oversee implementation of Breakfast in the Classroom (BIC) & Universal Breakfast (UB) programs</i></p> <p>Professional Development Coordinator <i>Role: Oversee implementation of Learning in Motion</i></p> <p>School Health Advisory Council Leader / Wellness Coordinator <i>Role: Develop & implement wellness policies</i></p> <p>Broome County Public Health Director/ Supervising Public Health Educator <i>Role: Facilitator, provide resources & technical assistance as needed</i></p>	<p># school districts adopting specific policies and # students impacted: (1) Mandatory active recess (2) Healthier nutrition standards for food and beverages sold in schools (3) Sugary drink policies</p> <p># school districts with wellness policies that specify support for and # number of students impacted: (1) Healthier food & beverage options (2) Safe Routes to Schools</p> <p># schools promoting access to free drinking water</p> <p>Individual measures: # students using active transport methods to/from school # students participating in UB & BIC # minutes students K-5 participate in physical activity outside of physical education classes (LIM)</p>	<p>Systems Change: Number of school districts that adopt healthier food and beverage options in school wellness policies</p> <p>Systems Change: Number of school districts whose school wellness policies address mandatory time for active recess for grades K-5</p> <p>Percentage of children who are overweight [defined as having an age and gender specific BMI at ≥85th to 95th percentile]</p> <p>Percentage of children who are obese [defined as having an age and gender specific BMI at ≥95th percentile]</p>

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 1:	Reduce the percentage of children who are obese in Broome County			
OBJECTIVE 1.4:	By December 31, 2018, increase by 10% the proportion of obese children enrolled in a Medicaid Managed Care Plan, ages 3-17 years, who were counseled on nutrition and physical activity or referred for nutrition/physical activity education by their healthcare provider by 10%			
IMPROVEMENT STRATEGY:	Increased use of managed care plan participation in the treatment measures for childhood obesity as part of a comprehensive approach for the prevention of childhood overweight and obesity			
EVIDENCE-BASE (source):	http://www.cdc.gov/obesity/downloads/community_strategies_guide.pdf http://www.cdc.gov/nccdphp/dnpao/ http://www.thecommunityguide.org/index.html http://www.health.ny.gov/prevention/obesity/preventing_childhood_obesity.htm			
PERFORMANCE MEASURE (source):	Percentage of children in a managed care plan, ages 3-17 years, who were counseled on nutrition or referred for nutrition education by their healthcare provider (SOURCE: Quality Assurance Reporting Requirements [QARR, regional], local healthcare system data)			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	74% Nutrition (2012 QARR-Central Region) 64% Physical Activity (2012 QARR-Central Region)		
	ANNUAL TARGET:	Increase nutrition referrals by 2% per year and physical activity referrals by 2% per year		
	2018 TARGET:	74.4%-Nutrition 70.4%-Physical Activity		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Core activities: (1) Assess status of pediatric BMI screening (2) Train providers in identification, assessment & treatment protocol for childhood obesity [USPSTF] (3) Facilitate referrals for nutrition & physical activity (4) Follow up with providers to address implementation challenges UHS: Modify EMR to provide nursing screening tool for (1) screen time (2) food and vending consumption (3) physical activity (4) sugary beverages	United Health Services <i>Stay Healthy Kids Program</i> Broome County Department of Social Services Medicaid Managed Care Organizations	Hospital Administration/Lead Physicians/Lead Health System Coordinators <i>Role: Provide leadership on initiative within organization & administrative support</i> Assistance Programs, Medicaid Representative <i>Role: Coordinate data collection</i> Medicaid Managed Care Organization Representatives <i>Role: Provide data for outcomes assessment</i>	Percentage of children referred for nutrition education by healthcare provider Percentage of children referred for physical activity by healthcare provider Percentage of children counseled on nutrition education by healthcare provider Percentage of children counseled on physical activity by healthcare provider	Percentage of children who are overweight [defined as having an age and gender specific BMI at ≥85th to 95th percentile] Percentage of children who are obese [defined as having an age and gender specific BMI at ≥95th percentile] Percentage of children who are at a healthy weight

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PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 2:	Increase breastfeeding			
OBJECTIVE 2.1:	By December 31, 2018, increase the percentage of women on the Broome County WIC Program who initiate breastfeeding (infants put on breast during first 48 hours of life) by 5%			
IMPROVEMENT STRATEGY:	Encourage WIC mothers to increase the initiation of breastfeeding by building enhanced support systems including early breastfeeding education and promotion efforts and the initiation of a peer counseling plan to assist with initiation of breastfeeding as soon as possible after birth			
EVIDENCE-BASE (source):	http://www.surgeongeneral.gov/library/calls/breastfeeding/index.html http://www.health.ny.gov/prevention/nutrition/wic/breastfeeding/			
PERFORMANCE MEASURE (source):	Breastfeeding initiation rate among WIC mothers (SOURCE: NYSDOH Bureau of Biometrics and Health Statistics)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	68%		
	ANNUAL TARGET:	1% per year		
	2018 TARGET:	71.4%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Train WIC and MCH staff to be Certified Lactation Consultants (CLCs)</p> <p>All WIC prenatal patients will be offered breastfeeding peer counseling</p> <p>All WIC breastfeeding mothers will receive one contact by peer counselor within one week of delivery</p> <p>Monthly calls to WIC breastfeeding mothers and a home visit as needed will be made</p> <p>Educate the fathers of WIC children on benefits of breastfeeding</p> <p>Provide free breastfeeding classes once a month in evenings to WIC prenatal patients</p> <p>Provide WIC breastfeeding package to WIC mothers</p>	<p>Broome County Health Department WIC Program</p> <p>Broome County Maternal Child Health Division</p> <p>Lourdes Hospital United Health Services</p>	<p>WIC Nutrition Services Director <i>Role: Lead for breastfeeding initiative</i></p> <p>Breastfeeding Coordinator <i>Role: Oversees breastfeeding peer counselors; coordinates activities</i></p> <p>Breastfeeding Peer Counselors <i>Role: Provide breastfeeding support</i></p> <p>Director of Maternal Child Health & Development <i>Role: Coordinates public health nurse home visits</i></p> <p>Public Health Nurses (PHN) <i>Role: PHN lactation counselors provide breastfeeding support</i></p> <p>Lactation Consultants <i>Role: Provide lactation consult prior to hospital discharge</i></p>	<p>Number of WIC infants breastfed</p> <p>Percentage of women choosing to breastfeed</p> <p>Number of women getting lactation consult</p> <p>Reduction in formula use</p> <p>Percentage of WIC prenatal clients requesting a peer counselor</p> <p>Number of prenatal clients attending WIC breastfeeding class</p> <p>Number of prenatal clients attending hospital breastfeeding class</p>	<p>Breastfeeding initiation</p> <p>Percentage of women on WIC who consider breastfeeding in the prenatal phase</p> <p>Number of women who return to work/school who continue to breastfeed</p> <p>Number of women who fully breastfeed (no formula)</p> <p>Number of infants who get 1-hour of skin-to-skin contact in the hospital</p>

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 2:	Increase breastfeeding			
OBJECTIVE 2.2:	By December 31, 2018, increase by 10% WIC infants who continue to be breastfed until 6 months			
IMPROVEMENT STRATEGY:	Encourage WIC mothers to increase the initiation of breastfeeding by building enhanced support systems including early breastfeeding education and promotion efforts and the initiation of a peer counseling plan to assist with initiation of breastfeeding as soon as possible after birth			
EVIDENCE-BASE (source):	http://www.surgeongeneral.gov/library/calls/breastfeeding/index.html http://www.health.ny.gov/prevention/nutrition/wic/breastfeeding/			
PERFORMANCE MEASURE (source):	Percentage of WIC women continuing to breastfeed for six months (SOURCE: NYSDOH Bureau of Biometrics and Health Statistics)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	25% - Percent of women on WIC who breastfeed for 6 months (Jan 2012-June 2012)		
	ANNUAL TARGET:	2% per year for five years		
	2018 TARGET:	27.5%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Public Health Nurse home visit at 1 month, 2 months</p> <p>Peer counselor follow up at 1 week, 3 weeks, 2 months, 3 months, 6 months</p> <p>Increase number of MCH nurses and WIC staff to be Certified Lactation Counselors</p> <p>Public Health Nurses take every phone call to assist breastfeeding mothers</p> <p>Provide breast pumps to working mothers in WIC</p> <p>Lourdes Hospital & UHS will strive to identify women appropriate for referral to WIC and/or other resources related to breastfeeding</p>	<p>Broome County Health Department WIC Program</p> <p>Broome County Maternal Child Health Division</p> <p>United Health Services</p> <p>Lourdes Hospital</p>	<p>WIC Nutrition Services Director <i>Role: Lead for breastfeeding initiative</i></p> <p>Breastfeeding Coordinator <i>Role: Oversees breastfeeding peer counselors; coordinates activities</i></p> <p>Breastfeeding Peer Counselors <i>Role: Provide breastfeeding support</i></p> <p>Director of Maternal Child Health & Development <i>Role: Coordinates public health nurse home visits</i></p> <p>Public Health Nurses (PHN) <i>Role: PHN lactation counselors provide breastfeeding support</i></p> <p>Appropriate Department Representative <i>Role: Provide administrative support for referrals to programs & resources</i></p>	<p>Number of women who breastfeed at 3 months, 6 months, 12 months</p> <p>Number of women using breast pumps – returning to work</p> <p>Within 2 weeks of infants birth breastfeeding contact by WIC staff and PHN</p> <p>Number of hospital breastfeeding contacts before discharge</p> <p>Number of nurses trained in breastfeeding</p>	<p>Percentage of WIC women continuing to breastfeed for six months</p> <p>Number of fully breastfeeding women (no formula)</p> <p>Number of infants who get 1-hour of skin-to-skin contact in the hospital</p>

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PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 2:	Increase breastfeeding			
OBJECTIVE 2.3:	By December 31, 2018, hospital systems will make progress toward designation as a baby friendly hospitals with 25% of private outpatient providers in the community adopting breastfeeding policies			
IMPROVEMENT STRATEGY:	Adopt breastfeeding friendly policies for primary care, pediatric and obstetrical practices			
EVIDENCE-BASE (source):	http://www.surgeongeneral.gov/library/calls/breastfeeding/index.html http://www.health.ny.gov/prevention/nutrition/wic/breastfeeding/			
PERFORMANCE MEASURE (source):	The number of hospitals and number of hospital prenatal outpatient practices sites that adopt breastfeeding policies			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	Zero outpatient providers and hospitals with breastfeeding-friendly policies		
	ANNUAL TARGET:	5% per year		
	2018 TARGET:	Both hospitals will participate in GREAT BEGINNINGS by adopting first three steps to become baby friendly and 25% of outpatient offices will adopt breastfeeding friendly policies		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Submit letter of intent to NYSDOH to participate in GREAT BEGINNINGS</p> <p>Train healthcare provider staff</p> <p>Create local breastfeeding resource guide for healthcare providers</p> <p>Garner earned media to celebrate and promote healthcare provider support for breastfeeding friendly and baby friendly policies</p> <p>Develop, adopt, and implement policies</p> <p>Lourdes: As part of an Ascension Health initiative, by 2015 move towards becoming a “Baby Friendly Hospital Initiative,” with the target to be designated a “Baby Friendly Hospital” by 2018,</p> <p>Complete 4 phase process, average 1 phase per year.</p> <p>Develop breastfeeding duration assessment tool for 3,6,9, months</p>	<p>United Health Services</p> <p>Lourdes Hospital</p> <p>Broome County Health Department</p> <p>Southern Tier Breastfeeding Coalition</p> <p>Mothers and Babies Perinatal Network</p>	<p>Appropriate hospital leadership & medical staff leadership</p> <p><i>Role: Oversee & coordinate efforts within respective organization to meet evaluation criteria, provide administrative support for application</i></p> <p>Broome County Public Health Director/ Supervising Public Health Educator</p> <p><i>Role: Lead agency, provide resources & technical assistance</i></p> <p>Southern Tier Breastfeeding Coalition Leader</p> <p><i>Role: Create breastfeeding resource guide for healthcare providers</i></p> <p>Breastfeeding Liaison</p> <p><i>Role: Provide education to healthcare providers, garner earned media, assist with policy development</i></p>	<p>Progress toward meeting evaluation criteria for facilities seeking designation</p> <p>Number of hospitals participating in baby friendly process</p> <p>Number of primary care, pediatric, and obstetric sites that are participating in baby-friendly process</p>	<p>Systems Change:</p> <p>Hospital system receives designation as baby friendly / breastfeeding friendly institutions</p> <p>Percentage of infants who were ever breastfed</p> <p>Percentage of infants exclusively breastfed (no formula)</p> <p>Breastfeeding duration rate</p>

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 3:	Prevent childhood obesity through interventions in early childcare			
OBJECTIVE 3.1:	By December 31, 2018, Increase by 25% the number of early childcare settings (childcare centers or family providers) located in high need areas, that adopt policies designed to support breastfeeding, improve nutrition, increase physical activity, and reduce screen time in early childcare settings			
IMPROVEMENT STRATEGY:	Active Living and Healthy Eating			
EVIDENCE-BASE (source):	http://www.surgeongeneral.gov/library/calls/breastfeeding/calltoactiontosupportbreastfeeding.pdf http://www.thecommunityguide.org/index.html http://www.health.ny.gov/prevention/obesity/preventing_childhood_obesity.htm			
PERFORMANCE MEASURE (source):	Number of early childcare settings with policies, Number/percentage of children in early childcare settings who are at a healthy weight (SOURCE: NYS Pediatric Nutrition Surveillance System [PedNSS], Childcare Referrals & Resource [CCR&R] data, Primary Care data)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	0		
	ANNUAL TARGET:	5 early childcare settings per year		
	2018 TARGET:	15		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Work with Childcare Resource and Referral Agency (FEN) to recruit & train physical activity (PA) specialist</p> <p>PA Specialist to deliver developmentally appropriate physical activity curricula to childcare providers</p> <p>Collect data and provide technical assistance to childcare providers</p> <p>Assess # of legally exempt providers not participating in CACFP & identify reasons</p> <p>Continue to implement county-wide policy requiring legally exempt providers caring for subsidized children ≥ 30 hrs/wk to participate in CACFP</p> <p>Promote benefits of participating in CACFP</p>	<p>Family Enrichment Network (FEN) Child Resource & referral (CCR&R)</p> <p>Broome County Health Department</p> <p>Broome County Department of Social Services</p>	<p>Family Enrichment Network Nutrition Program Director/CCR&R <i>Role: Coordinate enrollment of childcare centers & family providers in CACFP, provide administrative support for PA specialist, provide technical assistance to childcare providers, data collection</i></p> <p>Physical Activity Specialist <i>Role: Deliver curriculum for developmentally appropriate physical activity</i></p> <p>Supervising Public Health Educators, Public Health Representative <i>Role: Lead agency, monitor project implementation, provide leadership & technical assistance</i></p> <p>DSS Deputy Director of Family Services <i>Role: Collaboration with partner agencies to implement and enforce policy change</i></p>	<p>Number of childcare centers & providers implementing developmentally appropriate physical activity to children</p> <p>Minutes of developmentally appropriate physical activity delivered to children</p> <p>Number of legally exempt childcare providers participating in CACFP</p> <p>Percentage of children age 2-5 with ≤ 2 hours of TV viewing per day</p> <p>Percentage of infants who are breastfed in childcare settings</p> <p>Number of childcare staff trained in nutrition, breastfeeding, physical activity & limits on screen time</p>	<p>Systems Change:</p> <p>Percentage of children (age 2-5) who are obese</p> <p>Percentage of children (age 2-5) who are overweight</p> <p>Percentage of children (age 2-5) who are at a healthy weight</p>

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 4:	Create community environments that promote and support healthy food and beverage choices and physical activity			
OBJECTIVE 4.1:	By December 31, 2018, decrease the percentage of adults ages 18 years and older who consume one or more sugary drink per day by 5% from 23% to 21.85% among all adults			
IMPROVEMENT STRATEGY:	Active living and healthy eating			
EVIDENCE-BASE (source):	http://www.cdc.gov/nccdphp/dnpao/			
PERFORMANCE MEASURE (source):	Percentage of adults ages 18 years or older who consume one or more sugary drink per day. (SOURCE: Community Transformation Grant [CTG] Population Survey/NYS BRFS)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	23%: (CTG Population Survey)		
	ANNUAL TARGET:	1% per year		
	2018 TARGET:	21.8%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Conduct presentations at schools, community sites & businesses</p> <p>County & municipality to change procurement for beverages</p> <p>Provide technical assistance to organizations, municipalities and schools wanting to make changes</p> <p>When feasible, collect purchasing or sales data for beverages before changes are made</p> <p>Run awareness raising campaign to increase knowledge and promote healthy beverages</p> <p>Garner earned media on sugar content of many beverages & promoting healthy beverages</p> <p>Monitor changes made in beverage procurement and purchasing practices</p>	<p>Broome County Health Department</p> <p>Broome County Cornell Cooperative Extension</p> <p>Broome County Government</p> <p>City of Binghamton Municipality</p> <p>Broome County Central Foods</p> <p>Broome County School Districts</p> <p>Lourdes Hospital</p> <p>United Health Services</p>	<p>Supervising Public Health Educator and Public Health Representative <i>Role: Lead agency, coordinate project activities, provide technical assistance</i></p> <p>Cornell Cooperative Educators <i>Role: Conduct educational presentations</i></p> <p>Purchasing Directors <i>Role: Implement changes in procurement guidelines for beverages</i></p> <p>Central Foods Director <i>Role: Initiate changes in procurement guidelines for beverages</i></p> <p>School Health Advisory Council Wellness Team Leaders <i>Role: Provide leadership for policy changes related to sugary beverages</i></p> <p>Hospital Administrators <i>Role: Support enhancement of consumer awareness of appropriate choices</i></p>	<p>Number of buildings that change procurement & vending policies</p> <p>Content of beverages available for sale [documentation of changes made]</p> <p>Sales of sugary drinks & healthy beverages [changes in sales]</p> <p>Number of community based organizations, public sporting venues, education institutions and/or businesses that:</p> <ul style="list-style-type: none"> - adopt food procurement standards - healthy vending policies - offer healthy beverage and food options 	<p>Systems Change:</p> <p>County & municipal governments change procurement policies to reduce/eliminate purchase of sugary beverages</p> <p>Schools adopt vending policies that limit sugary beverages; schools amend wellness policies to discourage sugary beverages & encourage healthy options</p> <p>Percentage of adults who support policies restricting or banning sales of sugary drinks</p> <p>Prevalence of daily sugary-drink consumption among adults & children</p> <p>Sugary drink perceptions & attitudes</p>

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PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 4:	Create community environments that promote and support healthy food and beverage choices and physical activity			
OBJECTIVE 4.2:	By December 31, 2018, increase the percentage of adults 18 years and older who participate in leisure-time physical activity by 5% from 73.7% to 78.7% among all adults			
IMPROVEMENT STRATEGY:	Active Living			
EVIDENCE-BASE (source):	http://www.cdc.gov/nccdphp/dnpao/			
PERFORMANCE MEASURE (source):	Percentage of adults who participate in leisure time physical activity (SOURCE: NYS BRFS; CTG Population Survey)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	73.7%		
	ANNUAL TARGET:	1% per year		
	2018 TARGET:	78.7%		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Promote physical activity through revitalized BC Walks Program Continue community-wide BC Walks campaign Update BC Walks website Provide healthcare providers with BC Walks enrollment information Establish joint-use agreements with schools to use gymnasiums Garner earned media Integrate BC Walks promotion activities with complete streets, smart growth, safe routes to school and active living design interventions through the city and county comprehensive plans Track participation through BC Walks website	Broome County Health Department United Health Services Hospital Lourdes Hospital WSKG Binghamton University Binghamton Metropolitan Transportation Study Broome Tioga BOCES Broome County School Districts	Supervising Public Health Educator and Public Health Representative <i>Role: Lead agency, coordinate project activities, provide technical assistance</i> Stay Healthy Center Director Designated Hospital Liaison <i>Role: Support consumer awareness of community initiative</i> Community Health Outreach Director <i>Role: Garner media for consumer awareness of community initiative</i> Registered Dietician/Community Engagement Director <i>Role: Promote campaign on BU campus</i> Planner/Analyst <i>Role: Provide technical assistance related to pedestrian issues</i> School Wellness Team Leader <i>Role: Engage children in BC Walks JR, promote campaign in school community</i>	Number of residents participating in Broome County Walks (website enrollment) Number of earned media items	Percentage of adults participating in leisure time physical activity for 30 minutes or more per day on 3 or more days per week Percentage of adults who are obese Percentage of adults who are overweight

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 4:	Create community environments that promote and support healthy food and beverage choices and physical activity			
OBJECTIVE 4.3:	By December 31, 2018, increase the number of municipalities that have passed Complete Streets policies from one to four.			
IMPROVEMENT STRATEGY:	Complete Streets are designed to allow residents to travel easily and safely, whether walking, biking or riding the bus, connecting roadways to complementary trails and bike paths that provide safe places to walk and bike (Data Source: Tri-States Transportation Campaign)			
EVIDENCE-BASE (source):	http://www.cdc.gov/nccdphp/dnpao/			
PERFORMANCE MEASURE (source):	Number of municipalities with Complete Streets policies, increased participation in active modes of transportation, walking and leisure time activity (SOURCE: Local municipal records [resolutions, municipal meeting minutes] CTG Population Survey)			
INTERVENTION STATUS <input checked="" type="checkbox"/> Current <input type="checkbox"/> New	BASELINE:	1 municipality with Complete Streets policies		
	ANNUAL TARGET:	1 municipality per year		
	2018 TARGET:	4 municipalities with Complete Streets policies		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Implement City of Binghamton Comprehensive Plan for Complete Streets (CS) Implement Broome County Comprehensive Plan that includes action items which encourage Complete Streets policies for all municipalities Assess existing local practices related to CS in county municipalities Conduct Complete Streets trainings Share model practices with planning departments, departments of transportation, and public works departments Work collaboratively with individual municipalities to develop CS policies	Broome County Health Department <i>Creating Healthy Schools Healthy Communities Grant</i> City of Binghamton Broome County Planning Department Binghamton Metropolitan Transportation Study New York State Department of Transportation (NYSDOT) Region 9 Healthy Lifestyle Coalition <i>Klee Foundation/United Way Grant</i>	Public Health Director/Supervising Public Health Educator <i>Role: Oversee CS initiative, provide technical assistance</i> Mayor of Binghamton, Director of Planning, City Planners <i>Role: Serve as model municipality & mentor/support other municipalities</i> County Planners <i>Role: provide technical assistance to municipalities for CS policies</i> Planners/ Analysts <i>Role: Provide technical assistance to municipalities for CS policies</i> NYSDOT Planners, Safe Routes to School Coordinator <i>Role: Provide technical assistance to municipalities for CS policies</i> Healthy Lifestyles Coalition Director <i>Role: Leverage funds for CS initiative on the north side of Binghamton</i>	Number of municipalities that implement Complete Streets initiatives Number of Complete Streets initiatives strengthened Number and demographics of residents in municipalities covered by Complete Streets initiatives Number of town meeting presentations of Complete Streets Number of media spots/coverage on Complete Streets Number of presentations on Complete Streets	Systems Change: Number of local municipalities adopting Complete Streets policies Percentage of residents engaging in walking as exercise Percentage of residents participating in leisure time physical activity Percentage of residents using active modes of transportation

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PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Reduce Obesity in Children and Adults			
GOAL 4:	Create community environments that promote and support healthy food and beverage choices and physical activity			
OBJECTIVE 4.4:	By December 31, 2018, implement a program similar to “5210 Be a Healthy Hero Program” at Lourdes Clinical Practices			
IMPROVEMENT STRATEGY:	Healthy Lifestyle Habits in Adults			
EVIDENCE-BASE (source):	http://millionhearts.hhs.gov ; Sutter Health Palo Alto Medical Foundation: 5210 Be A Healthy Hero ” http://www.pamf.org/ynp/5210			
PERFORMANCE MEASURE (source):	Electronic Health Records that would provide real time aggregate BMI results of practioners/patients who engage in treatment guidelines for healthy lifestyle habits such as increased fruit and vegetable consumption and recommended amount of daily physical activity. (SOURCE: Electronic Health Records)			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	0 Lourdes Clinical Sites		
	ANNUAL TARGET:	4 Lourdes Clinical Site in 2017, 4 Lourdes Clinical Sites in 2018		
	2018 TARGET:	8 Lourdes Clinical Sites		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Train Lourdes clinical practices to use evidence-based strategies such as those “5210 Be a Healthy Hero” program to improve lifestyle habits and the practitioner population management, adherence to evidence-based treatment guidelines and the adoption of practices that will improve patient self-efficacy and confidence in self-management	Lourdes Hospital, Lourdes Clinical Practices	Lourdes Providers <i>Role: Oversee implementation of treatment guidelines within respective organization</i>	Number of practitioners/patients eating five or more fruits and vegetables per day Number of practitioners/patients reducing recreational screen time to 2 hours or less per day Number of practitioners/patients increasing physical activity to at least one hour of exercise or play Number of practitioners/patients drinking no sugary drinks per day	Increased percentage of adults eating five or more fruits and vegetables per day Increased percentage of adults participating in recreational screen time for 12 hours or less per day Increased percentage of adults participating in leisure time physical activity for at least one hour per day Increased percentage of adults who drink no sugary drinks per day Diminished BMI or maintenance of current healthy BMI achieved by target groups
	Broome County Health Department	Public Health Representatives <i>Role: Assist with supporting Lourdes leadership with technical support and advisement of the evidence based intervention strategy</i>		

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Increase access to high quality chronic disease preventive care and management in both clinical and community settings			
GOAL 1:	Increase screening rates and treatment for cardiovascular disease and diabetes, especially among disparate populations			
OBJECTIVE 1.1:	By December 31, 2018, increase the percentage of adults in Medicaid Managed Care, age 45 years and older, who had a test for high blood sugar or diabetes within the past three years by 5%			
IMPROVEMENT STRATEGY:	Early identification and management of people with pre-diabetes and diabetes has the potential to prevent diabetes and its complications. American Diabetes Association: Standards of Medical Care in Diabetes—2013 http://care.diabetesjournals.org/content/36/Supplement_1/S11.full			
EVIDENCE-BASE (source):	NYS Information for Action # 2013-8			
PERFORMANCE MEASURE (source):	Screening for diabetes among adults age 45+ (SOURCE: NYS BRFS; local hospital indicators - diabetes screening among adults age 45+)			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	58.8% (NYS BRFS 2011)		
	ANNUAL TARGET:	2% per year		
	2018 TARGET:	Increase baseline rate by 10% for diabetes and 5% for cardiovascular disease screenings		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Primary care network offices to work closely with the diabetes centers to implement standards of medical care in diabetes</p> <p>UHS disease management system to track referrals to Stay Healthy Center [provide follow-up phone contact from nurses to manage chronic disease]</p> <p>Both hospitals to provide diabetes individual education & group self-management classes</p> <p>Use media & health communications to build awareness & demand</p> <p>Identify underserved groups to improve access for preventive services</p> <p>Provide training for health professionals in patient-centered care, disability literacy & cultural competency</p> <p>Work with HIT to implement/modify EMR to include reminder system for screening</p>	United Health Services (UHS)	<p>UHS Designee</p> <p><i>Role: Oversee implementation of screening initiative within respective organization</i></p>	<p>Number of patients identified as having diabetes or pre-diabetes who receive follow-up by Stay Healthy Center</p> <p>Number & percentage of adults (age 45+) diagnosed with pre-diabetes or type 2 diabetes who are referred to diabetes self-management training (DSMT)</p> <p>Number of rural residents participating in chronic disease self-management</p> <p>Number of patients receiving diabetes education</p>	Screening rate for diabetes and pre-diabetes among adults age 45+
	Lourdes Hospital	<p>Lourdes Designee</p> <p><i>Role: Oversee implementation of screening initiative within respective organization</i></p>		
	Rural Health Network (RHN)	<p>RHN Community Services Director</p> <p><i>Role: Assist rural population with chronic disease management services including transportation management services</i></p>		

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PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Increase access to high quality chronic disease preventive care and management in both clinical and community settings			
GOAL 1:	Increase screening rates and treatment for cardiovascular disease and diabetes, especially among disparate populations			
OBJECTIVE 1.2a:	By December 31, 2018, reduce the age-adjusted hospitalization rate for heart attacks by 10% from 15.5 per 10,000 residents (2010) to 14.0 per 10,000 residents of all ages			
IMPROVEMENT STRATEGY:	Clinical decision-support systems (CDSS) to assist healthcare providers in implementing clinical guidelines at the point of care Team-based care is a health systems-level intervention that incorporates a multidisciplinary team to improve quality of care for patients with heart disease			
EVIDENCE-BASE (source):	Cholesterol management for patients with cardiovascular conditions http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3full.pdf			
PERFORMANCE MEASURE (source):	(1) Age-adjusted hospitalization rate for heart attacks (SOURCE: SPARCS; PA Tracking Indicator)			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	(1) 15.5 per 10,000		
	ANNUAL TARGET:	(1) 2% per year		
	2018 TARGET:	(1) 14 per 10,000		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Lourdes:</p> <p>(1) Expand case management interventions to include comprehensive admission assessment, patient care rounds, family meetings and discharge options</p> <p>(2) Expand discharge process that identifies patient’s choice, plan to obtain prescriptions and follow-up appointments, coordinate follow-up with primary care and specialist</p> <p>(3) Monthly heart failure meetings</p> <p>(4) Consistent client education for self-care at all levels.</p> <p>UHS:</p> <p>(1) Implementation of electronic medical record to facilitate early intervention & best practice measures</p> <p>(2) Meet Silver Six Award for heart failure</p> <p>(3) EMT education & pre-hospital EKGs</p> <p>(4) Expand cardiac rehab services</p> <p>(5) Evaluate outcome tracking (BMI, smoking, BP, 6-minute walk test)</p> <p>(6) Collaborate with UHS Health Home</p>	United Health Services (UHS)	<p>UHS Designee</p> <p><i>Role: Oversee implementation of screening initiative within respective organization</i></p>	<p>Percentage of members, ages 18-75 years, with a cardiovascular condition, who had at least one cholesterol screening test during the measurement year</p> <p>Percentage of members, ages 18-75 years, with a cardiovascular condition, whose cholesterol level (LDL-C) was below the recommended level of 100 mg/dL during the measurement year</p> <p>Percentage of adults with a cardiovascular condition who have had cholesterol checked in the last year {BRFSS}</p> <p>Evaluation of rural disease management program including barriers/issues & effectiveness of strategies used</p>	Age-adjusted hospitalization rate for heart attacks [SPARCS]
	Lourdes Hospital	<p>Lourdes Designee</p> <p><i>Role: Oversee implementation of screening initiative within respective organization</i></p>		
	Rural Health Network (RHN)	<p>RHN Community Services Director</p> <p><i>Role: Assist rural population with chronic disease management services including transportation management services</i></p>		

PRIORITY AREA:	PREVENT CHRONIC DISEASE			
FOCUS AREA:	Increase access to high quality chronic disease preventive care and management in both clinical and community settings			
GOAL 1:	Increase screening rates and treatment for cardiovascular disease and diabetes, especially among disparate populations			
OBJECTIVE 1.2b:	By December 31, 2018, increase the percentage of Medicaid Managed Care plan members with diabetes who received all four screening tests for diabetes (A1c testing, lipid profile, dilated eye exam and nephropathy monitoring): <ul style="list-style-type: none"> • By 5% from 50% (2009) to 52.5% among all adults with diabetes • By 10% from 45% (2009) to 49.5% among Black/African American adults with diabetes 			
IMPROVEMENT STRATEGY:	Diabetes case management strategies for improved provider monitoring of A1c in combination with disease management Diabetes self-management education (DSME) to prevent short- and long-term complications that result from diabetes and improve quality of life			
EVIDENCE-BASE (source):	The Community Guide Diabetes Prevention and Control: Case Management Interventions to Improve Glycemic Control The Community Guide Diabetes Prevention and Control: Disease Management Programs			
PERFORMANCE MEASURE (source):	(SOURCE: NYS QARR; Health Disparities Indicator; Local Hospital Indicators)			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	50% among all adults with diabetes (2009) 45% among Black/African American adults with diabetes (2009)		
	ANNUAL TARGET:	1% per year all adults 2% per year Black/African American adults with diabetes		
	2018 TARGET:	55% among all adults with diabetes 55% among Black/African American adults with diabetes		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
Concentrate diabetes community education services in Black/African American communities Provide facilitated enrollment sites for health insurance assistance Monitor primary care diabetic screening practices Promote enrollment in diabetes self-management programs Media releases re: diabetes control	United Health Services (UHS) Lourdes Hospital Rural Health Network (RHN) Broome County Office for Aging	UHS Designee <i>Role: Oversee implementation of screening initiative within respective organization</i> Lourdes Designee <i>Role: Oversee implementation of screening initiative within respective organization</i> RHN Community Services Director <i>Role: Assist rural population with chronic disease management services including transportation management services</i> Broome County Office for Aging Educator <i>Role: Provide classes in chronic disease management through RSVP</i>	Percentage of members with diabetes who received at least one A1c test in the past year Percentage of members with diabetes who had at least one cholesterol screening test in the past year Percentage of members with diabetes who had a retinal eye screening exam during the last year or who had a negative retinal exam in the year prior Percentage of members with diabetes who had at least one nephropathy screening test in the past year or had evidence of nephropathy during the last year	Percentage of members with diabetes who had at least one of each of the following: - A1c test - cholesterol screening test - dilated eye exam or negative retinal exam in the year prior - nephropathy screening test or medical attention for nephropathy

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PRIORITY AREA:	PROMOTE MENTAL HEALTH AND PREVENT SUBSTANCE ABUSE			
FOCUS AREA:	Strengthen Infrastructure Across Systems			
GOAL 1:	Expand access to mental health/behavioral health services by integrating behavioral health into primary care and throughout the Lourdes Hospital and community continuum of care			
OBJECTIVE 1.1:	By December 31, 2018, complete the integration of behavioral health into primary care as prescribed by Lourdes Hospital/DSRIP project 3ai and inform the expansion of the process to United Health Services Hospital and Guthrie Health Care Systems.			
IMPROVEMENT STRATEGY:	Support the efforts of Delivery System Reform Incentive Program (DSRIP) and expand access to mental health/behavioral health services by integrating behavioral health into primary care throughout community continuum of care to identify behavioral health diagnosis early, allowing rapid treatment; to ensure treatment of medical and behavioral health conditions are compatible and do not cause adverse effects; and to de-stigmatize the behavioral health diagnosis.			
EVIDENCE-BASE (source):	NYSDOH DSRIP Took Kit, approved metrics which are taken from Project 3.a.i, Integration of Behavioral Health into Primary Care.			
PERFORMANCE MEASURE (source):	DSRIP 3.a.i evaluation metrics			
INTERVENTION STATUS <input type="checkbox"/> Current <input checked="" type="checkbox"/> New	BASELINE:	1		
	ANNUAL TARGET:	2 Lourdes Primary Care Sites: 1 in 2017, 1 in 2018		
	2018 TARGET:	3 Lourdes Primacy Care Sites		
MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)/RESOURCES	RESPONSIBLE INDIVIDUAL(S)	PROCESS MEASURES	OUTCOME MEASURES
<p>Complete pilot of behavior health integration into primary care practices</p> <p>Expand screening criteria for 2 Lourdes practices that integrate behavioral health into primary care to screen persons (focusing on Medicaid and uninsured) ages 18-64 with a Patient Health Questionnaire (PHQ)-9 score of 10 and above</p> <p>Ensure sound referral process to a behavioral health consultant for those screened at high risk</p> <p>Recruit and train behavior health consultants</p>	Lourdes Hospital & <i>DSRIP</i>	<p>Lourdes Behavior Health Experts</p> <p><i>Role: Oversee and monitor implementation of integration project</i></p>	<p>Number of patients screened at participating sites</p>	<p>25% of persons' ages 18-64 screened with PHQ</p>
	Lourdes Hospital	<p>Behavioral Health Consultants</p> <p><i>Role: Conduct appropriate case management and follow up activities</i></p>	<p>Number of patients engaged with Behavioral Health Consultants</p>	<p>25% of persons' ages 18-64, who are screened with PHQ- 9 and score of 10, will be engaged with a Behavioral Health Consultant</p>
	Broome County Health Department	<p>Administration</p> <p><i>Role: Assist Lourdes Hospital with recruitment of personnel and implementation of project</i></p>	<p>Number of providers who complete a pre and post-test on evidenced based protocols</p>	<p>Decrease in avoidable ER visits with a behavioral health diagnosis for Medicaid beneficiaries by 25%</p>
Lourdes Personnel & Administration	<p><i>Role: Advertise for behavior health consultants, conduct interview process, hire behavioral consultants, provide training</i></p>		<p>50% of providers trained will achieve an increased behavior health evidence based protocol</p>	