Broome County Community Health Assessment 2013-2017

Broome County Health Department

Claudia A. Edwards, M.S.
Director
Broome County Health Department

Acknowledgements

On behalf of the residents of Broome County, we are pleased to present:

The *Broome County Community Health Assessment 2013-2017*

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 2013–2017 Steering Committee:

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With grateful acknowledgement to the Broome County Health Department
for their administrative support and contributions.

Mobilizing Action through Planning and Partnerships: Our Community Road Map to Health

Our Vision:

"By 2017, 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."

Steering Committee for the Broome County Community Health Assessment 2013–2017

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EXECUTIVE SUMMARY

The Community Health Assessment is a process for examining the health of a community. Importantly, this assessment serves as a baseline for evaluating progress toward the New York State's *Prevention Agenda 2017* goals. These goals are designed to improve the health of all New Yorkers. This assessment also marks our progress toward *Healthy People 2020* objectives. 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 publication provides a comprehensive view of the health status of those who live here in Broome County.
It is hoped that this information will inform policy and decision-makers, serve as a resource for academics and clinicians, and assist individuals to focus on the health of their community and seek ways to improve it.

This report details the health status of the community, the process for conducting this assessment, and the selection of public health priorities for Broome County.

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 fall risks among residents age 65 or older
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

The CHA Steering Committee process used the MAPP Process to assess the health needs of the community, prioritize health needs, and strategize about ways to improve the health of Broome County residents. These efforts culminated in development of a Community Health Improvement Plan to address these priorities and this plan will be implemented and evaluated over the next four years.

Introduction

Community Health Assessment Leadership

A Steering Committee was re-convened in August 2012 and charged with providing the leadership for conducting the *Community Health Assessment* for the period 2013–2017. The Steering Committee was chaired by the Community Health Assessment (CHA) Coordinator and its members included a diverse cross-section of community agencies and area hospital system representatives directly involved in the development of their respective *Community Service Plans*. The senior staff of the local public health department was updated on CHA activities and provided input into the process. A core support team assisted with planning and included the Broome County Health Department (BCHD) Director, Medical Director, and CHA Coordinator as well as administrative, technology, Geographic Information Systems (GIS), and interdisciplinary planning support team members.

The MAPP Model

The community health assessment is not only required for state aid reimbursement under Article 6, but is also a core public health function and a critical step in health planning. Over the course of more than a year, the Steering Committee explored the relationship between *health needs* in our community and the *resources* available to address them. The work of the Steering Committee was guided by the *Mobilizing Action through Planning and Partnerships* (MAPP) model. This model functioned as a community-wide strategic planning tool and formed the basis for prioritizing key public health issues and identifying potential resources.

Collaboration

The data obtained by this process informed both the *Community Service Plans* required of hospital systems and the *Community Health Assessment* required of the 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 the document that follows. This volume serves as a resource for all those interested in improving the health and well-being of Broome County residents. The Steering Committee, for its part, will continue to work together in the interim period to address the health priorities identified by this process and strategically direct interventions to that end.

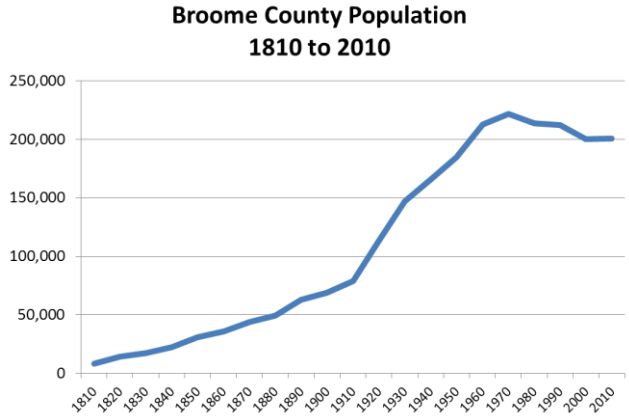
Section One – Populations at Risk

A. Demographic and Health Status Information

Population

Broome County is located in the Southern Tier of New York State (NYS), which encompasses nine counties along the Pennsylvania border and is one of three counties in the central New York region. The estimated population of Broome County in 2012 was 198,060. The county covers a land area of 705.77 square miles yielding a population density of 281 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 (Figure 3). 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 (Figure 4). Broome County ranks 19th out of 62 counties in population size. State population maps appear in Appendix B1-B4.

Figure 1. Broome County Population, 1810–2010



SOURCE: US Census Bureau, Population of States and Counties of the United States: 1790 to 1990; American Fact Finder, 2000, 2010

The population of Broome County grew steadily from 1810 to 1970, peaking at 221,815 persons in 1970 (Figure 1). 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 (Table 1 and Figure 2).

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 (Cornell University, Program on Applied Demographics [PAD] Projections, 2013). The population changes are not evenly distributed across municipalities. Between 2000 and 2010, the towns of Conklin and Nanticoke experienced a net outmigration that exceeded 6% while the towns of Kirkwood and Vestal experienced net population increases in excess of 3% (Figure 5). Both Conklin and Nanticoke have a high percentage of their populations located within the 1% and 0.2% flood boundaries (Conklin, 62.2% and 70.7% respectively; Nanticoke, 62.4% for both).[1] Flooding from severe storms particularly in September of 2004 and June 2006 may account for at least some of these population losses. Population impacts from hurricane Irene and tropical storm Lee in 2011 and hurricane Sandy in 2012 are not reflected in this intercensal period.

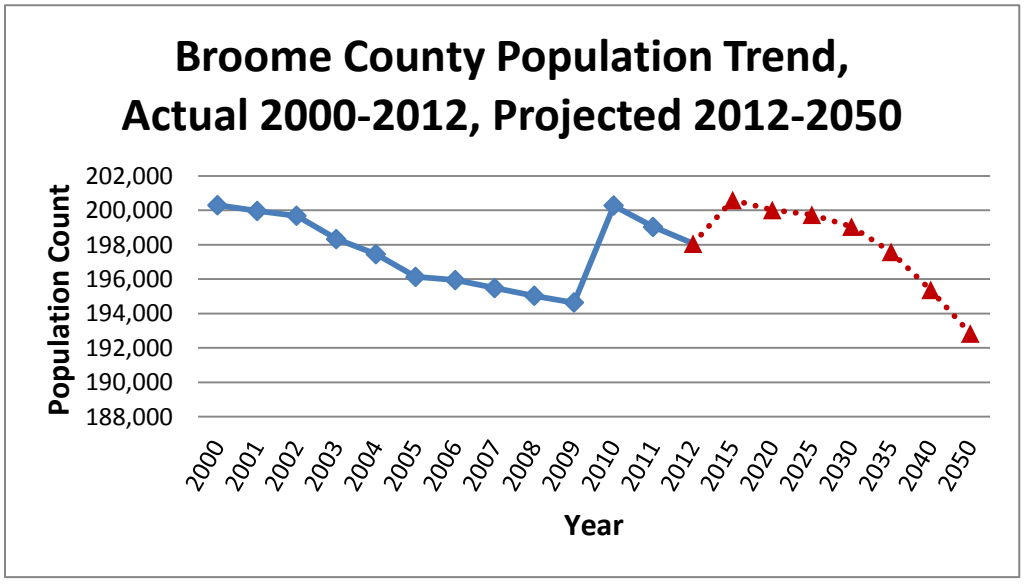
[1] Broome County Hazard Mitigation Plan. (2013). *DMA 2000 Hazard Mitigation Plan Update – Broome County, New York*. Retrieved from http://gobroomecounty.com/files/planning/_pdf/Hazard%20Mitigation/Final%20Draft%20For%20Approval/Section%205_4_1%20b%20Flood%20February%202013%20low%20res.pdf

Table 1. Population Estimates, Broome County, NY, 2000–2012

Year (as of July 1)	Population Estimate	Population Loss	Percent Change (from Previous Year)
2000	200,299	—	—
2001	199,958	341	-0.170
2002	199,670	288	-0.144
2003	198,326	1,344	-0.673
2004	197,453	873	-0.440
2005	196,127	1,326	-0.672
2006	195,942	185	-0.094
2007	195,477	465	-0.237
2008	195,018	459	-0.235
2009	194,630	388	-0.199
2010	200,272	+ 5642	+2.899
2011	199,031	1241	-0.620
2012	198,060	971	-0.488
TOTAL		**2,239**	**-1.118**

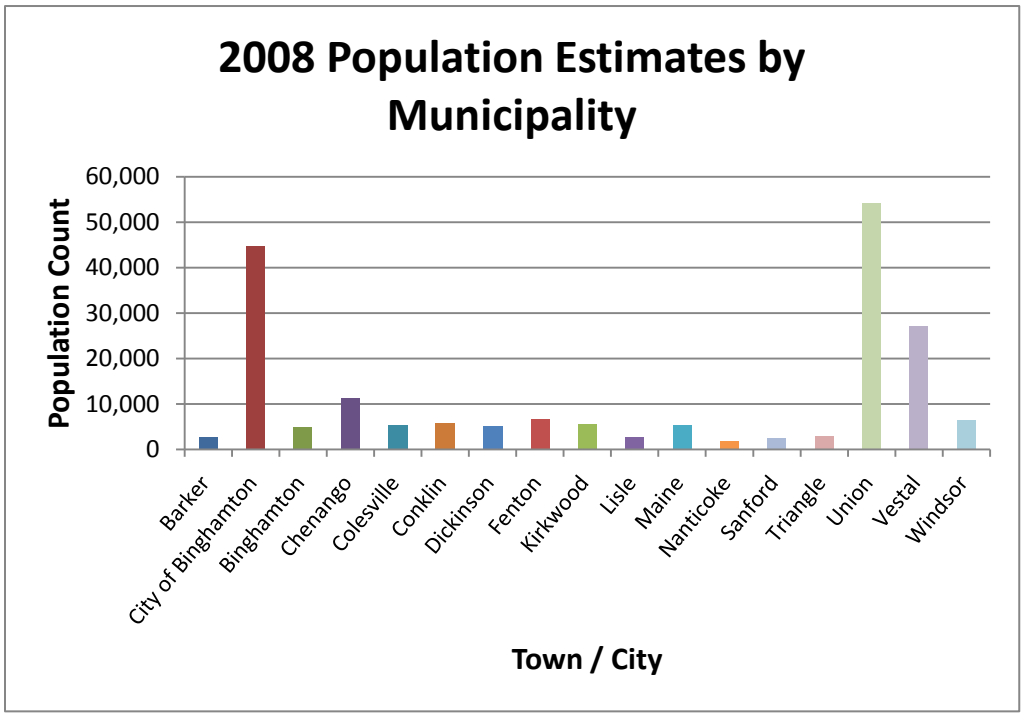
SOURCE: US Census Bureau, Population Estimates Program, 2000-2012

Figure 2. Population Trend, Broome County, NY, Actual 2000–2012, Projected 2012-2050



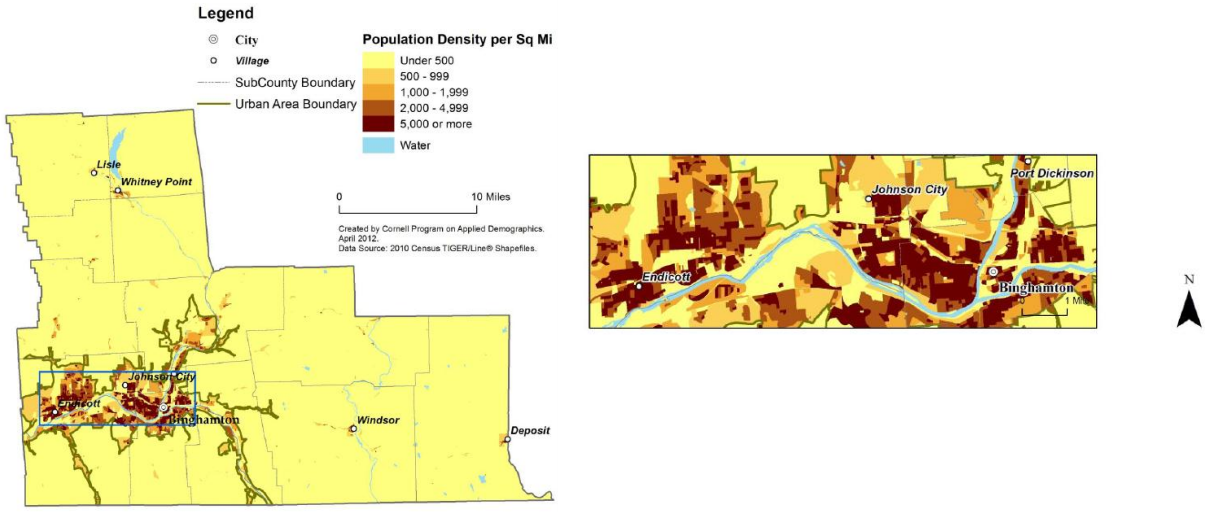
SOURCE: US Census Bureau, Population Estimates Program, 2000–2012; Cornell University, Program on Applied Demographics Projections, 2013

Figure 3. Population Estimates by Municipality, Broome County, NY, 2008



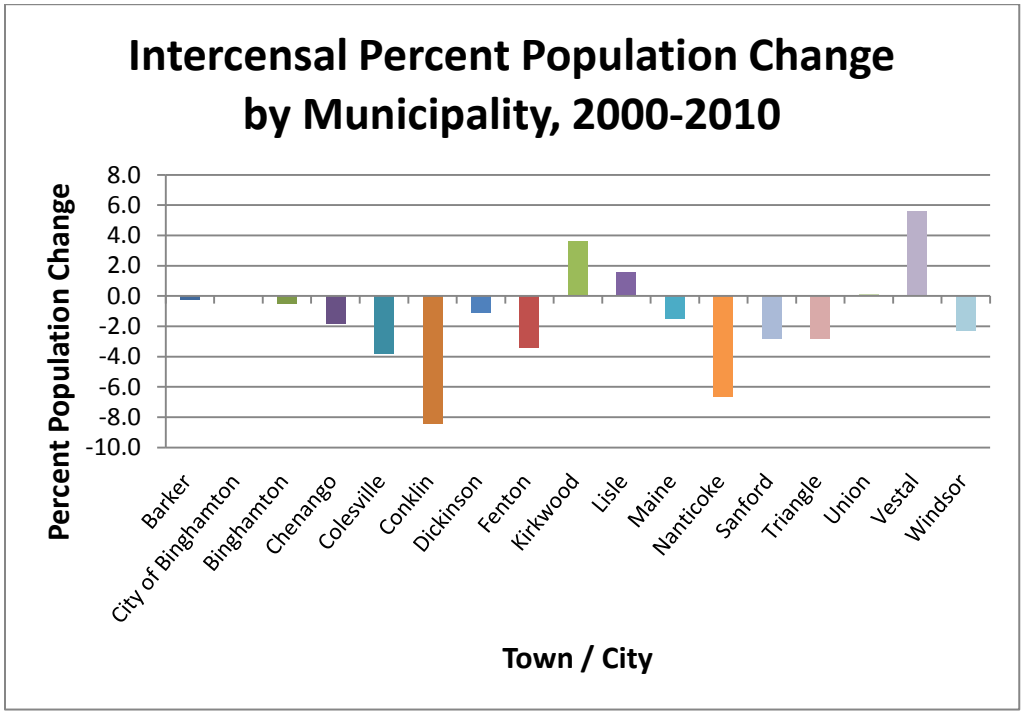
SOURCE: US Census Bureau, Population Estimates Program, 2000–2008

Figure 4. Population Map of Broome County, NY (persons per square mile), Broome County, NY, 2010



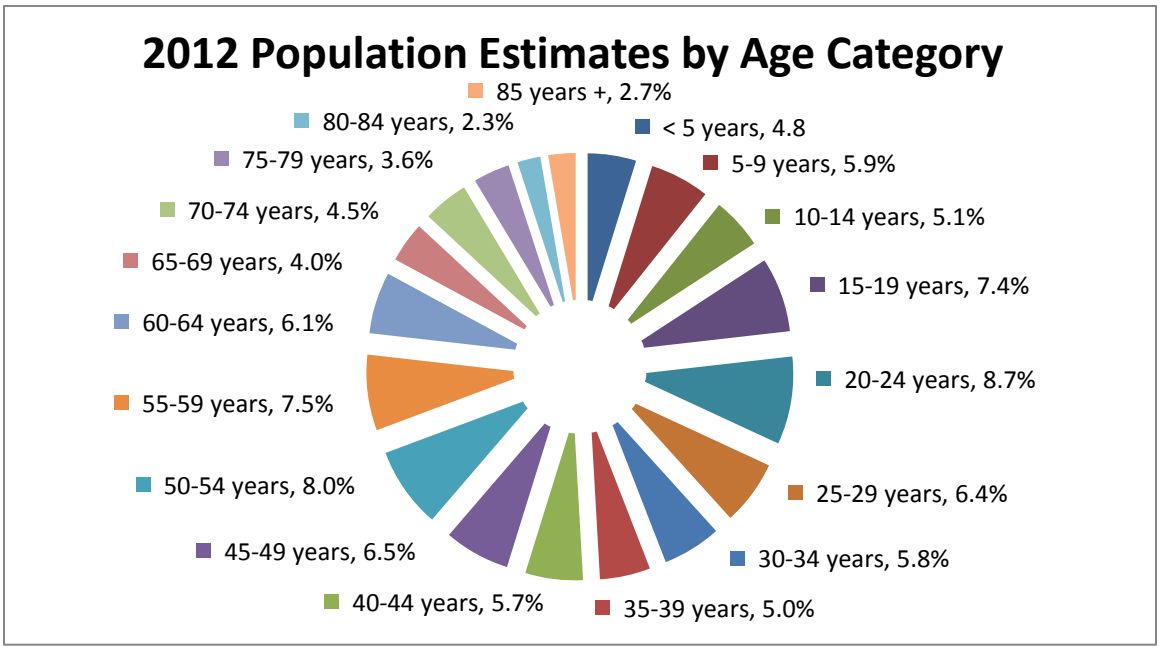
SOURCE: Cornell University, Program on Applied Demographics Projections, 2013

Figure 5. Intercensal Percent Population Change by Municipality, 2000-2010



SOURCE: US Census Bureau Intercensal Population Estimates, 2000-2010

Figure 6. Population Estimates by Age Category, Broome County, NY, 2012



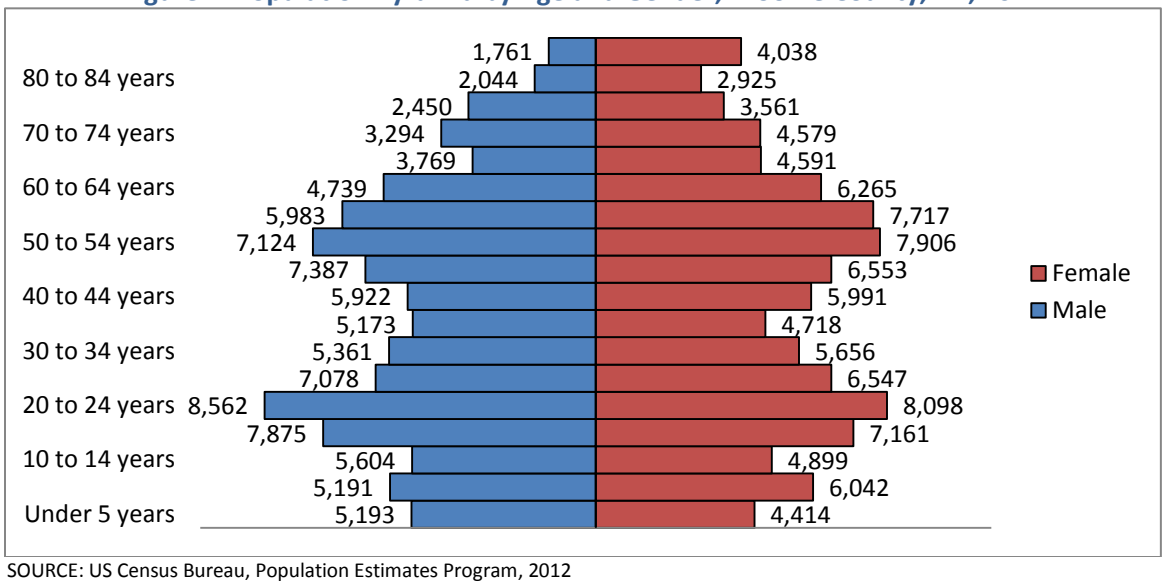
SOURCE: US Census Bureau, Population Estimates Program, 2012

Age and Gender

Population estimates by gender for Broome County (2012) appear in Appendix B5. Specific age groups by gender (2010) appear in Appendix B6. The median age in Broome County is 38.0 years for males, 43.2 for females, and 41.0 overall, ranking it in the third quartile for NYS (Appendix B7). In comparison, the median age is 38.1 years in NYS and 37.4 years in the US. Children under 18 years of age comprise 19.5% of the population; and adults age 65 and older, 17.1% (Figure 6), yielding a child dependency ratio[2] of 30.9, an old age dependency ratio[3] of 27.1, and an age dependency ratio[4] of 58.0. These figures are 34.0, 22.0, and 55.9 for NYS, and 37.4, 21.9, and 59.3 for the US respectively. Maps from the Census 2010 showing counties by age concentrations appear in Appendices B8 & B9, and graphically depict the lower concentration of youth and higher concentration of elderly relative to the rest of the state. Thus, Broome County experiences a greater burden of care for their elderly than NYS or the US as a whole.

For the estimated 2012 population, 48.7% are male and 51.3% are female. The population pyramid in Figure 7 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 ratio[5] is 104.1 in the three youngest cohorts (ages 0 to 14) as compared to 59.4 in the three oldest cohorts (75 and older), which reflects the higher mortality rates 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 is likely attributable to college attendance at Broome Community College and Binghamton University, and the narrowing in the 30–39 year-olds suggests that graduates subsequently seek 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 indicates the burden of care on working families in order to support an aging population.

Figure 7. Population Pyramid by Age and Gender, Broome County, NY, 2012

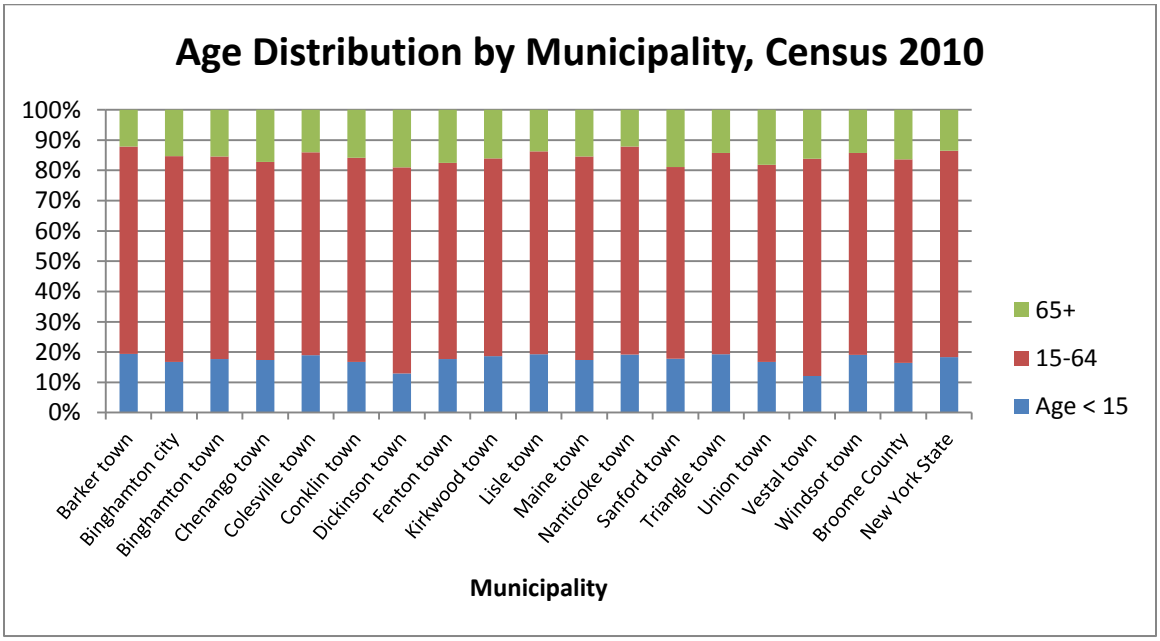


SOURCE: US Census Bureau, Population Estimates Program, 2012

[2] 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.
[3] 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.
[4] 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.
[5] The sex ratio = [(the number males) ÷ (the number of females)] x 100

Figure 8 provides data for age distribution of populations across municipalities (see also Appendix B10). Municipalities with the largest percentage of population 65 years of age or older are the towns of Dickinson (19.0%), Sanford (18.9%), and Union (18.1%). Municipalities with the largest proportion of population under the age of 15 years are the towns of Barker (19.4%), Lisle (19.3%), and Triangle (19.3%). In this figure, each bar represents 100% of the population for each municipality. The different color lengths are sectioned based on the relative percentages of the age groups within each municipality. The age dependency ratios are graphically represented by the length of the top and bottom sections in relation to the middle section of each bar. Towns with the highest dependency ratios are Sanford, Fenton, and Union; and towns with the lowest dependency ratio are Vestal, Nanticoke, and Barker.

Figure 8. Age Distribution by Municipality, Broome County, NYS, Census 2010



SOURCE: US Census Bureau, Census 2010

Race and Ethnicity

The majority of Broome County's population is white and non-Hispanic (Table 2, see also Appendices B11 & B12). Population estimates indicate that the proportions of Blacks and Asians have increased between 2000 and 2012. For Black, non-Hispanics, the population has increased from 3.3% to 5.0% and for Asian, non-Hispanics from 2.8% to 3.7%. The proportion of Hispanics or Latinos, regardless of race, has also increased from 2.0% in 2000 to an estimated 3.6% in 2012.Population trends for Black non-Hispanics and Hispanics indicate a continuous near linear increase whereas Asian non-Hispanics seem to have leveled off since 2008 (Appendices B13-B15).

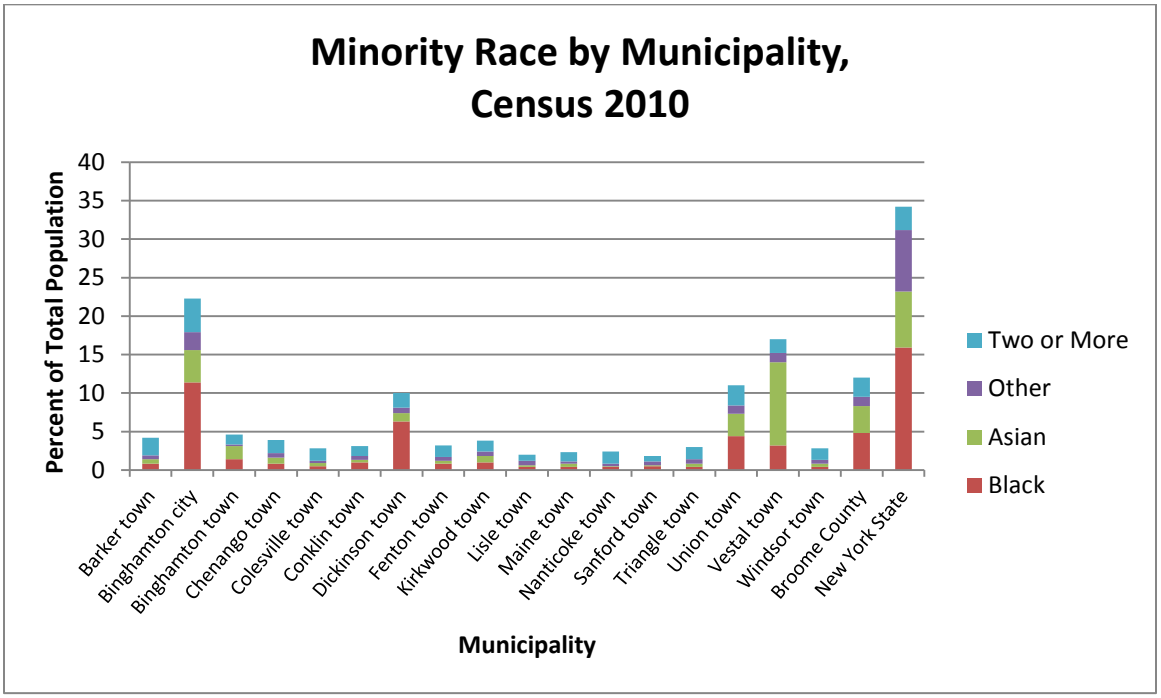
Rural areas of Broome County show less diversity than urban areas (Figure 9 and Appendix B16); and in all areas of Broome County, the proportion of non-white population is well-below NYS and US averages (Table 2). The municipalities with the highest percentage of Blacks include the City of Binghamton (11.4%) and the town of Dickinson (6.3%). The municipalities with the largest concentration of Asians are Vestal (10.8%) and the City of Binghamton (4.2%). The largest concentrations of Hispanics are in the City of Binghamton (6.4%) and the towns of Vestal (3.3%) and Union (3.2%).

Table 2. Population Estimates by Race / Ethnicity Category, Broome County, NY, 2000, 2012

Race / Ethnicity Category	Broome County				NYS		US	
	2000 Census	Percent	2012 Estimate	Percent	2000 %	2012 %	2000 %	2012 %
One race	197,343	98.4	193,793	97.8	96.9	97.3	97.6	97.1
White	183,153	91.3	173,806	87.8	67.9	65.2	75.1	73.9
Black or African American	6,575	3.3	9,993	5.0	15.9	15.6	12.3	12.6
American Indian or Alaska Native	384	0.2	451	0.2	0.4	0.4	0.9	0.8
Asian	5,585	2.8	7,242	3.7	5.5	7.7	3.6	5.0
Native Hawaiian or Other Pacific Islander	53	-	182	0.1	-	-	0.1	0.2
Other race	1,593	0.8						
Two or more races	3,193	1.6	4,267	2.2	3.1	2.7	2.4	2.9
Not Hispanic or Latino	196,550	98.0	191,002	96.4	84.9	81.8	87.5	83.1
Hispanic or Latino	3,986	2.0	7,058	3.6	15.1	18.2	12.5	16.9
TOTAL	***200,536***	***100.0***	***198,060***	***100.0***				

SOURCE: US Census Bureau, Census 2000, Population Estimates Program 2012

Figure 9. Minority Race by Municipality, Broome County, NYS, Census 2010



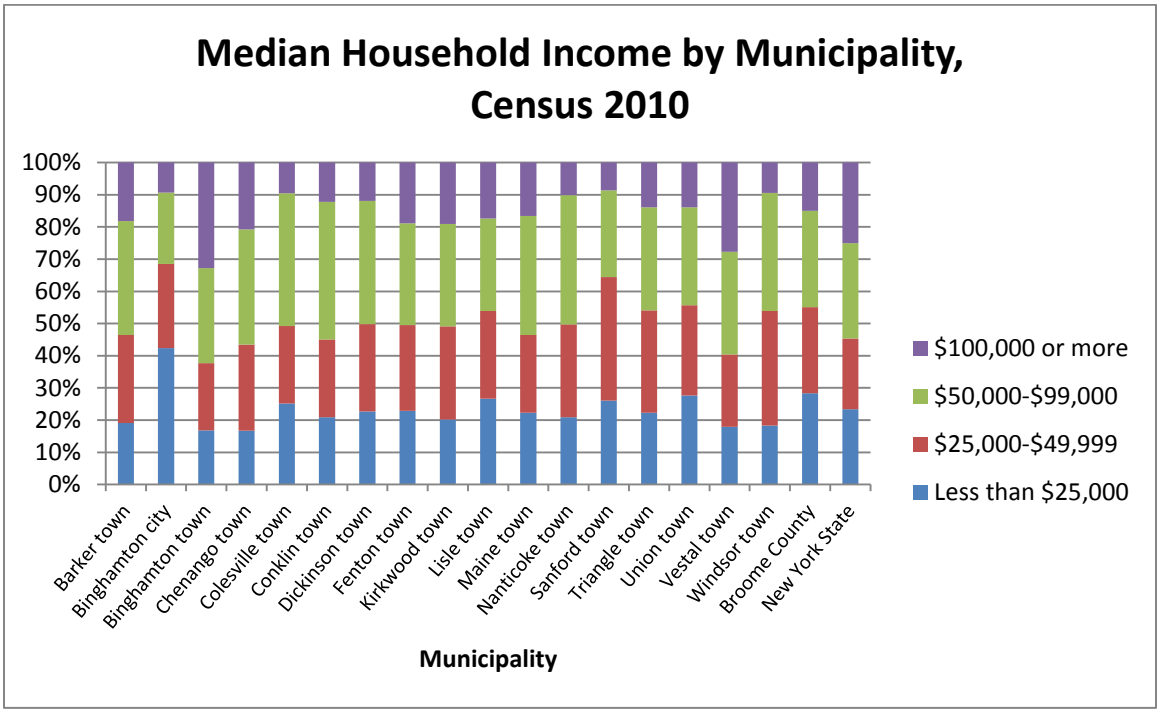
SOURCE: US Census Bureau, Census 2010

Income and Poverty Level

In Broome County, the median household income was $44,970, which is lower than both NYS ($55,972) and the US ($51,484). These figures are based on three-year averages and expressed in 2011 inflation-adjusted dollars. Median income for nonfamily households is 47% of that for married families. The median earnings for an individual were $25,704. Female earnings were 70% that of males. In addition, there is a positive association between earnings and educational attainment. On average, each increase

in education level yields a 30% increase in earnings. Data tables and maps for income appear in Appendices B17-B27.

Figure 10. Median Household Income by Municipality, Broome County, NYS, Census 2010



SOURCE: US Census Bureau, Census 2010

There were 33,286 individuals below poverty level in Broome County, which represents 17.5% of the population for whom poverty status was determined (Table 3). For the period 2009-2011, the proportion of individuals below poverty was higher in Broome County (17.5%) than in NYS (15.1%) or the US (15.2%), and relates to the lower income levels observed for both individuals and households.

2013 HHS Poverty Guidelines

(48 Contiguous States and D.C.)

Persons in Family	100% FPL	138% FPL	200% FPL	275% FPL
1	$11,490	$15,856	$22,980	$31,598
2	$15,510	$21,404	$31,020	$42,653
3	$19,530	$26,951	$39,060	$53,708
4	$23,550	$32,499	$47,100	$64,763
5	$27,570	$38,047	$55,140	$75,818
6	$31,590	$43,594	$63,180	$86,873
7	$35,610	$49,142	$71,220	$97,928
8	$39,630	$54,689	$79,260	$108,983

SOURCE: *Federal Register*, Vol. 78, No. 16, January 24, 2013, pp. 5182-5183

Detailed analyses of poverty level and demographic/social characteristics are provided for individuals and for families (Appendices B28-B40). The age group with the highest percentage below poverty level is children under 18 years of age (26%). The proportion of individuals below poverty level is 3.3 times higher for Blacks/African Americans and 2.3 times higher for Asians as well as 2.9 times higher for Hispanics (any race) than for whites (non-Hispanic). The percent below poverty level decreases with greater educational attainment; and over 31% of individuals who have less than a high school education are below poverty level. More than 20% of individuals who worked part-time year-round were below poverty level, 35% of unemployed individuals were below

poverty level, and 44% of individuals who worked less than full-time year-round or did not work at all were below poverty level.

The differences in poverty level among type of household are particularly striking (Appendix B40). Families in which the head of household is female with no husband present have poverty rates that are more than five times higher than married-couple families (e.g., 31.7% vs. 6.3%). These differences are compounded by significant racial and ethnic disparities. Over 40% percent of families receiving Supplemental Security Income and/or cash public assistance were below poverty level, and the poverty level was more than 66% for families with 3 or more children in which the head of household was female with no husband present.

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 (Appendix B39).

In relation to indicators of poverty for children and youth, rates in Broome County are higher than NYS. In 2011, there were 9,462 children under the age of 18 who were living below poverty level (24.4 per 100) and 6,797 received free or reduced-price school lunch in public schools (45.3 per 100). Between 2010 and 2012, slight increases were observed across all poverty indicators for Broome County as well as NYS and the US (Table 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.

Table 3. Poverty Indicators for Children and Youth, Broome County, New York State, US 2010 & 2012

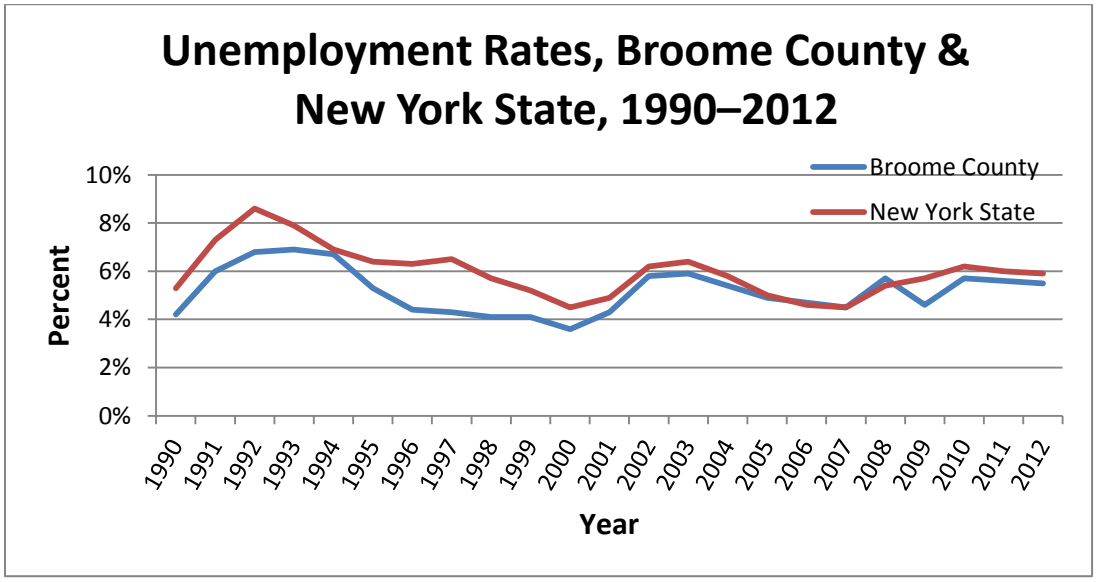
	Broome 2010 (%)	Broome 2012 (%)	NYS 2010 (%)	NYS 2012 (%)	US 2010 (%)	US 2012 (%)
Children living below poverty (age < 18 years)	25.1	25.5	21.2	22.8	21.6	22.6
Households receiving food stamp/SNAP benefits (past 12 months)	13.2	17.0	13.9	15.5	11.9	13.6
Households receiving public assistance	4.1	4.6	3.4	3.4	2.9	2.9
Households receiving Supplemental Security Income	5.8	7.0	6.2	6.4	5.1	5.4

SOURCE: US Census Bureau, American Community Survey, 2012 (1-year estimates)

Employment

For the period 2009–2011, the three-year unemployment rate for Broome County was 5.4%. Young adults had the highest unemployment rates, with 24.1% of 16–19 year olds and 14.4% of 20–24 year-olds unemployed. Unemployment rates for Asians, Blacks/African Americans, and Hispanics (any race) were 5.0%, 25.5%, and 14.2% respectively. The rates for Blacks/African Americans and Hispanics were nearly 2-3 times higher than the rate for Whites (8.4%). More than 31% of the population 16 years of age or over and who were below poverty level were unemployed. Of those with any type of disability, 17.2% 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 (see Figure 12).

Figure 11. Unemployment Rates for Broome County and New York State, 1990–2012

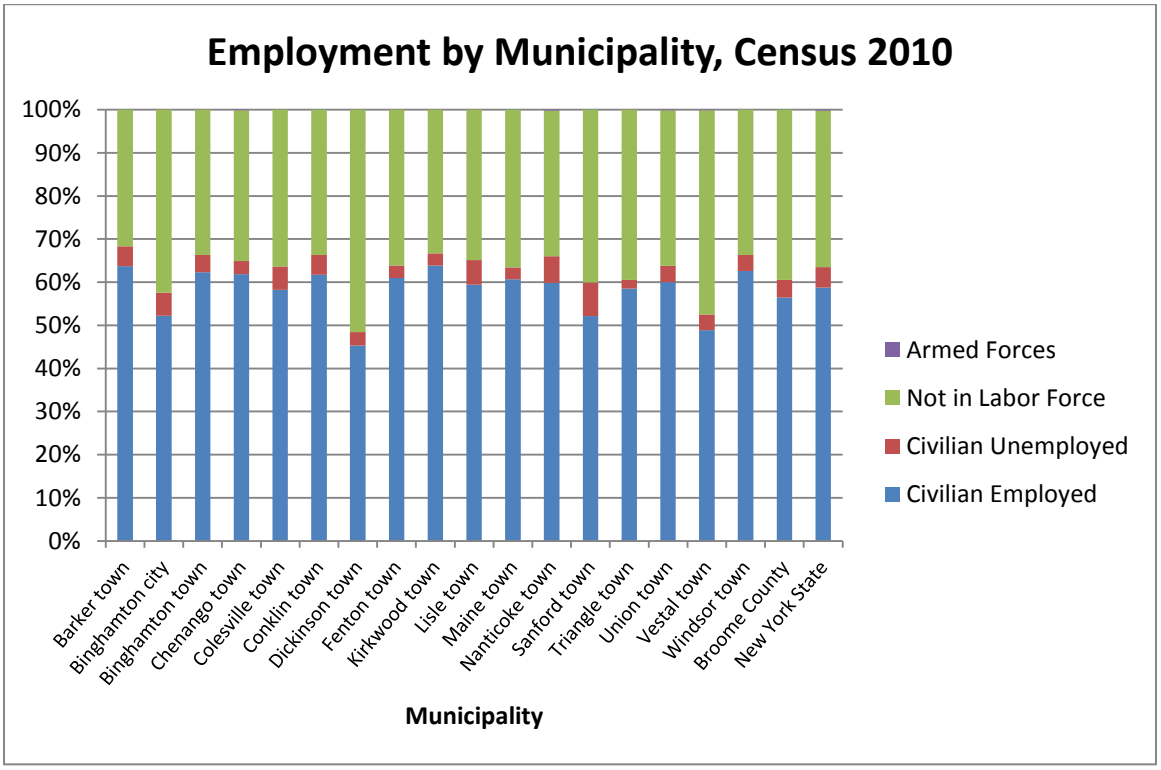


SOURCE: New York State Department of Labor, 1990-2012

County-specific information for employment status also appears in Appendices B41-B48. For the period 2009–2011, the three-year employment rate for Broome County was 56.9%. Employment rates were lowest for the eldest and youngest populations and highest for the 45–54 year-old age group (78.0%). Rates of employment were higher for whites (55.3%) than for Blacks/African-Americans (37.8%), Asians (48.9%), or Hispanics (49.0%). For those below poverty level, employment rates were 31.0% and for those with any type of disability 30.3%. 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.

Municipalities with the highest employment among the population age 16 years and over 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 %). These data are presented in Figure 12 below.

Figure 12. Employment by Municipality, Broome County, NYS, Census 2010



SOURCE: US Census Bureau, Census 2010

Education

Comparisons of three-year estimates for educational attainment appear in Table 4 and the data are shown in Figure 13. Among individuals 25 years of age and over, the percent population with less than a ninth-grade education is lower for Broome County (2.9%) than for NYS (6.7%) or the US (5.8%). The percent population who are high school graduates or who have an associate degree is higher than state and national averages. These data indicate a somewhat more educated public. Although the percent population enrolled in college or graduate school is 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.

Educational attainment by municipality is presented in Figure 13 and corresponding data appear in Appendix B55. The municipalities with the highest proportion of population who have less than a high school education are 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 are the towns of Vestal (43.6%) and Binghamton (32.7%). These suburban areas are located near two major educational institutions: Broome Community College and Binghamton University, which may account for the more educated population in proximity.

School enrollment data are presented in Table 5. In Broome County, the percent of children enrolled in preschool is lower than both state and national averages (4.8% vs. 6.1% respectively) whereas the percent population enrolled in college or graduate school is higher for Broome County than either the

state or the nation (40.8% vs. 32.1% and 28.8% respectively). Data for school enrollment by municipality is presented in Figure 15 and these data appear in Appendix B55. Municipalities with the highest enrollment in college are the town of Vestal (70.8%) and the city of Binghamton (40.8%). The annual dropout rate for Broome County for the 2010–2011 school year was 1.7% , which was lower than the 2.7% for NYS, and the percent of high school graduates intending to enroll in college was 84.1% compared to 82.0% for NYS. Appendices B49-B56 contain relevant education information.

Table 4. Educational Attainment for Broome County, New York State, and United States, 2009–2011

Educational Attainment	Broome County		NYS	US
	Population Estimate	Percent	Percent	Percent
Population 25 years and over	134,700			
Less than 9th grade	3,937	2.9	6.7	5.8
9th to 12th grade, no diploma	9,008	6.7	8.0	7.9
High school graduate (includes equivalency)	43,782	32.5	26.9	28.0
Some college, no degree	25,055	18.6	16.5	21.3
Associate's degree	15,197	11.3	8.5	8.0
Bachelor's degree	20,441	15.2	19.0	18.2
Graduate or professional degree	17,280	12.8	14.4	10.9
Percent high school graduate or higher		90.4	85.3	86.4
Percent bachelor's degree or higher		28.0	33.4	29.1

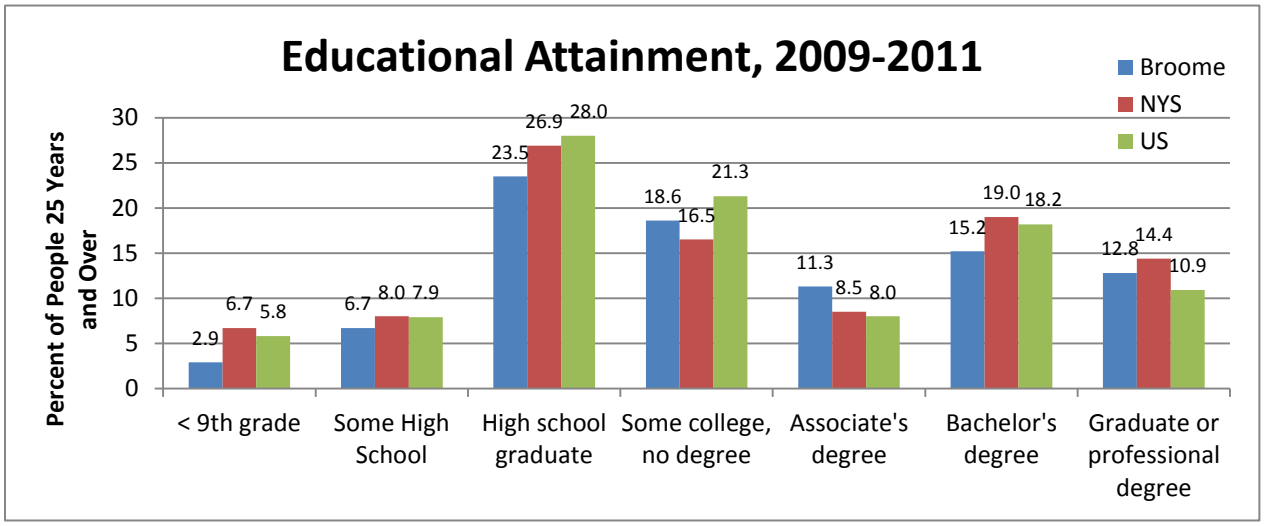
SOURCE: US Census Bureau, American Community Survey, 2009–2011

Table 5. School Enrollment for Broome County, New York State, and United States, 2009-2011

School Enrollment	Broome County		NYS	US
	Population Estimate	Percent	Percent	Percent
Population 3 years and over enrolled in school	54,978			
Nursery school, preschool	2,649	4.8	6.1	6.1
Kindergarten	2,751	5.0	4.7	5.1
Elementary school (grades 1–8)	17,492	31.8	37.3	39.6
High school (grades 9–12)	9,657	17.6	20.6	20.5
College or graduate school	22,429	40.8	31.2	28.8

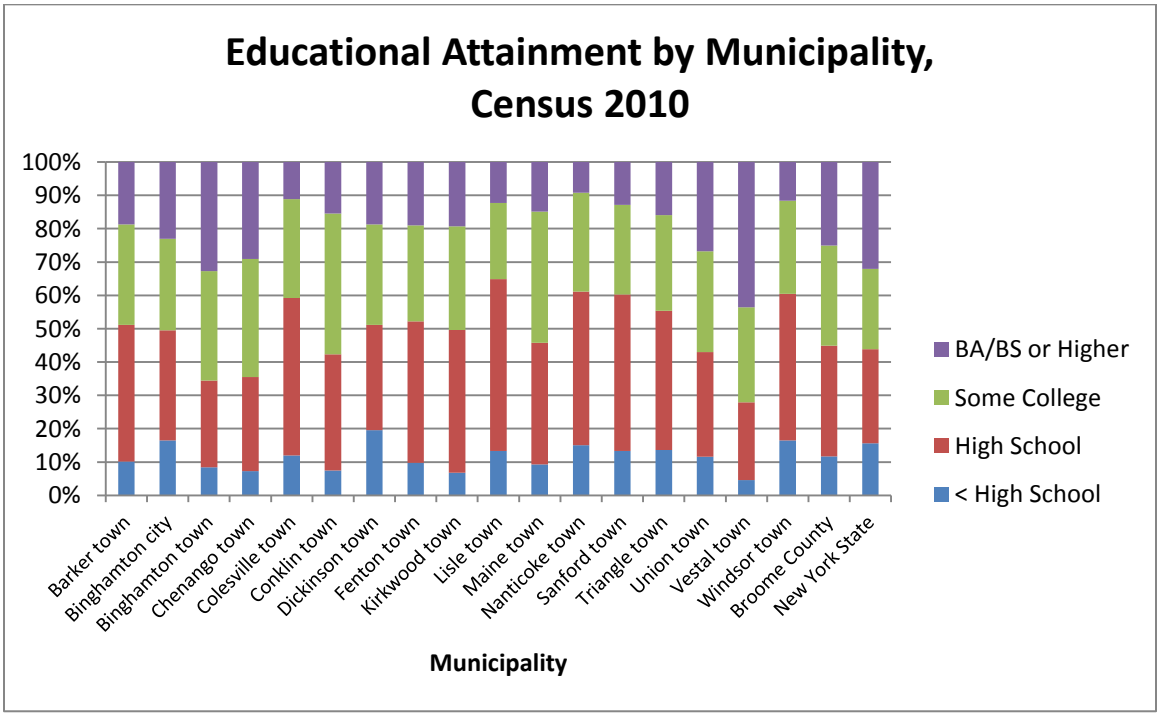
SOURCE: US Census Bureau, American Community Survey, 2009–2011

Figure 13. Educational Attainment, 2009–2011



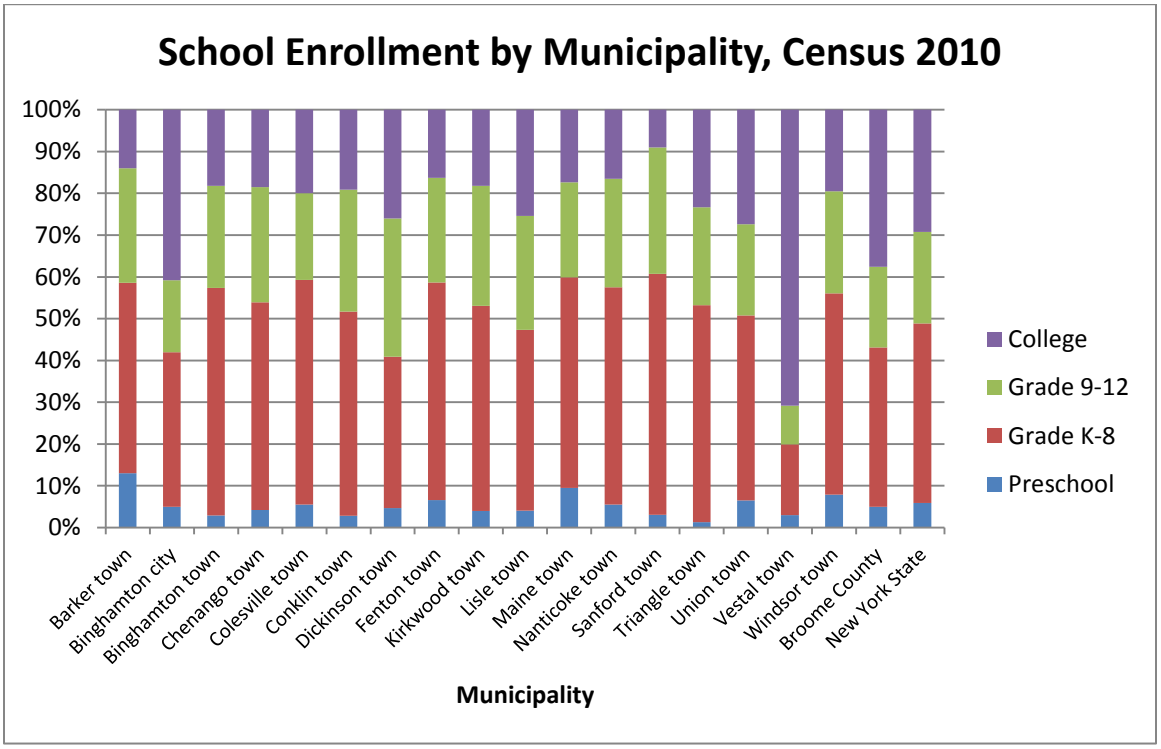
SOURCE: US Census Bureau, American Community Survey, 2009–2011

Figure 14. Educational Attainment by Municipality, Broome County, NYS, Census 2010



SOURCE: US Census Bureau, Census 2010

Figure 15. School Enrollment by Municipality, Broome County, NYS, Census 2010



SOURCE: US Census Bureau, Census 2010

Housing

Housing information can be found in Appendices B57-B79. Between 2009 and 2011, Broome County had an estimated 90,577 housing units and an 88.4% occupancy rate. The majority of housing in Broome County (56.1%) was built before 1960 and only 9.1% 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% are owner-occupied and 34% are renter-occupied. The median value of an owner occupied home for the 2009-2011 time period was $108,500, which is 60% of the national median value ($181,800) and only 37% of the median value of a home in NYS ($179,500). Over 66% of occupied housing units use gas for heating, 12% use kerosene or fuel oil, 10.2% use electricity, 6% use propane, and 3.7% heat their homes with wood. Monthly owner costs for housing units with a mortgage were $1,147; for those units without a mortgage, $468, and for renters, $662. Almost 20% of housing units with a mortgage had owner costs that were 30% or more of the household income, and this figure was only 12% for housing units without a mortgage. In contrast, 52.8% of renters spent 30% or more of the household income on rent. For transportation, 11.6% did not have access to a private vehicle while 52.1% had two or more vehicles.

Marital Status

Information about marital status can be found in Appendix B80. In Broome County, 46.1% of the male population over age 15 are currently married, 38.6% were never married, 9.5% are divorced, 3.1% are widowed, and 2.6% are separated (3-year estimates for 2009-2011). Among females over the age of 15, 43.5% are currently married, 30.4% were never married, 11.6% are divorced, 11.2% are widowed, and

3.3% are separated. In comparison to Whites, Blacks/African-Americans are more likely to be never married or separated and less likely to be currently married. Asians are more likely to be never married and less likely to be divorced or separated than Whites. Hispanics (any race) are more likely to be never married and less likely to be divorced than White, Non-Hispanics. Foreign born citizens have lower rates of divorce and separation than native citizens, which may relate to a traditional value placed on marriage by first generation immigrants. Females are more likely to be widowed than males (11.2% compared to 3.1%).

Households and Families

Household and family data are provided in Appendix B81. For the period 2009 to 2011, the total number of households in Broome County was estimated to be 80,076 and the average household size was 2.37 persons. The majority of households were comprised of families, both married-couple households (44.4%) and single head of household (16.5%, comprised of 12.3% female and 4.2% male). The remaining nonfamily households consisted of a person living alone (32.1%) or a person living with other non-related individuals (7%). Of those householders who live alone, 40% are 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

Information about grandparents is located in Appendix B83. An estimated 2,824 grandparents lived with their own grandchildren under the age of 18. Of these grandparents, 41.7% 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, 72% were female, 76% were between the ages of 30 and 59 years, 65% were married, 25% had some disability, 9% spoke a language other than English, 7% did not speak English very well, and 24% were below poverty level. In 22% 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 5.7% of people living in Broome County were foreign-born, less than half of the national average (12.9%) and nearly one-fourth of the NYS average (22.0%). Broome County has relatively higher rates of non-English speaking residents than many other rural upstate New York counties. For the period 2009–2011, an estimated 8.4% of individuals five years of age or older spoke a language other than English in the home including Indo-European language (3.6%), Asian/Pacific Islander Language (2.4%), and Spanish (2%). 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. Information about language and nativity can be found in Appendices B84-B89.

Disability

For the period 2009–2011, an estimated 18.3% of individuals age 5 or more residing in Broome County had some type of disability; 8.6% had one disability and 9.8% had two or more disabilities. Males with disabilities outnumbered females in the 5 to 15 age category, 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, which likely relates to the longevity of women and increased risk for disability that comes with age. Almost 36% of the total population age 65 and older reported some type of disability. Among those individuals over the age of 5 years for whom poverty status was determined, the proportion of those with any disability was 13.7% for Broome County, 10.8% for NYS, and 12.0% in the US. In Broome County, 24.4% percent of individuals with a disability have incomes below poverty level. 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). Information about disabilities is located in Appendices B90-B95.

Veteran Status

Ten percent of the civilian population aged 18 or older in Broome County has veteran status (Appendix B96). The majority of these individuals were veterans of the Vietnam War (33.6%), Korean War (12.15), or World War II (14.0%). Only 15.5% were from two recent Gulf War periods. Most veterans are white (96.5%), male (96.2%), and age 55 or older (72.7%). Compared to non-veterans, they are half as likely to be below poverty level (8.1% vs. 16.1%), but nearly twice as likely to have a disability (27.2% vs. 15.4%).

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 9.7% carpooled and 78.3% drove alone. Alternative modes of transportation reported include: public transportation (excluding taxicab), 2.8%; walked to get to work, 4.0%; bicycle, 0.1%; and taxicab, motorcycle, or other, 1.0%. Over 4% 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 18 minutes. The vast majority work in NYS (98.8%) and most worked in Broome County (89.9%). 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. Information about commuting is located in Appendices B97-B99.

A summary of the US Census Bureau demographic data from the American Community Survey 2009–2011 is presented in Appendix B101.

The next section provides epidemiologic data for select areas of public health concern. In each section, applicable *Healthy People 2020* objectives are listed followed by analyses of data making comparisons between Broome County and NYS as well as Upstate NY. Where possible, trend data are also examined with data presented in chart format in the appendices.

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%. For

rates of disease, the data are sorted in ascending order. For screenings or health behaviors, the data are sorted in descending order. In both cases, the first quartile or top 25% represents the best performance on that indicator. Maps of NYS with quartile rankings are provided in the appendices.

Achievement toward relevant *Prevention Agenda 2017* goals and *Healthy People 2020* objectives are explored. The *Prevention Agenda* indicators for tracking NYS public health priorities are presented in Appendix B157. Data come from a variety of sources compiled by the New York State Department of Health (NYSDOH) including the Prevention Quality Indicators (disparities in ambulatory care sensitive conditions), the Community Health Indicator Reports (CHIRS), and the County Health Indicators by Race/Ethnicity (CHIRE). The county's performance on specific indicators in relation to both state and national priorities is discussed in relevant sections that follow.

In 2012, NYSDOH developed the CHIRS which consolidated the Community Health Assessment Indicators (CHAI) and others within this new reporting system. The CHIRS provides data for over 300 health indicators at the county, regional, and state levels. In addition, data and maps are available that provide quartile rankings for counties within the state. Finally, the CHIRS offers access to information about trends over time (table and graphic form) with single- and three-year averages at the county-level as compared to Upstate New York. Numerous data sources are used in compiling these reporting systems including: vital statistics; hospitalization and emergency department data from the Statewide Planning and Research Cooperative (SPARCS); specific disease registries such as for cancer, AIDS/HIV, and sexually transmitted diseases; program-based data such as Student Weight Status Category Reporting System (SWSCR), Behavioral Risk Factor Surveillance System (BRFSS), Women's Infants, and Children (WIC) program, and Childhood Lead Prevention Program among others. The CHIRE contains a subset of these health indicators stratified by race/ethnicity in order to assist communities in addressing disparities among minority subgroups. The CHIRE data are located in Appendix B100 and are discussed in further detail in the Social Determinants of Health section. Citations for all data sources in this community health assessment are noted at the bottom of each data table or chart.

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.

***Healthy People 2020* Objectives — Natality**

FP-8. Reduce pregnancies among adolescent females.
FP-8.1 Reduce pregnancies among adolescent females aged 15 to 17 years
Target: 36.2 pregnancies per 1,000
FP 8.2 Reduce pregnancies among adolescent females aged 18 to 19 years
Target: 105.9 pregnancies per 1,000

Natality

Data related to family planning and natality can be found in Appendix 102 along with additional charts and maps in Appendices B103-B135.

The birth rate for Broome County was 10.4 live births per 1,000 women with almost no change in this rate for the past 5 years. This rate is somewhat lower than Upstate NY (11.0) and NYS (12.5). For the period 2008–2010, Broome County's fertility rate (i.e., births per 1,000 female population age 15–44)

was 52.9 per 1,000. In comparison, the fertility rate was 58.2 per 1,000 for NYS and 60.9 per 1,000 for Upstate NY. Broome County's fertility rate was significantly lower. For Broome County, the teen fertility rate was: 0.2 per 1,000 for females age 10-14 years, 12.2 per 1,000 for females age 15-17 years, 21.8 for females age 15-19 years, and 30.5 for females age 18-19 years. The fertility rate among females age 15-17 years was significantly higher for Broome County than for Upstate NY and significantly lower among females age 18-19 years. The fertility rates among females age 15-19 years and 18-19 years were significantly lower for Broome County than for NYS as a whole. Broome County was in the second quartile for the overall fertility rate, in the third quartile for fertility rate among females age 10-14 and 15-17, in the second quartile for fertility rate among females age 15-19 years, and in the first quartile for fertility rate among females age 18-19 years. Over the last few years, teen fertility rates have trended slightly downward across all age groups.

For the 2008–2010 time period, the pregnancy rate for females age 15–44 in Broome County was 76.3 pregnancies per 1,000 females compared to 93.6 for NYS (significantly lower) and 77.0 for upstate NY. This rate has increased slightly over the past five years. Age-specific rates were significantly lower for Broome County than for NYS among females aged 10–14, 15–17, 18-19, and 15–19. Although Broome County ranked in the fourth quartile for teen pregnancy among 15–17 year-olds and was significantly higher than all other Upstate NY counties, it was below the *Healthy People 2020* objective of 36.2 per 1,000 and the *Prevention Agenda 2013* goal of 25.6 per 1,000. Trend data indicate that the three-year average pregnancy rate for 10–14 year-olds has declined slightly from 1.1 to 0.7 between 2006 and 2009. The three-year average for pregnancy rate among 15–19 year-old females in Broome County has similarly decreased slightly from 45.8 in 2005 to 39.1 in 2009. There is considerable heterogeneity within the county in relation to pregnancy rates with the highest rates in the city of Binghamton (zip codes 13901, 13903, 13904, 13905), Johnson City (zip code 13790), and Deposit (zip code 13754). Though pregnancy rates are generally lower than the state, fertility rate and trend data suggest close monitoring of and continued public health efforts in the area of teenage pregnancy.

Morbidity

Disease morbidity relates to the prevalence or occurrence of injury or illness in a population. Prevalence is calculated as a proportion and is defined 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.

Detailed information is provided in each basic service area section that follows. A summary table of selected morbidity indicators is provided in Table 6 below. These indicators were selected as they represent areas in which Broome County underperformed relative to the state and provide opportunities for improvement. Comparisons of Broome County data were made to NYS and Upstate NY, and a check mark (✓) appears in the column where the morbidity indicator for Broome County is significantly higher than NYS or Upstate NY. An additional column is provided to indicate morbidity indicators that are in the fourth quartile for the state (poorest performance), for which a check mark (✓) appears in this column. The table includes both crude and age-adjusted rates. The former indicates the actual rate of disease in the population, and the latter is useful for state-level comparisons given the age differences between populations.

Table 6. Selected Morbidity Indicators, Broome County, 2008–2010

Morbidity Indicator	Number of Cases (3 years)	Rate	> NYS	> Upstate NY	4th Quartile NYS
CHILD HEALTH					
Pneumonia hospitalization (age 0–4 years, per 10,000)	173		✓	✓	✓
Gastroenteritis hospitalization (age 0–4 years, per 10,000)	52	16.8		✓	✓
Otitis media hospitalization (age 0–4 years, per 10,000)	14	4.5			✓
Incidence rate among children <72 months of age with a confirmed blood lead level ≥10mcg/dL (per 1,000 children screened)	117	14.3	✓	✓	✓
ORAL HEALTH					
Dental caries experience (percent of 3rd grade children)		56.7		✓	
Untreated dental caries (percent of 3rd grade children)		42.3		✓	✓
Caries emergency department visits (age 3-5 years, rate per 10,000)	329	182.0	✓	✓	✓
COMMUNICABLE DISEASES					
Pneumonia/flu hospitalization (age 65+ years, rate per 10,000)	1,688	172.3	✓	✓	
Chlamydia case rate – all ages (per 100,000)	534	185.9			✓
Meningococcal incidence (per 100,000)	6	1.0*	✓	✓	✓
OCCUPATIONAL					
Asbestosis hospitalization (rate per 10,000)	173	64.2	✓	✓	
INJURY					
Self-Inflicted injury hospitalization+ (rate per 10,000)	547	9.7	✓	✓	✓
Unintentional injury hospitalization+ (rate per 10,000)	4,948	67.7	✓	✓	
Age 25-64 years	1,472	49.2	✓	✓	
Age 65 years and older	3,038	310.1	✓	✓	✓
Fall-related hospitalization+ (rate per 10,000)	3,091	38.8	✓	✓	✓
Poisoning hospitalization+ (rate per 10,000)	678	11.7	✓	✓	
ALCOHOL & OTHER DRUGS					
Alcohol-related motor vehicle injuries & deaths	275	46.6	✓		
Newborn drug related discharges (per 10,000 newborn discharges)	62	100.0	✓		✓

SOURCE: New York State Community Health Indicators Reports, 2008–2010

+ Age-adjusted hospitalization rate reported

* Rate unstable, fewer than 10 events in numerator

Broome County was lower than or similar to NYS and Upstate NY for most hospitalization rates with several noteworthy exceptions. Pneumonia hospitalizations in children age 0–4 were significantly higher than both statewide rates and ranked in the fourth quartile. Pneumonia hospitalizations among adults age 65 and older were also significantly higher in Broome County than in NYS or Upstate NY (Appendices D30 & D31). Hospitalization rates for children ages 0-4 were in the fourth quartile for both gastroenteritis and otitis media. Child and adolescent health indicators are located in Appendix B195 with trend data and maps in Appendices B196-B215.

Several categories for injury-related hospitalizations were identified as significant areas of need, including self-inflicted injury, unintentional injury (overall, age 25-64, and 65+), falls, and poisoning. In all categories, the rates observed in Broome County were significantly higher than NYS and Upstate NY. In addition, Broome County ranked in the fourth quartile for self-inflicted injury hospitalizations, unintentional injury hospitalizations among adults aged 65 and older, and fall-related hospitalizations. Injury mortality and morbidity indicators can be found in Appendix C92 with additional tables, charts, and maps in Appendices C93-C133. An occupational hazard, asbestosis hospitalizations were higher in Broome County than in NYS and Upstate NY. Occupational health indicators are located in Appendix C8 and in Appendices C9-C19.

The incidence of high blood lead levels among children under the age of 6 years was significantly higher in Broome County than in Upstate NY. Blood lead levels and lead screening appear in Appendices C1-C7 and discussed further in the lead poisoning section that follows. Dental caries among third grade children was significantly higher in Broome County than for NYS and the percent of third grade children with untreated dental caries was significantly higher in Broome County than Upstate NY. The number of emergency department visits for dental caries was significantly higher in Broome County than in NYS or Upstate NY. Oral health indicators can be found in Appendix D206 with additional information contained in Appendices D207-D227. Oral health is discussed further in the Dental health Services section. Broome County ranked in the fourth quartile for blood lead levels, untreated dental caries, and emergency department visits for dental caries.

Alcohol-related motor vehicle injuries and deaths were significantly higher in Broome County than NYS; however they were significantly lower than Upstate NY (see Appendices C92 & C133). Finally, the newborn drug-related discharge rate in Broome County was significantly higher than the statewide average, and Broome County ranked in the fourth quartile for this indicator (see Appendices C20 & C81).

The prevalence rates for asthma, diabetes, hypertension, cardiovascular disease, and overweight/obesity are listed in Table 7. Broome County was similar to NYS and Upstate NY on most of these measures.

Table 7. Selected Chronic Disease Indicators, Broome County, 2008–2009

Morbidity Indicator	Prevalence (%)
CHRONIC DISEASE	
Asthma (adult)	11.6
Asthma (high school children)	
Diabetes (adult)	8.6
Diabetes (high school children)	
High blood pressure (adult)	28.9
Cardiovascular disease (adult) [diagnosis of heart attack, stroke, or angina]	7.0

Morbidity Indicator	Prevalence (%)
OVERWEIGHT & OBESITY	
Obesity (adult)	24.5
Overweight (school-age children)	15.0
Elementary students (pre-K, K, 2nd & 4th grades)	13.7
Middle & high school students (7th & 10th grades)	16.9
Obesity (school-age children)	17.1
Elementary students (pre-K, K, 2nd & 4th grades)	14.7
Middle & high school students (7th & 10th grades)	20.4
Overweight or Obese (school-age children)	32.1
Elementary students (pre-K, K, 2nd & 4th grades)	28.4
Middle & high school students (7th & 10th grades)	37.2
Pregnant women in WIC who were pre-pregnancy …	
Overweight	23.8
Obese	30.0
Children in WIC (age 2-4 years)	
Obese	14.6

SOURCE: New York State Community Health Indicators Reports, 2008–2009

The incidence rate for all cancers was significantly higher in Broome County as compared to NYS. However, incidence rates for specific cancers were not significantly higher than NYS or Upstate NY. Although Broome County ranked in the fourth quartile for prostate cancer, the rate was not significantly higher than the upstate area or the state as a whole. Table 8 rank orders incident cancer diagnoses. The cancers with the greatest number of newly diagnosed individuals were prostate (593), female breast (495), lung and bronchial (487), and colorectal (391). The incidence of cancer was highest for prostate (209.5 per 100,000) and female breast (164.4 per 100,000).

Table 8. Cancer Incidence (descending order), Broome County, 2007–2009

Cancer Incidence (rates per 100,000)	Number of Cases (3 years)	Crude Rate	Age-Adjusted Rate
ALL CANCERS	3732	638.8	512.3
Prostate	593	209.5	178.1
Female breast	495	164.4	128.7
Lung & bronchus	487	83.4	64.1
Colon & rectum	391	66.9	51.2
Lip, oral cavity & pharynx	88	15.1	12.1
Ovary	49	16.3	13.0
Cervix / uteri	20	6.6	5.4
Melanoma	19	3.3	2.5
LATE STAGE			
Female breast	20	6.6	5.1
Prostate	18	6.4	5.6

SOURCE: New York State, Community Health Indicator Reports, 2007–2009

Table 9 rank orders condition-specific hospitalizations. For the period 2008-2010, the conditions responsible for the greatest number of hospitalizations are diabetes (any diagnosis, 14,372), cardiovascular disease (10,148), diseases of the heart (6,851), unintentional injury (4,948), falls (3,091), coronary heart disease (2,455), chronic lower respiratory disease (2,225), congestive heart failure (1,928), and cerebrovascular disease (1,857). The rank ordering of the hospitalization rates (per 10,000

population) is the same as for the number of cases. Thus, public health interventions directed toward reducing the incidence of breast, lung, and colorectal cancers as well as hospitalizations related to diabetes, cardiovascular disease (all forms), unintentional injuries, and falls are likely to have the greatest public health impact on overall disease morbidity for residents of Broome County.

Additional information related to total number of hospitalizations and total emergency department visits can be found in Appendices B136-B140.

Table 9. Hospitalization Rates (descending order), Broome County, 2008–2010

Condition-Specific Hospitalization (rate per 10,000)	Number of Cases (3 years)	Crude Rate	Age-Adjusted Rate
Diabetes (any diagnosis)	14,372	243.5	195.7
Cardiovascular Disease	10,148	171.9	131.4
Diseases of the Heart	6,851	116.1	88.3
Coronary Heart Disease	2,455	41.6	32.3
Chronic Lower Respiratory Disease	2,255	38.2	32.7
Congestive Heart Failure	1,928	32.7	23.3
Cerebrovascular	1,857	31.5	23.7
Diabetes (primary diagnosis)	849	12.9	14.4
Asthma	650	11.0	11.0
Traumatic Brain Injury	630	10.7	9.2
Hypertension	221	4.7	
Cirrhosis	161	2.7	2.5
Assault	153	2.6	2.7
Asthma 0–17	152	12.8	
Pneumoconiosis	45	16.7	

SOURCE: New York State, Community Health Indicators Reports, 2008-2010

Table 10. Hospitalization Rates by Race, Broome County, NY, 2008–2010

Condition-Specific Hospitalization (rate per 10,000 population)	White	Black	Total	Ratio
Diabetes (any diagnosis)	184.2	337.9	195.7	1.8
Diseases of the Heart	84.1	106.7	88.3	1.3
Congestive Heart Failure	42.5	35.6	41.5	0.8
Coronary Heart Disease	30.4	42.9	32.3	1.4
Cerebrovascular	22.6	25.8	23.7	1.1
Diabetes (primary diagnosis)	11.7	29.2	12.9	**2.5**
Asthma (Age 0-17 years)	8.7	30.2	12.8	**3.5**
Asthma	9.1	24.6	11	**2.7**
Diabetes Short-term Complications	4.5	23.3	5.2	**5.2**

SOURCE: NYSDOH, Broome County Health Indicators by Race Ethnicity, 2008-2010

The disproportionate ratios by race are evident in Table 10 in particular for diabetes and asthma among Blacks as compared to Whites. Similar disparities in health outcomes are evident in the Preventions Quality Indicators.

The Prevention Quality Indicators (PQI) were developed by the Centers for Disease Control and Prevention for use in assessing the quality of outpatient care. This set of measures includes conditions for which appropriate outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease. These indicators are measured as rates of admission to the hospital for the condition in a given population and can be used to evaluate

the overall quality of primary and preventive care. PQIs are available for four areas: acute admissions, circulatory admissions, diabetes admissions, and respiratory admissions. The site uses 2008 and 2009 acute care hospital discharge data from the Statewide Planning and Research Cooperative System (SPARCS). Areas are selected by zip code. The patient counts by zip code reflect total hospital inpatient discharges for adults as well as children. In addition to the number of admissions, the website calculates estimated admission rates for the selected area, the state, and an area rate adjusted for age and gender. Additionally, disparity measures may be obtained as the percent expected stratified by race/ethnicity. Admission rates are presented in Table 11 below. For this analysis, zip codes were excluded where only a small fraction of the zip code area lies within the county border. [Refer to the following website for additional information: https://apps.nyhealth.gov/Data/prevention/quality_indicators/about/index.jsp]

Table 11. Prevention Quality Indicators, Broome County, 2008 & 2009

Admissions	Admissions for Condition	Area Rate	Statewide Rate	Area Rate Adjusted for Age & Sex	Admissions as Percent Expected			
					African-American	Asian	White	Overall
ACUTE ADMISSIONS								
Bacterial pneumonia	595	373	273	325	165	17	115	119
Dehydration	92	58	86	49	72	28	55	57
Urinary tract infection	298	187	167	159	123	48	91	95
All acute admissions	986	617	526	532	137	29	97	101
CIRCULATORY ADMISSIONS								
Angina	38	24	32	23	325	0	65	73
Congestive heart failure	546	342	352	286	194	34	76	81
Hypertension	68	43	72	40	386	0	48	56
All circulatory admissions	653	409	456	352	242	24	72	77
DIABETES ADMISSIONS								
Short-term complications	67	42	54	42	314	29	71	80
Long-term complications	84	53	124	48	93	0	38	39
Lower extremity amputations	23	15	24	14	54	0	55	59
Uncontrolled diabetes	33	21	34	20	332	0	52	59
All diabetes admissions	195	122	224	117	199	13	48	52
RESPIRATORY ADMISSIONS								
Asthma	148	93	176	92	198	16	46	52
Chronic Obstructive Pulmonary Disease	364	228	181	200	128	15	109	111
All respiratory admissions	512	321	357	299	169	16	81	84
ALL ADMISSIONS	2,346	1,469	1,563	1,307	183	21	80	84

SOURCE: New York State Prevention Quality Indicators, 2008 & 2009
ZIP CODES included in analysis: 13737, 13744, 13745, 13746, 13748, 13749, 13754, 13760, 13761, 13762, 13763, 13777, 13787, 13790, 13794, 13795, 13797, 13802, 13813, 13826, 13826, 13833, 13848, 13850, 13851, 13862, 13865, 13865, 13901, 13902, 13903, 13904, 13905

Interpretation of estimated rates should be made with caution, however, as Broome County borders Pennsylvania and some individuals who live in Broome County seek services outside the local area. Previous examination of this concern revealed that approximately 5% of individuals seek care outside Broome County, though no differential bias in relation to the type of care was noted. Thus, the outmigration for health services may attenuate the rates, but only to a small extent and not for any particular type of hospital admission. Difficulty in classification of race and the stability of the rate for

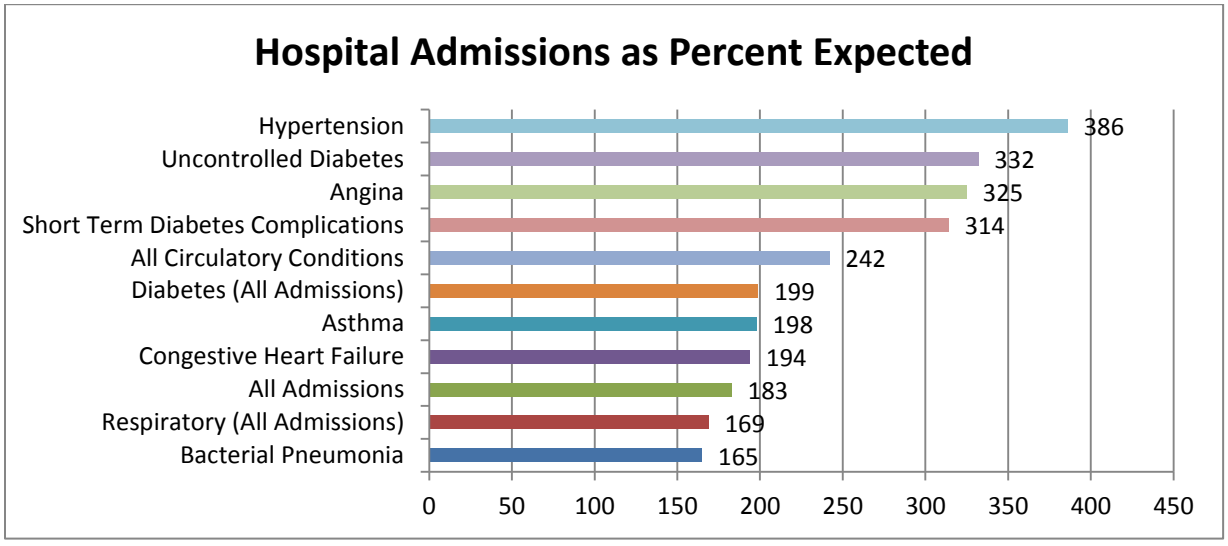
categories in which there are small counts can be a source of imprecision in these estimates and also warrant cautious interpretation.

The only conditions in which Broome County exceeded the state rate (adjusted for age and sex) were bacterial pneumonia and chronic obstructive pulmonary disease. For all other hospitalizations, Broome County was lower than NYS.

Admissions expressed as the percent expected is the ratio of the observed number of admissions to the "expected" number of admissions. The "expected" count is the number of admissions that would be observed if the rate for each age-sex group in the area was the same as for the state as a whole. The number of admissions as percent expected was lower for Asians than for Whites across all categories of admissions.

The number of admissions as percent expected was appreciably higher for African-Americans than for Whites for every category of admission with the exception of lower extremity amputations for diabetes (Table 11). For acute conditions, the admissions as percent expected in African-Americans when compared to Whites was 1.4 times higher for bacterial pneumonia, urinary tract infection, and all acute conditions. Dehydration was 1.3 times higher. For circulatory conditions, the admissions as percent expected in African-Americans when compared to Whites was 2.6 times higher for congestive heart failure, 5 times higher for angina, 8 times higher for hypertension, and 3.4 times higher for all circulatory conditions. For diabetes, the admissions as percent expected in African-Americans when compared to Whites was 2.4 times higher for long-term complications, 4.4 times higher for short-term complications, 6.4 times higher for uncontrolled diabetes, and 4.1 times higher for all diabetes conditions combined. For respiratory conditions, the admissions as percent expected in African-Americans when compared to Whites was 1.2 times higher for Chronic Obstructive Pulmonary Disease (COPD), 4.3 times higher for asthma, and 2.1 times higher for all respiratory conditions. For all conditions combined, African-Americans were 2.3 times higher than the hospitalization rate for Whites. Although African-Americans comprised only 3% of the population, they clearly bear a disproportionate share of disease burden as evidenced by the disparities in preventable hospitalizations depicted in Figure 16.

Figure 16. Prevention Quality Indicators for African Americans, Broome County, 2008 & 2009



SOURCE: New York State Prevention Quality Indicators, 2008 & 2009

***Healthy People 2010* Objectives — Mortality**

MICH-3 Reduce the rate of child deaths.
- **MICH 3.1** Children aged 1 to 4 years (25.7 per 100,000)
- **MICH 3.2** Children aged 5 to 9 years (12.3 per 100,000)

MICH 4 Reduce the rate of adolescent and young adult deaths.
- **MICH 4.1** Adolescents aged 10 to 14 years (15.2 per 100,000)
- **MICH 4.2** Adolescents aged 15 to 19 years (55.7 per 100,000)
- **MICH 4.3** Adolescents aged 20 to 24 years (88.5 per 100,000)

Mortality

Mortality relates to the occurrence of death in a population. Mortality rates for various conditions appear in Appendix B143. Additional information is provided in Appendices B144-B166.

The crude mortality rate for Broome County in 2007 was 1,046.8 per 100,000 population. The crude mortality rate was 843.7 per 100,000 population for Upstate NY and 748.3 per 100,000 population for NYS. The crude mortality rate has remained relatively stable over the past 5 years.

The top four leading causes of death in descending order are: heart disease, cancer, stroke, and chronic lower respiratory diseases (CLRD). For all of these conditions, Broome County experiences a higher mortality rate than Upstate NY and the state as a whole (Table 12). Among males, the top three leading causes of death in descending order are: heart disease, cancer, and CLRD. Among females, the two leading causes of death are heart disease and cancer. The top five leading causes of premature death (death before age 75) in descending order are: cancer, heart disease, CLRD, unintentional injury, and liver disease. For nearly all of these causes, Broome County experiences a higher mortality rate than Upstate NY and the state as a whole. The notable exception is the lower death rate from heart disease among women in Broome County than in NYS.

Table 12. Leading Causes of Death, Broome County, Upstate New York, New York State 2009

Cause of Death (rate per 100,000 population)	Broome County		Upstate NY	NYS
	Number	Rate	Rate	Rate
LEADING CAUSES OF DEATH				
Heart Disease	598	210	192	207
Cancer	472	180	171	160
Stroke	122	42	39	26
Chronic Lower Respiratory Diseases	113	43	31	31
Liver Disease	80	30		
Unintentional Injury			24	
Pneumonia				20
LEADING CAUSES OF PREMATURE DEATH (before age 75)				
Cancer	688	414	298	276
Heart Disease	488	251	178	192
Chronic Lower Respiratory Diseases	128	74	64	56
Unintentional Injury	98	62	38	30
Liver Disease	97	58	31	26

Cause of Death (rate per 100,000 population)	Broome County		Upstate NY	NYS
	Number	Rate	Rate	Rate
LEADING CAUSES OF DEATH - MALES				
Heart Disease	280	265	240	255
Cancer	243	224	206	195
Chronic Lower Respiratory Diseases	56	53	45	36
LEADING CAUSES OF DEATH - FEMALES				
Heart Disease	318	169	157	172
Cancer	229	152	148	139
Stroke	87	47		
Chronic Lower Respiratory Diseases			35	27

SOURCE: New York State Department of Health, Vital Statistics, 2009

A summary table of selected mortality indicators is provided in Table 13, below. Comparisons of Broome County data were made to Upstate NY and NYS, and a check mark (✓) appears in the column where the mortality rate for Broome County is significantly higher. An additional column is provided to indicate mortality rates which are in the highest quartile for the state (top 25% of all counties in NYS), for which a check mark (✓) appears in this column. Conditions were not included in this table if the crude mortality rate was significant but the age-adjusted rate was not. The mortality indicators in this table represent opportunities for improvement and public health intervention.

In general, mortality rates have remained relatively stable or slightly declined over the past 9 years (2000–2009). For many conditions, the age-adjusted rates are significantly higher for Broome County than both NYS and Upstate NY including: diabetes and cirrhosis mortality; premature death and pre-transport mortality due to cardiovascular disease; pre-transport mortality for diseases of the heart, coronary heart disease, and cerebrovascular disease; and for infant and neonatal mortality. Rates for these conditions placed Broome County in the fourth quartile relative to the rest of the state. The absolute number of deaths (3-year total) was highest for cardiovascular disease (2,304), diseases of the heart (1,790), all cancers (1,362), and coronary heart disease (1,299).

Thus, there are few areas in which Broome County does not experience a disproportionate share of deaths. Although the AIDS mortality rate in Broome County was in the fourth quartile for the state, it is nonetheless significantly lower than NYS. In relation to suicide mortality, Broome County was significantly lower than both NYS and Upstate NY and ranked in the highest quartile. Motor vehicle mortality was significantly lower for Broome County than for Upstate NY and was in the highest quartile. Similarly, pre-transport mortality for congestive heart failure was significantly lower for Broome County than for Upstate NY, but ranked in the second quartile. In relation to cancer of the lung and bronchus, Broome County was significantly lower than NYS and ranked in the second quartile. Motor vehicle mortality was significantly lower for Broome County than for Upstate NY and was in the highest quartile. In all other areas of mortality, Broome County was not significantly different than Upstate NY or NYS.

Table 13. Selected Mortality Indicators, Broome County, 2008–2010

Mortality Indicator	Number of Cases (3 years)	Crude Rate	Age-Adjusted Rate	> Upstate NY	> NYS	4th Quartile NYS
CANCER (2007-2009)	1,362	233.1	176.2	✓		
Lung and bronchus	373	63.8	48.7		✓	
Prostate	74	26.1	23.5			✓
Ovarian	46	15.3	10.9			✓
DIABETES	195	33.0	24.4	✓	✓	✓
CIRRHOSIS	65	11.0	9.1	✓	✓	✓
CARDIOVASCULAR	2,304	390.3	265.5	✓	✓	
Premature death (age 35-64)	283	124.5		✓	✓	✓
Pretransport mortality	1,320	223.6		✓	✓	✓
Diseases of the heart	1,790	303.3	207.5			
Premature death (age 35-64)	231	101.6		✓	✓	
Pretransport mortality	1,062	179.9		✓	✓	✓
Coronary heart disease	1,299	220.1	148.7		✓	
Premature death (age 35-64)	167	73.5		✓		
Pretransport mortality	805	136.4		✓	✓	✓
CEREBROVASCULAR DISEASE	349	59.1	39.4	✓	✓	✓
Premature death (age 35-64)	30	13.2				✓
Pretransport mortality	164	27.8		✓	✓	✓
Homicide	24	4.1	4.0			✓
Unintentional injury	186	31.5	28.1		✓	
Alcohol Related Motor Vehicle Injuries and Deaths	275	46.6			✓	
INFANT MORTALITY (per 1,000 births)						
Infant (<1 year)	54	8.7		✓	✓	✓
Neonatal (<28 days)	38	6.1		✓	✓	✓
Post-neonatal (1 month to 1 year)	16	2.6				✓
Perinatal (28 weeks gestation to 28 days of life)	48	7.7				✓
CLRD (COPD)	345	58.5	42.6		✓	
AIDS	10	2.0	2.0			✓

SOURCE: New York State Community Health Indicators Reports, 2008–2010

Premature Death and Years of Productive Life Lost

For any given death, the years of productive life lost (YPPL) is the number of years prior to age 75 that the 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. An analysis of the premature deaths in Broome County was performed for all deaths between 2005 and 2010 (Table 14) by Dr. Christopher Ryan, MD, Medical Director for the Broome County Health Department. For this analysis, deaths were

standardized to the 2005 Broome County population structure. The analysis revealed trends in causes of death and reductions in years of productive life lost (YPPL) that were similar to the nation as a whole.

- complications of prematurity in infants
- injuries, both unintentional and intentional, among children
- injuries, including self-inflicted ones, among teenagers and young adults
- an increasing incidence of coronary artery disease and cancer as age advances

Table 14. Premature Deaths by Group and Cause of Death, Broome County, 2005-2010

AGE	COUNT	ICD-10	AGE	COUNT	ICD-10
0 to 9			***40 to 49***		
Extreme immaturity	13	P072	Acute myocardial infarction	26	I219
Sudden infant death syndrome	11	R95	Malignant neoplasm of bronchus and lung	25	C349
Premature rupture of membranes	8	P011	Atherosclerotic heart disease	21	I251
Accidental suffocation and strangulation in bed	6	W75	Alcoholic cirrhosis of liver	12	K703
Assault by unspecified means	5	Y09	Intentional self-harm by firearm	12	X74
10 to 19			***50 to 59***		
Unspecified motor-vehicle accident	4	V892	Malignant neoplasm of bronchus and lung	95	C349
Fire in building or structure	3	X00	Acute myocardial infarction	78	I219
Intentional self-harm by hanging, strangulation and suffocation	< 3	X70	Atherosclerotic heart disease	64	I251
Accidental poisoning by narcotics and hallucinogens	< 3	X42	Malignant neoplasm of breast	25	C509
Cardiomyopathy	< 3	I429	Unspecified diabetes mellitus, without complications	25	E149
20 to 29			***60 to 69***		
Accidental poisoning by and exposure to other and unspecified drugs	9	X44	Malignant neoplasm of bronchus and lung	174	C349
Unspecified motor-vehicle accident	8	V892	Atherosclerotic heart disease	133	I251
Intentional self-harm by firearm	7	X74	Acute myocardial infarction	118	I219
Intentional self-harm by hanging, strangulation and suffocation	7	X70	Chronic obstructive pulmonary disease	67	J449
Accidental poisoning by narcotics and hallucinogens	5	X42	Unspecified diabetes mellitus, without complications	41	E149
30 to 39			***70 to 79***		
Accidental poisoning by narcotics and hallucinogens	7	X42	Malignant neoplasm of bronchus and lung	109	C349
Intentional self-harm by hanging, strangulation and suffocation	7	X70	Atherosclerotic heart disease	105	I251
Acute myocardial infarction	6	I219	Acute myocardial infarction	78	I219
Intentional self-harm by firearm	5	X74	Chronic obstructive pulmonary disease	67	J449
Other ill-defined and unspecified causes of mortality	4	R99	Malignant neoplasm of colon	29	C189

Additional information about years of productive life lost is located in Appendices B141 and B142.

Child Fatality Review Team Findings and Recommendations

The mission of the Broome County Child Fatality Review Team (BC CFRT) is to improve our understanding of how and why children die, develop and promote a countywide system of child death review and response, and to identify systemic and policy issues, and public health interventions to improve child health, safety and protection. Our ultimate goal is to prevent future deaths and to promote child safety through a confidential review process which is thorough, comprehensive, and multidisciplinary. Our tasks include the following:

Findings and Recommendations:

The BC CFRT reviews cases individually in a manner that is as comprehensive as possible. As referenced above, priority is given to review cases with DSS involvement. Regarding DSS involvement, it is important to note what the team did NOT find. There were no cases where DSS or any other local agency involvement could have prevented any of the 44 cases reviewed. DSS consistently conducted thorough investigations; appropriately provided protection for surviving children, when necessary; and provided families with significant services and referrals.

The following findings presented in this report represent the major themes that have emerged from reviewing cases over the course of several years. The BC CFRT is most concerned with identifying patterns of risk that exist in the community, which if changed, could result in preventing some child deaths in the future. It is important to note that it is not possible to prevent all deaths from occurring; however, much has been learned about child health and safety by examining the risk factors that exist in child fatalities. The team offers the following findings with corresponding community recommendations:

Finding 1: Infant Sleep Environment – Safe Sleep Practices

There has been much discussion in recent years about the role of safe sleep practices in reducing sudden infant death. As has been found by child fatality review teams around the county, the BC CFRT found that sleep environment is a very important element to be considered in understanding how and why some infants die. This report provides the opportunity to re-iterate the importance of the infant sleep environment.

The team recommends caregivers follow the recommendations provided by the American Academy of Pediatrics[6]. Infants should be placed on their back, in an empty crib. The crib should meet current safety standards and have a firm mattress sized appropriately for the crib, with a tight fitting sheet. The crib should be free from bumper pads, pillows, blankets, stuffed animals, etc. Additionally, newborns can benefit by being in close proximity to their parents, so if possible the crib should be positioned in the same room as the parents. Room-sharing can facilitate breast feeding and bonding.

Of the cases reviewed by the BC CFRT, regardless of death certification, the team determined 17 cases involved hazardous sleep environments. Hazardous sleep environments involve infants placed to sleep in environments that place them at significant risk of suffocation or asphyxiation. Such environments include presence of pillows, cushions, blankets, comforters, stuffed animals, pets, siblings, and include instances in which a child is placed to sleep on their stomach. In addition, infants are at risk when placed

[6] American Academy of Pediatrics, Retrieved on 3/18/13 from http://www.aap.org/en-us/about-the-aap/aap-press-room/pages/AAP-Expands-Guidelines-for-Infant-Sleep-Safety-and-SIDS-Risk-Reduction.aspx?nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR%3a+No+local+token.

to sleep in products not meant for such purpose (such as a couch, chair, boppy pillow or car seat), when an infant's size has exceeded the limit set for product safety, or if the product has not been assembled properly.

Most notable, in 10 cases an infant was co-sleeping with or sharing a sleep surface with at least one adult. At some point during the sleep episode the adult(s) and/or the bedding created a situation in which the infant was asphyxiated or suffocated. Co-sleeping between an infant and other individuals or pets is dangerous. All of these co-sleeping deaths may have been preventable.

As a result of BC CFRT's above findings that unsafe sleep caused children's deaths, the BC CFRT reviewed various educational opportunities parents and caregivers have to learn about safe sleep within our Broome County community. The BC CFRT determined the safe sleep message is routinely given at local hospitals, through family care and pediatric physicians, and community agencies. To strengthen this important message, the team sponsored a television commercial, purchased educational materials, and team members participated in several local news reports. Further, organizations such as Mothers and Babies Perinatal Network, Broome County's Health Department and Family Violence Prevention Council reaffirmed their commitment to continue to educate our community about the importance of safe sleep.

The BC CFRT recommends the community continue to invest in educating all types of caregivers regarding safe sleep of infants, including; parents, grandparents, intimate partners, daycare providers, and babysitters. The community should also continue to invest in the training of professionals, such as health care professionals and others who work with families. See *Appendix B* for a complete list of safe sleep recommendations.

Finding #2: Substance Use/Abuse

Another finding of the BC CRFT is the relationship between use of substances and child death. In at least 7 cases, use of prescription drugs, alcohol, or illicit drugs by a primary caretaker was determined to be a contributing factor in the events that led to a child's death. In other cases, impairment of a caretaker was suspected. Tragically, several children died as a result of accidental prescription drug poisoning/overdose.

The BC CRFT found the prescription of opiate drugs the most problematic. The following community recommendations are made:

- Caretakers be better advised by their physicians and pharmacists about the impact various prescriptions may have on their ability to properly attend to and supervise young children.
- Drivers should be advised by their physicians and pharmacists about the impact various medications may have on their ability to drive and respond to dangers in the road.
- All prescription drugs and over-the-counter drugs should be kept out of the reach of children, and certain drugs should be kept in a locked box.
- As improper disposal can cause child death, community education regarding proper disposal of various prescription medications.
- Increase the number of opportunities and continue to emphasize the availability for unused pharmaceuticals to be properly disposed of within the drop off disposal program provided by the Broome County Sheriff's Office.

It should also be noted, many children whose cases were reviewed were exposed to secondhand tobacco smoke, although such exposure was not directly linked to their death. Secondhand smoke exposure is a concern for the overall health and well-being of children and is well established in research

literature as a risk factor specifically related to Sudden Unexpected Infant Death. The risk for Sudden Unexpected Infant Death increases for babies whose mothers smoked while they were pregnant and for those infants exposed after birth. Chemicals in secondhand smoke appear to affect an infant's brain in ways that interfere with the regulation of breathing. In fact, the Surgeon General has concluded that there is no risk-free level of exposure to secondhand smoke for children, as even brief exposure can be harmful.[7]

Finding #3: Consumer Product Safety

Several cases reviewed by the team involved use/misuse of a consumer product. The team concluded the community would greatly benefit from a heightened awareness of possible dangers that could exist in consumer products, particularly those designed for young children. The following recommendations are made:

- Promote community notification of recalled child products.
- Consumers should not modify products from their original design.
- Consumers/caretakers should use products as they are recommended by the manufacturer.
- Since there is no way to assure that second-hand products meet current safety standards, it is recommended that caregivers not use products which are second-hand, found, or of unknown history. It is important that all products be assembled with proper parts as directed by manufacturer instruction.
- Encourage consumers to maintain a file for instructions on the products they purchase ….paying particular attention to when they should stop using the product because of weight/age restrictions. Consumers should flag dates to periodically read instructions. Store these essential documents for use with future children.
- Educate consumers that just because a product is sold in the store it does not mean it is safe or necessary. For instance, crib bumper pads are NOT NECESSARY; yet do present a potential hazard. The American Academy of Pediatrics states "Bumper pads should not be used in cribs. There is no evidence that bumper pads prevent injuries, and there is a potential risk of suffocation, strangulation or entrapment."[8] When shopping for products for babies or children, consumers should carefully inspect product for potential hazards, even if product has not been recalled.
- Children should be supervised when using products/toys.

Finding #4: Reduce Risk - Use Well Established Safety Devices/Procedures

Many deaths reviewed by the team were deemed preventable. The review process identified issues regarding child health and safety that could apply to the broader community, even if a particular child's death could not reasonably have been prevented. Children's health and safety can be maximized by utilizing devices or processes and procedures intended to protect the health and safety of children. Examples include:

[7] U.S. Department of Health and Human Services. 2006**,** The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Retrieved 12/28/12.

[8] American Academy of Pediatrics. Retrieved on 3/18/13 from http://www.aap.org/en-us/about-the-aap/aap-press-room/pages/AAP-Expands-Guidelines-for-Infant-Sleep-Safety-and-SIDS-Risk-Reduction.aspx?nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR%3a+No+local+token.

- Caretakers should have a general understanding of the various developmental milestones of babies and young children. Knowledge of children's developmental ability will enable caretakers to adhere to **safety guidelines appropriate for the age of the child**.
- **Proper adult supervision** is critical to children's health and safety.
- **Use smoke and carbon monoxide detectors.** Ensure batteries are routinely changed.
- **Pools and other bodies of water should be fenced off and locked. Children should always be supervised around bodies of water.**
- **Prevent fatal automobile accidents; use, booster seats, car seats, and seat belts** in the appropriate manner based on weight and age of the child.
- **Baby monitors** can alert caretakers that a baby is having difficulty during sleep; however, monitors need to be placed in a safe location away from the baby as the **electrical cord can cause hazards**.
- **Medications should be disposed of and stored properly. Medications must be** kept out of reach of children. Some medications may be better stored in a locked box.
- **Window locks/guards should be used** to prevent fatal falls. Windows should be free of window treatments with cords.
- **Practice gun safety/keep guns and ammunition locked.**
- **Children should be breast-fed; as it is associated with a reduced risk of Sudden Infant Death Syndrome. Breast-feeding improves mother-child bonding; and promotes positive health**, psycho-social, economic, and environmental effects. [9]
- **Promote preventive healthcare:** prenatal care; pediatric health, dental, and vision care. Promote immunizations.

Basic Service Area: Family Health

Dental Health Education

Few data are available in relation to knowledge about oral health. The School-Based Health Center Dental Program provides education on brushing, flossing, and nutrition at every dental visit. Oral health status indicators are presented in the Dental Health Services section, and the data for oral health come from screenings performed on third grade children. These data indicate a large proportion of third grade children experience untreated dental caries. The data support the ongoing and critical need for dental education in order to preserve permanent dentition and maintain oral health. Poor dental health can lead to localized infections of the bone and surrounding structures, and has been linked to obesity and other chronic diseases including cardiovascular disease and diabetes.

[9] U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Support Breastfeeding*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2011. This publication is available at http://www.surgeongeneral.gov.

***Healthy People 2020* Objectives — Primary & Preventive Health Care**

C-15 **Increase the proportion of women who receive a cervical cancer screening based on the most recent guidelines.**
Target: 93.0%

C-16 **Increase the proportion of adults who receive a colorectal cancer screening based on the most recent guidelines.**
Target: 70.5%

C-17 **Increase the proportion of women who receive a breast cancer screening based on the most recent guidelines.**
Target: 81.1%

HDS-4 **Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high.**
Target: 92.6%

HDS-5 **Reduce the proportion of persons in the population with hypertension.**
HDS-5.1 Reduce the proportion of adults with hypertension. (26.9%)
HDS-5.2 Reduce the proportion of children and adolescents with hypertension. (3.2%)

HDS-6 **Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.**
Target: 82.1%

Primary and Preventive Health Care Services

Data for primary and preventive health care is from the Expanded Behavioral Risk Factor Surveillance System (BRFSS) for 2008–2009 (Appendix B169-B194). In Broome County, the age-adjusted percent of women 18 years of age or older that have had a Pap smear in the past three years was 75.8%, lower than NYS (82.7%) and Upstate NY (82.6%). Although this difference was not statistically significant, Broome County was in the fourth quartile for the state and well below the *Healthy People 2020* objective of 93%. The percent of women age 40 and older with mammography screening in the past 2 years was 85.7% in Broome County, 79.7% in NYS, and 81.9% in Upstate NY. In this area, Broome County exceeded the *Healthy People 2020* objective of 81.1%. The percentage of adults who have had their cholesterol checked in the last 5 years was 73.8% for Broome County and 77.3% for NYS and 79.3% for Upstate NY, though these differences were not significant. The percent of adults who reported ever being told that they had high blood pressure was 28.9% for Broome County compared to 25.7% for NYS and 27.1% for Upstate NY. The prevalence of self-reported hypertension was higher than the *Healthy People 2020* objective of 26.9%. In relation to county rankings within NYS, Broome County was in the first quartile for mammography screening, in the third quartile for cholesterol and high blood pressure, and in the fourth quartile for cervical cancer screening.

***Healthy People 2020* Objectives — Lead Poisoning**

EH-8 **Reduce blood lead levels in children.**
- **EH-8.1** Eliminate blood lead levels in children. (no applicable measure)
- **EH-8.2** Reduce the mean blood lead levels in children. (1.4 μg/dL average blood lead level in children age 1 to 5)

OSH-7. **Reduce the proportion of persons who have elevated blood lead concentrations from work exposures.**
- **Target:** 20.2 persons per 100,000 employed adults

Lead Poisoning

Information about blood lead levels and lead screening can be found in Appendices C1-C7. The incidence of children < 72 months of age with confirmed blood lead levels ≥ 10 mcg/dL was 14.3 per 1,000 children, which was significantly higher than the NYS rate of 5.3 per 1,000 and the Upstate NY rate of 7.7 per 1,000 children. The percent of children born in 2008 with a lead screening by 9 months was 1.3% and was significantly lower than NYS (6.8%) and Upstate NY (2.9%). For this same cohort of children, 56.9% in Broome County had a lead screening by 18 months (compared to NYS 69.5% and Upstate NY 65.4%) and 33.3% had at least two lead screenings by 36 months (compared to NYS 52.9% and Upstate NY 45.2%). Broome County ranks in the third quartile in NYS for lead screening and in the fourth quartile for incidence of elevated blood lead levels among children under the age of six. Examination of trends shows steadily improving rates in lead screening among children (by age 18 months) with rates increasing from 44.2% in 2001 to 56.9% in 2007. Simultaneously, the incidence of elevated blood lead levels among children under the age of 6 appears to be declining. Despite these gains, additional effort in the area of lead screening is needed to prevent lead exposure and identify children with high blood lead levels.

For employed persons age 16 and older, rates for elevated blood lead levels (≥10 mcg/dL) in Broome County were significantly lower than both NYS and Upstate NY (15.2 per 100,000 vs. 23.2 and 24.0 respectively). Broome County ranked in the second quartile for this indicator and has met the *Healthy People 2020* objective of less than 20.2 per 100,000 employed persons for this indicator (Appendices C8, C18, & C19.

***Healthy People 2020* Objectives – Prenatal Care & Infant Mortality**

MICH-1 **Reduce fetal and infant deaths.**
- **MICH-1.1** Fetal deaths at ≥20 weeks gestation (5.6 fetal deaths per 1,000 live births & fetal deaths)
- **MICH-1.2** Fetal & infant deaths during perinatal period (28 weeks gestation to ≥7 days after birth; 5.9 per 1,000 live births & fetal deaths)
- **MICH-1.3** Infant deaths (within 1 year)
- **MICH-1.4** Neonatal deaths (within the first 28 days of life)
- **MICH-1.5** Postneonatal deaths (between 28 days & 1 year)

MICH-3 **Reduce child deaths.**
- **MICH-3.1** Children age 1 to 4 years (25.7 deaths per 100,000 population)
- **MICH-3.2** Children age 5 to 9 years (12.3 deaths per 100,000 population)

MICH-4 **Reduce adolescent and young adult deaths.**
- **MICH-4.1** Children age 10 to 14 years (15.2 deaths per 100,000 population)
- **MICH-4.2** Children age 15 to 19 years (55.7 deaths per 100,000 population)
- **MICH-4.3** Children age 20 to 24 years (88.5 deaths per 100,000 population)

MICH-5 **Reduce maternal deaths.**
- **Target:** 11.4 maternal deaths per 100,000 live births.

MICH-10 **Increase the proportion of pregnant women who receive early and adequate prenatal care.**
- **MICH-10.1** Care beginning in first trimester of pregnancy (77.9%)
- **MICH-10.1** Early and adequate prenatal care (77.6%)

Prenatal Care and Infant Mortality

Maternal and infant health indicators including prenatal care and infant mortality can be found in Appendix C20. Appendices C21-C91 contains additional charts and maps for each indicator. For the period from 2008–2010, the percent of births with early prenatal care (those who began prenatal care in the first trimester) was 77.5% for Broome County which was significantly higher than both NYS (72.8%) and Upstate NY (75.2%). Broome County ranked in the second quartile on this indicator and is just slightly under the *Health People 2020* objective of 77.9%. The proportion of births with late (in the third trimester) or no prenatal care was significantly lower for Broome County than for NYS (4.0% vs. 5.9%). The Kotelchuck Index is one measure used to examine the level of prenatal care and is defined as the percentage of births to women who began care in the first trimester of pregnancy and completed at least 80% of the expected prenatal visits. For Broome County, the percent receiving adequate prenatal care as defined by this index was 72.1%, which was significantly higher than both NYS (66.0%) and Upstate NY (68.2%). Broome County ranked in the second quartile for this indicator, but was below the *Healthy People 2020* objective of 77.6%. The percentage of women in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC Program) with early (first trimester) prenatal care was 81.9% for Broome County. Although this value was significantly lower than the proportion for NYS (85.6%) and Upstate NY (86.3%). For this low income group, the *Healthy People 2020* objective is currently being met. Trend data indicate that early prenatal care had declined over a five year period between 2003 and 2007, but since this time it has markedly increased. Thus, current strategies have had

a positive impact in reversing a five-year pattern and continued efforts in this this area will assist in reaching *Healthy People 2020* objectives.

For the period 2008–2010, infant (age < 1 year) mortality was significantly higher for Broome County than for NYS and Upstate NY (8.7 per 1,000 live births vs. 5.3 and 5.7 respectively). Over this three-year period, there were 54 infant deaths or an average of 18 deaths per year in the county. Neonatal (age < 28 days) mortality rates were also significantly higher for Broome County than for NYS and Upstate NY (6.1 per 1,000 live births vs. 3.6 and 4.0 respectively). Over the same three-year period, there were 38 neonatal deaths or an average of 12.7 deaths per year in the county. For both of these indicators, Broome County was in the fourth quartile for the state. Perinatal mortality for 20 weeks gestation to 7 days of life was 7.7 per 1,000 live births and for 20 weeks gestation to 28 days of life, was 10.9 per 1,000 live births in Broome County. These two indicators were similar to statewide rates. Over the three year period, there were 68 perinatal deaths between 20 weeks gestation and 28 days of life (average 22.7 perinatal deaths per year). Of these, 48 deaths or 70% occurred in the 28 weeks gestation to 7 days of life period. The post-neonatal (1 month to 1 year) mortality rate was 2.6 per 1,000 live births (16 deaths) in the three year period. The fetal death rate (> 20 weeks gestation) was 4.8 per 1,000 live births (30 deaths) over the three year period. These rates were not significantly different than NYS or Upstate NY. Trend data for infant deaths, neonatal deaths, post-neonatal deaths, and spontaneous fetal deaths appear in Appendix C51-C62. Up until 2007, there were marked increases in both infant and neonatal deaths. This pattern, however, has reversed since 2008. Notably, the fetal death rate has trended downward over the period with the three-year average for fetal deaths decreasing from 8.2 per 1,000 live births in 2000 to 4.8 per 1,000 live births in 2009.

The maternal mortality rate for Broome County was 16.2 per 100,000 live births, which represented only 1 death over the three-year period from 2008-2010 (Appendices C63 & C64). Because the number of deaths was small, the local rate is considered unstable and trends reflect this high variability. This rate placed Broome County in the third quartile for the state and just over the *Healthy People 2020* objective of 11.4 per 100,000 live births.

***Healthy People 2020* Objectives — Family Planning**

FP-5	**Reduce the proportion of births occurring within 24 months of a previous birth.**	
	Target:	29.8%
FP-8	**Reduce pregnancies among adolescent females.**	
	FP-8.1	Age 15 to 17 years (36.2 pregnancies per 1,000)
	FP-8.2	Age 18 to 19 years (105.9 pregnancies per 1,000)
MICH-8	**Reduce low birth weight (LBW) and very low birth weight (VLBW).**	
	MICH-8.1	Low birth weight (LBW) (7.8%)
	MICH-8.2	Very low birth weight (VLBW) (1.4%)
MICH-9	**Reduce preterm births.**	
	MICH-9.1	Total preterm births (11.4%)
	MICH-9.2	Late preterm or live births at 34 to 36 weeks of gestation (8.1%)
	MICH-9.3	Live births at 32 to 33 weeks of gestation (1.4%)
	MICH-9.4	Very preterm or live births at less than 32 weeks of gestation (1.8%)

Family Planning

For the 3-year period from 2008–2010, Broome County had a significantly higher percentage of births within 24 months of a woman's previous pregnancy than both NYS and upstate NY (25.3% vs. 18.0% and 21.1% respectively). Although Broome County ranked in the fourth quartile for this indicator, the rate was less than the *Healthy People 2020* target of 29.8%. The percent of births to teens aged 15–17 was 2.2% and for teens age 15-19 was 8.3%. Although the percentage for the younger age group was similar to NYS, the percentage for teens age 15-19 was significantly higher than both NYS and Upstate NY (6.6% and 6.8% respectively). Broome County ranked in the third quartile for the former and in the fourth quartile for the latter. The percent of births to women 35 years of age and older was 12.0% for Broome County, appreciably lower than the 19.4% for NYS and 19.0% for Upstate NY. In Broome County, the three year total for induced abortions was 2,290. Of these, 376 or 16.4% occurred in the 15–19 population. The abortion ratio (the number of induced abortions per 100 live births) for all women was 37.0 per 100. For women aged 15 to 19, the abortion ratio was 78.7 per 100, which is more than twice the overall ratio. For all ages, and in particular for the 15–19 year-old age group, the abortion ratio was significantly lower than the rest of the state. These data are located in Appendix B under Family Planning (Appendices B102-B135).

The percentage of births to women 25 years of age or older who did not have at least a high school education was 7.7% as compared to 14.8% for Upstate NY and 10.3% for NYS. These differences were statistically significant and Broome County ranked in the second quartile for this indicator. The percent of births to out of wedlock mothers was 45.5% for Broome County, which was significantly higher than the 41.4% for NYS and 37.6% for Upstate NY. The percent of first births was 41.4% for Broome County compared to 43.5% for NYS and 41.3% for Upstate NY. The percent of births that were multiple births was 3.9% for Broome County, which was similar to Upstate NY and NYS. The Caesarian section rate for Broome County was 35.2% which was similar to the NYS and Upstate NY. Trend data indicate that the percentage of out-of-wedlock births, the percentage of multiple births, and the percentage of births delivered by Cesarean section have steadily risen between 2001 and 2010 (see Appendices C21-C27, also C49 & C50).

In relation to premature births and low birthweight, Broome County figures were similar to NYS and Upstate NY for: very low birthweight (<1.5 kg, 1.7%), very low birthweight among singleton births (1.2%), low birthweight (<2.5 kg, 7.7%), and low birthweight among singleton births (6.0%). Broome County ranked in the fourth quartile for all categories of low birthweight. The percent of premature births less than 32 weeks in gestation was 2.0% for Broome County, ranking in the third quartile for the state. This percentage was 9.9% for 32 to < 37 weeks gestation, and 10.8% overall (<37 weeks gestation). Broome County was appreciably higher than the *Healthy People 2020* objectives for all gestational time points and slightly higher than the *Prevention Agenda 2017* target of 10.2% for preterm births. Trend data for low birthweight reveals that, while NYS and Upstate NY rates have remained relatively the same over the 2003 to 2007 time period, rates in Broome County have risen from 6.6 per 1,000 women to 9.2 per 1,000 women in 2007. Information about birthweight can be found in Appendices C65-C78). The number of premature births and associated low birthweight may represent a growing concern for Broome County.

The percent of births with a 5-minute APGAR score of less than 6 was 0.9% for Broome County compared to 0.7% for NYS and Upstate NY. Broome County was significantly higher than statewide and ranked in the fourth quartile for this indicator (see Appendices C79 & C80).

***Healthy People 2020* Objectives — Nutrition**

NWS-21 **Reduce iron deficiency among young children and females of childbearing age.**
- **NWS-21.1** Children age 1 to 2 years (14.3%)
- **NWS-21.2** Children age 3 to 4 years (4.3%)
- **NWS-21.3** Females aged 12 to 49 years (9.4%)

NWS-22 **Reduce iron deficiency among pregnant females.**
- **Target:** 14.5%

MICH-21 **Increase the proportion of infants who are breastfed.**
- **MICH-21.1** Infants who are ever breastfed (81.9%)
- **MICH-21.2** Infants who are breastfed at 6 months (60.6%)
- **MICH-21.3** Infants who are breastfed at 1 year (34.1%)
- **MICH-21.4** infants who are breastfed exclusively through 3 months (46.2%)
- **MICH-21.4** infants who are breastfed exclusively through 6 months (25.5%)

MICH-22 **Increase the proportion of employers that have worksite lactation support programs.**
- **Target:** 38%

MICH-23 **Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life.**
- **Target:** 14.2%

Nutrition

The percent of pregnant women participating in the WIC program who have anemia in the third trimester was significantly lower for Broome County than for NYS (31.8% vs. 37.3%) and was similar to Upstate NY. Broome County ranked in the second quartile for the state. The prevalence of anemia among low income pregnant women was more than twice the *Healthy People 2020* objective of 14.5%.

For Broome County, the percentage of infants who were fed any breast milk in the delivery hospital was 74.1% and who were exclusively breastfed in the hospital was 66.1%. This latter figure was higher than both NYS (42.5%) and the Prevention Agenda 2017 objective of 48.1%. The percentage of WIC mothers who breastfed for at least six months was 19.8%, and Broome County was significantly lower than NYS (39.7%) and Upstate NY (28.7%) for this indicator. Information about breastfeeding is located in Appendices C44-C48).

***Healthy People 2020* Objectives — Injury Prevention**

IVP-9 **Prevent an increase in poisoning deaths.**
IVP-9.1 Among all persons (13.1 deaths per 100,000 population)

IVP-11 **Reduce unintentional injury deaths.**
Target: 36.0 deaths per 100,000 population

IVP-12 **Reduce nonfatal unintentional injuries.**
Target: 9.2 deaths per 100,000 population

IVP-13 **Reduce motor vehicle crash-related deaths.**
IVP-13.1 12.4 deaths per 100,000 population

IVP 23 **Prevent an increase in fall-related deaths.**
IVP-23.2 Among adults age 65 and older (45.3 deaths per 100,000 population)

OA-11 **Reduce the rate of emergency department (ED) visits due to falls among older adults.**
Target: 4,711.6 ED visits per 100,000

IVP-29 **Reduce homicides.**
Target: 5.5 homicides per 100,000 population

Injury Prevention

Injury data appear in Appendix C92 for the time frame 2008-2010 and additional charts and maps are provided in Appendices C93-C133. The 3-year age-adjusted hospitalization rate for self-inflicted injury is significantly higher for Broome County (9.7 per 10,000) than for NYS (5.1 per 10,000) or Upstate NY (6.2 per 10,000). For the 15–19 age category, the hospitalization rate for self-inflicted injury was 12.0 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 third quartile for the 15-19 age group. The assault-related hospitalization rate (age-adjusted) was significantly lower for Broome County than for NYS (2.7 vs. 4.7per 10,000) and Broome County was ranked in the third quartile for this indicator. For unintentional injuries, the age-adjusted hospitalization rate in Broome County was 67.7 per 10,000, which was significantly higher than NYS and Upstate NY (64.5 and 65.1 respectively) and Broome County was ranked in the third quartile for this indicator. The unintentional injury hospitalization rate was highest in the 65 years and older age category (310.1 per 10,000), significantly higher than both NYS (260.9) and Upstate NY (276.6). The unintentional injury hospitalization rate was also high in the 25–64 age group (49.2 per 10,000), and was statistically higher than statewide rates (NYS 46.5, Upstate NY 46.4). The unintentional injury hospitalization rate was lowest in the less than 10 years age group (19.8 per 10,000) and significantly lower rates were observed for Broome County in the 15-24 age bracket (24.4 per 100,000 vs. 31.9 for NYS and 32.7 for Upstate NY).

In Broome County, the age-adjusted hospitalization rate for poisoning was 11.7 per 10,000 and was significantly higher than NYS and Upstate NY (10.2 per 10,000 for both). For this indicator, Broome County ranked in the third quartile. For traumatic brain injury, the age-adjusted hospitalization rate was 9.2 per 10,000 and was similar to the state averages. Notably, the age-adjusted hospitalization rates for self-inflicted injury (3-year averages) have shown a steady increase from 5.1 in 2002 to 9.7 in 2010. Similar trends were observed for unintentional injury hospitalizations among those age 25-64 years and 65 and older). Finally, the age-adjusted hospitalization rate for poisoning (3-year averages) increased

markedly from 6.7 in 2002 to 11.7 in 2009. These trends raise a level of concern about mental and emotional health in Broome County.

The age-adjusted hospitalization rate related to falls for the period 2008–2010 was significantly higher for Broome County than for the state (38.8 per 10,000 vs. 36.2 for NYS and 36.8 for Upstate NY). 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 first quartile for fall hospitalizations among 10–14 year-olds. In contrast, the county ranked in the fourth quartile among 65-74 year-olds and in the third quartile for those 75-84 and 85 years and older.

Trends in fall-related hospitalizations across multiple age groups appear in Appendix C112-C123. In general, no appreciable patterns were observed for younger age groups. Slightly increasing trends are 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.

Basic Service Area: Disease Control

***Healthy People 2020* Objectives — Sexually Transmitted Diseases**

STD-1 **Reduce the proportion of adolescents and young adults with *Chlamydia trachomatis* infections.**
- **STD 1.1** Females aged 15 to 24 years attending family planning clinics (6.7%)
- **STD 1.2.** Females aged 24 years and under enrolled in National Job Training Program (11.5%)
- **STD 1.3** Males aged 24 years and under enrolled in National Job Training Program (6.3%)

STD-5 **Reduce the proportion of females aged 15-44 years who have ever required treatment for pelvic inflammatory disease (PID)**
- **Target:** 3.8%

STD-6 **Reduce gonorrhea rates.**
- **STD 6.1** Females aged 15 to 44 years (251.9 new cases per 100,000 population)

STD-7 **Reduce sustained domestic transmission of primary and secondary syphilis.**
- **STD 7.1** Females (1.3 new cases per 100,000 population)
- **STD 7.2** Males (6.7 new cases per 100,000 population)

Sexually Transmitted Diseases

Information on sexually transmitted diseases (STDs) appears in Appendix D1-D29. For the time period 2008–2010, there were 10 cases of early syphilis (primary, secondary or latent of less than 1 year duration) in Broome County, which corresponds to a rate of 1.7 cases per 100,000 population. This rate was significantly lower than for the state (12.8 per 100,000). Because of the small number of cases, the local rate is considered unstable and demonstrates more fluctuation over time (Appendices D12 &

D13).This rate is just slightly above the *Healthy People 2020* objective of 1.7 cases per 100,000 population.

For gonorrhea, there was a 3-year total of 198 cases across all age groups (33.5 per 100,000 population). For the 15–19 year-old age group specifically, this rate was 3.6 times the overall rate (120.1 per 100,000). In comparison, the age-specific (15–19 years) gonorrhea rate for NYS was 335.5 per 100,000 population and for Upstate NY, it was 210.3 per 100,000. Broome County was in the third quartile for early syphilis, gonorrhea (all ages), and gonorrhea among 15–19 year-olds. The gonorrhea rate in Broome County is well below the *Healthy People 2020* rate of 251.9 per 100,000 population. Gonorrhea rates had decreased in 2004 and 2005, increased between 2007 and 2008, and are trending downward (Appendices D14-D17).

For this same time period, the Chlamydia rate for males was 185.9 per 100,000 population for all ages, significantly lower than NYS (305.1 per 100,000) but not Upstate NY (178.9 per 100,000). Rates in the 15–19 year-old population and 20–24 year old population were appreciably higher (499.9 per 100,000 and 875.7 per 100,000 respectively). For females, the overall Chlamydia rate was 340.9 per 100,000 population and the age-specific rates were 1,637.1per 100,000 for 15–19 year-olds and 1,668.2 per 100,000 for 20–24 year-olds. For both males and females across all age categories, the Chlamydia rate was significantly lower than the statewide rate. The overall and age-specific Chlamydia rates for males placed Broome County in the third (age-specific) or fourth (all ages) quartile for NYS; and for females, Broome County ranked in the second (age 20-24) or third quartile (age 15-19 and all ages). Chlamydia rates have been steadily climbing for males, though at a slower rate for Broome County than for NYS overall and remained relatively stable for females (Appendices D18-D28).

The pelvic inflammatory disease (PID) hospitalization rate for Broome County was 1.9 per 10,000 with a total of 22 hospitalizations between 2008 and 2010. This rate was significantly lower than for NYS (3.7 per 10,000) and Broome County ranked in the second quartile for this indicator. For all STDs, the county rate was about half of the statewide rate. Rates were highest for Chlamydia among females age 20–24 and lowest for early syphilis (see Appendix D29)

***Healthy People 2020* Objectives — Tuberculosis**

IID-29 **Reduce tuberculosis.**
Target: 1.0 new case per 100,000 population

Tuberculosis

The incidence of tuberculosis in Broome County ranked in the third quartile for the state at a rate of 1.2 per 100,000 population (excluding prison inmates) representing only 7 cases for the 3-year period 2008–2010 (see Appendices D30 & D44-D45). The tuberculosis rate in NYS was 5.4 per 100,000, which is clearly much higher than the county. In this area, Broome County ranked in the third quartile. Because of the small number of cases (<20), the rate is considered unstable and demonstrates more fluctuation over time. The incidence of tuberculosis infection was slightly higher than the *Healthy People 2020* objective of 1.0 new case per 100,000 population.

***Healthy People 2020* Objectives — Communicable Diseases**

IID-3 **Reduce meningococcal disease.**
Target: 1,094 cases per 100,000 population

IID-23 **Reduce hepatitis A.**
Target: 0.3 cases per 100,000 population

IID-25 **Reduce hepatitis B.**
Target: 1.3 cases per 100,000 population (age 19 and older)

IID-26 **Reduce new hepatitis C infections.**
Target: 0.25 new cases per 100,000 population

Communicable Diseases

Pertussis

In Broome County, from 2008 to 2010, the incidence of pertussis (whooping cough) was 1.5 per 100,000 with a total of 9 cases (see Appendices D30 & D32-D33). This rate was half the rate for NYS (3.0 per 100,000) and one-third the rate for Upstate NY (4.3 per 100,000). For pertussis incidence, Broome County ranked in the second quartile. Trend data from 2001 to 2010 reveal two spikes. One outbreak occurred during 2004 when the incidence rose to 56.1 per 100,000 population and another during 2006 with an incidence of 23.4 per 100,000. Rates have remained low since 2007. Pertussis is spread through airborne contact with respiratory droplets or discharges. Most fatalities occur in children less than 1 year of age, and even then the case fatality rate is low. Pertussis is a vaccine-preventable disease but protection often only lasts through childhood. A resurgence of disease in adults and adolescents poses a public health threat to infants who have not been vaccinated.

Mumps

In Broome County, from 2008 to 2010, there were no reported cases of mumps (Appendices D30 & D34-D35). This rate was 5.5 per 100,000 for NYS and 4.0 per 100,000 for Upstate NY where the incidence increased dramatically in 2009 and 2010. For mumps incidence, Broome County ranked in the second quartile. Although trend data from 2001 to 2010 reveals a small increase in 2007, the incidence of mumps has remained very low for most of this period.

Meningococcal Disease

In Broome County, from 2008 to 2010, there were 6 reported cases of meningococcal disease (Appendix D30 & D36-D37). This rate was 1.0 per 100,000 for Broome County as compared to 0.2 per 100,000 for both NYS and Upstate NY. For meningococcal incidence, Broome County ranked in the fourth quartile. Although trend data between 2001 and 2010 show considerable variability, the three-year averages suggest that there has been a general upward trend in incidence between 2005 and 2010.

Haemophilus influenzae

Haemophilus influenzae type b (Hib) causes infections of the blood, pneumonia, and acute bacterial meningitis. Seven cases of *Haemophilus influenzae* were diagnosed during 2008 to 2010 for an incidence of 1.2 per 100,000 population (Appendices D30 & D38-D39). Because the number of cases is less than 20, the 3-year estimate for incidence is considered unstable. Nonetheless, it is similar to the rates observed across NYS. Immunization against Hib has reduced the incidence of invasive disease and, in particular, early childhood meningitis.

Hepatitis A

Hepatitis A is an acute, self-limiting infectious disease caused by the Hepatitis A virus (HAV), which is transmitted by the fecal-oral route via contaminated food or drinking water. This illness is often associated with travel to areas with poor hygiene standards. Infection with the virus confers lifelong immunity and can be prevented by vaccination. From 2008 to 2010, there were 5 reported cases of Hepatitis A in Broome County with an incidence 0.8 per 100,000 population, which was identical to the rate for NYS. Trend data show an increase in the number of cases in 2004 and 2008-2009. The rate was higher than the *Healthy People 2020* objective for this indicator (0.3 per 100,000 population). (Refer to Appendices D30 & D40-D41)

Hepatitis B

Hepatitis B is caused by infection with the Hepatitis B virus (HBV) and transmission results from exposure to infectious blood or body fluids via unprotected sexual contact, blood transfusions, re-use of contaminated needles and syringes, and vertical transmission from mother to child during childbirth. The disease causes an inflammation of the liver that can result in cirrhosis or cancer and potentially death. This infection may be acute or chronic and can be prevented by administering a series of vaccinations. Post-exposure prophylaxis with immunoglobulin is also available. From 2008 to 2010, three cases of Hepatitis B were diagnosed in Broome County (Appendices D30 & D42-D43). Because of the small number of cases, the incidence rate of 0.5 per 100,000 population is unstable and trend data shows considerable variability. Broome County ranked in the second quartile with statewide rates just slightly higher. The overall incidence was lower than the *Healthy People 2020* target of 1.3 cases per 100,000 population.

Escherichia coli

Infection with *Escherichia coli* O157:H7, a foodborne illness, can cause severe bloody diarrhea and may result in acute kidney failure from destruction of red blood cells. The young and elderly are particularly susceptible with *E. coli* being the leading cause of kidney failure in children. A major source of infection is undercooked ground beef. From 2008 to 2010, only 1 case of *E. coli* was diagnosed in Broome County (Appendices D30 & D46-D47) yielding an incidence rate of 0.2 per 100,000 population (unstable estimate due to less than 20 cases). Broome County ranked in the second quartile, and this rate was lower than the rest of the state. The incidence of *E. coli* demonstrates considerable variability over time due to the small number of cases with outbreaks evident in 2005, 2007, and 2009.

Salmonella

Salmonella infection may be caused by a number of different species which are pathogenic for both animals and humans causing acute abdominal pain and diarrhea. Salmonellosis is considered a foodborne illness and often goes unrecognized unless a point source outbreak occurs. Transmission can be prevented by avoiding raw or undercooked eggs, poultry, and meat. For 2008–2010, the incidence of salmonella infection in Broome County was 10.8 per 100,000 (total of 64 cases). Trend data suggests that the number of cases for salmonella has been increasing since 2004. Broome County ranked in the second quartile with slightly lower incidence than NYS (13.9 per 100,000) or Upstate NY (12.9 per 100,000). (see Appendices D30 & D48-D49)

Shigellosis

Shigellosis infection also involves a number of different species and causes an acute bacterial diarrhea. Transmission occurs via the fecal-oral route and prevention is directed at isolation during acute illness and through safe food handling and hand hygiene. The incidence of *Shigella* (3-year estimate) in Broome County was 1.5 per 100,000 population with 9 cases reported between 2008-2010. This rate was significantly lower than both NYS (4.4 per 100,000) and Upstate NY (3.2 per 100,000). The small number of cases results in an unstable rate with variability from small fluctuations in the number of cases (Appendices D30 & D50-D51).

Lyme disease

Lyme disease, a tick-borne zoonosis caused by *Borrelia burgdorferi*, is characterized by a distinctive skin lesion and has systemic neurologic, rheumatologic, and cardiac manifestations. Seasonal and geographic patterns are evident with initial infection occurring primarily during summer months in the Northeastern US. The 3-year estimate (2008–2010) of Lyme disease incidence for Broome County was 11.0 per 100,000 resulting from a reported 65 cases (Appendices D30 & D52). This rate was a fraction of the rate for NYS (42.4 per 100,000) and Upstate NY (66.2 per 100,000). Broome County ranked in the second quartile for this indicator.

Pneumonia and Influenza

Comparison of pneumonia and influenza hospitalization rates among those 65 and older were higher for Broome County than for NYS and Upstate NY (172.3 per 10,000 vs. 127.9 and 140.1 respectively) (Appendices D30-D31). In comparison to other counties in the state, Broome County was in the third quartile with a total of 1,688 hospitalizations for the 2008–2010 time period. These data reflect International Classification of Diseases (ICD) codes 480–487.

***Healthy People 2020* Objectives — Immunizations**

IID-12 Increase the percentage of children and adults who are vaccinated annually against seasonal influenza.

- **IID12.1** Children age 6 to 23 months (80%)
- **IID12.2** Children age 2 to 4 years (80%)
- **IID12.3** Children age 5 to 12 years (80%)
- **IID12.4** Children age 13-17 years (80%)
- **IID12.5** Noninstitutionaled adults age 18 to 64 (80%)
- **IID12.6** Noninstitutionaled high-risk adults age 18 to 64 (90%)
- **IID12.7** Noninstitutionaled adults age 65 and older (90%)
- **IID12.8** Institutionaled adults age 18 and older (90%)
- **IID12.9** Healthcare personnel (90%)
- **IID12.10** Pregnant women (80%)

IID-13 Increase the percentage of adults who are vaccinated against pneumococcal disease.

- **IID-13.1** Pneumococcal vaccine (90%)

Immunizations

Information about immunizations for adults is located in Appendices D53-D60. For Broome County in 2008–2010, the percent of adults age 65 and over who received a flu shot in the past year was 75.5% and was not significantly different than the 75.0% for NYS. The percent of adults age 65 and older who have ever received the pneumococcal pneumonia vaccine was 68.3% for Broome County, which was also similar to NYS (64.7%) While these proportions ranked Broome County in the second and third quartiles respectively, they were well below the *Healthy People 2020* objective of 90%. Broome County exceeded the *Prevention Agenda 2017* objective of 66.2% for flu immunization among adults age 65 and older.

***Healthy People 2020* Objectives — Cancer**

C-1 **Reduce the overall cancer death rate.**
Target: 160.6 deaths per 100,000 population

C-2 **Reduce the lung cancer death rate.**
Target: 45.5 deaths per 100,000 population

C-3 **Reduce the female breast cancer death rate.**
Target: 20.6 deaths per 100,000 females

C-4 **Reduce the death rate from cancer of the uterine cervix.**
Target: 2.2 deaths per 100,000 females

C-5 **Reduce the colorectal cancer death rate.**
Target: 14.5 deaths per 100,000 population

C-6 **Reduce the oropharyngeal cancer death rate.**
Target: 2.3 deaths per 100,000 population

C-7 **Reduce the prostate cancer death rate.**
Target: 21.2 deaths per 100,000 males

C-8 **Reduce the rate of melanoma cancer deaths.**
Target: 2.4 deaths per 100,000 population

C-11 **Reduce late stage female breast cancer.**
Target: 41.0 new cases per 100,000 females

Chronic Diseases: Cancer

Cancer data are presented in Appendices D61-D117. These data are based on select County Health Assessment Indicators from the NYS Department of Health which are drawn from the NYS Cancer Registry for the years 2007–2009. Early stage cancer is defined as invasive cancers that are limited to the tissue of origin. Small area analyses were available for colorectal, lung, breast and prostate cancers. These analyses calculated the expected incidence as the number of people in a given zip code that would be expected to develop cancer within a 5-year period if the zip code had the same rate of cancer as the state as a whole. Zip codes with small numbers are combined with larger neighboring zip codes.

Each year an estimated 1,287 people are diagnosed with cancer, and it is responsible for 445 deaths per year in Broome County. Incidence and mortality is somewhat higher for males than females. Between 2000 and 2009, overall cancer rates in Broome County remained relatively stable. For the period 2007-2009, the crude mortality from all cancers was 233.1 per 100,000 population and the age-adjusted mortality was 176.2 per 100,000 population. Although the overall rate is significantly higher than NYS as a whole (163.0 per 100,000), it ranks Broome County in the second quartile. Both the crude and age-adjusted rates were higher than the *Healthy People* 2020 objective of 160.6 deaths per 100,000 population.

Cancer incidence and mortality by gender are provided in Appendices D62-D64. The greatest burden of disease based on absolute number of cases results from prostate cancer in men with an average 106 cases per year and breast cancer in women, with an average 162 cases per year. An estimated 130 persons are diagnosed each year with colon, rectal, or colorectal cancer and 160 persons with lung cancer. Lung cancer is responsible for an estimated 128 deaths per year; colon, rectal, or colorectal cancer for 44 deaths per year; breast cancer for 30 deaths per year in women and prostate cancer for 26 deaths per year in men.

For the period 2007-2009, the incidence of cancer of the oral cavity and pharynx was 15.1 per 100,000 for Broome County (third quartile) and the age-adjusted mortality rate was 2.6 per 100,000. None were significantly different than NYS or Upstate NY. Early diagnosis occurs in about one-third of cases for both males and females. The age-adjusted mortality was slightly higher than the *Healthy People 2020* objective of 2.3 per 100,000 population. (see Appendices D69-D71)

For colorectal cancer in Broome County, the age-adjusted incidence rate was 51.2per 100,000 (third quartile) and the age-adjusted mortality rate was 17.7 per 100,000 (third quartile) for the period 2007-2009. No significant difference was noted between Broome County and either NYS or Upstate NY. Almost half of all colorectal cancers are diagnosed at an early stage for both males and females. For the period 2000-2009, both the incidence and mortality have been relatively stable. Colorectal cancer mortality was higher than the *Healthy People 2020* objective of 14.5 per 100,000 population. Analysis of colorectal cancer by zip code revealed that females in Chenango Forks and Marathon had more than 50% above the expected rate. The incidence rates of colorectal cancer for males in Deposit, Kirkwood, Newark Valley, and Vestal as well as for most of Binghamton (13903, 13904, and 13905) were 15% to 49% above the expected rate as was the incidence for females in Conklin, Newark Valley, Port Crane, Windsor, and the east side of Binghamton (13904). Colorectal cancer rates were 15% to 50% below the expected rates for males in Windsor and females in Vestal. The areas with the largest number of cases were the population centers of Endicott, Johnson City, Vestal, and Binghamton. (see Appendices D72-D77)

In Broome County, the incidence of cancer of the lung and bronchus was similar to NYS (64.1 vs. 63.8 per 100,000). Even though Broome County was ranked in the top quartile, colorectal cancer incidence in Broome County was significantly higher than Upstate NY. Only about 15% of lung cancers are diagnosed at an early stage. Lung and bronchial cancer mortality was significantly higher in Broome County (48.7 per 100,000 population) than for NYS (42.8 per 100,000). County rankings within the state placed Broome County in the second quartile for deaths due to lung and bronchial cancer. Both the incidence and mortality remained level over the period 200-2009. Broome County is not currently meeting the *Healthy People 2020* objective of reducing the lung cancer death rate to below 45.5 per 100,000 population. The incidence of lung and bronchial cancer among males was 76.3 per 100,000 as compared to 56.0 per 100,000 among females. Gender-specific mortality rates were 54.1 per 100,000 for males and 35.8 per 100,000 for females. In the small area analysis, lung cancer in males was more than 100% above the expected rate in Deposit. Lung cancer incidence was more than 50% above expected for males in Harpursville, Newark Valley, and Richford. In no areas of the county did the expected rate for females exceed 50%. As lung cancer is closely linked to smoking and increases with age, the higher than expected rates in these areas could reflect the smoking history of their older adult population. (see Appendices D79-D86)

Broome County ranked in the third quartile for mortality from melanoma, a highly malignant form of skin cancer. The mortality rate for Broome County was 2.5 per 100,000 population compared to the NYS rate of 2.1 per 100,000. In this area, Broome County did not meet the *Healthy People 2020* objective of 2.4 per 100,000. Melanoma incidence was nearly twice as high for males as for females (28.9 vs. 16.1

per 100,000) and three times as high for mortality (4.4 vs. 1.4 per 100,000) which given the small number of deaths (n=7) should be interpreted cautiously. Fortunately, given the aggressive nature of this form of cancer, approximately 80% of malignant melanomas are diagnosed at an early stage. (see Appendix D61 & D78)

The incidence of female breast cancer in Broome County was 128.7 per 100,000 females, which was similar to NYS (126.9 per 100,000) and not significantly different from Upstate NY (136.1 per 100,000 females). More than two-thirds of these are diagnosed at an early stage. The mortality rate for female breast cancer was 18.2 per 100,000 and was similar to both NYS and Upstate NY. The temporal pattern for female breast cancer, both incidence and prevalence, demonstrate more variability than other types of cancer. Broome County has met the *Healthy People 2020* objective of reducing the female breast cancer death rate to less than 20.6 per 100,000. In Broome County, only 5.1 per 100,000 female breast cancers were diagnosed at a late stage (similar to NYS and Upstate NY), which was also notably below the incidence set by *Healthy People 2020* of less than 41.0 new cases per 100,000 females. Broome County ranked in the third quartile for incidence and in the second quartile for mortality and late stage diagnosis. The female breast cancer incidence was more than 50% above the expected rate in Richford. Johnson City, Port Crane, and Vestal which had female breast cancer incidence rates that were 5% to 49% above expected whereas Deposit, Newark Valley, and Binghamton (ZIP codes 13745 and 13902) had rates that were 15 to 50% below expected. (see Appendices D87-D94)

Broome County ranked in the first or second quartile for incidence of cancer of the cervix or uterus (5.4 per 100,000) and mortality (1.6 per 100,000). Compared to NYS, Broome County experienced similar rates and no temporal pattern was evident. Though the number of deaths due to this type of cancer was small, making the mortality rate unstable, it was nonetheless below the target rate of 2.2 per 100,000 females set by *Healthy People 2020*. Broome County ranked in the third quartile for incidence of ovarian cancer (13.0 per 100,000 females) and in the fourth quartile for mortality (10.9 per 100,000 females). These figures were similar to both NYS and Upstate NY with rates fluctuating over time and no clear pattern. Early stage diagnosis for cervical and uterine cancer is 63.9% and 76.8% respectively. In comparison, prompt diagnosis of ovarian cancer remains elusive with only 17% of cases being recognized in its earliest stages. (see Appendices D95-D98 for cervical cancer and D99-D102 for ovarian cancer)

The incidence of prostate cancer in Broome County was 178.1 per 100,000 males, and this figure was significantly higher than Upstate NY (171.2 per 100,000) but not NYS (166.9 per 100,000). This rate placed the county in the fourth quartile. Prostate cancer has the highest rate of early diagnosis at almost 90%. Prostate cancer mortality was 23.5 per 100,000 males, which was similar to NYS and Upstate NY, but again ranked in the fourth quartile. Diagnosis of prostate cancer at a late stage occurred at for 5.6 per 100,000 males, which was similar to NYS and Upstate NY. Broome County is not currently meeting the *Healthy People 2020* objective of reducing the prostate cancer death rate to below 21.2 per 100,000 males. In small area analysis (Appendix B), incidence rates for prostate cancer in males were more than 50% above the expected rate in Deposit; and 15% to 49% above the expected rate in Endicott, Greene, Marathon, Windsor, and the south side of Binghamton (13903). Rates were 15% to 50% below expected in Afton, Chenango Forks, and Harpursville. Over the period from 2000-2009, prostate cancer incidence and mortality have fluctuated to some extent but remained at similar levels. (see Appendices D103-D110)

Information about childhood cancers can be found in Appendices D111-D117. The overall incidence of childhood cancer is similar for Broome County (149.7 per 100,000 children age 0–19) as for NYS (188.5 per 100,000) and Upstate NY (185.6 per 100,000). The most common cancers in children age 0–4 are leukemias, malignant central nervous system tumors, and renal tumors. For children aged 5–9, cancers

with the highest incidence are leukemias, non-Hodgkin lymphomas, soft tissue sarcomas, and malignant bone tumors. For children aged 10-14 and 15-19, cancers with the highest incidence are leukemias, lymphomas, soft tissue and osteosarcomas. In addition, for children aged 15–19, gonadal neoplasms are more common than for younger aged children. Cancer is responsible for approximately 30–40 deaths per year in NYS. Across all age groups, childhood cancers with the highest mortality are leukemias and malignant central nervous system tumors. In the 15–19 year-old age group, tumors of the bones and joints also have a relatively high mortality, but in all cases the rate does not exceed 10 deaths per 100,000 children.

***Healthy People 2020* Objectives — Cardiovascular Disease**

HDS-2 **Reduce coronary heart disease deaths.**
Target: 100.8 deaths per 100,000 population

HDS-24 **Reduce hospitalizations of older adults with congestive heart failure as the principal diagnosis.**
HDS-24.1 Adults aged 65 to 74 years (8.8 per 1,000 population)
HDS-24.2 Adults aged 75 to 84 years (20.2 per 1,000 population)
HDS-24.3 Adults aged 85 years and older (38.6 per 1,000 population)

HDS-12 **Reduce the proportion of adults with hypertension whose blood pressure is under control.**
Target: 61.2%

HDS-20 **Increase the proportion of adults with coronary heart disease who have their low density lipoprotein (LDL)-cholesterol at or below recommended levels.**
Target: Developmental

Chronic Diseases: Cardiovascular Disease

Data for cardiovascular disease mortality and morbidity appear in Appendices D118-D153 and are based on selected County Health Assessment Indicators for 2008 to 2010 from the NYS Department of Health. Mortality data are derived from Vital Records and morbidity from the Statewide Planning and Research Cooperative both located at the Bureau of Biometrics and Health Data, NYS Department of Health. The category of cardiovascular disease includes International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) codes I00–I99. Disease of the heart include ICD-10 codes for rheumatic heart disease (codes I00–I09), hypertensive heart disease (code I11), hypertensive heart disease and hypertensive renal disease (code I13), ischemic heart disease, coronary heart disease and disease of pulmonary circulation, pericarditis and endocarditis, and cardiomyopathies (codes I20–I51).

In Broome County, cardiovascular disease is responsible for an average of 780 deaths per year, almost twice as many as for all cancers combined, and is the leading cause of death. Specific data for crude and age-adjusted mortality rates were presented previously and will not be repeated here. Rather, this section will describe in greater detail premature deaths (ages 35–64) and pretransport mortality as well as hospitalization rates.

The mortality rate for premature death is higher in Broome County than in NYS for all cardiovascular diseases (124.0 vs. 102.0 per 100,000), for diseases of the heart (101.6 vs. 83.3 per 100,000), and for

coronary heart disease (73.5 vs. 69.0 per 100,000). These differences are significant for all cardiovascular disease and diseases of the heart, but not for coronary heart disease. Moreover, the mortality rate for premature death was significantly higher in Broome County than Upstate NY in all three categories. Premature death from heart failure is relatively uncommon; and there were only 4 cases in Broome County over the 3-year period from 2008–2010. Since these rates are age-adjusted, differences in premature death are not accounted for by variability in age distribution of the populations.

In relation to pre-transport mortality, the rates were significantly higher in Broome County than NYS for all cardiovascular disease (223.6 vs. 144.1 per 100,000), for disease of the heart (1789.9 vs. 125.3 per 100,000), and for coronary heart disease (136.4 vs. 105.2 per 100,000). Because of the large distances required for emergency responders to reach rural county residents, response times in these areas are typically longer. Thus, comparisons against Upstate NY rates may be more appropriate. Even considering similar geography; however, premature death from all cardiovascular disease, diseases of the heart, coronary heart disease, and heart failure are significantly higher in Broome County relative to the rest of the state Broome County ranked in the fourth quartile for nearly all indicators. This finding suggests that there may be reasons, other than rurality that account for the higher pre-transport mortality rates.

Disparities in hospitalizations for cardiovascular disease were previously described. This section will discuss cardiovascular morbidity in relation to the county as a whole. On average in Broome County, there are 3,383 hospitalizations per year related to cardiovascular disease, 2,284 hospitalizations per year for diseases of the heart, 818 hospitalizations per year for coronary heart disease, and 643 hospitalizations per year for heart failure. Age-adjusted hospitalization rates in Broome County are significantly lower than both NYS and Upstate NY for all comparison categories. The age-adjusted hospitalization rate for all cardiovascular disease was 131.4 per 10,000 for Broome County versus 165.6 for NYS and 157.5 for Upstate NY. For diseases of the heart, the age-adjusted hospitalization rate for Broome County was 88.3 per 10,000 versus 113.3 for NYS and 109.2 for Upstate NY. For coronary heart disease, the age-adjusted hospitalization rate for Broome County was 32.3 per 10,000 versus 46.9 for NYS and 43.7 for Upstate NY. And finally, for heart failure, the age-adjusted hospitalization rate for Broome County was 23.3 per 10,000 versus 28.9 for NYS and 26.9 for Upstate NY. In relation to the county rankings within NYS, Broome County placed in the first quartile for all cardiovascular hospitalization rate indicators. Broome County did not meet the *Prevention Agenda 2017* goals in relation to the age-adjusted heart attack hospitalization rate (19.5 vs. 14.0 per 10,000). Hospitalization rates for this disease is considered “ambulatory sensitive” meaning that, with appropriate outpatient management, hospitalization may be avoidable. *Healthy People 2020* does provides only age-specific targets for congestive heart failure and not overall, but comparison indicates that the hospitalization rate for this condition in Broome County would only meet the current objective if all or most of the hospitalizations were among residents age 85 or older. While Broome County outperformed NYS on hospitalization rates and both hospitalization and mortality rates appear to be declining, the number of deaths per year and high mortality rates warrant continued focus on the cardiovascular health of Broome County residents.

***Healthy People 2020* Objectives — Cerebrovascular Disease**

HDS-3 Reduce stroke deaths.
Target: 33.8 deaths per 100,000 population

Chronic Diseases: Cerebrovascular Disease (Stroke)

Data for cerebrovascular disease mortality and morbidity appear in Appendices D514-D164 and are based on selected County Health Assessment Indicators for 2005 to 2007 from the NYS Department of Health. Mortality data are derived from Vital Records and morbidity from the Statewide Planning and Research Cooperative System (SPARCS) both located at the Bureau of Biometrics and Health Data, NYS Department of Health. The category of cerebrovascular disease includes ICD-10 codes I60–I69.

In Broome County, approximately 116 deaths per year are attributable to cerebrovascular disease and there is an average 619 hospitalizations each year. The age-adjusted mortality rate in Broome County was 39.4 per 100,000 population, and was significantly higher than both NYS (26.7 per 100,000) and Upstate NY (31.9 per 100,000). Broome County ranked in the fourth quartile for age-adjusted cerebrovascular mortality and has not met the *Healthy People 2020* objective of 33.8 deaths per 100,000. The pre-transport cerebrovascular disease mortality rate for Broome County (27.8 per 100,000) was significantly higher than for NYS (10.9 per 100,000) and for Upstate NY (16.5 per 100,000). Broome County ranked in the fourth quartile in the state for this indicator. The age-adjusted hospitalization rate for cerebrovascular disease was 23.7 per 10,000 population in Broome County, which was significantly lower than both NYS (25.1 per 10,000) and Upstate NY (25.3 per 10,000). Broome County ranked in the second quartile for this indicator. The high pre-transport mortality for stroke suggests that a focus on public health interventions directed toward raising awareness of stroke symptoms, early recognition of evolving stroke, and early activation of emergency medical services continue to be critical public health messages.

***Healthy People 2020* Objectives — Diabetes Mellitus**

D-1 **Reduce the annual number of new cases of diagnosed diabetes in the population.**
Target: 7.2 new cases per 1,000 population age 18-84

D-3 **Reduce the diabetes death rate.**
Target: 65.8 deaths per 100,000 population

D-4 **Reduce the rate of lower extremity amputations in persons with diagnosed diabetes.**
Target: [not applicable]

D-5 **Improve glycemic control among persons with diabetes**
D-5.1 Reduce the proportion of persons with diabetes with an A1c value greater than 9%
D-5.2 Increase the proportion of the diabetic population with an A1c value < 7%

D-6 **Improve lipid control among persons with diagnosed diabetes.**
Target: 58.4%

D-7 **Increase the proportion of persons with diagnosed diabetes whose blood pressure is under control.**
Target: 57.0%

D-8 **Increase the proportion of persons with diagnosed diabetes who have at least an annual dental examination.**
Target: 61.2%

D-9 **Increase the proportion of adults with diabetes who have at least an annual foot examination.**
Target: 74.8%

D-10 **Increase the proportion of adults with diabetes who have an annual dilated eye examination.**
Target: 58.7%

D-11 **Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year.**
Target: 71.1%

D-12 **Increase the proportion of persons with diagnosed diabetes who obtain an annual microalbumin measurement.**
Target: 71.1%

D-13 **Increase the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily.**
Target: 70.4%

D-14 **Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education.**
Target: 62.5%

D-15 **Increase the proportion of persons with diagnosed diabetes whose condition has been diagnosed.**
Target: 80.1%

Chronic Diseases: Diabetes Mellitus

Data for diabetes mortality and morbidity appear in Appendices D165 and D172-D183. These data are based on selected County Health Assessment Indicators for 2008 to 2010 from the NYS Department of Health. Mortality and morbidity data sources have been previously described. The ICD-10 codes for diabetes mellitus mortality include E10 to E14.

In Broome County, there is an average of 65 deaths per year due to diabetes mellitus. The age-adjusted diabetes mortality rate was estimated to be 24.4 per 100,000 population, and this rate was higher than both NYS (16.6 per 100,000) and Upstate NY (14.9 per 100,000). Among NYS counties, Broome County ranked in the fourth quartile for diabetes. The diabetes mortality was slightly less than the 65.8 deaths per 100,000 population objective set by *Healthy People 2020*.

The average number of hospitalizations per year was 283 for diabetes as a primary (admitting) diagnosis and 4,971 for any diabetes diagnostic code associated with the hospitalization. The age-adjusted hospitalization rate for those with a primary (admitting) diagnosis of diabetes was 12.9 per 10,000 population compared with 19.0 per 10,000 for NYS and 14.3 per 10,000 for Upstate NY. The age-adjusted hospitalization rate for those with any diagnosis of diabetes was 195.7 per 10,000 population for Broome County compared to 226.1 per 10,000 for NYS and 198.2 per 10,000 for Upstate NY. In both of these areas (primary or any diagnosis of diabetes), Broome County was significantly lower than both NYS and was significantly less than Upstate NY for hospitalizations with diabetes as a primary diagnosis.

Based on the BRFSS conducted by NYS in 2008-2009, the prevalence of diabetes in Broome County was 8.6%, similar to the 9.0% for NYS and 8.5% for Upstate NY. In relation to diabetes prevalence, Broome County ranked in the second quartile. Based on *Prevention Agenda 2017* indicators, the hospitalization rate for short-term complications of diabetes among 6-17 year-old children was 5.1 per 10,000 for Broome County between 2008-2010 which was lower than NYS (3.2 per 10,000) but higher than the target of 3.06 per 10,000 set by the NYS Department of Health. For short-term complications among adults age 18 or older, the hospitalization rate for short-term complications of diabetes was 5.1 per 10,000 as compared to 5.6 for NYS and the target of 4.86 in the NYS *Prevention Agenda 2017*. While the hospitalization rates for diabetes as a primary diagnosis have been relatively stable over the time period 2001-2010, the hospitalization rates for diabetes (any diagnosis) have been steadily increasing.

***Healthy People 2020* Objectives — Cirrhosis**

SA-11 **Reduce cirrhosis deaths.**
Target: 8.2 deaths per 100,000 population

Chronic Diseases: Cirrhosis

Data for cirrhosis mortality and morbidity appear in Appendices D165-D171 and are based on selected County Health Assessment Indicators for 2008 to 2010 from the NYS Department of Health. Mortality and morbidity data sources have been previously described. The ICD-10 codes for cirrhosis mortality are K73 and K74.

In Broome County, there were, on average, 22 deaths per year attributable to cirrhosis of the liver. The age-adjusted mortality rate for cirrhosis in Broome County was 9.1 per 100,000 population, which was significantly higher than the 6.2 per 100,000 for NYS and the 6.6 per 100,000 for Upstate NY. Broome County ranked in the fourth quartile for this indicator. In Broome County, cirrhosis of the liver accounted

for approximately 54 hospitalizations per year. The age-adjusted cirrhosis hospitalization rate in Broome County was 2.5 per 10,000 population compared to 2.7 per 10,000 for NYS and 2.2 per 10,000 for Upstate NY. Like other area hospitalization rates, Broome County was lower than statewide rates though this difference was not statistically significant. Between 2001 and 2010, the mortality and hospitalization rates have consistently been at these same values. Broome County has not met the *Healthy People 2020* target of 8.2 deaths per 100,000 population for this indicator.

***Healthy People 2020* Objectives — Asthma**

RD-1 **Reduce asthma deaths.**
- **RD-1.1** Children and adults under age 35 (not applicable)
- **RD-1.2** Adults aged 35 to 64 years (6.0 per million)
- **RD-1.3** Adults aged 65 years and older (22.9 per million)

RD-2 **Reduce hospitalizations for asthma.**
- **RD-2.1** Children under age 5 years (18.1 per 10,000)
- **RD-2.2** Children and adults aged 5 to 64 years (8.6 per 10,000)
- **RD-2.3** Adults aged 65 years and older (20.3 per 10,000)

RD-3. **Reduce hospital emergency department visits for asthma.**
- **RD-3.1** Children under age 5 years (95.6 per 10,000)
- **RD-3.2** Children and adults aged 5 to 64 years (49.7 per 10,000)
- **RD-3.3** Adults aged 65 years and older (13.8 per 10,000)

Chronic Diseases: Asthma

Data for asthma mortality and morbidity appear in Appendices D184 and D192-D205. These data are based on selected County Health Assessment Indicators for 2008 to 2010 from the NYS Department of Health. Mortality and morbidity data sources have been previously described. The ICD-10 codes for asthma mortality are J45 and J46.

In Broome County, an average of 3 deaths per year were due to asthma. The age-adjusted asthma mortality rate for Broome County at 1.5 per million population was similar to NYS (1.3 per million) and Upstate NY (0.7 per million), though the Broome County rate is unstable due to fewer than 20 events. Though the mortality is low, the morbidity for this disease is relatively high. The number of hospitalizations for asthma in Broome County was an estimated 217 per year. The age-adjusted asthma hospitalization rate for Broome County was 11.0 per 10,000 population. The asthma hospitalization rate for Broome County was significantly lower than NYS (20.3 per 10,000) and Upstate NY (12.3 per 10,000). Stratification of asthma hospitalizations by age group shows the highest morbidity for the 0–5 age group (26.8 per 10,000) and the 65 and older age group (17.4 per 10,000). Broome County ranked in the third quartile for asthma hospitalizations overall as well as across most age groups. Moreover, Broome County met all but one of the age-specific *Healthy People 2020* objectives for asthma hospitalizations; the exception being in the 65 and older age group. The asthma hospitalization rate of 9.5 per 10,000 for the 0–17 age group also met the *Prevention Agenda 2017* goal of 17.3 per 10,000. Trend data from 2003–2007 shows a steady decrease in hospitalizations for asthma. Based on NYS *Prevention Agenda* indicators, emergency room visits for asthma were 75.3 per 10,000 for children age 0-4 which one-third the rate for NYS and well below the target of 75.1 per 10,000. In addition, Broome County's

hospitalization rate for all asthma-related emergency department visits was 45.1 per 10,000 which was just over half the rate for NYS and 40% less than the 75.1 target for the NYS Prevention Agenda.

Based on the BRFSS conducted by NYS in 2008-2009, the prevalence of asthma in Broome County was 11.6%, similar to the 9.7% for NYS and 10.1% for Upstate NY. In relation to asthma prevalence, Broome County ranked in the third quartile. Like diabetes management, 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.

***Healthy People 2020* Objectives — Chronic Obstructive Pulmonary Disease**

RD-10 **Reduce deaths from chronic obstructive pulmonary disease (COPD) among adults.**
Target: 98.5 deaths per 100,000

RD-11 **Reduce hospitalizations for chronic obstructive pulmonary disease (COPD).**
Target: 50.1 hospitalization per 10,000

RD-12 **Reduce emergency department (ED) visits for chronic obstructive pulmonary disease (COPD).**
Target: 57.3 visits per 10,000

Chronic Diseases: Chronic Obstructive Pulmonary Disease

COPD 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 COPD also experience asthma symptoms, pure asthma is defined by its reversible nature. Thus, the ICD-9 codes for COPD included only chronic bronchitis and emphysema. With the 10th revision of the ICD codes COPD was renamed to CLRD and expanded to include other conditions of the lower respiratory tract such as asthma, status asthmaticus, and tracheitis.

Mortality and morbidity data for chronic lower respiratory disease (CLRD) appear in Appendix D184-D191 and are based on selected County Health Assessment Indicators for 2005 to 2007 from the NYS Department of Health. Mortality and morbidity data sources have been previously described. The ICD-10 codes for CLRD mortality include J40 to J47.

CLRD accounted for, on average, about 115 deaths per year and approximately 752 hospitalizations per year in Broome County. The age-adjusted mortality rate for CLRD in Broome County was 42.6 per 100,000 population, which was significantly higher than NYS (31.1 per 100,000) but not Upstate NY (38.5 per 100,000). The age-adjusted hospitalization rate for CLRD in Broome County was 32.7 per 10,000, which was significantly lower than NYS (37.5 per 10,000) but not Upstate NY (31.7 per 10,000). Broome County ranked in the second quartile for both CLRD mortality and hospitalization rate. For all three indicators (deaths, hospitalizations, and emergency department visits), Broome County was well below the *Healthy People 2020* objectives. Although the temporal patterns for mortality remained relatively stable from 2001 to 2010, the hospitalization rates for CLRD have increased steadily from a low of 19.6 per 10,000 in 2005 to a high of 34.3 in 2009. Thus, continued efforts for managing chronic lung disease in the community will be needed to maintain this rate below the *Healthy People 2020* objective.

***Healthy People 2020* Objectives — HIV & AIDS**

HIV-4 **Reduce new AIDS cases among adolescents and adults.**
Target: 12.4 new cases per 100,000 population

HIV-12 **Reduce deaths from HIV infection.**
Target: 3.3 deaths per 100,000 population

Human Immunodeficiency Virus (HIV) & Acquired Immunodeficiency Syndrome (AIDS)

The HIV case rate for Broome County was 5.1 per 100,000 population, which was similar to Upstate NY (7.4 per 100,000) and was one-fourth the NYS rate (21.4 per 100,000). The AIDS case rate for Broome County was 5.8 per 100,000 population, which was significantly lower than NYS (17.6 per 100,000) but not appreciably different than Upstate NY (5.6 per 100,000). Broome County's case rate was in the third quartile for HIV and AIDS. Although the age-adjusted AIDS mortality rate was significantly lower in Broome County than in NYS (2.0 vs. 5.3 per 100,000), the age-adjusted rate was similar to the Upstate area (2.5 per 100,000). The HIV case rate was approximately one-half of the target set by the *Prevention Agenda 2017* (14.7 per 100,000). The AIDS case rate was one-third the target set by the *Healthy People 2020* objective of 12.4 new cases per 100,000. The trend chart for the AIDS case rate in Broome County shows that the rate appears to have peaked in 2006 and has been declining since. It is uncertain whether this represents normal variability due to small numbers or a reversal of the previous increase between 2003 and 2006. (see Appendices D1-D7)

Optional Service Areas

***Healthy People 2020* Objectives — Dental Health**

CH-1 Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth.

- **CH-1.1** Children age 3 to 5 years with dental caries experience in their primary teeth. (30%)
- **CH-1.2** Children age 6 to 9 years with dental caries experience in their primary and permanent teeth. (49.0%)
- **CH-1.3** Adolescents age 13 to 15 with dental caries experience in their permanent teeth. (48.3%)

CH-2 Reduce the proportion of children and adolescents with untreated dental decay.

- **CH-2.1** Children age 3 to 5 with untreated dental decay in their primary teeth (21.4%)
- **CH-2.2** Children age 6 to 9 with untreated dental decay in their primary and permanent teeth (25.9%)
- **CH-2.3** Adolescents age 13 to 15 with untreated dental decay in their permanent teeth (15.3%)

CH-6 Increase the proportion of oral and pharyngeal cancers detected at the earliest stage.

Target: 35.8%

CH-8 Increase the proportion of low income children and adolescents who received any preventive dental service during the past year.

Target: 33.2%

CH-12 Increase the proportion of children and adolescents who have received dental sealants on their molar teeth.

- **CH-12.1** Children aged 3 to 5 years who have received dental sealants on one or more of their primary molar teeth (1.5%)
- **CH-12.2** Children age 6 to 9 years who have received dental sealants on one or more of their permanent first molar teeth (28.1%)
- **CH-12.3** Adolescents age 13 to 15 who have received dental sealants on one or more of their permanent molar teeth (21.9%)

Dental Health Services

The Oral Health Survey of third grade children covers the 3-year period from 2009–2011. Data from this survey showed significant differences between Broome County and Upstate NY (Appendix D198). The percent of third grade children with dental caries experience was 56.7% for Broome County and 45.4% for Upstate NY. Thus, the dental caries experience of third grade children in Broome County exceeds the *Healthy People 2020* target of 49.0% by an appreciable amount. The proportion of third grade children with untreated dental caries was 42.3% for Broome County as compared to 24.0% for Upstate NY. Broome County ranked in the third quartile for percent of third grade children with caries and in the fourth quartile for untreated caries. The prevalence of untreated tooth decay in children in Broome County (42.3%) was considerably higher than the *Prevention Agenda 2017* target of 21.6% and the *Healthy People 2020* Objective of 25.9%. (see also Appendices D207-D227)

Although the oral health of children in Broome County is well below the rest of the state, the percent of third grade children with dental sealants was significantly higher in Broome County (64.9%) than in Upstate NY (41.9%). Insurance coverage for dental care was also significantly different with a higher percentage of third grade children having dental insurance in Broome County than in the rest of the state (88.5% vs. 81.8%). In relation to having at least one dental visit in the last year, Broome County was significantly lower than Upstate NY (80.6% vs. 83.4%). Just over half of third grade children in Broome County reported taking fluoride tablets on a regular basis, which was significantly higher than the statewide average (41.9%).

Among children ages 3 to 5 years, the emergency department visit rate specifically for dental caries was 182.0 per 10,000 children, which was significantly higher than NYS (65.8 per 10,000) and upstate NY (69.9 per 10,000). For this indicator, Broome County ranked in the fourth quartile for the state.

In the low income population, 30.5% of Medicaid enrollees in Broome County had at least one dental visit within the last year; this figure was 40.8% for those between the age of 2 and 20. More than 25% of Medicaid enrollees in Broome County had at least one preventive dental visit within the last year. For these three indicators, Broome County was ranked in the first quartile and preventive care in particular was above the *Healthy People 2020* target of 25.4%. The age-adjusted percentage of all adults who had a dentist visit within the past year (between 2008 and 2009) was 73.6% which contrasts sharply with visit rate for the low income population of 40.8%.

Broome County ranked in the third quartile for oral cancer with an age-adjusted incidence of 12.1 per 100,000 and an age-adjusted mortality of 2.6 per 100,000. These rates were similar to both NYS and Upstate NY. In Broome County, the proportion of oral cancers diagnosed at an early stage was 33.3% for females and 31.6% for males, which nears the Healthy People 2020 target of 35.8%. While use of dental care services were generally higher and showed improving trends, the dental health of children and adults in Broome County was below statewide averages suggesting that expansion of, or enhancements to, current public health efforts may be needed to reduce morbidities associated with poor oral health. In addition, three-year averages for dental caries emergency department visits among children age 3 to 5 years have increased steadily from 107.1 per 10,000 in 2006 to 182.0 per 10,000.

Home Health Services

Under the Maternal Child Health and Development division, the Broome County Health Department operates a Licensed Home Care Services 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.

Data regarding prenatal care, family planning, immunizations, and breastfeeding have already been discussed. This section will review child abuse. In 2011, 1,711 children were indicated in reports of child abuse and maltreatment (Appendix D228); this number equates to a rate of 34.7 per 1,000 children/youth aged 0 to 17 years, which was twice the rate for NYS (16.9 per 1,000) and 2.2 times the rate for Upstate NY (15.6 per 1,000). In this same year, 310 children and youth (age 0–21 years) were in foster care and there were 184 admissions. In Broome County, the rate for children in foster care was 4.8 per 1,000 children age 0 to 21 years, which was 1.3 times the rate of NYS (3.8 per 1,000) and Upstate

NY (3.6 per 1,000). The admission rate to foster care was 3.7 per 1,000 children age 0 to 17 years for Broome County compared to 2.4 per 1,000 for NYS and 1.9 per 1,000 for Upstate NY. Early recognition of cases and removal from abusive situations is critical to a child's health and well-being.

Optional Other Service Areas / Programs

Medical Examiner

The county does not have a medical examiner. No information is submitted for this section.

Emergency Medical Services

The Emergency Medical Services (EMS) is a department within the county government. Information about EMS can be found in Section 3B under "Access to Care."

Laboratories

The Broome County Health Department does not operate a full-service laboratory, though limited microscopy is performed as part of the clinic services. Therefore, no information is submitted for this section.

B. Behavioral Risk Factors

Leading Health Indicators

- **Access to Health Services**
- **Clinical Preventive Services**
- **Environmental Quality**
- **Injury and Violence**
- **Maternal, Infant and Child Health**
- **Mental Health**
- **Nutrition, Physical Activity, and Obesity**
- **Oral Health**
- **Tobacco Use**
- **Reproductive and Sexual Health**
- **Social Determinants**
- **Substance Abuse**
- **Tobacco**

The Leading Health Indicators, selected from the *Healthy People 2020* objectives, are used as measures of population health reflecting the major health concerns in the United States. These indicators are of public health importance because of their ability to influence disease morbidity and mortality. There are a total of 26 indicators that cover 12 topic areas which are listed in the box to the left. These indicators depend to some extent on behavioral factors and access to health care as well as environmental, economic, and social conditions. As sexually transmitted diseases, injury, and immunization have been previously discussed, this section will address physical activity, overweight and obesity, tobacco use, substance abuse, and mental health. Access to Health Care is covered in Section Three.

Data for this section are drawn primarily from the NYS Expanded Behavioral Rick Factor Surveillance System (BRFSS). This national survey is conducted annually statewide using probability sampling and random digit dialing to permit calculation of point estimates. This telephone-based surveillance system is used to monitor modifiable behaviors and other risk factors contributing to the leading causes of morbidity and mortality in the adult population.

***Healthy People 2020* Objectives — Physical Activity**

PA-1 Reduce the proportion of adults who engage in no leisure-time physical activity.
Target: 32.6%

PA-2 Increase the proportion of adults who meet current Federal physical activity guidelines for aerobic physical activity and for muscle strengthening activity.
- **PA-2.1** Aerobic physical activity of at least moderate intensity for 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination (47.9%)
- **PA-2.2** Aerobic physical activity of at least moderate intensity for more than 300 minutes/week, or more than 150 minutes/week of vigorous intensity or an equivalent combination (31.3%)
- **PA-2.3** Muscle-strengthening activities on 2 or more days of the week (24.1%)
- **PA-2.4** Aerobic physical activity and muscle strengthening activity (20.1%)

PA-3 Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle strengthening activity.
- **PA-3.1** Aerobic physical activity (20.2%)
- **PA-3.2** Muscle strengthening (developmental)
- **PA-3.3** Aerobic physical activity and muscle strengthening activity (developmental)

PA-4 Increase the proportion of the Nation's public and private schools that require daily physical education for all students.
- **PA-4.1** Elementary schools (4.2%)
- **PA-4.2** Middle and junior high schools (8.6%)
- **PA-4.3** High schools (2.3%)

PA-5 Increase the proportion of adolescents who participate in daily school physical education.
Target: 36.6%

PA-6 Increase regularly scheduled elementary school recess.

PA-7 Increase the proportion of school districts that require or recommend elementary recess for an appropriate period of time.

PA-8 Increase the proportion of children and adolescents who do not exceed recommended limits for screen time. [*no more than 2 hours per day*]
- **PA-8.1** Age 0-2, no television or videos on an average weekday (44.7%)
- **PA-8.2.1** Age 2-5 (83.2%)
- **PA-8.2.2** Age 6-14 (86.8%)
- **PA-8.2.3** Grades 9-12 (73.9%)

PA-9 Increase the number of states with licensing regulations for physical activity in child care.

PA-10 Increase the proportion of public and private schools that provide access to physical spaces and facilities outside of school hours for physical activity.

PA-11 Increase the proportion of physician's office visits that include counseling or education related to physical activity.

EH-2 Increase use of alternative modes of transportation for work. [Trips to work made by]
- **EH-2.1** Bicycling (0.6%)
- **EH-2.2** Walking (3.1%)
- **EH-2.3** Mass transit (5.5%)

Physical Activity

Data for physical activity comes from the 2008-2009 Expanded Behavioral Risk Factor Surveillance System (BRFSS) for adults. These data are presented in Appendices E10-E12. 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 2008-2009, 17.3% of Broome County adults reported no leisure-time physical activity which was significantly lower than NYS (23.7%). Stratified analyses indicate that women are almost twice as likely as men to report no leisure time physical activity (22.7% for females vs. 13% for males). Individuals who are between the ages of 35 and 44 are the most active age group with only 11.2% reporting no leisure-time physical activity. Individuals over the age of 45 are twice as likely to have no leisure-time physical activity. Between 22% and 25% of adults above age 45 report no 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. (see Appendices E15-E16)

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%).

***Healthy People 2020* Objectives — Nutrition**

NWS-1 **Increase the number of states with nutrition standards for foods and beverages provided to preschool-aged children in child care.**
Target: 34 states

NWS-2 **Increase the proportion of schools that offer nutritious foods and beverages outside of school meals.**
NWS-2.1 Schools that do not sell or offer calorically sweetened beverages to students (21.3%)
NWS-2.2 School districts that require schools to make fruits or vegetables available whenever other food is offered or sold (18.6%)

NWS-3 **Increase the number of states that have state-level policies that incentivize food retail outlets to provide foods that are encouraged by the *Dietary Guidelines for Americans*.**
Target: 18 states

NWS-6 **Increase the proportion of physician office visits that include counseling or education related to nutrition or weight.**
NWS-6.1 Adult patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia (22.9%)
NWS-6.2 Adult patients who are obese (22.9%)
NWS-6.3 All children or adult patients (15.2%)

NWS-14 **Increase the contribution of fruits to the diets of the population aged 2 years and older.**
Target: 0.9 cup equivalent per 1,000 calories

NWS-15 **Increase the variety and contribution of vegetables to the diets of the population aged 2 years and older.**
NWS-15.1 Total vegetables (1.1 cup equivalent per 1,000 calories)
NWS-15.2 Green and orange vegetables and legumes (0.3 cup equivalent per 1,000 calories)

NWS-16 **Increase the contribution of whole grains to the diets of the population aged 2 years and older.**
Target: 0.6 ounce equivalent per 1,000 calories

NWS-17 **Reduce consumption of calories from solid fats and added sugars in the population aged 2 years and older.**
NWS-17.1 Solid fats (16.7%)
NWS-17.2 Added sugars (10.8%)
NWS-17.2 Solid fats and added sugars (29.8%)

NWS-18 **Reduce consumption of saturated fat in the population aged 2 years and older.**
Target: 9.5%

NWS-19 **Reduce consumption of sodium in the population aged 2 years and older.**
Target: 2,300 mg

Diet & Nutrition

Data for diet and nutrition come from the NYS Expanded BRFSS (adults). 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.

The *Dietary Guidelines for Americans 2010* 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. Finally, 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. (see Appendices E13-E14)

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. (see Appendices E17-E18)

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 as compared to NYS which experienced its first decline in this indicator in 2009.

***Healthy People 2020* Objectives — Overweight & Obesity**

NWS-5 **Increase the proportion of primary care physicians who regularly assess the body mass index of their patients.**
- **NWS-5.1** Adults (53.6%)
- **NWS-5.2** Children and adolescents (54.7%)

NWS-6 **Increase the proportion of physician office visits that include counseling or education related to nutrition or weight.**
- **NWS-6.2** Adult patients who are obese (22.9%)

NWS-8 **Increase the proportion of adults who are at a healthy weight.**
- **Target:** 33.9%

NWS-9 **Reduce the proportion of adults who are obese.**
- **Target:** 30.5%

NWS-10 **Reduce the proportion of children and adolescents who are considered obese.**
- **NWS-10.1** Children aged 2 to 5 years (9.6%)
- **NWS-10.2** Children aged 6 to 11 years (15.7%)
- **NWS-10.3** Adolescents aged 12 to 19 years (16.1%)
- **NWS-10.4** Children and adolescents aged 2 to 19 years (14.5%)

Overweight and Obesity

A healthy weight in adults is defined as a Body Mass Index (BMI) greater than or equal to 18.5 but less than 25 kg/m^2. Overweight is defined as a BMI greater than or equal to 25 but less than 30 kg/m^2 and obesity is defined as a BMI greater than or equal to 30 kg/m^2. 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. Information about obesity related indicators are located in Appendix E19 and additional tables, charts, and maps appear in Appendices E20-E44 for both adults and children.

In 2009, the prevalence of overweight was 38.8% and the prevalence of obesity was 24.9%, yielding a combined total of 63.7%, with no significant variation over the period between 2004 and 2009. Based on the 2009 Expanded BRFSS survey data reported by the NYS Department of Health, Broome County ranked in the second quartile in the state for obesity and in the third quartile for the combined categories of overweight and obesity. The rate of obesity among adult residents of Broome County exceeded the *Prevention Agenda 2017* objective of 23.2%, but was below the target of 30.5% for *Healthy People 2020*. Only 23% of adults reported receiving advice about their weight by a health professional. While this figure is similar to the proportion who are obese, 64% of individuals are overweight or obese, have increased risk based on weight status, and could be considered potential candidates for counseling about weight. Of those who reported receiving advice about their weight, 89% were advised to lose weight. Thus, in the majority of cases when weight status is addressed, clinicians seem to be providing clear advice to lose weight.

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 are available for 2010-2012, the first two years of reporting with this new system.

Among elementary schools, the prevalence of overweight was 13.7% and the prevalence of obesity was 14.7% for a combined total of 28.4% for the category overweight or obese. 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 the combined overweight/obese category. These data for obesity among elementary school children indicate that Broome County fell below the 15.7% target for the *Healthy People 2020* among children age 6 to 11 and the 16.7% objective for the NYS *Prevention Agenda 2017.*

Among middle/high schools, the prevalence of overweight was 16.9% and the prevalence of obesity was 20.4% for a combined total of 37.2% for the category overweight or obese. For these indicators, Broome County was similar to Upstate New York and ranked in the third quartile for the state. These data for obesity among middle/high school adolescents indicate that Broome County fell above the 16.1% target for the *Healthy People 2020* among children age 6 to 11 and the 16.7% objective for the NYS *Prevention Agenda 2017.* Because actual height and weight data are used to calculate BMI data reported to the state by schools instead of self-report, 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 from the YRBS (34.9% vs. 25.7%). The obesity epidemic, especially among youth, raises concerns about its health consequences including the metabolic syndrome, diabetes, and associated short- and long-term complications.

Information about student weight status category by school district is presented in table format and includes identification of each school district's Need to Resource Capacity category as defined and designated by the NYS Department of Education (Appendix E29). These data are also presented in graphical form for both elementary schools (Appendix E30) and middle/high schools (Appendix E31). Four out of the six school districts with the highest rates of obesity (above the 50th percentile) are also categorized as high need to resource capacity.

For women participating in the WIC program, a significantly lower percentage of pregnant women were overweight prior to pregnancy in Broome County as compared to NYS and Upstate NY (23.8% vs. 26.6% and 26.3% respectively) and Broome County was in the second quartile for this indicator. However, an appreciably higher percentage was obese prior to pregnancy for Broome County than for NYS and Upstate NY (30% vs. 23.4% and 26.7% respectively) and Broome County ranked in the third quartile for this indicator. (refer to Appendices C36-C40) For overweight among children aged 2-4 who participated in the WIC program, Broome County ranked in the second quartile for the state (14.6%). Though this figure was not significantly different than the state as a whole or the upstate area and below the *Prevention Agenda 2017* goal of 16.7% for children and adolescents, it is well above the 9.6% target for obesity among children age 2 to 5 years old set by *Healthy People 2020*. (refer to Appendices E33-E34)

***Healthy People 2020* Objectives — Tobacco Use**

TU-1 Reduce tobacco use by adults. [current smoker]
- **TU-1.1** Cigarettes **(**12%)
- **TU-1.2** Smokeless tobacco (0.3%)
- **TU-1.3** Cigars (0.2%)

TU-2 Reduce tobacco use by adolescents. [past month]
- **TU-2.1** All tobacco products (21%)
- **TU-2.2** Cigarettes (16%)
- **TU-2.3** Smokeless tobacco (6.9%)
- **TU-2.4** Cigars (8%)

TU-3 Reduce the initiation of tobacco use among children, adolescents, and young adults.

Adolescents age 12 to 17 years
- **TU-3.1** All tobacco products (5.7%)
- **TU-3.2** Cigarettes (4.2%)
- **TU-3.3** Smokeless tobacco (0.5%)
- **TU-3.4** Cigars (2.8%)

Young adults age 18 to 25 years
- **TU-3.5** All tobacco products (8.8%)
- **TU-3.6** Cigarettes (6.3%)
- **TU-3.7** Smokeless tobacco (0.2%)
- **TU-3.8** Cigars (4.1%)

TU-4 Increase smoking cessation attempts by adult smokers.
Target: 8%

TU-5 Increase recent smoking cessation success by adult smokers.
Target: 80%

TU-6 Increase smoking cessation during pregnancy.
Target: 30%

TU-7 Increase smoking cessation attempts by adolescent smokers.
Target: 64%

TU-9 Increase tobacco screening in health care settings.
- **TU-9.1** Office-based ambulatory care (68.6%)
- **TU-9.2** Hospital ambulatory care (66.2%)
- **TU-9.3** Dental care (developmental)
- **TU-9.4** Substance abuse (developmental)

TU-10 Increase tobacco cessation counseling in health care settings.
- **TU-10.1** Office-based ambulatory care (21.1%)
- **TU-10.2** Hospital ambulatory care (24.9%)
- **TU-10.3** Dental care (developmental)
- **TU-10.4** Substance abuse (developmental)

TU-11 Reduce the proportion of nonsmokers exposed to secondhand smoke.
- **TU-10.1** Age 3 to 11 (47%)
- **TU-10.2** Age 12 to 17 (41%)
- **TU-10.3** Age 18 and older (33.8%)

Tobacco Use

Data for smoking behaviors come from the BRFSS (adults), the YRBS (high school students), and the 2012 Prevention Needs Assessment Survey (grades 7-12). Information about tobacco use can be found in Appendices E45 and E49-E59. Based on the 2009 NYS Expanded BRFSS, smoking prevalence among adults in Broome County was 20.5% which was similar to the state and Broome County ranked in the second quartile for this indicator. This rate is higher than the *Healthy People 2020* objective of 12%. The percentage of adults living in homes where smoking is prohibited was 79.3% for Broome County (second quartile) and not significantly different than statewide.

Trend analysis for BRFSS data between 1995 and 2012 showed that prevalence peaked in 1998 at 24.1% and that there was a steady decline in prevalence from 23.2% in 2001 and to 15.5% in 2010. Unfortunately, the prevalence of smoking appears to be increasing with a prevalence of 16.2% in 2011 and 18.1% in 2012.

For Broome County, Prenatal Care Assistance Program (PCAP)/Medicaid Obstetrical and Maternal Services (MOMS) Program data related to smoking during pregnancy showed a prevalence (3-year average) of 32% in 2007, 29% in 2008-2010, and 28% in 2011. Although three-year averages provide more stable rates, these data are collected from new patients at the first prenatal visit and smoking during pregnancy is often underreported. Thus, these data may not provide a true estimate. Smoking during pregnancy and environmental exposure to tobacco smoke are associated with perinatal and infant morbidity and mortality, including higher rates of pre-term labor, low birth weight, premature rupture of membranes, abruption placentae, placenta previa, miscarriage, and fetal death. Pregnant women should be counseled at the earliest point, preferably preconception, about the potential dangers of smoking during pregnancy. Decreasing smoking during pregnancy may represent a leverage point for reducing the county's infant mortality.

Data for smoking behaviors among youth is available through the YRBSS though not at the county level. In 2011 for NYS, 33.5% of high school students reported ever trying cigarette smoking even one or two puffs. In addition, during the 30 days before the survey, 12.5% reported smoking cigarettes on at least one day (past month), 5.5% reported smoking on 20 or more days (frequent smoker), and 16.3% reported smoking more than 10 cigarettes per day (heavy smoker). Among the students who reported they were currently smoking, 54.9% had not tried to quit in the past year. Over 7% of high school students reported using chewing tobacco, snuff, or dip in the past month. Trend analysis indicates that although the percentage of students who report ever trying cigarettes has decreased steadily between 1999 and 2011, the proportion of students who report smoking more than 10 cigarettes per day in the past month (heavy use) has been increasing since 2006.

Local data was available from the 2006 and 2012 Prevention Needs Assessment county-specific reports through the KYDS Coalition in Broome County. Data from the Prevention Needs Assessment Survey is presented in Appendix E57 for cigarette use (past month) and Appendix E59 for heavy cigarette use. With each higher grade, there is a monotonic increase in both cigarette use in the past month and heavy cigarette use. In 2012, the proportion of students who reported smoking on at least one day during the previous 30 days (past month) was 8.4% for males, 8.2% for females, and 8.6% overall. The proportion of students who reported heavy cigarette use was less than 1% for 7th and 8th grade students. For high school adolescents, the prevalence of heavy use was 1.9% for 9th grade, 3.0% for 10th, 3.4%T for 11th and 4.6% for 12th grade. Although conclusions drawn from comparisons across different surveys should be interpreted cautiously, there is some evidence to suggest that Broome County has lower prevalence of heavy smoking among adolescents than NYS. For cigarette smoking in the past month, Broome County

was below the *Healthy People 2020* target of 16% for cigarettes across all grade levels.

***Healthy People 2020* Objectives — Substance Abuse**

SA-2 Increase the proportion of adolescents never using substances.
- **SA-2.1** Alcohol among adolescents age 12 to 17 (11%)
- **SA-2.2** Marijuana among adolescents age 12 to 17 (88.9%)
- **SA-2.3** Alcoholic beverages among high school seniors (30.5%)
- **SA-2.4** Illicit drugs among high school seniors (58.6%)

SA-3 Increase the proportion of adolescents who disapprove of substance abuse.
- **SA-3.1** Having one or two alcoholic drinks nearly every day among 8th graders (86.4%)
- **SA-3.2** Having one or two alcoholic drinks nearly every day among 10th graders (85.4%)
- **SA-3.3** Having one or two alcoholic drinks nearly every day among 12th graders (77.6%)

SA-4 Increase the proportion of adolescents who perceive great risk associated with substance abuse.
- **SA-4.1** Consuming five or more alcoholic drinks at a single occasion once or twice a week among adolescents age 12 to 17 (44%)

SA-13 Reduce past-month use of illicit substances.
- **SA-13.1** Use of any alcohol or any illicit drugs during the past 30 days among adolescents age 12 to 17 (16.6%)
- **SA-13.2** Use of marijuana during the past 30 days among adolescents age 12 to 17 (6%)
- **SA-13.3** Use of any illicit drug during the past 30 days among adults age 18 years and older (7.1%)

SA-14 Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.
- **SA-14.1** Binge drinking (past 2 weeks) among high school seniors (22.7%)
- **SA-14.2** Binge drinking (past 2 weeks) among college students (37%)
- **SA-14.3** Binge drinking (past month) among adults age 18 and older (24.4%)
- **SA-14.4** Binge drinking among adolescents age 12 to 17 years (8.6%)

Substance Abuse

Based on SPARCS data, between 2008 and 2010, there were 275 alcohol-related motor vehicle injuries and deaths among adults equating to a rate of 46.6 per 100,000, which is significantly higher than NYS (36.2 per 100,000) but similar to Upstate NY (50 per 100,000). For this indicator, Broome County ranked in the first quartile. For this same time period, there were 62 hospitalizations among neonates due to drug related causes equating to a rate of 100.0 per 10,000 newborn discharges. This rate was significantly higher for Broome County than for NYS (64.0 per 10,000 newborn discharges) but not for Upstate NY. 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 (27.2 per 10,000) and Upstate NY (21.8 per 10,000). Trend data seem to show that for all three of these indicators (alcohol-related motor vehicle injuries and deaths and newborn drug-related hospitalization rates, and drug-related hospitalizations); Broome County rates appear to be declining.

Data from the Expanded BRFSS for 2009 indicate that 13.2% of adults engaged in binge drinking (5 or more drinks in a row) compared to 14.1% for NYS and 15.2% for Upstate NY. For binge drinking, Broome County ranked in the second quartile. For this indicator, Broome County is not only ranked above the median in a group with healthier behavior, but also is below the *Healthy People 2020* objective of 24.4% for binge drinking among adults. The prevalence of binge drinking is higher among males than females with males being 2.4 times more likely to binge. Binge drinking among males is above the *Healthy People* target. Prevalence is also higher among adults age 35-44 than among older adults (age 65+) and among those with lower educational attainment. Men in the younger age group are 3.9 times more likely to binge than men 65 and older, and those with a high school diploma or less education are 1.9 times more likely to binge that men with a college degree. Trend data for binge drinking was relatively stable from 2004 to 2010, but more recent data suggest this pattern may be changing upward. Although Broome County is below the *Healthy People 2020* target for binge drinking, continued observation may be warranted given recent shifts in prevalence. (see Appendices E60-E66)

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 in the 35-44 year age group. 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.

Data from the 2012 Prevention Needs Assessment Survey revealed that 15% of students engaged in binge drinking and there was a monotonic increase in the percent of students who engaged in binge drinking by grade level (Appendix E67). In 2012, the percent of 12th graders who reported binge drinking was 29.3% (Appendix E68), however comparisons to the *Healthy People 2020* objective are not made as this objective refers to binge drinking in the past two weeks (versus past month), which will inflate the proportion. The percent binge drinking among 12–17 year-olds (7th through 12th grade) was 1.7 times the *Healthy People 2020* objective (15% vs. 8.6%).

In 2012, 25.2% of 7th to 12th grade students reported using alcohol in the past month, 11.3% reported using marijuana, 8.4% reported using cigarettes, 6.2% reported using chewing tobacco, 2.3% reported using amphetamines, 2.2% reported using sedatives, 2.2% reported using other narcotics, and 1.9% reported using inhalants. Overall, 14.6% of students reported using any drug, which is below the *Healthy People 2020* target of 16.6 percent. (refer to Appendix E69 for marijuana use) There was a similar gradient by grade level observed for lifetime use of alcohol, with 40.9% of all 7th to 12th grade students in Broome County using alcohol at some time during their life. For lifetime use of any drug, 19.8% had smoked cigarettes, 19.8% had used marijuana, 12.5% had used chewing tobacco, 5.7% had used inhalants, 5.1% had used amphetamines, 5.0% had used other narcotics, and 4.4% had used sedatives. While comparisons to a similar survey conducted by Monitoring the Future indicate that the rates are not significantly higher than those observed across the country, they are nonetheless disturbing, particularly for parents. Marijuana use now equals or exceeds the prevalence of cigarette smoking and is 3 times the target objective for *Healthy People 2020.*

Data from the 2012 Prevention Needs Assessment also show that 69.1% of 7th through 12th grade students think people risk harming themselves if they have five or more drinks of an alcoholic beverage once or twice a week. This figure is 1.6 times higher than the *Healthy People 2020* objective (SA-4.1 target 44%). In addition, 60% of 8th graders, 58% of 10th graders, and 61% of 12th graders either strongly or somewhat disapprove of having someone their age having one or two drinks of an alcoholic beverage nearly every day. These figures are considerably higher than the *Healthy People 2020* objective SA-3

(targets are 86.4%, 85.4%, and 77.6% respectively).

***Healthy People 2020* Objectives — Mental Health**

MHMD-1 **Reduce the suicide rate.**
Target: 10.2 suicides per 100,000 population

MHMD-4 **Reduce the proportion of persons who experience major depressive episodes.**
MHMD-4.1 Adolescents age 12-17 (7.4%)
MHMD-4.2 Adults age 18 and older (5.8%)

MHMD-5 **Increase the proportion of primary care facilities that provide mental health treatment onsite or by paid referral.**
Target: 87%

MHMD-6 **Increase the proportion of children with mental health problems who receive treatment.**
Target: 75.8%

MHMD-9 **Reduce the proportion of adults with mental health disorders who receive treatment.**
MHMD-9.1 Serious mental illness (64.6%)
MHMD-9.2 Major depressive episodes (78.2%)

MHMD-10 **Increase the proportion of persons with co-occurring substance abuse and mental disorders who receive treatment for both disorders.**
Target: 3.0%

MHMD-11 **Increase depression screening by primary care providers.**
MHMD-11.1 Adults age 19 and older (2.4%)
MHMD-11.2 Youth age 12-18 (2.3%)

Mental Health

Based on the 2009 Expanded BRFSS, 13.2% of Broome County adults reported 14 or more days with poor mental health (Appendix E4). This proportion was 10.7% for NYS and 10.1% for Upstate NY. Adults in Broome County were 1.3 times more likely to report poor mental health for at least 2 weeks out of the past month. Similarly, 11.3% of adults in Broome County reported that their physical health was not good for 14 or more out of the past 30 days (Appendix E3). Approximately 20% reported that their physical or mental health were not good on 14 or more days (Appendix E6). Almost 62% of Broome County adults age 65 or older reported having arthritis (Appendix E73). Fifty-five percent of adults over the age of 55 and 57% of adults age 45-54 reported having chronic joint symptoms (Appendix E72). Thirty-one percent of adults over the age of 65 and 35% of adults age 55-64 reported activity limitations due to physical, mental, or emotional problems (Appendix E7). Almost 38% of adults age 55 and older reported having a disability (Appendix E9) and 20% age 65 and older reported having a health problem that required the use of special equipment (Appendix E8). For all of these indicators, higher percentages were reported for those who were older (≥age 55), less educated (high school education or less), and had incomes less than the Broome County median individual income (<$25,000). 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. It is interesting to note that as many adults reported poor mental health as did poor physical health. Among children, data from the 2012 Prevention Needs Assessment Survey indicated that 34.2% of adolescents (7th-12th grade) reported depressive symptoms.

Poverty, Crime, & Delinquency among Youth

Economic security means living in a household where there is enough money and resources to meet basic needs. Children living in poverty experience food insecurity and compromised physical health associated with poor nutrition. Extreme economic deprivation is the single most important risk factor associated with problem behaviors in youth, substance abuse, violence, sexual acting out and teenage pregnancy, delinquency, poor academic performance, and dropping out of school.

In 2011, 24.4% of children in Broome County ages birth to 17 years lived in poverty, a 2% increase from 2005, though similar to Upstate NY and NYS (both 22.8%). In addition, the percentage of Broome County children receiving food stamps increased from 17.9% in 2005 to 28.6% in 2012. The percentage of Broome County youth in families receiving public assistance also rose over this same time period (from 7.2% to 10.0%), and is higher than for Upstate NY and NYS (both 7%). Almost 3% of children and youth in Broome County receive supplemental security income (SSI) as compared to 2.1% in the rest of the state. Approximately 45% of Broome County children received free or reduced lunches in 2011, compared with 52.4% in Upstate NY and NYS. In three of the five indicators of economic security (poverty level, public assistance, and supplemental security income), Broome County has a higher percentage of children in poverty than NYS. (see Appendix E74)

Physical health and emotional health are interdependent, as evidenced by self-inflicted injuries, such as suicide attempts. Between 2008 and 2010, 21 children age 10-19 had self-inflicted injuries that required hospitalization (17.6 per 100,000 youth age 10-14, 119.5 per 100,000 youth aged 15–19). The suicide mortality rate in 2008–2010 was favorable. No suicides occurred among adolescents age 10-19 for the three-year period. Still, the numbers of children who experience depression, anxiety, or bipolar disorder and the impact these have on their emotional, cognitive, and academic abilities remains concerning.

NYS Office of Mental Health Patient Characteristics Survey (2011) demonstrated that in one survey week, 308 clients below the age of 18 were seen for mental health services in Broome County. Most of these were seen for outpatient support services, but 39 out of the 308 children were seen for emergency care related to a mental health crisis. (see Appendices E76)

Data for youth arrests and violent crime can be found in Appendix E78. Broome County youth aged 16 to 21 had a higher rate of arrests for driving while intoxicated (31.2 per 10,000) than NYS (29.6 per 10,000) but lower than Upstate NY (42.4 per 10,000) and there were only 2 deaths related to motor-vehicle crashes. In Broome County, this same age group also has a higher rate of arrests for property crime (292.6 per 10, 000) than NYS (157.8 per 10,000) or Upstate NY (163.0 per 10,000). There were 108 intakes for juvenile delinquency among Broome County youth ages 7 to 15 years, which was less than half the number of intakes in 2005 (Appendix E79).

Results from the 2011 Prevention Needs Assessment Survey revealed a disturbing array of antisocial behaviors in school (past year) among 7th through 12th graders (Appendix E70). In 2012, 10.2% reported being drunk or high at school, 9.6% reported attacking another person with intent to harm, 9% of students were suspended from school, 7.2% reported gang involvement, 5.2% reported selling illicit drugs, 4.4% reported having been arrested, 4% reported having carried a handgun, though only 1.4% reported carrying a handgun to school. Opportunities and rewards for pro-social involvement with peers, school, family, and community act as protective factors. In contrast, poor family management, family conflict, and exposure to adult antisocial behavior can contribute to delinquent behaviors.

National Data indicate that 1 in 10 children suffer from serious emotional disturbance, only 30% of them graduate with a high school diploma and suicide is the third leading cause of death in 15-24 year olds. According to the NYS Office of Mental Health, approximately 5% of NYS children have emotional disturbances with intensive need for specialty services and 12% have at-risk behaviors with need for early identification and intervention.

Depression in the Elderly

Along with children, elders are members of our community considered among the most vulnerable to mental health problems and their consequences. Factors such as social isolation, cognitive changes, financial stressors, and diminished physical capacity can exacerbate mental and emotional problems. In the most serious situations, these conditions leave elders highly vulnerable to abuse and/or neglect.

Population studies among the elderly indicate a prevalence of depression ranging from 1% to 20%. Consequences of depression include reduced life satisfaction and quality of life, social deprivation and loneliness, increased use of health and home care services, cognitive decline and impairments in activities of daily living as well as suicide and non-suicide mortality. In the Office of Mental Health, Patient Characteristic Survey Week of 2011, 109 elders over 65 years old were seen for intensive mental health service, 9 of those for emergency crisis intervention and 34 more for in-patient evaluation (Appendix E76).

Elder Abuse

The Department of Social Services, Protective Services for Adults (PSA), calls attention to the reported incidence of elder abuse and neglect in our community, although all situations of mistreatment of adults are likely underreported. In 2008, of 280 active adult cases, 103 (38%) were 60 years old or older. Of the total referrals to Protective Services for adults eighty, 6.5% are self-neglect cases and 13.5% are abuse cases. Elders over the age of 60 comprise 60% of the reported cases of abuse, which includes physical, financial, and emotional abuse as well as neglect. As of August 2009, the percentage of PSA clients over 60 years old was 33.8%, and both 2008 and 2009 represent a sharp decline from 1988, when the percentage of clients over 60 years old was 57%. This improvement may be due in part to programs like HOME and Elder Abuse Outreach Program, which provide mental health services aimed at early intervention, with an intended outcome of fewer referrals to protective services.

Social Determinants of Health

County Health Indicators by Race/Ethnicity (CHIRE) for2008-2010 were made available by the New York State Department of Health (see Appendix B100). 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 2010 census data, non-Hispanic Blacks/African Americans comprised 5.2% of the county population, non-Hispanic Asian/Pacific Islanders comprised 3.7%, and Hispanics 3.4%. Income was lower and poverty was higher among these minority populations. Median household income (2008-2010) was $23,527 for non-Hispanic Blacks/African Americans, $39,261 for non-Hispanic Asian/Pacific Islanders, and $29,111 for Hispanics as compared to $45,629 for non-Hispanic Whites. The percent of families below poverty (2008-2010) was 3.7 times higher for non-Hispanic Blacks/African Americans, 1.9 times higher for non-Hispanic Asian/Pacific Islanders, and 2.0 times higher for Hispanics than for non-Hispanic Whites (36.5%, 18.9%, 19.7% respectively vs. 9.8%). 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 (71.8% vs. 33.1%). The premature deaths among this minority group contributed to more years of productive life lost (9,794 vs. 6,594 per 100,000). And while the overall mortality rate for non-Hispanic Asian/Pacific Islanders was nearly half that of non-Hispanic Whites, the percentage of premature deaths among this minority group was more than twice that of non-Hispanic Whites (75.8% vs. 33.1%). 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 (72.9% vs. 33.1%). Based on the Indicators for Tracking Public Health Priorities (Appendix 167), the ratio of premature deaths (before age 65) was 3.1 for non-Hispanic Blacks and 2.4 for Hispanics as compared to non-Hispanic Whites. These ratios were higher than NYS and higher than the 2013-2017 NYS Prevention Agenda objective of 1.87 and 1.86 respectively.

Natality indicators showed similar disparities. The percent of births with early (1st trimester) prenatal care and the percent of births with adequate prenatal care (Kotelchuk Index) was considerably lower for non-Hispanic Blacks/African Americans than for non-Hispanic Whites (early prenatal care 64.2% vs. 79.4% and adequate prenatal care 54.7% vs. 74.5%). These differences in prenatal care may account for the higher percentage of premature births and low birthweight births among non-Hispanic Blacks/African Americans than among non-Hispanic Whites (premature births 15.4% vs. 10.5% and low birthweight births 11.3% vs. 7.5%). Although the ratio of preterm births for non-Hispanic Blacks as compared to non-Hispanic Whites in Broome County was lower than NYS (1.47 for Broome County vs. 1.61 for NYS), it was nonetheless slightly higher than the 2013-2017 NYS Prevention Agenda objective (1.42 ratio). The teen pregnancy rate among females aged 15-17 was 2.6 times higher for this minority group than for non-Hispanic Whites (47.0 vs. 17.9 per 1,000). Among Hispanics, the teen pregnancy rate for females aged 15-17 was 4.3 times higher than that for non-Hispanic Whites (76.3 vs. 17.9 per 1,000).

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 2.7 times the rate for non-Hispanic Whites (24.6 vs. 9.1 hospitalizations per 10,000). Moreover, the asthma hospitalization rate among youth aged 0-17 years was 30.2 per 10,000 for non-Hispanic Blacks/African Americans compared to 8.7 per 10,000 for non-Hispanic Whites.

Similar differences exist for diabetes. The age-adjusted hospitalization rate for diabetes as a primary diagnosis was 29.2 per 10,000 for non-Hispanic Blacks/African Americans compared to 11.7 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 (337.9 vs. 184.2 per 10,000). Further, the age-adjusted hospitalization rate for short-term complications secondary to diabetes was likewise higher for non-Hispanic Blacks/African Americans than for non-Hispanic Whites (23.3 vs. 4.5 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.

Local Circumstances / Barriers to a Healthy Lifestyle

As part of the Steps to a HealthierNY program grant, counties had the opportunity to add questions to the 2007-2008 Steps BRFSS survey. In the final year of the grant, a number of questions were selected about changes that the community could make to help people exercise more and to eat healthier. Questions were also asked about walking time to various locations such as a school or place of worship as well as the perceived safety of the walk. The results from this survey appear in Appendices E81-E86, and a summary of the results appears in Table 15 below listing each question in descending order by percentage who agreed or strongly agreed with the response (n=1417).

Broome County adults identified having maps of walking routes (71.5%), release time from work (68.4%), and more spaces for outdoor recreation (68.3%) as the top three items that could help them to exercise more. Of the top five items, three related to the built environment: building more spaces for outdoor recreation (68.3%), maintaining sidewalks (67.9), and improving pedestrian and bicycle access (61.2%). Only about 50% of residents agreed or strongly agreed that controlling loose dogs in the neighborhood would help them to exercise more.

Broome County residents also identified having healthier food options at work (85.0%), assuring nutrition information is available (84.8%), and having more farmer's markets (82.4%) as the top three items that could help them to eat healthier. More than 80% of adult residents of Broome County agreed or strongly agreed with the top 5 items on the "Help me to eat healthier list." Less than 50% of Broome County residents agreed that levying a tax on soft drinks and snack foods with low nutrient value would help them to eat healthier.

Table 15. Prioritized List of Changes that the Community Could Make to …

Help you to exercise more …	Help you to eat healthier …
1. Provide maps of walking, jogging, and bicycling routes in the community	1. Offer healthier choices in worksite vending machines and cafeterias
2. Allow release time from work for exercise activities	2. Assure nutrition information is available wherever food or meals are bought or sold
3. Build more spaces for outdoor recreation such as parks and walking trails	3. Have more opportunities to buy fresh fruits and vegetables from farmer's markets
4. Ensure that sidewalks in your neighborhood are available and maintained	4. Provide healthier snack options at sporting events or entertainment venues
5. Improve pedestrian/bicycle access to schools in your neighborhood	5. Identify healthy choices on menus in local restaurants
6. Develop more opportunities for indoor walking such as malls and schools	6. Provide dietary counseling for families through community based programs
7. Increase police enforcement and control crime in my neighborhood	7. Ban the use of trans fats in local restaurants
8. Have better traffic control for pedestrian crossing at intersections	8. Levy a tax on soft drinks and snack foods with low nutrient value
9. Provide better street lighting on neighborhood streets	
10. Control loose dogs in your neighborhood	

SOURCE: Broome County Health Department, Steps Behavioral Risk Factor Surveillance System, 2007-2008

As part of this survey, Broome County adults were also asked about walking behaviors in relation to distance (as measured by time) and safety. The places that were cited most frequently as being within 10 minutes of one's home were: a convenience store (50.5%), a place of worship (48.5%), and a public

park, playground or sports field (45.4%). The three locations that were cited most frequently as being more than a 10 minute walk were: a shopping center (88.3%), one's place of employment (87.8%), and commercial fitness center (87.1%). In relation to safety, the most frequently cited location for safe walking was a public park, playground or sports field (70.3%), a place of worship (66.5%), a school (63.2%), and a convenience store (62.6%). Locations identified as not safe include shopping centers (62.2%), place of employment (59.2%), and commercial fitness center (57.7%).

The Initiative for Healthy Infrastructure at the University at Albany, Department of Geography and Planning has produced a series of maps depicting areas within walking distance of education facilities, recreation facilities, and medical facilities for both Broome County and the City of Binghamton. These maps appear in Appendices E88-E93. The distribution of school systems across the county is sparse. Most rural areas have a single central school district with elementary and high school buildings located in proximity of each other. Few schools in rural areas are walkable except for those who live in the nearby village. Parks and recreational areas show a considerably greater distribution across the county than schools, and cover a larger land area. Areas within walking distance to a medical facility are restricted almost exclusively to the central urbanized area of the county.

Despite the recent emphasis on the importance of physical activity to maintain health, more than half of the adult population is not performing the minimal level of physical activity. Health education and targeted behavioral interventions as well as changes in the physical environment and access to safe convenient places to exercise can make physical activity a more normative experience.

C. The Local Healthcare Environment

The Physical Environment - Geography & Climate

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 number of farms in Broome County has continued to decline over the past decade with the latest statistics (2007) indicating there are 580 farms covering 86,613 acres within the county. The county has two large population centers, surrounding suburban areas, and, for the largest portion of the land area, predominantly rural townships with small village centers. The roadways in these latter areas lack sidewalks except in the small villages. 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.

Like many areas, residents express concern about air and water quality, industrial waste contamination in soil and groundwater, as well as lack of inspection of private wells. More recently, the discovery of natural gas and its potential extraction has raised many environmental impact concerns, which remain unresolved at this time. Environmental issues were a top priority for one of the focus group sessions with an expressed desire for a "greener environment," more eco-friendly buses, and greater recycling. Most urbanized areas, excluding Johnson City, have municipal water systems that are fluoridated; however, most residences in rural areas have private wells, so access to and consistent use of fluoride supplements creates a challenge for dental care in this county.

Topography and location influence the climate of Broome County. Broome County is primarily pleasantly cool with an average annual temperature of 45.8^{o} F and moist. This area has about 48% of the annual average available sunshine, primarily in the summer months. The area has a reported 212 cloudy days with 80% or greater overcast per year. Inclement weather is often cited as a barrier to being more physically active.

Legal Aspects - Laws & 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.

Social Aspects

Social isolation, particularly for rural elders, is a major issue. The Broome County Office for Aging (OFA) reports 11,632 elders, 60 years of age and older live alone. A comparison between the 2000 Census data and 2010 in the age range of 60-64 years and 85 and above continue to increase. The lower end of this age spectrum reflects the initial impact of the aging of the "Baby Boom." Unfortunately the core volunteers for senior centers and vital services such as Meals on Wheels tend to be in the 65-74 age cohort, a group whose numbers are estimated to be declining in Broome County. Another issue of concern is the potential increase in the need for in-home services. This demand may be ameliorated, to a small degree, by the decline in the age 75-84 cohort; however, the predicted growth of those 85 and older can be expected to increase the demand for these services.

During a Steering Committee meeting, data regarding social isolation of elders were reported (OFA). Of those Broome County seniors living alone, 19% did not socialize with family, friends, or neighbors in the past week and experienced decreased motivation to cook for self, which raises concerns of nutritional

status in the vulnerable population. The outmigration of younger family members, often to seek employment in more urban settings contributes to the social isolation of elders. Lack of social networks contributes to isolation of elders, particularly among the oldest cohort and those living in poverty. Intergenerational concerns related to elders include but are not limited to the issue of grandparents caring for grandchildren and the stress on family caregivers for the elderly, particularly with chronic and debilitating health issues.

Health Care and Economics

Diminishing funding from both private and public sources along with a rise in the number of unemployed and uninsured/underinsured are placing an ever increasing strain on health care resources. As cost control measures are being undertaken in the health care sector, more of the cost burden for care is being shifted to the county level. A particular concern is the resulting strain on the portion of the system that serves as a safety net within our county including The Dr. Garabed A. Fattal Community Free Clinic (Community Free Clinic). Many governmental agencies and offices are functioning with tight budgets. Although Broome County has been successful in running many health promotion and education programs that are grant funded, both public and private foundation grant funding has been curtailed and successful programs may be less sustainable without these types of funding. Efforts are being made to seek multiple funding sources to replace terminating grants.

Institutions - 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.

Agriculture

Agricultural issues continue to have ramifications for the health of citizens of Broome County. Dairy and fruit and vegetable farming remain the mainstays of the local agricultural picture. Farm workers have distinct risks for health issues as well as access to health care services. Rural dwellers, particularly farmers often define health as the ability to work, delaying health care until unable to work. This cultural aspect of how health is defined is compounded by the preference for use of informal networks, the nature of self-employment which limits access to health insurance, and the hands-on nature of farming which leads many agricultural workers to seek health care only when they can no longer ignore the problem. This delay may result in an emergent situation, raising the cost of treatment. One advantage of a strong agricultural system within the region is the ability to accentuate the use of locally grown/produced foods. The Cornell Cooperative Extension (CCE) along with may regional partners including the Rural Health Network of South Central New York (RHNSCNY) are focusing on bringing locally grown/produced foods to public institutions within the county. Growing Health, a food tasting symposium has served to help raise awareness about the advantages of using locally grown foods. Food safety is of concern throughout the country with many recent examples of food contamination.

Moreover, in an era of mass production and distribution of food supplies, the source is often difficult to discern. Food safety concerns may encourage the use of locally grown/produced foods.

Media Messages

Broome County has four local television stations serving the area. Cable television services also include a regional news channel, with one focus area being the Southern Tier of New York. In addition, the area has multiple radio stations. The Press and Sun Bulletin is the local daily newspaper and also provides an electronic site entitled pressconnects.com. Each of these media outlets is a source for health information and public service announcements (PSAs). These PSAs have provided support for several programs including Sodium Reduction in Communities, Steps to a HealthierNY, BC Walks, and the Rock on Cafe. Use of social marketing and media for health messages are a means of effecting changes in diet, physical activity, and tobacco use making healthy choices normative and creating a healthy lifestyle culture.

Laws and Regulations (smoking policies)

New York State has been highly successful in promoting tobacco free-environments through laws and regulations regarding tobacco use in public areas, use of taxes to deter tobacco consumption, and focus on enforcement of regulations on tobacco sales to minors. For more than a decade tobacco-free workplace regulations have been in place and have become more stringent, now covering entrances to public institutions such as hospitals and libraries prohibiting individuals from congregating just outside doorways to smoke. Young Lungs at Play is focused on making playgrounds and parks in Broome County tobacco-free zones. This initiative was supported by the Broome County Health Department Steps to a HealthierNY, Tobacco Free Broome and Tioga Coalition, United Health Services Hospitals and the Asthma Coalition of the Southern Tier.

Geography - Environmental Concerns

Broome County enjoys the active participation of its citizens in shaping environmental policy through the Broome County Environmental Management Council (EMC). Initially established by the Broome County Legislature, the EMC seeks to preserve, protect, and enhance the local environment. Its members include members of the community with environmental concerns who serve as Broome County's government citizen advisory board on environmental matters. Since 1971, volunteer members of the EMC have conducted meetings and public information sessions in addition to preparing reports, plans, and advisory resolutions. Topics of concern to the EMC include natural resource management, water resource protection, land use planning, sustainable development, hazardous and solid waste management.

In the last several years, the EMC has been particularly concerned with the environmental impact of the contamination in the Village of Endicott and surrounding areas. In 1979, International Business Machines (IBM) Corporation reported to the NYS Department of Environmental Conservation (DEC) that volatile organic compounds (VOCs), including trichloroethylene (TCE), were released into the ground. Since that time, IBM has been sampling for groundwater contamination on its site and subsequently reported that additional releases of VOCs had occurred. In 1986, the site was downgraded to a Class 4 site (case closed) on the NYS hazardous waste registry, however it was reclassified as a Class 2 site (posing a public threat) in 2004 due to renewed public concern about the health effects of released contaminants into the local environment.

In 2003, traces of chemicals such as TCE were also detected in homes and businesses through a process known as soil vapor intrusion (breathing soil gas). To prevent harmful chemicals such as TCE from entering homes in areas associated with the company's former manufacturing plant, IBM agreed to

install ventilation systems in buildings in Endicott where air sampling detected VOCs in indoor air. IBM is cleaning up groundwater contaminants as part of an ongoing remediation plan required by New York State.

TCE is suspected of being carcinogenic and is known to cause central nervous system damage, birth defects, and other chronic health states. In 2005, a comprehensive study of cancer rates within the IBM plume area was completed. While this study demonstrated an elevated level of testicular and kidney cancers as well as heart birth defects, the small population size of the study area limited the meaningful interpretation of these rates.

Yet another, more recent environmental issue in Broome County and surrounding areas concerns the prospective interest in the natural gas drilling that lies beneath the Marcellus Shale of the northeastern region. Potential production from the 31-million-acre core area of the Marcellus region could meet the entire nation's gas needs for approximately 14 years. Remarkably, 10 to 20 percent of this natural resource lies within New York's borders; stretching along the southern tier of the state. Currently, most of the operating oil and gas wells are in the westernmost region of the Southern Tier. Over the past several years, however, exploratory drilling has occurred in every county of southern New York, including Broome County. Despite the fact that the development of these natural gas fields could potentially create substantial economic and fiscal benefits for Broome County and its surrounding areas, many questions and concerns remain regarding the multifaceted environmental impacts that gas drilling could have on natural resources in the areas well as the health, well-being, and safety of residents. The issue remains under review.

Section Two – Local Health Unit Capacity Profile

Broome County Health Department

Mission: The Broome County Health Department is committed to working proactively in collaboration with the community to preserve, promote and protect the public health and quality of life of all Broome County Residents.

Vision: *Leading the community to the promise of a healthy future*

Introduction

Public health responsibilities encompass preventing epidemics and the spread of disease, protecting against environmental hazards, preventing injuries, encouraging healthy behavior, helping communities to recover from disasters, and ensuring the quality and accessibility of health services.

Public health employees are dedicated to providing safe environments and services to help the people who are most at risk to thrive. While the core functions of public health are health assessment, policy development as it relates to matters pertaining to health, and assurance of a healthy environment through surveillance, the end result of these functions is to improve the health of our residents and communities. Private and public organizations, individuals, government officials and public health employees work together to accomplish this mission.

The focus of health programming in our community is determined by the needs of the population and is data driven and evidence based. Public health employees monitor the health status of the community through surveillance of local information regarding disease states and environmental hazards. Additionally, employees review data collected by the New York State Department of Health and the needs assessments of various community agencies to compile a Broome County Community Health Assessment. Health related issues are diagnosed and investigated with the intent to inform, educate, and empower the community, thereby giving residents the voice and responsibility for action. In support of community efforts, the Health Department then develops policies and plans in response to the identified areas of action.

Public health response also includes enforcement of laws and regulations that protect health. Food service inspections, along with compliance checks for retail tobacco outlets are two examples of how public health employees monitor areas of concern to protect the health and safety of community members.

Working with at-risk populations, those who are uninsured or underinsured, the Health Department links people to necessary services and assures the availability of healthcare options.

Operational planning is an important part of public health. To assure a competent public health workforce, the Health Department will continue to work with institutions of higher education to train and develop expertise in employees, ensuring that they meet or exceed established standards.

The department will continue to evaluate effectiveness, accessibility and the quality of both personnel and population-based health programming, and will use data to research innovative, community focused solutions to health problems.

The Broome County Health Department has adopted ten essential public health services that are integral to assuring the health of the community (see also Appendix F2).

The Ten Essential Public Health Services

1. **Monitor** health status to identify community health problems.
2. **Diagnose and investigate** health problems and health hazards in the community.
3. **Inform, educate, and empower** people about health issues.
4. **Mobilize** community partnerships to identify and solve health problems.
5. **Develop policies and plans** that support individual and community health efforts.
6. **Enforce** laws and regulations that protect health and ensure safety.
7. **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. **Assure** a competent public health and personal healthcare workforce.
9. **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.
10. **Research** for new insights and innovative solutions to health problems.

Organization

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 Health Care Needs. The Fiscal Services Unit and Health Promotion and Outreach (grants) are part of the Administration Division (refer to Organizational Chart in Appendix F1).

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 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. A complete description of the process used to conduct the community health assessment can be found Section 3 of this report. The programs and services which are described in the section below as well as programs and other grants received by the Broome County Health Department appear in Appendix F3.

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 described below is available to provide educational materials and presentations to the public on a variety of topics. The programs listed within each Division provide an array of health education and promotion activities throughout Broome County. 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 have a fee based on cost, with fees adjusted 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 91 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 divisions are detailed in the sections that follow.

Expertise & Technical Capacity

The Director is responsible for the conduct of the Community Health Assessment. The Health Department contracted this task to a faculty member of the Decker School of Nursing at Binghamton University who holds a Master's Degree in Nursing and a Master's Degree in Public Health. This individual also served as the local evaluator for the Steps to a HealthierNY and had conducted analyses of the local BRFSS and YRBS, which provided input to the document and informed the decision-making process. While collection of these data was funded by a Centers for Disease Control and Prevention grant, consideration should be given to making this type of data widely available to all counties in the state.

A variety of data sources were used to conduct this assessment in addition to the use of pencil-and-paper surveys, online surveys using Survey Monkey, and focus groups. 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 including the Community Health Assessment Indicators and the Community Health Data Set, which are publicly available, as well as SPARCS data and other sources available through the Health Commerce System.

Prevention Quality Indictors, which provided zip-code level information about hospitalization rates in an interactive format, has also been utilized. 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, and this service was used for developing most of the maps in this document. The conduct of the Community Health Assessment and the preparation of this document is a daunting task, and require a considerable amount of human resources. This process, however, is invaluable in relation to development of collaborative efforts with local hospital systems. The capacity of local health departments to conduct such assessments is constrained by its budget, increasing service demands, and need to respond to emerging public health threats. Thus, state support for these efforts is crucial.

Adequacy & Deployment of Resources

Administration

Administration exists to establish and maintain the infrastructure necessary to assure the quality and consistency of public health services provided to the community in a cost-effective manner. The department strives to reduce inefficiencies, provide economies, and ensure compliance with regulations, accreditation standards and laws established by governing bodies. Administration serves as a "hub" between external recipients and internal recipients of services.

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 payables/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.

DESCRIPTION OF SERVICES

The Administration Division is composed of three units: Fiscal, Departmental Support, and Administration.

Fiscal:

- The fiscal unit is responsible for all facets of the Health Department's finances. Under the direction of the Fiscal Services Administrator, the fiscal staff provide payroll and personnel processing, accounts payable and receivable, cash management, statistical and financial analysis, billing, claiming and grants management. In addition, the unit prepares complex financial and statistical reports (including cost reports), state aid applications, and various reports for the Health Department programs. Fiscal staff members provide information and guidance on fiscal matters to the other divisions. Accountants act as liaisons to agency and non-agency staff regarding fiscal and program operations, departmental budget requests, and grant programs. The Fiscal Services Administrator coordinates the budget process fiscal procedures, and personnel activities for the entire Health Department.

Administration:

- Plans, directs, and administers all public health programs and services according to applicable laws and regulations as described in the Broome County Charter, Public Health Law and federal regulations.
- Serves as a primary and expert resource for establishing and maintaining Public Health policies, practices and capacity.
- Conducts public health surveillance, investigates public health issues, and evaluates public health interventions targeting chronic disease prevention and control, emerging infectious disease outbreaks, toxic exposures, environmental health problems, injuries, unintentional child fatalities, injuries or deaths due to motor vehicle, pedestrian and bicycle crashes, communicable diseases, maternal child health morbidity, and tobacco control and preventive cancer services.
- Exercises, tests, refines and implements the Countywide Health Emergency Operations Plan for terrorist threats/incidents, communicable disease outbreaks, and disasters.
- Provides education to medical community to ensure timely identification and diagnosis of symptoms resulting from a biological, chemical, or radiological all hazards event.
- Directs the 2013-2017 Community Health Assessment and Community Health Improvement Plan process and functions as a community liaison in the process.
- Participates in evaluating, planning, and monitoring the health status of the County and its residents.
- Provides direct supervision and direction of departmental community health education and promotion activities. Coordinates and administers health education and health promotion activities in collaboration with other community agencies stakeholders, residents and elected officials.
- Provides direct supervision and direction to the fiscal and departmental support staff.

Departmental Support:

- The assigned staff members are responsible for maintaining a clean and safe physical environment for the clients/visitors. Expenses support the infrastructure of the Health Department including information technology, telecommunications, and service contracts.

Administration:

Public Health Standards:

Investigate health problems and environmental public health hazards to protect the community
- Conduct timely investigations of health problems and environmental public health hazards.
- Contain/mitigate health problems and environmental public health hazards.
- Analyze public health data to identify trends in health problems, environmental public health hazards, and social and economic factors that affect the public's health.
- Maintain a plan with policies and procedures for urgent and non-urgent communications.
- Inform and educate about public health issues and functions
- Provide health education and health promotion policies, programs, processes, and interventions to support prevention and wellness.
- Provide information on public health issues and public health functions through multiple methods to a variety of audiences.

Develop public health policies and plans
- Serve as a primary and expert resource for establishing and maintaining public health polices practices, and capacity.
- Develop and implement a health department organizational strategic plan.
- Conduct a comprehensive planning process resulting in a Community Health Improvement Plan.
- Maintain an All Hazards Emergency Operations Plan

Enforce public health laws
- Review existing laws and work with governing entities and elected/appointed officials to update as needed.
- Educate individuals and organizations on the meaning, purpose, compliance, and benefit of public health laws and how to comply.
- Conduct and monitor public health enforcement activities and coordinate notification of violations among appropriate agencies.

Evaluate and continuously improve processes, programs and interventions
- Use a performance management system to improve organizational practice, processes, programs, and interventions
- Develop and implement quality improvement processes integrated into organizational practice, programs, processes and interventions.

Maintain administrative and management capacity
- Develop and maintain an operational infrastructure to support the performance of public health functions.
- Establish effective financial management systems

Maintain capacity to engage the public health governing entity
- Maintain current operational definitions and statements of the public health roles, responsibilities, and authorities.
- Provide information to the governing entity regarding public health and the official responsibilities of the health department and of the governing entity.
- Encourage the governing entity's engagement in the public health department's overall obligations and responsibilities.

ADMINISTRATION: 2014 OBJECTIVES

- Engage in meaningful research of community health status, measured by jurisdictional mortality, incidence, or prevalence. Assess County characteristics such as poverty, health disparities, and health literacy to determine health behaviors, adverse health events, and populations at risk.
- Coordinate stakeholders from all sectors to participate in the Community Health Improvement Plan.
- Develop a well-trained and competent workforce through assessing training needs and collaborative planning with institutions of higher learning to maintain the technological tools of the public health infrastructure that are necessary to support all essential public health services.
- Increase awareness of chronic disease prevention through evidence-based health promotion and education activities and strategies that encourage lifestyle changes and engages community members where they live, learn, work, play, and pray.
- Build the capacity of community organizations to provide health information and programming as part of "doing business" offering cost-effective programs that impact health outcomes and are easy to replicate.
- Collaborate with institutions of higher learning to bring in expertise in planning and evaluation, epidemiologic studies, data collection, and management.

ADMINISTRATION: 2013 BUDGET HIGHLIGHTS

- Maintain health education activities to provide for coordination of efforts to prevent diseases and encourage healthy lifestyles by building the capacity of community organizations and by seeking insurance reimbursement where appropriate.
- Improved community health assessment and surveillance activities through coordination with other community agencies.
- Continued maximization of grant funding to support operating budget as the focus of public health shifts from direct services provision to surveillance, assurance, and policy development.
- Prioritization of expenses to reflect identified staff needs for education and technology, while focusing on equitable salary levels for recruiting and retaining staff.

Maternal Child Health and Development

The mission of the Maternal Child Health Programs is to promote through identification, assessment, education, and service provision, the growth and development of children with special needs and their families, and to improve the health of women, infants, and children through health teaching and counseling, and the early identification of existing and potential health problems.

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.

Child Find: This statewide program ensures that a child (birth to three years of age) who may be at risk for delays will get the help needed to enhance his or her early growth and development. The goal of Child Find is to improve the identification, referral to care and follow-up of infants and toddlers at risk of developmental delay and disability. It helps ensure that eligible children under age three are engaged in primary health care, receive developmental surveillance and screening through their primary health care provider, and are appropriately referred to early intervention services. There were 133 new referrals to the Child Find Program in 2012 with 219 children actively enrolled. There were 112 new referrals to the Child Find Program in 2011 with 339 children actively enrolled. In 2012, Child Find Program referrals were increased from 2011 and enrollment was down – this may be a reflection of the increase in Early Intervention Program enrollment during that time.

Children with Special Health Care Needs/Physically Handicapped Children's Program (PHCP): The purpose of programming for children with special health care needs is to ensure access to quality health care for chronically ill and disabled children. Children under 21 years of age who reside in Broome County and whose families meet financial qualifications are eligible. Families are referred to community or state agencies to help them in accessing insurance and/or services for their children with special needs, as well as assisting parents with payments for the medical care of their children.

Early Intervention Program (EIP) (birth–2 years): The Early Intervention Program is a state and federally mandated program which focuses on early identification and follow-up of children, age birth through two, with developmental delays (cognitive, physical, communication, social/emotional or adaptive). The EIP provides detailed evaluations for the family. The service coordinator works with the family to identify concerns and priorities for the child, as well as strengths and resources to enhance the child's development. The service coordinator refers the child for needed services based upon an Individualized Family Services Plan developed for the child in collaboration with the family. The Early Intervention Program is designed to ensure a central role for the family in the process of improving both the developmental and educational growth of their child.

Education to Handicapped Children's Program (EHCP) Committee on Preschool Special Education (CPSE) (ages 3–5 years): The Education to Handicapped Children's Program is a federal and state mandated program for children, ages three through five, with suspected or confirmed delays, that will affect learning. This program is directed through the New York State Department of Education with the objective being the transition of identified children into the formal school system.

As with other programs, the family is an important part of the team in developing a plan based on the identified needs of their child. The EHCP process determines placement opportunities and services to benefit both the child and the family.

Healthy Families Broome (HFB): The Healthy Families Broome (HFB) Home Visiting Program is part of a statewide initiative (Healthy Families New York-HFNY). HFB is one of 36 sites funded through the New York State Office of Children and Family Services. It is a voluntary program that offers support and education to expectant new parents who reside in Broome County, outside the Binghamton City School District. Families are offered long-term home visiting services until their child enters school or Head Start. The Healthy Families Broome Home Visiting Program is a comprehensive prevention program that focuses on the safety of children while at the same time supporting families. Services include educating families on parenting and child development, connecting them with needed services, and assessing children for developmental delays. Healthy Families Broome is provided locally through the Broome County Health Department in collaboration with the Lourdes Youth Services PACT Program.

Licensed Home Care Services Agency (LHCSA): Broome County Health Department operates a Licensed Home Care Services Agency. The scope of practice encompasses maternal and child health prevention

activities including skilled nursing, lactation counseling, in-home physical assessment of clients and their environment, health education and referral to community resources. Communication is established with the family's health care provider to assist in planning and advocating for the client's needs.

Home visitation services are available to all prenatal, postpartum/newborn clients in Broome County. Referrals are accepted from hospitals, health care providers, insurance companies and clients or their families. The ultimate goal is to direct the patient toward self or family care.

Maternal and Child Health Nursing: This team of highly trained nurses has extensive education and expertise in assessing infants, children and families within the community setting. The home visiting services includes: a skilled nursing assessment; support to the family to have a positive pregnancy and a healthy baby; providing prenatal guidance and birthing information; assistance with obtaining a medical home, health insurance, prenatal care, family planning, well child exams, immunizations, breastfeeding, quality child care, crisis planning, recognizing if a child has special needs, and providing linkages to other resources.

Maternal Child Health and Development: The assurance of optimal physical, psychosocial and developmental health and wellbeing for childbearing and child-rearing families is the goal through maternal child programs designed to help families receive the evaluation and treatment services they need. Some children may experience delays in their development, and early detection and treatment may make a difference…for the child, the family, and the community.

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.

Table 16. Broome County Women, Infants, Children (WIC) Program Data, 2012

Program Data	YTD 2012 (N)
Total # of Participants Served	22,958
# Clinic Days	254
Average # of Participants/Day	~91
# New Pregnant Women	1,032
# New Women (Postpartum and Breastfeeding)	254
# New Infants	1,243
# New Children	829
Total New Participants	***3,358***

MATERNAL CHILD HEALTH AND DEVELOPMENT: 2014 OBJECTIVES

- Reduce fetal, infant and child death by early identification of problems, developing and implementing interventions and providing community education.
- Increase the number of children screened for lead poisoning at age one and two by providing information to parents in collaboration with Environmental Health staff.
- Eliminate childhood lead poisoning through primary prevention, early identification, and continued services to children with elevated blood levels.
- Maximize use of preventive health services through education and collaboration with local health care providers, the Clinic Division, Department of Social Services, schools, NYS Department of Health, and child care providers.
- Offer Kempe assessment to expectant and new families to assess their strengths and challenges. Offer families information regarding local community resources and connect eligible families to Healthy Families Broome home visiting program.
- Continue to review and update Quality Assurance Corporate Compliance Plan in the division to ensure program integrity, accuracy, appropriate authorization of service and quality of care.
- Maternal Child Health / Licensed Home Care Services Agency
    - Increase the number of prenatal visits to ensure early and continuous comprehensive prenatal care to reduce infant mortality, decrease low-birthweight babies, and increase positive birth outcomes.
    - Increase the number of evaluation visits to postpartum/newborn clients to minimize environmental hazards to reproduction/growth/development through evaluation of home settings, health habits and nutrition status.
    - Continue to provide home visiting, nursing assessment and education to children with identified elevated blood lead levels and refer at risk dwellings for assessment.
    - Continue to offer bereavement support to families dealing with the loss of a child
    - Ensure appropriate newborn bloodspot screening, follow-up testing, and referral to services.
    - Expand contracts in place with insurance providers to maximize billing as allowed for LHCSA home visits.
    - Continue to provide training in medication administration to child care providers.
- Increasing need for services in both the Early Intervention Program and the Preschool Education Program demands assurance of adequate capacity of needed services for infants and children identified as having developmental and/or learning delays and/or being at risk for developmental delays.
- The NYS Department of Health restructured the billing component of the Early Intervention Program and program staff works to successfully accommodate these changes.
- The NYS Department of Health also plans to restructure the methodology for reimbursement of service coordination activities. The Broome County Early Intervention Program will work to successfully accommodate these changes when they become known.
- Continue to strive for state performance standards in the Early Intervention Program.
- Continue conservative fiscal management of the Children with Special Health Care Needs programs while meeting State and Federal regulations.
- Utilize the preschool software program intended for billing Medicaid to efficiently capture data that will be useful in completing reports to assist in better program management.
- Implement procedures which will promote both efficient use of providers' time as well as maximizing desired results for families.

MATERNAL CHILD HEALTH AND DEVELOPMENT: 2013 BUDGET HIGHLIGHTS

- Continue to identify vulnerable families and implement areas of collaboration with Department of Social Services and other human service providers to prevent child abuse/neglect.
- Continue to pursue contracts with managed care organizations to maximize resources by billing for licensed home care agency services.
- Continue to develop better infrastructure to supplement operating budget costs with third party insurance revenue, state aid and grant funding.
- Continue to assist families in ascertaining community resources to meet their health care needs, through referrals and linkages with community agencies.
- Use local data to expand resources and motivate action toward elimination of lead poisoning in collaboration with the Environmental Health Division and more community agencies.
- Continued transition into NYEIS, the new Early Intervention Program software from the NYS Department of Health. Approximately 65-80% of children enrolled in Broome County's Early Intervention and Child Find Programs are in the NYEIS system. The State Department of Health plans to complete work on system reports, which will allow for greater trending and forecasting at the local level.
- Introduction of State Fiscal Agent for the Early Intervention Program has changed the mechanism for payment and reimbursement in the Early Intervention Program.
- Expected change in the methodology for reimbursement of Service Coordination activities is still unknown.
- Increasing requirements of children with disabilities and developmental delays will continue to challenge the department to find resources to adequately meet their needs.

Environmental Health

To promote the public health and prevent communicable disease, chronic conditions and injury by providing technical assistance to the regulated community and education to the public in various program areas, including but not limited to Food Service, Water and Air Quality, Rabies Control, Lead Poisoning Prevention, Swimming Pool inspections and Hotel fire safety inspections. The Division is charged with the enforcement of the New York State Sanitary Code, the Broome County Sanitary Code and certain parts of the Public Health Law.

Environmental Health

The Division of Environmental Health conducts routine inspections of approximately 1,500 regulated facilities; responds to complaints of public health nuisances; provides 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.

Childhood Lead Poisoning Prevention: Lead poisoning is caused by eating, drinking or breathing anything with lead in it. It can slow a child's normal growth and development and can cause mental retardation, kidney disease, liver damage, blindness or death. Regular testing on children up to six years of age is required to identify the problem early. The Lead Poisoning Prevention Program is managed by the Broome County Health Department with testing done by health department clinic staff, private physicians, and medical clinics. Advice on cleaning the child's environment, nutrition, housekeeping, working with landlords/property owners and physicians, and retesting are part of the follow-up when an elevated lead level is found. Data for the lead prevention program for 2012 are detailed below.

Table 17. Blood lead tests by age group of the child at testing during the selected time frame 01/01/2012 – 12/31/2012

Lead Values (mcg/dL)							
	0 to <5	5 to <10	10 to14	15 to 19	20 to 44	45 to 69	70+
# Children	2558	158	33	12	5	1	0

Table 18. Blood lead tests by age group of the child at testing during the selected time frame 01/01/2012 – 12/31/2012

Age Group (months)							
Blood Lead Level (mcg/dL)*	**< 9 months**	**9 to < 18 months**	**18 to < 36 months**	**36 to < 48 months**	**48 to < 60 months**	**60 to < 72 months**	**72+ months**
0 to < 5	13	1068	943	209	128	57	140
5 to < 10	0	42	65	19	15	10	7
10 to 14	0	9	10	6	2	3	3
15 to 19	0	2	5	2	1	2	0
20 to 44	0	0	2	2	0	0	0
45 to 69	0	0	0	0	1	0	0
70+	0	0	0	0	0	0	0

Water Supplies: Inspect, survey, educate and monitor the various public water supplies in accordance with Part 5 of the NYS Sanitary Code. Review plans for the construction, addition, or modification of any public water supply to assure compliance with State and Federal Regulations. Require correction of any violations and provide technical assistance to water supply operators to comply with Part 5 of the NYS Sanitary Code. Provide technical information to well owners.

Wastewater Treatment: Staff reviews, inspects, educates and takes enforcement actions as needed, designs, and provides approval of existing residential systems seeking modifications or corrections. Plan reviews are completed for new systems as well as enforcement of nuisance complaints regarding failing systems. Permits and approvals are provided in accordance with both New York State and Broome County Sanitary Codes. Staff review and provide approval of all proposed wastewater disposal systems (10,000 gallons) for new construction or modifications to existing systems. Approval is issued in accordance with NYS Department of Environmental Conservation SPDES (State Pollutant Discharge Elimination System) Permits and Standards for Waste Treatment Works.

Emergency Response: Staff responds to spills, pipe ruptures, or accidents resulting in the discharge of liquid, gaseous or solid materials that may produce an environmental hazard. Follow-up action is coordinated to eliminate problems and determine that all public hazards are eliminated. Environmental Health is an active member of the Local Emergency Planning Committee to plan and respond to natural and manmade disasters.

Subdivisions: Review and provide approvals for plans and specifications for realty subdivisions. This includes the development of water supplies and design of wastewater disposal systems.

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.

Indoor Air Act (non-tobacco): Investigate complaints of impacted indoor air quality. Provide recommendations concerning corrective action and suggest laboratories for required analyses or collection of necessary samples. Recent air quality problems have involved PCBs, asbestos, chlordane, radon and chlorinated solvents.

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Toxic/Solid Waste Dumpsites: Investigate and report on dumpsites in Broome County which may present a potential public health problem. Review and comment on any reports completed concerning remedial actions, hydrogeological data collected, and proposed construction. Respond to chemical emergencies that may produce hazards; review remediation activities to reduce public health hazards.

Food Service: Inspect, investigate, educate and take enforcement action as needed over all regulated food service facilities in Broome County.

Mobile Home Parks: Inspect, educate and take enforcement action on any violations for mobile home parks per Part 17 of the NYS Sanitary Code including public water supplies and sewage systems.

***Temporary Residences, Campgrounds and Children's Camps*:** Inspect, educate and take enforcement action on any violations for hotel/motels, travel trailer campgrounds and children's camps per Part 7 of the NYS Sanitary Code. This includes reviewing and approving plans for construction, alteration and/or modification of proposed or existing buildings as well as children's camp supervision and safety requirements. Regulation of sewage and water supplies as well.

Rabies Control: Staff members investigate reports of animal exposures, ship suspected rabid animals to the state laboratory, and provide outreach and education. Staff enforce 10 day confinement periods and quarantine, support free rabies clinics and provide authorization of rabies prophylaxis.

Swimming Pools and Beaches: The Division of Environmental Health inspects, educates and takes enforcement actions as needed on all public swimming pools and bathing beaches in Broome County in accordance with Part 6 of the NYS Sanitary Code.

Public Health Nuisances: The Division of Environmental Health responds to or makes referrals to appropriate agencies to report rodents, outdoor burning, household garbage complaints, and sale of Bath Salts and Synthetic Marijuana.

Lead Poisoning Prevention:

Childhood Lead: The Broome County Health Department offers services to all children with elevated blood lead levels through the Childhood Lead Poisoning Prevention Program (CLPPP). This program coordinates appropriate follow-up for lead poisoned children. Staff members inform parents about strategies to prevent lead exposure and reduce lead hazards. They can provide education on lead poisoning and environmental evaluations. Referrals are made to other agencies and programs as needed and staff can coordinate communications between the Regional Lead Poisoning Resource Center, health care providers and parents.

Primary Prevention: Primary prevention staff educates, identifies, and requires correction of lead based paint hazards in high-risk housing prior to a child being diagnosed with an elevated blood lead level.

Lead Hazard Control Grant (HUD): This program is designed to fund the cost of controlling lead paint in low-income housing. Grant funding is available in the form of five-year forgivable loans for both rental and owner-occupied housing units built before 1978. To be eligible, units must house or be regularly visited by at least one child age six or younger or a pregnant woman. Eligibility is based on the income of residents and tenants, not the income of rental property owners.

Educational information is available on the following topics: West Nile Virus, Lyme disease, Mold, Bedbugs, Tattoo Guidance and Tanning.

ENVIRONMENTAL HEALTH: 2014 OBJECTIVES

- Continue to monitor and reduce public health hazards found during inspections within program areas, along with increased education and enforcement actions.
- Implement new program policies and procedures to maintain accountability and efficiency.
- Modify the Broome County Sanitary Code fee schedule to come in line with the permit fees of similar counties as well as become more equitable between permitted facilities within program areas.
- Modify Environmental Health staff roles to meet the increasing demands with limited staff and funding.
- Prioritize program objectives to those of high risk. Cut or limit non-mandated programs to meet budget constraints.
- Modify inspection protocols to increase program efficiency and minimize excessive travel.
- Increase transparency to public by placing inspection reports online.
- Increase educational awareness of Environmental Health issues via free in-house and on-line training courses, smart phone applications and media.

ENVIRONMENTAL HEALTH: 2013 HIGHLIGHTS

- Continue to pursue grants to decrease net to county support.
- Decrease contractual costs, travel costs and staff time by humanely euthanizing rabies specimens in-house following NYSDOH and BC Risk and Insurance approved protocol.
- Minimize unnecessary and costly human post exposure prophylaxis by providing Healthcare Specialists the tools necessary to make sound judgments when providing treatment.
- Increased the number of food inspections by modifying staff roles and program policies.

Clinics & Disease Control

The Broome County Health Department Clinic Services Division focuses on prevention of the transmission of infection and communicable diseases through the coordination of community resources, surveillance, health education, consultation and direct care based on community need.

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 healthcare providers as well as outreach to homeless shelters and the County corrections facility to improve Hepatitis A and B and Influenza immunization rates. 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.

Communicable Disease Control: An important role of the local health department is to investigate diseases that the New York State Department of Health designates as reportable. When an individual contracts a disease such as measles, hepatitis, or meningitis, reports to the health department are required from physicians, hospitals, and laboratories. The nurses who work in disease control speak with the person or parent (if it is a child) to determine the source of the disease, identify others at risk, and recommend needed treatment. All information is protected and treated confidentially. Fact sheets and printed materials are also available to the public by request.

Table 19. Communicable Disease Investigation Report, 2012

Communicable Disease	YTD 2012 (N)
Hepatitis C, chronic unduplicated	143
Pneumococcal Infection, sensitive to penicillin	24
Salmonellosis	22
Hepatitis B, chronic unduplicated	17
Lyme Disease	72
Pneumococcal Infection, resistant to penicillin	0
Campylobacteriosis	26
Group B Strep, invasive	25
Giardiasis	22
Legionella	27
Hepatitis B, pregnant carrier	5
Aseptic/Viral Meningitis	5
Group A Strep, invasive	3
Pertussis	99
Shigellosis	0
Hepatitis A	0
Haemophilus Influenzae, invasive	4
Yersiniosis	0
Hepatitis C, acute	3
Meningococcemia, Meningococcal Meningitis	0
Other Bacterial Meningitis	3
Listeriosis	1
Cryptosporidia	1
E Coli 0157:H7	0
Mumps	0
Miscellaneous	3
Total	***508***

Tuberculosis Control Clinic: The Tuberculosis (TB) Control Clinic provides for the diagnosis, treatment, prevention, and control of TB in Broome County. An individual who is suspected of having TB is interviewed by a clinic nurse and referred for a chest x-ray and other tests, as indicated. The clinic physician discusses treatment recommendations with the individual. Medication is provided through the clinic and follow-up appointments are made for the client.

As with other communicable diseases, it is sometimes necessary for other family members, or close contacts of the client, to be tested/examined at the clinic as well. The Tuberculosis Control Clinic reaches out to identify individuals in targeted populations at high risk for exposure to TB who have been infected but are not yet contagious. Staff will conduct outreach to find these individuals and provide treatment before they become ill and contagious to others. The Clinic serves as a resource for other health professionals, health care facilities, and congregate living establishments in the community. Referrals from these sources are welcome. The clinic nurse is available to answer questions and to provide educational presentations and materials.

Table 20. Chest Clinic – Program Data, 2012

Program Data	2012 (N)
Clinic Visits	1,907
Patients Seen	1,275
Mantoux Administered	613
Patients Started on Preventative Treatment	90
Medication Refills	331
Suspect TB Cases and Investigations	3
Confirmed Active TB Cases	4
DOT (Directly Observed Therapy)	162

Immunization Action Program: The objective of the program is to increase immunization levels of both children and adults. Efforts to do this involve education and removing barriers to immunizations. The Broome County Health Department acts as a safety net by providing immunizations for all age groups to people that are uninsured, underinsured or may not have a primary care provider. Routine and travel immunizations are also given. Flu vaccinations are given at mass clinics throughout Broome County. Education is provided to, but not limited to, community outreach programs, presentations to provider and day care sites, provider AFIX (Assessment Feedback Incentive and Exchange) visits, the semi-annual clinic newsletter and telephone consultation.

Table 21. Immunization Clinics – Program Data, 2012

Program Data	Routine (N)	Travel (N)	Employee Health (N)
Sessions	155	N/A	N/A
Visits	726	142	N/A
Immunizations	1,025	270	383

Table 22. Immunization/Vaccine Data, 2012

Type of Vaccine Administered	YTD 2012 (N)
Pediatric Pneumococcal	23
DtaP	24
Rotavirus	4
Varicella	149
TD	9
HIB	16
IPV	51
MMR	131
Flu	1,036
Pneumococcal	31
HPV	119

Type of Vaccine Administered	YTD 2012 (N)
Pediatric Hep B	24
Adult Hep B	180
Tdap	445
Hep A/Hep B (Twinrix)	382
Pediatric Hep A	84
Typhoid	68
Yellow Fever	40
Meningitis	73
Rabies	17
Adult Hep A	296
DTAP & IPV	10
DTAP, IPV & HIB	8
Pediarix (DTAP & Hep B & IPV)	14

Table 23. Influenza/Pneumonia Vaccination – Program Data, 2012

Influenza / Pneumonia Vaccination	YTD 2008 (N)
Influenza Vaccinations	1,036
Pneumococcal Vaccinations	31
Pediatric Pneumococcal Vaccinations	23

Sexually Transmitted Disease (STD) Clinic: The Sexually Transmitted Disease (STD) Clinic is available to those people who are at risk or may have come in contact with one or more sexually transmitted diseases. There is no charge to Broome County residents for STD testing and treatment. A confidential interview by a professional staff member includes asking about the clients' symptoms, their sexual activities and other information important to the diagnosis of their problem. STD Clinic staff works closely with the NYS Department of Health to assure treatment and provide contact notification and services.

Table 24. STD Clinic – Program Data, 2012

Program Data	2012 (N)
STD Clinic Visits	2,124
Broome County Jail Clinic Visits	836

Table 25. STD Clinic Diagnosis – Program Data, 2012

Most Frequent Diagnoses	2012 (N)
Bacterial Vaginosis	386
Nongonococcal/Urethritis	316
Human Papilloma Virus	278
Chlamydia*	193
Gonorrhea**	47

*718 cases diagnosed in Broome County, 193 of which were diagnosed at the Broome County Health Department
**133 cases diagnosed in Broome County, 47 of which were diagnosed at the Broome County Health Department

Table 26. STD Clinic Total Sessions – Program Data, 2012

Time	2012 (N)
A.M.	96
P.M.	122
Evening	51
Total	269

HIV Counseling and Testing Services: Clinical testing is the only way to determine if a person is infected with HIV, the virus that leads to AIDS. Early diagnosis and treatment can improve the quality of life for a person with the virus. Confidential HIV testing is available through all clinics. There are times set aside specifically for HIV testing with trained HIV test counselors. Appointments for anonymous testing can be made by calling 1-800-562-9423, and are offered at various locations throughout the region.

Table 27. HIV Counseling & Testing – Program Data, 2012

Location/Source	Counseled/Tested (N)	HIV Incidence (%)
STD	1,337	0.075
HIV Grant	14	0.0
Jail	399	0.0
STAP Grant	568	0.176
TB	50	0.0

Employee Health Services: The Clinic Services Division provides an employee health component for Broome County government employees.

Preventive Dentistry Dental Services Program: The Preventive Dentistry Program was a service of the Health Department for nearly thirty years. This grant program provides for a variety of prevention-oriented oral health services which include: oral health education, dental screening, dental sealants, and

fluoride treatments. The program starts with second grade students and is then offered to other grades (K–5). Program services are provided through a subcontract with Lourdes Hospital Oral Health Program in five Binghamton City elementary schools with the highest percentages of students receiving free and reduced meals.

Table 28. Broome County Preventive Dentistry Program Data, 2010-2011

Program Data	2010-2011 (N)
Unduplicated number of children receiving a dental screening	869
Unduplicated number of children referred for treatment services (dental visit)	458
Oral Prophylaxis	293
Sealants applied	495
Children with treated decay (caries experience)	218
Children with untreated decay	458
Children with sealants present	304
Total unduplicated number of children receiving education	2,771
Number of contacts with parents	`100

CLINICS & DISEASE CONTROL: 2014 OBJECTIVES

- Through a coordinated effort, continue to participate in and collaborate with community agencies in a community-wide emergency preparedness response plan including development and implementation of regional stockpile distribution and mass immunization/prophylaxis clinics.
- The community will continue to be served by a system to monitor infectious diseases by subgroup.
- Prevent and minimize vaccine-preventable diseases by providing education, surveillance, and direct service as needed.
- Reduce the transmission of sexually transmitted diseases by providing education, surveillance, and direct services as needed.
- Evaluate for tuberculosis infection and reduce transmission by providing targeted testing, education, surveillance, and direct service to populations at risk.
- Optimize the health and wellbeing of County employees and volunteer firefighters through the provision of comprehensive risk assessment, education, immunizations, and referrals.
- Continue communicable disease surveillance to include school absenteeism for disease trending.
- Optimize visits to influenza vaccine clinics by offering clinics early in the season and charging a fee consistent with that of community providers.
- Expand adult immunization rates for tetanus, diphtheria, pertussis, human papilloma virus and pneumococcal disease as the Affordable Care Act is implemented with coverage for preventive services.
- Continue and expand community presentations on sexually transmitted infections, HIV, bloodborne pathogens and other infectious diseases to high school, adult education and college students, health and social service professionals, and County employees.

CLINICS & DISEASE CONTROL: 2013 BUDGET HIGHLIGHTS

- Continue to contract with the Broome County Correctional Facility to offer STD and HIV testing and education, and Hepatitis, HPV, Pneumococcal and Influenza vaccines.
- Continue to expand revenue collection by establishing and revising contracts with third party payers.
- Maximize grant revenues to support the operating budget.
- Revise Medicaid billing procedures to accommodate revised methodologies.
- Maintain internal controls and a quality assurance plan that meets Corporate Compliance regulations for Medicaid billing.
- Use standardized tools for evaluating quality of care, medical necessity and appropriateness of procedures.
- Strengthen internal controls to prevent pended or denied claims and overpayments.
- Establish and renew contracts with Broome County volunteer fire departments to perform NFPA 1582 periodic physical exams.
- Continue to perform rapid Hepatitis C testing and referrals for medical care to contribute to reducing future health care costs for infected residents.
- Successfully make the mandatory transition to ICD-10 diagnostic coding for billing, cost accounting and morbidity databases.

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, Schuyler, 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. The Broome County Health Department recruits uninsured individuals who qualify to participate in the program to receive these life-saving screenings that they might not otherwise access due to financial barriers. The Department acts as a fiscal conduit, providing payment for services performed on behalf of the Cancer Services Program by local participating providers. Increasing access to health care providers and providing accurate information about cancer screenings are essential components in the success of the program.

Clinical breast exams and mammograms are offered to average risk, uninsured women residing in New York State, age 40-64. Individuals at increased risk due to family or personal history or who are symptomatic for breast cancer may be screened at a younger age. Pap test/pelvic exams are offered to women who are uninsured, residing in New York State, age 40-64. Fecal Occult take-home test kits are offered to uninsured men and women, residing in New York State, age 50-64. Individuals at increased risk due to family or personal history of colorectal cancer may be screened at a younger age.

Table 29. Cancer Services Program of the Southern Tier Data, 2012

Procedure		2012
Cancer Screenings Reimbursed Through Broome County		
	Clinical Breast Exams	540
	Mammograms	535
	Pap Test/Pelvic Exam	217
	Colorectal Fecal Occult Test	112
Cancer Screenings Reimbursed Through Broome, Chemung, Chenango, Schuyler and Tioga Counties		
	Clinical Breast Exams	1,119
	Mammograms	1,121
	Pap Test/Pelvic Exam	463
	Colorectal Fecal Occult Test	252
Medicaid Cancer Treatment Program Applications Submitted for Broome County Participants		
	Breast Cancer	20
	Cervical Cancer	1
	Colorectal Cancer	2
	Prostate Cancer	3

The Medicaid Cancer Treatment Program provides Medicaid Health Insurance Coverage for CSP clients utilizing the CSP income eligibility criteria. The CSP does not reimburse for prostate cancer screenings but provides Medicaid Cancer Treatment Program coverage for uninsured men diagnosed with the disease if they are eligible.

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 parks/outdoor areas and smoke-free housing policies and educated about effective interventions to protect youth from initiating tobacco use.

Table 30. Recent Policies Enacted in Broome County

Policies Obtained in Broome County	
Tobacco/Smoke Free Parks (partial or entire park)	6 municipalities
Tobacco/Smoke Free Grounds (businesses/libraries/agencies)	20
Tobacco Free College Campus	3 (one in progress)
Smoke Free Housing	11 buildings (250 units in progress)
Letters of Support to Reduce the Density of Tobacco Retailers or Their Proximity to Schools/Playgrounds/Parks	28

Broome County Traffic Safety/Injury Control: The Broome County Traffic Safety Community Education Project seeks to reduce and eliminate the number of highway injuries and fatalities by implementing community education programs and services that address issues such as child passenger safety, bike/pedestrian safety, teen safe driving, older driving safety, motorcycle safety and impaired driving.

Table 31. Community Programs by the Broome County Traffic Safety Community Education Project, 2012

Traffic Safety Program Data	2012
Community Outreach Programs	97
Child Safety Seat Fittings	339
Child Safety Seats Distributed	200
Bicycle Helmets Distributed	266

Chronic Disease Grants

Community Transformation Grant: The Broome County Health Department's two year Community Transformation Grant, funded by the New York State Department, is working in many sectors of the community including education, transportation and business that involve early child care settings, schools and the community at large. The interventions target tobacco-free living, healthy eating and active living and healthy and safe environments for children ages 0-18.

Early Childhood Sector Goals: 1) increase the quantity and quality of developmentally appropriate physical activity in child care centers and homes. 2) Increase participation in the Child and Adult Care Food Program (CACFP) for legally exempt providers who care for subsidized children 30 or more hours per week through implementation of the program standard in the County Child and Family Services Plan. 3) Increase voluntary participation in CACFP by child care centers and homes serving low-income children.

School Goals: 1) Increase physical activity in the elementary classroom. Increase access to safe routes to school for walking and biking. 2) Develop regional food procurement initiatives that consolidate food purchasing, standardize menus, leverage and secure more competitive pricing, and improve the nutritional qualify of the school lunch program. 3) Prohibit tobacco use at off-campus school sponsored events.

Community at Large Goals: 1) Increase access to safe and accessible streets for walking and biking through the implementation and strengthening of Complete Streets policies. 2) Modify beverage procurement and serving practices that decrease availability of sugary drinks and increase availability of healthy beverages. 3) Increase access to smoke-free low-income multi-unit properties through implementation of smoke-free policies.

Comprehensive Evaluation: There is an overall comprehensive evaluation plan that includes: program specific measures: ongoing data collection on the implementation of interventions, monitoring for process evaluation, program outreach, and pre-post implementation measures to assess program outcomes and progress toward objectives.

Population Measures: Pre-post implementation assessment of attitudinal, behavioral, and health indicators through a random-digit dial telephone survey and measures of student weight status collection.

Enhanced Evaluation: Further evaluation of innovative strategies with the potential to contribute to evidence for statewide policy.

Comprehensive Cancer Grant: The Broome County Health Department's Comprehensive Cancer Prevention Program (CCPP) is a 5 year grant initiative funded by the New York State Department of Health to reduce the burden of cancer in Broome County through community based interventions that support healthy lifestyles. In collaboration with public and private partners, CCPP utilizes innovative strategies to:

1) Decrease rates of obesity by working with jurisdictions and organizations that purchase, distribute, or serve food to adopt and ensure compliance with the food procurement standards established by the NYS Council on Food Policy.
2) Increase duration and exclusivity of breastfeeding in the post-discharge time period by engaging and assisting Pediatricians to implement evidence-based practices to improve breastfeeding outcomes.
3) Increase screening rates for breast, cervical and colorectal cancer by reducing barriers (out of pocket costs, time off from work) to cancer screening that exist in the workplace.

Fall Prevention Grant

The Broome County Health Department is the lead agency for a five year Fall Prevention Grant funded by the New York State Department of Health. The purpose of the program is to reduce falls among older adults by employing evidence-based strategies within the community and health care delivery system. The grant program funds three evidence-based community programs and one pilot project called STEADI (**ST**opping **E**lderly **A**ccidents, **D**eaths and **I**njuries) that supports the implementation of health care provider fall risk assessments into the local health care delivery system. The three evidence-based community programs are Tai Chi-Moving for Better Balance, Stepping On Program, and Otago Program.

Section Three — Problems and Issues in the Community

A. Profile of Community Resources

The following list of community resources is inclusive but by no means exhaustive of the many health-related services available in Broome County. Much of the information about the agencies listed here was gathered from a combination of community resource guides including United Way's *First Call for Help* Directory, the United Way's Broome County *Family and Youth Services Guide*, and the Broome County *Elder Services Guide* published by Actions for Older Persons. Additionally, these agencies and others that provide community services and resources can be found online at their respective websites. A directory of non-profit community agencies and services can be found online at: http://www.unitedwaybroome.org/ Detailed information about these agencies can be found in Appendix G1 and includes the name of the service provider, the target population served, and a brief description of services provided.

Broome County is known among area providers as a "resource rich" community. There are a large number of health and human service programs and agencies that share a common goal of improving the health status of area residents in different ways, yet each has their own specific mission, objectives, and target population.

There have been significant efforts at the county level to develop an *integrated planning* approach to services. Broome County's Integrated County Planning (ICP) Committee represents a customer-oriented system for delivering human services that builds on community and individual strengths and relies on standards, best practices, and outcomes that are valid and measurable. It seeks to accomplish this by combining several existing planning processes into a more streamlined and understandable process that guides the allocation and management of resources. The purpose of this approach is to foster collaboration among community organizations and minimize or eliminate duplication and maximize effective use of resources. This approach also assists department heads in health and human services to be aware of resources allocations for specific population groups and concerns. An online, web-based process for community agencies to request letters of support from county departments has streamlined communication among agencies applying for grant funding.

Assessment of Services

Description of Service Providers

Absolut Center for Nursing and Rehabilitation at Endicott, LLC — Absolut Care of Endicott is a one hundred sixty (160) bed facility located in the rolling hills of the Central Southern-tier of New York, near the City of Binghamton. The facility specializes in short-term rehabilitation and long-term skilled nursing care, provided in a family oriented environment. Private and semi-private accommodations are offered and residents are encouraged to personalize their surroundings with cherished mementoes and favorite possessions from home.

ACHIEVE — provides services to advocate for enhanced quality of life through skill advancement, inclusion, integration and independence of persons with intellectual and other developmental disabilities through services provided in Broome and Tioga Counties.

Action for Older Persons, Inc. (AOP) — assists individuals by providing timely, accurate and unbiased information in preparing for aging. AOP educates and collaborates to promote quality of life through the aging process for older adults, their families and caregivers.

Addiction Center of Broome County (ACBC) — provides a comprehensive array of outpatient services to assist individuals 18 years of age and over and their families in recovering from the effects of addiction or alcohol/substance abuse.

Alcoholics Anonymous (AA) — is a fellowship of men and women who share their experiences, strength, and hope with each other that they may solve their common problems and help others to recover from alcoholism. The only requirement for membership is a desire to stop drinking. There are no dues or fees for AA membership; they are self-supporting through our own contributions. AA is not allied with any sect, denomination, politics, organization or institution and does not wish to engage in any controversy (they neither endorse nor oppose any causes). Their primary purpose is to stay sober and help other alcoholics achieve sobriety.

Alzheimer's Association — provides leadership to eliminate Alzheimer's disease though advancement of research, while enhancing care and support for individuals and their families affected by Alzheimer's disease. Fourteen counties are covered, including Broome, Chenango and Tioga.

American Cancer Society, Southern Tier Region — promotes activities to eliminate cancer as a major health problem by preventing cancer, saving lives from cancer, and diminishing suffering from cancer through research, education, service and advocacy. The region covers Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Schuyler, Steuben, Tioga and Tompkins Counties.

American Heart Association, Mid-State New York — provides educational information and programs to residents of Broome, Chenango, Tioga and Delaware counties at community, health, school and work sites. Provides funds to support research, public education, and program services to heart patients through voluntary fundraising such as: Heart Walk; Heart Ball; Jump Rope, Hoops for Heart; and memorial contributions.

American Lung Association of the Northeast — provides services to save lives by improving lung health and preventing lung disease through education, research and advocacy; focuses on healthy air, tobacco control and all lung diseases, including asthma and COPD.

American Red Cross Association — provides relief to victims of disasters and provides assistance to help people prevent, prepare for, and respond to emergencies. Services include disaster relief; health education, such as first aid, CPR, babysitting, water safety; shopping service for elderly, and emergency communications and casework for members of the U.S. Armed Services and their families.

Americare — a licensed home health care agency providing home care services.

Association for Vision Rehabilitation and Employment, Inc. — endeavors to create opportunities for success and independence with people who have sustained vision loss. Services for legally-blind or

visually-impaired residents of all ages of Broome, Tioga, Chemung, Schuyler, Tompkins, Cortland, Chenango, Delaware and Otsego counties include education, employment counseling, information and referral, low vision evaluations, support groups, vision rehabilitation services, and counseling. Limited services are available to Pennsylvania residents of Susquehanna, Bradford and Tioga counties.

Berkshire Farm Center and Services for Youth — provides services to strengthen children and their families so that they can live safely, independently and productively within their home communities. Services include therapeutic foster care, community-based congregate care, residential and transitional support services, OASAS certified substance abuse program, NYS accredited junior/senior high school and services for runaway youth or youth at risk for homelessness.

Binghamton University (BU) — The Psychological Clinic at BU provides psychotherapy and counseling services to the local community and serves as a training facility supporting the Clinical Psychology Doctoral Program. The Clinic offers therapy for adults, children, couples, families and groups; and assessment, neuropsychological evaluations, and consultation services to individuals, professionals and outside agencies.

The Elder Services Center offers comprehensive, multi-disciplinary assessment of persons with dementia-related symptoms; and assists families, other caregivers and health professionals to learn positive approaches to managing problems associated with Alzheimer's and related dementias.

The University Health Service provides treatment of acute illness and injury, health education, women's health services, alcohol and other drug counseling, vaccine clinics, HIV testing, psychiatric consultation and laboratory service. The staff consists of physicians, nurse practitioners, registered nurses, a health educator, and an HIV test counselor.

The Decker School of Nursing offers a four-year program of study in nursing; graduate programs for administrators, educators, and nurse practitioners with a focus on community, family, and geriatric health; psychiatric mental health; and a doctoral program in rural health and vulnerable populations.

Birthright of Binghamton, Inc. — provides free confidential support to women facing a crisis pregnancy. Services include information and referral for adoption, medical and maternity care resources, and a free confidential pregnancy test.

Boys and Girls Club of Binghamton — helps all youth, with special concern for those from disadvantaged circumstances, to develop skills and realize their potential as productive citizens and responsible individuals by providing educational, social and recreational programs for youth, including an evening meal program for youth, sports program, and Smart Moves, a substance abuse prevention program.

Boys and Girls Club of Western Broome Family Center — promotes physical, mental, emotional, social, cultural and spiritual well-being of members (infants — seniors with an emphasis on youth). Programs include recreational programs, childcare, education and job seeking and job-keeping skills for adolescents.

Bridgewater Center for Rehabilitation and Nursing — is a long and short term care facility with a total of 356 beds, offering skilled nursing and sub-acute care, short-term rehabilitation, dementia care, palliative and hospice care, respite care and a specialized ventilator unit.

Broome Community College (BCC) — provides a variety of services to BCC students including: athletic physical, pregnancy test, blood pressure screening, contraceptive and healthy lifestyle information, health counseling and health education programs. Dental clinic provides dental examinations and cleanings by dental hygiene students to students and the general public. This two year college provides a two-year degree of study in Registered Nursing and Dental Hygiene as well as non-degree continuing education programs in health sciences.

Broome County Community Alternative Systems Agency (CASA) — provides evaluation and assessment of Broome County residents, regardless of age or income, for long-term health care services to determine appropriateness of service and other long-term care options.

Broome County Council of Churches — collaborates with many community facets serving people with needs, providing programs and services to the hungry, elderly and lonely; disabled, sick; imprisoned; homeless and poor; and youth of Broome County. Services include food pantries, and hospital and jail ministries.

Broome County Gang Prevention (BCGP) – commits to deterrence of youth crime and gang activity through coordinated community resources, awareness and education, and creates opportunities for youth (targets youth 7-15 years old) and their families.

Broome County Health Department — works proactively in collaboration with the community to preserve, promote and protect the health and quality of life for all Broome County residents. Services include clinic services (immunizations, HIV and STD counseling and testing, communicable disease control, etc.); environmental services (lead testing, restaurant inspection, public water supply surveillance, etc.); WIC (nutrition program for women, infants and children); maternal and child health programs, bioterrorism planning in partnership with community providers, and health education and screenings.

Broome County Mental Health Department — ensures provision of service for mental health, mental and developmental disabilities, alcohol and substance abuse services in Broome County. This department directly operates a mental health and chemical dependency programs, including outpatient programs.

Broome County Office of Aging — provides services to enhance the quality of life for all older persons, by promoting independence and dignity; fostering public awareness of talent/human resources that older citizens present to the community; planning and advocating for comprehensive and coordinated senior services. Services include health and wellness and nutrition education programs, adult day program, home care services, employment for seniors, and home energy assistance. The Office for Aging operates the Meals on Wheels program and eleven senior centers throughout the county.

Broome County Department of Social Services — promotes sufficiency and assures the protection of vulnerable individuals. Programs include: Medical Transportation, Food Stamps, HEAP (Housing and Energy Assistance Program), Medicaid, Employment and Training, Temporary Assistance, and Protective Services for Adults and Children.

Broome County Traffic Safety Board — promotes street and highway traffic and pedestrian safety by analyzing traffic data, formulating recommendations for safety programs for agencies and developing and coordinating recommended changes in laws or regulations to appropriate legislative bodies.

Broome County Urban League — enables African Americans, other minorities, and the poor to secure economic self-reliance, parity, power and civil rights. Programs include educational resources, including after school programs for youth, advocacy support services and referrals.

Broome County Youth Bureau — promotes and encourages development of a comprehensive system of services, supports and opportunities for children and youth through planning, funding, coordination, evaluation and advocacy. The Youth Bureau administers NYS Office of Children and Family Services funding through a Request for Proposal process for programs operated by community-based organizations or local municipalities who provide youth recreation, youth service, and delinquency prevention programs; and who provide short or long-term shelter and services to runaway and homeless youth.

Broome Developmental Disabilities Services (BDDSO) — helps people with developmental disabilities live richer lives by providing residential, day services, and support to individuals with developmental disabilities and their families. Services provided include: High Risk Birth Clinic, day habilitation, day treatment, residential living, and employment and training programs.

Broome-Tioga BOCES — provides services to 15 school districts in the two county region, including school-age, youth, and adult education, alternative education, career and technical education, and special education.

Catholic Charities of Broome County — responds to people and their needs, through service, advocacy, convening and empowerment. Services include: Youth Services; Family, Community, Parish; Mental Health; Food Pantry; Residential Services; Pregnancy/Adoption; and Disaster services.

Child Advocacy Center — see Crime Victims Assistance Center.

Citizen Action of New York — handles education, health care, managed care, working families party, social, and environmental justice.

Coalition for Home Health Care — provides channels for cooperation and unity among health and human service providers, planners and other interested persons.

Community Options of the Southern Tier — provides residential and employment opportunities for individuals with disabilities. Covers Broome, Chenango, Delaware, Otsego and Tioga counties as well as Cayuga, Chemung, Cortland, Schuyler, Steuben and Tompkins.

Cornell Cooperative Extension of Broome County — provides informal, out-of-school educational opportunities based on current research with a focus on four (4) critical issues; Family/Youth/ Community Development; Agricultural Profitability; Environment; and Nutrition/Food Safety. Professionals, para-professionals, and volunteers deliver programs based on research completed by Cornell University. Offers experiential education, classes, written material, media, automated telephone response lines, and office requests.

Crime Victims Assistance Center — provides compassionate support and education to enhance the community's ability to prevent and respond to victims of crime. Services include a 24-hour crisis line and

advocacy program, free and confidential counseling, education and outreach, child advocacy center, and sexual assault response team.

Dr. Garabed A. Fattal Community Free Clinic — provides free health care for uninsured adults of the Southern Tier to address urgent care, lab results and diagnostic issues.

Epilepsy Foundation, Rochester/Syracuse/Binghamton — ensures people with seizures are able to participate in all life experiences; and will prevent, control and cure epilepsy through services, education, advocacy and research. Programs include information and referrals, educational programs, employment solutions, counseling, support groups, family and community support services, residential services, and Camp EAGR (a summer camp for children).

Fairview Recovery Services, Inc. — is committed to providing chemical dependency services in Broome County and surrounding areas by delivering a continuum of services to individuals suffering from chemical dependency and other disabling conditions. Services include residential treatment, supportive living, vocational assistance and case management services.

Family & Children's Society — is a non-profit organization providing services to children and adults. Services include counseling, family mental health program, adoptive parent programs, domestic and sexual abuse programs, and home care services. Family Homes for the Elderly Program provides residential living for elderly persons.

Family Enrichment Network — provides supportive services for the optimal development of children and families with a strong commitment to partnering with families and community agencies to develop and provide programs to achieve the best results for children and families. Services include Head Start programs, special education programming, childcare resource and referrals, employment support for formerly incarcerated adults, and state certified parenting classes.

Family Planning of SCNY — advocates and provides individuals, families and organizations in our region with information, education and health care services pertaining to human sexuality and reproductive health in a private and confidential manner, respectful of all beliefs, supporting individual freedom of choice and responsibility. Medical services provided on a sliding fee scale include birth control, annual gynecological exams, testing and treatment for sexually transmitted infections, pregnancy testing and counseling, screening for breast, cervical, testicular and colorectal cancers, and emergency contraception.

Ferre Institute-Genetic Counseling — provides accessible comprehensive genetic counseling services to anyone with questions or family history of inherited condition; and information regarding medical genetics, infertility, and Lesbian and Gay Family Building Project — a program that offers educational programs for lesbian, gay, bisexual and transgender people to build and strengthen their families.

First Call for Help – United Way — a service of the United Way providing a comprehensive human services directory of not-for-profit and public agencies that provide services in Broome County.

Good Shepherd Fairview Home — is a long-term care facility providing an adult facility, skilled nursing facility and independent apartment living for the elderly and disabled. Offers levels of care including 40 apartments for independent living, 41 adult care facility rooms, 32 assisted living program rooms, 34

skilled nursing beds for long-term care and 2 respite care beds, and 20 private rooms for short-stay rehabilitation.

Greater Binghamton Health Center — promotes mental health by offering quality, innovative treatment and education in compassionate, therapeutic and safe environment. Adult inpatient and outpatient treatment services, and child and adolescent services are provided.

Handicapped Children's Association of Southern New York — develops, establishes, and maintains multidisciplinary diagnostic and treatment services, family support, and early intervention services for persons with developmental and/or physical disabilities, primarily children and their families.

HIV Primary Care Clinic at Arnot Health — provides medical care and case management services for people living with HIV/AIDS in South Central NY and Northern PA. Arranges access to medical, psychological and social services, including legal aid and housing subsidy programs. Clinics are located in Elmira, Ithaca, and Bath.

Interfaith Coalition on Sexual Identity — produces and publicizes events such as educational forums, conferences, concerts, discussions, and interfaith religious services. Seeks to educate people of all religious beliefs and to affirm, support, and advocate for fair and equal treatment of all persons of all sexual identities.

Interim Healthcare of Binghamton, Inc. — a licensed home health care agency that provides home care services to community-based clients.

Legal Aid Society for Mid-New York — provides advice, counseling, advocacy, and representation for low income individuals in civil court and administrative forums. Covers Broome, Cayuga, Chenango, Cortland, Delaware, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego and Otsego Counties.

Lourdes Hospital — provides many services, including acute care services, primary care, walk-in care, Regional Cancer Center, maternal and child health services, youth services, ambulatory infusion center, Hospice program, and community education. Home care is available through Lourdes-At-Home, a certified home health care agency, and Lourdes Long-Term Home Health Care Program.

Lupus Alliance New York - Southern Tier Affiliate — provides information, education and referral to assist individuals suffering from Lupus; promote public education to increase knowledge and understanding of Lupus; support of research programs related to diagnosis, treatment, and cure.

Mental Health Association of the Southern Tier — provides services to residents in the community to promote mental health and wellness through referrals, information, advocacy, education, prevention, and other services. Services include: Chemical Dependency Prevention Program; Children's Coordinated Services Initiative; and Compeer - a volunteer program that provides social support to clients.

Metro Interfaith Housing Management — serves the housing needs of low income families, handicapped individuals and elderly residents of our community by providing decent, safe and affordable rental housing. Owns many properties including Metro Plaza and Lincoln Court Apartments; manages Broome County VOA Living Center.

Mom's House — offers free, competent child care for children of single-parent students who are continuing their education. Also presents workshops on nutrition, child care, home management and educational options.

Mothers and Babies Perinatal Network of South Central NY (M&BPN) — a not-for-profit community organization that works to improve pregnancy and birth outcomes and support the health and development of individuals and families through community and professional education; regional planning for maternal and child health programs; education and referral services; partnering with local, regional and statewide organizations; promoting policies, programs and services for pregnant and parenting families and teens.

Multiple Sclerosis Association of America —works to provide support to those living with multiple sclerosis. Services offered include toll-free help line, education, cooling and assistive equipment distribution, outreach, support groups, counseling and a lending library.

Muscular Dystrophy Association — provides information, referral, programs, and services to persons with any of 40 neuromuscular diseases in MDA program including ALS; services include education, equipment assistance, supports groups, summer camp for persons under the age of 21, and volunteer support.

National Kidney Foundation of Central NY — serving 13 counties, including Broome, to prevent kidney disease, improving the health and well-being of individuals and families affected by kidney disease, and increase the availability of all organs for transplantation. Provides information and referral regarding kidney disease, dialysis, and transplant information.

Opportunities for Broome — provides advocacy and services to poor and/or disadvantaged people of Broome County. Programs include Head Start, Family Development, and Housing. Provides Universal Pre-K programs and Head Start Programs in rural areas. Provides permanent, safe and affordable housing. Helps people find emergency assistance for food, clothing, shelter, prescription drugs, fuel and transportation, provides referrals, and assists families with setting goals to become independent and self-sufficient.

Rise (previously SOS Shelter) — assists families experiencing or threatened by domestic violence. Works to increase community's awareness of this problem. Primary focus to provide supportive, secure surroundings for a woman and her children, to facilitate solutions to immediate problems, and aid in planning long-term needs. The shelter itself can house up to 20 women and children per night. Provides community education and a 24-hour hotline.

Rural Health Network of South Central NY — works to promote and improve health of rural communities and strengthen each community's capacity to respond to health needs by reducing barriers and improving access and use of health and human services through advocacy, communication and partnerships. Services include transportation, chronic disease case management, prescription assistance, vision services, dental initiative, education, and health care access by education and advocacy.

Salvation Army Adult Rehabilitation Center —sixty bed facility provides in-house, long-term drug/alcohol rehabilitation program for men.

Samaritan Counseling Center of the Southern Tier — empowers the whole person by using a spiritually sensitive approach to counseling, consultation and education. Provides workshops and training sessions in parent education, anger and stress management, spirituality and prayer, grieving issues, communication, and team building. Provides individual, family and marital counseling.

SEPP Group — provides elderly and persons with disabilities with housing facilities in multiple locations throughout the county and services specifically designed to meet their physical, social, and psychological needs, and to promote their health, security, happiness, and usefulness in longer living.

Southern Tier AIDS Program — a not-for-profit organization that provides services to persons infected with or affected by HIV/AIDS. Services include prevention, education, case management, supportive services, outreach and advocacy, and transitional planning for incarcerated HIV inmates. Provides education and referrals for persons infected with or at risk for Hepatitis C. HIV and limited Hepatitis C testing is available in conjunction with the Broome County Health Department. Operates syringe exchange program in Tompkins County. Provides a youth drop-in center that focuses its programming on the physical and mental health of GLBT youth (14-20 yrs.) and seeks to educate schools, those who serve youth, and community professionals about the need to be aware of and sensitive to the needs of GLBT youth.

Southern Tier HealthLink — brings healthcare providers and consumers in Central New York together with technology to improve health care quality, access and safety while reducing costs. In 2010, this agency launched its Health Information Exchange, and plans to connect to the Statewide Health Information Network of NY (SHIN-NY) to allow healthcare information to be shared throughout the state. For consenting patients this secure record-sharing system provides your information to people, places and equipment that deliver healthcare services to you, which will result in improved treatment and peace of mind.

Southern Tier Independence Center (STIC) —provides services to persons with disabilities and their families to increase inclusion and integration into all aspects of community life. Services include advocacy, educational resources, barrier consultation, benefits assistance, interpreter services, Braille services, counseling, independent living skills training, peer counseling, loan closet, service coordination, supported employment and technology assistance. Acts as fiscal intermediary for Medicaid eligible home-care consumers.

Susquehanna Nursing and Rehabilitation Center — provides a skilled nursing care facility with 160 beds and independent apartments for the elderly or disabled. It also provides home health care and medical day care for the elderly and disabled clients.

The Hearth at Castle Gardens Senior Living Center — enriched housing facility for independent living, assisted and enriched living, and Alzheimer's and dementia care.

United Health Services — provides many services, including acute care services at Binghamton General Hospital and Wilson Medical Center, primary care, walk-in care, maternal and child health services, substance abuse treatment, mental health services and community education. Home care is available through Twin Tier Home Health, a certified home health care agency and Ideal Long-Term Home Health Care Program — a certified home health care program offering nursing, therapies, home health aides, and case management services to homebound clients on a long-term basis. Also has an AIDS Long- Term Home Health Care Program that provides all the services of the agency to clients infected with HIV and

diagnosed with AIDS. Professional Home Care is a durable medical equipment provider. Ideal Senior Living Center is a long-term skilled nursing care facility with 150 beds which also includes an adult care facility and an assisted living facility.

United Methodist Homes — a long-term care organization providing skilled nursing facilities, adult care facilities, assisted living facilities, licensed home health care agencies, supportive and independent residences for the elderly and disabled. Elizabeth Church Manor provides 121 skilled nursing facility beds; 24 assisted living beds and 28 adult care facility beds. Hilltop Retirement Center provides 122 skilled nursing facility beds, 26 assisted living beds and 72 adult care facility beds. Both Elizabeth Church Manor and Hilltop each have a dedicated dementia unit.

Veteran's Administration Healthcare Network — provides physical and mental health care for all veterans, including primary care, lab work, and physical exam; also provides weekday transportation to Syracuse Veterans Hospital.

Volunteers of America of Western NY — provide emergency housing and low-income permanent housing for men, women, families and youth.

Willow Point Nursing Home — provides skilled nursing care for 303 residents through interdisciplinary approach which emphasizes quality of life and dignity of individual. Facility includes specialized dementia unit, short term rehabilitation, hospice services, and respite services.

Woodland Manor and Woodland Place — two facilities providing continuing care retirement living, independent living, assisted living, Alzheimer's care, skilled nursing, long term care, senior rehabilitation services, short stay respite care, hospice and palliative care, adult day care services and senior in-home visits.

Young Men's Christian Association (YMCA) —provides youth and adults with education, including workshops on healthy cooking and youth development. Provides recreation activities, day and summer camps, child care, safety courses, and shelter housing for men.

Young Women's Christian Association (YWCA) — home to several unique programs aimed at improving the quality of life for all citizens, including racial justice practices, residential programs, access to free cancer screenings for low-income women, and access to quality early childhood services. Dedicated to eliminating racism; empowering women; and promoting peace, justice, freedom and dignity for all. Programs include Intensive Independent Living, Emergency Housing for Women, Young Wonders Early Childhood Center. ENCOREplus Program offers outreach, education and advocacy for breast/cervical cancer.

Summary of Service Providers

Availability, accessibility, affordability, acceptability, quality and service utilization are part of assessment of services. There are multiple sources for health care, both public and private, within Broome County identified in the "Profile of Community Resources."

The Dr. Garabed A. Fattal Community Free Clinic (CFC) increases the availability, accessibility and affordability for those without health care coverage in Broome County, but reported increases in service utilization and limitations in the resources to provide this service have placed a strain on this safety net.

Accessibility of mental health services is limited in part to the reported insufficient numbers of mental health service providers including psychiatrists in general and, in particular, the shortage of child/ adolescent psychiatrists. The Office of Mental Health has one of the few public child /adolescent inpatient services available within Broome County. This facility serves a regional area but they are limited by the number of beds and frequently have to turn away adolescents needing inpatient care.

Affordability and accessibility to prescription drugs is often reported as a problem, particularly for those of lower incomes or living on fixed incomes. Broome County has several non-profit agencies that work to assist these individuals gain access to prescription drugs in an affordable manner. The Rural Health Network of South Central New York is one such agency. The Hope Pharmacy, launched by Lourdes hospital and multiple community partners is another resource in the area dedicated to improving access to prescription drugs.

Dental care especially for those on Medicaid has been identified as an area where, although progress has been made, gaps in service remain. There is a need for more capacity, improved availability, accessibility, and affordability of these services. There is an even greater shortage of eye care providers who serve Medicare populations, making vision services perhaps the most acute service gap to fill.

Quality of health services is regulated from multiple sources including the facilities themselves as well as county, state, and federal regulations. Both hospital systems as well as area health service providers are dedicated to providing the highest quality care as evidenced by the recent achievement of Magnet designation by Lourdes Hospital. The Magnet Recognition Program® was developed by the American Nurses Credentialing Center (ANCC) to recognize health care organizations that provide nursing excellence. The program also provides a vehicle for disseminating successful nursing practices and strategies and contributes to the overall quality of patient care.

Outreach and Public Health Education Efforts

Many community agencies as well as health and human service organizations, including the Broome County Health Department, engage in significant outreach to the general and/or targeted populations. Information about the specific target population and the education and outreach efforts of area agencies are provided in Appendix G1. Clearly, local organizations are keenly aware of the need to reach those segments of the population which are most vulnerable to the gaps in services herein identified. The annual reports from these area agencies reveal a sustained commitment to serving the needs of all Broome County residents.

Clinic Facilities & Private Provider Resources for Medicaid Recipients

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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 mission of the Free Clinic is to provide primary health care and prescription medications to uninsured adults at no cost to the individual. Also seeking services are people who have medical insurance to cover doctor's visits but lack insurance to cover medications. A person with a limited income who has a chronic illness such as diabetes is faced with monthly medication costs that can be as high as $400–$600.

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 the 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 operates two evenings a week, Monday and Thursday 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 150 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. The Broome County Legislature has provided grants of $100,000 or more for the past nine years. 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 1/3 of the budget of the Free Clinic and the remaining 2/3 of the budget represents the value of the in-kind support from volunteers 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 both Monday and Thursday nights. Faculty members supervise these residents. The Albany College of Pharmacy places pharmacy students at the Free Clinic for a rotation in community service each summer. 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 35 patient visits each session. In 2012, there were a total of 2,698 patient visits. Since the inception of the Free Clinic in 1997 more than 10,700 unduplicated patients have been seen at the Free Clinic. A survey of persons seeking services at the Free Clinic was conducted in the spring of 2009 and repeated in 2013. The survey results are summarized below.

Table 32. Demographic Profile of Clients, Dr. Garabed A. Fattal Community Free Clinic Survey, 2009 /2013

Demographic	2009		2013		Demographic	2009		2013	
	N	%	N	%		N	%	N	%
Sex					Part time	25	20.3	44	30
Female	72	50.70	79	53.70	Unemployed	59	47.9	57	38.8
Male	70	49.20	68	46.30	Retired	4	3.3	14	9.5
Patient Birth Year					Seasonal	2	1.6	3	2
1944-1949	N/A	9.8	N/A	6.1	Employment Industry Type				
1950-1959	N/A	23.7	N/A	21.8	Government & Schools	0	N/A	2	N/A
1960-1969	N/A	23.7	N/A	23.8	Child Care	3	N/A	5	N/A
1970-1979	N/A	18.8	N/A	28.6	Construction and Mfg.	12	N/A	12	N/A
1980-1989	N/A	20.4	N/A	15.6	Fast Food, Restaurants, Bars	2	N/A	12	N/A
1990-1997	N/A	1.6	N/A	2.7	Health Care Services	4	N/A	9	N/A
Citizenship					Transportation	5	N/A	4	N/A
U.S. Citizen	114	93.4	111	75.5	Retail	5	N/A	1	N/A
Legal Resident	4	3.2	30	20.4	Telemarketing & Comm.	1	N/A	1	N/A
Resident (Other)	4	3.2	6	4.1	Other	2	N/A	46	N/A
Married	33	27	70	47.6	Self-Employed	0	N/A	12	N/A
Widowed	0	0	13	8.8	Number of Dependents				
Divorced	16	13	19	12.9	10 Dependents	1	0.8	0	0
Separated	9	7.1	8	5.4	6 Dependents	2	1.7	0	0
Single	64	52.4	27	18.4	5 Dependents	4	3.4	0	0
Race					4 Dependents	4	3.4	2	1.4
Caucasian	96	75.6	86	58.5	3 Dependents	9	7.6	10	6.8
Afro-American	23	18.1	27	18.4	2 Dependents	27	22.7	37	25.2
Asian	3	2.4	16	10.9	1 Dependents	72	60.5	96	65.3
Hispanic	3	2.4	13	5.4	Household Income ($)				
Other	2	1.6	4	2.7	<10,000	36	30	49	33
Veteran Status					10,001-15,000	30	25	38	25.9
Yes	10	8.2	5	3.4	15,001-20,000	21	17.5	18	12.2
No	112	91.8	142	96.7	20,001-25,000	9	7.5	9	6.1
Disabled Status					25,001-30,000	11	9.2	9	6.1
Yes	17	13.9	13	8.8	>30,000	11	9.2	9	6.1
No	104	85.2	133	90.5	N/A	2	1.6	9	6.1
Unknown	1	0.8	1	0.7	Source of Income				
Zip Codes					Salary	65	N/A	32	N/A
Broome County	111	N/A	136	N/A	Social Security	12	N/A	12	N/A
Out of State	1	N/A	1	N/A	Disability	6	N/A	11	N/A
Out of County	9	N/A	4	N/A	Pension/Savings	6	N/A	10	N/A
Employment					Unemployment Benefits	12	N/A	14	N/A
Full time	33	26.8	29	19.7	Other	12	N/A	17	N/A

SOURCE: Dr. Garabed A. Fattal Community Free Clinic Survey, 2009/2013

Table 33. Dr. Garabed A. Fattal Community Free Clinic Survey Results, 2009/2013

Demographic	2009		2013		Demographic	2009		2013	
	N	%	N	%		N	%	N	%
Health Insurance					Prescription Drug Insurance				
Yes	3	2.4	7	4.8	Yes	2	1.6	1	0.7
No	117	95.9	138	93.9	No	118	96.7	144	98
Don't Know (DK)	2	1.6	2	1.4	Don't Know	1	--	9	--
Receive/Eligible For					Private Insurance	1	--	0	--
Medicaid – Yes	11	9	16	10.9	Dental Insurance				
Medicaid – No	92	75.4	106	72.1	Yes	6	4.9	3	2
Medicaid –DK	19	15.6	29	17	No	114	93.4	140	95.2
Medicare – Yes	5	4.1	2	1.4	Don't Know	2	1.6	4	2.7
Medicare – No	100	81.9	125	85	Private Dental Insurance	4	--	1	--
Medicare-DK	17	13.9	20	13.6					
Veteran's Bill Insurance –Yes	0	0	2	1.4					
Veteran's – No	106	86.9	145	98.6					
Veteran's – DK	16	13.1	0	0					
Private Ins. – Yes	2	1.7	2	1.4					
Private Ins. – No	104	86	142	96.6					
Private Ins. – DK	15	12.4	3	2					
CHIP-Child Health Ins. Program-- Yes	1	0.8	2	1.4					
CHIP – No	108	87	142	96.6					
CHIP – DK	15	12.1	1	0.7					
Family Health Plus (FHP) – Yes	1	0.8	0	0					
FHP – No	103	84.4	143	97.3					
FHP – Don't Know	18	14.8	4	2.7					

SOURCE: Dr. Garabed A. Fattal Community Free Clinic Survey, 2009/2013

B. Access to Care

Hospitals

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 (Appendix G3-G5).

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 2011 Community Service Plan provides details on their efforts and progress toward addressing the priorities identified by the 2010-2013 Community Health Assessment (http://www.lourdes.com/media/11863/community_service.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 2011 Community Service Report provides details about changes in services to meet the needs of the local community (http://www.uhs.net/upload/docs/Annual%20Reports/CommunityService2011-Final.pdf).

Table 34. Area Hospitals - Licensed Number to Operate and Type of Beds, Broome County, NY

Care Unit	Binghamton General Hospital	Lourdes Hospital	Wilson Medical Center
Coronary Care			16
Intensive Care	8	12	12
Maternity		25	34
Medical-Surgical	86	194	190
Neonatal Continuing Care			2
Neonatal Intensive Care			6
Neonatal Intermediate Care			6
Pediatric		11	14
Chemical Dependence - Rehabilitation	20		
Coma Recovery	1		
Transitional Care	20		
Physical Medicine/Rehabilitation	24		
Psychiatric/Mental	56		
Trauma Brain Injury	5		
Total	***220***	***242***	***280***

Primary Care Sites

The locations and geographic distribution of area primary care centers throughout Broome County can be seen on the map included in Appendix G6-G7. The catchment area served by both health care systems extends beyond Broome County into Tioga and surrounding counties. Lourdes operates 17 primary care offices, 13 of which are located in Broome County: Binghamton (9), Vestal (2), Endicott (1), Johnson City (1), and Windsor (1). Of these locations, three provide care to pediatric clients including one specifically for endocrinology. UHS operates two primary care centers in Binghamton, two family care centers (Deposit and Johnson City), and one pediatric office in Binghamton. 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 and has one pediatric practice in Binghamton.

Specialty services in Broome County are available through both Lourdes and United Health Services. The UHS Medical group, a multi-specialty practice with over 130 practitioners, offers a variety of medical and surgical specialties (formerly United Medical Associates).

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.

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.

Mission in Motion

In addition to services offered through primary care office sites, Lourdes provides services through two mobile medical van units through its Mission in Motion program. Both mobile medical unit vans make health care accessible by providing primary care and cancer screening services to those in underserved and rural areas in the Southern Tier. One medical unit, the Mobile Mammography van, is a member of the Cancer Services program funded by NYS and provides no cost/low cost mammograms, pelvic exams, and Pap tests. This van also provides health care services for women including breast exams, digital mammography screenings, routine gynecological screenings, and education. The other mobile van, a primary care medical unit, is used for general wellness and health screenings throughout the area, as well as a wide variety of occupational health service screenings. It offers a wide range of health care services to the public including: cancer screenings, health promotion, disease prevention, education and information, physical exams, occupational health testing, and cholesterol testing. Both mobile units travel to a wide variety of community sites such as churches, schools, senior centers, and worksites.

Center for Oral Health

In January 2005, in response to a long standing need for dental care in the community, Lourdes opened a dental clinic, entitled the Center for Oral Health. This center was opened in order to provide increased access to dental services for children who are uninsured, on Medicaid, or on NY Child's Health Plus program, a population that is underserved for dental services in the Broome County area. The initial start-up grant application was submitted jointly by Lourdes Hospital and the Broome County Health Department to the NYS Department of Health's Dental Bureau. This effort was also supported by UHS

Hospitals, who felt the need far exceeded current capacity to serve the dental needs of low-income children and their families. Services provided by dentists and registered dental hygienists through the Center for Oral Health include routine cleanings, patient education, fluoride treatments, sealants, x-rays, urgent care, filings, and extractions. All services offered at the Center of Oral Health are available on the Lourdes Mobile Dental Clinic and all children at participating schools are eligible to receive free dental education, screening, and a parent report to bring home. These services, in turn, are coordinated with the Broome County Health Department, which had a long-standing dental sealant program in area schools, so that services are maximized and not duplicated. Lourdes also offers a Patient Financial Assistance Program to help patients who meet specific guidelines and who are not eligible for any other available program. The Center for Oral Health is conveniently located in Binghamton, next door to the Broome County Health Department.

UHS Dental Clinic

Supported by UHS Hospitals, UHS also has a fully operating dental clinic located within Binghamton General Hospital. The clinic provides care for all ages, from children to the elderly and offers many treatment options, such as anesthesia or sedation, for patients with special needs, or for those who have severe handicap limitations or who are compromised medically. Additionally, the clinic provides patient screenings for oral cancer and treatment for patients undergoing radiation or chemotherapy for head or neck cancer. It also provides education about oral hygiene, complete examinations, x-rays, cleanings, fluoride treatments, fillings, fittings of crowns, bridges and dentures, extractions and minor oral surgery. Dental services are offered on a sliding fee scale that covers between 20-60% off a patient's bill if they qualify for financial assistance. The clinic is open five days per week by appointment for patient dental care.

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 Mental Health Department 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 Mental Health Department 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.

Emergency Medical Services

Emergency medical services (EMS) are provided by Broome County as well as private emergency squads. The emergency response provided by the county is a separate department under county government. Emergency medical response for Broome County is provided by a combination of ambulance services and non-transporting first response services (Appendix G8-G10). These responders are the physical link between local hospitals and the geographic townships and serve as the "ultimate safety net." Unfortunately, there is no level of government that is responsible for providing EMS to all municipalities. The success of EMS in the county is tenuously sustained by the support and cooperation of many community agencies and volunteers. The EMS leadership in the county strives to ensure the availability of emergency services through recruitment, education, training, and mentoring of EMS personnel. Despite the fact that communities are not required to have or support EMS, most have some form of volunteer service agency. In addition to their critical emergency response role, EMS often provide education and outreach to community members teaching them about recognition of heart attack and stroke symptoms and when to activate EMS.

Physician Supply and Needs Assessment for Broome County

Though not exhaustive of all practicing physicians in the county, 168 physicians from a broad range of specialties are listed as members of the Broome County Medical Society as of November 2013 (Appendix G11). In 2013 the NYS Health Workforce Planning Data Guide (Appendix G12) noted 602 active patient care physicians in the county 230 in primary care and 372 in specialty areas. Physician shortages for the area are captured in the Federal Health Professional Shortage Areas (HPSA). Primary Care HPSAs are based on a physician to population ratio of 1:3,500 and does not take into account for the number of physician assistants or nurse practitioners. The Health Resources and Services Administration data for Health Professional Shortage Areas indicate a shortage of 1 physician in the Deposit service area (Medicaid eligible), 10 physicians in the Greater Binghamton area (Medicaid eligible), and 17 physicians for the low income population within the county. The HPSA primary care designation for these areas represents service need for 23,713 residents or 12.1% of the Broome County population (NYS Health Workforce Planning Data Guide, 2013).

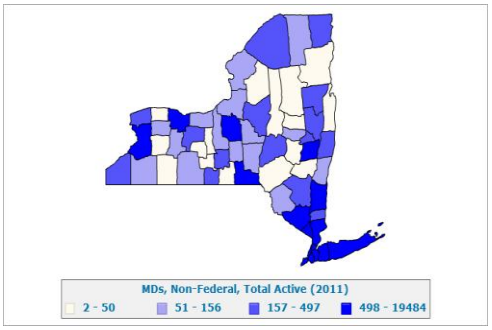


Figure 17. Quartiles for Total Active Non-Federal Physicians among NYS Counties, 2011

Thus, the University of the State of New York Regents report of Designated Physician Shortage Areas (2013) identifies the Deposit service area (including the towns of Colesville, Sanford, and Windsor) and the Greater Binghamton service area (including the towns of Barker, Binghamton, Chenango, Conklin, Dickinson, Fenton, Kirkwood, Lisle, Maine, Nanticoke, Triangle, Union, and Vestal as well as the City of Binghamton) as Primary Care Regents Physician Shortage Areas. In addition, Broome County is designated as a shortage area for primary care physicians and psychiatrists within the Developmental Disabilities Services Office. In the category of non-primary care shortage areas, Broome County is designated for preventive medicine. Both United Health Services hospitals are eligible under the Primary Care and Non-Primary Care designations.

In The Southern Tier, which includes Broome, Chenango, Delaware, Tioga, and Tompkins counties, the average age of physicians is 53 years just slightly older than the average 52 years for NYS (Appendix G12). Twenty-two percent are female and 6.1% are from underrepresented minorities reflecting less diversity in the physician workforce than NYS as a whole (31.8% female and 10.6% underrepresented minority). Like most of the health professions, physicians are thought to be "aging out" in large numbers over the next few years. Despite this trend, the Center for Health Workforce Studies (2009) in their projections for New York Supply and Demand through 2030 reports that the number of primary care physicians will approximate population needs in the Southern Tier of NYS. Across the state, however, significant gaps were projected in specialty areas including ophthalmology, urology, psychiatry, and pathology.

Advance Practice Nurses (APN) and Registered Nurses (RN)

Registered Nurses comprise the largest proportion of the healthcare sector workforce. The Center for Health Workforce Studies (2013) in their Health Workforce Planning Data Guide reports there are 2,707 Registered Nurses (RNs), 742 Licensed Practical Nurses (LPNs), and 206 Nurse Practitioners (NPs) in Broome County (Appendix G12-G13). Nurses staff hospitals, nursing homes, assisted living facilities, home care agencies, outpatient clinics, primary care and specialty practices, health departments, and hospice programs. For the period 2008 to 2018, the US Bureau of Labor Statistics projects a 22% increase in employment for nurses adding 581,500 new RNs and 155,600 new LPNs to the workforce. In addition, 458,000 RNs and 80,100 LPNs will be needed to replace nurses who are expected to retire or leave the field during this time period.[10]

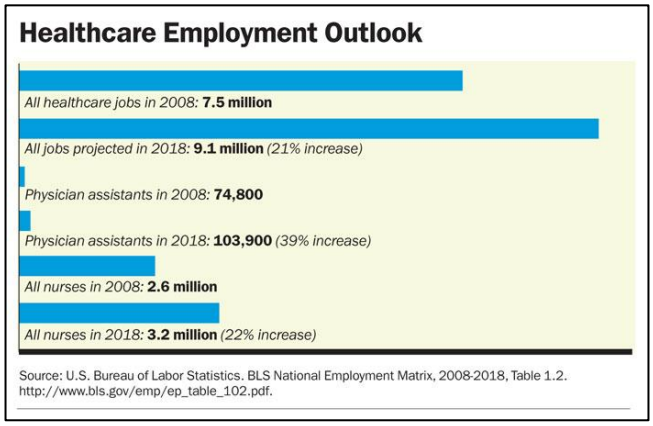


Figure 18. Healthcare Employment Outlook, 2008

Furthermore, trends indicate that nursing positions are shifting from traditional hospital to home health, ambulatory care, and nursing home settings. Data for health workforce by sector employment is provided in Appendix G14. Current workforce models provide varying estimates and many factors contribute to supply and demand.[11] On the demand side, the aging population and increasing prevalence of chronic diseases such as diabetes contribute to the expected need for more healthcare workers. Economic factors and healthcare policy shifts are more difficult to predict. The Affordable Care Act and Medicaid Redesign as well as policy recommendations of the Institute of Medicine[12] are likely to increase demand while education cycles, training capacity, and faculty shortages are likely to limit supply. Overall, the net effect is long-term projected shortages in the nursing workforce.

Broome County has benefitted from having two schools of nursing located within the area. Broome Community College prepares Associate Degree nurses and Binghamton University (BU), Decker School of

[10] The Center for Health Workforce Studies (2011). *The health care workforce in New York, 2009: Trends in the supply and demand for health workers.* Albany, NY: Author.
[11] Keckley, PH., & Coughlin, S. (2012). The new health care workforce: Looking around the corner to future talent management. Available from the Deloitte Center for Health Solutions.
[12] Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Washington, DC: National Academies Press.

Nursing prepares nurses with Baccalaureate, Masters, and Doctoral (PhD) degrees. The Baccalaureate program includes both traditional students and those seeking a second degree. In addition, RNs can obtain a BS or MS degree at BU. A majority of the students prepared at the Master's level stay in this area often serving in Health Profession Shortage Areas. The PhD program is the only doctorate focused on rural nursing in the country.

Public Health Workforce

A study of public health workforce needs conducted in six states, including NY, noted that public health agencies, particularly those in rural areas had difficulty recruiting RNs. These recruitment issues are most often related to budgetary constraints, non-competitive salaries, availability of RNs and adequacy of numbers prepared with the desired level of education. Recommendations from the public health workforce report relevant to nursing professionals include: providing support and assistance to educate graduate and undergraduate nurses with essential knowledge, skills, and competencies for public health practice; developing service obligated scholarship or loan repayment programs similar to the National Health Service Corps; encouraging educational institutions to be responsive to the needs of local public health agencies; providing incentives for collaboration between academia and public health agencies; developing best practice models; supporting curricula for public health in schools of nursing; and monitoring the size and composition of the public health workforce.

Long Term Care Facilities & Services

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. Three of the nine facilities offer the provision for respite care while all nine are contracted to provide hospice care through Hospice at Lourdes. An updated list of these facilities appears in Appendix G15 (see also Appendix G19). Among these nine, there are a total of 1,621 skilled nursing beds, 105 assisted living program beds, and 189 adult care facility beds. In addition, there are 377 units in free standing adult care facilities, 166 apartments, including 32 dementia beds, and 89 persons served in level one adult care facilities.

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.

Elder Care Programs & Services

A number of programs and services are available through the Broome County Office for Aging (Appendix G16). 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 homebound), 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 (Appendix G19). A list of the apartment options for seniors and those with disabilities is provided in Appendix G17.

Sixteen agencies are licensed home care services agencies and are based in Broome County. Broome County added two new Dialysis facilities since 2005. Only one of the three sites offers evening hours.

Primary Care & Preventive Health Services Utilization

Southern Tier Cancer Services Program

The Cancer Services Program of the Southern Tier (CSP) serves Broome, Chemung, Chenango, Schuyler and Tioga Counties. The purpose of the program is to increase breast, cervical and colorectal cancer screenings by offering reimbursement for these services for the uninsured. The program offers breast and cervical screenings to individuals age 40-64 and colorectal screenings to individuals ages 50-64. There are exceptions to the age groups in cases where there are increased risk factors (as determined by the program guidelines). If an individual is diagnosed with breast, cervical, colorectal or prostate cancer, staff can meet with him or her to determine if they are eligible for the Medicaid Cancer Treatment Program, utilizing the Cancer Services Program income eligibility criteria. This program provides Medicaid insurance coverage through the duration of their treatment.

The Cancer Services Program is a program of the New York State Department of Health and funding is provided by New York State and the Centers for Disease Control and Prevention. The program is only available to New York State residents.

Table 35. Patients Diagnosed with Cancer or Pre-Cancer Cells, 2012

Breast Cancer	Cervical Abnormal	Colorectal Cancer	Prostate Cancer
20	1	2	3

Source: Broome County Health Department, 2012

Table 36. Screening Services Count (performed in Broome County Provider Sites and Reimbursed by the Southern Tier Cancer Services Program)

Screening Exam	2012
Clinical Breast Exam	540
Mammogram	535
Pap Test/Pelvic Exam	217
Colorectal Fecal Occult Test	112

Source: Broome County Health Department, 2012

The majority of individuals who participate in the program are low-income, working, and uninsured individuals. Recently there has been an increase in the number of individuals contacting the program, usually through referrals, who have lost their jobs and their health insurance coverage.

Triaging Clients for Public Health Insurance Programs:

The CSP of the Southern Tier screens clients for eligibility over the phone. There is no need for proof of income or insurance status in order to receive program screening services. Clients are sent a NYS

attestation, stating that they are over 40 and that the insurance status and income information is accurate. At this time, callers are offered referrals for local insurance navigation programs as a resource to assist them with reviewing their eligibility for public health coverage program options. Clients are also referred to Patient Financial Assistance Programs offered through United Health Services and Lourdes Hospitals. These programs offer uninsured patients billing discounts or charity care based on their income

Medicaid Cancer Treatment Program Coverage:

The Medicaid Cancer Treatment Program Coverage (MCTP) is a program specifically designed to serve clients who have been diagnosed through the CSP or who have no health insurance and are in need of cancer treatment services/procedures. CSP staff meets with clients who have been diagnosed with breast, cervical, colorectal or prostate cancer and those who have been diagnosed with pre-cancerous cervical conditions, and complete the MCTP application on behalf of Medicaid Enrollment Officers who work directly with NYSDOH CSP. The income guidelines are higher, allowing the client to make up to 250% of the Federal Poverty Guideline. In cases of a breast or cervical diagnosis, there is no income exclusion. The application process is expedited. If approved, the client receives full Medicaid coverage for a determined timeframe. Generally, if the client is diagnosed with cancer, they receive coverage for a full year, with annual renewals. CSP staff again meets with the client to complete the recertification application. In order to be eligible, the client must still be receiving or in need of treatment.

Commonly Identified Barriers & Affected Sub-groups – 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 65 years old who are uninsured in Broome County was 18.1%, which equates to 18,523 persons (Appendix G19). While this figure is lower than the 20.8% estimate for NYS, the difference is not statistically significant. The proportion of uninsured was 5.1% among individuals under the age of 18 and 13.0% 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 between $25,000 and $50,000. The 2011 Small Area Health Insurance Estimates released in August, 2013 suggests lower uninsured rates. The estimated percentage of individuals under age 65 was 11.8% for Broome County, with only 4.6% of children under the age of 19 having no health insurance. According to data from this source, there was no significant change in the county-level estimate for individuals under the age of 65 between 2008 and 2011.

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 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.

C. Broome County Community Health Assessment 2013-2017 Process

Collaborative Partners

The 2013-2017 Community Health Assessment (CHA) has involved a variety of partners from a broad cross-section of community and human services agencies in Broome County (Appendix G2).The committee has benefitted tremendously from a stable membership of committed leaders as well as inclusion of new members who brought fresh perspectives to the work of the group.

In collaboration with the Public Health Director and the CHA Coordinator, these Steering Committee members provided the leadership for conducting the MAPP process and guiding selection of the mutually derived priorities. The Steering Committee's work was also supported by a Supervising Public Health Educator who led the chronic disease risk reduction interventions and the Public Health Emergency Preparedness Program Director who served as health department lead on the mental health and prescription drug initiatives.

Health department senior staff, which included the division directors and department supervisors, was updated on the ongoing activities of the Steering Committee and CHA process. In addition, they provided input by making in-house data available, participating in surveys, completing the prioritization tool, and keeping the CHA Coordinator apprised of relevant changes to programs and services.

The core support team consisted of the Broome County Health Department Director and the Medical Director as well as administrative, technical, and interdisciplinary planning support team members.

Collaborative Efforts

Since the last Community Health Assessment, the Steering Committee continued to meet on a quarterly basis. The Steering Committee serves as an active workgroup not only monitoring progress on implementation of the previous community health improvement plan but also actively seeking new opportunities for collaboration including funding for evidence-based and promising strategies to address community needs.

Over the past year, the steering committee met monthly. Meetings focused on re-evaluating the health status of the county and conducting specific activities to inform the *2013-1017 Community Health Assessment*. The meetings were chaired by the CHA Coordinator and attendance averaged about 10 members per meeting. Minutes were taken by the administrative support team member. Agendas and meeting minutes were e-mailed to committee members. In addition, all agendas, meeting minutes, and materials are kept in a binder as a formal record of the CHA process.

Monthly meetings between the BCHD Director and the CHA Coordinator were held to assess progress and to plan for upcoming CHA meetings and activities. Between meetings, Steering Committee members

completed assessment tools and surveys and during meetings contributed to interpretation of data analyses, providing a contextual understanding of issues underlying observed differences in the occurrence and rates of disease among residents of the county.

Vision

The vision statement developed by the Steering Committee for the 2010-2013 Community Health Assessment continues to reflect the ongoing work of the Steering Committee.

Community Themes & Strengths Assessment

The Community Themes and Strengths assessment examines topics of interest, engages the community in relation to their perceptions about quality of life, and explores community assets. A Community Survey was conducted via Survey Monkey. This survey was provided to community organizations via an email link as well as in portable document format (PDF). Partners were asked to engage their respective service sectors in completing the survey and a link to the survey was made available on the county website.

Particular effort was invested in surveying specific vulnerable groups. The survey was translated and administered to clients at the American Civic Association to assess the perceptions and needs of immigrants and refugees. The survey was also conducted at the Dr. Garabed A. Fattal Community Free Clinic where uninsured residents obtain free health services. In addition, participation was obtained from nearly every senior center in the county to reach rural elders. The survey asked residents about their mental and physical health and overall general health; their use of medical, dental or mental health services; their perceptions about quality of life in the county; concerns and issues about their community being a safe and healthy place to live; the adequacy of health services available; and their prioritization of health issues. A summary of the results from this survey appear in Appendices G46-G65 and are presented in narrative further below.

Community Health Status Assessment

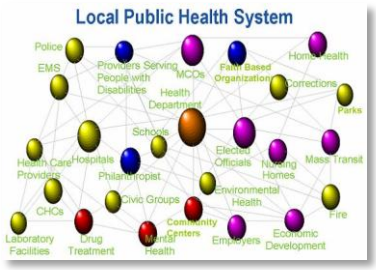
The Community Health Status Assessment examines the health status, quality of life, and risk factors for disease present in the community. A variety of data sources were used for this assessment including: the NYS Prevention Agenda Indicators for Tracking Public Health Priorities, 2013-2017; the County Health Indicators by Race/Ethnicity (CHIRE); the Community Health Indicators Reports (CHIRS); the County Health Assessment Indicators (CHAI); the Expanded Behavioral Risk Factor Surveillance System (BRFSS); and data from the Statewide Planning and Research Cooperative System (SPARCS). These data were available on the NYS Health Information Network. In addition, other county level data available online such as from the Census Bureau were downloaded, analyzed, and reviewed by the Steering Committee with comparisons made to NYS *Prevention Agenda 2017* goals and *Healthy People 2020* objectives.

Furthermore, 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.

Local Public Health System Assessment

The Local Public Health Assessment measures the capacity of the local public health system to conduct essential public health services. The local public health system is viewed as all organizations and entities within the community that contribute to the public's health and not limited to the local public health department.

Over this past year, the Broome County Health Department (BCHD) has been engaged in the critical review and strategic planning process required for accreditation. The BCHD has examined its processes, programs, and interventions and assessed the extent to which they provide the ten essential public health services as well as their performance in the domains of management/administration and governance. The final report regarding their level of achievement with respect to the standards and measures of the Public Health Accreditation Board is forthcoming and was not available for inclusion at this time. This rigorous review process will provide important information about the capacity of the BCHD to execute its core functions, assure delivery of public health services, and accomplish its organizational mission. This information will be provide important feedback to a key member of the local public health system and provide opportunities for quality improvement.



In addition to this process, a community organization survey was conducted to assess the scope of services provided by community organizations in relation to the Prevention Agenda priorities. The survey was broadly disseminated via Survey Monkey across all sectors of the community including healthcare organizations, county and municipal governments, elected officials, academic institutions, community-based organizations, non-governmental agencies, media, employers and businesses. The results of this survey appear in Appendices G36-G45.

Forces of Change Assessment

The Forces of Change Assessment identifies factors that are currently affecting or may affect the community or local public health system. Typically, these factors involve issues that are broader than the community such as domestic economic and healthcare policy, or uncontrollable elements such as catastrophic events, or transformations in societal attitudes or values. These factors are important to identify because they may influence health outcomes. Awareness of these forces can help public health leaders to proactively anticipate change and formulate a managed response. Further, such analysis can provide insight into the gaps that exist between the current situation and ideal circumstances, and thereby inform public health planning. Several methods were used for this assessment including analysis of the narrative responses from the Community Survey, information from focus groups conducted by local organizations, informal discussions with key community leaders, and examination of local headlines as well as national news events. The data obtained through these activities are woven into discussions within relevant sections of this report.

Development of the Community Service Plans & Community Health Improvement Plan

Representatives from both area hospital systems served on the Steering Committee. During the kickoff 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. In total, the information resources and rich discussions provided the basis for examining the public health priorities for the county. A specific tool which was developed for the 2010-2013 Community Health Assessment was modified and used to rate, rank, and select priority areas for the county. This process is discussed separately in Section 4. The tool and scoring results appear in Appendix E.

Several activities supported development of the *Community Health Improvement Plan* (*CHIP*) and *Community Service Plans* (*CSPs*). First, the recommended intervention strategies for each priority area were re-organized by sector. Each member of the Steering Committee was given the set of potential interventions for all Prevention Agenda priority areas in their respective sector. This document served as an inventory or checklist for organizations to explore current strategies being used and to consider additional opportunities for action. Organizations participating in the MAPP process brought the document back to their respective organization and assessed which interventions were currently underway and which interventions they might consider undertaking. The documents provided a framework for thoughtful consideration of and discussions about evidence-based strategies. This document was shared with Steering Committee members early in the MAPP process and was useful for selecting priorities as well as developing the work plan.

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.

Community Organization Survey

The Community Organization Survey was designed to assess the local public health system which is broadly defined as all of the organizations and entities that contribute to the public's health. To that end this survey asked members of community organizations from across many sectors four key questions in relation to each of the Prevention Agenda priority areas:

1. In thinking about the mission of your organization, how important is [goal or priority area]?
2. Is your organization currently taking any actions (either new or ongoing) to improve the health of [specific subgroups or topics]?
3. For which of these [specific subgroups or topics] do you have relevant recent data (within the last three years) or data summaries that could be shared?

Finally, organizational members were asked to rank order the five Prevention Agenda priority areas.

Responses from the Community Organization Survey (Appendices G36-G45) were examined to identify groups in the community that provide services to populations or that have ongoing interventions within the Prevention Agenda priority areas. This survey was completed by 173 individuals representing a diverse cross-section of community agencies and organizations including community based organizations (26.8%), health care delivery systems (25.0%), governmental agencies other than public health (19.0%), governmental public health (10.7%), academia (7.1%), policy makers and elected officials (5.4%), non-governmental public health (3.0%), media (1.8%), and employers, businesses, or unions (1.2%). Information from five respondents was missing with respect to community sector (Appendix G36).

Within these organizations and agencies, members reported serving populations at risk based on disabilities (58.4%), specific age (56.6%), socioeconomic status (48.6%), geography (42.2%), gender (32.9%), race (32.9%), and sexual orientation (30.1%). Over 23% of respondents reported that their organization did not serve vulnerable populations at risk based on any of these demographic factors (Appendix G37).

Just over 70% of the respondents were administrators within their organization (Appendix G38). The survey was designed to reach these individuals specifically. An email explaining the purpose of the survey along with the survey link was sent to directors of community organizations. This mass mailing was conducted with the assistance of the United Way of Broome County which maintains a database of community organizations for the "2-1-1 First Call for Help" program. The majority of these administrators worked in healthcare delivery systems (n=28), community based organizations (n=37), governmental agencies other than public health (n=23), and governmental public health (n=11). Other roles included employee (n=16), elected officials (n=11), direct care providers (n=9), support staff (n=8), and faculty (n=5).

Improve the Health of People Who Live in Broome County

Survey respondents were asked a series of questions. The first question asked: "In thinking about the mission of your organization, how important is the goal to improve the health of people who live in Broome County?" (Appendix G39). Over 93% of respondents indicated that this goal was moderately to very important to their mission. Next, respondents were asked if their organization was currently taking any actions (either new or ongoing) to improve the health of specific populations. Over 80% responded that their organization was currently taking actions to improve the health of people from low income groups and 76.5% reported taking actions to improve the health of people with disabilities. Approximately 60% to 65% of organizations reported taking action for older individuals, people who live

in rural areas, infants and children, and uninsured or underinsured. In contrast only 40% of organizations reported currently taking actions to improve the health of veterans and military families.

Survey respondents were also asked for which of the populations they had relevant recent data (within the last 3 years) or data summaries that could be shared. The most frequently identified population was older individuals (51.4%) and only 8.3% of organizations reported that their data included information about veteran status.

Prevention Agenda Priority Area 1: Promote a Healthy and Safe Environment

Almost 93% indicated that this goal was moderately to very important to their mission (Appendix G40). Although this area ranked high in terms of importance, few organizations were currently taking actions in this area. Over 54% reported that their organization was currently taking actions to improve injuries, violence or occupational health and 40.3% reported taking actions to improve the built environment. Only 26.4% of organizations reported taking action to improve water quality and only 21.5% to improve outdoor air quality. Likewise, while 77.4% reported having relevant recent data on injuries, violence or occupational health less than 40% had information about the built environment or water quality and only 6% reported having data related to outdoor air quality.

Prevention Agenda Priority Area 2: Prevent Chronic Diseases

Over 76% indicated that this goal was moderately to very important to their mission (Appendix G41). Although this area ranked lower than the environment in terms of importance, more organizations were currently taking actions in this area. For all subgroups, more than 40% reported that their organization was currently taking actions to prevent chronic diseases. For specific subgroups: 42.6% were working to reduce obesity in children, 45.7% were working to reduce obesity in adults, 51.7% were working to limit exposure to secondhand smoke, and 47.9% were working to improve care for managing chronic diseases. In relation to data availability, 68.8% had relevant recent data related to managing chronic diseases. Although almost 44% had data related to reducing tobacco use, only 28.1% had data related to secondhand smoke exposure.

For this priority area, an additional question asked about specific chronic diseases including asthma, cancer, diabetes, heart disease, and stroke. Over 80% of respondents reported that they were currently taking action in relation to asthma and cancer and almost 88% were taking action in relation to diabetes and heart disease. Seventy percent were currently taking action in relation to stroke. For all chronic conditions, less than half of those who said their organization was currently taking action had relevant recent data.

Prevention Agenda Priority Area 3: Prevent Communicable Diseases

Approximately 64% indicated that this goal was moderately to very important to their mission (Appendix G42). Communicable diseases ranked the lowest in terms of importance as compared to all other Prevention Agenda priority areas. This priority area includes HIV, sexually transmitted diseases, vaccine-preventable diseases, and healthcare-related infections. Of these four areas, vaccine-preventable diseases was the most frequently reported area in which community organizations were taking actions to prevent disease (41%) and 70% reported having relevant recent data.

Prevention Agenda Priority Area 4: Promote Healthy Women, Infants and Children

Promoting the health of women, infants, and children was identified as moderately to very important by 75% of respondents (Appendix G43). For this area, 56.5% were currently taking actions to improve the health of young children, 50% to improve the health of mothers, and 43.2% to improve the health of infants. Only 31.2% of respondents reported that their organization was taking actions to improve the

health of individuals who want to have children. Almost 82% of respondents reported that their organization had relevant recent data related to young children. More respondents reported having relevant data for infants (63.6%) and mothers (59.1%) than for preconception care (40.9%).

Prevention Agenda Priority Area 5: Promote Mental Health and Prevent Substance Abuse

Almost 78% indicated that this goal was moderately to very important to their mission (Appendix G44). Almost 76% of respondents reported that their organization was currently taking action to promote well-being. Respondents also reported taking actions to prevent mental, emotional, or behavioral problems (59.3%); substance abuse (51.3%); and how mental how services are coordinated (46.8%). Only 28.6% of respondents reported that their organization was taking action to address the mental health needs of veterans and their families.

Prevention Agenda: Priority Area Ranking

The last survey question asked: "In thinking about the health needs of Broome County residents … How would you rank the five priority areas that have been identified by the New York State Department of Health in the 2013-2017 Prevention Agenda?" (Appendix G45)

From highest to lowest priority, these areas were ranked as follows:

Table 37. In thinking about the health needs of Broome County residents … How would you rank the five priority areas that have been identified by the New York State Department of Health in the 2013-2017 Prevention Agenda? [1 = HIGHEST Priority and 5 = LOWEST Priority]

Prevention Agenda Priority Area	Ranking (average rating)	Importance to Organizational Mission
1. Healthy and Safe Environment	2.52	92.8%
2. Chronic Diseases	2.69	76.1%
3. Mental Health and Substance Abuse	2.92	77.6%
4. Healthy Women, Infants and Children	3.02	75.0%
5. Communicable Diseases	3.85	63.8%

Based on the importance of the Prevention Agenda priority area to the organizational mission, promoting mental health and preventing substance abuse would rank above preventing chronic disease.

Respondents were also asked to voluntarily provide the name of their organization and their contact information if they were willing to discuss their work in the priority area and the data that their organization collects. The Steering Committee is using this information to engage new partners and explore additional sources of local level data that could support the prevention work in the county.

Community Survey

Responses from the Community Survey are located in Appendix G46-G65. This convenience survey was completed by 638 community members. The majority of respondents were White, Non-Hispanic females which is reflective of the county's demography and higher response rate for females (Appendices G46 & G48-G49). All age groups were represented with the modal age group 50 to 59 years old (Appendix G47). The large majority spoke mainly English in the home (97.3% Appendix G50). Most of the respondents were married (48.8% Appendix G51). Twenty percent were never married, 15% were widowed, and 15% were divorced. Sixty-nine percent of respondents owned the place where they lived (Appendix G54). Only a small percentage of respondents (5.1%) did not live or work in the county (Appendix G55).

Thirteen percent chose not to provide information about household income (Appendix G52). Twenty-six percent reported household incomes less than $25,000; 46.5% less than $50,000; 62.5% less than $75,000; and 73.3% less than $100,000. Over 41% had a college degree and 28.1% had less than a high school education or a high school diploma/GED (Appendix G53). Forty eight percent reported having private health insurance and 23.3% had more than one type of insurance (Appendix G56). Over 10% reported having Medicaid, 6.4% paid with cash, 2% reported using the Community Free Clinic, and 0.8% reported that they did not have any insurance. Just over 1% of the respondents identified receiving VA benefits.

Fifteen percent of respondents rated their overall physical health as fair or poor and 11.6% reported that their mental or emotional health was fair or poor (Appendix G57). Ninety-one percent of respondent shad used medical, dental, or mental health services in Broome County in the past year (Appendix G59). When asked, "In the past year, have you needed medical, dental, or mental healthcare services but you were not able to receive the care you needed?" 16% responded yes (Appendix G60).

Six questions were asked that related to quality of life in Broome County (Appendix G61). These questions asked about: (1) health care services, (2) being a good place live, (3) being a good place to grow old, (4) economic opportunities, (5) being a safe place to live, and (6) networks of support for individuals and families during times of stress and need. For each statement, respondents were asked to rate their level of agreement on a four-point scale: strongly disagree, disagree, agree, and strongly agree.

With respect to health care that is received in the county, respondents were asked to consider healthcare options, access, cost, availability and quality of those services. Almost 85% of respondents were satisfied with the health care that they received and only 3.3% expressed strong dissatisfaction. For the county being a good place to raise children, respondents were asked to consider the availability and quality of schools, day care, after school programs, and recreation. Eighty-one percent either agreed or strongly agreed with this statement and only 3.4% strongly disagreed. In relation to growing old in the county, respondents were asked to consider elder-friendly housing, access/transportation to medical services, elder day care, social support for elders living alone, and Meals on Wheels. Seventy-three percent of respondents thought that Broome County was a good place to grow old while 5.5% strongly disagreed with the statement.

The question about economic opportunity prompted respondents to think about the availability and quality of jobs, job training and higher education opportunities, and affordable housing. Only twenty nine percent of respondents felt that there was plenty of economic opportunity in the county. This quality of life topic received the lowest rating and almost 24% of respondents strongly disagreed with the statement. With respect to safety, respondents were asked to consider safety at home, in the

workplace, in schools, at playgrounds, parks, and shopping centers as well as walkable environment. Sixty-nine percent felt that the county was a safe place to live and only 5.4% strongly disagreed with this statement. The last topic, networks of support, provided examples such as neighbors, support groups, faith community outreach, agencies, organizations, and providers. Almost 83% of respondents felt that there were supports in the county during times of stress and need and only 2.8% strongly disagreed with this statement.

The next seven questions prompted respondents to think about having a safe and healthy environment and then asked them to rate whether certain characteristics of their environment were a major concern or problem, a minor concern or problem, or not a concern or problem at all (Appendix G62). The areas of highest concern (a major problem) were: the quality of the water (27.4%), the availability of safe places to walk or be physically active (22.5%), the amount of violence in their neighborhood (21.1%), and the availability of affordable fresh foods (20.1%). A smaller proportion of respondents identified the availability of public transportation (10.6%), the quality of the outdoor air (17.6%), and the quality of the air inside their home (12.1%) as a major concern or problem.

Eight questions related to the adequacy of health services available in the community and respondents were asked to identify if the specific health service was a major or minor concern/problem or not a concern at all (Appendix G63). The adequacy of dental care was identified as a major concern/problem by 56.1% of respondents. Additional areas of high concern related to the adequacy of health services were: care for infants and children (41.0%), home care (39.1%), counseling and mental health (36.5%), long-term care (36.3%), and services for those with disabilities (33.0%). Less than 30% felt that the adequacy of health services for substance abuse or care for veterans was a major concern or problem.

The next set of questions asked respondents: “If you needed or used medical, dental, or mental healthcare services in the past year, which of the following was/were a problem?” (Appendix G64). Respondents were told to check all applicable items. The most frequently identified problem was finding someone who would take their insurance (38.7%). Other problems encountered included: finding an office or clinic that’s open outside of work hours (32.3%), finding somewhere that offers free or reduced-cost services (28.6%), transportation (27.1%), and the ability to take off from work when sick without losing pay (26.4%). Less than 20% of respondents identified finding someone to coordinate their care, child care, or language as a problem.

The last survey question asked respondents about how important ten specific health issues were to them (Appendix G65). Included in this list were the five priority areas of the Prevention Agenda. Responses to this question are shown in the table below.

Table 38. In your opinion, how important are these health issues to you?

Health Issue	Somewhat or Very Important (%)	Very Important (%)
1. Chronic Diseases (such as cancer, stroke, heart disease, and diabetes)	94.3	75.5
2. Obesity	87.4	58.1
3. Active healthy lifestyles	85.3	68.7
4. Exposure to secondhand smoke	84.8	60.6
5. Anxiety or depression	84.5	51.9
6. Healthy mothers and babies	83.0	66.4
7. Tobacco use	78.9	56.3
8. Substance abuse	71.5	47.1
9. Suicide	68.9	46.4
10. Sexually transmitted infection and HIV/AIDS	66.7	42.8

The table above shows the rank ordering for the health issues based on a response of “very important.” The top six items were the same when the response categories “somewhat important” and “very important” were combined. The rank order for the combined responses would be: chronic diseases, active healthy lifestyles, healthy mothers and babies, exposure to secondhand smoke, obesity, and anxiety or depression.

Section Four – Local Health Priorities

A. Prevention Agenda Priorities

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 fall risks among residents age 65 or older
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 breastfeeding initiation and duration in healthcare 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

Summary of the Process for Identification of Local Public Health Priorities

Local public health priorities were identified by the Steering Committee for the Community Health Assessment at the July 2013 meeting and final selection was made at the August meeting. The process for selecting the criteria was initially discussed at the April 2013 Steering Committee Meeting and formalized at the June Meeting.

The "Priority Setting Tool" used for this purpose was originally developed for the *Broome County Community Health Assessment 2010-2013* and was revised to include the *New York State Prevention Agenda 2013-2017* priorities as well as changes to the criteria and scoring of the tool. This revised tool is located in Appendix H1.

The tool, *Setting Priorities for the Broome County Community Health Assessment 2013-2017,* 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 the sixteen (16) 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:

ASSESSMENT FACTORS

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.

Work Time Lost or Disability – this factor considers indirect costs representing the value of lost productivity for all affected Broome County residents.

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.

INTERVENTION FACTORS

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. The partial and full weights for the Rating Factors appear in Table 39 (see also Appendix H2).

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 "Assessment Score" and an "Intervention 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.

The tool was completed by Broome County Steering Committee Members and division/department leaders at the Broome County Health Department. A total of 14 completed or partially completed tools were submitted and tallied. A summary of the results from the scoring of this tool appear in Appendix E. The highest ranking priority items were brought forward to the July 2013 Steering Committee meeting for discussion. The priority area rankings using the weighted scores appear in Table 40 (see also Appendix H3); the rankings for the focus areas/goals based on the weighted scores are provided in Table 41 (see also Appendix H4); and the average rank scores from the relative rank method appear below in Table 42 (see also Appendix H5). Results from these analyses were tabulated so that the rankings achieved through the use of the weighted Rating Factors, the average relative rank score, and the results from the Community Organizations Survey could be compared (Table 43; see also Appendix H6).

RESULTS FROM THE PRIORITY SETTING TOOL FOR WEIGHTING OF RATING FACTORS

Analysis of the "importance" assigned to each Rating Factor was used to generate the partial and full weights which appear in Table 39 below (see also Appendix H2). The Assessment Factors that were identified as most important were "Total Health Care Costs" (partial weight=25%) and "Absolute Number of Individuals Affected" (partial weight=21%). The weighting for the Intervention Factors was more evenly distributed with "Feasibility of Potential Intervention/Initiative" (partial weight=29%) and "Availability of Funding for Initiative" (partial weight=27%) identified as the most important.

Table 39. Partial Weights and Full Weights for Rating Factors by Assessment and Intervention Grouping

FACTOR GROUPING	RATING FACTOR	Partial Weight (%)	Full Weight (%)
ASSESSMENT FACTORS	Total Healthcare Costs	25	15
	Absolute Number of Individuals Affected	21	13
	Worsening Trend (over past 5 years)	15	9
	Work Time Lost or Disability	11	7
	Underperforming US/NYS Health Goals	14	8.5
	Health Disparities Present	15	9
	TOTAL	***100***	
INTERVENTION FACTORS	Measurability of Indicators to Monitor Change	24	9
	Opportunity to Continue Prior Intervention Focus	21	8
	Feasibility of Potential Intervention/Initiative	29	11
	Availability of Funding for Initiative	27	10
	TOTAL	***100***	***100***

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2013

RESULTS FOR PRIORITY AREAS BASED ON WEIGHTED RATING FACTORS

The results for prioritizing Prevention Agenda 2013-2017 Priority Areas based on the weighted rating factors are presented in Table 40 below (see also Appendix H3). "Prevent Chronic Diseases" was identified as the highest priority area (total score=1.67) followed by "Promote Mental Health and Prevent Substance Abuse" (total score=1.77) and "Promote Healthy Women, Infants, and Children" (total score=1.88). The priority area "Prevent Chronic Disease" had the lowest Assessment and Intervention Scores (1.64 and 1.72 respectively). The "Promote Mental Health and Prevent Substance Abuse" priority area had the second lowest Assessment and Intervention Scores (1.76 and 1.79 respectively) and "Promote Healthy Women Infants and Children" had the third lowest Assessment and Interventions Scores (1.87 and 1.91 respectively).

Table 40. Priority Area Rankings Based on Weighted Scores for Assessment Factors, Intervention Factors, and Overall Total, Broome County, 2013

PRIORITY AREA	ASSESSMENT SCORE	INTERVENTION SCORE	TOTAL SCORE
Prevent Chronic Diseases	1.640	1.719	1.670
Promote Mental Health & Prevent Substance Abuse	1.757	1.789	1.769
Promote Healthy Women, Infants & Children	1.872	1.905	1.884
Promote a Healthy & Safe Environment	2.161	2.299	2.214
Prevent Infectious Diseases	2.321	2.182	2.268

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2013

RESULTS FOR FOCUS AREAS / GOALS BASED ON WEIGHTED RATING FACTORS

The results for prioritizing Prevention Agenda 2013-2017 focus areas / goals based on the weighted rating factors are presented in Table 41 below (see also Appendix H4). The top ranked focus area was Goal #2 "Promote Use of Evidence-Based Care to Manage Chronic Diseases" under Focus Area #3 "Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and

Community Settings" in the "Prevent Chronic Diseases" Priority Area. This goal received the lowest Assessment, Intervention, and Total Scores (1.39 for all three). Goal #1 from this same focus area "Increase screening rates for cardiovascular disease, diabetes, and cancer, especially among disparate populations" was ranked third (Assessment Score=1.45, Intervention Score=1.60, and Total Score=1.51). Ranked second between these two goals was Goal #1 "Increase the proportion of NYS children who receive comprehensive well child care in accordance with AAP Guidelines" under Focus Area #2 "Child Health" of the "Promote Healthy Women, Infants, and Children" Priority Area. The fourth ranked item was Goal #1 "Reduce fall risks among the most vulnerable populations" under Focus Area #4 "Injuries, Violence, and Occupational Health" of the "Promote a Healthy and Safe Environment" Priority Area.

Notably, all four goals related to the obesity prevention focus area appeared in the top 20 list: Goal #1 "Create community environments that promote and support healthy food and beverage choices and physical activity" was ranked eighth; Goal #2 "Prevent childhood obesity through early child care and schools" was ranked twelfth; Goal #3 "Expand the role of health care and health service providers and insurers in obesity prevention" was ranked eighteenth; and Goal #4 "Expand the role of public and private employers in obesity prevention" was ranked fourteenth.

Table 41. Top Twenty Ranked Focus Areas / Goals Based on Weighted Scores for Assessment Factors, Intervention Factors, and Overall Total, Broome County, 2013

FOCUS AREA & GOAL	PRIORITY AREA	ASSESSMENT SCORE	INTERVENTION SCORE	TOTAL SCORE
Manage – CD	PCD	1.391	1.387	1.390
Well childcare	MCH	1.423	1.599	1.491
Screening – CD	PCD	1.452	1.601	1.509
Falls	ENV	1.492	1.737	1.586
Reproductive services	MCH	1.472	1.783	1.591
MEB disorders	MHSA	1.622	1.606	1.616
Tobacco use	PCD	1.588	1.686	1.625
Community Environment – OP	PCD	1.533	1.817	1.642
Dental caries	MCH	1.616	1.687	1.643
Infrastructure	MHSA	1.666	1.643	1.657
Professional collaboration	MHSA	1.718	1.631	1.685
Child care & schools – OP	PCD	1.713	1.680	1.700
Tobacco use	MHSA	1.725	1.672	1.705
Employers – OP	PCD	1.546	1.969	1.708
Tobacco cessation	PCD	1.719	1.743	1.728
Education – CD	PCD	1.895	1.528	1.754
Community MEB health	MHSA	1.668	1.988	1.791
Healthcare – OP	PCD	1.772	1.862	1.807
Secondhand smoke	PCD	1.791	1.917	1.839
Suicide	MHSA	1.976	1.766	1.895

ENV = Promote a Healthy and Safe Environment
MCH = Promote Healthy Women, Infants, and Children
OP = Obesity Prevention
MEB = Mental, Emotional, and Behavioral
PCD = Prevent Chronic Diseases
MHSA = Promote Mental Health and Prevent Substance Abuse
CD = Chronic Disease

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2013

RESULTS FOR PRIORITY AREAS BASED ON RELATIVE RANKING

The results for prioritizing Prevention Agenda 2013-2017 priority areas based on the relative ranking schema are presented in Table 42 below (see also Appendix H5). Both "Prevent Chronic Disease" and "Promote a Healthy & Safe Environment" received the lowest mean rank score (2.11). The priority area that ranked third was "Promote Healthy Women, Infants & Children" (score=2.89). The fourth and fifth ranked priority areas were "Promote Mental Health & Prevent Substance Abuse" (score=3.33) and "Prevent Infectious Diseases" (score=4.56) respectively.

Table 42. Priority Area Rankings Based on the Average Relative Rank Score, Broome County, 2013

PRIORITY AREA	AVERAGE RELATIVE RANK SCORE
Prevent Chronic Diseases	2.11
Promote a Healthy & Safe Environment	2.11
Promote Healthy Women, Infants & Children	2.89
Promote Mental Health & Prevent Substance Abuse	3.33
Prevent Infectious Diseases	4.56

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2013

DISCUSSION OF RESULTS

To guide decision-making, multiple perspectives were sought from across stakeholder groups including: community residents (*Community Health Assessment 2013-2017—Community Survey*), community organizations (*Community Health Assessment 2013-2017—Community Organizations Survey*), and public health leadership (*Broome County Community Health Assessment 2013-2017—Priority Setting Tool*). Data from these surveys/tools were used to inform selection of priorities by the Broome County CHA Steering Committee. Table 43 provides a summary of the priority area rankings based on: (1) Priority Tool - Total Score Using Weighted Rating Factors, (2) Priority Tool – Relative Rank Score, and (3) Community Organization Survey – Priority Score. The results from the *Community Survey* and the *Community Organizations Survey* are discussed in detail in Section Three of this document.

Table 43. Summary of Priority Area Rankings Based on Total Score (Priority Setting Tool), Average Relative Rank Score (Priority Setting Tool), and Community Organizations Survey Score

Priority Area	Total Score	Priority Area Ranking by Total Score	Average Relative Rank Score	Priority Area Ranking by Average Relative Rank Score	Community Organizations Survey Rating Score	Prioritization by Community Organizations Survey
Promote a Healthy & Safe Environment	2.214	**4**	2.11	**1**	2.52	**1**
Prevent Chronic Diseases	1.670	**1**	2.11	**1**	2.69	**2**
Prevent Infectious Diseases	2.268	**5**	4.56	**5**	3.85	**5**
Promote Healthy Women, Infants & Children	1.884	**3**	2.89	**3**	3.02	**4**
Promote Mental Health & Prevent Substance Abuse	1.769	**2**	3.33	**4**	2.92	**3**

SOURCE: Community Health Assessment Steering Committee Priority Setting Tool, 2013; Broome County Community Health Assessment-Community Organizations Survey, 2013

The Prevention Agenda Priority Area that received the lowest rating across all assessment methods was "Prevent HIV/STDs, Vaccine-Preventable Disease and Health Care-Associated Infections," which was fifth out of five in the Rating Factor method (total score=2.27) and relative rank method (rank score=4.56) as well as on the *Broome County Community Health Assessment 2013-2017 – Community Organizations Survey* (mean rating=3.85) and the *Broome County Community Health Assessment 2013-2017 – Community Survey* with 26.6% of respondents identifying these health issues as not very important to them. (see also Appendix H9)

"Promote Healthy Women, Infants and Children" was ranked third by the *Priority Setting Tool* for both the weighted rating factors (total score=1.88) and the relative ranking method (rank score=2.89). This area was ranked fourth in the *Community Organizations Survey* (rating score 3.02). The three highest rated focus areas / goals in the maternal-child health area included: (1) "Increase the proportion of NYS children who receive comprehensive well child care in accordance with AAP guidelines" (ranked second, total score=1.49), (2) "Reduce the rate of adolescent and unplanned pregnancies in NYS" (ranked fifth, total score=1.59), and (3) "Reduce the prevalence of dental caries among NYS children" (ranked ninth, total score=1.64). Recognition of the importance this priority area was evident in the *Community Survey* which ranked "Healthy Mothers and Babies" third with over 66% of respondents saying this health issue was "very important" to them. (see also Appendix H10)

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.

HIGH PRIORITY: Promote a Healthy and Safe Environment – Reduce Fall Risk among Vulnerable Populations

"Promoting a Healthy and Safe Environment" was identified as the highest priority in the relative ranking method of the *Priority Setting Tool* (rank score=2.11) and in the *Community Organizations Survey* (rating score=2.52). While this priority area ranked fourth when analyzed by the weighted rating factors, one particular focus area/goal "Reducing Falls among the Most Vulnerable Populations" was ranked among the highest for Assessment Score (1.49), Intervention Score (1.60), and Total Score (1.51). The aging population within the county, the high rate of fall-related hospitalizations among individuals age 65 and older, 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 (see also Appendix H7).

HIGH PRIORITY: Prevent Chronic Diseases – Reduce Obesity in Children and Adults

Based on the high rankings that it received across all assessment / prioritization method, the second priority area selected by the Steering Committee was "Prevent Chronic Diseases." This priority area was ranked #1 for both the weighted scoring (total score=1.67) and the relative ranking (score=2.11) of the *Priority Setting Tool*. It was ranked #2 in the *Community Organizations Survey* (mean rating=2.69). Within this priority area, the focus area identified as the having the highest priority was "Increasing access to high quality chronic disease preventive care and management in both clinical and community settings" which included two goals "Use of evidence-based care to manage chronic diseases" (total

score=1.39) and "Increasing screening rates for cardiovascular disease, diabetes and cancer among disparate populations" (total score=1.51). This result is consistent with the *Broome County Community Health Assessment 2013-2017 - Community Survey* in which "Chronic diseases (such as cancer, stroke, heart disease, and diabetes)" was identified as "Very Important" by more than 75% of respondents. Furthermore, all four goals related to "Reducing Obesity in Children and Adults" were among the top 20 rankings based on weighted scores and included community environments (#8), child care and schools (#12), employers (#14), and healthcare (#18). In the *Community Survey,* the second most important issue was "Active Healthy Lifestyles" with 68.7% of respondents saying this health issue was "Very Important" to them. Furthermore, over 87% of community members stated that "Obesity" was important to them. Given the ongoing work in the area by a variety of stakeholders, a continued focus on Obesity Prevention was deemed a high priority. (see also Appendix H8)

HIGH PRIORITY: Prevent Chronic Diseases – Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings

Within the priority area of "Prevent Chronic Diseases," in addition to obesity prevention, "increasing access to high quality chronic disease preventive care and management in both clinical and community settings" was identified as an important health priority for Broome County. 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. (see also Appendix H8)

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. The priority area "Promote Mental Health and Prevent Substance Abuse" ranked second using the weighted rating factors on the *Priority Setting Tool* (Assessment Score=1.76, Intervention Score=1.79, and Total Score=1.77). Within this priority area, "Prevent and reduce occurrences of mental, emotional, and behavioral disorders among youth and adults" ranked sixth, "Strengthen infrastructure for mental, emotional, and behavioral health promotion" ranked tenth, and "Support collaboration among professionals working in fields of mental, emotional, and behavioral health promotion and chronic disease prevention" ranked eleventh. (see also Appendix H11)

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 disease 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.

Summary

Chronic disease refers to a medical condition that is persistent or recurrent. 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.

Mental health disorders are medical conditions that 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.

Section Five —Opportunities for Action: Narrative of Community Health Improvement Plan

A. Healthy and Safe Environment

Opportunity

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 16% of the population is over the age 65 and 52% 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 244.2 per 10,000 (NYS SPARCS 2008-2010). This rate is notably higher than NYS at 204.6 per 10,000 (NYS SPARCS 2008-2010). Broome County ranked in the 4th quartile which translates to being in the bottom 25% of all NYS counties. The NYS Prevention Agenda 2017 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.

Broome County Falls Prevention Workgroup

The Broome County Office for Aging assisted the Broome County Health Department with establishing a workgroup on fall prevention in order to support the implementation, monitoring and evaluation of the fall prevention grant activities which are integrated within the Broome County CHIP. The specific role of this workgroup is multipronged: 1) Provide the integration and education of healthcare systems with community based education through an improved referral process and engagement of healthcare providers; 2) Standardize the approach to fall prevention among community sectors and through key stakeholders; 3) Ensure the sustainability of community based programs within existing mechanisms and ensure that fall risk assessments are adopted and employed in healthcare systems' primary care centers.

The representatives of this workgroup are the Broome County Health Department, Broome County Office for Aging, United Health Services, Lourdes Hospital, CDPHP health care plan, Gentiva Home Health Services, Independence Awareness, Broome County YMCA, Retired Senior Volunteer Program, Broome County Council of Churches, Binghamton University Decker School of Nursing, Southern Tier Center on Aging, Action for Older Persons, and Broome County Office of Emergency Services.

Current Interventions in Broome County

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.

Another program has been developed specifically for clinicians. The CDC is piloting 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 healthcare personnel involved in older adult care. The STEADI program enforces the US Preventive Services Task Force recommendations for fall risk assessments and involves the use of a clinician tool kit that guides providers through a multifunctional fall risk assessment.

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.

Potential Interventions

Fall prevention interventions should be broadly considered by all community sectors and woven into sector specific policies wherever possible. Potential fall prevention interventions include creating safe walking environments that target reducing the slip and fall hazards in outdoor and indoor public areas, collaborating with local housing authorities, code enforcement and planning departments to target environmental fall risk in public housing, working with Medicare and other healthcare plans to approve reimbursement of fall prevention activities and community based classes, expanding access to and availability of exercise programs in community venues, working with employers to educate older adults on proper footwear that would reduce fall risk while at work, and using the media to promote independence among older adults through exercise, including the promotion of community based classes and activities that reduce fall risks, especially to those high risk and hard to reach populations.

Overview of Community Health Improvement Plan Strategies

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. Tai Chi programs are especially effective. In addition, it is recommended that older adults ask their doctor or pharmacist to review medications that may provoke a fall, have their vision checked, make their homes safer by reducing tripping hazards, improve lighting and install railings or grab bars to assist them while moving around in uneven areas of the home. The Stepping On Program provides these specific education opportunities. The gaps noted in the healthcare provider participation to address fall prevention are being addressed through the implementation of the STEADI and OTAGO program in both hospital systems.

The Broome County CHIP addresses the objectives of expanding the community based programming of Tai Chi Moving for Better Balance, the Stepping On Program and implementing the clinically based

systems changes of the STEADI and OTAGO programs. 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.

B. Prevent Chronic Disease: Reduce Obesity in Adults and Children

Opportunity

According to the Centers for Disease 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 high blood pressure, high cholesterol, stroke, heart disease, Type 2 diabetes, asthma, some cancers, and osteoarthritis. Alarmingly, these conditions are now appearing in adolescents and children.

Currently, the percent of adults who are obese in Broome County is 24.5 % which is higher than the rest of the state and the NYS Prevention Agenda 2017 target. The percent of children and adolescents who are obese in Broome County is 18.6 % which is higher than the rest of the state and the NYS Prevention Agenda 2017 target.

In order 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 stakeholders, decision makers, and community partners to work within all levels of the health impact pyramid[13] 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.

Broome County Chronic Disease Leadership Team

The Broome County Chronic Disease Leadership Team is a diverse group of stakeholders who are representative of various community sectors and priority populations. This leadership team meets bi-monthly to assist with and support 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, 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

[13] Frieden T., (2010). A framework for public health action: The health impact pyramid. *American Journal of Public Health*, *100*(4), 590-595.

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.

Current Interventions in Broome County

The Broome County Health Department has collaborated with numerous community partners over the past decade to focus on obesity and chronic disease prevention efforts in schools, worksites, community based institutions, and in health care sectors. These strategies include: adopting employee breastfeeding policies, initiating screening assessment, identification and treatment recommendations for childhood obesity in local health care systems, implementing calorie menu labeling in senior centers, legislating county wide trans-fat and smoke free parks, instituting complete streets policies, smart growth/livable community principles (in the largest county municipality), adopting healthy vending policies and exclusive sugary drink policies, instituting food procurement standards, and increasing the availability and visibility of healthier food and beverage choices in public and/or private venues. In addition, these strategies also include improving the availability of mechanisms for purchasing and/or using foods from farms, community supported agriculture community gardens, urban agriculture initiatives, consolidated school food procurement, amendment of wellness policies in schools, reducing sodium in senior nutrition programs, increasing school breakfast participation, and including physical activity within the school day apart from physical education.

Potential Interventions

Presently, there are significant opportunities for employing more evidence-based interventions that can reduce and prevent obesity and chronic disease. A key intervention includes increasing sustainable community based programs for physician referral and reimbursement by health care plans which addresses risk factors for obesity and chronic disease. Other interventions include: continuing to increase the rate of adoption, implementing and enforcing the complete streets policies for all Broome County municipalities, obtaining joint use agreements that will increase physical activity opportunities, encouraging more earned media activities to support widespread messaging of chronic disease prevention actions, offering more local food procurement opportunities and local farmer involvement, adopting food procurement standards across all municipalities, healthcare institutions, and places where large amounts of food are purchased, improving physical locations to support breastfeeding in health care institutions, public places and worksites, and seeking grant opportunities to expand and enhance evidence based chronic disease prevention programming that supports physical activity and nutrition strategies in all sectors of the community.

Overview of Community Health Improvement Plan Strategies

The Broome County CHIP tackles the priority area of preventing chronic disease and the focus area of reducing obesity in children and adults via four main goals: 1) Reduce the percentage of children who are obese in Broome County 2) Increase breastfeeding, 3) Prevent childhood obesity through interventions in early childcare 4) Create community environments that promote and support healthy food and beverage choices as well as physical activity. These are public health approaches that mobilize a voluminous number of community partners and can reach the majority of people through multiple settings such as child care facilities, community based organizations, workplaces, schools, the community at large and healthcare facilities. Working with community partners to create sustainable

policy systems and environmental changes in these community sectors allows healthy choices to be more available, affordable, and easy for residents to naturally engage in.

Each of the four goals of the CHIP addresses a disparate population and provides the opportunity to impact the entire Broome County population concurrently. A brief overview of each goal, objective(s), improvement strategy, activities, and partners spearheading them are provided below.

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

a. Provide reduced fat WIC food packages, nutrition education, and healthy lifestyle messages to reduce the incidence and prevalence of obesity among children ages 2-4 years who participate in the WIC program. Activities include conducting nutrition counseling with participants after obtaining BMI, encouraging low fat milk consumption versus large amounts of fruit juice and other low nutrient dense and high calorie drinks, and encouraging daily physical activity with children. The Broome County Health Department WIC Program is responsible for this goal.
b. Adopt school 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. Activities include training staff and adopting a curriculum that supports *Learning in Motion,* establishing strong nutrition standards for food sold in schools, adopting walking/biking to and from school, implementing mandatory time for active recess in school wellness policies, incorporating universal breakfast as part of school learning day and adopting *Breakfast in the Classroom* for school districts with high free and reduced lunch rates. Principal partners for this goal are the Broome County School Districts, Broome Tioga BOCES Food Service, Broome Tioga BOCES Professional Services, Healthy Lifestyle Coalition and WSKG.
c. Engage primary care providers to encourage participation in the screening, prevention and treatment measures for obesity on a yearly basis as part of a comprehensive approach for the prevention of childhood overweight and obesity. Some of the activities include expanding use of EMR (Electronic Medical Record) for assessing status of pediatric BMI screening capability in the EMR, training providers in the identification, assessment and treatment protocol for childhood obesity according to the US Preventive Services Task Force [USPSTF], facilitating referrals for nutrition & physical activity and following up with providers to address implementation challenges. The supporting partners in these efforts include United Health Services and Lourdes Hospital.
d. 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. Activities include the same as listed in (c) with the addition of expanding the EMR to provide a nursing screening tool for screen time, food and vending consumption, physical activity, and intake of sugary beverages. The main partners leading these efforts are United Health Services and Lourdes Hospital.

2) Increase breastfeeding

The Broome County CHIP prioritizes working with mothers who participate in the Broome County WIC Program in order to increase the initiation and duration of breastfeeding by building enhanced support systems. This includes early breastfeeding education and promotion efforts, the initiation of a peer counseling plan, a public nurse home visit, and engagement of a hospital lactation consultant who assists with the initiation of breastfeeding as soon as possible after childbirth and who supports the duration process. In addition, both hospital systems will be conducting activities with the progressive aim of hospital designations as baby friendly hospitals. Enhanced systems also include private outpatient providers in the community adopting

breastfeeding friendly policies that support breastfeeding specifically in primary care, pediatric and obstetrical practices. Along with the Broome County Health Department, United Health Services, Lourdes Hospital, the Mothers and Babies Perinatal Network and the Southern Tier Breastfeeding Coalition collectively assist with these efforts.

3) Prevent childhood obesity through interventions in early childcare

Activities for reducing childhood obesity in early child care settings, located in high need areas of Broome County, include adopting policies designed to support breastfeeding, improve nutrition through increased participation in the Child and Adult Care Food Program (CACFP), increase structured and developmentally appropriate physical activity through training of childcare providers by a physical activity specialist, and reducing screen time by educating children and their families. The primary partners involved in achieving this goal include the Family Enrichment Network Childcare Resource and Referral Agency, United Way, and the Broome County Department of Social Services.

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

The Broome County CHIP contains several opportunities for increasing nutrition and physical activity in many sectors of the community. The first is a nutrition strategy that aims to decrease the percentage of adults ages 18 years and older who consume one or more sugary drinks per day. This goal can be achieved by conducting education presentations at schools, community sites and businesses, changing food procurement standards for beverages in municipalities and health care facilities, monitoring purchasing, sales data and purchasing practices and providing community-wide education campaigns using paid and earned media. Partners involved in this intervention include Broome County Cornell Cooperative Extension, Broome County Government Central Foods, City of Binghamton Municipality, United Way, Healthy Lifestyle Coalition, United Health Services and Lourdes Hospital.

To promote physical activity, the Broome County CHIP addresses the adoption of *Complete Streets* policies by local municipalities and revitalizes the *BC Walks* community wide walking campaign. Complete Streets was designed to allow residents to travel easily and safely, whether walking, biking or riding the bus while connecting roadways to complementary trails and bike paths that provide safe places to walk and bike. The *BC Walks* community wide walking campaign will promote the use of *Complete Streets* as a mechanism for residents to increase their physical activity within their daily activities. General activities to increase the adoption of *Complete Streets* policies for identified municipalities include providing assessment, training, technical assistance and mentorship to local municipalities. Implementation also involves collaboration with the Safe Routes to School Program and the garnering of earned media to promote these efforts. Activities to revitalize the *BC Walks* program include reestablishment of the community team, updating of the website for enrollment, promoting the program through various sectors - including schools and healthcare facilities - and garnering earned media. Partners involved in these activities include United Health Services, Broome County Planning, Binghamton Metropolitan Transportation Study, and City of Binghamton as a mentor, New York State Department of Transportation and the local media.

C. Prevent Chronic Disease: Increase access to high-quality chronic disease preventive care and management in clinical and community settings

Opportunity

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/African American 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.

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

The Broome County CHA Steering Committee representatives will provide the necessary oversight of the objectives and interventions listed in the CHIP that address chronic disease and mental health management. These representatives include United Health Services, Lourdes Hospital, Catholic Charities, Broome County Mental Health Department, Garabed A. Fattal 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 Broome County Department of Social Services Mental Health Clinic.

Current Interventions in Broome County

By way of the efforts of the previous CHA/CHIP 2010-2013, increased availability and access to evidence based chronic disease management programs, promoted by the NYSDOH, now exist in Broome County. It is still necessary; however, to build the capacity of local community based organizations and healthcare systems to address the growing need for chronic disease management interventions, especially where identified health disparities exist. Current interventions include collaboration with the Rural Health Network of South Central New York (RHNSCNY), Broome County Office for Aging and the Retired Volunteer Senior Program (RSVP) in order to increase access to and delivery of the Stamford Chronic Disease Self-Management Program (CDSMP) and Stamford Diabetes Self-Management Programs (DSMP) in all locations of Broome County. The Broome County YMCA is working to increase participation of and health care provider referrals to the Diabetes Prevention Program (DPP). Other specific strategies that currently exist include working with local community based organizations to promote activities and linkages to health care providers that assist with self and clinician referrals, fostering collaboration among traditional and non-traditional community partners in order to improve access to clinical and community preventive services, seeking partnerships with healthcare plans to

assist with coverage and promotion of the programs, training patient navigators and case managers to ensure compliance with plans of care, increasing the use of the patient centered Medicaid medical home model and coverage of preventive services in local healthcare plans, training for healthcare providers in chronic disease prevention behaviors and risk factors, expanding utilization of electronic medical records and disease management systems to assist in the coordination of care, working with school-based health centers in obesity prevention interventions, incorporating prevention agenda goals and objectives in the strategic planning and accreditation proposal processes, working with healthcare providers to establish breastfeeding-friendly practices, baby friendly hospital systems, and providing diabetes and weight management teaching day (Continuing Medical Education credits) CMEs for healthcare providers.

Potential Interventions

For consideration, some potential interventions for preventing chronic disease include providing incentives for employees and their families to access clinical and community preventive services, providing employees time off or flex-time to access preventive services in addition to being able to attend community programs aimed at disease self-management, and providing employees with comprehensive wellness programs. Specific to the healthcare sector, working with hospital systems to support policies that adopt healthy food and beverage standards, along with the use of healthy, locally grown foods in cafeterias, vending, and patient meals. In addition, providing education to clinicians and the public about coverage improvements for clinical preventive services as outlined in the Affordable Care Act such as new coverage for lactation consultant services.

Overview of Community Health Improvement Plan Strategies

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/African American 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. Both hospital systems have developed individual approaches with similar themes around the CHIP objectives. These themes include expanding case management interventions to include comprehensive admission assessment, patient care rounds, family meetings and discharge options, consistent patient education throughout the gamut of care, patient tools for chronic disease self-management, and referrals to 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). Likewise, similar themes exist for expanding the use of electronic medical records for assisting in screening, treatment, case management, and data collection. Clinical systems changes also involve educating healthcare providers, including EMTs, with the latest clinical guidelines and recommendations for chronic disease screening, treatment and management protocol in addition to employing disease management systems, expanding discharge processes that are specific to patient choice, planning for obtaining prescriptions, expanding cardiac rehab services, and utilizing telehealth home technology as well as effectively collaborating with hospital home health programs.

In addition to the clinically based interventions, the Broome County CHA Steering Committee has identified the need for transportation services and the impacts that a lack of transportation has on chronic disease management and compliance to patient care plans. To assist with providing technical support and assistance that addresses the transportation needs in Broome County, especially for those disparate populations residing in the rural areas, the Rural Health Network of South Central New York has acquired a mobility management grant to assist patients with coordination of transportation in order to obtain non-emergency medical transportation services. Mobility Management of South Central New York (MMSCNY) is a partnership of health, human service, transportation provider and transportation planning organizations. MMSCNY seeks to improve transportation access and coordination in South Central New York, with services targeted to rural communities and to populations that lack easy access to transportation. The GetThere Call Center, the principal program of MMSCNY, provides free trip planning, travel training, and transportation education services to people throughout the region and beyond. More information on this initiative can be found at: http://www.rhnscny.org/programs/btmmp

Lastly, in an effort to strengthen the infrastructure across systems to serve health disparities with multiple chronic conditions and/or mental health disorders, the Broome County CHIP incorporated the Health Home Model as an intervention. This strategy promotes the enrollment of identified Medicaid members into the Health Home model where an individualized patient centered care plan is developed based on physical, mental health and chemical dependency needs. This model provides the necessary care coordination and patient navigation services for high need/cost Medicaid recipients. Activities for this strategy include training and recruiting staff regarding Health Home, calling clients, meeting with clients, consulting with healthcare/mental health professionals, convening interdisciplinary teams by care coordinators, and making referrals to community and social support services. Partners responsible for this intervention are United Health Services and Catholic Charities.

Tables that follow:

Table 44. Opportunities for Action

Partner organizations and agencies are listed by sector for each Prevention Agenda priority area

Table 45. Community Health Improvement Plan

Details the work plan including major activities, responsible organizations, responsible individuals, process measures, and outcome measures. Performance measures and targets are also listed. The improvement strategy, its evidence base, and status as new or current is given.

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Communities	Provide safe walking environments. (CTG, BMTS, NYSDOT) Reduce slip and fall hazards in common areas of residences and public buildings. (STIC, BC UL, BC Planning) Provide information to hard to reach populations. (OFA, STIC)	Mobilize advocates to increase demand for healthy environments, food choices and improved opportunities for physical activity. (CCE, BT BOCES, CTG, SRC, BCSD, JCSD) Support use of funds for trails, complete streets, safe routes to school, active transportation infrastructure and programs and other non- motorized transportation enhancements. (CTG, NYSDOT, BMTS) Increase awareness of and demand for additional local and State parks infrastructure repairs and improvements in park operations. Increase awareness of and demand for open space protection in each community. Support pedestrian facilities with all new development and open space or other recreational facilities with all new residential development. (NYSDOT, BMTS) Encourage awareness of and demand for breastfeeding counseling/education. (BCWIC, UHS, Lourdes, M&BPN) Advocate for restriction of marketing of unhealthful products to kids. (BT BOCES, BCWIC) Advocate for restriction of marketing of infant formula. (BCWIC, UHS, Lourdes, M&BPN) Provide resources and availability of parks and trails to employers to augment worksite wellness programs. Advocate for stronger breastfeeding support at work and laws/enforcement. (BCWIC, M&BPN)	Encourage individuals and families to visit healthcare providers to receive clinical preventive services. (M&BPN , RHN, UW, OFB) Advocate for improved access to and delivery of quality clinical and community preventive services. (M&BPN , RHN, UW, OFB) Raise funds and promote awareness of clinical and community preventive services. (UW)

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Community Based Organizations	Train physical therapists to deliver the Otago Exercise Program or other equivalent programs. (YMCA, OFA, UHS, Lourdes, Independence Awareness) Conduct in-house fall risk assessments. (Independence Awareness) Provide access to exercise programs. (YMCA, UHS, Lourdes, Parks & Recréation) Train community workers in exercise programs for older adults. (YMCA, Independence Awareness,) Promote community-based programs for fall prevention. (YMCA, UHS, Lourdes, OFA) Expand access to and availability of exercise and information programs in community venues. (YMCA, UHS, Lourdes, OFA) Target fall risk in housing in disadvantaged areas.	Create linkages with local health care systems to connect patients to community preventive resources. (UHS, Lourdes) Expand public-private partnerships to implement community-based obesity preventive services. Support training and use of community health workers to provide breastfeeding support. (WIC, Lourdes, UHS, STBFC, M&BPN)	Inform people about the range of preventive services they should receive and their benefits. (UHS, Lourdes) Create linkages with local healthcare systems to connect patients to community preventive resources. (UHS, Lourdes) Support use of alternative locations to deliver preventive services. (YMCA, UHS, Lourdes) Expand public-private partnerships to implement community preventive services. (YMCA, UHS, Lourdes) Support training and use of community health workers and patient navigators. (UHS, Lourdes)

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Employers, Businesses, Unions and Work Sites	Provide training and appropriate footwear for older employees. (Independence Awareness, YMCA)	Partner with regional economic development councils and State business association for messaging on obesity prevention, including promoting access to healthy foods and increasing opportunities for physical activity. (CTG, CCE) Connect schools and hospitals in rural areas to cross-promote obesity reduction activities. (UHS, Lourdes) Engage business associations to promote/make visible and value obesity reduction. (CCE, CTG, CCP) Site businesses with access to transit, walking and bicycling facilities, and develop workplace facilities and incentives that encourage active commuting. (BMTS, NYSDOT) Require health insurance contracts to cover obesity and diabetes prevention programs. (health plans) Require health insurers to cover nutrition education, lactation counseling, and other preventive strategies during pre- and post-natal care to promote recommended gestational weight gain and breastfeeding, and to prevent maternal, infant and child obesity. (health plans)	Offer health coverage that provides employees and their families with access to preventive services with no or reduced out-of-pocket costs. Provide incentives for employees and their families to access clinical and community preventive services. (potential opportunity) Give employees time off or flextime to access preventive services and to attend community programs aimed at disease self-management. (potential opportunity) Provide employees with comprehensive wellness programs. (potential opportunity)

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
College and Universities/Academia		Conduct research to support evidence-based approaches to reducing obesity. (BU) Identify emerging best practices. (BU) Evaluate obesity prevention initiatives. (BU) Develop data to strengthen the case for return on investment in obesity reduction programs and share with policymakers. (BU) Develop information for regional economic development councils about the benefits of locally produced, minimally processed foods. Develop the economic case for active transportation at the local level. (NYSDOT, BMTS) Develop lists of model practices and resources for schools. (school wellness groups) Develop an economic benefits argument on implementing worksite wellness that is specific to New York State. Identify model practices in breastfeeding promotion among NYS employers. (STBFC, M&BPN)	Provide health care organizations and clinicians with trainings related to quality improvement and the use of health information technology to increase the use of clinical preventive services and disease management. (UHS, Lourdes) Train community volunteers to become community health workers or patient navigators. Promote the use of preventive services within their own health service provisions. (UHS, Lourdes, M&BPN, RHN) Engage in research and research translation to inform the evidence-base for chronic disease prevention and management. (BU, local health foundations).

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Government and Non-Governmental Public Health	Coordinate resources focused on fall prevention. (BCHD, UHS, Lourdes, YMCA) Increase awareness of exercise as method to maintain independence. (BCHD, YMCA, UHS, Lourdes) Provide access to exercise programs. (YMCA) Conduct outreach and media campaigns directed at targeted occupational groups. (BCHD) Promote community-based programs for fall prevention. (BCHD, YMCA, Lourdes, UHS) Target fall risk in housing in disadvantaged areas. Increase Medicare, Social Security and other benefits to cover fall prevention assessments and interventions, e.g., visual and hearing aids, lighting, non-slip flooring.	Provide technical assistance to community groups and local government wishing to create or enhance parks, playgrounds and trails as physical activity opportunities for residents, including those with disabilities. (BCHD, BMTS, NYSDOT) Provide guidance, training and support to communities to have skills to increase access to physical activity and nutrition. (BT BOCES, CCE , BCHD) Promote opportunities for availability of healthy foods.(BT BOCES, CCE , RHN, F&HN, OFA, BCHD) Use social media to promote awareness of key obesity prevention strategies/practices, including a focus on populations affected by racial, ethnic, educational attainment and economic disparities. (BCHD) Increase awareness of obesity as a risk factor for chronic disease. (Lourdes, UHS, BCHD) Educate lawmakers about the need for increased prevention funding. (BCHD) Share information with policymakers about benefits of promoting healthy local foods. (BCHD) Dedicate funds for trails, complete streets, safe routes to school and active transportation infrastructure and programs. (local & state govt.) Increase State parks infrastructure repairs and improved park operations. (local & state govt.) Collaborate with Child and Adult Care Food Program (CACFP) and WIC to promote breastfeeding-friendly early childcare centers. (BCHD)	Increase delivery of preventive services by Medicaid and other public insurance program providers. (BCHD) Improve monitoring capacity for quality and performance of recommended clinical preventive services statewide and provide resources to improve monitoring capacity at the local level. (BCHD) Educate clinicians and the public about coverage improvements for clinical preventive services as outlined in the Affordable Care Act. (BCHD) Support adoption of certified electronic health records that meet federal "meaningful use" criteria. (BCHD) Expand use of patient-centered medical home models. (Lourdes, UHS) Identify high-priority clinical and community preventive services and test innovative strategies. (BCHD) Foster collaboration among traditional and non-traditional community partners to improve access to clinical and community preventive services. (BCHD)

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Government and Non-Governmental Public Health		Recognize schools and daycares that have policies/practices that promote obesity prevention. (FEN, M&BPN, BCHD) Educate lawmakers about low compliance of schools with physical education standards and the need to increase monitoring, evaluation and enforcement. (BCHD) Encourage the community to support implementation and compliance with Office of Children and Family Services (OCFS) new regulations affecting child daycare centers and homes. (BCHD) Push for improved compliance with physical education requirements. (BCHD) Develop training for allied health professionals on obesity screening, prevention and referrals. (BCHD) Create social marketing messages to promote breastfeeding education as the norm. (BCHD, WIC, STBFC) Advocate for insurance coverage for obesity and diabetes prevention programs. (BCHD) Work with the NYS Council on Food Policy to develop, promote and enforce food procurement guidelines for all State agencies. (BCHD, RHN, F&HN) Help identify models for best practices for worksite wellness at small and medium businesses/worksites. (BCHD) Encourage participation in online tools such as the "Fit-Friendly" programs. Support establishment of obesity prevention coverage for public and private insurance. (BCHD) Provide private insurance and Medicaid incentives for births in Baby-Friendly Hospitals.	

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Other Government Agencies	Increase awareness of exercise as method to maintain independence for older adults. (YMCA, Independence Awareness, Lourdes, UHS, OFA) Provide access to exercise programs. (YMCA, Independence Awareness, Lourdes, UHS, OFA) Reduce slip and fall hazards in common areas of residences and public buildings. (local planning and housing) Assess and change building codes to include elimination of fall risks. (local housing and planning) Increase access to public transportation through subsidy. (NYSDOT, BMTS) Target fall risk in housing in disadvantaged areas. (local housing and planning)	Advocate for nutrition education in high-needs area by local dietetics clubs/associations. (STDA) Develop standards for healthy eating and physical activity for individuals in group homes and adult homes. (BCHD) Assist in the development of nutrition education standards. Support education opportunities for school food-service workers on nutrition and wellness. Assist in the development of food procurement policies. (BT BOCES)	Promote the use of preventive services within their own health service networks. (healthcare plans) Expand the use of community health workers and patient navigators. (healthcare plans) Adopt a "health in all policies" approach to regulation and policy development and implementation. (healthcare plans) Revise regulations to allow reimbursement for services provided by non-licensed professionals who receive formal training and certification in the delivery of preventive services (e.g., community health workers, lactation consultants). (healthcare plans) Incorporate Prevention Agenda goals and objectives in county health planning initiatives. (BCHD)
Policy makers and Elected Officials	Improve walkability and safety in community and public spaces. (BMTS, DOT, municipal planning) Assess and change building codes to include elimination of fall risks. (BMTS, DOT, municipal planning)	Strengthen enforcement and investigation of motor vehicle traffic violations that endanger pedestrians and bicyclists. (law enforcement) Implement measures to preserve green space equitably, especially throughout urban neighborhoods. (municipal planning) Increase local and State parks infrastructure repairs and improved park operations. (municipal planning, Parks & Recreation) Expand providers' awareness and knowledge of standards for obesity screening and prevention. Educate and advocate for restrictions on marketing and distribution of baby formula "gifts" through healthcare providers and hospitals. (BCHD)	Promote awareness of and demand for clinical and community preventive services. (UHS, Lourdes, BCHD) Support adequate funding for evidence-based projects focusing on increasing awareness of and access to clinical and community preventive services. (UHS, Lourdes, BCHD) Support adequate government reimbursement for preventive services and expanded access to insurance coverage that includes preventive care benefits.(UHS, Lourdes, BCHD) Support a "health in all policies" approach to legislation. (BCHD, Lourdes, UHS) Participate in/lend support to local community initiatives that increase access to high-quality chronic disease prevention and management services. (BCHD)

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Healthcare providers & Healthcare Insurers: Healthcare Delivery System	Train community workers in evidence-based intervention programs for older adults such as Tai Chi: Moving for Better Balance, Stepping On, A Matter of Balance, Otago Exercise Program, and other equivalent programs. (BCHD, Independence Awareness, YMCA) Provide screening for older adults using Timed Up and Go and Risk Assessment questionnaires. (YMCA, Independence Awareness) Provide referrals to physical and occupational therapy. (Lourdes, UHS, YMCA) Integrate exercise and fall prevention into physical therapy. (Lourdes, UHS) Promote the use of evidence-based intervention programs for healthcare providers such as the Stopping Elderly Accidents, Deaths, and Injuries (STEADI) toolkit. (BCHD, UHS, Lourdes, YMCA, Independence Awareness)	Establish or enhance reimbursement and incentive models to increase delivery of high-quality chronic disease prevention and management services. (healthcare plans) Offer recommended clinical preventive services and connect patients to community-based preventive service resources. (BCHD) Incorporate Prevention Agenda goals and objectives into hospital Community Service Plans, and coordinate implementation with local health departments and other community partners. (BCHD) Adopt and use certified electronic health records, especially those with clinical decision supports and registry functionality. Send reminders to patients for preventive and follow-up care, and identify community resources available to patients to support disease self-management. (Lourdes, UHS) Adopt medical home or team-based care models. (Lourdes, UHS) Create linkages with and connect patients to community preventive resources. (Lourdes, UHS) Provide feedback to clinicians around clinical benchmarks and incentivize quality improvement efforts. (BCHD, Lourdes, UHS) Reduce or eliminate out-of-pocket costs for clinical and community preventive services. Educate and encourage enrollees to access clinical and community preventive services. Coordinate with clinicians to establish and implement patient reminder systems for preventive and follow-up care. (Lourdes, UHS)	Adopt hospital policies to support use of healthy, locally grown foods in cafeteria and patient meals. (UHS, Lourdes) Adopt healthy meal and beverage standards for meals sold and served in hospitals. (UHS, Lourdes) Set example for community through breastfeeding-friendly hospitals and practices. (Lourdes, UHS) Increase the number of Baby-Friendly Hospitals. (Lourdes, UHS) Promote preventive interventions for obesity in pre- and post-natal care .(Lourdes, UHS) Assist with referrals to community resources. (BCHD, Lourdes, UHS) Conduct Continuing Medical Education (CME) programs for health professionals, including programs on diet, exercise, stress, coping, obesity and disabilities. Offer information regarding availability of parks and trails in discussions with patients seeking free activities close to home. (UHS, Lourdes) Support school-based health centers in obesity prevention interventions. (UHS) Facilitate referrals for wellness services. (UHS, Lourdes)

OPPORTUNITIES FOR ACTION			
Sector	**Fall Prevention**	**Preventing Chronic Disease/Obesity**	**Chronic Disease Management**
Media	Use the media to promote independence among older adults through exercise, including promotion of classes and activities that reduce fall risks. (BCHD, YMCA, OFA) Conduct outreach and media campaigns directed at targeted occupational groups. Expand access to and availability of exercise and information programs in community venues. (OFA, BCHD, YMCA, Lourdes, UHS, Falls Prevention Workgroup) Raise awareness of programs, problems and solutions. (Independence Awareness, YMCA, OFA, BCHD, Lourdes, UHS, Falls Prevention Workgroup)	Use public service announcements to promote healthy eating, physical activity and breastfeeding. Increase the time allotted for programming that supports disease prevention. Help community organizations develop communication strategies to promote disease prevention and breastfeeding. Increase the time allotted for programming that supports breastfeeding. Conduct breastfeeding promotion/obesity prevention media campaigns. Create public service announcements and other programs that show people with disabilities included in public health activities as well as in healthy eating and physical activity messages.	
Philanthropy		Fund training programs for education and childcare professionals on obesity interventions and related regulations. (local foundations, Klee Foundation) Provide resources to communities for obesity prevention interventions. (local foundations, United Way) Support research efforts aimed at informing the evidence base for obesity prevention. (local foundations, United Way)	

ABBREVIATION - ACRONYM	ORGANIZATION/PARTNER
BMTS	Binghamton Metropolitan Transportation Study
BU	Binghamton University
BCHD	Broome County Health Department
OFA	Broome County Office for Aging
CP	Broome County Planning Department
BCSD	Broome County School Districts
BCUL	Broome County Urban League
BCWIC	Broome County Women, Infants and Children
BT-BOCES	Broome Tioga Board of Cooperative Educational Services
CTG	Community Transformation Grant
CCG	Comprehensive Cancer Grant
CCE	Cornel Cooperative Extension of The Southern Tier
F&HN	Food and Health Network
IA	Independence Awareness
M&BPN	Mothers and Babies Perinatal Network
NYSDOT	New York State Department Of Transportation
Lourdes	Our Lady of Lourdes Memorial Hospital
RHN	Rural Health Network of The Southern Tier
SRC	Sodium Reduction in Communities Project Grant
STBC	Southern Tier Breastfeeding Coalition
STIC	Southern Tier Independence Center
UHS	United Health Services
UW	United Way of Broome County

Table 45. The Community Health Improvement Plan (CHIP) for the Broome County Community Health Assessment 2013-2017

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, 2017, 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 **☑ Current ☐ New**	**BASELINE:**	2013: 244/10,000 (2008 SPARCS)		
	ANNUAL TARGET:	2014: 239/10,000 2015: 234/10,000 2016:229/10,000		
	2017 TARGET:	2017: 224/10,000		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**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 *Role: Coordinate workgroup, oversee implementation of falls prevention work plan*	***Systems Change:*** Implementation of fall risk assessment practice in health care 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 *Role: Lead agency, provide resources & technical assistance, assist with data collection*		
	Lourdes Hospital - Home Health - Physical Therapy - Primary Care	Lourdes Hospital Department Representatives *Role: Oversee & implement falls prevention work plan within the organization*		
	United Health Services Hospitals - In Balance - Physical Therapy	United Health Services Fall Prevention Representative *Role: Oversee & implement falls prevention work plan within the organization*		

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, 2017, 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/homeandrecreationalsafety/Falls/steadi/index.html			
PERFORMANCE MEASURE (source):	Number of provider sites screening older adults using evidence-based Fall Risk Assessments			
	BASELINE:	14 provider sites		
INTERVENTION STATUS ☑ **Current** ☐ **New**	**ANNUAL TARGET:**	Increase 2 provider sites per year to 24 total sites		
	2017 TARGET:	24 provider sites		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Common activities: (1) Work with HIT to implement/modify EMR to capture risk assessment and fall plan of care (2) Follow up monthly with provider sites to assess implementation process (QA) ***Lourdes:*** (1) Establish baseline data in year 1 (2) Identify internal trends: - Number of fall risk assessments - Number of fall plans of care (3) Work with community partners to identify strategies to increase the # of patients referred to community programs ***UHS:*** (1) Expand fall risk assessments to 3 surrounding counties—Tioga, Chenango, Delaware	Broome County Office For Aging	Broome County Office For Aging Director and Wellness Coordinator *Role: Coordinate workgroup, oversee implementation of falls prevention work plan*	Number of hospital primary care sites that have received training Number of healthcare providers in primary care sites trained Number of Medicare patients evaluated per unit time frame Number of clinical risk assessments performed per unit time frame Number of patients with fall prevention plan of care per unit time frame Number of referrals to - physical therapy programs - community programs	***Systems Change:*** Implementation of fall risk assessment practice in health care setting , as determined by stakeholders, e.g., STEADI, Otago Number of provider sites screening older adults using evidence-based Fall Risk Assessments 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	Broome County Health Department Public Health Director, Supervising Public Health Educator and Health Program Specialist *Role: Lead agency, provide resources & technical assistance, assist with data collection*		
	Lourdes Hospital - Home Health - Physical Therapy - Primary Care	Lourdes Hospital Department Representatives *Role: Oversee & implement falls prevention work plan within the organization*		
	United Health Services Hospitals - In Balance - Physical Therapy	United Health Services Falls Prevention Representative *Role: Oversee & implement falls prevention work plan within the organization*		

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, 2017, 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 **☐ Current ☑ New**	**BASELINE:**	0		
	ANNUAL TARGET:	1 hospital based program per year		
	2017 TARGET:	2 hospital based programs		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**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	Lourdes: Appropriate Department Representative *Role: Oversee implementation of falls prevention work plan in respective departments*	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
	United Health Services Hospitals - In Balance - Physical Therapy	United Health Services Fall Prevention Team *Role: Oversee implementation of falls prevention work plan in respective departments*		

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, 2017, 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 **☑ Current ☐ New**	**BASELINE:**	6 programs		
	ANNUAL TARGET:	Increase 2 programs per year for 5 years		
	2017 TARGET:	16 programs total		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**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	Director and Wellness Coordinator *Role: Coordinate workgroup, oversee implementation of falls prevention work plan*	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
	Broome County Health Department	Public Health Director, Supervising Public Health Educator and Health Program Specialist *Role: Lead agency, provide resources & technical assistance, assist with data collection*		
	Lourdes Hospital - Home Health - Physical Therapy - Primary Care	Lourdes Hospital Department Representatives *Role: Oversee & implement falls prevention work plan within the organization*		
	United Health Services - In Balance - Physical Therapy	United Health Services Fall Prevention Team *Role: Oversee & implement falls prevention work plan within the organization*		
	YMCA	YMCA Tai Chi instructor and Chronic Disease Director *Role: Oversee & implement falls prevention work plan within the organization*		
	Independence Awareness	Independence Awareness Stepping On Master Trainers *Role: Implement falls prevention work plan*		

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, 2017, 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 **☑Current ☐ New**	**BASELINE:**	14.6%		
	ANNUAL TARGET:	2013; 14.4% 2014; 14.3; 2015 14.18; 2016 14.04; 2017 13.9%		
	2017 TARGET:	13.9%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Continue to advocate for a decreased fat WIC food package 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 Height, weight and BMIs measured for children ages 2-4 with nutrition counseling provided Encourage increased milk consumption and decreased fruit juice and other empty calorie liquid consumption to 4 oz.	Broome County Health Department WIC Program	Broome County Health Department WIC Supervisor and Nutritionists *Role: Oversee & implement WIC breastfeeding work plan*	Number of WIC participants receiving reduced fat WIC food package Number of WIC participants receiving general nutrition education and active learning information Number of WIC participants measured for height weight and BMI with associated counseling based on BMI outcome Number of WIC participants educated on importance of milk consumption and decreased consumption of sugary drinks and excessive fruit juice	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] Percentage of WIC children aged 2-4 years who are obese [defined as having an age and gender specific BMI at ≥95th percentile]

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, 2017, 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 ☑ Current ☐ New	**BASELINE:**	63% (2012 QARR-Central Region)		
	ANNUAL TARGET:	1.3% per year		
	2017 TARGET:	69.5%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**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 *Role: Oversee implementation of BMI screening intervention within organization*	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 *Role: Oversee implementation of BMI screening intervention within organization*		

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, 2017, 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 **☑ Current ☐ New**	**BASELINE:**	18.6%		
	ANNUAL TARGET:	1% per year		
	2017 TARGET:	17.7%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
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 ***Universal Breakfast:*** Incorporate Universal Breakfast (UB) as part of school learning time ***Breakfast in the Classroom:*** Adopt Breakfast in the Classroom (BIC) for school districts with high free and reduced lunch rates ***Learning in Motion / BC Walks:*** Work with school leadership to ensure increased opportunities for physical activity outside of physical education classes ***Safe Routes to Schools:*** Education activities and practices adopted in school wellness policies	Broome County School Districts	School District Superintendents *Role: Implement policies, provide administrative support for programs*	# 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 # school districts with wellness policies that specify support for and # number of students impacted: (1) Healthier food & beverage options (2) Safe Routes to Schools # schools promoting access to free drinking water 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)	***Systems Change:*** Number of school districts that adopt healthier food and beverage options in school wellness policies ***Systems Change:*** Number of school districts whose school wellness policies address mandatory time for active recess for grades K-5 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]
	Broome Tioga BOCES Food Services	BT-BOCES Food Service Director *Role: Oversee implementation of Breakfast in the Classroom (BIC) & Universal Breakfast (UB) programs*		
	Broome Tioga BOCES Professional Development	Professional Development Coordinator *Role: Oversee implementation of Learning in Motion*		
	Broome County School Districts	School Health Advisory Council Leader / Wellness Coordinator *Role: Develop & implement wellness policies*		
	Broome County Health Department	Broome County Public Health Director/ Supervising Public Health Educator *Role: Facilitator, provide resources & technical assistance as needed*		

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, 2017, 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 health care 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 **☐ Current ☑ 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		
	2017 TARGET:	74.4%-Nutrition 70.4%-Physical Activity		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**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	Hospital Administration/Lead Physicians/Lead Health System Coordinators *Role: Provide leadership on initiative within organization & administrative support*	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
	Broome County Department of Social Services	Assistance Programs, Medicaid Representative *Role: Coordinate data collection*		
	Medicaid Managed Care Organizations	Medicaid Managed Care Organization Representatives *Role: Provide data for outcomes assessment*		

PRIORITY AREA:	***PREVENT CHRONIC DISEASE***			
FOCUS AREA:	**Reduce Obesity in Children and Adults**			
GOAL 2:	Increase breastfeeding			
OBJECTIVE 2.1:	By December 31, 2017, 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 **☑ Current ☐ New**	**BASELINE:**	68%		
	ANNUAL TARGET:	1% per year		
	2017 TARGET:	71.4%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Train WIC and MCH staff to be Certified Lactation Consultants (CLCs) All WIC prenatal patients will be offered breastfeeding peer counseling All WIC breastfeeding mothers will receive one contact by peer counselor within one week of delivery Monthly calls to WIC breastfeeding mothers and a home visit as needed will be made Educate the fathers of WIC children on benefits of breastfeeding Provide free breastfeeding classes once a month in evenings to WIC prenatal patients Provide WIC breastfeeding package to WIC mothers	Broome County WIC Program	WIC Nutrition Services Director *Role: Lead for breastfeeding initiative* Breastfeeding Coordinator *Role: Oversees breastfeeding peer counselors; coordinates activities* Breastfeeding Peer Counselors *Role: Provide breastfeeding support*	Number of WIC infants breastfed Percentage of women choosing to breastfeed Number of women getting lactation consult Reduction in formula use Percentage of WIC prenatal clients requesting a peer counselor Number of prenatal clients attending WIC breastfeeding class Number of prenatal clients attending hospital breastfeeding class	Breastfeeding initiation Percentage of women on WIC who consider breastfeeding in the prenatal phase Number of women who return to work/school who continue to breastfeed Number of women who fully breastfeed (no formula) Number of infants who get 1-hour of skin-to-skin contact in the hospital
	Broome County Maternal Child Health Division	Director of Maternal Child Health & Development *Role: Coordinates public health nurse home visits* Public Health Nurses (PHN) *Role: PHN lactation counselors provide breastfeeding support*		
	Lourdes Hospital United Health Services	Lactation Consultants *Role: Provide lactation consult prior to hospital discharge*		

PRIORITY AREA:	***PREVENT CHRONIC DISEASE***			
FOCUS AREA:	**Reduce Obesity in Children and Adults**			
GOAL 2:	Increase breastfeeding			
OBJECTIVE 2.2:	By December 31, 2017, 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 **☑ Current ☐ 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		
	2017 TARGET:	27.5%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Public Health Nurse home visit at 1 month, 2 months Peer counselor follow up at 1 week, 3 weeks, 2 months, 3 months, 6 months Increase number of MCH nurses and WIC staff to be Certified Lactation Counselors Public Health Nurses take every phone call to assist breastfeeding mothers Provide breast pumps to working mothers in WIC Lourdes Hospital & UHS will strive to identify women appropriate for referral to WIC and/or other resources related to breastfeeding	Broome County WIC Program	WIC Nutrition Services Director *Role: Lead for breastfeeding initiative* Breastfeeding Coordinator *Role: Oversees breastfeeding peer counselors; coordinates activities* Breastfeeding Peer Counselors *Role: Provide breastfeeding support*	Number of women who breastfeed at 3 months, 6 months, 12 months Number of women using breast pumps – returning to work Within 2 weeks of infants birth breastfeeding contact by WIC staff and PHN Number of hospital breastfeeding contacts before discharge Number of nurses trained in breastfeeding	Percentage of WIC women continuing to breastfeed for six months Number of fully breastfeeding women (no formula) Number of infants who get 1-hour of skin-to-skin contact in the hospital
	Broome County Maternal Child Health Division	Director of Maternal Child Health & Development *Role: Coordinates public health nurse home visits* Public Health Nurses (PHN) *Role: PHN lactation counselors provide breastfeeding support*		
	United Health Services Lourdes Hospital	Appropriate Department Representative *Role: Provide administrative support for referrals to programs & resources*		

PRIORITY AREA:	***PREVENT CHRONIC DISEASE***			
FOCUS AREA:	**Reduce Obesity in Children and Adults**			
GOAL 2:	Increase breastfeeding			
OBJECTIVE 3:	By December 31, 2017, 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 ☐ **Current** ☑ **New**	**BASELINE:**	Zero outpatient providers and hospitals with breastfeeding-friendly policies		
	ANNUAL TARGET:	5% per year		
	2017 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)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Submit letter of intent to NYSDOH to participate in GREAT BEGINNINGS Train health care provider staff Create local breastfeeding resource guide for health care providers Garner earned media to celebrate and promote healthcare provider support for breastfeeding friendly and baby friendly policies Develop, adopt, and implement policies ***Lourdes:*** As part of an Ascension Health initiative, by 2015 begin the "Baby Friendly Hospital Initiative," with the target to be designated a "Baby Friendly Hospital" by 2017	United Health Services Lourdes Hospital	Appropriate hospital leadership & medical staff leadership *Role: Oversee & coordinate efforts within respective organization to meet evaluation criteria, provide administrative support for application*	Progress toward meeting evaluation criteria for facilities seeking designation Number of hospitals participating in baby friendly process Number of primary care, pediatric, and obstetric sites that are participating in baby-friendly process	***Systems Change:*** Hospital system receives designation as baby friendly / breastfeeding friendly institutions Percentage of infants who were ever breastfed Percentage of infants exclusively breastfed (no formula) Breastfeeding duration rate
	Broome County Health Department	Broome County Public Health Director/ Supervising Public Health Educator *Role: Lead agency, provide resources & technical assistance*		
	Southern Tier Breastfeeding Coalition	Southern Tier Breastfeeding Coalition Leader *Role: Create breastfeeding resource guide for health care providers*		
	Mothers and Babies Perinatal Network	Breastfeeding Liaison *Role: Provide education to healthcare providers, garner earned media, assist with policy development*		

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, 2017, 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], Child Care Referrals & Resource [CCR&R] data, Primary Care data)			
INTERVENTION STATUS **☑ Current ☐ New**	**BASELINE:**	0		
	ANNUAL TARGET:	5 early child care settings per year		
	2017 TARGET:	15		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Work with Childcare Resource and Referral Agency (FEN) to recruit & train physical activity (PA) specialist PA Specialist to deliver developmentally appropriate physical activity curricula to childcare providers Collect data and provide technical assistance to childcare providers Assess # of legally exempt providers not participating in CACFP & identify reasons Work with DSS & FEN to provide public meeting about proposing county-wide policy requiring legally exempt providers caring for subsidized children ≥30 hrs./wk. to participate in CACFP Promote benefits of participating in CACFP	Family Enrichment Network (FEN) Child Resource & referral (CCR&R)	Family Enrichment Network Nutrition Program Director/CCR&R *Role: Coordinate enrollment of childcare centers & family providers in CACFP, provide administrative support for PA specialist, provide technical assistance to childcare providers, data collection* Physical Activity Specialist *Role: Deliver curriculum for developmentally appropriate physical activity*	Number of childcare centers & providers implementing developmentally appropriate physical activity to children Minutes of developmentally appropriate physical activity delivered to children Number of legally exempt childcare providers participating in CACFP Percentage of children age 2-5 with ≤ 2 hours of TV viewing per day Percentage of infants who are breastfed in childcare settings Number of childcare staff trained in nutrition, breastfeeding, physical activity & limits on screen time	***Systems Change:*** County-wide policy requiring legally exempt providers caring for subsidized children 30 or more hours a week to participate in CACFP Percentage of children (age 2-5) who are obese Percentage of children (age 2-5) who are overweight Percentage of children (age 2-5) who are at a healthy weight
	Broome County Health Department	Supervising Public Health Educators, Public Health Representative *Role: Lead agency, monitor project implementation, provide leadership & technical assistance*		
	Broome County Department of Social Services	DSS Deputy Director of Family Services *Role: Collaboration with partner agencies to develop policy change*		

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, 2017, 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 BRFSS)			
INTERVENTION STATUS ☑ Current ☐ New	**BASELINE:**	23%: (CTG Population Survey)		
	ANNUAL TARGET:	1% per year		
	2017 TARGET:	21.8%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Conduct presentations at schools, community sites & businesses County & municipality to change procurement for beverages Provide technical assistance to organizations, municipalities and schools wanting to make changes When feasible, collect purchasing or sales data for beverages before changes are made Run awareness raising campaign to increase knowledge and promote healthy beverages Garner earned media on sugar content of many beverages & promoting healthy beverages Monitor changes made in beverage procurement and purchasing practices	Broome County Health Department	Supervising Public Health Educator and Public Health Representative *Role: Lead agency, coordinate project activities, provide technical assistance*	Number of buildings that change procurement & vending policies Content of beverages available for sale [documentation of changes made] Sales of sugary drinks & healthy beverages [changes in sales] Number of community based organizations, public sporting venues, education institutions and/or businesses that: - adopt food procurement standards - healthy vending policies - offer healthy beverage and food options	***Systems Change:*** County & municipal governments change procurement policies to reduce/eliminate purchase of sugary beverages Schools adopt vending policies that limit sugary beverages; schools amend wellness policies to discourage sugary beverages & encourage healthy options Percentage of adults who support policies restricting or banning sales of sugary drinks Prevalence of daily sugary-drink consumption among adults & children Sugary drink perceptions & attitudes
	Broome County Cornell Cooperative Extension	Cornell Cooperative Educators *Role: Conduct educational presentations*		
	Broome County Government City of Binghamton Municipality	Purchasing Directors *Role: Implement changes in procurement guidelines for beverages*		
	Broome County Central Foods	Central Foods Director *Role: Initiate changes in procurement guidelines for beverages*		
	Broome County School Districts	School Health Advisory Council Wellness Team Leaders *Role: Provide leadership for policy changes related to sugary beverages*		
	Lourdes Hospital United Health Services	Hospital Administrators *Role: Support enhancement of consumer awareness of appropriate choices*		

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, 2017, 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 BRFSS; CTG Population Survey)			
INTERVENTION STATUS **☑ Current ☐ New**	**BASELINE:**	73.7%		
	ANNUAL TARGET:	1% per year		
	2017 TARGET:	78.7%		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Promote physical activity through revitalized BC Walks Program Design community-wide BC Walks campaign Update / activate 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	Supervising Public Health Educator and Public Health Representative *Role: Lead agency, coordinate project activities, provide technical assistance*	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
	United Health Services Hospital Lourdes Hospital	Stay Healthy Center Director Designated Hospital Liaison *Role: Support consumer awareness of community initiative*		
	WSKG	Community Health Outreach Director *Role: Garner media for consumer awareness of community initiative*		
	Binghamton University	Registered Dietician/Community Engagement Director *Role: Promote campaign on BU campus*		
	Binghamton Metropolitan Transportation Study	Planner/Analyst *Role: Provide technical assistance related to pedestrian issues*		
	Broome Tioga BOCES Broome County School Districts	School Wellness Team Leader *Role: Engage children in BC Walks JR, promote campaign in school community*		

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, 2017, 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 ☑ **Current** ☐ **New**	**BASELINE:**	1 municipality with Complete Streets policies		
	ANNUAL TARGET:	1 municipality per year		
	2017 TARGET:	4 municipalities with Complete Streets policies		

MAJOR ACTIVITIES	RESPONSIBLE ORGANIZATION(S)	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	Public Health Director/Supervising Public Health Educator *Role: Oversee CS initiative, provide technical assistance*	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
	City of Binghamton	Mayor of Binghamton, Director of Planning, City Planners *Role: Serve as model municipality & mentor/support other municipalities*		
	Broome County Planning Department	County Planners *Role: provide technical assistance to municipalities for CS policies*		
	Binghamton Metropolitan Transportation Study	Planners/ Analysts *Role: Provide technical assistance to municipalities for CS policies*		
	New York State Department of Transportation (NYSDOT) Region 9	NYSDOT Planners, Safe Routes to School Coordinator *Role: Provide technical assistance to municipalities for CS policies*		
	Healthy Lifestyle Coalition	Healthy Lifestyles Coalition Director *Role: Leverage funds for CS initiative on the north side of Binghamton*		

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, 2017, 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 BRFSS; local hospital indicators - diabetes screening among adults age 45+)			
INTERVENTION STATUS ☐ Current ☑ New	**BASELINE:**	58.8% (NYS BRFSS 2011)		
	ANNUAL TARGET:	2% per year		
	2017 TARGET:	Increase baseline rate by 10% for diabetes and 5% for cardiovascular disease screenings		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Primary care network offices to work closely with the diabetes centers to implement standards of medical care in diabetes UHS disease management system to track referrals to Stay Healthy Center [provide follow-up phone contact from nurses to manage chronic disease] Both hospitals to provide diabetes individual education & group self-management classes Use media & health communications to build awareness & demand Identify underserved groups to improve access for preventive services Provide training for health professionals in patient-centered care, disability literacy & cultural competency Work with HIT to implement/modify EMR to include reminder system for screening	United Health Services (UHS)	UHS Designee *Role: Oversee implementation of screening initiative within respective organization*	Number of patients identified as having diabetes or pre-diabetes who receive follow-up by Stay Healthy Center Number & percentage of adults (age 45+) diagnosed with pre-diabetes or type 2 diabetes who are referred to diabetes self-management training (DSMT) Number of rural residents participating in chronic disease self-management Number of patients receiving diabetes education	Screening rate for diabetes and pre-diabetes among adults age 45+
	Lourdes Hospital	Lourdes Designee *Role: Oversee implementation of screening initiative within respective organization*		
	Rural Health Network (RHN)	RHN Community Services Director *Role: Assist rural population with chronic disease management services including transportation management services*		

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, 2017, increase the percentage of health plan members, ages 18-85 years, with hypertension who have controlled their blood pressure (below 140/90): • By 7% for residents enrolled in Medicaid Managed Care • By 15% among Black/African American adults enrolled in Medicaid Managed Care			
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 hypertension			
EVIDENCE-BASE (source):	The Community Guide Cardiovascular Disease Prevention and Control: Clinical Decision-Support Systems (CDSS) http://www.health.ny.gov/statistics/prevention/injury_prevention/information_for_action/docs/2011-1_ifa_report.pdf			
PERFORMANCE MEASURE (source):	Percentage of health plan members, ages 18-85 years, with hypertension who have controlled their blood pressure (< 140/90) (SOURCE: NYS QARR; PA Tracking Indicator; Health Disparities Indicator, local hospital indicators)			
INTERVENTION STATUS **☐ Current ☑ New**	**BASELINE:**	66% for Medicaid Managed Care (2012 central region) 59% among Black/African American adults enrolled in Medicaid Managed Care (2012 central region)		
	ANNUAL TARGET:	By 1.4% per year for residents enrolled in Medicaid Managed Care By 3% per year among Black/African American adults enrolled in Medicaid Managed Care		
	2017 TARGET:	By 71% for residents enrolled in Medicaid Managed Care By 68% among Black/African American adults enrolled in Medicaid Managed Care		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Increase health care coverage for patients Increase access to medication Identify other barriers to care/management and BP control Develop system for patient follow-up of health status and medication use Address lack of transportation issues Psychosocial barriers to compliance Monitor patients comprehension of discharge instructions Provide training for health professionals in patient-centered care	United Health Services (UHS)	UHS Designee *Role: Oversee implementation of screening initiative within respective organization*	Number/percentage of adults with hypertension whose blood pressure is controlled (< 140/90) Number/percentage of Black/African American adults with hypertension whose blood pressure is controlled (< 140/90) Number/percentage of patients receiving education related to: - hypertension - weight loss - medication compliance Evaluation of rural disease management program including barriers/issues & effectiveness of strategies used	Percentage of health plan members, ages 18-85 years, with hypertension who have controlled their blood pressure (< 140/90) - among Medicaid Managed Care - among Black/African American adults
	Lourdes Hospital	Lourdes Designee *Role: Oversee implementation of screening initiative within respective organization*		
	Rural Health Network (RHN)	RHN Community Services Director *Role: Assist rural population with chronic disease management services including transportation management services*		

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, 2017, 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 **☐ Current ☑ New**	**BASELINE:**	(1) 15.5 per 10,000		
	ANNUAL TARGET:	(1) 2% per year		
	2017 TARGET:	(1) 14 per 10,000		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Lourdes: (1) Expand case management interventions to include comprehensive admission assessment, patient care rounds, family meetings and discharge options (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 (3) Monthly heart failure meetings (4) Consistent client education for self-care at all levels. ***UHS:*** (1) Implementation of electronic medical record to facilitate early intervention & best practice measures (2) Meet Silver Six Award for heart failure (3) EMT education & pre-hospital EKGs (4) Expand cardiac rehab services (5) Evaluate outcome tracking (BMI, smoking, BP, 6-minute walk test) (6) Collaborate with UHS Health Home	United Health Services (UHS)	UHS Designee *Role: Oversee implementation of screening initiative within respective organization*	Percentage of members, ages 18-75 years, with a cardiovascular condition, who had at least one cholesterol screening test during the measurement year 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 Percentage of adults with a cardiovascular condition who have had cholesterol checked in the last year {BRFSS] Evaluation of rural disease management program including barriers/issues & effectiveness of strategies used	Age-adjusted hospitalization rate for heart attacks [SPARCS]
	Lourdes Hospital	Lourdes Designee *Role: Oversee implementation of screening initiative within respective organization*		
	Rural Health Network (RHN)	RHN Community Services Director *Role: Assist rural population with chronic disease management services including transportation management services*		

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 #1.2c:	By December 31, 2017, increase the percentage of adult Medicaid Managed Care plan members with diabetes whose blood glucose is in good control (A1c < 8%) • By 7% for residents enrolled in Medicaid Managed Care • By 10% for Black/African American adults enrolled in Medicaid Managed Care			
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):	Comprehensive Diabetes Care - The Community Guide Diabetes Prevention and Control: Case Management Interventions to Improve Glycemic Control The Community Guide Diabetes Prevention and Control: Disease Management Programs; IFA #2012-1			
PERFORMANCE MEASURE (source):	Percentage of adult Medicaid Managed Care plan members with diabetes whose blood glucose is in good control (A1c < 8%) (SOURCE: NYS QARR; PA Tracking Indicator; Health Disparities Indicator, local hospital indicators)			
INTERVENTION STATUS **☐ Current ☑ New**	**BASELINE:**	85%		
	ANNUAL TARGET:	By 1.4% per year for residents enrolled in Medicaid Managed Care By 2% per year for Black/African American adults enrolled in Medicaid Managed Care		
	2017 TARGET:	44% overall; Black/African American adults enrolled in MMC TBD		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Lourdes: (1) Provide interactive tools and newsletters for disease management (2) Annual diabetes teaching day (3) Lourdes Diabetes Center to work closely with 16 outpatient sites & nearly 90 healthcare providers ***UHS:*** (1) Disease management system that refers patients with diabetes to the Stay Healthy Center (2) UHS provides physician consultation, inpatient/outpatient management for diabetes (3) UHS provides inpatient/outpatient diabetes education for individuals, group self-management classes, support group	Lourdes Hospital	Lourdes Designee *Role: Oversee implementation of disease management initiative within respective organization*	Number/percentage of patients referred for diabetes education Number/percentage of patients receiving education related to: - diabetes - weight loss - medication compliance Evaluation of rural disease management program including barriers/issues & effectiveness of strategies used	Percentage of adult Medicaid Managed Care plan members with diabetes whose blood glucose is in good control (A1c<8%)
	United Health Services (UHS)	UHS Designee *Role: Oversee implementation of screening initiative within respective organization*		
	Rural Health Network (RHN)	RHN Community Services Director *Role: Assist rural population with chronic disease management services including transportation management services*		

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 #1.2d:	By December 31, 2017, 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): • 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 **☐ Current ☑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		
	2017 TARGET:	55% among all adults with diabetes 55% among Black/African American adults with diabetes		
MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**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)	UHS Designee *Role: Oversee implementation of screening initiative within respective organization*	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
	Lourdes Hospital	Lourdes Designee *Role: Oversee implementation of screening initiative within respective organization*		
	Rural Health Network (RHN)	RHN Community Services Director *Role: Assist rural population with chronic disease management services including transportation management services*		
	Broome County Office for Aging	Broome County Office for Aging Educator *Role: Provide classes in chronic disease management through RSVP*		

PRIORITY AREA:	***PROMOTE MENTAL HEALTH AND PREVENT SUBSTANCE ABUSE***			
FOCUS AREA:	**Strengthen Infrastructure Across Systems**			
GOAL:	Enroll state identified eligible adults that have chronic medical and behavioral health conditions in the Health Home to provide comprehensive care management			
OBJECTIVE 1:	By December 31, 2017, eighty percent (80%) of Health Home patients will have an individualized patient-centered care plan based on physical, mental health and chemical dependency needs			
IMPROVEMENT STRATEGY:	Promote Mental Health Among Chronically Ill Adults (Health Home) Provide care coordination and patient navigation services for high need/cost Medicaid members			
EVIDENCE-BASE (source):	Coordinating Care for Adults with Complex Health Needs, AHRQ Pub #12-0010, January 2012			
PERFORMANCE MEASURE (source):	10% per year of patients identified by NYSDOH as eligible for Health Home are enrolled 50% of Health Home patients are compliant with mental health/medical visits (SOURCE: TBD)			
INTERVENTION STATUS ☐ **Current** ☑ **New**	**BASELINE:**	Zero (20% of 6,000 patients identified as eligible)		
	ANNUAL TARGET:	10% per year of patients eligible for Health Home sign consent and are enrolled		
	2017 TARGET:	1825 patients are enrolled by 2017 (365 per year – UHS)		

MAJOR ACTIVITIES	**RESPONSIBLE ORGANIZATION(S)**	**RESPONSIBLE INDIVIDUAL(S)**	**PROCESS MEASURES**	**OUTCOME MEASURES**
Train and recruit staff regarding Health Home Provide outreach & engage potential clients Meet with clients Consult with healthcare/mental health professionals Care coordinators convene interdisciplinary team meetings Referrals to community and social support services	United Health Services	UHS Director of Community Ed UHS Care Coordinator Lead Practice Nurses at each outpatient office	Percentage of patients engaged with intake process Percentage of patients enrolled in UHS or CC Health Home Percentage of patients referred from other agencies (e.g., hospitals, social workers, emergency departments & primary care) Percentage of Health Home patients with an individualized patient-centered care plan Percentage of patients meeting comprehensive care goals	Number of emergency room visits for Health Home patients Number of inpatient stays for Health Home patients
	Catholic Charities (CC)	Director of Case Management Lead Practice Nurses at each outpatient office		