

RURAL BROOME **COUNTS**



A needs-assets assessment of rural Broome County

July 2015



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Introduction

Broome County is unique in the rural region commonly known as South Central New York. It is the largest county by population (199,928), approximately four times as large as each of the surrounding rural counties (Tioga 51,067; Chenango 50,490; Delaware 47,851; Cortland 49,453)¹. Broome's population is 76.6% urban and suburban. The remaining 46,736 (23.4%) of Broome's residents live in rural areas, defined as areas with 200 or fewer individuals per square mile. Based on this criterion, eleven Broome County townships are considered rural.

Rural Broome Counts (RBC) was designed to investigate rural Broome as distinct from greater Binghamton and suburban Broome. The population of rural Broome County is roughly the same as the population of each of the four adjacent rural counties (approximately 50,000 residents)¹. Comparing rural Broome with surrounding counties in terms of needs, assets and services created an opportunity to also understand rural Broome in this context. As you read this report, it may be helpful to consider the pros and cons of living in a rural community in a county that is predominantly urban/suburban.

The Rural Broome Counts Needs-Assets Assessment Project grew directly from challenges faced by the Rural Health Network SCNY and other organizations in advocating for resources and services to address the health related needs (broadly defined) of rural Broome County residents. United Way of Broome County, recognizing the value of a project to better identify the specific needs and assets of rural Broome, provided a Venture Grant to help support the work. Rebecca Chandler, an AmeriCorps-VISTA member and recent graduate of Binghamton University, led the project with support from the RBC Advisory Committee and staff from the Rural Health Network SCNY. The RBC Kick-Off meeting, held on October 15, 2014 and attended by 48 individuals representing a wide range of rural Broome stakeholders, identified three priority assets and three priority challenges. These priorities became the framework for the RBC research and report. Many individuals and organizations throughout Broome County and the wider region contributed to the report as key informants and content experts.

One purpose of the RBC Project was to establish baseline information for sub-regions of rural Broome, described in the report as "pocket communities." This effort was based on the hypothesis that rural village centers, and the rural geography they serve, require a special mix of economic, social, educational, and community assets in order to remain viable and resilient. With an inventory of community assets, it becomes easier to track the gain or loss of assets and infrastructure over time. This knowledge can help to inform strategic investment of resources where and when needed, to highlight the relationship between health and other indicators, and to point out the presence or absence of select assets. Shanna Ratner, principal of Yellow Wood Associates, who provided technical assistance on RBC, prefers to consider rural communities in the framework of community "resiliency" rather than viability. Both community viability and community resilience offer rich opportunities for continued research to better understand rural Broome.

We launched Rural Broome Counts to quantify and better understand the needs and assets of rural Broome County. While we accomplished this goal to some extent, the project also revealed how much information and data are not available. Based on our work, we recommend that stakeholders not only continue to assess rural Broome's needs and assets, but also continue to advocate for targeted research (e.g., how lack of affordable transportation impacts employment and the economy). We also suggest that when systems and programs in our region collect data, they should consider the distinction between rural and non-rural populations. Many questions remained unanswered because the available information did not differentiate between rural Broome and the rest of Broome County.

Finally, if the RBC information is to have any positive impact on the residents and communities of rural Broome, policy makers, service providers, and funders must consider this data in their decisions. While RBC is not a comprehensive assessment of rural Broome County, it provides a useful start. Focusing on and acknowledging rural Broome is an important step towards a positive, resilient future for all Broome residents.

1. "Census.gov." Census.gov. Accessed August 10, 2015. <http://www.census.gov/>.

Rural Broome Counts

Project Background and Objective

The Rural Health Network of South Central New York has found it difficult in the past to advocate for the needs of rural Broome County residents, due to the lack of available data that distinguishes the 11 rural Broome municipalities from the rest of Broome County. The Rural Broome Counts Assessment Project was established as a way to highlight the strengths and challenges facing rural Broome County residents and possible ways to address any service gaps we discovered. Our main goal was to

collect and report on data most relevant to rural Broome County that will help to more equitably distribute resources, plan services, and inform policy decisions. We have also established a framework to update the needs-assets assessment every three years, so we can track rural Broome County's status and provide information for other planning efforts such as the Broome County Community Health Assessment, Aging Services Plan, Coordinated Transportation Plan, and others.

Rural Broome Counts Process

On October 15, 2014 the Rural Broome Counts Kick-Off Workshop was held at Cornell Cooperative Extension in Broome County. There were 48 stakeholders in attendance, from all different sectors, including education, human services, health, transportation, and local government. Grouped according to their area of expertise, attendees were asked to complete several exercises that would help us determine the top three strengths and top three challenges facing rural Broome County. Stakeholders individually voted on the top strengths and challenges identified by the small groups. The top strengths they identified were (1) Community, (2) Schools and Staff, and (3) Natural Resources. The top three challenges were (1) Poverty, (2) Services Beyond Primary Care, and (3) Transportation. These six focus areas then became the base on which we structured the report.

An Advisory Committee, made up of 13 interested stakeholders, started meeting monthly to develop the project and obtain feedback on the different

sections of the report. Members shared many innovative ideas at these meetings. One was the concept of re-framing the report around "Access." Thinking of rural challenges in terms of lack of "Access," as opposed to lack of transportation, prevents us from assuming a solution. In other words, the Rural Broome Counts Advisory Committee and Leadership Team were able to think about a larger variety of potential solutions to rural challenges (for example, using technology and creative partnerships to increase access to services among rural residents) than simply expanding transportation services.

To gain a better sense of the transportation service environment in rural Broome, and some of the challenges that arise as a result of existing service gaps, we held a transportation work group session in December 2014. We invited individuals familiar with the rural transportation challenges in Broome County and shared a map of the service area of BC Country, the rural public transportation service. The map sparked

an in-depth discussion of the limitations of the service, and of how current public transit options do not meet the needs of many rural individuals. Attendees made many suggestions for improving the transportation options. They included: adding park and rides in the village centers of the rural pocket communities to serve as common pick up points; establishing public-private partnerships between institutions such as hospitals and the county transportation department to provide transportation for rural employees and/or patients; and increasing coordination services such as the GetThere Call Center to best utilize the services that are currently available.

To gather information for other sections of the report, we held one-on-one interviews with key informants in the community, to investigate both quantitative and qualitative data related to the six key topic areas. Those interviews enlightened the Rural Broome Counts team to the fact that very little health data exists, or at least is easily accessible, at the township or ZIP code level. This creates a major challenge when trying to ascertain the health status of rural residents separately from residents of the rest of Broome County. We also gained an understanding of the mental health and health services that do exist in the community, and how these services can be expanded to serve more rural residents. In-depth interviews with the school superintendents of the four rural Broome school districts taught us about the numerous school-community partnerships that exist and the critical role the public schools play in maintaining a resilient rural environment. Local rural politicians and county legislators

helped us gain a better feel for the rural communities they serve and appreciate the strong sense of community spirit that enlivens rural areas.

To obtain the perspective of rural Broome residents on ease of access to services, and overall health, in their regions, we developed a survey. We distributed this questionnaire through an online portal and in person at several events, at libraries, and at primary care sites in the rural communities. Although the results of the survey do not represent all of rural Broome County residents, particularly residents of the lowest socio-economic class, they do provide a good baseline for further investigation.

This process has been extremely informative; it marks the beginning of the research that must be conducted on rural Broome in the future. We are excited to continue to work towards achieving equity for rural Broome residents, and we hope that this report inspires others to consider rural Broome when developing programs, conducting assessments, and advocating for policy change.

Five Important Takeaways of the Rural Broome Counts Process:

- The Advisory Committee recommended re-framing the Rural Broome Counts Report around the concept of “Access.” We should not assume that the only solution to the access challenges of rural Broome residents is expansion of affordable transportation options (although this is one important strategy). Mobile services, technology, information and communication tools can all be ways to improve access to goods, services and in some cases employment for rural Broome residents.
- Homelessness is not just an urban issue. There are many homeless students and families in the rural areas as well.
- Very little health data is available at the ZIP code and township level. Further research into this issue is highly recommended to obtain a better understanding of the health status of rural Broome.
- Little quantitative data exists on the number of rural Broome residents who are unable to gain employment due to lack of reliable transportation. We recommend that employment agencies and businesses start collecting data on their applicants’ and employees’ methods of transportation.
- We suggest further research to obtain data on number of jobs in the rural Broome townships.

Project Manager Message

As part of my AmeriCorps VISTA responsibilities with the Rural Health Network of South Central New York, I served as the project manager for the Rural Broome Counts Assessment Project. At the start of my AmeriCorps VISTA experience, I did not know what to expect. I was a naïve and idealistic recent graduate from Binghamton University with a desire to devote myself to a year of community service. I had conducted scientific research in college, but I had no prior public health or social science research experience. Although my VISTA position involved research and analytics, it was entirely different from what I was accustomed to in school.

At the Rural Broome Counts Kick-Off on October 15, 2014, stakeholders identified the top strengths and challenges found in rural Broome County, but they described them only in broad terms. That made it hard to determine what data we had to collect to conduct a detailed assessment. Before we could evaluate the level of “Poverty,” or the level of “Community Spirit,” we needed to define those terms and figure out what kind of yardstick we can use to measure them. I felt overwhelmed by the amount of work ahead, but I was excited about the project and the prospect of discovering new information that could change policies and service allocation to benefit rural Broome County in the future.

I am thankful for the opportunity to work with and learn from the wonderful group of hard-working and innovative individuals who make up the Rural Broome Counts Advisory Committee. Their assistance in developing the report and working through the ambiguities has been invaluable. One of the most important lessons they have taught me is that there is no one “perfect solution” for meeting a service need. For example, each time I found a new piece of data or talked to a different person about transportation, my perspective on how to best ameliorate that set of challenges would shift. But in meetings of the transportation work group and the Advisory Committee, I discovered that closing the mobility gap in rural Broome County meant more than just increasing the transportation budget and sending out more BC Country buses to rural communities. Solutions could also include bringing services to rural Broome part-time, increasing coordination of existing transportation services, or expanding volunteer transportation. I realized how important it is to think creatively when budgets are tight, but needs are high.

Coming from my work in a science laboratory, I found that one of the greatest challenges I faced in this project was removing myself from the comforts of my cubicle in Whitney Point to do in-person interviews with key informants. My previous lab work involved collaboration but also offered its fair share of social isolation. With encouragement from Jack Salo and Pam Guth, I began my journey into the community, gaining the opportunity to speak with a wide variety of knowledgeable and inspiring community members and professionals. Talking with local elected officials, I collected insights into future developments in rural towns and villages. I learned about the local transportation system: how it operates, whom it is serving, and whom it is not serving. I learned that although Broome County is rich in services, the real challenge lies in the ability of rural Broome residents to access those services.

However, by far, the greatest lesson I have learned is that much more work needs to be done. Many times, I would return to Jack and Pam feeling deflated because I had failed to obtain the information we wanted to include in this report. This was often because the data I was looking for was simply not available at the township level. Either the sample size of the data collected was too small to be considered reliable, or officials declined to release the data because it could be linked to specific individuals. During such times, Jack reminded me that the questions we develop through our research are as valuable, if not more valuable, than the answers. I hope the questions we raise throughout this report inspire others to take up the cause, and help us better understand and advocate for rural Broome.

There were also moments throughout the year when I saw first-hand the value of the Rural Broome Counts research work, and that motivated me to keep pushing through the challenges. One such moment came in a conversation with Karen Witbeck, chief of services for children’s inpatient and outpatient programs at the Greater Binghamton Health Center. She told me she had not considered targeting rural Broome as a site for her new Mobile Integration Team program, but after hearing my presentation on Rural Broome Counts, she was inspired to find partners for this program in the area.

As I near the end of my VISTA term and prepare for the next VISTA member to take my place, I am reminded of what a wonderful and enriching experience my service term has been. The public health knowledge that I have gained will serve me well as I pursue a career as a family practitioner in a rural area. Most importantly, I believe that the data and information that comes out of this report will make a real difference in the lives of rural Broome residents, as people begin to more strongly consider rural Broome as distinct from the rest of Broome County. I would like to acknowledge everyone who has contributed information, ideas, and time to this report, as well as Jack Salo and Pam Guth for their unwavering support and tutelage this past year.

Best Wishes,



Rebecca Chandler



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This report was made possible due to the hard work, dedication, and vision of the Rural Broome Counts Advisory Committee and the Rural Broome Counts Leadership Team. We would like to thank the many individuals that have contributed their time and effort to developing the Rural Broome Counts project, particularly the agencies and community leaders that served as key informants and provided much of the data included in this report. Finally, we would like to thank Broome County United Way for generously supporting the Rural Broome Counts project, as well as the AmeriCorps/VISTA Program, the NYS Office of Rural Health, and the Rural Health Network of South Central New York for providing additional funding and resources.

Disclaimer: Unless specifically noted as recommended by the Rural Broome Counts Advisory Committee or Transportation Work Group, the recommendations made in the Rural Broome Counts Report have been developed by the Rural Health Network of South Central New York. While the recommendations have been informed by the Rural Broome Counts research and the experience of the Rural Health Network of South Central New York, the reader should not assume that informants or other participants in the Rural Broome Counts project agree with or support these recommendations.

Individuals and Organizations that Contributed Information and/or Services to Rural Broome Counts

We offer our gratitude and support to all the dedicated professionals and AmeriCorps and VISTA members that serve Rural Broome County and contribute to each community's quality of life.

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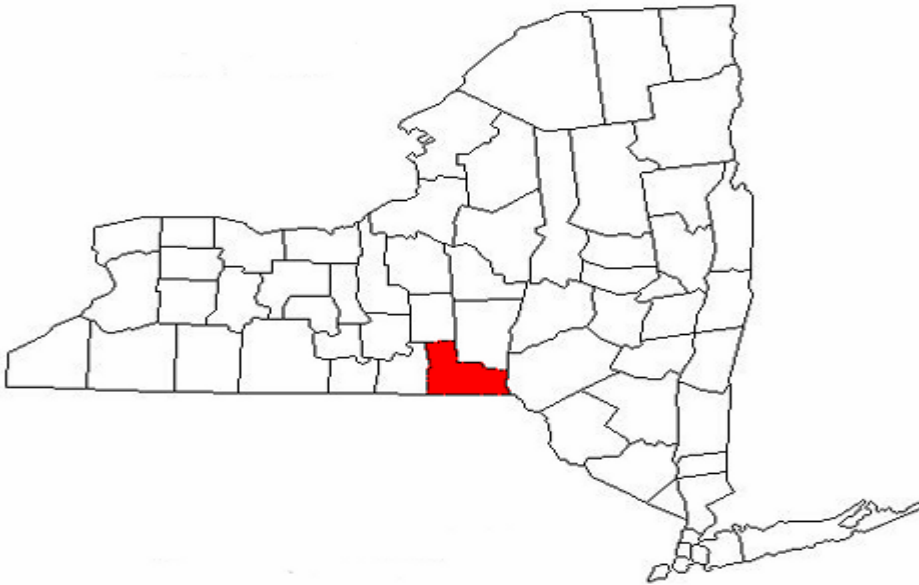
Lesli Van Zandbergen, Van Zandbergen Photography

*Kick-Off Attendees



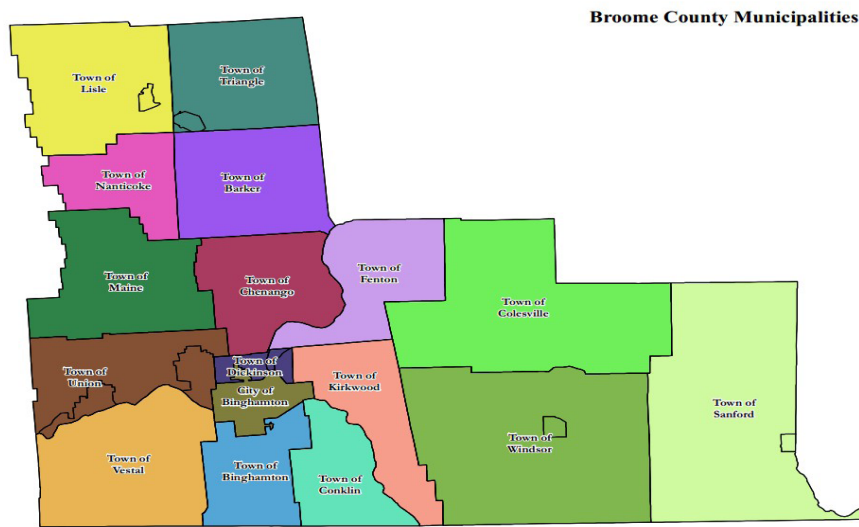
What Does Rural Broome County Look Like?

Fig. 1. New York State Map



Source: Accessed August 3, 2015. <https://familysearch.org/learn/wiki/en/images/a/a3/Ny-broome.png>.

Fig. 2. Broome County Municipalities



Source: Broome County GIS.

11 Rural Broome Municipalities:

- 1.) Lisle
- 2.) Triangle
- 3.) Nanticoke
- 4.) Barker
- 5.) Maine
- 6.) Town of Binghamton
- 7.) Fenton
- 8.) Kirkwood
- 9.) Colesville
- 10.) Windsor
- 11.) Sanford

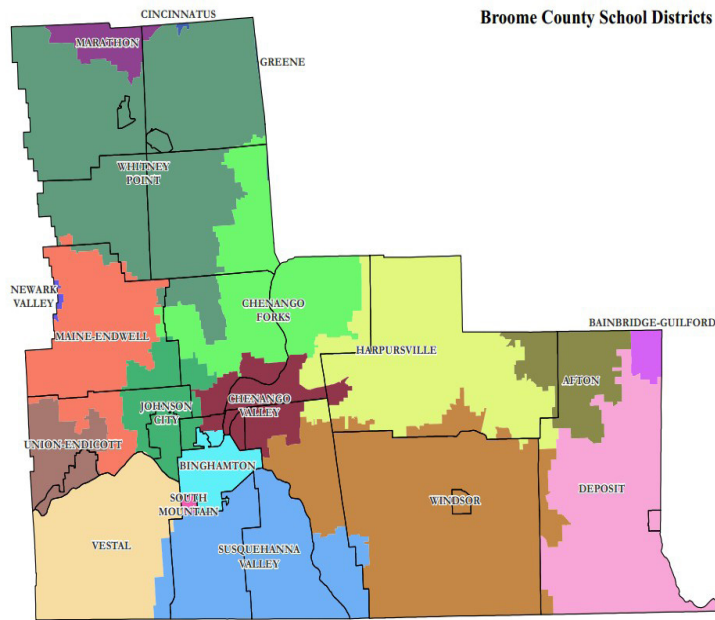
5 Suburban Broome Municipalities:

- 1.) Vestal
- 2.) Conklin
- 3.) Union
- 4.) Dickinson
- 5.) Chenango

Urban Broome:

- 1.) City of Binghamton

Fig. 3. Broome County School Districts



Source: Broome County GIS.

4 Rural Broome School Districts:

- 1.) Whitney Point
- 2.) Windsor
- 3.) Harpursville
- 4.) Deposit

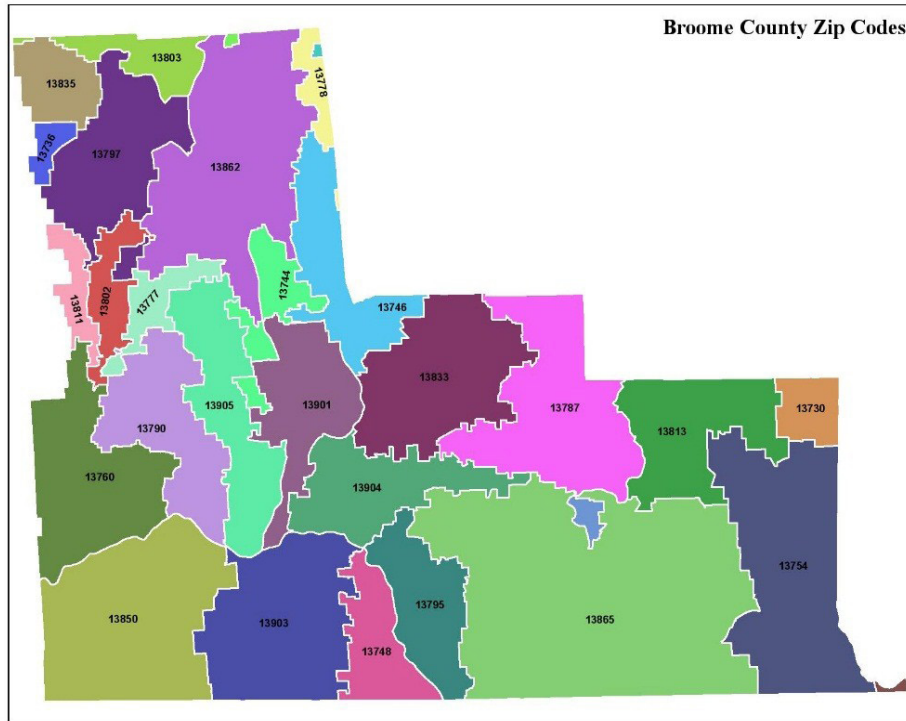
1 Urban Broome School District:

- 1.) City of Binghamton

7 Suburban Broome School Districts:

- 1.) Vestal
- 2.) Susquehanna Valley
- 3.) Maine-Endwell
- 4.) Union-Endicott
- 5.) Johnson City
- 6.) Chenango Valley
- 7.) Chenango Forks

Fig. 4. Broome County Zip Codes



Source: Broome County GIS

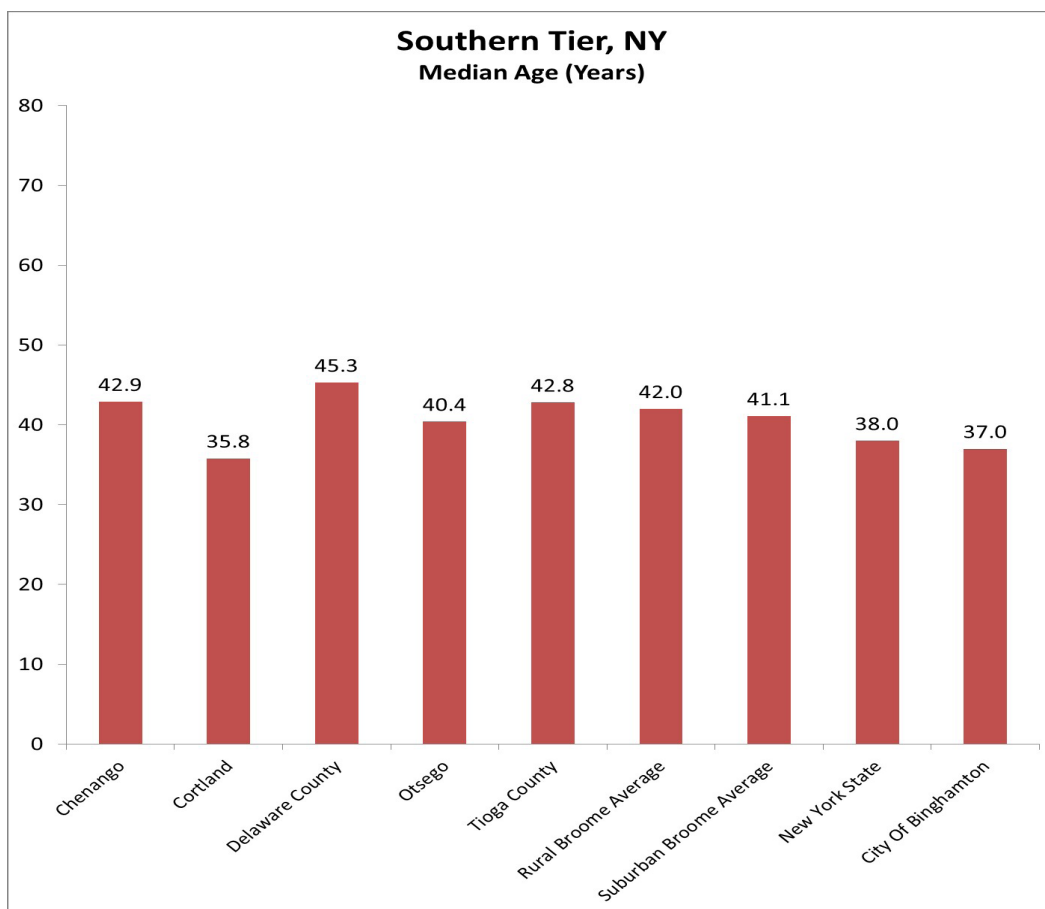
Rural Broome Zip
Codes:
13862
13797
13744
13777
13787
13826
13865
13795
13754
13746
13802

Suburban Broome Zip Codes:
13748
13790
13760
13850
13901
13903
13904

Urban Broome Zip Codes:
13902
13905

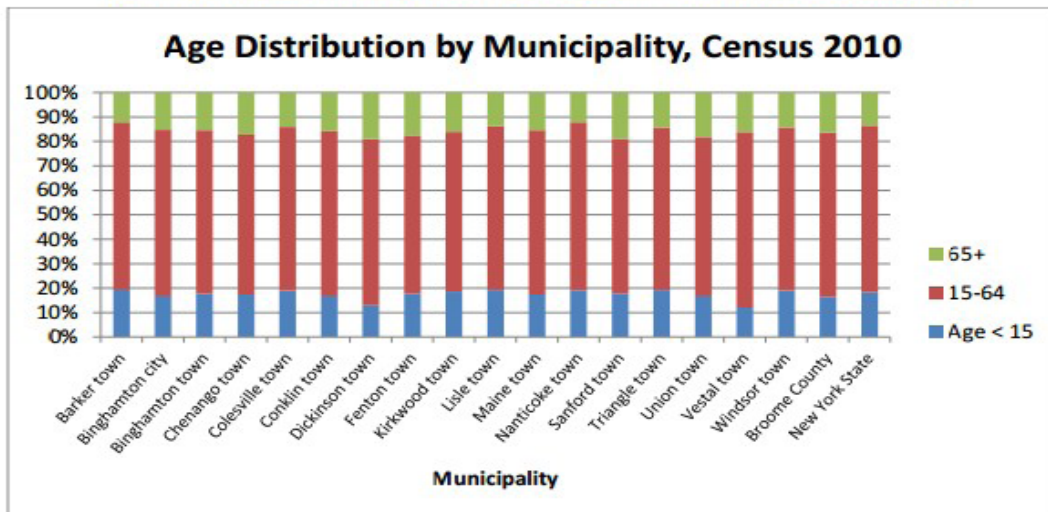
Demographics of Rural Broome County

Fig. 5. Southern Tier Median Age



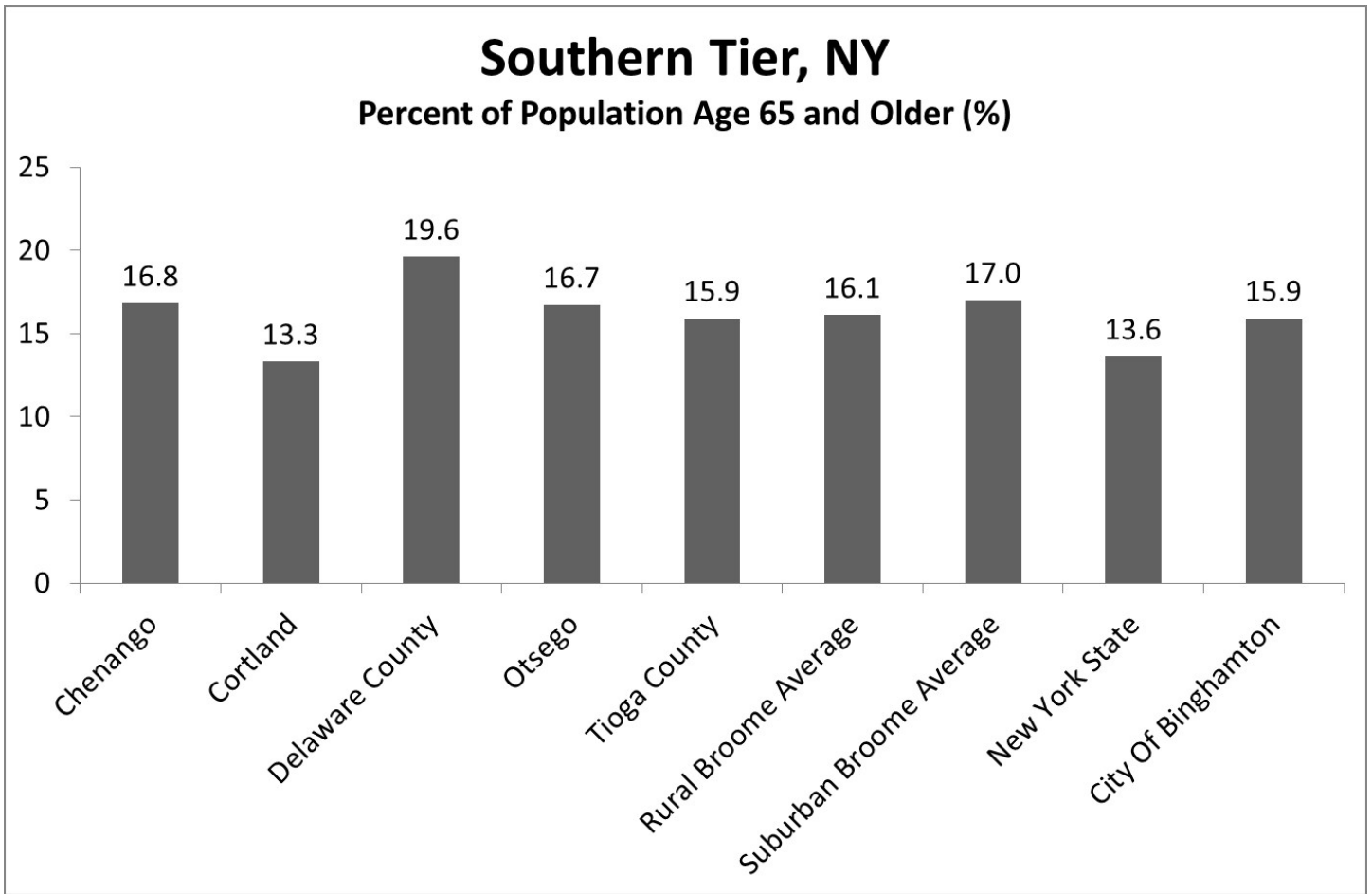
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 6. Age Distribution by Municipality



SOURCE: US Census Bureau, Census 2010

Fig. 7. Southern Tier Percent of Population Age 65 and Older



Source: U.S. Census Bureau, 2008-2012 American Community Survey

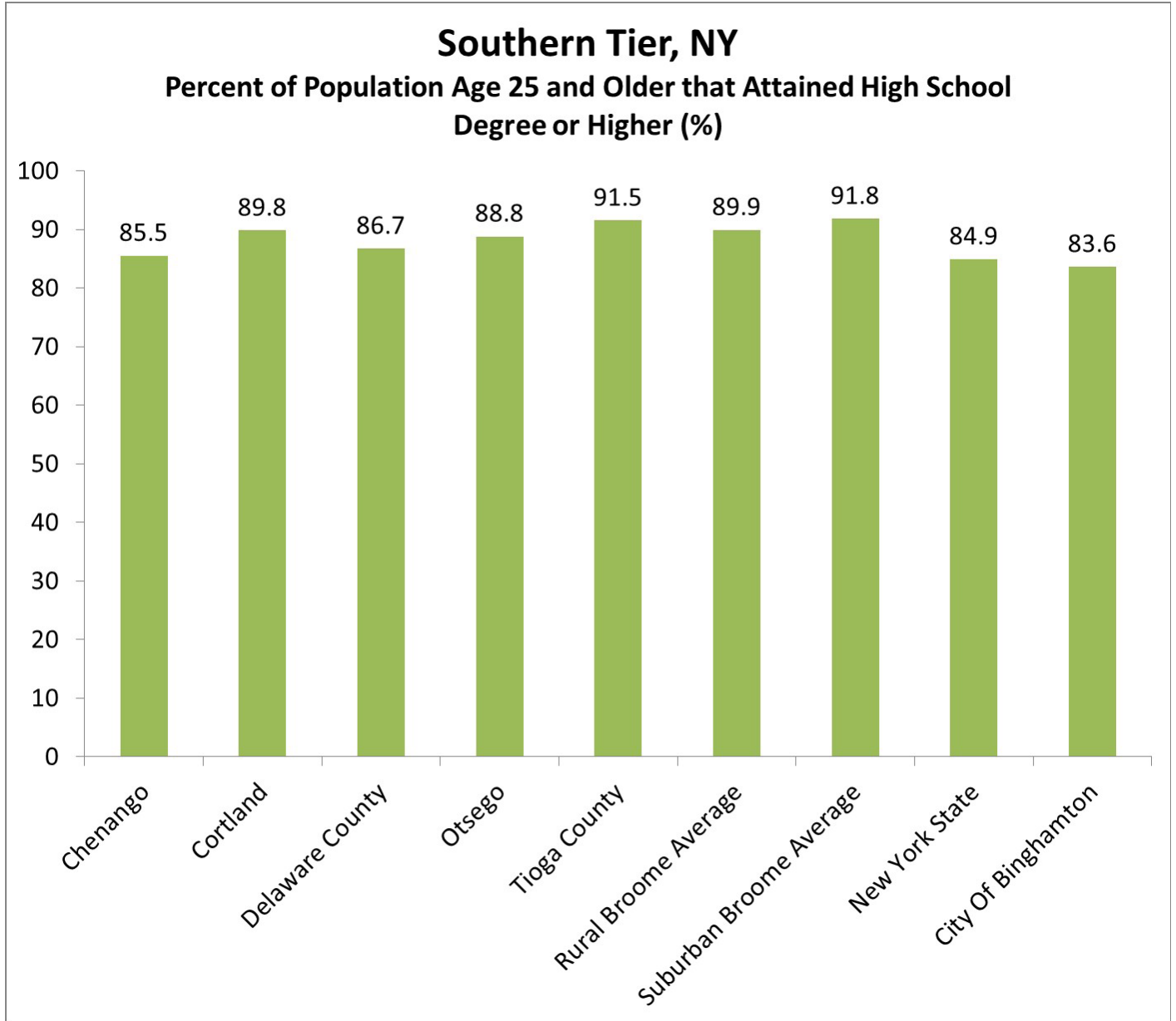
Fig. 8. New York County Rankings by Age

	County	Median Age	% over 65
1	Hamilton	51.3	23.4
2	Delaware	45.4	19.4
3	Columbia	45.3	18.2
4	Essex	44.5	18.1
5	Greene	44	17.3
6	Warren	44.1	17.1
7	Schuyler	44.2	17
8	Herkimer	42.1	16.8
9	Chenango	42.9	16.6
10	Chautauqua	40.9	16.6
11	Montgomery	40.8	16.6
12	Yates	40.7	16.6
13	Otsego	40.9	16.5
14	Broome	40.2	16.4
15	Oneida	40.8	16.3
16	Fulton	41.8	16
17	Schoharie	42.5	15.9
18	Niagara	41.9	15.9
19	Steuben	41.4	15.9
20	Tioga	42.5	15.7
21	Chemung	40.9	15.7
22	Erie	40.4	15.7
23	Genesee	41.5	15.6
24	Seneca	41	15.5
25	Cattaraugus	40.7	15.5
26	Ontario	42.1	15.4
27	Washington	41.7	15.4
28	Cayuga	41.5	15.3
29	Nassau	41.1	15.3
30	Allegany	37.8	15.2
31	Lewis	40.2	15
32	Schenectady	39.8	14.9
33	Ulster	42	14.8
34	Sullivan	41.7	14.8
35	Westchester	40	14.7
36	Orleans	41	14.4
37	*New York State	38	14.4
38	Wayne	41.6	14.3
39	Onondaga	38.6	14
40	Madison	39.5	13.9
41	Albany	38.5	13.9
42	Monroe	38.5	13.9
43	St. Lawrence	37.5	13.9
44	Saratoga	40.9	13.7
45	Livingston	39.8	13.7
46	Wyoming	40.9	13.6
47	Rensselaer	39.2	13.6
48	Dutchess	40.2	13.5
49	Suffolk	39.8	13.5
50	New York	35.5	13.5
51	Rockland	36.7	13.4
52	Franklin	39.3	13.3
53	Clinton	39.1	13.3
54	Cortland	35.8	13.1
55	Queens	35.5	12.8
56	Richmond	38.4	12.7
57	Oswego	38.5	12.6
58	Putnam	41.9	12.5
59	Kings	34.1	11.5
60	Jefferson	32.6	11.2
61	Orange	36.6	11
62	Tompkins	29.8	10.8
63	Bronx	32.8	10.5

Source: U.S. Census Bureau, 2010 Census

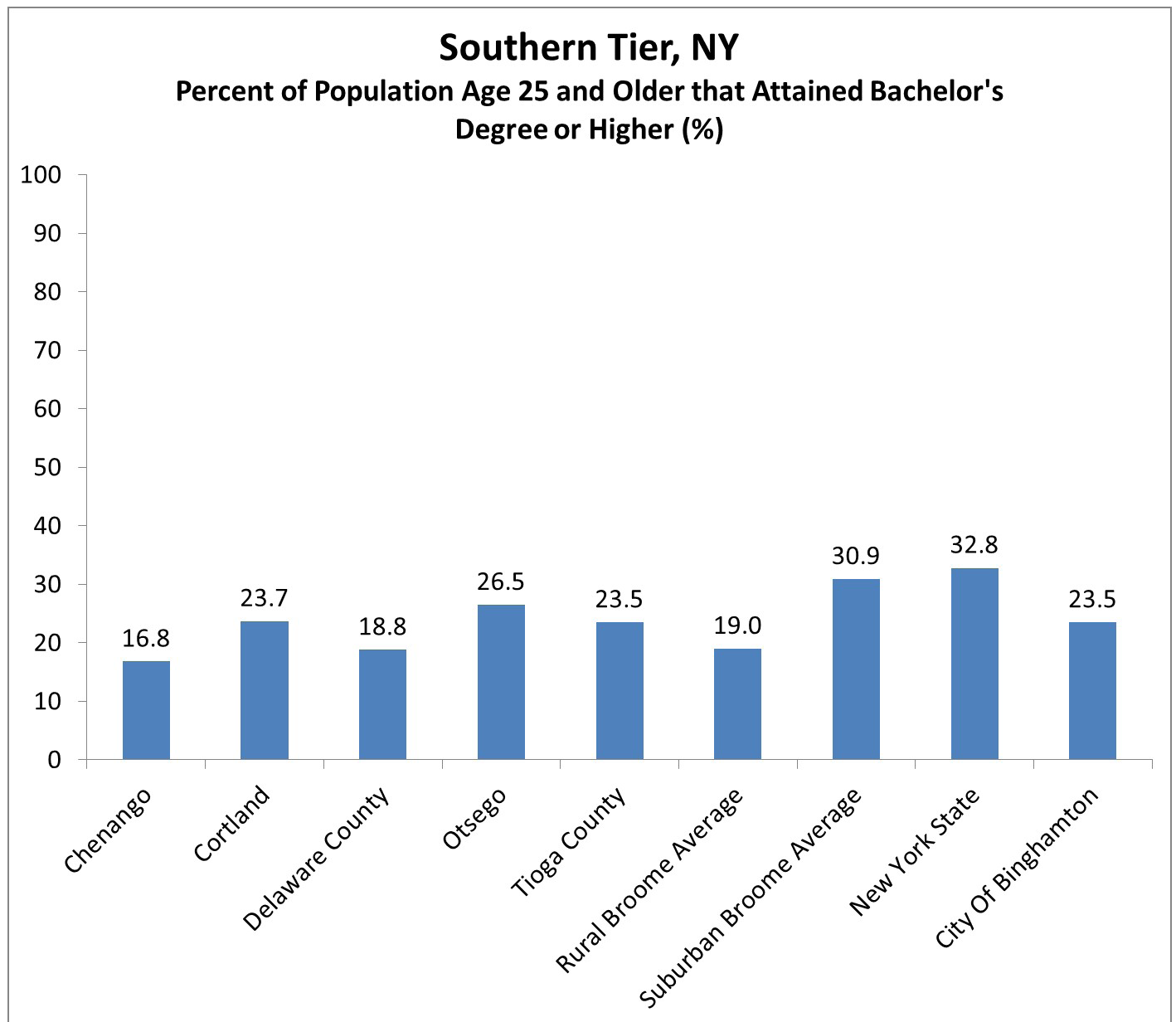
*Not a county

Fig. 9. Southern Tier Percent of Population Age 25 and Older that Attained High School Degree or Higher



Source: U.S. Census Bureau, 2008-2012 American Community Survey

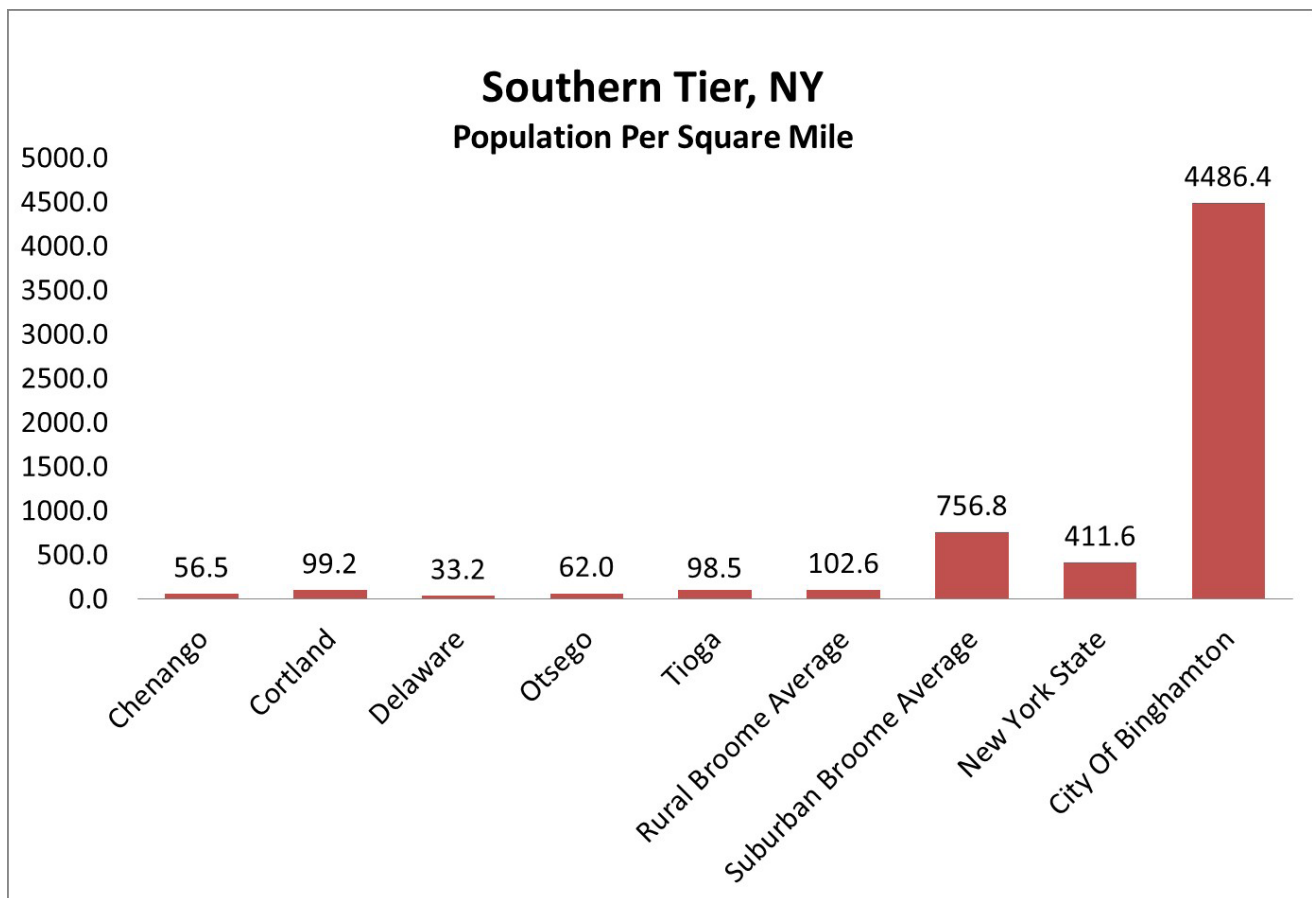
Fig. 10. Southern Tier Percent of Population Age 25 and Older that Attained Bachelor's Degree or Higher



Source: U.S. Census Bureau, 2008-2012 American Community Survey

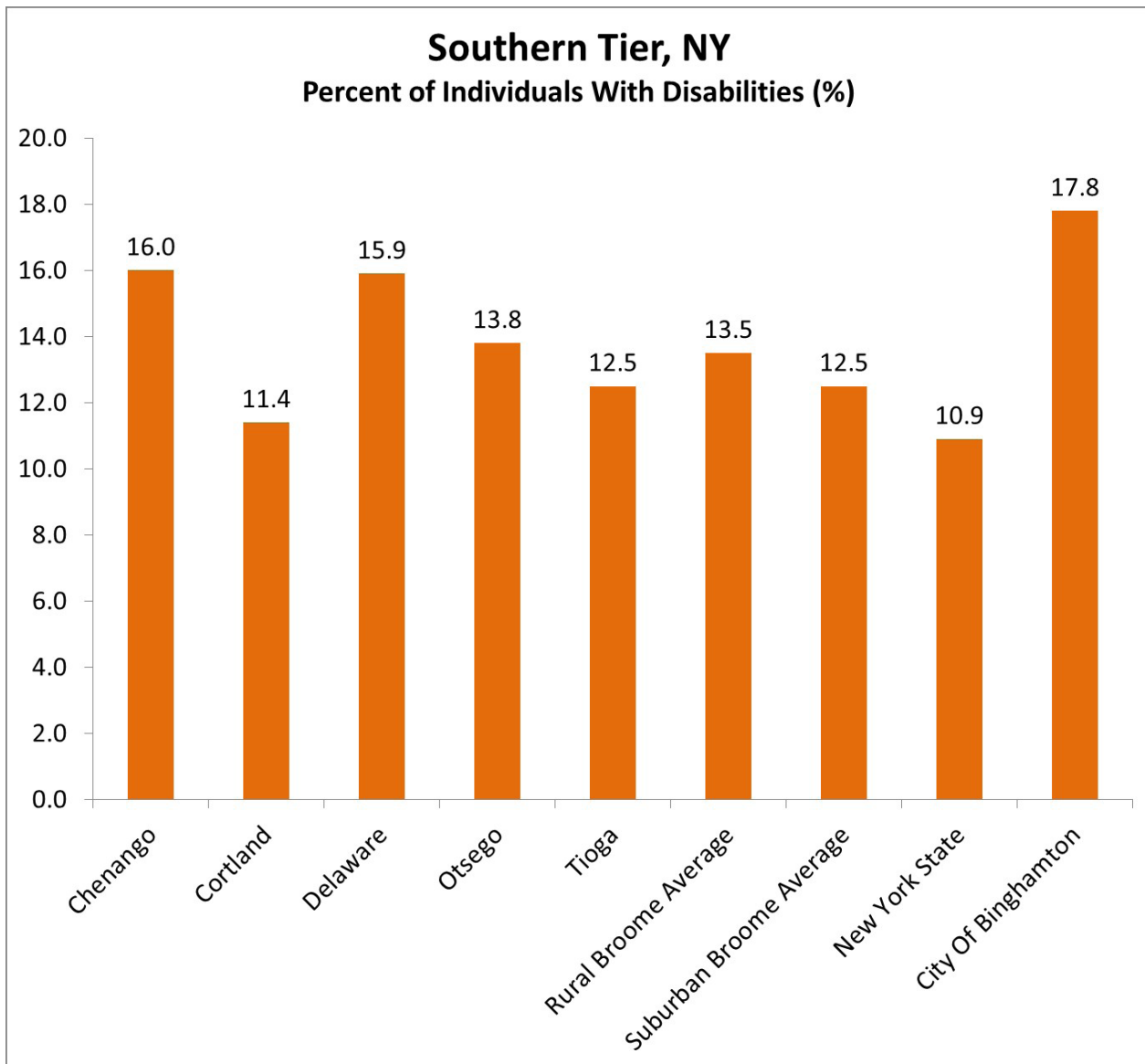
Quick Facts of Rural Broome County

Fig. 11. Southern Tier Population Per Square Mile



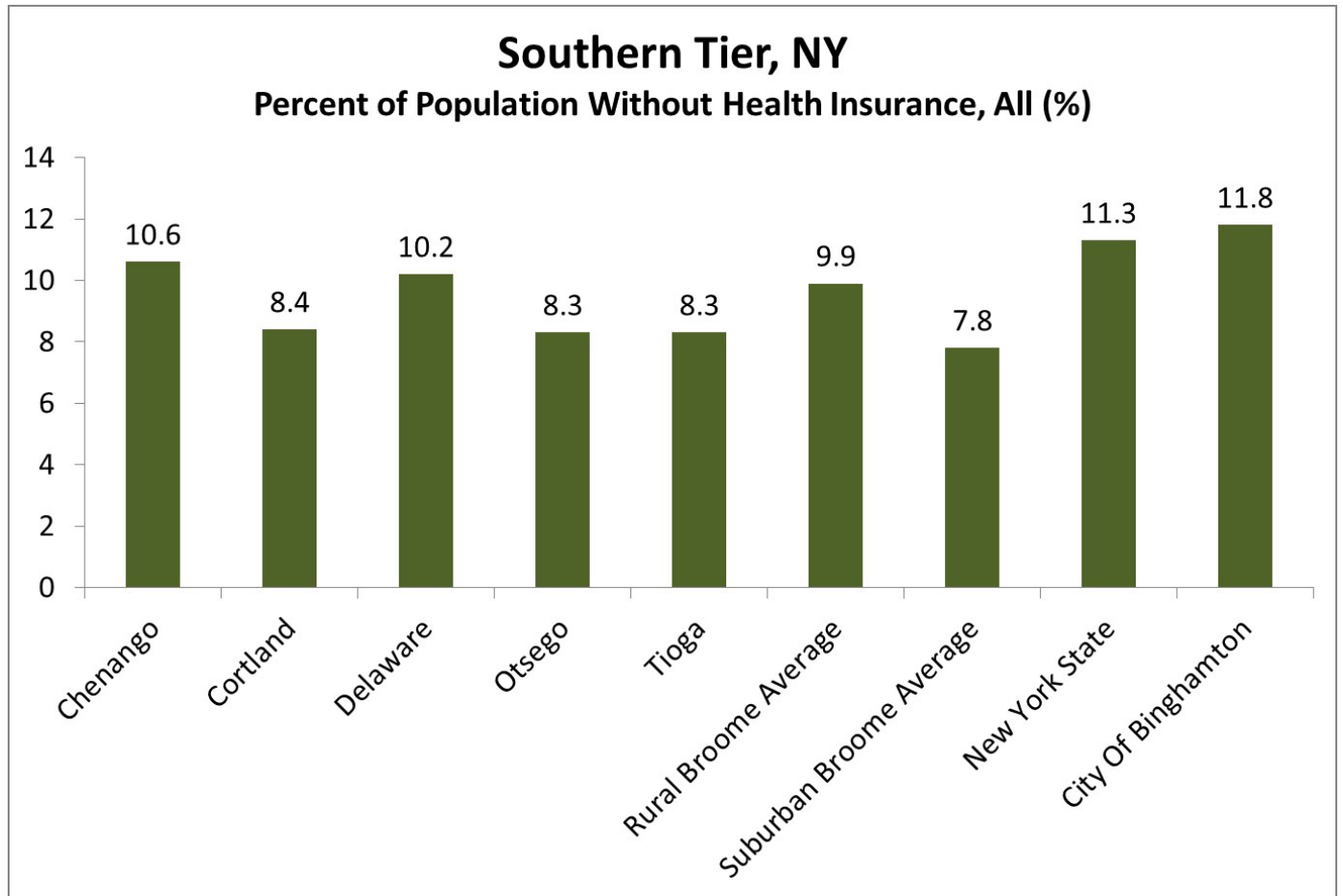
Source: (1) U.S. Census Bureau, 2008-2012 American Community Survey
(2) Broome County Planning Hazard Mitigation Planning Document (<http://go.broomecounty.com/planning/hazardmitigation/plandocuments>)

Fig. 12. Southern Tier Percent of Individuals With Disabilities



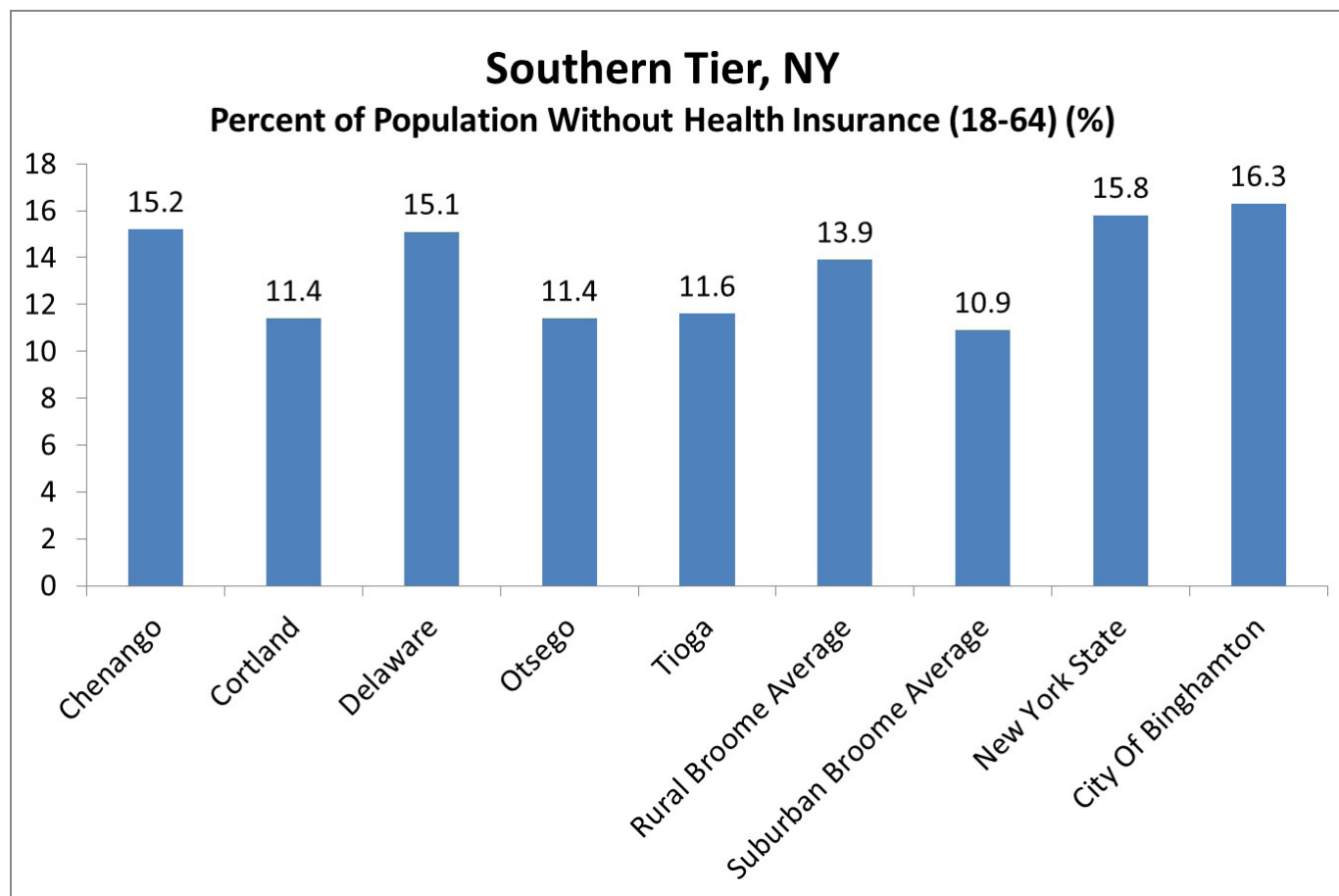
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 13. Southern Tier Percent of Population Without Health Insurance (All)



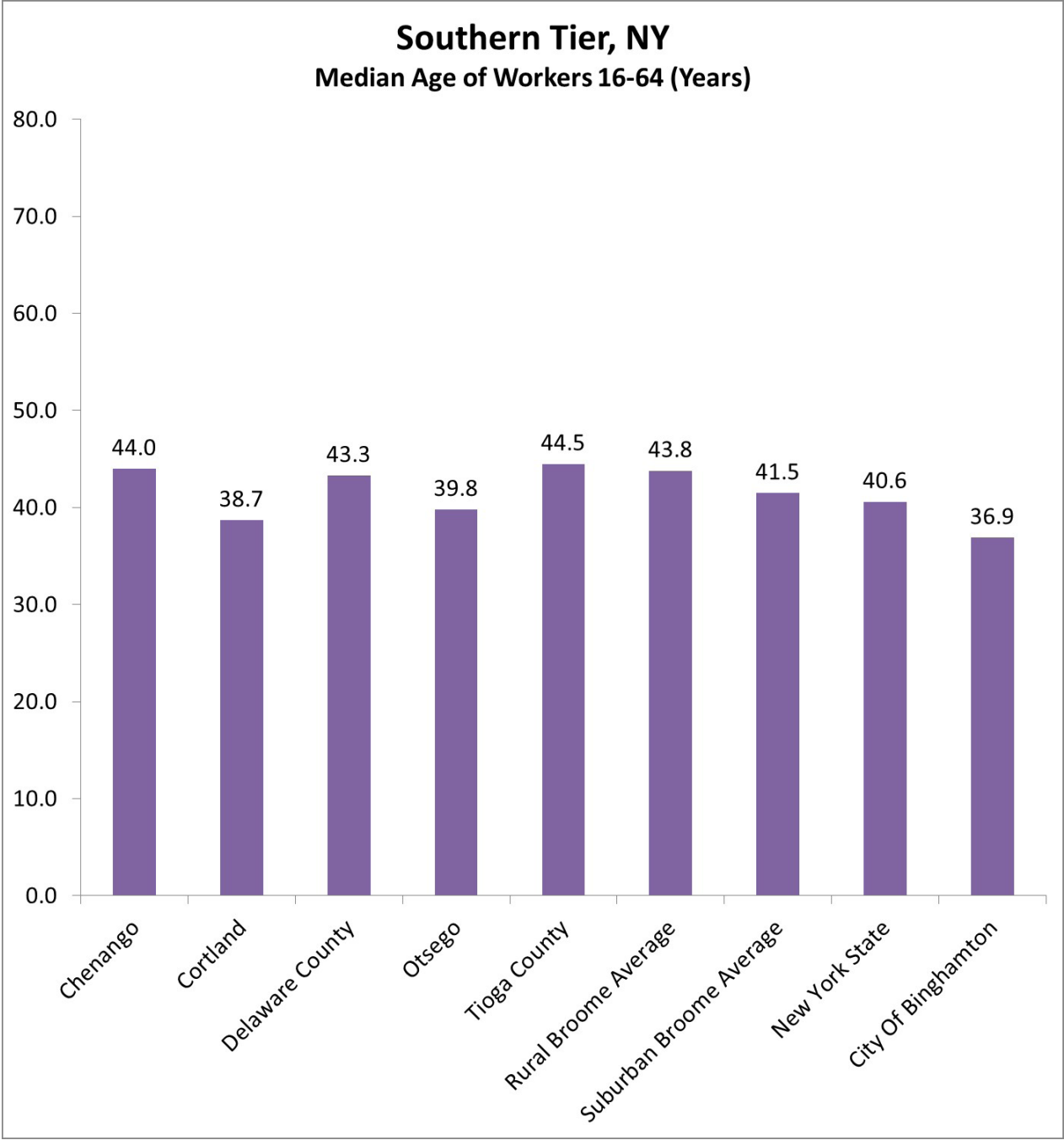
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 14. Southern Tier Percent of Population Without Health Insurance (18-64)



Source: U.S. Census Bureau, 2008-2012 American Community Survey

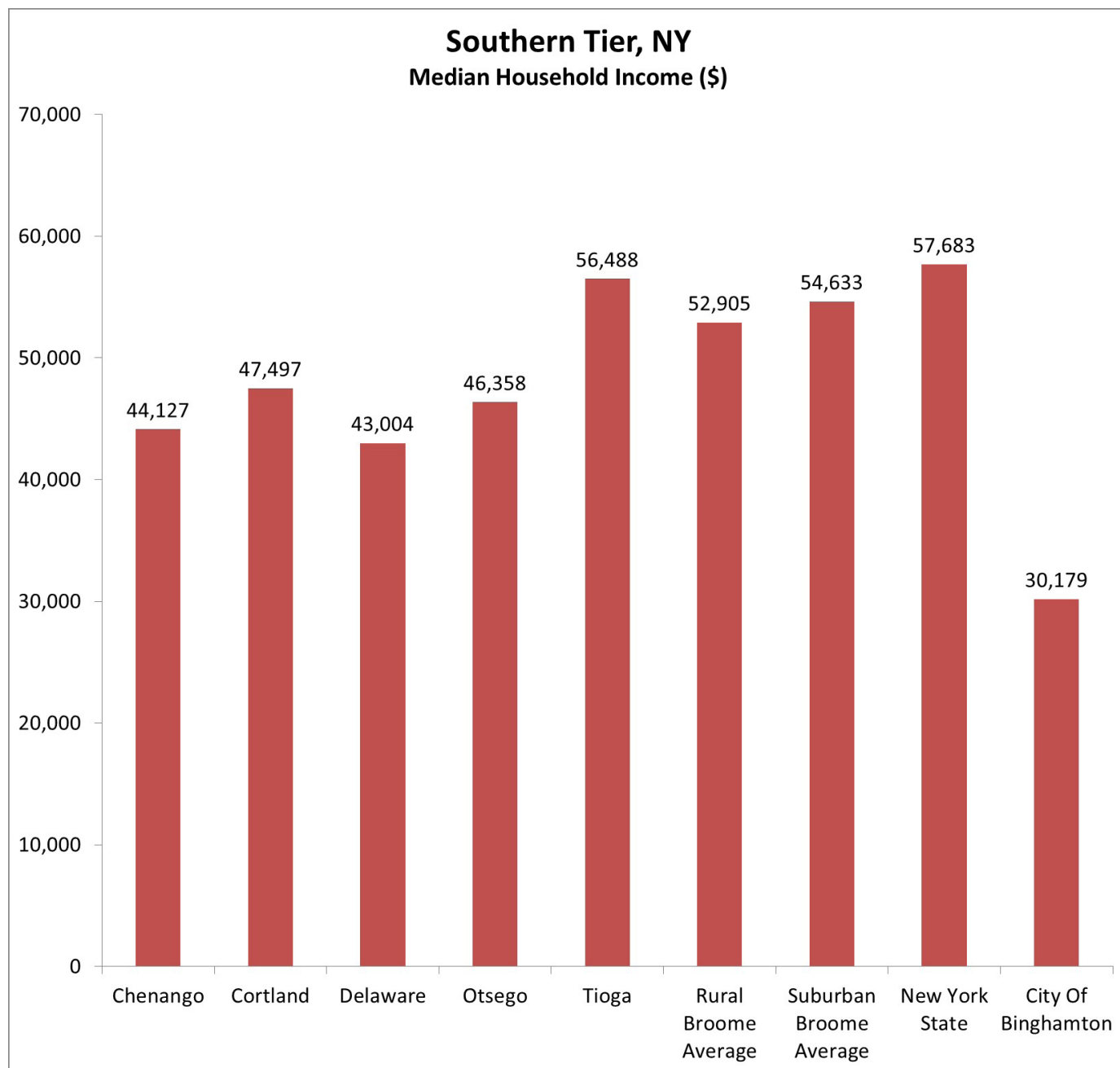
Fig. 15. Southern Tier Median Age of Workers



Source: U.S. Census Bureau, 2008-2012 American Community Survey

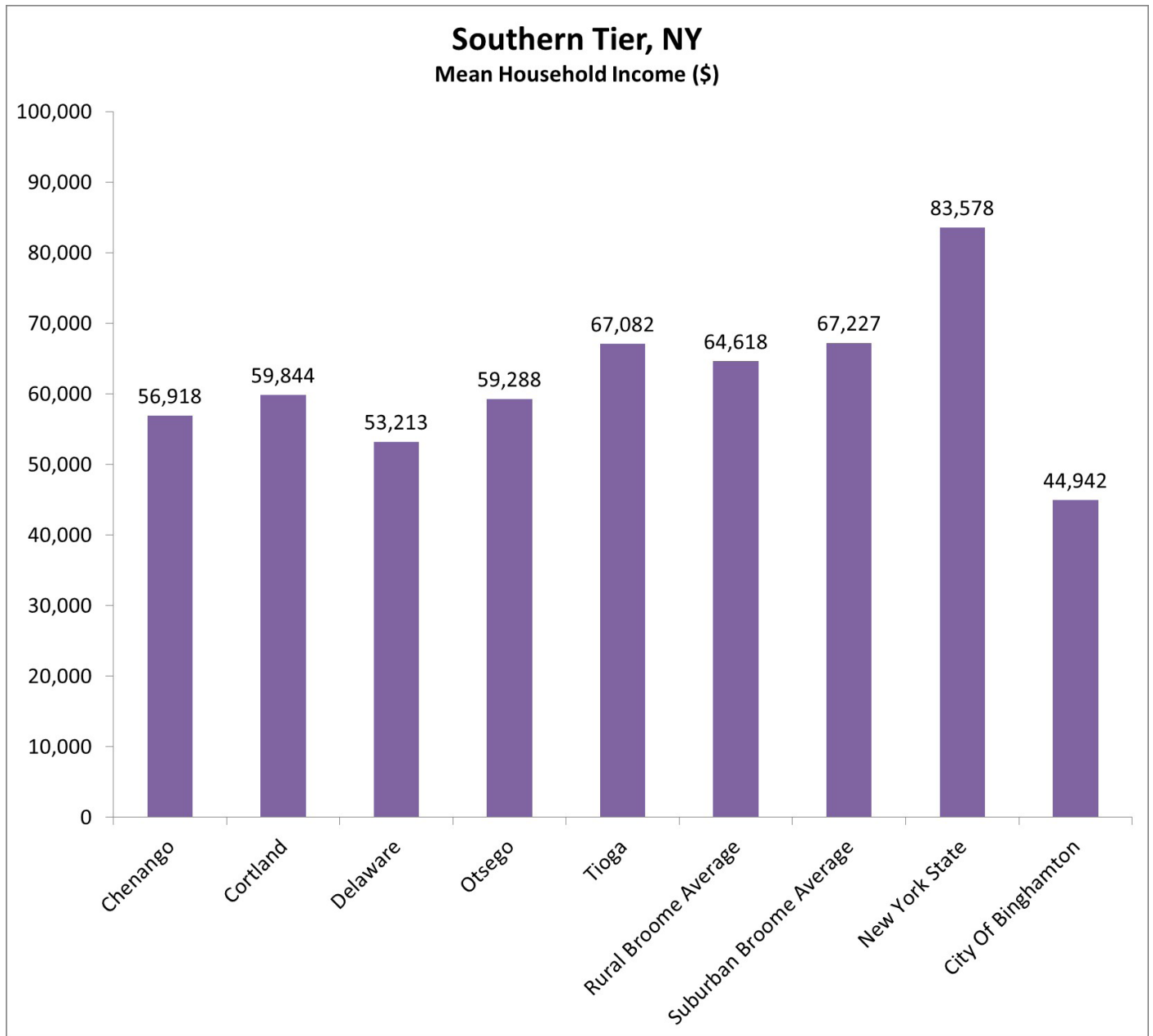
Economic Characteristics of Rural Broome County

Fig. 16. Southern Tier Median Household Income



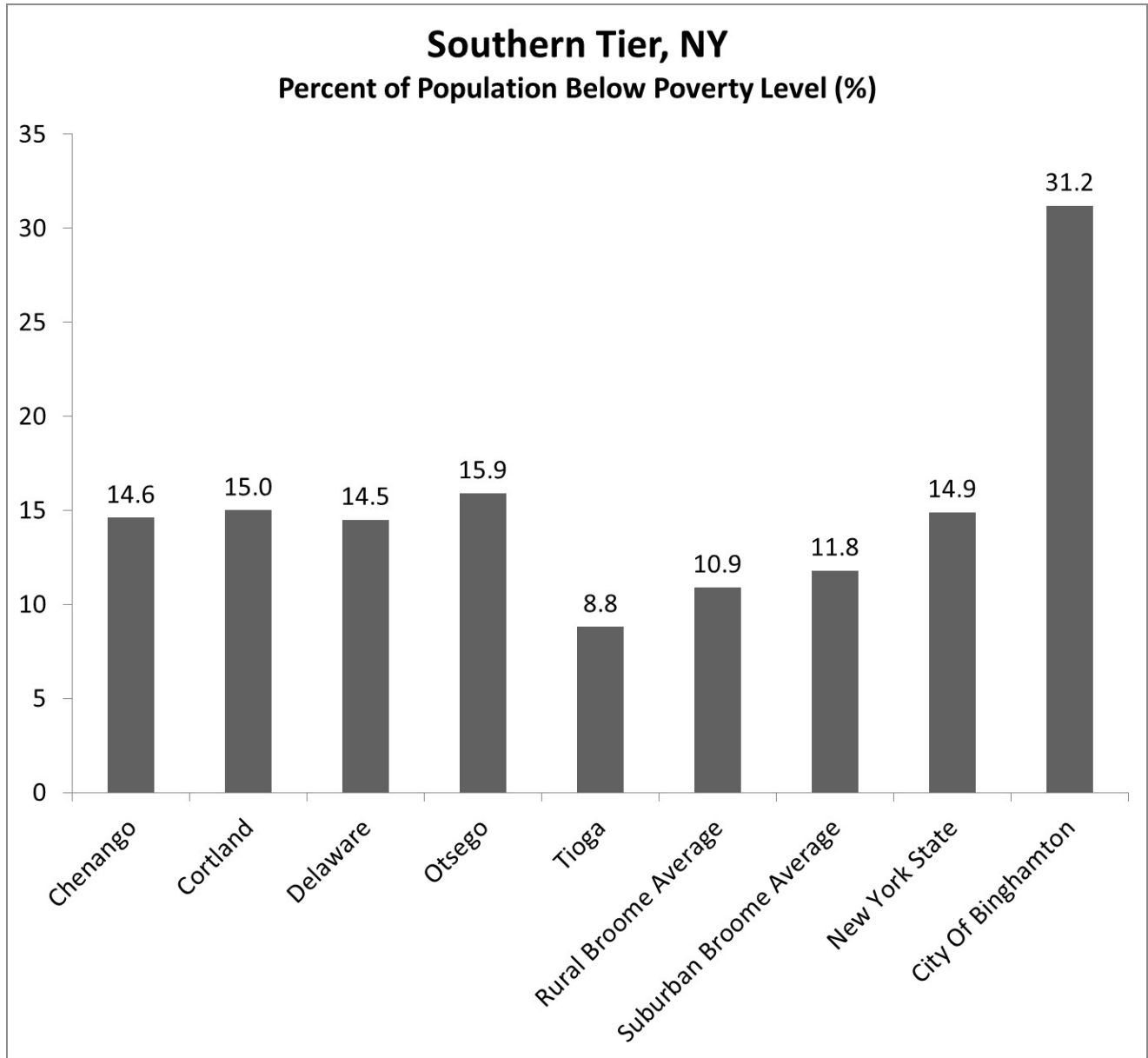
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 17. Southern Tier Mean Household Income



Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 18. Southern Tier Percent of Population Below Poverty Level



Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 19. 2015 Poverty Guidelines

2015 POVERTY GUIDELINES
ALL STATES (EXCEPT ALASKA AND HAWAII) AND D.C.

ANNUAL GUIDELINES

FAMILY SIZE	PERCENT OF POVERTY GUIDELINE										
	100%	120%	133%	135%	140%	145%	150%	175%	185%	200%	250%
1	11,770.00	14,124.00	15,654.10	15,889.50	16,478.00	17,066.50	17,655.00	20,597.50	21,774.50	23,540.00	29,425.00
2	15,930.00	19,116.00	21,186.90	21,505.50	22,302.00	23,098.50	23,895.00	27,877.50	29,470.50	31,860.00	39,825.00
3	20,090.00	24,108.00	26,719.70	27,121.50	28,126.00	29,130.50	30,135.00	35,157.50	37,166.50	40,180.00	50,225.00
4	24,250.00	29,100.00	32,252.50	32,737.50	33,950.00	35,162.50	36,375.00	42,437.50	44,862.50	48,500.00	60,625.00
5	28,410.00	34,092.00	37,785.30	38,353.50	39,774.00	41,194.50	42,615.00	49,717.50	52,558.50	56,820.00	71,025.00
6	32,570.00	39,084.00	43,318.10	43,969.50	45,598.00	47,226.50	48,855.00	56,997.50	60,254.50	65,140.00	81,425.00
7	36,730.00	44,076.00	48,850.90	49,585.50	51,422.00	53,258.50	55,095.00	64,277.50	67,950.50	73,460.00	91,825.00
8	40,890.00	49,068.00	54,383.70	55,201.50	57,246.00	59,290.50	61,335.00	71,557.50	75,646.50	81,780.00	102,225.00

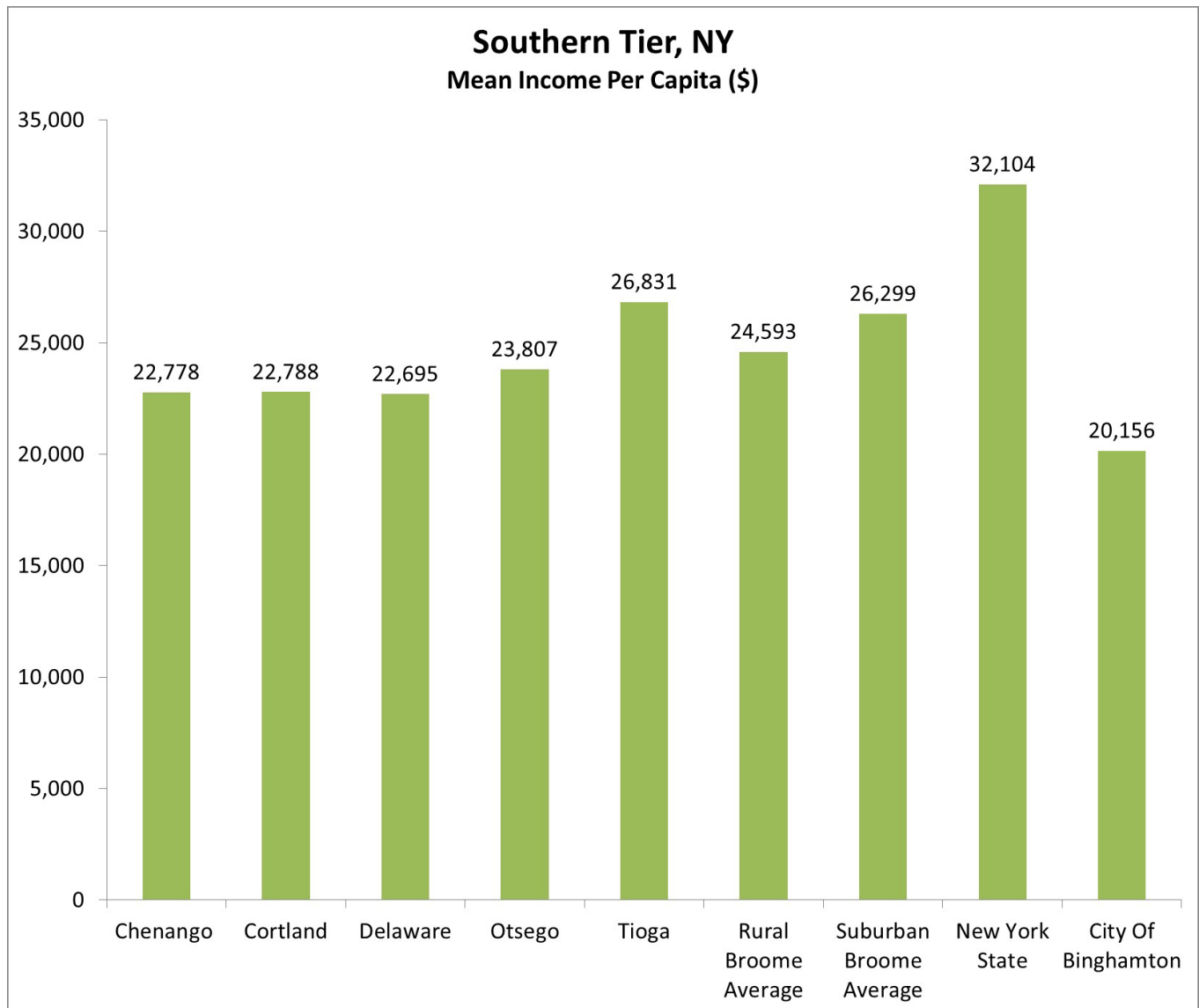
For family units of more than 8 members, add \$4,160 for each additional member.

MONTHLY GUIDELINES

FAMILY SIZE	PERCENT OF POVERTY GUIDELINE										
	100%	120%	133%	135%	140%	145%	150%	175%	185%	200%	250%
1	987.83	1,177.00	1,304.51	1,324.13	1,373.17	1,422.21	1,471.25	1,716.46	1,814.54	1,961.67	2,452.08
2	1,327.50	1,593.00	1,765.58	1,792.13	1,868.50	1,924.88	1,991.25	2,323.13	2,455.88	2,655.00	3,318.75
3	1,674.17	2,009.00	2,226.64	2,260.13	2,343.83	2,427.54	2,511.25	2,929.79	3,097.21	3,348.33	4,185.42
4	2,020.83	2,425.00	2,687.71	2,728.13	2,829.17	2,930.21	3,031.25	3,536.46	3,738.54	4,041.67	5,052.08
5	2,367.50	2,841.00	3,148.78	3,196.13	3,314.50	3,432.88	3,551.25	4,143.13	4,379.88	4,735.00	5,918.75
6	2,714.17	3,257.00	3,609.84	3,664.13	3,799.83	3,935.54	4,071.25	4,749.79	5,021.21	5,428.33	6,785.42
7	3,060.83	3,673.00	4,070.91	4,132.13	4,265.17	4,438.21	4,591.25	5,356.46	5,662.54	6,121.67	7,652.08
8	3,407.50	4,089.00	4,531.98	4,600.13	4,770.50	4,940.88	5,111.25	5,963.13	6,303.88	6,815.00	8,518.75

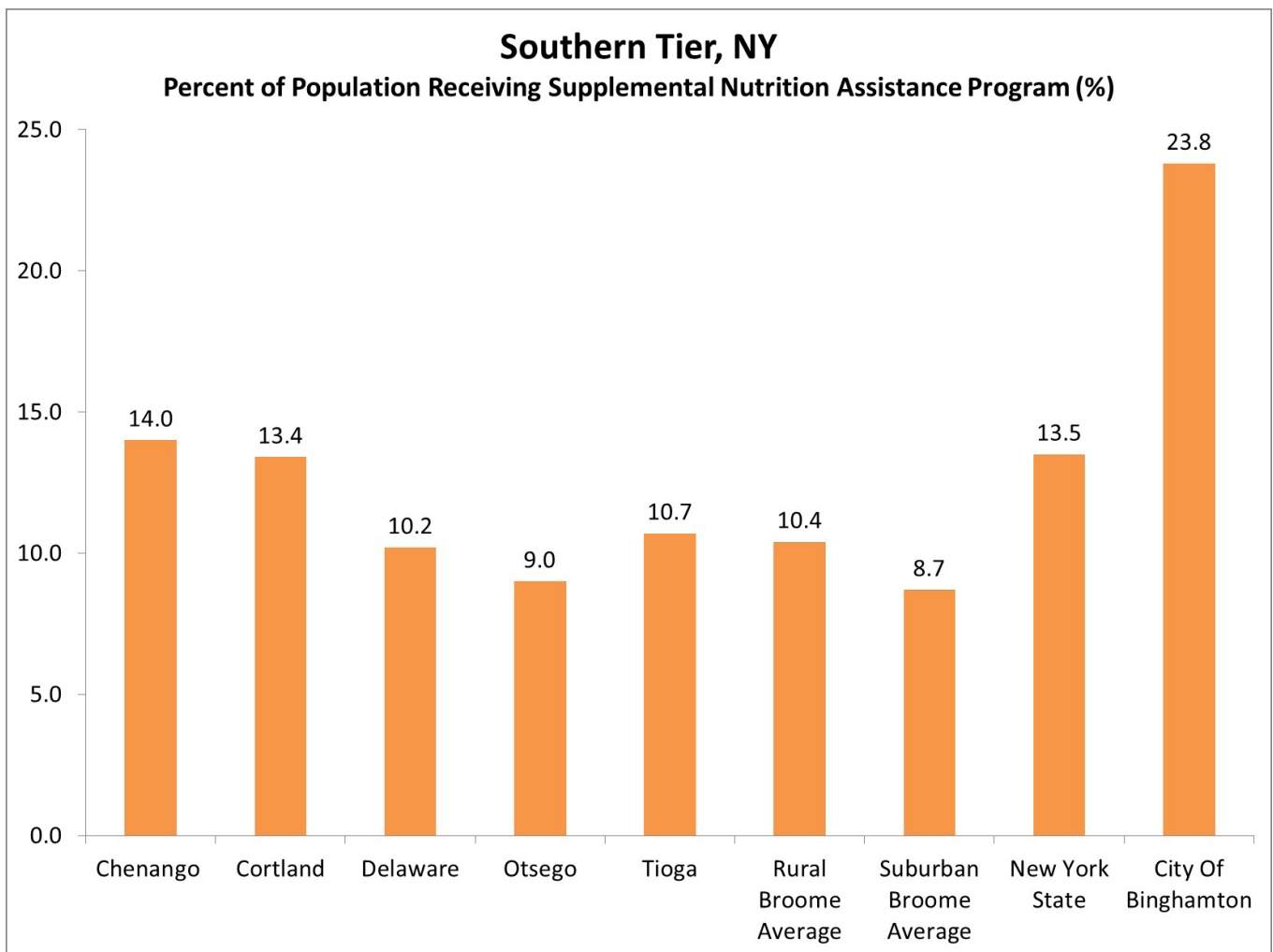
Source: Centers for Medicare & Medicaid Services, Medicaid.gov

Fig. 20. Southern Tier Mean Income Per Capita



Source: U.S. Census Bureau, 2008-2012 American Community Survey

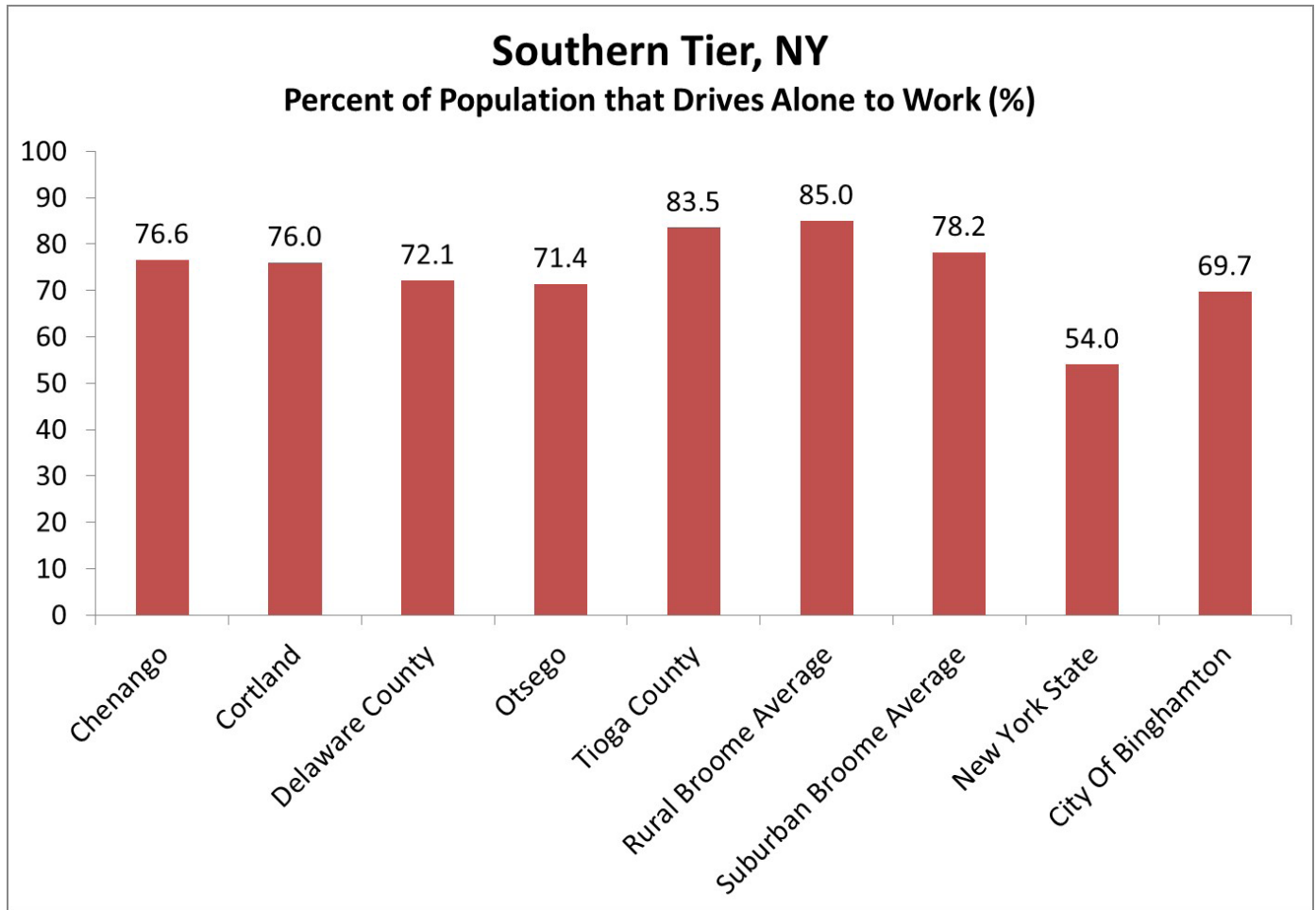
Fig. 21. Southern Tier Percent of Population Receiving Supplemental Nutrition Assistance Program



Source: U.S. Census Bureau, 2008-2012 American Community Survey

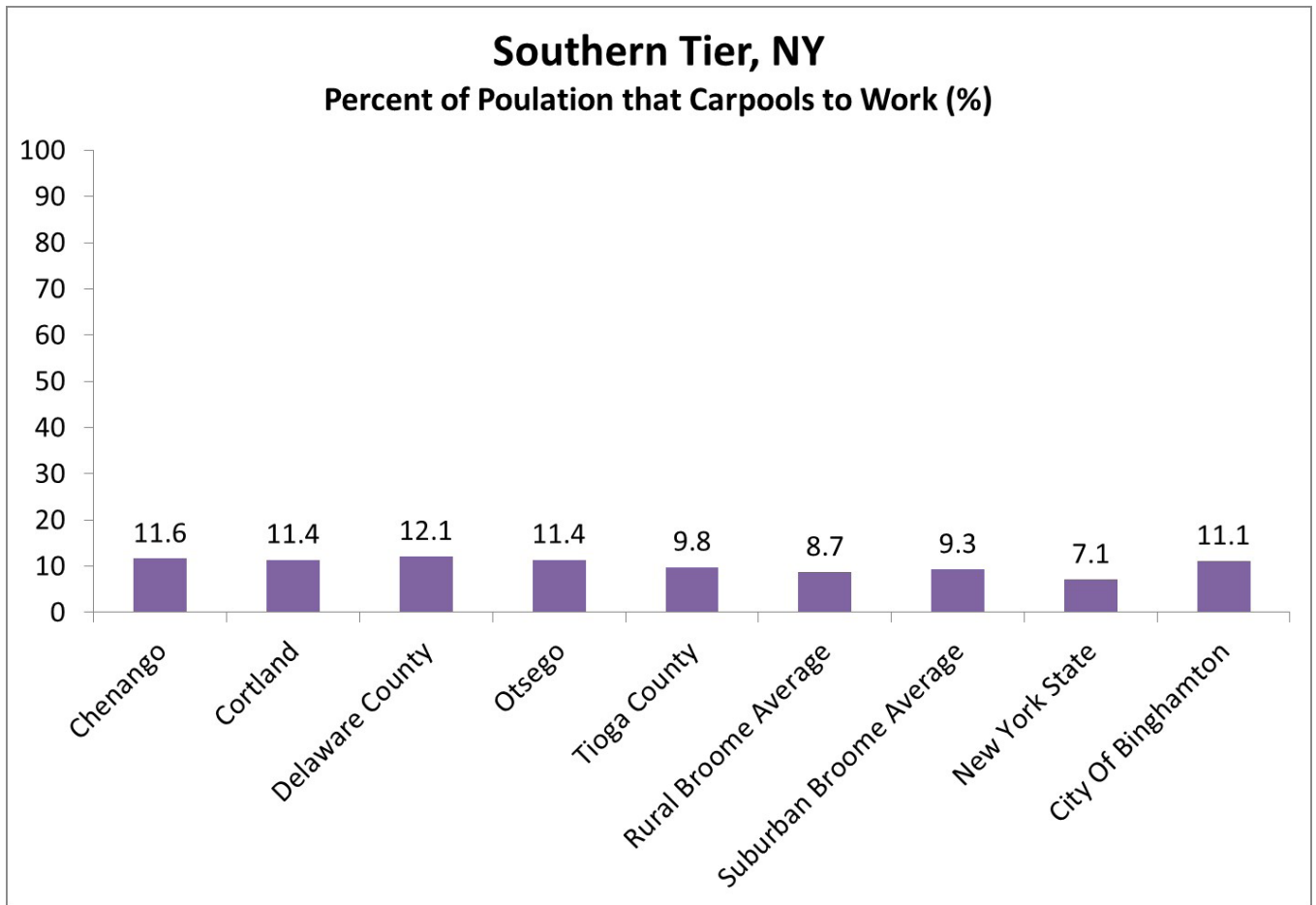
Employment Characteristics of Rural Broome County

Fig. 22. Southern Tier Percent of Population that Drives Alone to Work



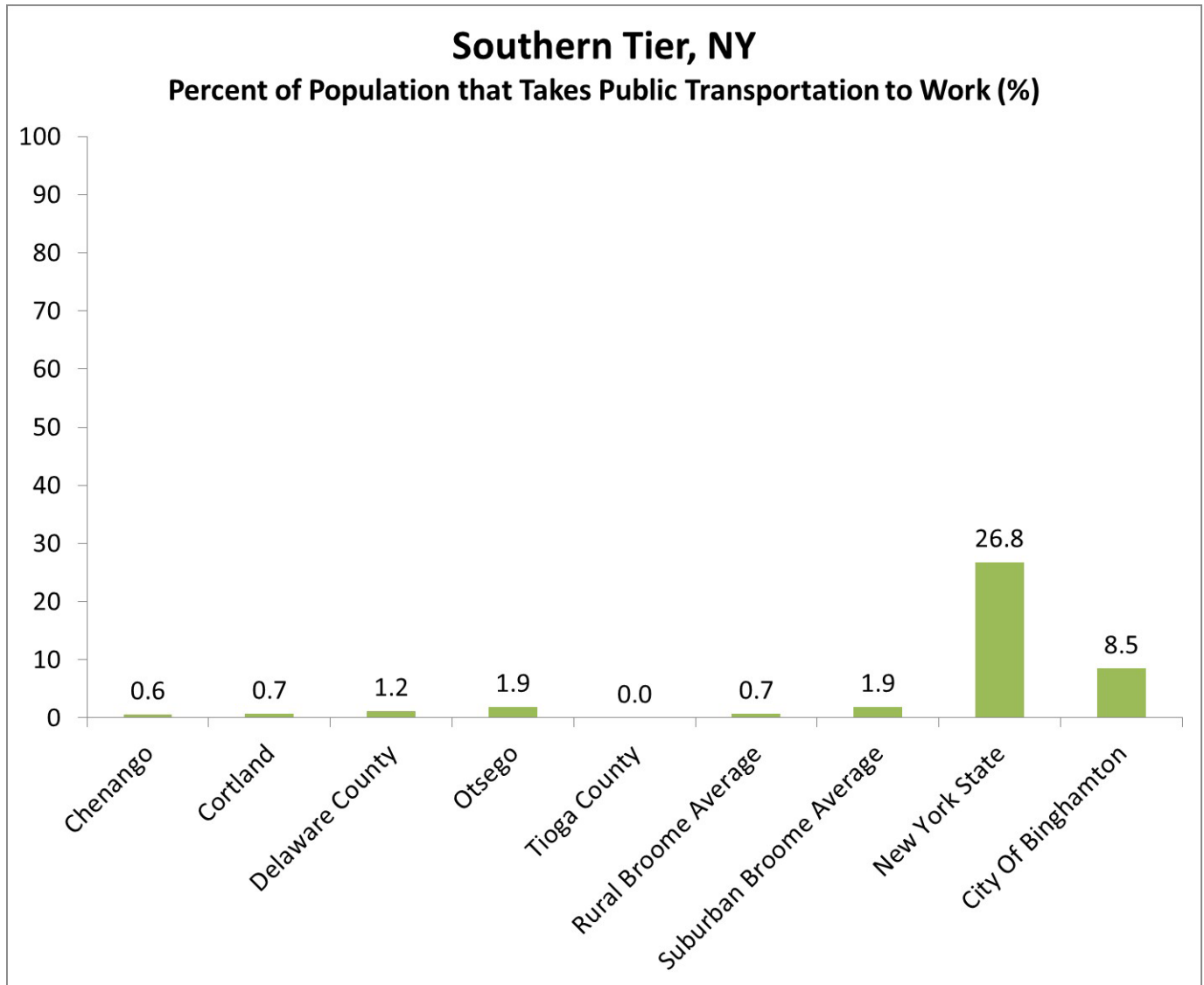
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 23. Southern Tier Percent of Population that Carpools to Work



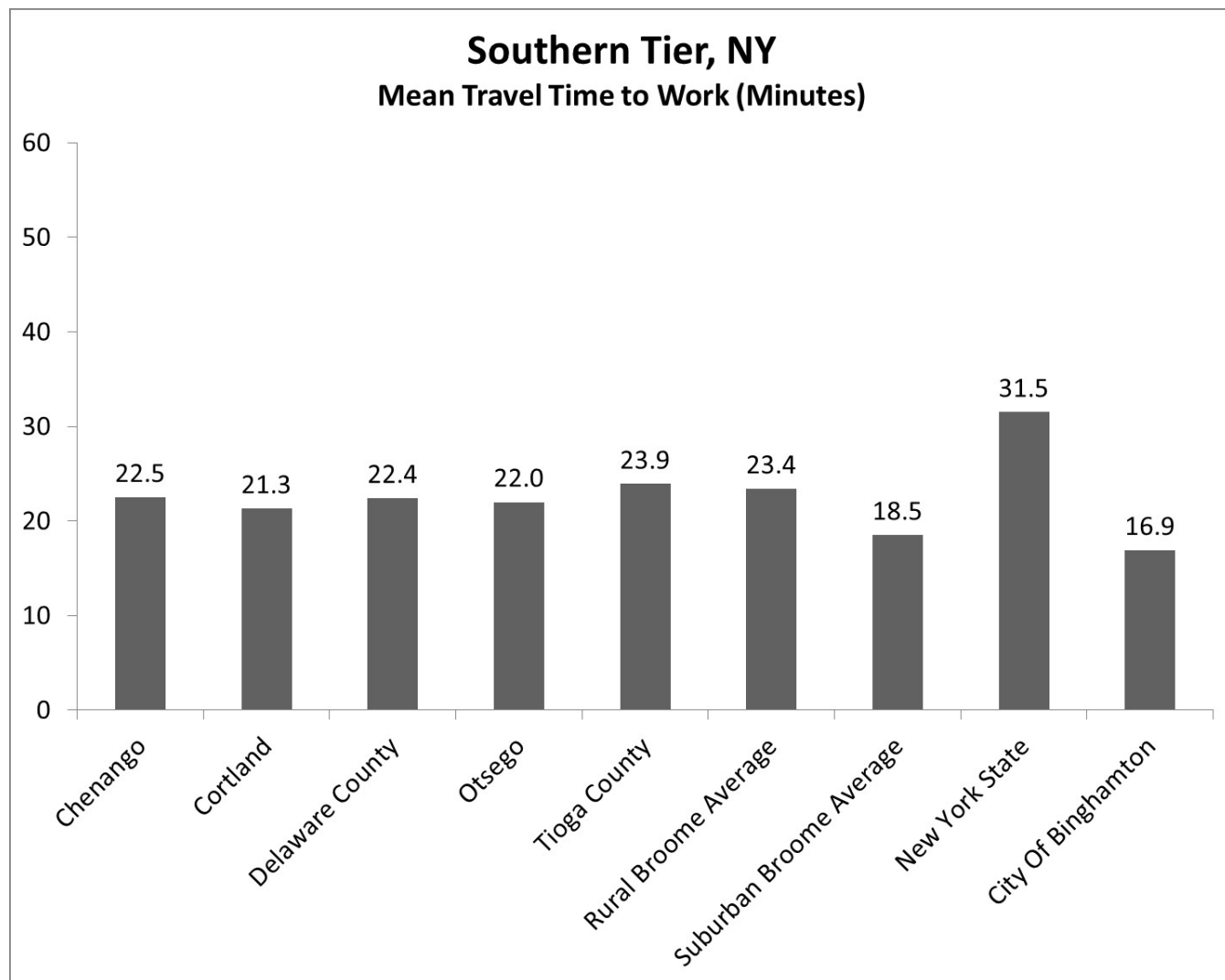
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 24. Southern Tier Percent of Population that Takes Public Transportation to Work



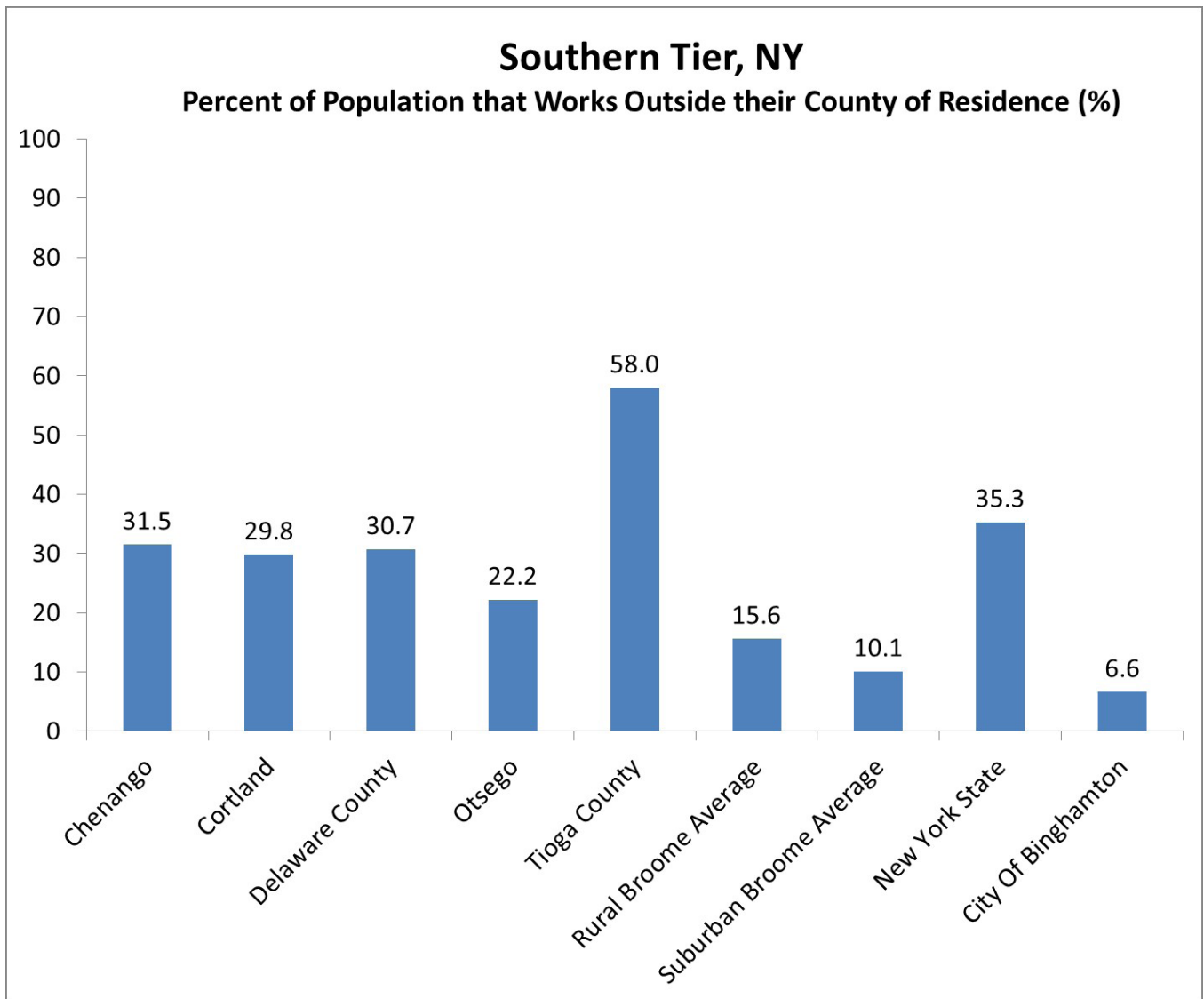
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 25. Southern Tier Mean Travel Time to Work



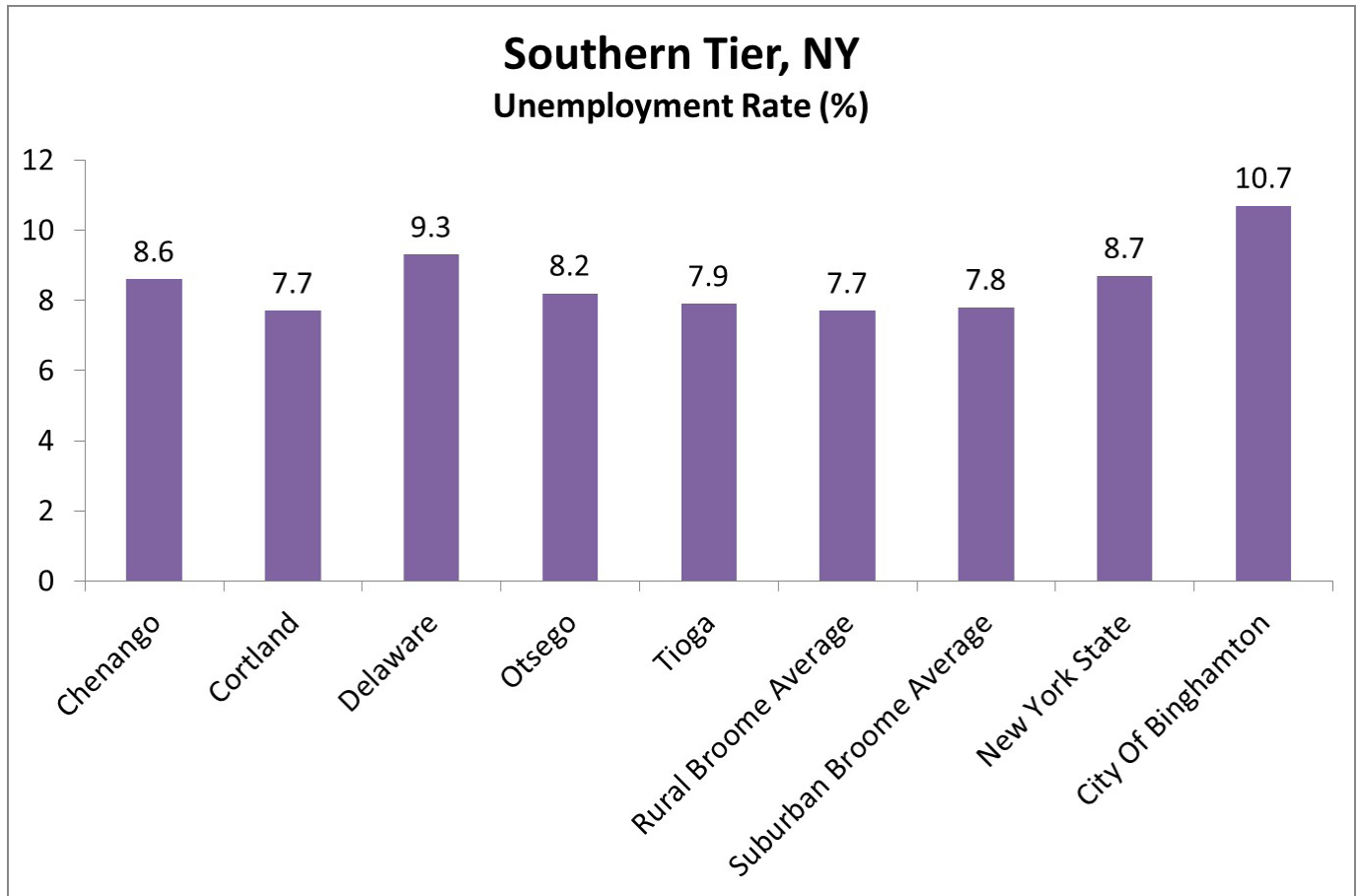
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 26. Southern Tier Percent of Population that Works Outside their County of Residence



Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 27. Southern Tier Unemployment Rate



Source: U.S. Census Bureau, 2008-2012 American Community Survey

Rural Broome County Sub-Regions Comparison

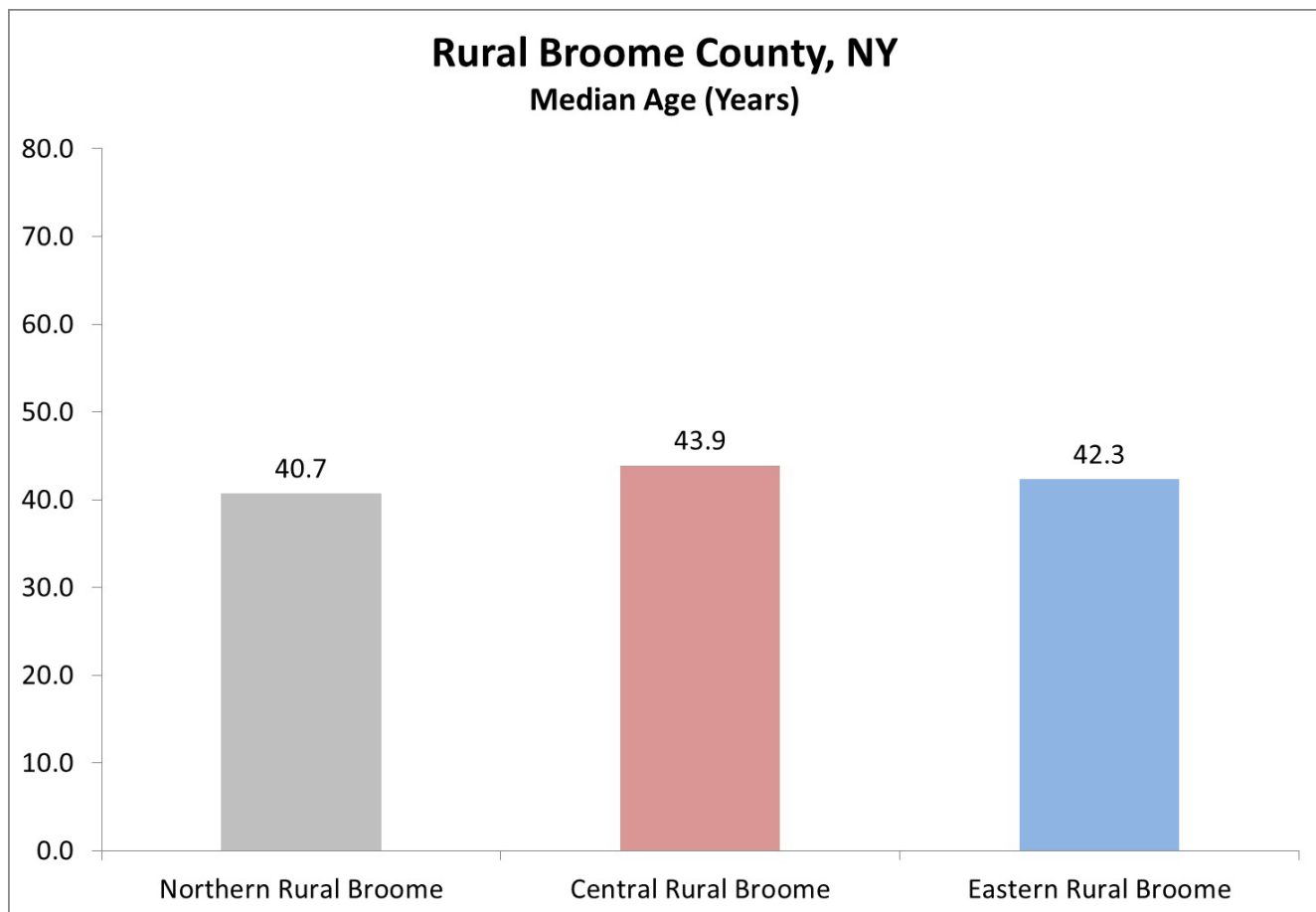
The following graphs compare three different regions of rural Broome using data available through the American Community Survey.

Northern Rural Broome consists of: Lisle, Triangle, Nanticoke, Barker, and Maine (population 15,280)

Central Rural Broome consists of: Town of Binghamton, Kirkwood, and Fenton (population 17,406)

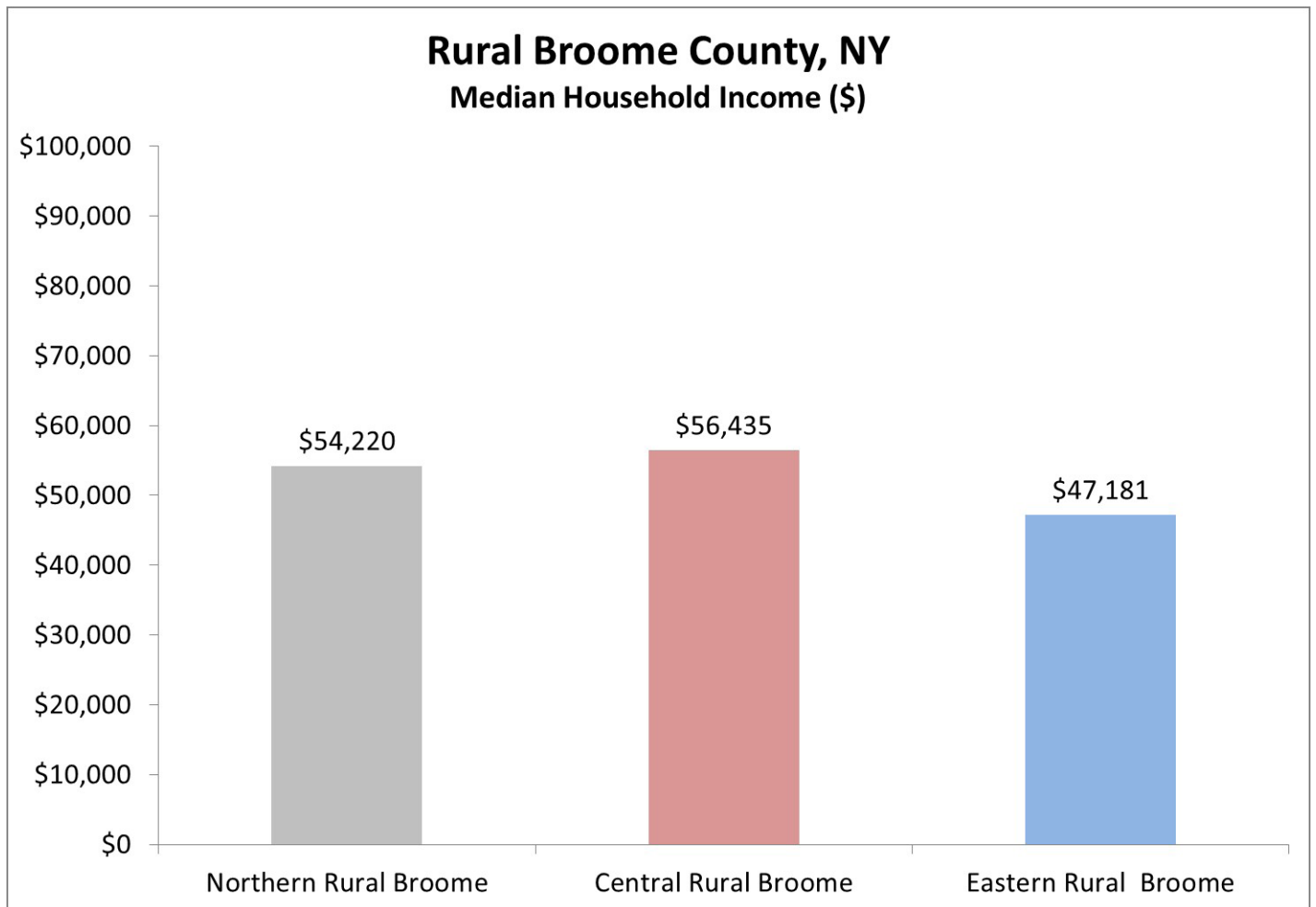
Eastern Rural Broome consists of: Colesville, Windsor, and Sanford (population 14,050)

Fig. 28. Rural Broome County Median Age



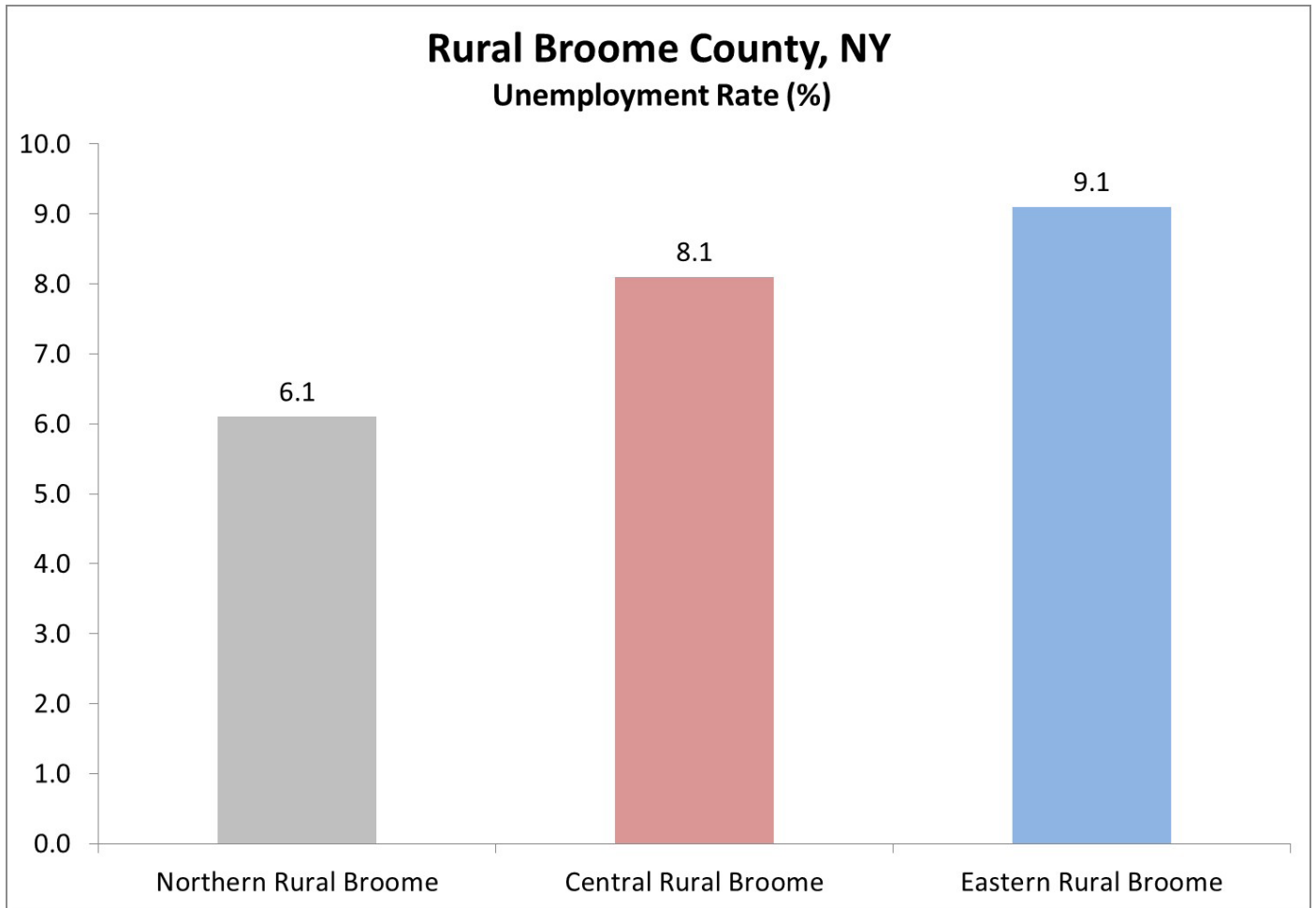
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 29. Rural Broome County Median Household Income



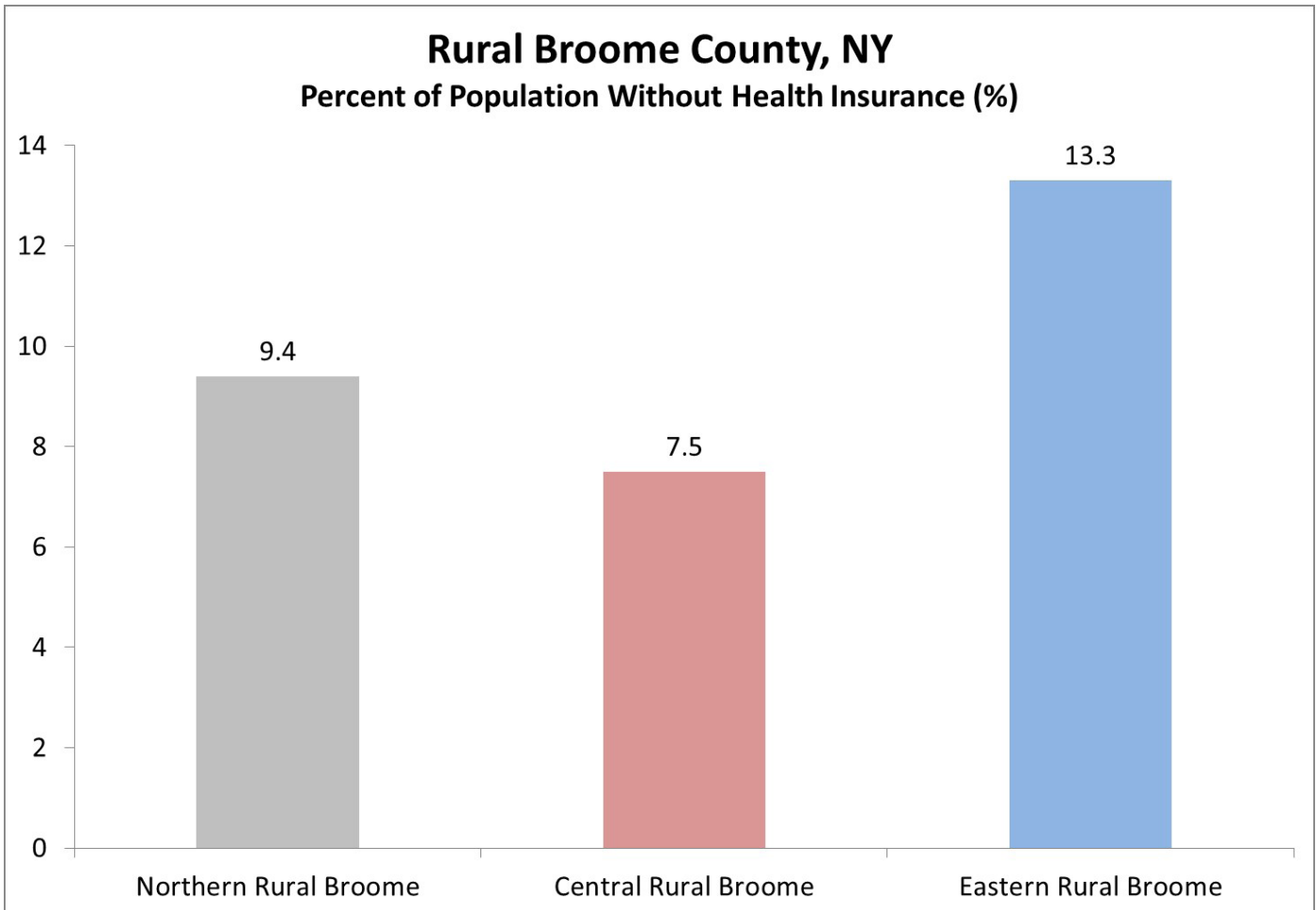
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 30. Rural Broome County Unemployment Rate



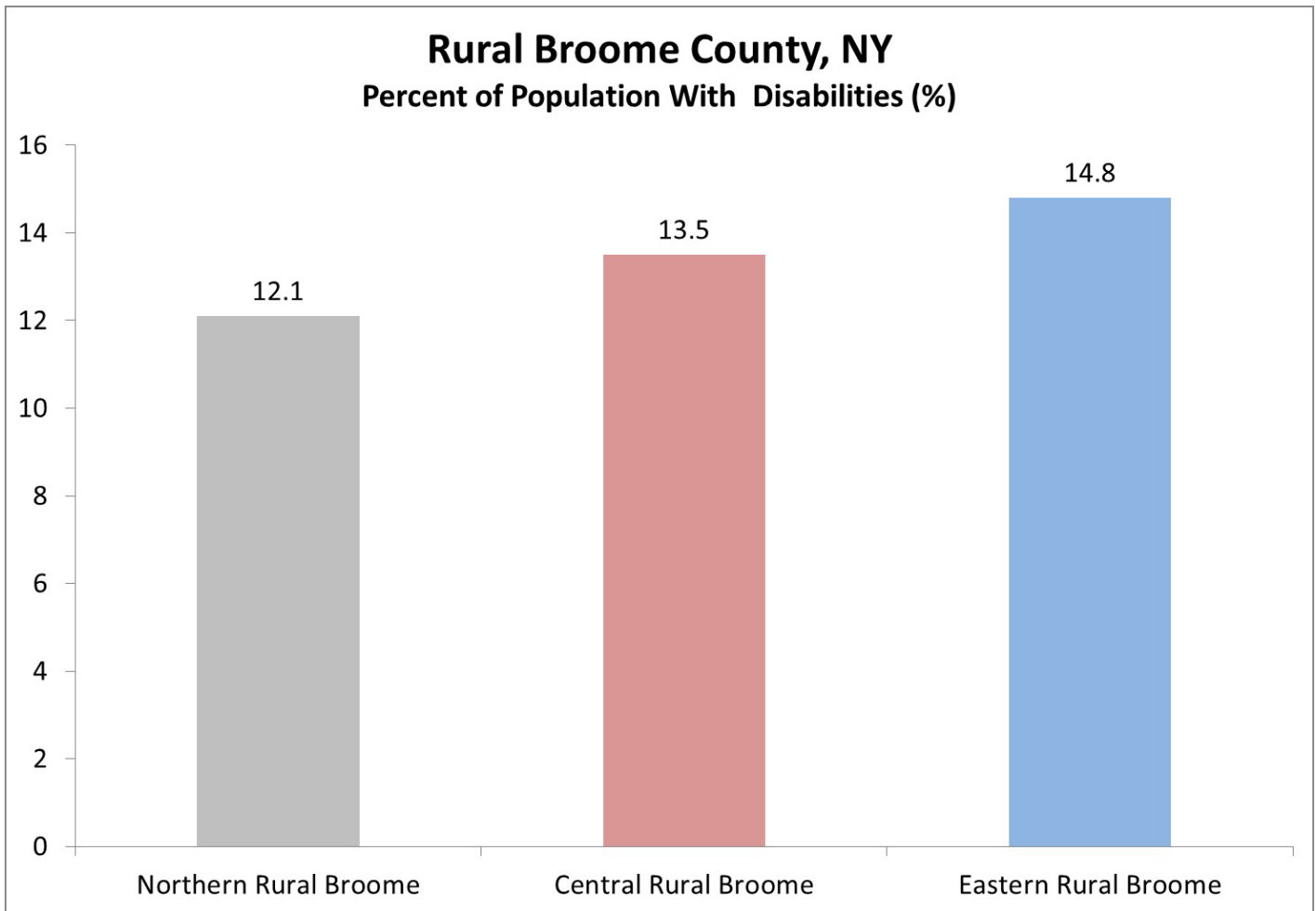
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 31. Rural Broome County Percent of Population Without Health Insurance



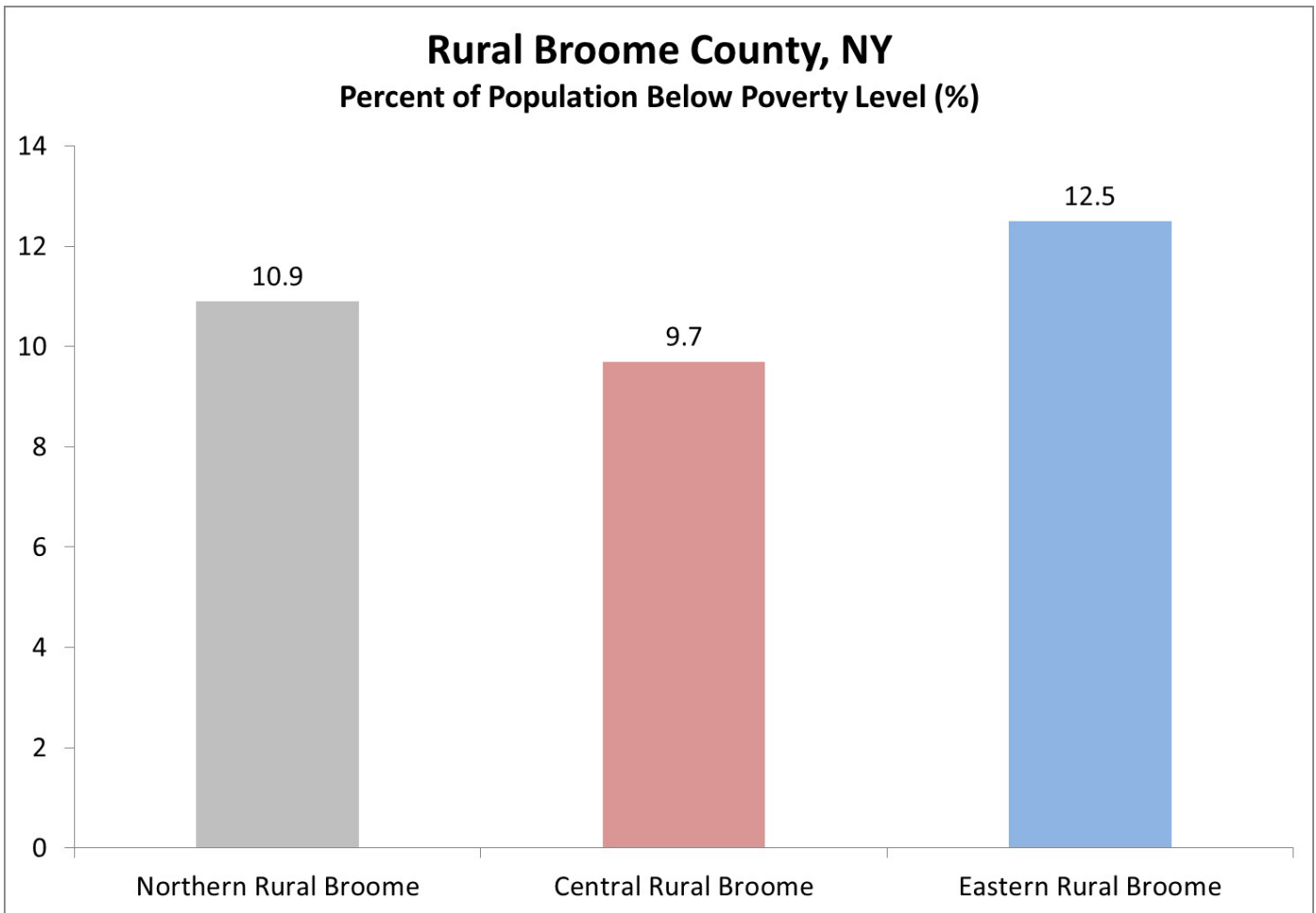
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 32. Rural Broome County Percent of Population With Disabilities



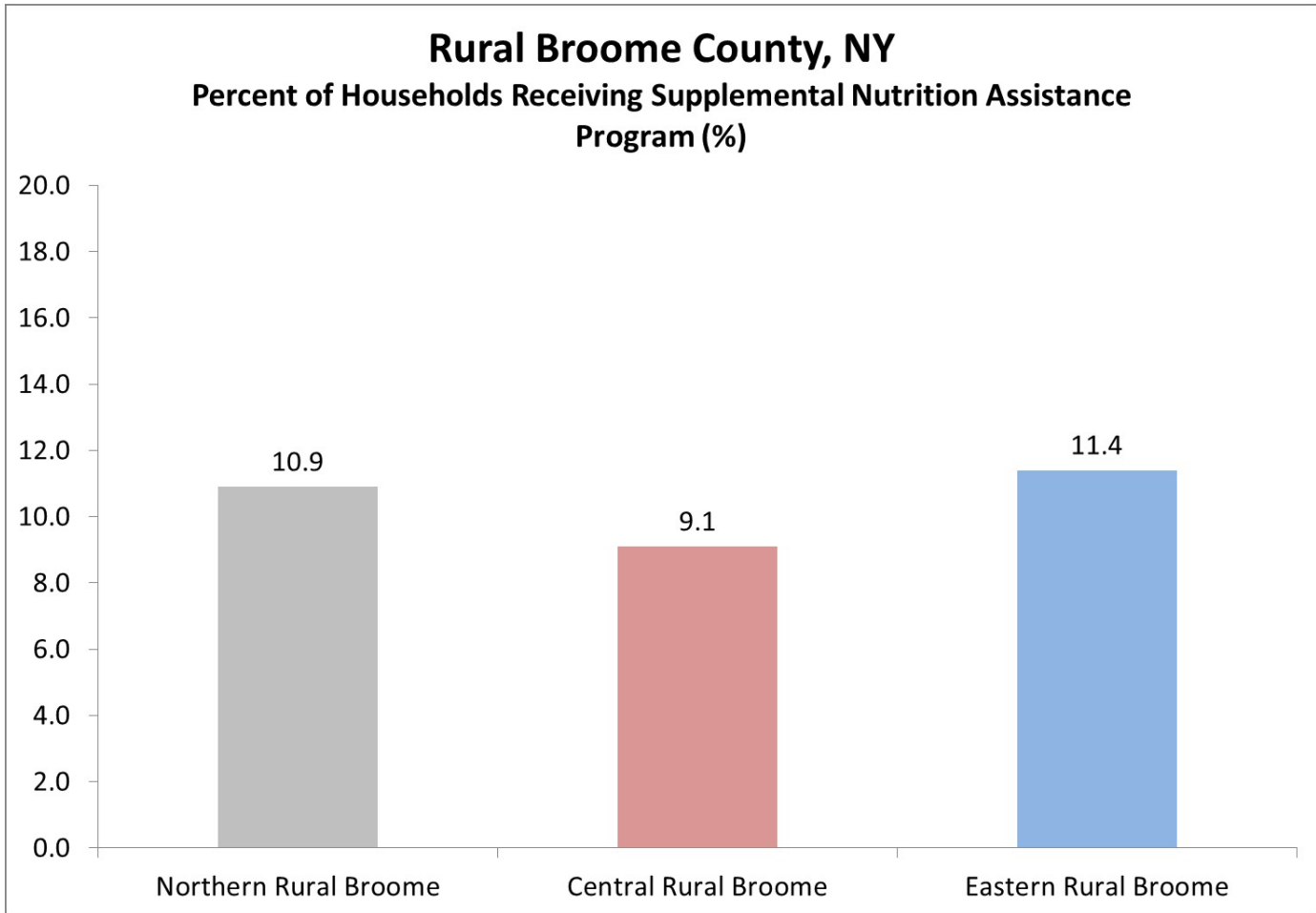
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 33. Rural Broome County Percent of Population Below Poverty Level



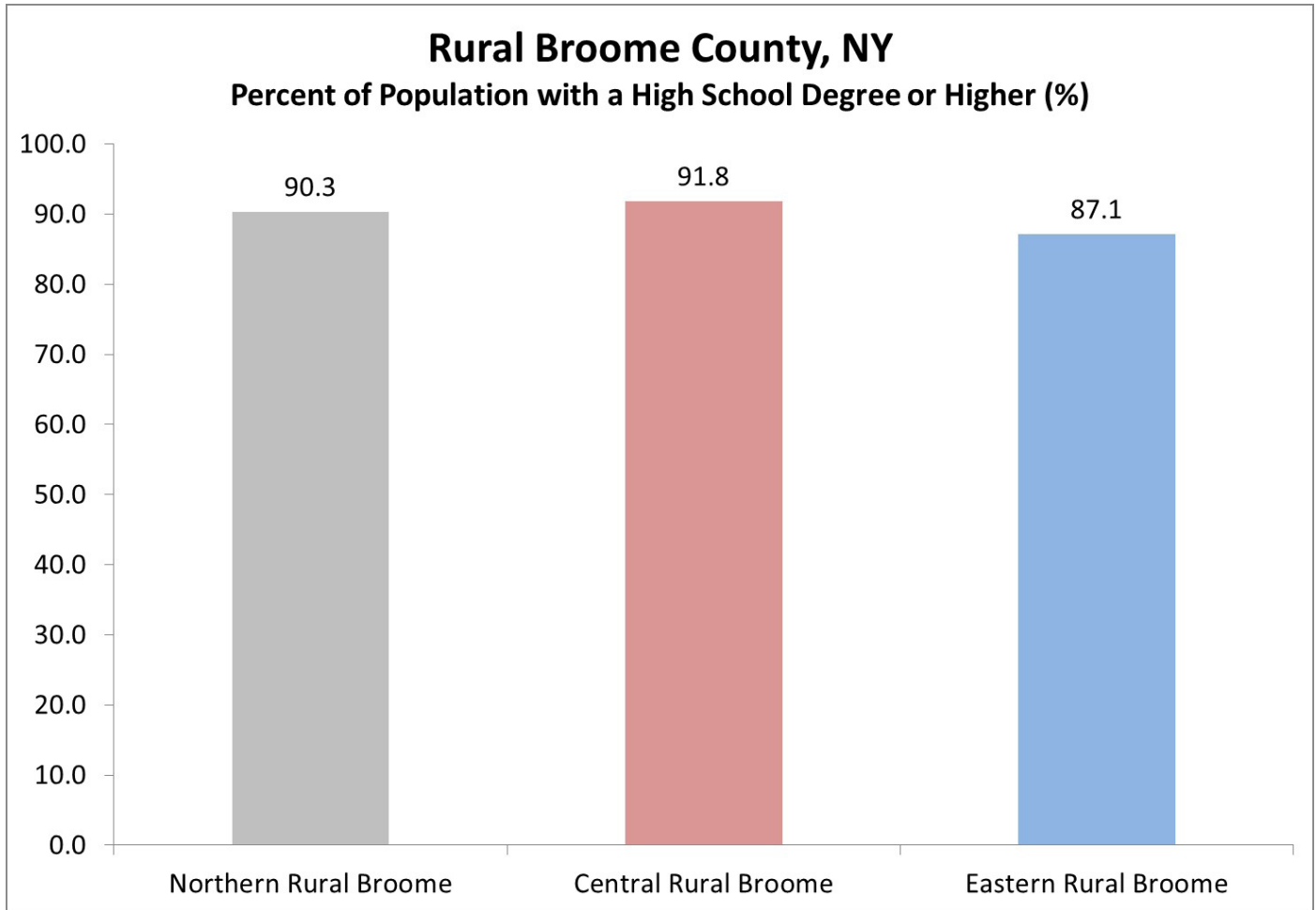
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 34. Rural Broome County Percent of Households Receiving Supplemental Nutrition Assistance Program



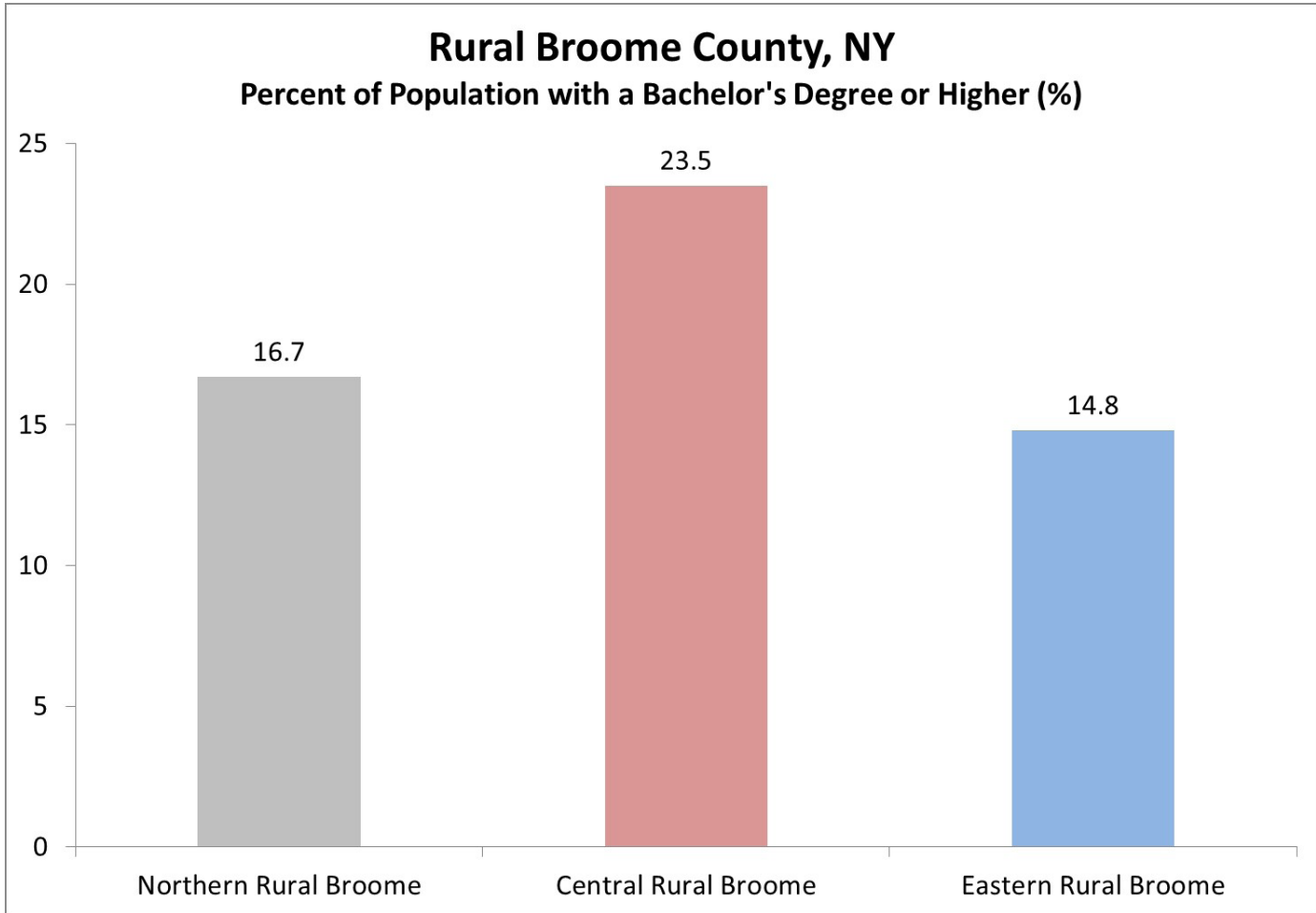
Source: U.S. Census Bureau, 2008-2012 American Community Survey

Fig. 35. Rural Broome County Percent of Population with a High School Degree or Higher



Source: U.S. Census Bureau, 2008-2012 American Community Survey

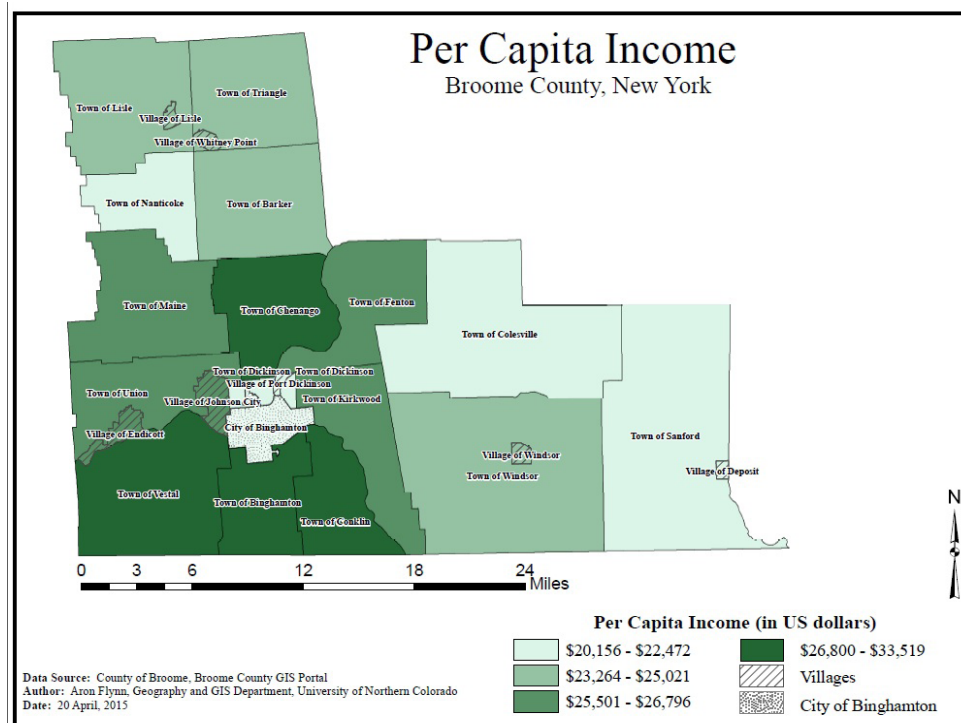
Fig. 36. Rural Broome County Percent of Population with a Bachelor's Degree or Higher



Source: U.S. Census Bureau, 2008-2012 American Community Survey

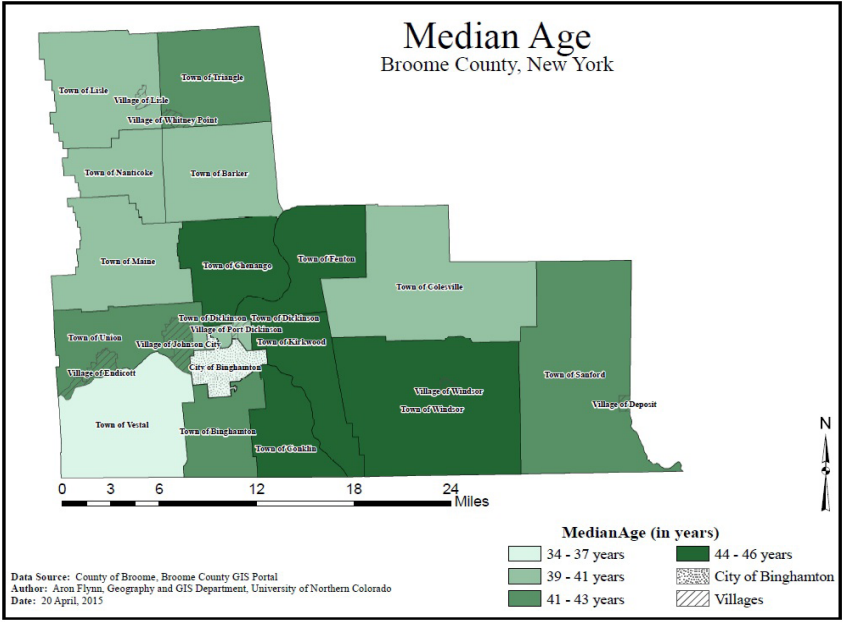
Demographics

Fig. 37. Per Capita Income Broome County



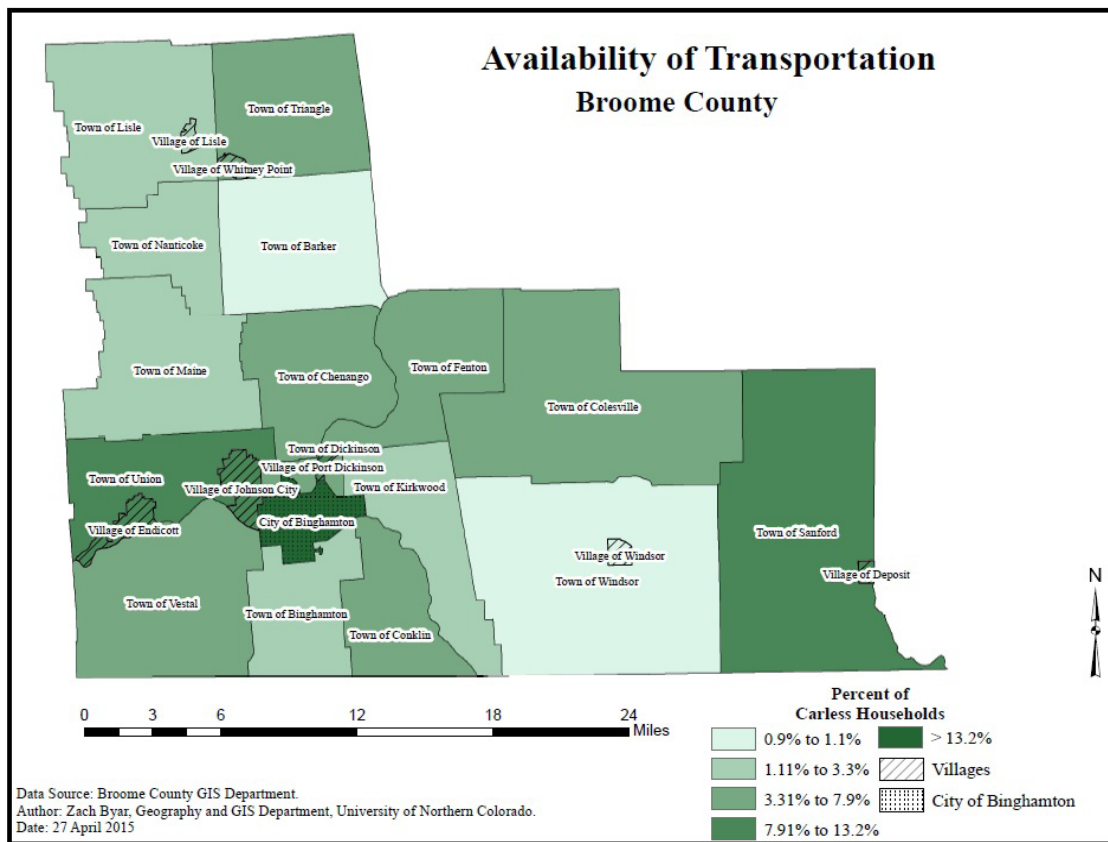
Source: Geography and GIS Department, University of Northern Colorado

Fig. 38. Median Age Broome County



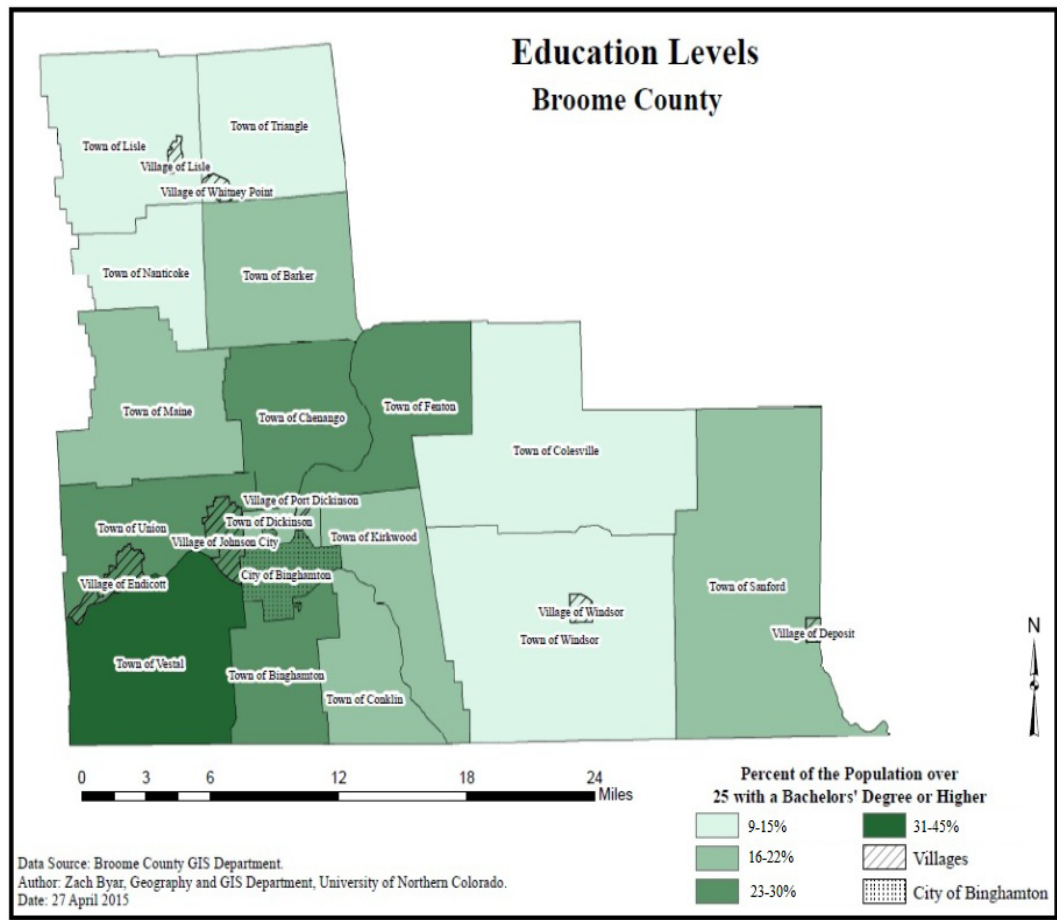
Source: Geography and GIS Department, University of Northern Colorado

Fig. 39. Availability of Transportation Broome County



Source: Geography and GIS Department, University of Northern Colorado

Fig. 40. Education Levels Broome County



Source: Geography and GIS Department, University of Northern Colorado

Definitions of Rural

The concept of rurality has been defined in many ways, both conceptually and analytically. At the level of the federal government, 15 different definitions exist to define rural and urban or non-metropolitan and metropolitan areas.¹ When these definitions are applied to the U.S., the portion of the population living in rural areas ranges from 17 to 49 percent.² Each agency uses its own definition to compile statistics, determine program eligibility, and create funding opportunities. Therefore, it is important to distinguish which definition is being used when confronting information about a rural population.

The Rural Assistance Center has created an

1.) Coburn, A., MacKinney, A., McBride, T., Mueller, K., Slifkin, R., & Wakefield, M. (2007). Choosing Rural Definitions: Implications for Health Policy. Rural Policy Research Institute Health Panel, Issue Brief #2. Retrieved from: <http://www.rupri.org/Forms/RuralDefinitionsBrief.pdf>.

2.) Cromartie, J., & Bucholtz, S. (2008). Defining the "Rural" in Rural America: The use of different definitions of rural by Federal agencies reflects the multidimensional qualities of rural America. USDA, Economic Research Service. Amber Waves. Retrieved from: <http://ers.usda.gov/amber-waves/2008-june/defining-the-%E2%80%9C-rural%E2%80%9D-in-rural-america.aspx>.

"Am I Rural?" tool that allows a user to enter an address and determine his or her geographic categorization, according to several different definitions, and the corresponding eligibility for certain programs.³ Other rural definition tools exist, but they vary in their applications.⁴

The following table contains some of the most common definitions of rural, as well as more specialized definitions for application in New York State.

3.) Rural Assistance Center. (2015). Am I Rural? Rural Assistance Center. Retrieved from: <http://www.raconline.org/amirural/tool>.

4.) La Caille John, P., & Reynnells, L. (2014). What is Rural? USDA, National Agricultural Library, Rural Information Center. Retrieved from: <http://ric.nal.usda.gov/what-is-rural>.

Fig. 41. Rural Definitions

Rural Definitions			
Agency/Tool	Definition	Broome County	Potential Application
U.S. Census Bureau: Urbanized Area (UA)	Rural areas are everything outside of urbanized areas or urban clusters. Urbanized areas have a population of at least 50,000 and urban clusters have a population between 2,500 and 50,000. Both urbanized areas and urban clusters have a population density of 1,000 persons per square mile. The definition extends to include adjacent census blocks with at least 500 people per square mile.	Everything outside the Binghamton Urbanized Area is rural. Most towns in Broome County are at least partially, if not wholly, considered rural.	Centers for Medicare and Medicaid Services: Rural Health Clinics Program
U.S. Office of Management and Budget (OMB): Core Based Statistical Areas or Metropolitan and Nonmetropolitan	OMB classifies this data at the county level. A metropolitan county has an urban core with a population of 50,000 or more. Nonmetropolitan counties include micropolitan areas, with an urban core population of 10,000 to 50,000, and noncore areas, with no urban core.	Broome County is metropolitan under this designation.	N/A
Economic Research Service, U.S. Dept. of Agriculture: Rural Urban Commuting Area (RUCA) Codes	Classifies census tracts into 33 different categories based on population density, commuting trends, and relationships between different areas. The data sources are the American Community Survey as well as the U.S. Census. Agencies that use this definition collapse the categories in different ways based on their needs.	Broome County contains areas coded as 1 and 2 for RUCA codes. These are generally considered metropolitan.	Federal Office of Rural Health Policy: Rural Health Care Services Outreach Grant Program, Rural Health Network Development Program
New York State Office of Rural Health	Rural counties have populations less than 200,000. Rural towns have a population density less than 200 persons per square mile. Towns with less than 250 persons per square mile are considered rural with special permission granted from the NYS Office of Rural Health.	Barker, the Town of Binghamton, Colesville, Fenton, Kirkwood, Lisle, Maine, Nanticoke, Sanford, Triangle, and Windsor are rural.	New York State: Rural Health Network Development Program

Additional References

- 1.) Cromartie, J., & Bucholtz, S. (2007). Rural Definitions: State Level Maps, New York. United States Department of Agriculture, Economic Research Service. Retrieved from: http://www.ers.usda.gov/datafiles/Rural_Definitions/StateLevel_Maps/NY.pdf.
- 2.) New York State Department of Health, Office of Health Systems Management, Division of Health Facility Planning, Charles D. Cook Office of Rural Health. Request for Applications: Rural Health Network Development Program. (2012). Retrieved from: <https://www.health.ny.gov/funding/rfa/inactive/1207271020/1207271020.pdf>.

Poverty



Introduction

Poverty is a “condition where people’s basic needs for food, clothing, and shelter are not being met”.¹ Living in poverty in a rural area can amplify the challenges an individual faces in trying to meet basic needs, as services, providers, and employment opportunities are often difficult to access. Thus, rural poverty has overarching impacts on the health, well-being, and lifestyle of individuals and their families. Urbanization and globalization have reduced economic opportunities and increased poverty in rural areas. Upstate New York and Broome County have not been immune to these trends. However, recent initiatives and programs have been working to combat rural poverty.

Broome County Economy

Binghamton, NY, the county seat of Broome County, was the birthplace of Endicott-Johnson, International Business Machines (IBM), and Link Flight Simulation, among others.² During the manufacturing boom, ample jobs and economic opportunities were available to rural and urban residents alike. However, national mechanization and globalization trends have meant a decline in manufacturing jobs in the area. That trend continues today; between 2005 and 2011, the county’s manufacturing sector saw a loss of 6,800 jobs.³

In rural areas, small, family-owned farms and low-skilled agricultural employment opportunities were the norm, allowing families to earn a modest living. Changes in agricultural methods and scale resulted in a decrease of family-owned farms and a consequent decline in employment in rural areas.

1.) Poverty. Business Dictionary.com. <http://www.businessdictionary.com/definition/poverty.html>.

2.) Broome County Local History and Genealogy Center. (n.d.) Broome County History Brochure. <http://www.gobroomecounty.com/files/pdfs/BroomeCountyHistory.pdf>.

3.) Broome County. (2013). Broome County Comprehensive Plan – Building Our Future. Economic Profile. <http://gobroomecounty.com/comprehensiveplan>.

According to the 2013 Broome County Comprehensive Plan, the period between 2001-2011 saw an increase in agricultural sector employment; however a mere 160 individuals were employed in Agriculture, Forestry, Fishing & Hunting in 2011.³

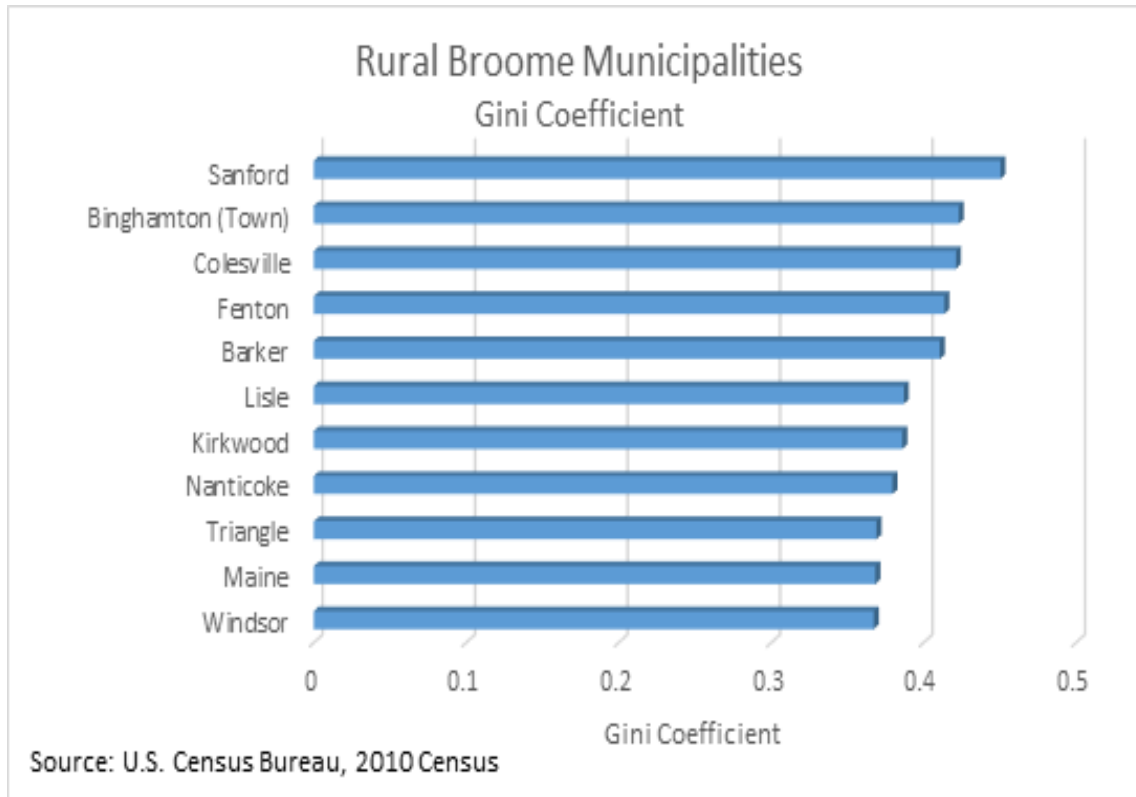
Changes in employment opportunities available in rural areas have led to increasing rates of poverty among rural residents over time. More recently, although both urban and rural areas were hit equally hard by the 2007-2009 recession, urban areas have been more resilient in recovering from the high unemployment rates, while rural areas have seen a decline in the percent of the population participating in the workforce.⁴ Part of this trend may be due to the fact that rural populations tend to be older, with many residents aging out of the workforce.

Although the local region shares in these national trends, the economic picture in Upstate New York is different from the picture in many other parts of the county. While income inequality is an issue here, the gaps are not as significant as in the rest of the nation.⁵ Figure 42 on page 55 depicts the Gini Coefficients for rural Broome municipalities. The Gini Coefficient is a measure of income inequality, where 0 is completely equal and 1 is completely unequal. The greater the coefficient, the greater the income inequality in the area. As the figure shows, Sanford, Town of Binghamton, Colesville, Fenton, and Barker experience the most income inequality among the rural municipalities in Broome County.

4.) Kusmin, L. (2014). Rural America at a Glance, 2014 Edition. EB-26. U.S. Department of Agriculture. <http://www.ers.usda.gov/media/1697681/eb26.pdf>.

5.) Pendall, R. & Christopherson, S. (2004). Losing Ground: Income and Poverty in Upstate New York, 1980-2000. The Brookings Institution. <http://www.brookings.edu/research/reports/2004/09/demographics-pendall>.

Fig. 42. Gini coefficient values, a measure of income inequality, for the rural Broome municipalities.



A report by the Brookings Institution on income and poverty in Upstate New York identifies other pressing economic issues for the region. Skilled professionals here receive lower wages than they do in other regions. Professionals often choose to leave the area for higher wages, creating a void in certain sectors that may further impact the availability of services. Other issues that persist in this region are slow personal income growth across the board and very little income growth among households at the bottom of the income scale. Finally, concentrated poverty, although it is on the decline across the nation, is increasing in Upstate New York.¹

Special Populations

Individuals on either end of the age spectrum—children and the elderly—often experience greater and longer-lasting impacts from living in poverty. Each of these age groups has special needs, which can be much more challenging to meet when living in a low income household in a rural area. As such, researchers place special emphasis on examining the gaps in service for these groups and developing targeted policies and programs to alleviate them.

The White House, in collaboration with the Office of Management and Budget (2015), recently released a report on rural poverty among children.² According to several different measures, the national rural child poverty rate could range from 14.3-23.0%. In Broome County, more than 25% of children under the age of 18 are living in poverty.³ In rural Broome County, 21.1% of children under 18 live in poverty.⁴ “Rural children enter Kindergarten underprepared, are less likely to receive preventative medical and mental health care, and are more food insecure—all of which have lasting impacts on life outcomes,” says the White

1.) Pendall, R. & Christopherson, S. (2004). *Losing Ground: Income and Poverty in Upstate New York, 1980-2000*. The Brookings Institution. <http://www.brookings.edu/research/reports/2004/09/demographics-pendall>.

2.) Council of Economic Advisers, Domestic Policy Council, and Office of Management and Budget. (2015). *Opportunity for All: Fighting Rural Child Poverty*. https://www.whitehouse.gov/sites/default/files/docs/rural_child_poverty_report_final_non-embargoed.pdf.

3.) Broome County Health Department. *Community Health Assessment and Community Health Improvement Plan 2013-2017*. Page 19. <http://gobroomecounty.com/hd/cha>.

4.) “American Community Survey (ACS).” American Community Survey (ACS). Accessed August 10, 2015. <https://www.census.gov/programs-surveys/acs/>.

House Report.²

Demographers predict that the number of older Americans will dramatically increase in the coming decades. With age, the number of disabilities increases, while income often decreases. Despite these challenges, many senior citizens are choosing to “age in place,” or live in their own homes.⁵ Aging in rural areas presents additional challenges, due to the distance to hospitals, pharmacies, grocery stores, and activity centers. Moreover, seniors often live in older homes in need of repair, which present hazards to their health and safety. Health home providers have identified difficulties in providing housing to individuals in need.⁶ Geographic isolation and lack of resources can present serious challenges to older individuals.

Housing can be an issue for rural families as well. Increasingly, rural homelessness is being recognized as an issue, although many agree it is difficult to determine how many individuals it affects.^{7, 8} One report estimates that 14 of every 10,000 rural residents are homeless.⁷ Children who become homeless often experience interruptions in their education and can undergo stress and trauma, which have lasting impacts on their mental health. Service providers agree that the best way to reduce homelessness in rural areas is to prevent it.⁸

Combatting Rural Poverty

With funding to rural poverty programs on the decline, practitioners working in these areas have to become more creative with the resources they have.⁹

5.) Joint Center for Housing Studies of Harvard University. (2014). *Housing America’s Older Adults: Meeting the Needs of an Aging Population*. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs-housing_america_older_adults_2014.pdf.

6.) New York State Department of Health. (2012). *Health Home Supportive Housing Survey Summary*. Health Home Program. https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/docs/hh_supportive_housing_survey_summary.pdf.

7.) Henry, M., & Sermons, M.W. (2010). *Geography of Homelessness*. National Alliance to End Homelessness. http://b3cdn.net/naeh/3953e7051f30801dc6_iim6banq3.pdf.

8.) Wiltz, T. (June 26, 2015). *States Struggle with Hidden Rural Homelessness*. Pew Charitable Trusts. <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/6/26/states-struggle-with-hidden-rural-homelessness>.

9.) Pender, J.L. (2015). *Foundation Grants to Rural Areas from 2005 to 2010: Trends and Patterns*. United States Department of Agriculture Economic Research Services. EIB-141. <http://www.ers.usda.gov/media/1858911/eib141.pdf>.

One example of an innovative response is the Bright Spots program in Appalachia, which searches for the positive deviants or outliers—counties that have the same economic problems as their neighbors, such as poverty and unemployment, but have better health outcomes.¹⁰ Once the program identifies one of these outliers, it works with county residents to determine the source of their success in obtaining better health, and uses those findings to craft solutions to help less successful areas.

10.) Krol, D. (April 1, 2015). Data, Meet Curiosity: Finding Bright Spots in Appalachia. http://www.rwjf.org/en/culture-of-health/2015/03/data_meet_curiosity.html?rid=BPCO7qEkRbz6D2AxIhy5URn04X-KLFMS&et_cid=221812.

Other policies aimed at bringing economic opportunities to rural areas, such as the tax credit program and rural development initiatives, are signs of hope for combatting rural poverty rates.¹¹ With a greater number of rural individuals participating in the workforce, and the resultant increases in personal income, many of the negative impacts that rural poverty can have on individuals and their families will be reversed.

11.) Spies, C. (July 2, 2015). Improvement with a Capital “I”: Tax Credits and Rural Development. *Nonprofit Quarterly*. <http://nonprofitquarterly.org/2015/07/02/improvement-with-a-capital-i/>.

Resources for Further Reading

Rural Poverty

Broome County. (2013). Broome County Comprehensive Plan – Building Our Future. Economic Profile. <http://gobroomecounty.com/comprehensiveplan>.

Council of Economic Advisers, Domestic Policy Council, and Office of Management and Budget. (2015). Opportunity for All: Fighting Rural Child Poverty. https://www.whitehouse.gov/sites/default/files/docs/rural_child_poverty_report_final_non-embargoed.pdf.

DeNavas-Walt, C. & Proctor, B.D. (2014). Income and Poverty in the United States: 2013, Current Population Reports. United States Census Bureau U.S. Department of Commerce. <https://www.census.gov/content/dam/Census/library/publications/2014/demo/p60-249.pdf>.

Fitchen, J. (1981). *Poverty in Rural America: A Case Study*. Boulder, CO.: Westview Press.

Kusmin, L. (2014). Rural America at a Glance, 2014 Edition. EB-26. U.S. Department of Agriculture. <http://www.ers.usda.gov/media/1697681/eb26.pdf>.

Miller, K. & Weber, B. (2014). Persistent Poverty Dynamics: Understanding Poverty Trends Over 50 Years. Rural Policy Research Institute. http://www.rupri.org/Forms/Poverty_MillerWeber_July2014.pdf.

Pendall, R. & Christopherson, S. (2004). *Losing Ground: Income and Poverty in Upstate New York, 1980-2000*. The Brookings Institution. <http://www.brookings.edu/research/reports/2004/09/demographics-pendall>.

Poverty. (n.d.) Business Dictionary.com. <http://www.businessdictionary.com/definition/poverty.html>.

Schmit, T. M., & Bills, N. L. (2012). Agriculture-Based Economic Development in NYS: Trends and Prospects. Charles H. Dyson School of Applied Economic and Management Cornell University. <http://dyson.cornell.edu/outreach/extensionpdf/2012/Cornell-Dyson-eb1211.pdf>.

Shaefer, H.L. & Edin, K. (2014). The Rise in Extreme Poverty. Pathways Summer 2014. http://web.stanford.edu/group/scspi/_media/pdf/pathways/summer_2014/Pathways_Summer_2014_ShaeferEdin.pdf.

Anti-Poverty Programs

Ben-Shalom, Y., Moffitt, R. A., & Scholz, J. K. (2011). An Assessment of the Effectiveness of Anti-Poverty Programs in the United States. National Bureau of Economic Research: Working Paper 17042. <http://www.nber.org/papers/w17042.pdf>.

Chetty, R., & Hendren, N. (2015). The Impacts of Neighborhoods on Intergenerational Mobility: Childhood Exposure Effects and County-Level Estimates. http://www.equality-of-opportunity.org/images/nbhds_exec_summary.pdf.

Krol, D. (April 1, 2015). Data, Meet Curiosity: Finding Bright Spots in Appalachia. http://www.rwjf.org/en/culture-of-health/2015/03/data_meet_curiosity.html?rid=BPCO7qEkRbz6D2AxIhy5URn04XKLFMS&et_cid=221812.

Leonhardt, D., Cox, A., & Miller, C. (2015, May 3). An Atlas of Upward Mobility Shows Paths Out of Poverty. New York Times. <http://www.nytimes.com/2015/05/04/upshot/an-atlas-of-upward-mobility-shows-paths-out-of-poverty.html>.

Pender, J.L. (2015). Foundation Grants to Rural Areas from 2005 to 2010: Trends and Patterns. United States Department of Agriculture Economic Research Services. EIB-141. <http://www.ers.usda.gov/media/1858911/eib141.pdf>.

Rodrigue, E. & Reeves, R.V. (June 11, 2015). Cutting Poverty by Increasing Program Participation. The Brookings Institute. <http://www.brookings.edu/blogs/social-mobility-memos/posts/2015/06/11-cutting-poverty-program-reeves>.

Spies, C. (July 2, 2015). Improvement with a Capital “I”: Tax Credits and Rural Development. Nonprofit Quarterly. <http://nonprofitquarterly.org/2015/07/02/improvement-with-a-capital-i/>.

Role of Immigrants in Rural Economy

Marema, T. (April 19, 2015). Immigration Linked to Rural Economic Gains. The Daily Yonder. <http://www.dailyyonder.com/immigration-linked-rural-economic-gains/2015/04/19/7817>.

Rural Housing

Joint Center for Housing Studies of Harvard University. (2014). Housing America’s Older Adults: Meeting the Needs of an Aging Population. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs-housing_america_older_adults_2014.pdf.

Moses, Kathy, and Rachel Davis. “Housing Is A Prescription For Better Health.” Housing Is A Prescription For Better Health. July 22, 2015. Accessed August 12, 2015. <http://healthaffairs.org/blog/2015/07/22/housing-is-a-prescription-for-better-health/>.

New York State Department of Health. (2012). Health Home Supportive Housing Survey Summary. Health Home Program. https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/docs/hh_supportive_housing_survey_summary.pdf.

Rural Homelessness

Henry, M., & Sermons, M.W. (2010). Geography of Homelessness. National Alliance to End Homelessness. http://b.3cdn.net/naeh/3953e7051f30801dc6_iim6banq3.pdf.

Rural Homelessness. (n.d.) United States Interagency Council on Homelessness. http://usich.gov/issue/rural_homelessness.

Rural Homelessness. (n.d.) National Alliance to End Homelessness. <http://www.endhomelessness.org/pages/rural>.

Wiltz, T. (June 26, 2015) States Struggle with Hidden Rural Homelessness. Pew Charitable Trusts. <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/6/26/states-struggle-with-hidden-rural-homelessness>.

Global Poverty

Elton, J. (June 24, 2015). 10 things you didn't know about extreme poverty. ONE <http://www.one.org/us/2015/06/24/10-things-you-didnt-know-about-extreme-poverty/>.

Related Census Data

- 1) 19% of rural Broome residents age 25 and older attained a Bachelor's Degree or higher as compared to 30.9% of suburban Broome residents and 23.5% of City of Binghamton residents.
- 2) 89.9% of rural Broome residents age 25 and older attained a high school degree or higher as compared to 91.8% of suburban Broome residents and 83.6% of City of Binghamton residents.
- 3) The median household income in rural Broome was \$52,905, in suburban Broome was \$54,633, and in the City of Binghamton was \$30,179.
- 4.) The mean household income in rural Broome was \$64, 618, in suburban Broome was \$67,227, and in the City of Binghamton was \$44,942.
- 5.) The percent of the rural Broome population living below the poverty level was 10.9%, as compared to 11.8% of the suburban Broome population, and 31.2% of the City of Binghamton population.
- 6.) The median income per capita in rural Broome was \$24, 593, in suburban Broome was \$26, 299, and in the City of Binghamton was \$20,156.
- 7.) The percent of the rural Broome population receiving SNAP was 10.4%, as compared to 8.7% of the suburban Broome population, and 23.8% of the City of Binghamton population.
- 8.) The unemployment rate in rural Broome was 7.7%, in suburban Broome was 7.8%, and in the City of Binghamton was 10.7%.

Source: U.S. Census Bureau, 2008-2012 American Community Survey

Rural Health Services



Rural Health Services

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Broome County NY Rural Health Services Access and Availability

During the RBC Kick-Off event in October 2014, Services Beyond Primary Care, emerged as the second greatest challenge in our rural communities. As providers and consumers, we define this term broadly, starting with the primary care clinics of the two hospital systems, Our Lady of Lourdes and United Health Services (UHS). Lourdes operates one rural primary care clinic, located in Whitney Point, and UHS supports four (in Windsor, Deposit, Kirkwood, and Maine). During publication of this RBC report, UHS informed northern Broome County patients that the primary care site in Lisle would be closed on July 31, 2015. This decreases access to care for rural residents of all ages living in the towns of Lisle, Triangle, Nanticoke, and Barker. Among the four pocket communities, Harpursville School District has no primary care facility. Couple these facts with the lack of transportation services (see page 81) in our most northern quadrant of Broome County, and it becomes clear that rural residents will need innovative solutions and preventative measures to help them stay healthy and mobile. Residents will also need creative strategies to help them age safely in or near their rural homes, close to family and social supports.

Beyond primary care, rural residents seek equitable access to other supports for their health, well-being and quality of life across the age spectrum. Those supports include: transportation, nutritious foods, health insurance, prescriptions, vision and dental plans, financial assistance programs, health education, safe rural gathering places, walkable communities, and tobacco free zones. They need assets such as technology and connectivity, either at home or in community-based settings, so they can exchange medical information and increase their health literacy, either in person, via the internet, or through fax or telephone (mobile and landline). They also need timely access to services to effectively diagnose, treat, and manage conditions that impact mental health, chronic diseases, and oral health. While it might not be cost effective to locate a full range of health care facilities in rural municipalities, there are other ways to deliver critical services to rural residents. These could impact the health of rural people and communities in many ways,

from preventing disease to controlling certain conditions (blood pressure, sugar levels, cholesterol, pain/fatigue), improving daily functioning (mobility/balance, medication adherence), and avoiding hospitalizations and emergency room visits.

Here are some alternatives for delivering health care services in rural communities:

- Integrate health related supports into existing rural primary care sites (social worker, disease educator).
- Offer services through community and clinical settings, such as senior centers, libraries, schools, and public housing.
- Build partnerships for rural healthy lifestyle education (physical activity, nutrition, stress reduction, falls prevention, tobacco cessation).
- Utilize licensed health care staff and paraprofessionals to provide holistic care beyond the walls of hospitals, primary care, and mental health clinics.
- Improve communication technology/connectivity for telephonic, tele-health/telemedicine and access to patient portals.
- Provide mobile services that rotate among rural communities.
- Manage chronic conditions through health care coordination, nursing visits, telemedicine, and evidence-based disease interventions.

Some of these innovative solutions are currently available, or are expanding to include targeted populations of rural Broome County residents. The next section highlights some examples of services beyond primary care.

Services Beyond Primary Care

Health Care at Home

Our Lady of Lourdes Hospital leads a Parish Nurse Ministry Program for congregations of all faiths in Broome and Tioga Counties. A coordinator provides education, training, and support to the cadre of registered nurses who provide outreach visits into homes and community settings, including rural Broome County.¹

United Health Services and Lourdes Hospital both provide Home Health Care for patients ranging from newborns to the elderly, starting with an assessment and comprehensive care plan specific to the individual. Nursing services include medication adherence, disease management, post-surgical or wound care, and IV therapy. In addition to nurses, the care team could include physical, occupational, speech, or respiratory therapists, medical social workers, and nutrition counselors. Home health aides assist patients with personal care needs. Insurance plans including Medicare, Medicaid, and private plans are all accepted, or patients may self-pay. Some financial assistance is available to clients who qualify.^{2,3}

United Health Services and Lourdes Hospital also offer Long Term Home Health Care, a program designed to provide a cost-effective alternative to a nursing home. Rural people can remain in their own homes during extended illness or injury. A coordinated plan of personal services is tailored to meet a person's health, social, and environmental needs.^{2,3} Support is offered for relatives and friends caring for their loved ones at home. Persons 18 years of age or older, chronically ill or disabled, can receive long term home care if:

- They are Broome County residents
- They are medically eligible for nursing home care
- Care can be safely provided at home
- They receive approval from a medical provider

Additional long term care support services include:

- Meals-On-Wheels
- Personal emergency response system
- Social day care
- Transportation to social day care
- Homemaker
- Personal care aide

Tele-Health/Telemedicine

Lourdes and United Health Services hospitals located in urban Broome County also implement health technology for specified populations of patients, including rural residents, to monitor blood pressure, heart rate, body temperature, weight, and oxygen levels in the comfort of their own homes. Seven days a week, the patient connects the monitoring device to a telephone line to send the information to a nurse, who reviews the data to ensure all measurements are within normal ranges. Rural residents with chronic conditions such as heart disease, respiratory disease, diabetes, high blood pressure, and asthma can all benefit from this technology which could reduce the use of ambulance services and emergency departments and avoid hospitalizations.

Telephonic support is available to all UHS patients, including rural Broome County residents, through a toll free phone line, Nurse Direct. Housed at the Oakdale Mall Stay Healthy Center, this service provides a nurse seven days a week, from 8 a.m.-8 p.m., to answer health questions and make referrals to providers near rural homes or places of employment.⁴ Lourdes offers a Cardio-Vascular Nurse Practitioner Care Manager for telephonic support and home visits, to assist their heart patients after hospital discharge and prevent readmissions.⁵

Mobile Health & Behavioral Health Services

In addition to the Our Lady of Lourdes Hospital Dental Van serving rural school districts (see page 107), Lourdes' "Mission in Motion" Van provides

1.) Lourdes Parish Nurse Ministry. Parish Nursing - an old idea with a new twist. <https://www.lourdes.com/centers-and-services/parish-nurse>

2.) United Health Services. Home Care. <http://www.uhs.net/care-treatment/home-care/>

3.) Lourdes at Home. Quality Home Care You Deserve. <https://www.lourdes.com/centers-and-services/at-home/>

4.) United Health Services. Nurse Direct. <http://www.uhs.net/wellness/nurse-direct/>

5.) Nursing at Lourdes. Outpatient Care. <https://www.lourdes.com/centers-and-services/nursing/outpatient/>

comprehensive women's health care services—including breast and pelvic exams, digital mammography screenings and pap smears—and education. The mobile van can travel to rural worksites, health fairs, community events, senior centers, schools, and places of worship.⁶

The Mental Health Association of the Southern Tier's (MHAST) Rural BEAR Program is an example of a community organization based in Binghamton giving rural children and their families greater access to behavioral health supports. Serving families in the Harpursville, Whitney Point, Deposit, Chenango Valley, Chenango Forks, Susquehanna Valley, and Maine Endwell school districts, the program provides access and care coordination for children experiencing emotional and behavioral challenges. A 2010 study by the Rural Health Research and Policy Center indicated that rural families access approximately 20% fewer mental health and related services than urban children. In the Rural BEAR Program, a care coordinator provides individualized plans to eliminate barriers and increase mental health care accessibility for all. The program's services—including crisis intervention, supportive counseling, transportation, home visits, support, advocacy, education, skill building, and community referrals—reduce the need for higher levels of care. The unique aspect of Rural BEAR is the role of the care coordinator, who builds rapport and trust with children by sharing activities such as fishing, walking, playing video games, or shopping. This personal connection improves children's academic performance and school attendance, reduces the need for crisis intervention, and delivers community resources to families. In 2013, Rural BEAR served 33 families, provided 366 supportive counseling contacts and transported children/youth to 92 mental health appointments.⁷

A second community intervention that increases rural access to mental health services is the Greater Binghamton Health Center Mobile Integration Team (MIT). Through a referral and consenting process, Southern Tier MIT provides an array of services, delivered by a mobile, multidisciplinary team of pro-

6.) Lourdes Mission in Motion. Mobile Mammography. <https://www.lourdes.com/centers-and-services/mission-in-motion/>

7.) Mental Health Association of the Southern Tier. (2014). Rural Bear. MHAST 2013 Annual Report. Page 7. <http://www.yourmha.com/assets/financials/MHA-Annual-Report-2013-web.pdf>

fessionals and paraprofessionals who travel to rural communities (Allegany, Broome, Cattaraugus, Chemung, Chenango, Delaware, Ontario, Otsego, Schuyler, Seneca, Steuben, Tioga, Tompkins, Wayne and Yates Counties).⁸

Individuals participating in services provided by the Southern Tier MIT can expect support, immediate access, enhanced skills and knowledge, and connection to programs and services, including:

- Brief therapeutic support,
- Skill building,
- Crisis assessment and intervention,
- Consultation and information,
- Peer support groups and skills training,
- Family and caregiver support,
- Behavioral support and consultation,
- In-home and community based respite.

Currently, MIT serves adults with serious mental illness and, in some instances, families with children. Required referral forms can be accessed from and returned via fax or mail to: Deborah Hoppe, MIT team leader, 114 Clinton Street, Binghamton, NY 13905. Phone: 607-763-2770 or 1-844-435-7648 FAX: 607-763-2792. For crisis intervention services available 24/7, contact the Broome County crisis line: 607-762-2302.⁸

Youth MIT serves children with serious emotional disturbances in a six-county region (Broome, Chenango, Delaware, Otsego, Tioga, and Tompkins Counties). The intent is to deliver preventive services and link people to related services. Care coordination occurs through a referral and assessment process with a Youth MIT composed of: registered nurses, licensed practical nurses, social workers, psychologists, family advisors, and youth peer advocates. The child's care plan may be managed through his or her primary care provider, and transportation support for mental health appointments is available. Families are supported with advocacy and service provision.⁸ Opportunities exist for potential partnerships with rural Broome County schools and primary care sites. Refer to page 109 for Promise Zone services in rural Broome County School Districts.

8.) New York State Office of Mental Health. Mobile Integration Team. <https://www.omh.ny.gov/omhweb/transformation/docs/st-flyer.pdf>

Rural Broome County Community Based Health Supports

Rural Health Network of South Central New York (RHNSCNY)

RHNSCNY's mission is to advance the health and well-being of rural people and communities. Four major initiatives support this collaborative work: Community Health Services, Mobility Management of South Central New York (MMSCNY), Food and Health Network (FaHN), and Rural Health Services Corps. Staff, national service members, and volunteers work across multiple counties, including Broome, to build capacity and strategically plan and deliver prevention and intervention strategies, to build a healthier rural Broome County.

Community Health Services

Health Care Access provides telephone or in person assistance to rural individuals and families seeking referrals and direct access to health insurance, prescriptions, transportation, vision or oral health services, healthy foods, energy, and financial assistance. Through intake, referral and case management, rural residents gain assistance that ranges from one time help to ongoing support.

The Renew Health Program provides caring support to rural adults in Broome and Tioga counties who have at least one chronic physical or behavioral health condition, including: pre-diabetes/diabetes, cardiovascular diseases, hypertension, respiratory illness (asthma, COPD), chronic pain, stress, anxiety, or depression. Renew Health takes a three-prong approach: linking rural people to a medical home, providing chronic disease education, and providing case management. UHS and Lourdes primary care clinics are the primary sources of patient centered medical homes for rural Broome County adults. RHNSCNY partners with HealthLinkNY, the Regional Health Information Organization (RHIO) serving Broome County. Community health services staff are qualified to access Patient Portals via the RHIO to support the health care of rural adults. The client chooses which entities can access the protected Patient Portal. RHNSCNY staff assist rural people with establishing on-line portals and using them as tools for self-management. Currently, the web portal provides patient record lookup, online patient consent management, clinical message center

alerts, and health home patient alerts. In the future, it could house an individualized health care plan, including self- management goals and centralized, real-time medical records, to facilitate communication across systems and among health care providers in clinical and community based settings.

Case management occurs during home visits or office visits, in mutually agreed upon community settings, or via telephone. The Renew Health case manager is an MSW intern from Binghamton University's Social Work program, supervised by a licensed clinician (LCSW) each week at BU and onsite via case conferencing at RHNSCNY by a non-clinician. The case manager recognizes the strengths of enrolled rural adults, addresses their disease-specific health challenges and supports, and overcomes system barriers and social determinants of health.

Chronic Disease Education consists of evidence based interventions, which two RHNSCNY staff are trained to implement in small groups (10-15 per cohort) in rural settings for adults with chronic health conditions and/or their caregivers. The Chronic Disease Self-Management Program (CDSMP) is a six-week series of sessions, two and a half hours each, co-led by two certified peer leaders. *Living a Healthy Life with Chronic Conditions, 4th Ed.* is the resource text for participants, along with a CD, *Relaxation for Mind and Body: Pathways to Healing* (Bull Publishing). RHNSCNY holds a Stanford University license to deliver this curriculum, through a memorandum of understanding with the NYS Quality Training Assistance Center for Excellence in Aging and Community Wellness at the SUNY Albany School of Social Welfare. Self- management skills taught in the program include: weekly action planning, symptom cycle recognition, physical activity, nutrition, medication adherence, treatment decisions, and communicating with providers and family members.

A second intervention for chronic disease is the NYS Diabetes Prevention Program (DPP), recognized by the Centers for Disease Control and Prevention (CDC). The goal of this program is to reduce the risk of developing Type 2 diabetes through healthy lifestyle changes. Rural adults who either have a body mass in-

dex (BMI) of 24 or greater, have a history of gestational diabetes but are not currently pregnant, have been clinically diagnosed with pre-diabetes with an A1C blood sugar level of 5.7 – 6.4, or have a risk test self-assessment score of 9 or greater, all qualify for DPP. A DPP-certified lifestyle coach facilitates small group sessions (12 -14 adults per cohort) for 16 one-hour weekly sessions, followed by eight one-hour monthly meetings. Participants set personalized goals for counting fat grams and calories, and for completing physical activities, all aimed at accomplishing their own weight loss goals. Healthy choices, trigger avoidance, and intervention strategies are introduced, practiced, and reinforced through individual gains and peer support.

Community Health Services impacts rural lives and communities by increasing health care access and support, improving health literacy, and enhancing communication among clinical and community based providers, including family members and caregivers.

Mobility Management of South Central New York (MMSCNY)

GetThere Call Center

MMSCNY is the transportation connection for rural Broome County residents and beyond. The Get-There Call Center (M-F 8-4:30 @ 1-855-373-4040) is a one-stop resource for transportation information and trip planning, helping residents in multiple counties gain access to non-emergency medical appointments, education, or employment. Options include public transit, carpooling, volunteer driver services, and more. Travel assistance and transportation training are also available to individuals, groups, staff, consumers, and organizations. (See RBC Transportation page 93)

Connection to Care (CTC)

In October of 2013, supported by an Ascension Health Partnership in Ministry grant, Rural Health Network SCNY initiated Connection to Care, a non-emergency medical transportation fund and service that provides assistance to rural residents. In its second year, CTC provided more than 42,000 miles of transportation to 119 unique users. CTC's mission is to provide the most cost effective transportation service available that is appropriate for the individual and his or her health condition.

Medicaid recipients access transportation services as a benefit. However, rural individuals who are not eligible for Medicaid and who do not drive, live

in a household without a car, or cannot afford to pay for transportation frequently cannot get to health care appointments. With limited or non-existent public transportation throughout much of rural Broome County, some residents go without adequate preventative health care, cancel appointments, and end up with more serious health conditions as a result.

While many celebrate the idea of helping older people remain in their homes as long as they can, aging in place is impossible for rural residents without transportation. People who have stopped driving, or who cannot afford to own a vehicle, need affordable transportation services so they can see their health care providers and maintain their health and independence.

Available through the GetThere Call Center, CTC works with rural individuals who need help with transportation to access health services. When a person calls GetThere, a staff member asks a series of questions to determine the transportation need and the financial situation. Some callers only require information on available services; however, if a financial need exists, the staff member considers several options to craft a service plan. First, the staff member determines how much (if anything) the caller can contribute to the cost of transportation. The next step is to consider all available transportation options. These might include: a fuel debit card to help the caller with the cost of driving his or her car; vouchers or tokens, if public transportation is available; or a referral to a volunteer transportation service, if one exists in the area (CTC has agreements with five such services). If no other options exist, CTC can pay for taxi or medivan service. CTC recently received recognition from the National Center for Mobility Management in its publication, *Promising Practices in Mobility Management: Integrating Services Across Transportation Sectors*. CTC is working with several philanthropic organizations, health care providers and businesses to establish sustained funding for its program. The goal is to ensure that transportation-disadvantaged rural residents continue to have access to essential health services.

Rural Health Services Corps (RHSC)

The Rural Health Service Corps (RHSC) is an AmeriCorps National Service program administered by the Rural Health Network SCNY. The purpose is to provide meaningful service and learning opportuni-

ties for people committed to improving the health and lives of those living in South Central New York State (SCNY).

RHSC members address broad community health needs. They focus on helping residents access health services and education, creating systemic food security, and supporting independent living for the elderly, home bound and people with disabilities. Members serve at more than 20 partnering host sites across the SCNY region.

AmeriCorps members serving through RHSC provide direct service to communities and develop professional skills, build teamwork and leadership abilities, learn about nonprofit management and community health, and connect with a broad network of AmeriCorps members, alumni and supporters.

RHSC members engage in a variety of work throughout rural Broome County to promote food security, improve access to essential health services, and provide supports for independent living. RHSC members deliver fresh, healthy food to rural residents through the CHOW bus mobile food pantry. Rural health advocates with Mothers & Babies Perinatal Network SCNY conduct extensive outreach in rural communities, talking with small business owners, high school students and community leaders about important health benefits and services. RHSC members serving at RHNSCNY provide intake and referral assistance to connect rural residents with needed health benefits and services, such as prescription, vision and dental assistance. Members with Mobility Management SCNY connect rural residents with transportation resources to help them get to medical appointments and other essential services.

During the 2014-2015 RHSC program year there were 26 AmeriCorps members serving rural Broome, five AmeriCorps VISTA members serving rural Broome, and 13 host site organizations serving rural Broome.

Food and Health Network (FaHN)

The Food and Health Network of South Central New York (FaHN) is an eight-county coalition of individuals, farms, and organizations dedicated to creating food-secure communities and a strong regional food system. Many of FaHN's projects—establishing farm-to-school partnerships and expanding summer food service programs—increase access to healthy foods as a means of preventing chronic disease. Through collaboration initiated by FaHN, the Broome County

Council of Churches' CHOW Bus, a mobile low- and no-cost produce stand, started serving Lisle and Whitney Point every week during the summer of 2014 to give rural residents with limited access to transportation the chance to get fresh vegetables. In 2015, nine rural sites (representing 30% of the total sites) will also serve USDA summer meals to ensure that children have access to healthy food when school is out. FaHN continues to expand its projects and partnerships to make Broome County's food system healthier.

Broome County Health Department (BCHD)

Maternal child health and development public health nurses conduct prenatal and postnatal home visits to pregnant and parenting families to ensure healthy birth outcomes. Lourdes Youth Services PACT Program collaborates with BCHD under the Healthy Families NY model of child abuse prevention to screen, assess and provide parent education to families with children from prenatal to age five. Broome County families outside the City of Binghamton are served through this home visiting model.¹

A Women Infant and Children (WIC) clinic in the City of Binghamton is open five days per week. The WIC staff travels by van to five satellite sites (three of them rural: Whitney Point, Windsor, and Port Crane). The van visits Whitney Point once per month and visits Windsor and Port Crane once every three months.²

1.) Broome County Health Department. Maternal Child Health and Development. <http://www.gobroomecounty.com/mch>

2.) Broome County Health Department. Women, Infants and Children. <http://www.gobroomecounty.com/wic>

Even with all these innovative strategies, does rural Broome County suffer serious health disparities? Are health care resources and supports accessible to rural residents in an equitable way?

Social Determinants of Health

It is widely recognized that the factors affecting an individual's health consist of far more than the clinical care that person receives. Often, other factors affecting daily life have the greatest impact on one's health and wellbeing. These factors may create significant inequities.

Social determinants of health is the public health term for this collection of factors and systems, largely outside an individual's control, that impact one's health. The World Health Organization defines social determinants of health as, "The circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics."¹

Health Disparities

As previously discussed, an individual's health and wellbeing are often influenced by the social deter-

1.) World Health Organization. Accessed on 6/15/2015. http://www.who.int/social_determinants/thecommission/finalreport/key_concepts/en/

minants of health. Differences in social structures and economic power can create differences in health outcomes. These differences, often caused by a "social or economic disadvantage"² are termed health disparities. According to the CDC, "Health disparities negatively affect groups of people who have systematically experienced greater social or economic obstacles to health. These obstacles stem from characteristics historically linked to discrimination or exclusion such as race or ethnicity, religion, socioeconomic status, gender, mental health, sexual orientation, or geographic location. Other characteristics include cognitive, sensory, or physical disability."²

Rural Health Disparities

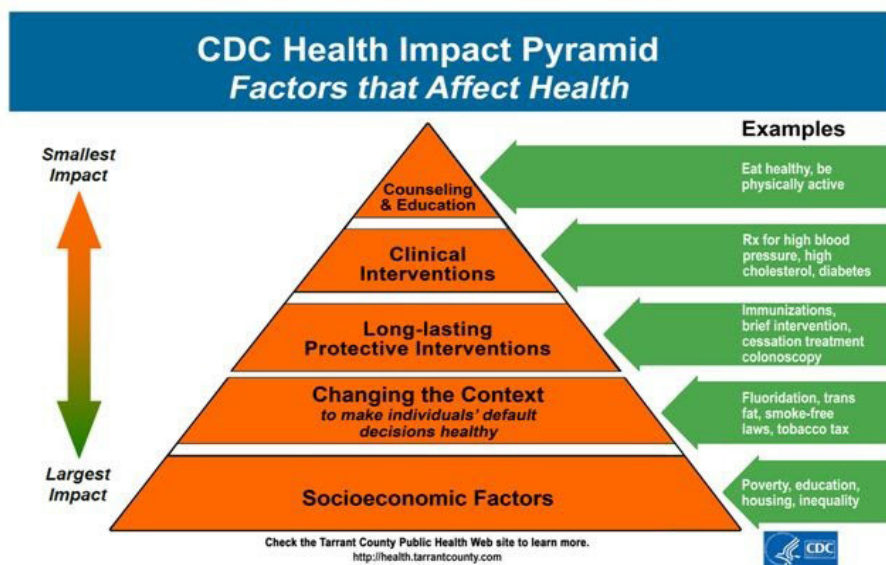
Geographic location can contribute to health disparities. Rural people can experience differences in their health outcomes due to their relative geographic isolation and the associated factors.

The Rural Assistance Center has identified the following health disparities risk factors that rural people may experience: "geographic isolation, lower socio-economic status, higher rates of health risk behaviors, and limited job opportunities."³ The combination of these risk factors leads to poorer health statuses, higher rates of diseases, and lower life expectancy of rural people.³

2.) Centers for Disease Control and Prevention. Accessed on 6/15/2015. <http://www.cdc.gov/socialdeterminants/Definitions.html>

3.) Rural Assistance Center. Accessed on 6/15/2015. <https://www.raconline.org/topics/rural-health-disparities>

Fig. 43. CDC Health Impact Pyramid



Source: "Health Impact Assessment." Health Impact Assessment. Accessed August 11, 2015. <http://www.mapc.org/hia>.

Definitions of HPSA and MUA

The U.S. Department of Health and Human Services (HHS) has developed two ways to designate a particular area or population as underserved. These designations allow the community to qualify for a number of federally funded programs to increase access to providers and medical care.

The first designation is Medically Underserved Area or Medically Underserved Population. According to the HHS, “Medically Underserved Area (MUAs) may be a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services”. On the other hand, the HHS reports, “Medically Underserved Populations (MUPs) may include groups of persons who face economic, cultural or linguistic barriers to health care.”¹ Obtaining a designation as a MUA/P allows the area or population to qualify for a Federally Qualified Health Clinic (FQHC) that provides low cost health care ser-

1.) U.S. Department of Health and Human Services. Health Resources and Services Administration. Accessed on 6/15/2015. <http://www.hrsa.gov/shortage/>

vices to the target area or population.

The second designation is Health Professional Shortage Area. According to HHS, “Health Professional Shortage Areas (HPSAs) may be designated as having a shortage of primary medical care, dental or mental health providers. They may be urban or rural areas, population groups or medical or other public facilities.”¹ Areas that seek this designation can qualify for different sources of federal funds, such as increased Medicaid reimbursement, Exchange visitor program, and National Health Service Corps Loan Repayment, among others.

Physician Supply and Needs Assessment for Rural Broome County

The University of the State of New York Regents report on 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 psy-

chiatrists 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 (Binghamton General and Wilson Memorial) are eligible under the Primary Care and Non-Primary Care designations. The average age of physicians is 53 years, just slightly older than the average 52 years for NYS.¹

1.) Office of Postsecondary Access, Support and Success, The State Education Department, The University of the State of New York. (2015). Regents Designated Physician Shortage Areas in New York State. <http://www.highered.nysed.gov/kiap/scholarships/documents/2015PLFShortageBulletin.pdf>

Rural Broome County Health Challenges

Data Challenges

Privacy protections, lack of technology and systems connectivity, and difference in methodology complicate the task of collecting, storing, retrieving, analyzing, sharing and publishing health data. Even within single hospital and health systems, there are multiple electronic medical records and paper tracking mechanisms that cannot exchange data, particularly not in real time. This is a challenge to all providers and patients seeking information on health history, treatment protocols and diagnostic results in order to coordinate the best possible care plan.

Health data can be reported at an aggregate level by patient ZIP code as long as the number of cases is high enough to protect patient identity within the geographic location. Health data by patient ZIP code is useful for many purposes, but not for learning more about the status and trends related to the 11 rural municipalities in Broome County. Rural Health Network SCNY staff participate in the Broome County Health Department's mandated Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP) process. The team that developed these comprehensive 2013- 2017 plans was led by Yvonne Johnston, clinical assistant professor/research associate, from Binghamton University's Decker School of Nursing, and facilitated by Claudia Edwards, Broome County public health director, and Mary McFadden, supervising public health educator. During this collaborative series of monthly meetings and discussions, we

reviewed ZIP code level health data yet often were left asking, "What does it look like in rural Broome County?" As the idea for Rural Broome Counts emerged, we further wondered, "What does the quantitative data look like for rural Broome County residents? What are the health concerns of rural residents and providers? Are there pockets of health and wellness, or concentrations of chronic physical or behavioral conditions, in the rural towns? Are the prevention priorities and interventions different or the same for urban and rural communities?" Even more importantly, we asked, "How can we learn more?"

For data available at the ZIP code level, RBC used a hybrid definition, combining the New York State Office of Rural Health definition of rural (an area with 200 or fewer people per square mile) and the U.S. Census definition of urban (more than 1,000 people per square mile) to determine the classification of each ZIP code (urban, suburban, and rural).

If 50% or more of the population within a given ZIP code lives within a given rural Broome school district, that ZIP code was assigned to the given rural school district/pocket community. For example, 99.41% of the population in the 13862 ZIP code lives within the Whitney Point School District boundaries, and, therefore, 13862 was assigned to the Whitney Point pocket community.

Fig. 60b. Rural Broome Counts Zip Code Classification

Rural Broome Counts Zip Code Classification				
Designation	Population Density	Corresponding Broome County Zip Codes		
Urban	1000 people per square mile or greater	13905, 13902		
Suburban	Between 1000 and 200 people per square mile	13748, 13790, 13760, 13850, 13901, 13903, 13904		
Rural	200 people per square mile or less	13746, 13802, 13862, 13797, 13744, 13777, 13787, 13826, 13865, 13795, 13754	Pocket Community	
			Zip Codes	
			Whitney Point	13862, 13797, 13744, 13777
			Harpursville	13787
			Deposit	13754
			Windsor	13826, 13865, 13795

The documents identified below, listed in order from national to local systems, could in the future be helpful tools for gathering, reviewing, or analyzing data sets at the pocket community or township level, in order to determine locally meaningful health priorities and strategies.

- Healthy People 2020 (<http://www.healthypeople.gov/>)
- Rural Healthy People 2020 (<https://sph.tamhsc.edu/srhc/docs/rhp2020.pdf>)
- NYS Department of Health Prevention Agenda 2013-2017 (https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/docs/tracking_indicators.pdf)
- Broome County 2013–2017 Community Health Assessment and Improvement Plan (<http://www.gobroomecounty.com/files/hd/cha/Broome%20County%20Community%20Health%20Assessment%202013-2017.pdf>)
- Our Lady of Lourdes Hospital Community Services Plan (<https://www.lourdes.com/media/203172/csp2014.pdf>)
- United Health Services Community Services Plan (<http://www.uhs.net/app/files/public/1244/UHS-Hospitals-Community-Service-Plan.pdf>)
- Rural Broome Counts (<http://www.rhnsny.org/programs/partnerships/rural-broome-counts>)

Identifying hot spots of chronic health conditions, targeting prevention and disease management strategies through clinical and community based organizations, creating healthier environments, advocating for systemic and policy improvements, and supporting behavioral changes are all high priorities in NYS and Broome County.

Specific Diseases and Populations

RBC leadership was curious to learn what we know, or what we can logically deduce, about the prevalence of any particular chronic disease in our rural areas, given the challenge of access to ZIP code-specific data.

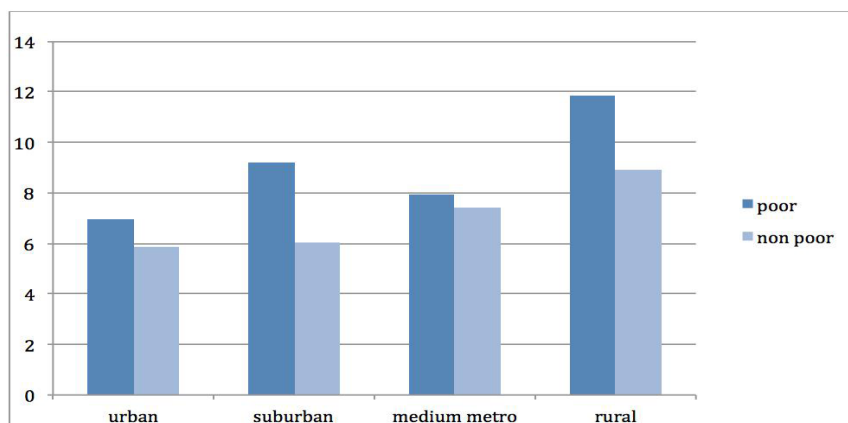
The following section explores Chronic Obstructive Pulmonary Disorder (COPD) as an example. COPD is a preventable and manageable health condition. It is defined as lung/respiratory disease that makes breathing difficult, concluding in chronic bronchitis or emphysema. Symptoms include shortness of breath during normal daily activities (walking, cooking, cleaning, bathing), wheezing, chest tightness, or persistent cough.¹

The graph below depicts the COPD prevalence by U.S. urban, suburban and rural communities.²

- 1.) WebMD. COPD (Chronic Obstructive Pulmonary Disease) - Topic Overview. <http://www.webmd.com/lung/copd/tc/chronic-obstructive-pulmonary-disease-copd-overview>
- 2.) Sarath Raju et al. (2015). The Impact Of Poverty And Rural Residence On Chronic Obstructive Pulmonary Disease (COPD) Prevalence: A Nationwide Analysis. American Thoracic Society Journals. http://www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A3904

Fig. 44. COPD Prevalence in the United States by Urban Rural Residence and Community-level Poverty

Figure 1. COPD Prevalence in the United States by Urban Rural Residence and Community-Level Poverty



Source: Sarath Raju et al. (2015). The Impact Of Poverty And Rural Residence On Chronic Obstructive Pulmonary Disease (COPD) Prevalence: A Nationwide Analysis. American Thoracic Society Journals. http://www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A3904

Study Participants: Population-based sample of 87,701 non-institutionalized U.S. adults older than 40 years. COPD was defined by prevalence of self-reported emphysema or chronic bronchitis.

Methodology: Multivariate logistic regression models were constructed to investigate predictors of COPD, including community-level variables (region, census level poverty, urban/rural residence, fuel sources) and individual-level variables (age, sex, race/ethnicity, smoking years, household income, home ownership, education status). Analyses were completed using the sample weights provided in National Health Interview Survey (NHIS).

Data sources: NHIS, U.S. Census, National Center for Health Statistics Urban-Rural Classification Scheme

Findings: Researchers examined community and individual risk factors as potential COPD predictors, including region, census level poverty, urban/rural residence, fuel sources, age, sex, race/ethnicity, smoking years, household income, home ownership, and education level. Prevalence of COPD in the study was 7.2%. In small metro/rural-poor communities, COPD prevalence was 11.9%. Rural residence, U.S. Southern residence, and community poverty were all associated with a greater prevalence of COPD.

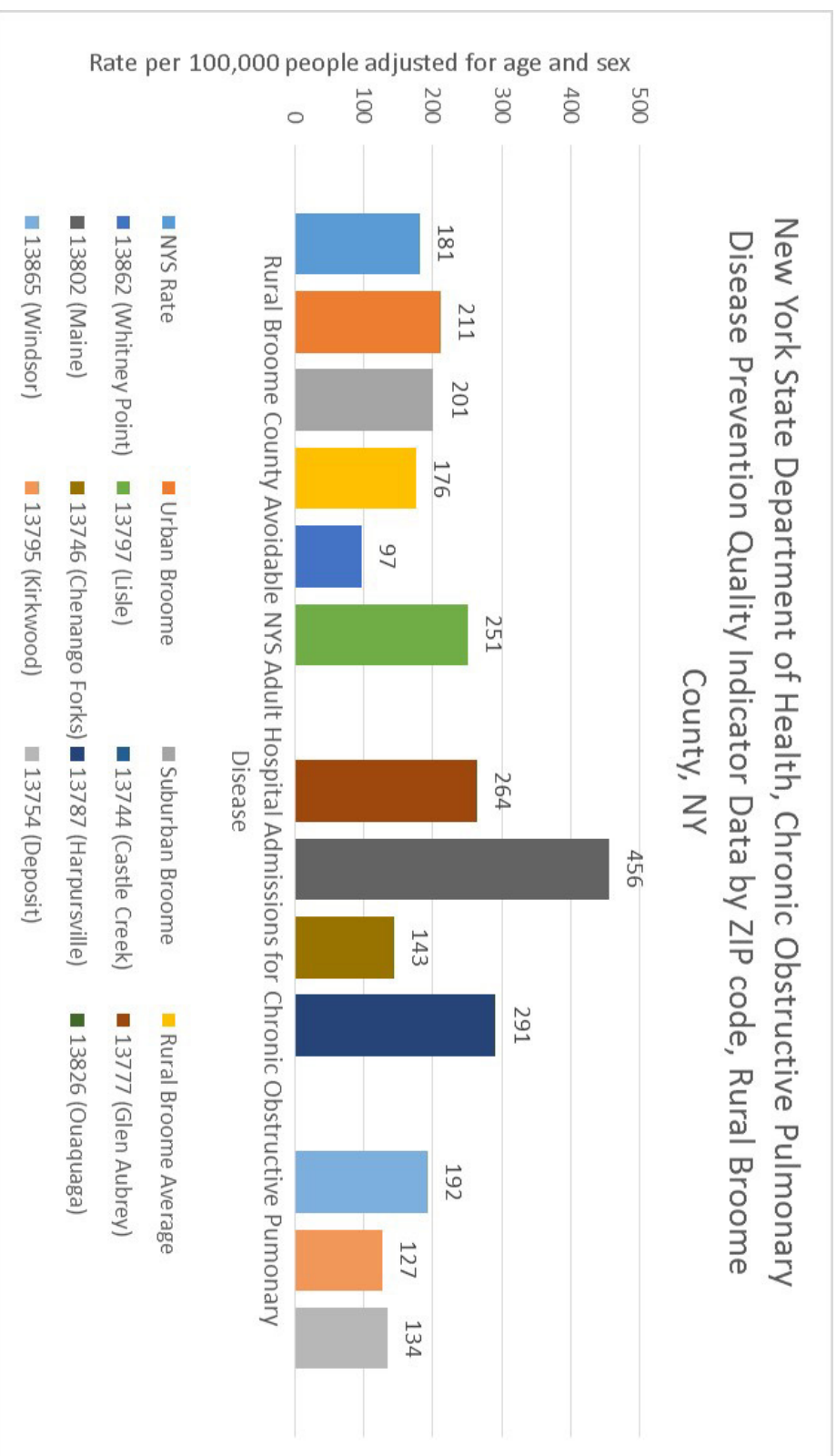
Conclusion: In a nationally representative sample, living in a rural community and poverty were independent risk factors for COPD. Findings suggest regional differences and the need for future disparities research to understand the potential contribution of occupational exposures, fuel sources, and indoor air pollutants to COPD prevalence in poor, rural areas.

Since transportation barriers and limited access to preventative care or COPD screening may prevent rural adults with symptoms from seeking timely health care and follow up appointments, the national study makes sense. RBC leadership wondered what we know or what we can deduce about the prevalence of COPD in Broome County adults and in the rural townships.

Rebecca Chandler, AmeriCorps-VISTA member, utilized the ZIP code hybrid methodology previously described (page 70) and applied it to Prevention Quality Indicators (PQI105) COPD rates and data. She created the graph on page 73 to illustrate adult COPD rates and avoidable hospitalizations in NYS compared to Broome County, and then by urban, suburban or rural areas. COPD rates are per 100,000 people and adjusted for age and sex. Rates in urban Broome County (211) exceed NYS rates (181), followed by suburban (201) and then total rural (176). Given RHNSCNY staff experience with adult chronic diseases and rural disparities, this finding did not make sense. However, when one examines the rates at each rural town/ZIP code, there appear to be spikes above the NYS and urban Broome rates in specific rural areas: Town of Maine (456), Town of Colesville (Harpursville 291), Town of Nanticoke (Glen Aubrey 264), and Town of Lisle (251), in descending order. The Town of Windsor (192) also surpasses the NYS rate.¹

1.) New York State Department of Health. View Prevention Quality Indicators: COPD. https://apps.health.ny.gov/statistics/prevention/quality_indicators/mapaction.map

Fig. 45. Rates of Avoidable COPD Hospitalizations Among Adults in NYS and Broome County by Zip Code



Data Source: New York State Department of Health. View Prevention Quality Indicators: COPD. https://apps.health.ny.gov/statistics/pr_evention/quality_indicators/mapaction.map

Another target population to examine could be Medicaid adults with COPD. What do COPD rates look like for beneficiaries living in Broome County rural towns? NYS Office of Health Systems Management created a map in 2014, entitled: Southern Tier Medicaid Avoidable Hospitalizations COPD & Asthma in Older Adults, and utilized Prevention Quality Indicators (PQI105) for Medicaid Recipients 2001-2012.¹ This map indicates shaded areas identifying above average Broome County Medicaid adult hospital admissions due to COPD and asthma in the Towns of Binghamton, Maine, Kirkwood, Sanford (Deposit) and parts of Windsor.

In the summer of 2015, through Medicaid Redesign (see page 77), a local population health team was trained in retrieving and analyzing Medicaid claims data (Salient). Team members are able to view and sort health data from the NYS Department of Health Medicaid billed services with a six month lag time. This data is currently under review by a team of UHS and Lourdes hospital systems analysts and administrators, who can view it at the patient ZIP code level or by clinical provider identification number. In the future, we hope to be able to look at disease-specific aggregated data by rural ZIP code and use the methodology described in COPD example, or retrieve data by rural Broome County health care provider number.

Other suggested next steps are to use similar data sources and methodologies to compare rates of adult cardiovascular conditions (angina, congestive heart failure, and hypertension) resulting in avoidable hospitalizations for rural Broome County on average, by 11 rural townships, and in relation to NYS, urban and suburban and Broome County rates.

One important cardiovascular risk factor to monitor is a patient's elevated A1C level. An A1C is a diagnostic test used to determine blood sugar levels. A1C levels below 5.6 % are considered normal for adults. An elevated A1C level of 5.7 – 6.4% classifies a patient as pre-diabetic, and a level above 6.5% classifies the patient as diabetic. According to the NYS Diabetes Prevention Program, recognized by the Centers for Disease Control and Prevention, patient counseling on diagnosis, risk status and health education, including

1.) Data Source Office of Quality and Patient Safety. (2014). Southern Tier Medicaid Avoidable Hospitalizations. http://www.health.ny.gov/health_care/medicaid/redesign/dsrip/performance_data/docs/chart-book1_avoidable_hospitalization_southern_tier.pdf

lifestyle changes should occur for people in the pre-diabetes range. Strategies a patient can implement with support from a certified lifestyle coach in a the Diabetes Prevention Program include setting personal goals to achieve 5-7% weight loss through food tracking and fat gram counting, and engaging in 150 minutes of moderate physical activity per week. RHNSCNY and YMCA of Broome County have screening resources, referral information, and staff trained to implement this program.

Not only is an individual with an elevated A1C level at risk for developing Type 2 diabetes, but he or she also faces an increased risk of cardiovascular diseases. Patients need to be educated about these correlated risks. In 2014, the NYS Department of Health released a set of county Medicaid data maps.² The map of the Southern Tier, including Broome County, entitled "Comprehensive Diabetes Care A1C Testing" indicates that adults with diabetes who are in Medicaid and live in the northern and easternmost regions of Broome County receive A1C testing at a lower than average rate. Using this critical diagnostic tool as part of a prevention and management strategy could help to improve rural rates of both cardiovascular diseases and diabetes. To help standardize clinical guidelines and ensure compliance, the health care community could use electronic medical record systems to send alerts to providers, and to remind patients about pre-visit planning, scheduling blood work, arranging transportation and attending follow-up appointments.

Another potential indicator of rural health disparity is student obesity rates. The graph on page 76, created by Rebecca Chandler, AmeriCorps-VISTA

2.) Data Source Office of Quality and Patient Safety. (2014). Southern Tier Comprehensive Diabetes Care HbA1c Testing. http://www.health.ny.gov/health_care/medicaid/redesign/dsrip/performance_data/docs/chart-book1_clinical_metrics_southern_tier.pdf

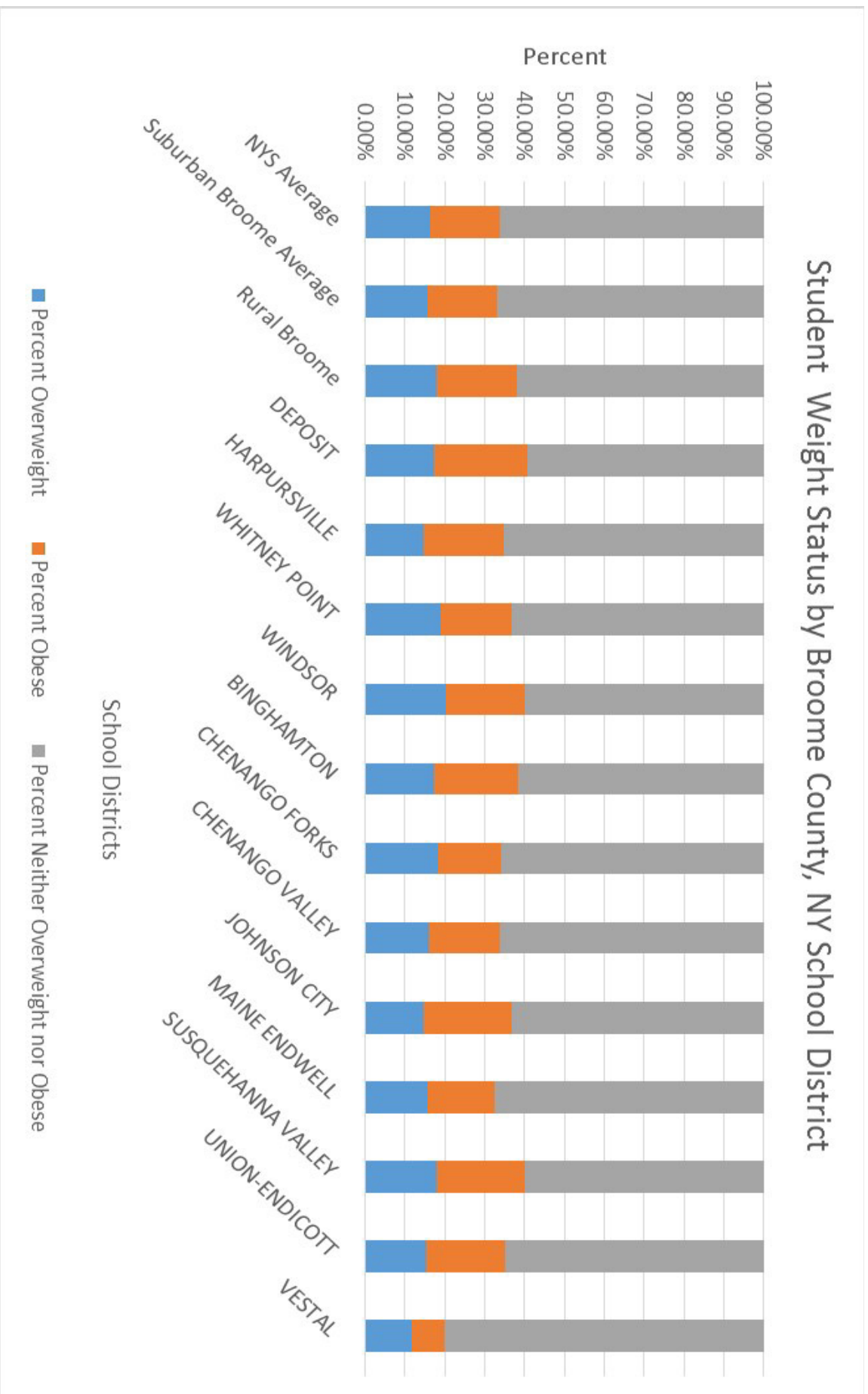
member compares this data point for the following populations: NYS, all of Broome County, Urban School District (Binghamton City School District), Suburban School Districts (Union-Endicott, Vestal, Maine-Endwell, Chenango Valley, Chenango Forks, Susquehanna Valley, Johnson City) and Rural School Districts (Deposit, Harpursville, Windsor, Whitney Point). Two of the four rural school districts (Deposit and Windsor) have the highest percentages of overweight or obese students across Broome County.³

The Student Weight Status Category Reporting System, available for public viewing through Health Data NY, shows an estimated percentage of students who are overweight, obese, and overweight or obese in New York State school districts. The rates of overweight and obese are reported as percentages based on counts of students in selected grades (Pre-K, K, 2, 4, 7, 10) reported to New York State Department of Health. Weight status is determined by a body mass index (BMI) calculation, a person's weight in kilograms divided by the square of the height in meters. A high BMI can indicate high body fatness. A child whose BMI falls into the 85th to 95th percentile for their age is considered to be overweight, and a child whose BMI falls into the 95th to 99th percentile for their age is considered to be obese.

This data is from 2010-2011 and could be used as a baseline as RBC tracks trends in the future.

3.) State of New York, Open Data, New York State Department of Health. (2010). Student Weight Status Category Reporting Results: Beginning 2010. <https://health.data.ny.gov/Health/Student-Weight-Status-Category-Reporting-Results-B/es3k-2aus>.

Fig. 46. Student Weight Status by Broome County, NY School District



Transforming Health Care for Specified Populations

Medicaid Redesign DSRIP

NYS expanded Medicaid eligibility in January 2014 to 138% above the Federal Poverty Level. In 2015, that equates to an annual household income threshold of \$16,243 for a single person, \$21,983 for a couple, and \$33,465 for a family of four. For families with children younger than five years, the household income threshold is higher. Increased Medicaid (and Medicare) reimbursements for health services provide an important incentive for providers to serve rural communities and families.

Late in 2014, UHS became the lead agency in the Southern Tier for a program that will reinvest savings gained through Medicaid reforms. The Delivery System Reform Incentive Payment (DSRIP) program promotes community level partnerships and offers financial support to providers, with the overarching goal of reducing avoidable hospitalizations and emergency room visits of Medicaid beneficiaries by 25% within five years. The new partnership of clinical and community based providers is Care Compass Network (CCN), a regional integrated delivery network and Performing Provider System (PPS) that covers nine contiguous counties. Within the PPS, Broome County is the only area that is not purely rural. However, 11 municipalities included in the PPS are rural townships as defined by NYS Office of Rural Health (see page 52). Broome County also includes four suburban towns and the City of Binghamton. Aligning Broome with eight NYS rural counties whose populations are less than 200,000 (Chemung, Chenango, Cortland, Delaware, Schuyler, Steuben, Tioga, and Tompkins) strengthens the rural focus of CCN. This alignment also improves CCN's ability to collaborate on advocacy, planning, and capacity building to address the physical and behavioral health care and social supports for Medicaid beneficiaries living in rural communities.

CCN's vision is to improve the health and life of Medicaid beneficiaries by engaging them in coordinated care, using the most appropriate, cost effective setting given medical, behavioral, and social needs. Four goals are:

- Develop and implement a model of care that right sizes, realigns, and integrates the continuum of community based and institutional services to achieve Delivery System Reform Incentive Payment (DSRIP) goals to improve access to care while simultaneously

reducing patient Emergency Department visits, re-admissions, and preventable admissions, thereby reducing costs.

- Retrain and redeploy the healthcare workforce to align with and support the transformed service delivery model.
- Implement community based care coordination to deploy early intervention and prevention to people with rising risk for chronic illness and facilitate access and movement through care settings in the service continuum.
- Build organizational infrastructure for population health management, financial operations, contracting and electronic information management needed to support the Care Compass Network in the achievement of DSRIP quality and utilization goals.

The first two years (2015-2016) of the implementation of CCN will require extensive infrastructure build (information technology, electronic medical records and connectivity, integrated systems of care across continuum) and outreach/engagement of Medicaid beneficiaries and their health care providers in clinical and community based settings. This transformation will have a major impact on rural Broome County Medicaid recipients and their health care teams. This early work also will lay the groundwork for expanding CCN's activities to the Medicare population in the near future.

All consumers of health care will reap the benefits of CCN's efforts as it promotes Patient Centered Medical Home accreditation, including care coordination, clinical practice standards, cultural competency guidelines, health literacy supports and health information technology.¹

Three disease management projects carried out by CCN will focus on identifying hot spots and preventing, treating and tracking outcomes for specific chronic health conditions (cardiovascular, diabetes and COPD) regardless of where the Medicaid patient is cared for in NYS. The program will offer tobacco cessation support and referrals and will promote messages about reducing exposure to second hand smoke, respiratory environmental triggers and policy changes to encourage smoke-free environments.

CCN also will conduct three mental health projects to integrate behavioral health with primary

1.) Alexa Brown. (2014). Improving Care Coordination in Rural Communities. Webinar. NORC Walsh Center for Rural Health Analysis, University of Chicago. www.raconline.org

care, offer crisis stabilization services, and strengthen the infrastructure for mental health/substance abuse service in clinical and community based settings, aligned with NYS Prevention Agenda goals. Depression screenings, mental health assessments, and interventions will become more widely available to rural residents.

All Populations

Population Health Improvement Program (PHIP)

The New York State Department of Health recently funded a new initiative, the Population Health Improvement Program (PHIP). PHIP is a regional planning process that seeks to be responsive to its community and the priorities the community identifies for population health. PHIP will achieve these goals by: creating a neutral forum to enable collaboration about and discussion of issues related to population health, health disparities, and the regional care delivery system; developing a data-driven picture of population health within the region and allowing all regional stakeholders to leverage this analysis for their own organizations and regional collaboration; completing an assessment of health disparities and population health in the region, making that assessment publicly available, and, in conjunction with the community, outlining priorities for addressing health disparities and improving population health; and identifying, sharing, and disseminating best practices and strategies to promote better health outcomes and reduce disparities across the population of each region.

HealthlinkNY is the contractor for the Southern Tier PHIP region, comprised of Broome, Chenango, Delaware, Tioga and Tompkins counties. As this is a largely rural area, PHIP will provide a unique opportunity to identify ways to better assess the rural communities in Broome County, bring attention to critical issues within the area, and create strategies to address the health disparities experienced by this population. To learn more about PHIP and how you can get involved, please visit the NYS DOH website or HealthlinkNY's website and click on the link for PHIP.

NYSDOH: https://www.health.ny.gov/community/programs/population_health_improvement/

HealthlinkNY: <http://www.healthlinkny.com/>

Additional RBC Health and Wellbeing Recommendations:

- Agree upon the definition of “rural” (NYS Office of Rural Health identifies 11 Broome County municipalities with less than 200 people per square mile) and consider degrees of rurality. Create a uniform methodology for gathering and analyzing data
- Address social determinants of patient/client health by collecting data about access barriers identified through 14 key questions at intake (community based organizations) or during onboarding and at each subsequent visit (clinical settings). The questions should focus on transportation, food security, and housing.
- Frame what we currently know about the health of rural Broome County residents and flag metrics requiring further research or analysis.
- Determine the gaps, where quantitative data is insufficient or non-accessible. Identify town of residence for all Broome County clients/patients accessing services in clinical or community based settings.
- Explore options for including “town” as a data point in electronic medical records, to help identify disease hot spots and offer rurally-appropriate strategies to mitigate risks.
- Engage rural consumers to see if they are ready to be their own health advocates, to document their experiences, and to address barriers they encounter when seeking health care and support.
- Investigate the financial consequences when rural individuals apply for Social Security benefits (due to age or disability) and then lose other financial assistance or insurance coverage (public insurance/Medicaid, prescriptions, transportation to health care, SNAP/food stamps, home energy).

Questions About Social Determinants and Health Access

Consumers' responses to the statements below could help to assess needs in a rural community and identify barriers to health care services and community resources. These barriers may impact the health, wellbeing and lifestyle choices of individuals, families, and specified populations (as defined by age, ability, physical or mental health status, town of residence/degree of rurality).

Transportation

(Source: the following questions were developed by John C. Salo.)

1. I have access to a dependable vehicle or public transportation. Yes = Transportation Independent
2. I have some, yet limited, transportation options (undependable personal vehicle, lack income for gas, maintenance/repairs, licensure/registration & insurance) Yes = Transportation Vulnerable, assistance needed
3. I lack access to a personal vehicle or public transportation for most of my mobility needs including: employment, education/training, healthy foods/shopping, medical or social service appointments. Yes = Transportation Dependent, highest level of assistance needed

Food

(Source: adapted from USDA, Child Hunger Coalition: Childhood Hunger Screening & Intervention Algorithm, Eat Well Play Hard Binghamton, Healthy Lifestyles Coalition)

For each statement, please tell me if the following was "often true, sometimes true, or never true" for your household within the past 12 months:

1. I worried we would run out of food before we had money to buy more.
2. The food we have at home didn't last and we didn't have money or transportation to get more.

A response of "sometimes true" or "often true" to either question designates food insecurity in terms of quantity.

For collecting information on access to healthy foods, the following questions could be asked to address quality of foods served at home. Healthy goal is 5-7 servings of fresh fruit or vegetables per day. In regard to the quality of the food, fresh is best, followed by frozen, and then canned.

3. Yesterday I ate ____ servings of fruit (____ fresh, ____ frozen, ____ canned).
Yesterday I ate ____ servings of vegetables (____ fresh, ____ frozen, ____ canned).
4. On average I eat ____ servings of fruit daily (____ fresh, ____ frozen, ____ canned).
On average I eat ____ servings of vegetables daily (____ fresh, ____ frozen, ____ canned).

Housing

(Source: adapted from How Housing Matters: Americans' Attitudes Transformed By The Housing Crisis and Changing Lifestyles A Report Of Findings Based On a National Survey Among Adults, April 3, 2013, Hart Research Associates, Washington DC)

1. I worry about household bills.
2. My housing situation is less, more, or equally as stable as it was five years ago.
3. I have fallen behind or missed rent/mortgage payments ____ times in the last five years.
4. I borrowed money from family/friends/community or used a line of credit to pay for household bills, rent or mortgage ____ times this year.
5. I moved ____ times in the past five years because it was challenging to make rent/mortgage payments.
6. I have been evicted (or on notice) or entered into foreclosure proceedings in the past five years.
7. I have been homeless ____ times in the past five years for ____ (days/weeks/months).

Rural Health Additional Resources

Alfero, Charles, Andrew Coburn, Jennifer Lundblad, A. Clinton MacKinney, Timothy McBride, Keith Mueller, and Paula Weigel. "Care Coordination in Rural Communities: Supporting the High Performance Rural Health System." Accessed August 7, 2015. <http://www.public-health.uiowa.edu/rupri/publications/policypapers/RUPRI-CareCoordination.pdf>.

Buman MP, Winter SJ, Sheats JL, Hekler EB, Otten JJ, Grieco LA, et al. The Stanford Healthy Neighborhood Discovery Tool: a computerized tool to assess active living environments. *Am J Prev Med* 2013;44(4):e41–7. CrossRef PubMed

Eberhardt MS, Pamuk ER. The importance of place of residence: examining health in rural and nonrural areas. *Am J Public Health* 2004;94(10):1682–6. CrossRef PubMed

Frost SS, Goins RT, Hunter RH, Hooker SP, Bryant LL, Kruger J, et al. Effects of the built environment on physical activity of adults living in rural settings. *Am J Health Promot* 2010;24(4):267–83. CrossRef PubMed <http://www.hhnmag.com/Daily/2015/July/rural-health-IT-population-health-Sue-Deitz> video clip Using IT to

"Healthcare Workforce: New Roles for a Changing Healthcare Delivery System." Healthcare Association of New York State. 2014. Accessed August 11, 2015.

Seguin RA, Morgan EH, Connor LM, Garner JA, King AC, Sheats JL, et al. Rural Food and Physical Activity Assessment Using an Electronic Tablet-Based Application, New York, 2013–2014. *Prev Chronic Dis* 2015;12:150147. DOI: <http://dx.doi.org/10.5888/pcd12.150147>.

"Staying Healthy in Rural Areas." Finger Lakes Community Health. Accessed August 7, 2015. <http://flhealth.org/national-rural-health-day/>.

"Technology Stemming from Tragedy - The Rural Monitor." The Rural Monitor. August 5, 2015. Accessed August 11, 2015. https://www.raconline.org/rural-monitor/finger-lakes-telehealth-network/?utm_source=racupdate&utm_medium=email&utm_campaign=update080515.

"Understanding the Uninsured Now." June 1, 2015. Accessed August 7, 2015. http://www.rwjf.org/content/dam/farm/reports/surveys_and_polls/2015/rwjf420854.

"Using IT to Impact Population Health in Rural Communities." Using IT to Impact Population Health in Rural Communities. Accessed August 7, 2015. <http://www.hhnmag.com/Daily/2015/July/rural-health-IT-population-health-Sue-Deitz>.

Transportation



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Transportation

One of the most helpful insights to surface from the RBC Advisory Committee meetings was that transportation services are not the only way to improve access to goods, services and employment in rural Broome County. Still, while technology, mobile service, etc. are part of the access solution, it remains a fact that for most rural residents, most of the time, access to employment, goods and services requires travel in a vehicle.

When rural communities were predominantly agricultural, with farms and village centers providing much of what residents needed, transportation was less of a barrier to accessing essential goods, services, and employment. Today, most rural residents travel, often long distances, to jobs, stores and services. For many rural Broome residents whose incomes are low, and for those who do not drive, lack of affordable transportation is a barrier to viability and prosperity for the following reasons:

- They usually travel farther to access employment, goods, and services than their suburban and urban counterparts, who have more public and private transportation options (see figure 25 on page 35). Longer trips are more expensive, placing a disproportionate financial burden on rural residents and households in Broome County.
- Many low income rural individuals and families cannot afford to own a vehicle.
- Rural Broome County has few affordable transportation services for any purpose, and essentially no affordable options, other than car-pooling, for travel to employment.
- Rural Broome County has very few general-purpose volunteer transportation services. One volunteer provider serves one rural township, and one urban provider offers some service in the Town of Binghamton and Kirkwood.

- Some rural Broome residents who need a wheelchair lift do not have access to curb-to-curb public transportation service. Others require help getting out of the house, to the vehicle and/or into the vehicle. While this level of service is available, it is very expensive.

The following section on transportation and mobility provides maps showing common destinations and distances, along with graphs and narrative that describe transportation services and issues. One premise of the RBC project was that inequities in the allocation of important public and private resources to residents and communities of Broome County are correctable. Transportation and mobility services may constitute the most significant example of inequitable resource distribution, but this is also a sector where strategic investment of public and private resources (based on good data, planning, and collaboration) could improve the quality of life and prosperity of rural Broome residents.

In the transportation sector, organizations could expand existing volunteer programs or establish new ones, helping to increase affordable options, especially for seniors. Broome County's rural public transportation service, BC Country, could consider loosening current restrictions that limit access and ridership. Local policymakers could research public systems serving rural populations of comparable size and adopt their best practices. Communities, employers, and organizations could promote ride sharing, van pooling and car sharing initiatives. Entrepreneurs could launch new businesses and social enterprises, creating new transportation-related employment and transportation savings for low income workers and families. Service providers could use technology to greater effect to connect transportation services and riders in real time. There is much that can be done to improve access and mobility for the residents of rural Broome County.

Broome County Public Transportation

The Broome County Department of Public Transportation operates three programs that provide some level of service to rural Broome County:

- BC Country is a limited, one round trip per day service that covers much of rural Broome (see map page 86).
- BC Lift, for individuals with disabilities, mirrors the BC Transit fixed route bus system and has slight penetration into three rural townships. BC Lift is available up to three-quarters of a mile beyond the fixed route.

BC Country

BC Country is a rural public transportation service administered and operated by the Broome County Department of Public Transportation. The rural areas/townships served (all or in part) are : Barker, Town of Binghamton, Chenango Bridge, Chenango Forks, Colesville, Conklin, Fenton, Glen Aubrey, Harpursville, Kirkwood, Maine, Port Crane, Vestal, Whitney Point, and Windsor.¹ Chenango Bridge, Chenango Forks, Conklin, and Vestal are not defined as rural using the NYS Office of Rural Health criteria (population density of 200 people per square mile or less). Individuals attending programming at ACHIEVE, a non-profit agency serving individuals with developmental disabilities, constituted approximately 50% of ridership in 2014 (est. 11,000 of 23,258 rides).^{2,3} BC Country provided 143,518 miles of service in 2014. (BC Transit fixed route service mileage in 2014 was 1,160,955.6.)

The map of the service area of BC Country is

1.) "B.C. Country: Serving Rural Broome County." B.C. Country: Serving Rural Broome County. Accessed August 3, 2015. <http://www.ridebctransit.com/transit/bccountry>.

2.) "Welcome to ACHIEVE! | Find Yourself Here." Welcome to ACHIEVE! | Find Yourself Here. Accessed August 3, 2015. <http://www.achieveny.org/>.

3.) "Public Transportation." Public Transportation. Accessed August 3, 2015. <http://www.gobroomecounty.com/transit/>.

- BC Transit is primarily a fixed route, urban service that has slight penetration into two rural townships (Kirkwood and Fenton).

The information provided in figure 47 compares Broome County's rural public transportation service, BC Country, to rural public transportation services in two other rural counties in the region. It is helpful to see how different counties deliver public transportation to rural communities and to better understand how public transportation can maximize access and service for rural residents.

provided on page 86. The shaded areas (excluding the pale yellow area) represent the locations served by BC Country. The pale yellow area represents the area served by BC Lift, which reflects the BC Transit fixed route service area plus a three-quarter mile extension. As the map shows, large areas of rural northern and eastern Broome County are not served by BC Country. Service is available to residents of these communities at designated pick-up locations in the BC Country service area.

BC Country requires all individuals served to be registered. Once registered, individuals can request and schedule rides. They must make ride requests by phone, at least two business days, and no more than seven business days, in advance. BC Country receives calls Monday-Friday from 8 a.m.- 4 p.m. and confirms reservations one business day before the requested date for the ride.

One of BC Country's more confusing policies is that it does not guarantee curb-to-curb service for every residence in its service area. Some individuals in Nanticoke, for example, can access the service only at a designated pickup point in Whitney Point. The best way to determine if the service will pick up a rider at home is to call and inquire. Based on the information available, this policy is not fixed: a rider may or may not receive curb-to-curb service, at the discretion of

BC Country. This practice also applies to individuals who use wheelchairs. Rather than obtaining pickup service at home, they might have to travel to a designated pickup point to access the ride. For wheelchair users who live any distance from a pickup point, this requirement makes the service inaccessible.

BC Country buses provide service Monday - Friday, picking up riders from 6 a.m. - 8 a.m. and returning them to their homes from 2 p.m. - 3 p.m. It does not operate on weekends or holidays. Passengers learn their specific pickup times when their reservations are confirmed. A BC Country bus will not stop if flagged down by an individual who has not made a reservation. The buses bring individuals from the rural areas that they serve only to the urban core of Binghamton and then back to the rural areas—not to other locations within the service area.

BC Country will not transport residents from the greater Binghamton area to rural destinations, except for return trips to rural pickup points, nor will the service transport residents from one rural area in Broome County to another.

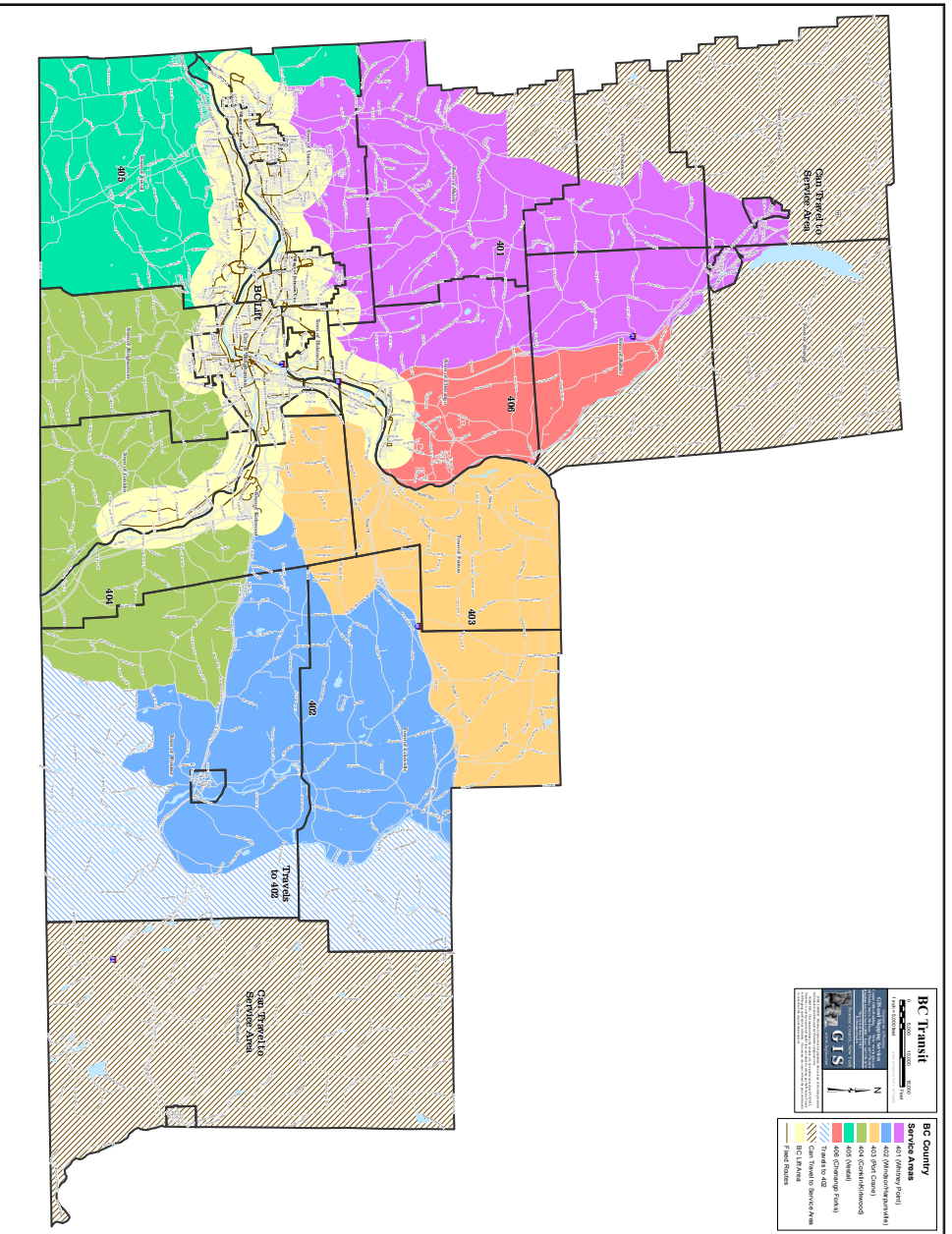
The regular fare is \$3 for each one-way ride, \$2 for persons with disabilities. Children under age five ride free when accompanied by an adult. If you are age 60 or over, you can apply for an Office for Aging Iden-

tification Card, which allows you to ride at no charge; however, there is a suggested donation of \$1.50.¹ The service provided by BC Country is both limited and restrictive when compared with many other New York State rural public transportation systems. One reason for this is that some rural counties, including Chenango and Otsego, operate fixed route rural transportation systems that provide consistent service to residents who live on or can access the route. The fixed route service is available to the general public without prior registration or scheduling. BC Country has some elements of fixed route operation (e.g., regular, daily service for ACHIEVE riders), but for the general public, it operates only on a single trip reservation basis. The following chart compares BC Country's service limitations, requirements and restrictions to those of the Chenango and Otsego rural public transportation systems:

Fig. 47. Comparison of Rural Public Transportation Systems

Comparison of Rural Public Transportation Systems			
Description of Limitation, Restriction or Requirement	BC Country	Chenango County Public Transportation	Otsego County Public Transportation: Otsego Express
Registration required before service can be used	Yes	No	No
Reservation confirmation	Confirmed one business day before date of ride requested.	N/A	N/A
Service available Mon-Fri	No; some routes run five days a week, some three days.	Yes	Yes
Fixed pick-up time	Yes; 6 - 8 a.m. window in the morning, 2 - 3 p.m. window in the afternoon. Dispatcher determines actual pick-up time.	No	No
Rural residents can "flag down" a bus that is passing	No	Yes	Yes, but only after alerting the service provider
Passenger round-trip frequency	Once a day	Three times a day; two times a day on the Bainbridge route	1 - 2 times a day, depending on the route
Curb to curb service	Generally available in the service area, but not guaranteed in all situations	Fixed routes only, with 3/4 mile route deviation for individuals with disabilities to comply with the Americans with Disabilities Act (ADA)	Fixed routes only, with 3/4 mile route deviation for individuals with disabilities to comply with the Americans with Disabilities Act (ADA)

Fig. 48. Map of Broome County Public Transportation



Source: "B.C. Country: Serving Rural Broome County." B.C. Country: Serving Rural Broome County. Accessed August 3, 2015. <http://www.ridebctransit.com/transit/bccountry>.

While BC Country may have business and/or regulatory reasons for its restrictions and requirements, the net result is that these policies, along with limited service, create significant barriers for rural (and urban) Broome residents who could benefit from affordable public transportation.

One way to improve access, and potentially increase BC Country ridership without increasing costs, would be to combine the best features of a reservation-based system and a fixed route system.

In this scenario, BC Country would be open to the public without registration or reservation. Drivers would pick up passengers at fixed locations and might also respond to “flagging down” at safe locations along the route. Adding service from greater Binghamton to rural destinations would provide affordable public transportation, for example, to families who wanted to spend the day at a county park, college students who wanted to pursue internships in rural schools, and

individuals traveling to rural areas to visit relatives. Operating a hybrid system involves tradeoffs, but the benefits of better access would outweigh any inconveniences, especially for riders who do not benefit from the system as it is currently designed.

Rural Broome Counts acknowledges the value of public transportation as an important component of a comprehensive rural mobility and transportation strategy. Loosening current restrictions and requirements for riding on BC Country could improve access and mobility for both rural and urban Broome residents without increasing costs. Clearly, the Broome County Department of Public Transportation could have a greater impact on mobility and access for rural residents of Broome County.

BC Lift

BC Lift is a paratransit service designed for Broome County residents who cannot use the BC Transit fixed route service because of a disability. It serves very limited areas of rural Broome County, including parts of Kirkwood, Fenton, and the Town of Binghamton. To be eligible for this service, a rider must complete a BC Lift Eligibility Application with his or her health care professional, documenting a health condition that precludes use of BC Transit’s fixed route system.

BC Lift picks up riders at home and brings them to their destinations if they live within the BC Lift service area (represented by the pale yellow area on page 86). Riders must make reservations at least one business day, but not more than seven days, in advance. Rides can be reserved on the phone Monday – Sunday, from 8 a.m. – 4 p.m., and online Monday-Friday, 8 a.m. – 3 p.m. The service operates Monday – Friday, 5:30 a.m. – 10 p.m., Saturday, 5:30 a.m. - 6:30 p.m. , and Sunday, 9 a.m. - 5:30 p.m.

Rural Broome residents who require a wheelchair lift in order to be transported, and who live outside the BC Lift service area, may not have access to public transportation services.¹

1.) “BC Lift ADA Paratransit Service.” BC Lift ADA Paratransit Service. Accessed August 3, 2015. <http://www.gobroomecounty.com/transit/bc-lift-ada-home>.

BC Transit

BC Transit is Broome County’s fixed route public transportation system, with 17 routes that serve the Binghamton metropolitan area. BC Transit does not serve the rural townships of Broome County, except for some parts of Kirkwood and Fenton. A magnified view of the fixed routes can be found on the next page, but to gain a perspective on the service area of BC Transit in comparison to the entirety of Broome County, see page 86. (The lines within the pale yellow area represent the BC Transit fixed routes).²

2.) “B.C. Transit Buses - Fixed Route Buses.” B.C. Transit Buses. Accessed August 3, 2015. <http://www.gobroomecounty.com/transit/citybus>.

Fig. 49. Map of Broome County Transit System



Source: "B.C. Transit Buses - Fixed Route Buses" B.C. Transit Buses. Accessed August 3, 2015. <http://www.gobroomecounty.com/transit/citybus>.

Rural - Urban, Rural - Rural Public Transportation Equity

The RBC Transportation Work Group held a discussion on transportation equity during its meeting on December 23, 2014. Members acknowledged that public transportation services are generally related to population density: more population, especially in an urban environment, equates to more public transportation. While this premise acknowledges the economies of scale available for operating transit in densely populated areas, it should not be used to justify limited service to the rural population, whose transportation needs are equal to, if not greater than, the needs of

their urban counterparts.

The lack of affordable transportation options in rural Broome County, when compared to the extensive public, non-profit, volunteer, and private transportation options in the greater Binghamton area, represents a serious disadvantage for rural Broome residents. The inequity is also apparent when the transportation service profile of rural Broome is compared with other New York State rural counties, many of which have far more public, volunteer, and non-profit transportation services for populations of similar size.

Private Non-Profit and Volunteer Transportation Services

Rural Broome County has a limited number of volunteer transportation services. One volunteer provider, the Deposit Foundation, serves the Town of Sanford. One urban provider, Broome County Council of Churches: Faith in Action Volunteers, provides some service to individuals in the Town of Binghamton and Kirkwood. By way of comparison, Tioga County has three rural volunteer transportation service providers, and Delaware County has two.

Some volunteer transportation services in Broome County that are designed for specific needs (e.g. American Cancer Society Road To Recovery,

ENCORE, etc.) serve rural Broome as well as surrounding rural counties. There are volunteer services (Faith in Action Volunteers) and specialized transportation options available for seniors in the greater Binghamton area. But for most rural Broome residents, volunteer transportation services are not available. The following table provides information on non-profit and volunteer transportation services that may be available to some rural residents:

Fig. 50. Broome County Private Non-Profit Transportation Services

Private Transportation Services							
Name of Service	American Cancer Society: Road to Recovery	Deposit Foundation	*Disabled American Veterans	*Encore Plus	Faith in Action	RSVP	Senior Helpers
Lead entity	American Cancer Society	Deposit Foundation	Veterans Service Agency	YWCA of Binghamton	Broome County Council of Churches	Catholic Charities of Broome County	Broome County Office for Aging
Geographic area served	Broome, Tioga, Seneca, Cortland, Delaware, Otsego, Tompkins, Chemung	Deposit School District	Broome, Tioga, Chenango	Broome and Tioga	Broome	Broome County's urban core	Broome
Number of rural municipalities	All	Village of Deposit and parts of Windsor and Sanford	N/A	N/A	Ki-Hewood and Town of Binghamton	Town of Binghamton	All depending on availability of workers to fill the job; most serve the Triple Cities
Description of service	Door to door transportation service designed to transport individuals to medical appointments from their home.	Transports residents of Deposit School District to the Triple Cities area (Binghamton, Johnson City, Endicott and Vestal) and other destinations if necessary	Transports veterans from the Binghamton area to the VA Medical Center in Syracuse.	Provides transportation to women for women-specific medical screening.	Provides transportation to and from medical appointments and grocery shopping trips.	Provides transportation to seniors to adult day care programs and senior centers. Will also transport seniors with disabilities to employment.	Allows seniors to hire a driver as needed.
Eligibility	Individual must be diagnosed with cancer and must make a reservation four business days prior to travel date. Individual must be able to walk and get in and out of a car on their own. They can bring a spouse or aid and/or a caregiver.	Must be a resident of the Village of Deposit or the Towns of Deposit or Sanford.	Veterans, regardless of disability.	Must have an appointment for cancer screening; must schedule ride two weeks to a month in advance.	Must be a Broome County resident age 60 or over who has applied and been approved by Faith in Action. Individuals must put in a trip request 10 days in advance.	No service to Hyrumville or Endicott. Must be a senior.	No restrictions.
Number of volunteers/paid drivers	Does not track number of volunteers. If they do not have a volunteer to transport an individual, they will arrange for another method of transportation.	N/A	N/A	N/A	N/A	Three paid drivers	Approximately 200 paid Senior Helpers have indicated they will drive. This number fluctuates based on their availability (going south for the winter, illness, etc.) These individuals are paid and do not volunteer.
Number of volunteers per day/week/month/year	N/A	Ranges from three hours every three months to six hours a week; a typical round trip takes about three hours	N/A	N/A	N/A	Two drivers are 16 hours/week, one is 8 hours/week	N/A
Seating capacity	Varies; volunteers use their own vehicles	Seven people including the driver; they try not to take more than four clients at a time	N/A	N/A	Varies; volunteers use their own vehicles or a mini-van that Faith in Action shares with CHOW	10 passenger maximum	Varies; Senior Helpers use their own vehicles
Maximum number of miles or trips per consumer	No maximum	N/A	N/A	N/A	Maximum of six round trips/month. Maximum of two round trips for grocery shopping a month (also counted towards six trip maximum total)	No maximum	No maximum

Private, For Profit Transportation Services:

Intercity Bus:

Coach USA operates an intercity bus service in Broome County under the brand name Short Line. This service has one stop in rural Broome County; it is a flag stop in Whitney Point, at the intersection of State Route 26 and U.S. Route 11. Short Line also stops at 32 Oak St. in Deposit, but the stop is technically in Delaware County.

Taxi service:

As of April 29, 2013, there were 27 licensed taxicab companies in Broome County.¹ These services generally charge a flat pickup fee plus \$2 per mile. For longer trips or trips into rural areas, taxis typically charge \$2.50 per mile. The Greater Binghamton Convention and Visitors Bureau maintains a comprehensive list of taxi providers at <http://www.visitbinghamton.org/taxis/>, although the list is subject to frequent change.

1.) "Broome County News | Broomecountyny." Broome County News | Broomecountyny. Accessed August 3, 2015. <http://www.gobroomecounty.com/>.

Medivan/Accessible Vehicles:

Medivans provide transportation to individuals requiring a higher level of service than most taxi companies can provide. They operate accessible vehicles that can support wheelchair and stretcher transportation. Southern Tier Medi-Van and Redivan are two medivan operators located in Binghamton; both of them serve the entirety of Broome County, rural communities included.

Southern Tier Medi-Van (operated by Serafini Transportation) has pickup fees for rural areas: Wheelchair - \$99; Stretcher - \$149. The company then charges \$3.25 per mile on top of the pickup fee.

Charter:

Multiple providers in Broome County offer charter transportation for groups. Birnie Bus, Coach USA, Coachmaster Transportation Services, and Shafer Tour and Charters all operate for-hire services in the area. Additionally, Broome County residents can obtain charters through Swarthout Coaches of Ithaca.

Lack of Transportation as a Barrier to Employment

Due in part to the lack of transportation options in rural Broome County, 85% of employed rural Broome residents drive alone to work.¹ But for many low income, rural individuals and families, including those living at or near the poverty rate, owning a vehicle is not an option. The annual cost to own and operate a vehicle (sedan average) in 2015 as reported by AAA is \$8,698.00 (\$0.58 per mile based on 15,000 miles of travel).² According to the Federal Highway Administration, "Transportation is the second largest expense for most households after housing. Households living in auto-dependent locations spend 25% of their income on transportation costs."³ This calculation,

1.) "2010 Census." 2010 Census. Accessed August 3, 2015. <http://www.census.gov/2010census/>.

2.) "Annual Cost to Own and Operate a Vehicle Falls to \$8,698, Finds AAA | AAA NewsRoom." AAA NewsRoom. April 27, 2015. Accessed August 3, 2015. <http://newsroom.aaa.com/2015/04/annual-cost-operate-vehicle-falls-8698-finds-aaa/>

3.) "Livability Initiative." Livability. Accessed August 3, 2015. <http://www.fhwa.dot.gov/livability/>.

tion, of course, assumes the ability to purchase and operate a vehicle. For a family of four living at the federal poverty level (annual income of \$23,850 per year or less), the expense as reported by AAA would be at least 36% of their annual income, which makes vehicle ownership essentially unaffordable.

The prohibitive cost of a car for those on low incomes, along with the lack of affordable transportation options, can bar rural residents from jobs for which they are qualified. Individuals with limited education find most of their employment opportunities in the retail, service, and light manufacturing sectors. In Broome County, those employment opportunities are located mainly in greater Binghamton (and other population centers), and they may involve second- or overnight shift work. Rural residents with children and/or without affordable transportation cannot

consider these jobs. While low wage employment is a problem regardless of location, the combination of low pay and costly transportation creates multiple barriers to employment and economic viability for many rural residents.

In an effort to better understand and document this issue, RBC researched the extent to which rural Broome residents are unable to gain employment due to lack of affordable transportation. Marge Hergel, senior employment coordinator at Workforce NY in Binghamton, acknowledged that lack of transportation is an issue when trying to find a job because “it is hard to find jobs that accommodate the bus schedule.” (Note: this applies to those served by BC Transit’s fixed route service, which primarily serves urban and some suburban Broome residents. It is even harder for rural Broome residents, who essentially do not have a public transportation option for travel to employment). Ms. Hergel said she has heard of rural residents who moved to the City of Binghamton to work until they saved enough money to move back to their rural communities. It is important to note that this is not a feasible solution for every rural individual or family. Ms. Hergel provided a copy of a page from the Workforce NY application that asks whether the individual has access to reliable transportation. She also provided information on a sampling of eight rural Broome individuals who were seeking jobs through Workforce NY: three had access to a car, three owned a car, and two did not answer the transportation questions on the application.

Christian Harris, labor market analyst for the Southern Tier Region of the NYS Department of Labor, told us that job data is not tracked at the local

level (ZIP code or township level). Mr. Harris suggested that RBC use the American Community Survey and U.S. Census data to measure unemployment in the rural areas of Broome County. However, U.S. Census data is collected only once every ten years, and the American Community Survey data at the township level is available (as estimates with a large margin of error) only in three and five year increments. The lack of unemployment information at the township and/or ZIP code levels makes it difficult to target affordable, employment-oriented transportation services.

Jean Buzel, vocational rehabilitation counselor with ACCES VR, did not have data or information on transportation as a barrier to employment for the individuals with disabilities her organization serves. However, she mentioned that it is part of the protocol at ACCES VR to ask a client whether he or she has access to reliable transportation. “Transportation is a major issue,” she said. “People who live off the regular route have a very difficult time getting to their job. I have had to close more than one case because people cannot get to a job.” When asked what she does for a client who cannot get to a job because of a transportation barrier, Ms. Buzel said that they discuss other options for the person.

Scott Reigle, senior transportation planner with the Binghamton Metropolitan Transportation Study (BMTS), could not provide data on the correlation between lack of transportation and unemployment in rural Broome County. He did acknowledge that Broome County’s public transportation system does not work well for commutes from rural areas, due to the scarcity of service and limited hours of service.

Transportation and Employment Information

1) Eighty-five percent of rural Broome residents drive alone to work. This is a higher percentage than for suburban Broome (78.2%), urban Broome (69.7%), or New York State (54%), and higher than the averages of surrounding rural counties (Chenango (76.6%), Cortland (76.0%), Delaware (72.1%), Otsego (71.4%), and Tioga (83.5%).

2) Only 0.7% of rural Broome residents use public transportation to get to work. This is a lower percentage than for suburban Broome (1.9%), urban Broome (8.5%), and New York State (26.8%).

3) Rural Broome residents have a mean travel time to work of 23.4 minutes. For suburban Broome, it is 18.5 minutes, and for the City of Binghamton it is 16.9 minutes. The New York State average is 31.5 minutes.

RBC recommends that job training programs, employment services, and employers do a better job of collecting and analyzing data on the relationship between transportation access and affordability, employment, and retention of employment. If policymakers can quantify this issue and identify pockets of transportation need for specific purposes (employment, health care, etc.), they can use that information to design cost-effective strategies for increasing mobility, creating economic benefits and improving the quality of life for rural Broome residents.

Transportation and Seniors Living in Rural Broome County

Transportation is one of the top five reasons people call the Broome County Office for Aging. Seniors need access to essential services such as food and medical services, especially if they are not available in their community, close to home. Seniors find that there are few transportation options if they are no longer able or cannot afford to drive. Rural public transportation, the BC Country bus service, currently has limited rural routes, limited options for pick up and drop off times, and cannot provide rural-to-rural travel.

Door-through-door service meets the needs of seniors whose health issues require them to have hands-on assistance when traveling any distance. Volunteers provide the only affordable source of escorted door-through-door transportation. However, volunteer

services are limited as are the areas that can be served. Seniors often depend on friends or relatives for transportation, if any live locally.

The term “aging in place” is used to describe the situation when older individuals remain in their homes or communities of choice as long as possible, often with support services to help maintain their independence. To make aging in place a safe, healthy, and dignified choice for rural residents, communities must design affordable transportation options that meet the needs of seniors for services both within and outside the rural areas in which they live. Services located in the community would result in fewer burdens on individuals and their transportation providers.

Mobility Management and Coordinated Transportation Services

Mobility Management:

Mobility management is a person-centered approach that seeks to address the unique transportation needs of individuals by using all available resources. Mobility management also uses advocacy and planning to work toward a more comprehensive and efficient transportation network, which can better serve individuals, communities, and businesses.¹

Get There Call Center:

The GetThere Call Center (toll free number: 1-855-373-4040) is a regional service provided by Mobility Management of South Central New York, a program of the Rural Health Network SCNY. GetThere serves Broome, Chenango, Delaware, Otsego, and Tioga Counties, with the majority of users residing in Broome County (445 out of 718 cases—or 62%—in 2014). GetThere provides transportation information and education, trip planning, individual and small group travel training, and a fund for non-emergency medical transportation (Connection To Care).

GetThere is staffed by a coordinator and by mobility and transportation advocates who are available to respond to calls Monday – Friday, 8:30 a.m. - 4:30 p.m. Outside regular business hours, callers can leave messages, which are returned as soon as possible. GetThere is available to the general public and is used mainly by seniors, individuals with disabilities, low

income individuals, and others with limited transportation options.¹

The focus of GetThere’s travel training program is to teach people how to use the public transportation system. In travel training, individuals or small groups receive specialized instruction on how to navigate public transit in a safe and confident manner; trainees learn skills like how to plan their trip, read schedules, and board and disembark from the bus, among others. In one-on-one settings, a travel trainer may also accompany the trainee on a practice run, providing support and coaching along the way.

Through the Connection to Care initiative of Mobility Management of SCNY (an exclusively rural service), mobility and transportation advocates help rural clients arrange transportation to health care appointments and to pick up prescription medications or medical supplies. If an individual can demonstrate financial need, Connection to Care will pay for some, or if necessary, all of the transportation expense.

Connection to Care uses the least expensive transportation option that is appropriate for the individual’s health status and ability. Transportation options used by Connection to Care include public transportation, volunteer transportation, fuel cards for users who drive their own vehicles, and private (for-profit) transportation contractors. Page 94 contains data on the number of requests for trip planning that Connection to Care and Mobility Management received in 2014, arranged by township.

1.) “Mobility Management of South Central New York - Rural Health Network of SCNY.” Mobility Management of South Central New York - Rural Health Network of SCNY. Accessed August 3, 2015. <http://www.rhnsny.org/programs/mmscnny>.

Fig. 51. Rural Broome County Mobility Management Data

Rural Broome Mobility Management Data 2014		
Location	# of Calls	% of Total Calls
Broome	445	61.98%
Rural (Broome County)	112	15.60%
Chemung	2	0.28%
Chenango	41	5.71%
Cortland	7	0.97%
Delaware	43	5.99%
Otsego	35	4.87%
Tioga	136	18.94%
Tompkins	1	0.14%
Rural (All Counties)	372	51.81%

These are the numbers of individuals that were assisted through the GetThere Call Center in obtaining transportation information and trip planning.

Fig. 52. Rural Broome County Connection to Care Data

Rural Broome Connection to Care Data Unduplicated 2014	
Zip Detail	Unique Count
*Castle Creek	2
*Chenango Forks	2
Deposit	4
Harpursville	9
Kirkwood	3
Lisle	5
Maine	2
*Endicott	6
*Johnson City	1
Port Crane	9
Whitney Point	9
Windsor	3
Town of Binghamton	3
*Not rural as defined by NYS Office for Rural Health	

These are the numbers of individuals that were assisted in their transportation needs through Connection to Care.

Ride Coordination:

Ride coordination is a cost-effective strategy for increasing transportation options. Whether by helping rural residents take better advantage of existing services, or using a database to arrange carpools, ride coordination can help to bridge the transportation gap without requiring new resources.

Broome-Tioga Rideshare

Broome-Tioga Rideshare (formerly Broome-Tioga Greenride) is an online carpooling database sponsored by the BMTS. Any individual looking for a ride in Broome, Tioga, or surrounding counties can register on the Broome-Tioga Rideshare website (www.BTRideshare.com) and search for a carpool partner. As part of the New York State Department of Transportation 511 System, Broome-Tioga Rideshare can also link users to other potential riders or drivers throughout New York State. Individuals who do not have cars can register for the service by indicating in the “Preferences” section that they cannot offer rides. The registrant is asked to enter his or her name, address, e-mail address, and destination, and the database uses mapping software to find potential carpool partners. Ride seekers can also note if they have gender preferences, smoking/non-smoking preferences, or other specifications the system should consider when matching them with potential carpool partners.¹

1.) “511NY. Get Connected to Go.” 511NY. Get Connected to Go. Accessed August 3, 2015. <https://ridematch.511nyridesare.org/newyork/?id=2071&client=BMTS>.

The Broome-Tioga Rideshare service could help to close the transportation service gap if enough individuals sign up for the service. But with very few riders currently registered, the ridesharing options are limited. Since Broome-Tioga Rideshare began in May 2014, 70 people from Broome and Tioga Counties have activated accounts. Thirty-nine of those people were formerly registered with the Broome-Tioga Greenride service and re-activated their accounts when prompted by BMTS. The other 31 self-registered to create new accounts. Perhaps if Broome-Tioga Rideshare conducted a large enough marketing campaign, it might encourage the rural Broome public to use this service. It might also be wise to let potential users register offline (either by phone or via a paper application), so individuals without Internet access can take advantage of the service.

Emergency Medical Transportation Service

Five ambulance services serve Rural Broome County:

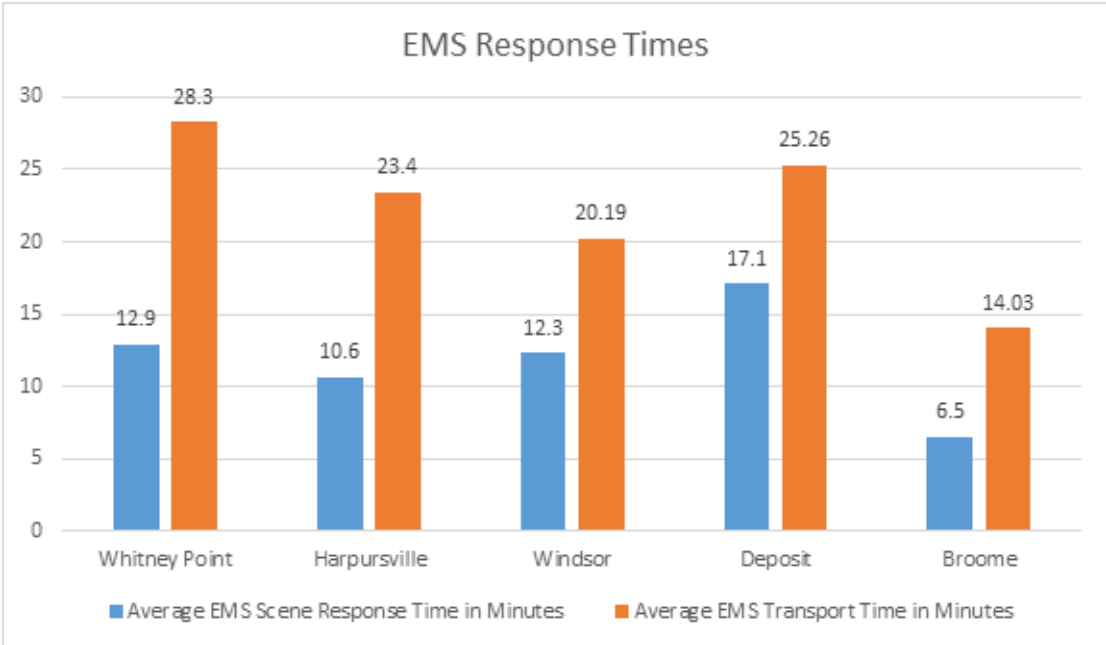
- 1.) Deposit Fire Department First Aid and Rescue Co.
 - Primary Territory: Towns of Sanford, Deposit, and Village of Deposit
- 2.) Windsor Emergency Services, Inc.
 - Primary Territory: Village and Town of Windsor
- 3.) Colesville Volunteer Ambulance Service
 - Primary Territory: Town of Colesville
- 4.) Superior Ambulance Service, Inc.
 - Primary Territory: Broome County
- 5.) Broome Volunteer Emergency Squad, Inc.
 - Primary Territory: Towns of Binghamton, Conklin, Dickinson, Fenton and Kirkwood, Village of Whitney Point, Townships of Lisle, Triangle, Barker, Portions of Nanticoke, Richford and Chenango, Town of Windsor Fire Protection District

Rural emergency medical transportation trends in rural New York State and nationally show a decline in the number of volunteers and in ambulance services staffed purely by volunteers. The trend is towards services that rely on paid staff or a combination of paid staff and volunteers.

One issue that would benefit from additional research is the use of rural EMS transportation services for non-emergency needs. Simply put, EMS is required to respond to 911 calls and provide transportation to the emergency room at the request of any individual, whether or not that person is experiencing an emergency. People who access “just in time” transportation to the emergency room of a nearby hospital through the 911 and EMS system are known as “frequent fliers.”

The cost of inappropriate use of EMS is not limited to the cost of transportation. If a non-emergency caller uses a rural EMS provider inappropriately, that can result in a longer response time for another caller with a true medical emergency. Patients who use the emergency room for non-emergencies, rather than using primary care, generate higher costs. Under its Medicaid reform initiative, New York State aims to reduce inappropriate use of emergency room care by 25% within five years. Rural EMS providers, hospital systems, and transportation/mobility management service providers should start working together to address this important issue.

Fig. 53. Broome County EMS Response Times



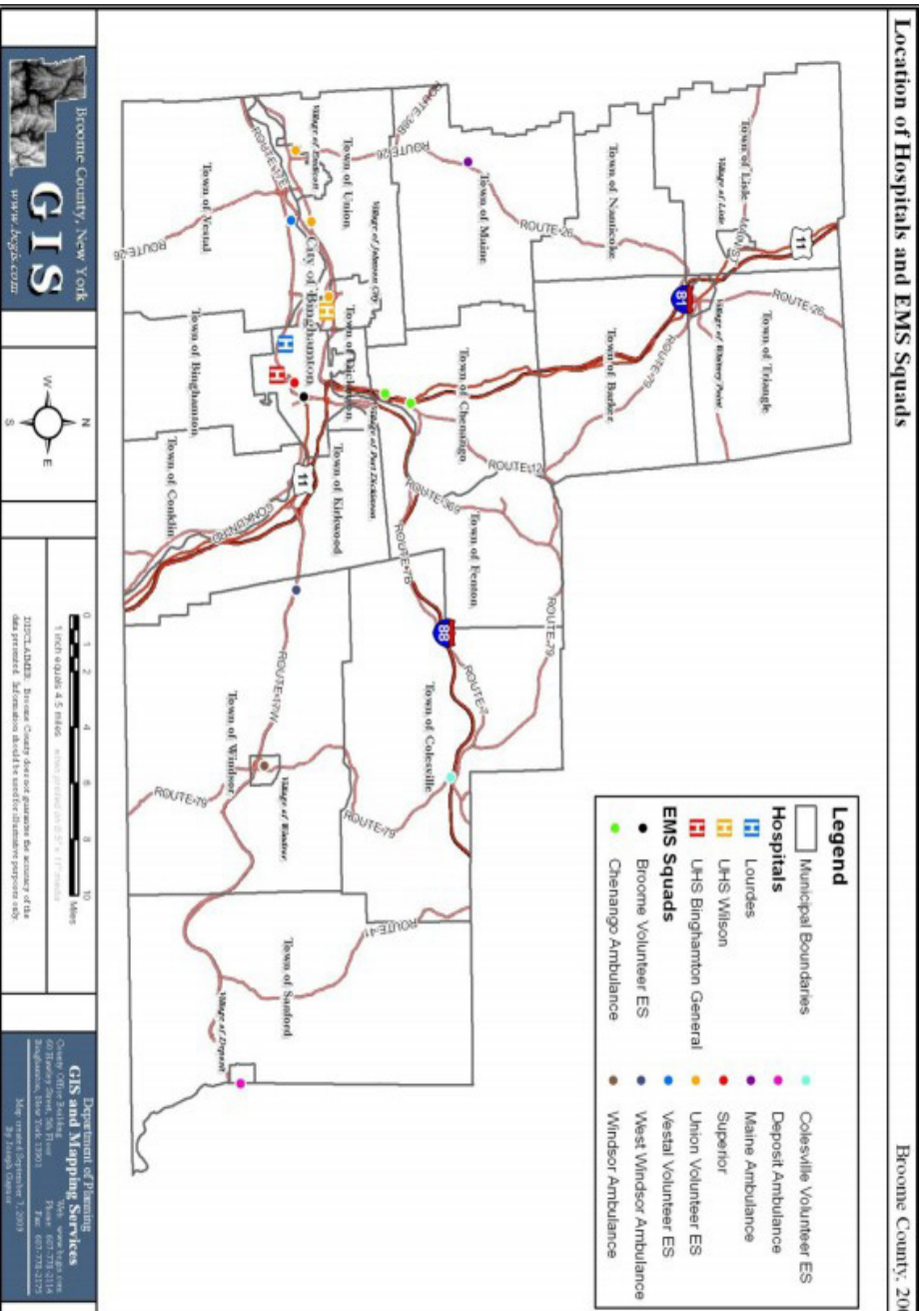
Source: Richard Blackley, Executive Director, Susquehanna Regional EMS

Fig. 54. Rural Broome County EMS Volunteers

Pocket Community	Volunteer # and Type
Windsor	44 (ambulance only)
Deposit	54 (ambulance and fire)
Harpursville	35 (ambulance only)
Whitney Point	0

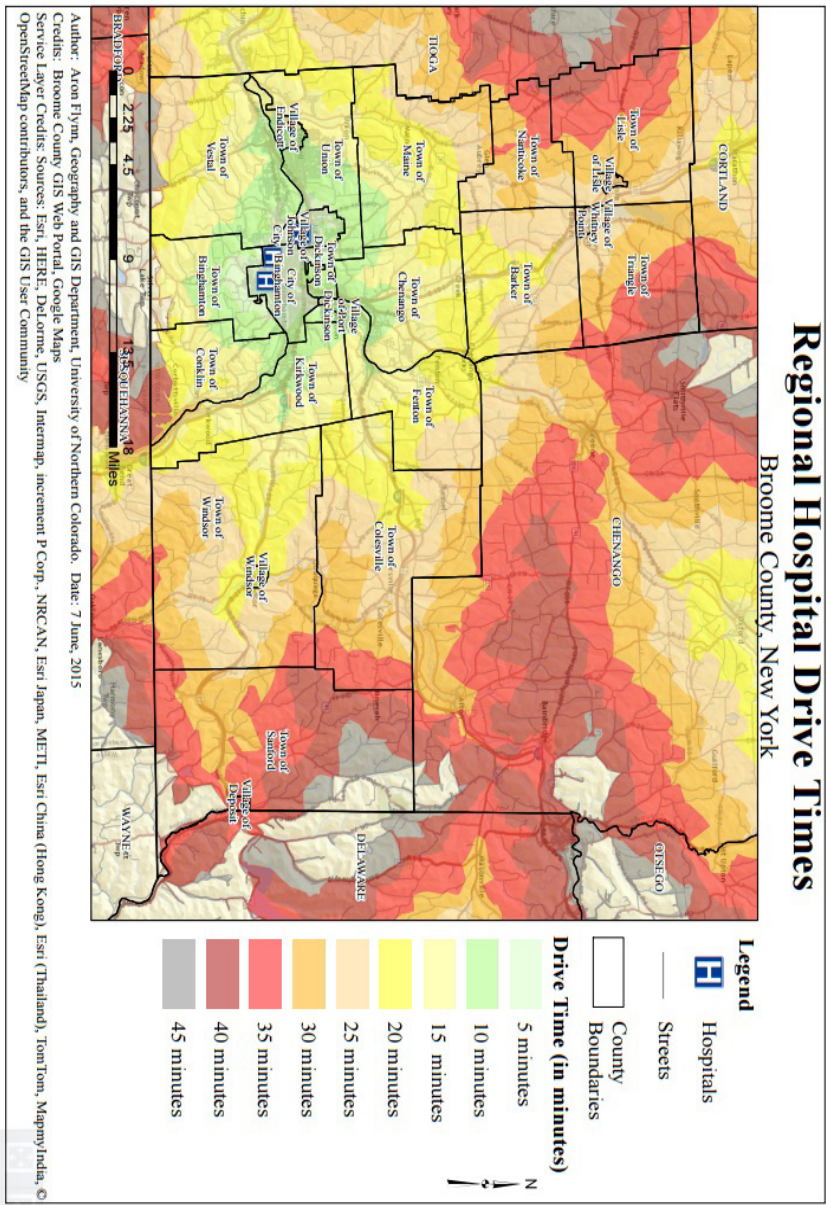
Source: Richard Blackley, Executive Director, Susquehanna Regional EMS

Fig. 55. Location of Hospitals and EMS Squads in Broome County



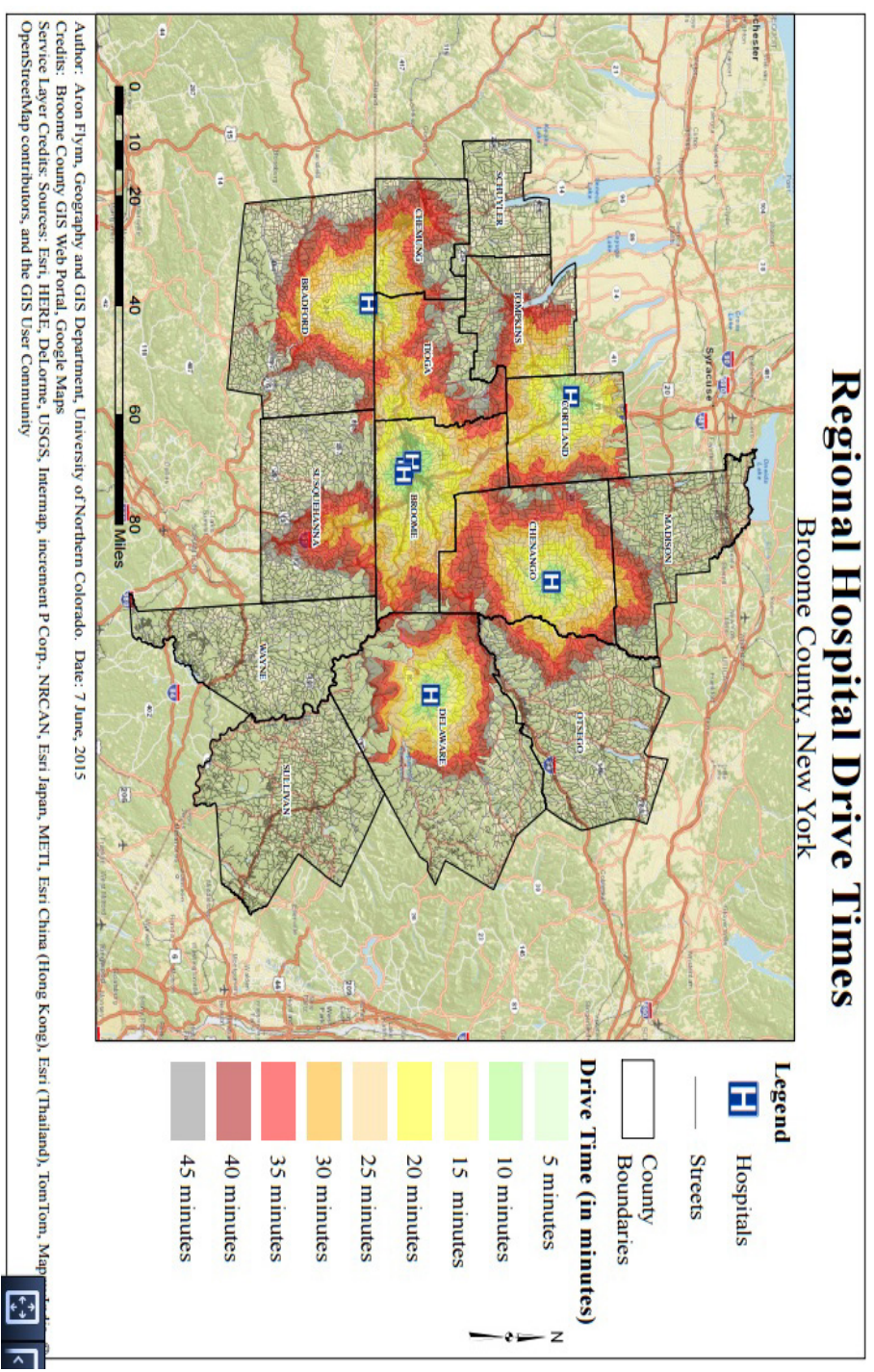
Source: "Quick Links." Broome County GIS Portal. Accessed August 10, 2015. <http://broomegis.co.broome.ny.us/Website/GISWeb/Portal.htm>.

Fig. 56. Broome County Regional Hospital Drive Times



Source: Geography and GIS Department, University of Northern Colorado

Fig. 57. Southern Tier Regional Hospital Drive Times



Source: Geography and GIS Department, University of Northern Colorado

Rural Transportation Case Story

Promise Zone Case Story

At one meeting of the RBC Transportation Work Group, Luann Kida, Community Schools Director for the Broome County Promise Zone, shared a rural transportation success story. In 2014, Whitney Point offered a summer STEM (science, technology, engineering, and mathematics) program for its students, with some programming for parents as well. The program ran for six weeks, Monday – Friday, and involved six field trips. To accommodate students who did not have transportation and to encourage more students to participate, the program provided transportation for students and their parents. One of the challenges this model posed was that it used school buses to transport students and their families.

Due to strict regulations regarding children and adults riding school buses at the same time, the buses had to make two trips, first to transport the children and then the parents. The transportation cost for the summer program totaled more than \$10,000, including drivers' wages and mileage expenses.

Despite this challenge, Kida stressed that the transportation service greatly increased the number of students who could participate in the program. Also, because Whitney Point offered the program and made it easy to access, students and parents developed better attitudes toward the school district.

Recommendations for Improving Rural Mobility and Affordable Transportation Options

1. Create maps that clearly show where in Broome County there is no public paratransit service (curb-to-curb wheelchair transportation), where there is limited or restricted paratransit service, and where there are paratransit services that comply with the ADA (Americans with Disability Act).
 - b. Consider how to address the increasing need for door-through-door transportation for seniors and individuals with disabilities.
 - c. Consider the use of rideshare and vanpool models to increase affordable transportation options in rural Broome.
2. Increase advocacy, and establish processes for addressing issues related to public transportation service, access, and equity in rural Broome County.
3. Improve the collection and analysis of data about transportation needs in Broome County. This will help officials within job training services, employment services, and employers' human resource departments better understand the impact of transportation on employment, quality of employment, and retention.
4. Include transportation information when establishing patients' electronic medical records. This will help providers and policymakers understand the relationship between transportation access and the use of health services, including inappropriate use of EMS transportation for non-emergency purposes.
5. Recommendations from the RBC Transportation Work Group:
 - a. Consider establishing transportation hubs in rural towns and villages. A municipal building could provide a waiting area, bathrooms, etc. for riders. This recommendation assumes a higher level of rural transportation service than currently exists. The Transportation Work Group also supports preserving and expanding essential services, businesses, and resources within rural village centers. A related and compatible recommendation is to establish more park and rides in rural towns and villages. This recommendation also assumes a level of transportation service adequate to support transportation to employment centers.

Community Spirit



Rural Broome County Residents and Community Spirit

During the October 2014 Rural Broome Counts Kick-Off Workshop, participants representing multiple perspectives—from the health and mental health, education, government, not-for-profit, advocacy, planning, and rural arenas—agreed that the greatest strength of the county’s 11 rural towns lies in rural people. Participants reached this consensus through small group exercises and an individual voting process. During subsequent RBC Advisory Committee meetings, experiences living near, working with, and serving alongside rural populations were discussed. Throughout these discussions, community emerged as an important, overarching theme.

The RBC Kick-Off participants and Advisory Committee members described rural community spirit as the small town, homegrown, grass roots, pull-up-your-bootstraps-and-help-your-family-friends-and-neighbors feeling that rural residents display. They also identified the initiative it takes to get things done at the local level on a shoestring budget. Our participants believe that rural people are often motivated by a sense of self-sufficiency, pride, persistence, diligence, and faith. Like their counterparts in many urban and suburban Broome communities, the people of rural Broome achieve tremendous synergy when they work together. The bonds they create are both empowering and inspiring.

Both community spirit and the second strength, rural schools, contribute to a sense of belonging, as they connect residents through a shared vision. Rural people celebrate their roots, and they feel a tremendous sense of responsibility for building and sustaining a viable community. Hubs of spirit are created and nurtured by people active in schools, community associations, places of worship, senior centers, public libraries, parks, town halls, police forces, fire departments, emergency response teams, military/veteran allegiances, philanthropic organizations, athletic teams, creative art forums, neighborhoods, and inter-generational or newly rural families.

The rural people of Broome County give tirelessly to their communities and support one another by volunteering time, donating money, goods, and services, planning local events, performing in arts programs, and sharing recreation and leisure activi-

ties. Civically engaged rural people gather together on everyday occasions and during special celebrations in times of glory and tragedy. Examples shared included searching for a missing child, recovering from massive floods (2006, 2011), and assisting rural families following house fires.

As the Rural Health Network SCNY plans subsequent years of the Rural Broome Counts project, we intend to take a closer look into the four pocket communities surrounding the rural school districts—Deposit, Harpursville, Whitney Point and Windsor—and engage residents and stakeholders in the research. We will use surveys, focus groups, and personal interviews to document real life stories of rural people and communities, providing examples of their resiliency, their hopes, and the challenges they face. We will make a conscious effort to include individuals, partners, families, business owners, retirees, the unemployed, and people of diverse ages, faiths, sexual orientations and abilities.

We will ask rural residents to define community spirit and describe examples in their respective rural areas. We hope to record their journeys and reflections in multiple modalities and to illustrate the importance of Broome County’s 11 rural towns and their residents. We remain committed to keeping rural voices and ideas at the forefront when advocating on their behalf, building new partnerships, expanding existing ones, and defending equitable human, fiscal, and infrastructure resource allocation. Please join the discussion and take action, because Rural Broome Counts!

Please share your photos of the many faces of rural Broome County residents and their community spirit on our Facebook page.

(www.facebook.com/ruralbroomecounts)

Resources for Further Reading

Accessed August 3, 2015. <http://www.cfra.org/renewrural/s/desirable-communities>.

Accessed August 3, 2015. <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1419&context=greatplainsresearch>.

“Entrepreneurship in Rural Communities: An Emerging Strategy Presents Opportunities and Challenges | Federal Reserve Bank of Minneapolis.” Entrepreneurship in Rural Communities: An Emerging Strategy Presents Opportunities and Challenges | Federal Reserve Bank of Minneapolis. Accessed August 3, 2015. <https://www.minneapolisfed.org/publications/community-dividend/entrepreneurship-in-rural-communities-an-emerging-strategy-presents-opportunities-and-challenges>.

“How Festivals Create Community Identity | Daily Yonder | Keep It Rural.” How Festivals Create Community Identity | Daily Yonder | Keep It Rural. Accessed August 3, 2015. <http://www.dailyyonder.com/festivals-create-community-identity/2013/11/08/6888>.

“Investing In What Works for America’s Communities » Community Development in Rural America: Collaborative, Regional, and Comprehensive.” Investing In What Works for Americas Communities. Accessed August 3, 2015. <http://www.whatworksforamerica.org/ideas/community-development-in-rural-america-collaborative-regional-and-comprehensive/#.Vbp5CflViko>.

“Rural Community Spirit Articles - Google Search.” Rural Community Spirit Articles - Google Search. Accessed August 3, 2015. <https://www.google.com/search?q=rural+community+spirit+articles&espv=2&biw=1431&bih=727&tbm=isch&tbo=u&source=univ&sa=X&ved=0CFQQsARqFQoT-COnrp9zHg8cCFUpwPgodmnsHeA&dpr=1>.

“The Rural Dilemma, by Thomas D. Rowley and David Freshwater : Articles : Terrain.org.” The Rural Dilemma, by Thomas D. Rowley and David Freshwater : Articles : Terrain.org. Accessed August 3, 2015. <http://www.terrain.org/articles/10/ruraldilemma.htm>.

“Rural Post Offices: Community Spirit at Risk If Rural Post Offices Close.” Tribunedigital-chicagotribune. September 11, 2011. Accessed August 3, 2015. http://articles.chicagotribune.com/2011-09-11/news/ct-met-rural-post-office-closing-20110911_1_post-office-community-spirit-closing.

Rural Schools



Rural Schools Introduction

Given the relative isolation of rural Broome communities from greater Binghamton, the services hub of Broome County, rural communities must have places of their own where residents can access needed services. The RBC assessment process has shown us the extent to which the rural school districts fill this role. At the Rural Broome Counts Kick-Off Workshop, “Rural Schools and Staff” was identified as the number two strength of rural Broome County. In our one-on-one interviews with rural Broome superintendents (Kathleen Wood, Harpursville School District; Edward Shirkey, Deposit School District; Patricia Follette, Whitney Point School District; and Jason Andrews, Windsor School District), we learned about the vast variety of services the school districts provide to their communities through partnerships with a wide range of organizations and institutions.

It is especially important to note that often schools elect to provide these services not because New York State requires it, but because they know that holistic support for students and families will improve students’ performance in the classroom.

The dedication of the rural school districts to their students and their communities is deeply inspiring. To honor the hard work they do for rural Broome, we have documented in this section some of the school-community partnerships of the Whitney Point, Windsor, Deposit, and Harpursville School Districts. Some examples include partnerships with Lourdes Youth Services, Broome County Promise Zone, and local institutions of higher learning.

Our rural school districts face many challenges that seem to be increasing over time. Patricia Follette, Whitney Point School District superintendent, apprised the Rural Broome Counts Advisory Committee of the number of families in her district that are homeless as well as the transiency of families in the district. Transient families do not fit the classic definition of homeless in terms of living in shelters or on the street. But many families are forced to move in with relatives or “couch surf” from dwelling to dwelling, due to substandard housing conditions in their normal places of residence, particularly during the winter. Such detracts from a student’s education and socialization, as he or she is constantly moving from one district to another. Follette explained that instead of having parents register their children for school at the school directly (i.e. the elementary school), she has them register at the

district office in an attempt to better identify students that fit the McKinney-Vento Act^a definition of homelessness. This act provides funding to school districts to support programs that serve homeless students. Follette makes every effort to keep transient students in the district, even when their families are forced to move away. However, arranging to transport such students to school is difficult and very expensive for the district.

Substandard housing affects different districts in different ways. Edward Shirkey, superintendent of the Deposit Central School District, explained that he keeps school open even during many winter storms, to ensure that his students have a warm place to stay during the day. He knows that many of his students live in substandard housing with poor heating, and he wants to keep them safe during the cold winter months.

Follette also described the growing number of students who enter the district with Individualized Education Plans.^b These higher-needs students are difficult to provide for and put an additional financial strain on the district. However, she said, Whitney Point is dedicated to meeting the needs of its students even when these challenges arise. Jason Andrews, superintendent of the Windsor School District, noted that his district is home to an increasing number of students with 504 plans.^c

Rural districts should be commended on the creative solutions they have implemented to address these challenges, as well as the community partnerships they have established and programs that they offer their students and families. We would like to thank the rural Broome superintendents for giving us insight into their school districts, their academic programs, and the work they do for their communities.

a. “The McKinney-Vento Homeless Education Assistance Act is a federal law that ensures immediate enrollment and educational stability for homeless children and youth. McKinney-Vento provides federal funding to states for the purpose of supporting district programs that serve homeless students.” (<http://www.k12.wa.us/HomelessEd/AssistanceAct.aspx>)

b. An individualized education plan (IEP) is a legally binding document that every public school must create for every child receiving special education services. An IEP is meant to address each child’s unique learning issues and include specific educational goals. (www.understood.org)

c. A 504 plan helps students with learning and attention issues participate in a general education classroom by outlining how their specific needs will be accommodated. The plan covers a wide range of physical and mental impairments that may inhibit a student's ability to learn and helps remove those barriers to learning. The criteria for students who qualify for a 504 plan is broader than the criteria for an IEP. (www.understood.org)

Whitney Point School District (WPCSD)¹

1.) "Whitney Point Central School District Home." Whitney Point Central School District Home. Accessed August 3, 2015. <http://www.wpcsd.org/>.

Whitney Point CSD serves northern Broome County, including Nanticoke, Barker, Lisle, Triangle, and parts of Maine and Chenango townships. The list below provides some information on the programs and services that WPCSD provides to the Northern Broome Community.

1.) PROMISE ZONE.¹ Whitney Point has partnered with the Broome County Promise Zone (a result of the groundwork laid by SHARE, Safe Healthy Attitudes Require Education, a four-year grant funded program) to improve student attendance by increasing access to services and encouraging family engagement. Licensed social workers and Binghamton University MSW interns work with Whitney Point families to overcome barriers such as filling out necessary paperwork for school and accessing mental health services for themselves and their children.

Home visits are conducted to increase family engagement and overcome transportation barriers.

During the 2014-2015 school year, Promise Zone conducted the following programs:

After school programming for the fourth through eighth graders included academic and wellness components. Educators stayed after school to do skill-based work in small groups. Students were instructed in dance, yoga, and meditation.

In a "family room" at the high school, Promise Zone held a weekly academy for groups of parents, to teach them how to get involved in their children's academic lives and foster their success. Broome County Cornell Cooperative Extension also conducted healthy meal demonstrations during these sessions. Transportation or gas cards were provided to increase family attendance at meetings.

In collaboration with Binghamton University,

1.) "Broome County Promise Zone." Facebook. Accessed August 3, 2015. <https://www.facebook.com/pages/Broome-County-Promise-Zone/562354943890394>.

Promise Zone started a mentoring program in the elementary school with a goal of providing opportunities for the parents of kindergarten students to get involved in the school community. Volunteers were tasked to provide assistance in the kindergarten classrooms and the library as well as make positive phone calls home to parents. In addition, a new group to support grandparents who are caring for school-age children has been formed.

Promise Zone also hosted a summer camp for middle and high school students that included weekly field trips, visits to college campuses, community service, and cooking classes.

2.) LOURDES YOUTH SERVICES. Whitney Point partners with Our Lady of Lourdes to bring a mobile dental van to the district two times per year. The van provides oral health services to the students, such as cleanings, fillings, extractions, and X-rays. The district also participate in the All Stars Program and Teen Intervene to prevent drug use and assist at-risk students. The All Stars Program is an evidence-based curriculum, which educates sixth through eighth grade students on how to make healthy choices regarding schoolwork, drug and alcohol use, and interpersonal relationships. Teen Intervene is geared towards students who have already been identified as using alcohol or other substances. The program connects teens to support and counseling services.²

3.) FAMILY AND CHILDREN'S SOCIETY

Whitney Point has partnered with Family and Children's Society to offer mental health services to students and their families with a social worker who works full-time in Whitney Point Schools and receives referrals from school personnel. This effort is aimed

2.) Lourdes Hospital. Accessed August 3, 2015. <https://www.lourdes.com/centers-and-services/youth-services/>.

at providing mental health support to families right in the community and addressing the barrier of lengthy travel time.³

3.) SUNY BROOME, TOMPKINS CORTLAND COMMUNITY COLLEGE (TC3), BROOME TIOGA BOCES, SUNY CORTLAND. Whitney Point has partnered with SUNY Broome to offer college courses on site in the evenings for anybody in the community. During the day, high school students can take college classes and receive credit through SUNY Broome or TC3. Whitney Point provides transportation for students from the high school to Broome Tioga BOCES, so they can take classes there on a full day or half-day basis. WPCSD partners with SUNY Cortland and is a SUNY Cortland Professional Development School. Undergraduates and student teachers provide many opportunities for students throughout the year including the use of iPads and parent information nights. During the summer, they assist in a summer enrichment program for elementary school students. The program introduces students to STEM (Science, Technology, Engineering, and Math) courses to spark their interest in this area.

4.) WELLNESS COMMITTEE. The Wellness Committee implements policies that follow the WPCSD mission of providing a school environment that promotes and protects student health, wellbeing, and the ability to learn. The key strategy is to support healthy eating and physical activity. Currently, the wellness committee is updating the WPCSD Wellness Policy to improve the quality of food at school events, increase physical education and activities, and promote nutrition education among staff and students. The Wellness Committee brings healthy activities to the community, such as a Drug Awareness and Wellness Forum, which was held on April 22, 2015. At this event, parents, recovering heroin addicts, law enforcement officers, and other representatives from a variety of organizations spoke about the effects of heroin addiction and how to address the issue in the Whitney Point community.

5.) RURAL HEALTH NETWORK OF SOUTH CENTRAL NEW YORK. Whitney Point Central School District and Rural Health Network SCNY collaborate on many projects to improve the quality of life for northern rural Broome residents. Olivia Consol, a Rural Health Service Corps AmeriCorps member, represents Ru-

3.) "Family and Children's Society." Family and Children's Society. Accessed August 10, 2015. <http://www.familycs.org/>.

ral Health Network SCNY on the WPCSD Wellness Committee. Other AmeriCorps members serving with Rural Health Network SCNY have also provided health education programs to WPCSD students. As a member of the Rural Broome Counts Advisory Committee, Patricia Follette, WPCSD superintendent, provided the school district perspective on rural Broome challenges and helped develop the assessment.⁴

6.) BROOME COUNTY HEALTH DEPARTMENT. WPCSD has collaborated with the BC Health Department on a number of different initiatives, including the Tobacco Coalition and Reality Check (to reduce tobacco use among the student body), the Sodium Reduction Initiative (to reduce sodium in school lunches and increase community education and awareness), and Steps to a Healthier New York Initiative (to reduce obesity).

7.) BACKPACK PROGRAM. Every Friday, students go home with a backpack full of food to ensure that they have healthy meals to eat over the weekend when they are not receiving breakfast and lunch at school. School social workers and nurses refer students to participate in this program.

8.) OTHER COMMUNITY PARTNERSHIPS. Whitney Point conducted a threat assessment, in partnership with local law enforcement, to learn how to use a local place of worship as a safe place in the event of an emergency. There are two community planning groups who meet to discuss current events in the community, plan and provide positive activities, and support youth and the homebound. Whitney Point student music groups perform at local senior centers. Students in the Home and Careers classes go to the Whitney Point Preschool to take child care classes. WPCSD helps to sponsor a school-community musical that takes place every other year, in which community members and students are recruited to perform. An Eagles Nest Booster Club of parent and other community representatives provides support to the Whitney Point CSD music, art and athletic programs as well as other school activities. A col-

4.) "Rural Health Network of SCNY." Rural Health Network of SCNY. Accessed August 3, 2015. <http://www.rhnsny.org/>.

laboration during the holiday seasons between district staff and community members and agencies provides presents and hygiene products to about 150 parents and children each year. The high school student government collects food for holiday baskets and a number of other school clubs and organizations provide community activities and donations to local organiza-

tions. Seniors from local places of worship volunteer for a grandparent program, helping elementary school students with reading. Places of worship also connect WPCSD families with the local food bank and provide them with clothing if necessary.

Deposit Central School District (DCSD)¹

1.) "Deposit Central School." Deposit Central School. Accessed August 3, 2015. <http://www.depositcsd.org/>.

Deposit CSD serves eastern Broome County's Sanford Township. The list below describes programs and services that DCSD offers, as well as services that are shared between DCSD and other entities to reduce cost.

1.) SCHOOL DISTRICT PARTNERSHIPS. Deposit and Hancock School Districts share a transportation supervisor as well as athletic team membership.

2.) TOWN AND VILLAGE PARTNERSHIPS. Deposit CSD shares equipment with the Village of Deposit and the town of Sanford. During the last major flood, the town of Sanford utilized the school bus garage as a shelter. There is a community pool on school property. The school district, the village of Deposit, the town of Sanford, and the town of Deposit share the cost of maintenance, upkeep, and personnel to run the pool, which is open from late June through August. DCSD runs a kayaking program for seniors and eighth graders. Participants practice in the pool and then take a kayak trip down the Delaware River. In the future, DCSD will partner with the town to use a compressed natural gas filling station to fuel its school buses.

3.) LOURDES YOUTH SERVICES. DCSD partners with Lourdes to bring the mobile dental van to the school for a week at a time to provide dental services to elementary, middle, and high school students. Services include cavity fillings, extractions, and emergency dental care. This partnership has existed for about five years. Deposit hosted a Heroin Education Night on November 17, 2014 in partnership with Lourdes Youth Services. The event featured speeches from law enforcement, recovering addicts, mental health service workers, and others on the effects of addiction and how to stop drug use in the community.¹

1.) Lourdes Hospital. Accessed August 3, 2015. <https://www.lourdes.com/centers-and-services/youth-services/>.

4.) COMMITTEE ON PRE-SCHOOL SPECIAL EDUCATION (CPSE). DCSD has its own CPSE team, made up of two full time social workers, two full time guidance counselors, two RNs, one school psychologist, one full time occupational therapist, and one full time speech pathologist. The district also hires a physical therapist from an outside agency. DCSD contracts out this CPSE service to other organizations in Delaware and Broome Counties. Having a CPSE team on site has proven extremely beneficial, streamlining the evaluation process to one week instead of three months.

5.) SUNY BROOME, SUNY ALBANY, TC3. DCSD works with SUNY Broome through a fast forward program and with TC3 to provide many college classes to high school students. The district has also partnered with SUNY Albany to offer a college course to the high school students.

6.) DEPOSIT'S CLOSET AND FOOD DRIVES/PANTRY. Run by local churches, Deposit's Closet distributes clothing to community members, including Deposit School District families. Deposit has its own food pantry, and DCSD runs two to three drives per year to collect food donations for the pantry.

7.) RELAY FOR LIFE. The DCSD National Honor Society, National Junior Honor Society, and student council raised over \$6,000 for Relay for Life and received top honors for their fundraising efforts.

8.) FREE SUMMER LUNCH PROGRAM AND FREE BREAKFAST PROGRAM. DCSD offers free lunch during the summer for anybody in the community 18 years old or

younger. In 2015, DCSD will offer free breakfast every Monday-Friday for pre-kindergarten through sixth grade students.

9.) FOOD BANK OF THE SOUTHERN TIER. Every Friday, 40-50 students receive backpacks full of food to ensure that they have healthy meals to eat during the weekend. This program is offered in partnership with the Food Bank of the Southern Tier. Enough food is supplied to feed at least the child recipient, but if the school district knows that the student has a sibling, it will try to provide some additional food. Items provided

include things such as boxed cereal and tuna.²

10.) SAFETY. Deposit CSD was the first school to sign up for Narcan (an opioid antagonist used to counter the effects of an opioid overdose) training programs. At the time of this interview, the district had seven staff members trained in using Narcan. DCSD also has an emergency response team that practices for emergency situations. Its bus drivers are also trained in using AEDs and CPR.

2.) "Food Bank of the Southern Tier." Food Bank of the Southern Tier. Accessed August 3, 2015. <http://www.foodbankst.org/>.

Windsor Central School District (WCSD)¹

1.) "Windsor Central School District." Windsor Central School District. Accessed August 3, 2015. <http://www.windsor-csd.org/>.

Windsor CSD serves eastern Broome County. This includes parts of Windsor, Kirkwood, Colesville, and Sanford Townships. The list below provides some information on programs and services that Windsor School District provides to the eastern Broome community.

1.) BINGHAMTON UNIVERSITY (BU), SUNY BROOME. WCSD offers a dual enrollment program in conjunction with BU and SUNY Broome. The program enables high school students to complete various courses on-site, while simultaneously earning college credit.

2.) WINDSOR TRANSITION ACADEMY. WCSD, in coordination with the Liberty Partnership Program at BU, offers a summer program that targets incoming ninth grade students. As field experience, BU graduate students teach the adolescents skills based in literacy, Common Core Standard-based skills, as well as technology-related research to help ease their transition from middle school to high school.

3.) KYDS COALITION. WCSD was formerly involved with the KYDS Coalition, a Broome County Youth Prevention Partnership, which sponsored programs that encouraged community collaboration in order to prevent drug and alcohol use among youth.

4.) LOURDES. Lourdes is the health care provider for WCSD and also provides the school with a social worker. The mobile dental van goes to WCSD to provide

oral health services to students. WCSD also offers a fluoride program in one of its schools in partnership with Lourdes. A substance abuse counselor from Lourdes offers services at WCSD for students struggling with drug abuse.¹

5.) KNIGHT PACK PROGRAM. This backpack program provides referred students with backpacks full of food every Friday to ensure they have healthy meals to eat over the weekend. The Windsor Human Development organization, a local non-profit, provides the bulk of the food used to fill the backpacks.²

6.) SUMMER CAMP. WCSD offers a summer camp for elementary school students that focuses on literacy and academic enrichment. High school students and teachers work with the elementary school students on skill development. The district also offers a band camp, sports camp, and teacher generated mini-camps. Breakfast and lunch as well as transportation are provided to student campers.

7.) MOTHERS AND BABIES PERINATAL NETWORK. Mothers and Babies Perinatal Network conducts outreach at WCSD events to provide education on insurance

1.) Lourdes Hospital. Accessed August 3, 2015. <https://www.lourdes.com/centers-and-services/youth-services/>.

2.) Accessed August 3, 2015. <http://www.windsor-csd.org/protected/articleView.aspx?iid=4GU3I&dasi=3GAB>.

ance to Windsor School District families.³

8.) TOWNS OF WINDSOR AND KIRKWOOD. The school district partners with Windsor and Kirkwood to offer youth programming such as sports to the WCSD students.

9.) CORNELL COOPERATIVE EXTENSION BROOME. WCSD partnered with CCE Broome on the Safe Routes to School initiative to rebuild sidewalks and improve infrastructure.⁴

3.) "Mothers and Babies Perinatal Network." Mothers and Babies Perinatal Network. Accessed August 10, 2015. <http://www.mothersandbabies.org/>.

4.) "Home." Cornell Cooperative Extension. Accessed August 3, 2015. <http://ccebroomecounty.com/>.

10.) WINDSOR WHIP WORKS ART CENTER. This local art gallery showcases student art and brings in artists to teach Windsor students and teachers. It also hosts Windsor student performances.⁵

11.) COMMUNITY DRUG AWARENESS NIGHT. Windsor hosted a two-part Community Drug Awareness Night on January 28, 2015 and March 31, 2015. The events focused on preventing heroin use and other forms of drug addiction.

5.) "Windsor Whip Works." Windsor Whip Works. Accessed August 3, 2015. <http://www.whipworksartgallery.org/>.

Harpursville Central School District (HCSD)¹

1.) "Harpursville Central School District Home." Harpursville Central School District Home. Accessed August 3, 2015. <http://www.hcs.stier.org/>.

Harpursville CSD serves eastern Broome County, including most of Colesville and parts of Windsor, Kirkwood, Fenton, and Sanford Townships. The list below provides some information on programs and services that Harpursville School District provides to the eastern Broome Community.

1.) LOURDES. The mobile dental van goes to HCSD to provide oral health education as well as free dental screenings to students.¹

2.) SUMMER FEEDING PROGRAM. During the summer, Harpursville offers free breakfast and lunch to youth under the age of 18 Monday-Friday.

3.) AFTER SCHOOL ENRICHMENT PROGRAM. This program is open to kindergarten through sixth grade students. It runs during the school year, Monday through Friday, from 3p.m. to 5:15 p.m. The program features an academic component, hands on activities, and other activities that encourage team building and social awareness. HCSD employs JS High School students to assist with programming.

4.) SUMMER ENRICHMENT PROGRAM. Harpursville

1.) Lourdes Hospital. Accessed August 3, 2015. <https://www.lourdes.com/centers-and-services/youth-services/>.

offers a Summer Enrichment Program to students entering kindergarten through sixth grade. The program runs Monday-Friday for five weeks and offers academic enrichment, swimming, arts, field trips, and free breakfast and lunch. This program includes not only Harpursville students but students from Afton Central School. HCSD employs JS High School students to assist with programming.

5.) BREAKFAST AND LUNCH PROGRAM. HCSD provides 177 families with free breakfast and 220 families with free lunch.

6.) BACKPACK PROGRAM. Every Friday, referred students receive backpacks full of food to ensure that they have healthy meals to eat during the weekend. This program is offered in partnership with the Food Bank of the Southern Tier.²

7.) SUPPER PROGRAM. On Monday-Friday, Harpursville School District provides a dinner to students participating in the after school program.

2.) "Food Bank of the Southern Tier." Food Bank of the Southern Tier. Accessed August 3, 2015. <http://www.foodbankst.org/>

8.) BROOME COMMUNITY COLLEGE, TOMPKINS CORTLAND COMMUNITY COLLEGE AND DRIVER'S EDUCATION. Harpursville offers free college courses to its students, allowing them to earn up to 53 SUNY college credits. The average student at Harpursville graduates with 12-24 credit hours. HCSD also offers driver's education classes to its students at no cost during the school year and for \$30.00 per student during the summer.

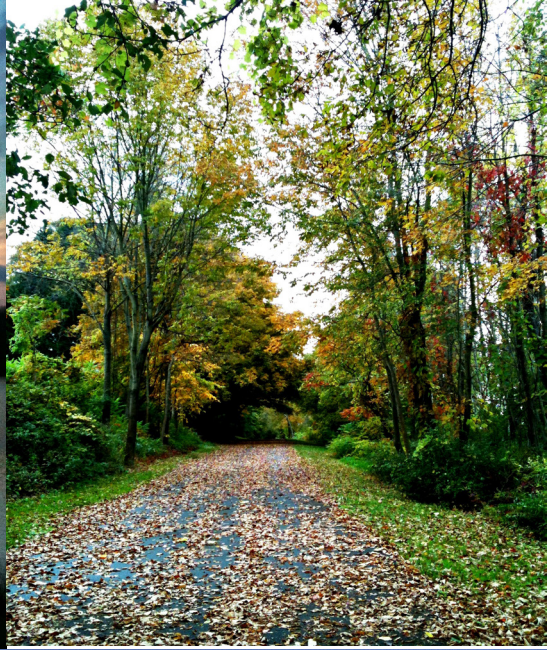
9.) WHITNEY TITUS TRUST FUND (TITUS-COLESVILLE FUND). This is a trust of \$2 million that was left to the Town of Colesville and the Harpursville School District by a well-respected community member, Whitney Titus. A committee made up of the superintendent of Harpursville Schools, the supervisor of the Town of Colesville, the senior trust officer of the bank responsible for the account, and up to two other community and civic leaders awards up to \$90,000 annually to various projects benefitting the Town of Colesville and the Harpursville School District.

10.) COLESVILLE COMMUNITY PANTRY. This food pantry is open to all Town of Colesville residents. (Proof of residency for each recipient is required.) The pantry is open 10 a.m.-12 p.m. and 4:30-6:30 p.m. the first and third Tuesdays of the month. A mobile food pantry is also open every third Thursday of the month; it does not have a residency requirement. The Harpursville School Interact club volunteers at each mobile food pantry.³

11.) HEALTH SERVICES. HCSD has on staff a nurse practitioner to provide health care services on site with limited billing to insurance companies (i.e. Medicaid). In addition, the district employs a 10 month LPN, a full time LPN and a full time School Nurse Assistant.

3.) Accessed August 3, 2015. <http://townofcolesville.org/content/CommunityCategories/Home/:item=1&field=groups;/content/CommunityGroups/View/3>.

Natural Resources



Natural Resources

Attendees at the Rural Broome Counts Kick-off event identified natural resources as one of the top three strengths of rural Broome County. In their conversations, attendees focused on the area's natural beauty and recreational opportunities. Random House Dictionary defines natural resources as "the natural wealth of a country, consisting of land, forests, mineral deposits, water, etc."¹ This section will briefly discuss some of the ways Broome County's natural resources contribute to sustaining its economy and enhance the quality of life. It will also describe how resources are regulated and protected to ensure our current and future use.

Importance of Agriculture to the Rural Economy

The Food and Health Network of SCNY (FaHN) is an eight-county coalition of diverse stakeholders working to build food-secure communities and a strong regional food system through collaboration.² The Rural Health Network of SCNY is the lead agency providing coordination for the work of FaHN. According to the forthcoming 2015 FaHN Food System Assessment update focused on economic vitality: "South Central New York's food system is poised for growth in a manner that is economically, socially, and environmentally sustainable, creates healthy communities, and improves the quality of life."³ Some of the region's many strengths include over 5,000 farms, adequate water, proximity to major markets and population centers, growing demand for locally produced food and interest in agriculture, and the resources of the region's universities and community colleges.

Broome County's agricultural contribution to the local economy is not as robust as the contributions of many of the surrounding, more rural, members of the eight-county coalition. But agriculture is still an important part of our rural communities, and it has potential for growth.

Broome County has 563 farms on 79,676 acres of land; 29% of Broome County lies within an agricultural district, as defined by New York State.

1.) Random House Webster's College Dictionary. 2nd ed. New York: Random House, 1997.

2.) "Food and Health Network of SCNY." Food and Health Network of SCNY. Accessed August 3, 2015. <http://foodandhealthnetwork.org/>.

Our agricultural producers:³

- Generate more than \$30.7 million annually in sales.
- Generate more than \$100 million annually in business investments.
- Are experiencing rapid growth in fruits, vegetables, farmers' markets, and direct marketing.
- Have 5,000 dairy cows, producing nearly \$21 million worth of milk and other dairy products.
- Help preserve and enhance Broome County's environment and quality of life.
- Contribute to Broome County's rural character and protect open spaces essential to residents and visitors.

There is growing interest in agritourism, both among farmers looking for new ways to reach consumers and among consumers looking for recreational activities that allow them to explore where foods and other products are produced. In 2007, agritourism and recreational services grossed almost \$18 million in New York State and almost \$557 million nationwide, according to the U.S. Census of Agriculture. The Greater Binghamton Convention and Visitor's Bureau has published a brochure highlighting 36 locations in Broome County open to visitors either year round or seasonally.⁴

Natural Resources Enhance Our Quality of Life

"Broome County's natural beauty and abundant natural resources are consistently identified as among the area's biggest strengths. Open spaces range from natural spaces such as forests, lakes and wetlands, to designed spaces such as parks, to working landscapes such as farms. These areas contribute not only environmental benefits such as water quality protection and wildlife habitat, they also contribute social and economic benefits, which help support the economy and make the county an attractive and healthy place to

3.) Excerpted from "The Economic Impact of Broome County Agriculture" published by Cornell Cooperative Extension of Broome County. Sources cited: 2012 Census of Agriculture, US Summary and State Data, United States Department of Agriculture, National Agriculture Statistics Services (May 2014).

4.) Accessed August 3, 2015. <http://www.visitbinghamton.org/wp-content/uploads/agritourism.pdf>.

live.”⁵

Broome County is home to two state parks, seven county parks, and more than 85 town, village, and city parks. Broome County Department of Parks and Recreation reports that annually more than two million visitors enjoy the county parks. More than 200,000 people visited Chenango Valley and Oquaga Creek State Parks in 2013. See the chart on page 118 for state, county, and local parks in Broome County.

The county contains 8,630 acres of State Forest lands that typically include Reforestation Areas, Multiple-Use Areas, Unique Areas and State Nature and Historic Preserves. These lands are protected primarily for their natural resource value but are open to the public to provide passive recreation opportunities such as recreational trails, camping, and hunting. Management is guided by the Department of Environmental Conservation’s (DEC) Strategic Plan for State Forest Man-

5.) “Broome County Comprehensive Plan - Building Our Future.” Broome County Comprehensive Plan. Accessed August 3, 2015. <http://www.gobroomecounty.com/comprehensiveplan>.

Numerous clubs, associations, and environmental groups meet to enjoy, protect, and sustain local resources. These clubs provide social connections around a wide variety of shared interests. Although this is far from a comprehensive list, here are some examples of groups connecting people in Broome County:

- Triple Cities Hiking Club www.triplecitieshikingclub.org
- Triple Cities Runners Club www.triplecitiesrunnersclub.org
- Triple Cities Ski Club www.tscweb.com
- Ahwaga Canoe and Kayak Club <http://www.ahwaga.org/>
- Broome County Sportsmen’s Association <http://www.bcsportsmen.org/>
- Whitney Point Sportsmen’s Association <http://www.wpsportsmen.org/>
- Sierra Club, Susquehanna Group <http://www.sierraclub.org/atlantic/susquehanna>
- Southern Tier Bicycle Club Inc. <http://www.southerntierbicycleclub.org/>
- The Naturalists’ Club of Broome County <http://www.naturalistsclub.org/>

agement and by individual unit management plans.⁶

Suggested Links:

- Broome County Comprehensive Plan – Building Our Future, Open Spaces chapter http://go-broomecounty.com/files/planning/_pdf/Comprehensive%20Plan/Comprehensive%20Plan%20Final/6%20WD%20-%20County%20Comp%20Plan%20-%20Open%20Space%205-13.pdf
- Broome County Parks <http://www.gobroomecounty.com/parks>
- Chenango Valley State Park <http://nysparks.com/parks/41/details.aspx#sthash.URdtyBoJ.dpuf>
- Oquaga Creek State Park <http://nysparks.com/parks/27/details.aspx#sthash.qA5kE3P6.dpuf>

6.) “Disclaimer.” New York State Department of Environmental Conservation. Accessed August 3, 2015. <http://www.dec.ny.gov/>.

Preserving & Protecting Our Natural Resources:

As stated in the 2015 Broome County Comprehensive Plan, “Goals as they relate to open space planning include preservation of valuable lands, enhancing and developing recreational opportunities, conserving habitats, increasing access to natural resource lands and water, protecting air and water quality, maintaining and enhancing natural resource-based industries, including forestry and agriculture, discouraging incompatible uses, and reducing inappropriate conversion of undeveloped land.”¹

Groups involved in the regulation, planning, use, and preservation of natural resources include:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mission Statement: “To conserve, improve and protect New York’s natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and

1.) “Broome County Comprehensive Plan - Building Our Future.” Broome County Comprehensive Plan. Accessed August 3, 2015. <http://www.gobroomecounty.com/comprehensiveplan>.

welfare of the people of the state and their overall economic and social well-being.”²

The New York State Department of Environmental Conservation (DEC) was created on July 1, 1970 to combine, in a single agency, all state programs designed to protect and enhance the environment. Broome County is part of NYS DEC Region 7 (Central New York), which also includes, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins counties. The following link provides a chart of available recreational activities on state DEC lands for Region 7:
http://www.dec.ny.gov/docs/regions_pdf/landmatrix.pdf

BROOME COUNTY SOIL & WATER DISTRICT

Mission Statement: "It is the mission of the Broome County Soil & Water Conservation District to assist citizens and units of local government in making sound decisions concerning the management of soil, water, and related natural resources."³

The Broome County Soil & Water Conservation District is the lead agency for nonpoint source pollution abatement, municipal storm water assistance, technical planning and grant writing for natural resource issues, and the design and implementation of agricultural Best Management Practices in the County. Property owners may receive technical information as it pertains to soil, water and other natural resource issues on their property.
<http://www.broomeswcd.org/broome/>

NEW YORK STATE DEPARTMENT OF AGRICULTURE & MARKETS

Mission Statement: "Our goal is to increase the consumption of New York-grown and minimally processed foods in schools in order to strengthen local agriculture, improve student health, and promote regional food systems awareness."⁴

New York State Department of Agriculture & Markets works to foster a competitive food and agriculture industry that benefits producers and consumers alike. It promotes a viable agricultural industry, foster agricultural environmental stewardship, and 2.) "Disclaimer." New York State Department of Environmental Conservation. Accessed August 3, 2015. <http://www.dec.ny.gov/>.

3.) "Broome County SWCD - Home Page." Broome County SWCD - Home Page. Accessed August 3, 2015. <http://www.broomeswcd.org/broome/>.

safeguard our food supply.⁴
<http://www.agriculture.ny.gov/TheDepartment.html>

FARM BUREAU

Mission Statement: "To Serve And Strengthen Agriculture."⁵

Farm Bureau is a non-governmental, volunteer organization financed and controlled by member families for the purpose of solving economic and public policy issues challenging the agricultural industry. Farm Bureau's "grassroots" policy development process continues to ensure that the organization represents the majority position of its membership. Policy development begins at the county level with problem identification and culminates at the New York Farm Bureau Annual Meeting with resolutions addressing those issues.⁵

BROOME COUNTY FARM BUREAU

According to its website: "Broome County Farm Bureau gives farmers and non-farmers alike the opportunity to be part of an organization dedicated to supporting and enriching agriculture. It provides an opportunity for individuals interested in the food system, land issues and rural living to join together and make their voices heard. We are active within the political system on a broad range of issues that concern every New Yorker, from taxation, conservation to local food availability. We believe that a strong, viable agricultural industry is beneficial not only to our economy, but also to our local communities and our consumers."⁶
http://www.nyfb.org/about_nyfb/new_york_county_farm_bureau_detail.cfm?ID=4

4.) "New York State Department of Agriculture & Markets." New York State Department of Agriculture & Markets. Accessed August 3, 2015. <http://www.agriculture.ny.gov/>.

5.) "New York Farm Bureau - New York, Farms." New York Farm Bureau - New York, Farms. Accessed August 3, 2015. <http://www.nyfb.org/>.

6.) "About New York Farm Bureau." New York Farm Bureau: About NYFB. Accessed August 3, 2015. http://www.nyfb.org/about_nyfb/new_york_county_farm_bureau_detail.cfm?ID=4.

Broome County Parks				
Northern Broome County (Whitney Point, Lisle and Surrounding Areas)				
Town	State Park	County Park	Town/Village Park	Total
Town of Barker			N/A	
Town of Lisle			N/A	
Town of Nanticoke		Greenwood Park		1
Town of Triangle		Dorchester Park		1
Eastern Broome County (Windsor, Harpursville, Deposit)				
Town	State Park	County Park	Town/Village Park	Total
Town of Colesville		Nathaniel Cole Park	Clyde S. Woodard Park; Harmony Park	3
Town of Kirkwood			Veterans' River Park; Valley Park; Grange Hall Road Park	3
Town of Sanford	Oquaga Creek State Park			1
Town of Windsor		Hawkins Pond Nature Area	Klumpp Park; Village of Windsor Park	
Other Rural Areas				
Town	State Park	County Park	Town/Village Park	Total
Town of Binghamton		AquaTerra Wilderness Area	Jackson Park; Veterans' Field	3
Town of Fenton	Chenango Valley State Park			1
Town of Maine			Town of Maine Park	1
Suburban Towns and City of Binghamton				
Town	State Park	County Park	Town/Village Park	Total
Town of Chenango			Wolfe Park; Otsiningo North; Hider Park; Broad Acres; Chenango Bridge Park; Castle Creek Park	6
Town of Conklin			Schnurbusch Park; Conklin Forks Park; Sullivan Park; Julius Rogers Park	4
Town of Dickinson		Otsiningo Park	Sunrise Terrace Park	2
Town of Union		Grippen Park; Roundtop Park	Wide variety of Town and Village parks with various amenities	13+
Town of Vestal			Wide variety of Town and Village parks with various amenities	21
City of Binghamton			Wide variety of City parks with green space, walking and biking trails, swimming pools, basketball and tennis courts, skate boarding, playgrounds and picnic areas	33+

Fig. 58. Broome County Parks

Viability Indicators



Rural Broome Counts Viability Indicators

When you visit or drive through many of New York's rural villages and small cities, the loss of Main Street retail and service businesses is painfully obvious. In some communities, the sight of abandoned brick buildings signals the loss of local schools through consolidation. The absence of doctors' offices and grocery stores also indicates the extent to which a rural population center lacks critical services to support the health and wellbeing of residents, especially those who do not drive.

This section of the Rural Broome Counts report began with an assumption that rural villages are important to the residents who live there and to the larger rural community, because they provide essential goods, services, educational opportunities, and social connections. What happens to a community when it loses essential social, commercial, educational and/or health services? How does the loss of primary care or the absence of mental health services affect the health of the people living there?

Pocket Communities Explanation

The data presented in the following viability indicators is available at either the ZIP code, township, or school district level. The table on page 121 indicates which townships and school districts correspond to each of the four rural pocket communities, and which fall into the "urban Broome," "suburban Broome," and "other rural Broome" categories. The boundaries of the four rural pocket communities correspond to the geographic boundaries of the school districts that serve them (Whitney Point, Harpursville, Deposit,

RBC developed the Viability Indicators section of this report to establish baseline information on a range of services, activities, and other assets for four village centers, plus the rural area served by the school districts in each of those communities. Rural Health Network SCNY is committed to revisiting this data periodically to report on changes in services and infrastructure. The information is intended to be both helpful and provocative in understanding how the presence or absence of different services and infrastructure affects community resilience and viability.

In the future, Rural Health Network SCNY could partner with other organizations and institutions of higher learning to gather additional information on the four communities. What minimum conditions are necessary for rural villages and rural places to remain viable and resilient? We welcome suggestions on additional ways to consider rural viability.

and Windsor). Due to the setup of the school district boundaries, the four rural pocket community designations exclude the rural townships of Maine, Town of Binghamton, and Fenton. Therefore, we have elected to create a category called "other rural Broome," which includes those townships when data is available at the township level. Data available at the school district level does not have an "other rural Broome" category.

Fig. 59. Rural Broome County Pocket Communities

<i>Pocket Communities</i>		
Pocket Community	Townships	School Districts
Whitney Point	Lisle, Triangle, Nanticoke, Barker	Whitney Point
Harpurville	Colesville	Harpurville
Deposit	Sanford	Deposit
Windsor	Windsor, Kirkwood	Windsor
Other Rural Broome	Maine, Town of Binghamton, Fenton	None
Suburban Broome	Chenango, Conklin, Vestal, Union, Dickinson	Union-Endicott, Maine-Endwell, Vestal, Susquehanna Valley, Chenango Forks, Chenango Valley, Johnson City
Urban Broome	City of Binghamton	Binghamton

For data available at the ZIP code level, we used a hybrid definition combining the New York State Office of Rural Health definition of rural (an area with 200 people per square mile or less) and the U.S. Census definition of urban (greater than 1000 people per square mile) to determine the classification of each ZIP code (urban, suburban, and rural).

Fig. 60. Urban, Suburban, and Rural Broome Zip Codes

<i>Urban, Suburban and Rural Zip Codes</i>		
Designation	Population Density	Corresponding Broome County Zip Codes
Urban	1000 people per square mile or greater	13905, 13902
Suburban	Between 1000 and 200 people per square mile	13748, 13790, 13760, 13850, 13901, 13903, 13904
Rural	200 people per square mile or less	13746, 13802, 13862, 13797, 13744, 13777, 13787, 13826, 13865, 13795, 13754

We were able to find ZIP code level data for only one viability indicator (Number of Businesses). We elected to use the ZIP code designations in figure 60 to separate that data into suburban, urban, and rural, rather than assigning it to the four rural Broome pocket communities, other rural Broome, suburban Broome, and urban Broome. In the future, however, if we use ZIP code level data to compare the four rural pocket communities, the ZIP codes corresponding to each of the four rural pocket communities are:

Fig. 61. Rural Broome Pocket Community Zip Codes

<i>Rural Pocket Community Zip Codes</i>	
Pocket Community	Zip Code
Whitney Point	13862, 13797, 13744, 13777
Harpursville	13787
Deposit	13754
Windsor	13826, 13865, 13795

The methodology behind the above designation:
 If 50% or more of the population within a given ZIP code lives within a given rural Broome school district, that ZIP code was assigned to the given rural school district/pocket community. For example, 99.41% of the population in the 13862 ZIP code lives within the Whitney Point School District boundaries, so 13862 was assigned to the Whitney Point pocket community.

Fig. 62. Primary Care Sites and Services in Broome County

Primary Care Sites and Services in Broome County, 2015				
Pocket Community	Number of Primary Care Sites	Evening/Weekend Hours	Lab/X-Ray Services On-Site	On-Site Mental Health Services
Deposit	1	No	Yes; lab and X-ray	Yes
Harpursville	0	N/A	N/A	N/A
Whitney Point	1	No	Yes; lab only	No
Windsor	2	Yes (1 site)	Yes; lab only	No
Other Rural Broome (Fenton, Maine, Town of Binghamton)	1	No	Yes; lab only	No
Suburban Broome	16	Yes (3 sites)	Yes; 9 sites lab only, 6 sites lab and X-ray, 1 site X-ray only	Yes; 2 sites
City of Binghamton	8	Yes (5 sites)	Yes; 4 sites lab and X-ray, 1 site lab only	Yes; 2 sites

Source: Google.com

Fig. 63. Dental and Oral Health Care Sites in Broome County

Dental and Oral Health Care Sites in Broome County, 2015		
Pocket Community	Number of Oral Health Care Sites	Number of Providers
Deposit	1	1
Harpursville	1	1
Whitney Point	1	1
Windsor	3	7
Other Rural Broome (Fenton, Maine, Town of Binghamton)	2	2
Suburban Broome	44	80
City of Binghamton	20	45

Source: Google.com

Fig. 64. Child Care Programs in Broome County

Child Care Programs, All Modalities, in Broome County, 2015

School District	Total Number of Slots	Number of Centers/Sites
Deposit	65	2
Harpursville	48	3
Whitney Point	198	6
Windsor	58	4
Binghamton	1053*	35
Maine-Endwell	312	10
Susquehanna Valley	130	2
Union-Endicott	747	20
Vestal	959	16

Source: http://ocfs.ny.gov/main/childcare/ccfs_template.asp

*One center did not report capacity

Source: "Division of Child Care Services." New York State Office of Children and Family Services (OCFS). Accessed August 11, 2015. <http://ocfs.ny.gov/main/childcare/looking.asp>.

Fig. 65. CHOW Food Distribution Locations

CHOW Food Distribution Locations, 2015						
Pocket Community	Deposit	Harpursville	Whitney Point	Windsor	Binghamton	Union
Number of Sites	0	0	2	0	3	4
Site 1 Name			Saving Grace Arts Center		Broome County Public Library	YMCA West Family Branch
Hours			10:15-11:30 a.m. Tuesdays		9 a.m.-1 p.m. Wednesdays	8:30-10:30 a.m. Mondays
Site 2 Name			Lisle Pool		Horizons Federal Credit Union	Yoga Body Shop
Hours			12-1 p.m. Tuesdays		1:30-3:30 p.m. Wednesdays	3:30-5:30 p.m. Mondays
Site 3 Name					First Assembly of God	Cornerstone Community Church
Hours					4:30-6:30 p.m. Wednesdays	3-4 p.m. Tuesdays
Site 4 Name						Sarah Jane Johnson Memorial
Hours						4:45-6 p.m. Tuesdays

Source: "CHOWbus." Facebook. Accessed August 11, 2015. <https://www.facebook.com/pages/CHOW-bus/1477803722508272>.

CHOW (Community Hunger Outreach Warehouse) is a program of the Broome County Council of Churches. CHOW distributes more than 130,000 pounds of food each month through its network of 30 food pantries in Broome County congregations, plus 30 soup kitchens and community meal programs. CHOW also runs the CHOW bus, a mobile community food market on a school bus that provides healthy, low-cost foods to the public. The CHOW bus stops at various locations in Broome County from spring through fall. CHOW may serve other locations than the ones listed above, depending on the time of the year.¹

1.) "CHOW -." Accessed August 11, 2015. <http://broomecouncil.net/chow/>.

Fig. 66. Food Bank of the Southern Tier Member Food Pantries

Food Bank of the Southern Tier Member Food Pantries, 2015							
Pocket Community	Deposit	Harpursville	Whitney Point	Windsor	Other Rural Broome	Binghamton	Suburban Broome
Number of Food Pantries	0	1	0	2	1	16	9

Source: "Food Bank of the Southern Tier." Food Bank of the Southern Tier. Accessed August 11, 2015. <http://www.foodbankst.org/index.asp?pageId=48>.

Fig. 67. Summer Food Service Program Sites in Broome County

Summer Food Service Program Sites in Broome County						
Pocket Community	Deposit	Harpursville	Whitney Point	Windsor	Binghamton	Suburban Broome
2014						
Number of Sites	1	1	2	2*	16	7*
2015						
Number of Sites	1	1	4	3	17	4

Source: “Summer Food Service Program.” Food and Health Network of SCNY. June 14, 2015. Accessed August 11, 2015. <http://foodandhealthnetwork.org/projects-and-programs/access-to-summer-meals/>.

*The sites located in the Windsor pocket community (located in Kirkwood) in 2014 were only open to children enrolled in a summer program. Two of the suburban Broome sites in 2014 were also only open to children enrolled in a summer program. All other sites in 2014 and 2015 were open to all children 18 years and younger.

The Summer Food Service Program (SFSP) is sponsored by the United States Department of Agriculture (USDA) and administered through New York State. The SFSP reimburses providers who serve free, healthy meals to children and teens (18 years and younger) in low-income areas during the summer when school is not in session.¹

1.) “Summer Food Service Program (SFSP).” Summer Food Service Program (SFSP). Accessed August 11, 2015. <http://www.fns.usda.gov/sfsp/summer-food-service-program-sfsp>.

Fig. 68. School District Indicators in Broome County

School District Indicators in Broome County, 2013-2014												
School District	Enrollment	Five-year Graduation Rates	# of Students Eligible for Free/Reduced Lunch	% of Students Eligible for Free/Reduced Lunch	Annual Attendance Rate	# of High School Students that Plan to Go on to Higher Education	% of High School Students that Plan to Go on to Higher Education	# of Students that Dropped Out	% of Students that Dropped Out	# of Students Classified as Students with Disabilities	% of Students Classified as Students with Disabilities	
Deposit	527	82%	342	65%	95%	30	77%	N/A	N/A	82	16%	
Harpurville	804	91%	401	50%	95%	53	72%	N/A	N/A	111	14%	
Whitney Point	1,431	83%	789	56%	93%	73	71%	15	3%	241	17%	
Windor	1,671	88%	693	42%	96%	117	82%	6	1%	208	12%	
Binghamton	5,617	65%	3,752	67%	91%	249	77%	274	10%	808	14%	
Chenango Forks	1,497	85%	546	36%	96%	87	84%	5	1%	178	12%	
Chenango Valley	1,695	90%	611	36%	95%	108	90%	11	2%	247	15%	
Maine-Endwell	2,408	85%	740	30%	95%	172	86%	11	1%	401	17%	
Susquehanna Valley	1,580	89%	597	37%	94%	99	78%	6	1%	204	13%	
Union-Endicott	3,792	81%	1,742	46%	95%	291	94%	11	1%	525	14%	
Vestal	3,391	94%	617	19%	95%	249	90%	7	1%	391	12%	

Source: <https://reportcards.nysed.gov/index.php> (NYSSED.gov)

*N/A indicates that these numbers were not available through the NYSED report cards

Source: "New York State Report Cards." NYSED.gov. Accessed August 11, 2015. <https://reportcards.nysed.gov/>.

Fig. 69. Percent of Income Spent on Housing in Broome County

Percentage of Income Spent on Housing in Broome County				
Township	Housing Units	Median Household Annual Income (2013 Inflation-Adjusted Dollars)	Annual Median Housing Costs (Dollars)	Annual Housing Cost as a Percentage of Annual Income
Deposit	Occupied Housing Units	\$42,060.00	\$7,680	18.3%
	Owner-Occupied Housing Units	\$46,563.00	\$8,520	18.3%
	Renter-Occupied Housing Units	\$23,750.00	\$6,864	28.9%
Harpursville	Occupied Housing Units	\$47,899.00	\$9,336	19.5%
	Owner-Occupied Housing Units	\$50,865.00	\$9,168	18.0%
	Renter-Occupied Housing Units	\$24,255.00	\$9,516	39.2%
Whitney Point	Occupied Housing Units	\$50,492.75	\$9,069	18.1%
	Owner-Occupied Housing Units	\$57,804.00	\$9,390	16.3%
	Renter-Occupied Housing Units	\$30,108.25	\$8,883	32.9%
Windsor	Occupied Housing Units	\$51,632.00	\$9,288	18.0%
	Owner-Occupied Housing Units	\$56,056.50	\$10,134	18.2%
	Renter-Occupied Housing Units	\$33,847.00	\$7,638	23.9%
Other Rural Broome Areas	Occupied Housing Units	\$59,584.67	\$10,204	17.0%
	Owner-Occupied Housing Units	\$65,386.33	\$10,472	15.9%
	Renter-Occupied Housing Units	\$40,169.67	\$9,168	22.9%
City of Binghamton	Occupied Housing Units	\$30,978.00	\$8,268	26.7%
	Owner-Occupied Housing Units	\$52,385.00	\$9,264	18.4%
	Renter-Occupied Housing Units	\$17,462.00	\$7,680	44.0%
Suburban Broome Average	Occupied Housing Units	\$54,453.40	\$9,681.60	17.9%
	Owner-Occupied Housing Units	\$63,531.60	\$10,780.80	17.0%
	Renter-Occupied Housing Units	\$25,993.80	\$8,508.00	34.4%
New York State Average	Occupied Housing Units	\$58,003.00	\$14,568.00	25.1%
	Owner-Occupied Housing Units	\$80,227.00	\$16,980.00	21.2%
	Renter-Occupied Housing Units	\$36,916.00	\$13,056.00	35.4%

Source: U.S. Census Bureau, 2009-2013 American Community Survey

Methodology: This data was obtained from the U.S. Census Bureau American Community Survey 5-year estimates 2009-2013. The median monthly housing costs were multiplied by 12 to get the annual median housing costs. The annual median housing costs were divided by the corresponding median household annual income and multiplied by 100 to determine the percentage of annual income spent on housing. Data from Sanford Township was used to represent the Deposit pocket community. Data from Colesville was used to represent the Harpursville pocket community. Data from Triangle, Lisle, Nanticoke, and Barker was averaged to represent the Whitney Point pocket community. Data from Windsor and Kirkwood was averaged to represent the Windsor pocket community. Data from the towns of Binghamton, Maine, and Fenton was averaged to represent other rural Broome. Data from Chenango, Vestal, Conklin, Union, and Dickinson townships was averaged to represent suburban Broome.

Census Definitions of Housing Unit and Occupied Housing Unit

“Housing Unit – A house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have direct access from outside the building or through a common hall. Boats, recreational vehicles (RVs), vans, tents, railroad cars, and the like are included only if they are occupied as someone's current place of residence. Vacant mobile homes are included provided they are intended for occupancy on the site where they stand. Vacant mobile homes on dealers' sales lots, at the factory, or in storage yards are excluded from the housing inventory. Also excluded from the housing inventory are quarters being used entirely for nonresidential purposes, such as a store or an office, or quarters used for the storage of business supplies or inventory, machinery, or agricultural products.”¹

“Occupied Housing Unit – A housing unit is classified as occupied if it is the current place of residence of the person or group of people living in it at the time of interview, or if the occupants are only temporarily absent from the residence for two months or less, that is, away on vacation or a business trip. If all the people staying in the unit at the time of the interview are staying there for two months or less, the unit is considered to be temporarily occupied and classified as “vacant.” The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters. The living quarters occupied by staff personnel within any group quarters are separate housing units if they satisfy the housing unit criteria of separateness and direct access; otherwise, they are considered group quarters. Occupied rooms or suites of rooms in hotels, motels, and similar places are classified as housing units only when occupied by permanent residents, that is, people who consider the hotel as their current place of residence or have no current place of residence elsewhere. If any of the occupants in rooming or boarding houses, congregate housing, or continuing care facilities live separately from others in the building and have direct access, their quarters are classified as separate housing units.”¹

1.) “American Community Survey and Puerto Rico Community Survey 2013 Subject Definitions.” United States Census Bureau. 2013. Accessed August 11, 2015. http://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2013_ACSSubjectDefinitions.pdf.

Key Findings: 1.) Those who rent typically spend the highest percentage of their annual income on housing regardless of location of residence. 2.) Renters in Harpursville and Whitney Point spend a higher percentage of their annual income on housing than renters in any other area in rural Broome 3.) Binghamton City residents spend a higher percentage of their annual income than residents of any other location for every category (except owner-occupied housing units in the NYS category).

Fig. 70. Food Bank of the Southern Tier Mobile Food Pantry Sites

<i>Food Bank of the Southern Tier Mobile Food Pantry Sites, July 2015</i>			
City	Date	Location	Time
Deposit	7/21/2015	Town of Deposit Fire Dept., 74 2nd St.	12 - 1 p.m.
Binghamton	7/22/2015	United Presbyterian Church, 42 Chenango St.	12 - 1 p.m.
Binghamton	7/29/2015	Church of the Good Shepherd, 360 Conklin Ave.	10 - 11 a.m.
Binghamton	7/30/2015	American Legion, 177 Robinson St.	12 - 1 p.m.
Johnson City	7/30/2015	Family Enrichment Network, 24 Cherry St.	10 - 11 a.m.

Source: "Food Bank of the Southern Tier." Food Bank of the Southern Tier. Accessed August 11, 2015. <http://www.foodbankst.org/index.asp?pageId=82>.

The Mobile Food Pantry is a converted beverage truck that delivers fresh produce, dairy products, and other food and grocery products to distribution sites and makes them available, for free, to people in need. When the truck arrives at a site, volunteers place the food on tables surrounding the truck, and consumers can select whatever items they want.

Fig. 71. CHOW Sponsored Food Pantries

CHOW-Sponsored Food Pantries, 2015							
Pocket Community	Deposit	Harpursville	Whitney Point	Windsor	Other Rural Broome	Binghamton	Suburban Broome
Number of Food Pantries	0	0	0	2	1	17	9

Source: “Pantries & Soup Kitchens -.” Accessed August 11, 2015. <http://broomecouncil.net/chow/pantries-soup-kitchens/>.

Fig. 72. CHOW Sponsored Soup Kitchens

CHOW-Sponsored Soup Kitchens, 2015							
Pocket Community	Deposit	Harpursville	Whitney Point	Windsor	Other Rural Broome	Binghamton	Suburban Broome
Number of Soup Kitchen Sites	1	0	1	1	0	22	18

Source: “Pantries & Soup Kitchens -.” Accessed August 11, 2015. <http://broomecouncil.net/chow/pantries-soup-kitchens/>.

Fig. 73. Libraries in Broome County

<i>Libraries in Broome County, 2014-2015</i>									
Pocket Community	Whitney Point	Deposit	Windsor	Harpurville	Fenton	Endicott	Vestal	Johnson City	Binghamton
Number of Libraries	2	1	1	1	1	1	1	1	1
Total Hours Open/Week	20-34	36	4	35	19	64	55	62	60
Number of Computers	23	5, plus 1 for microfilm reader only	4	4	1	13 desktop and 13 laptops for library classes only	12	14	60-64
Fax Machines, Photocopiers and Printers Available to Public	Yes: all	Yes: all	Yes	1 fax 2 photocopiers	N/A	Yes	Photocopier and printer	Yes	3 printers, 2 photocopiers, no fax
Population of Area Chartered to Serve in 2014	944 - 2705	3888	N/A	Approx 10,000	N/A	13,000	20,043	14,890	200,600
Number of Resident Borrowers in 2014	462 - 503	1,275	N/A	2,370	N/A	10,797	8,212	7,276	48,136
Number of Non-Resident Borrowers in 2014	295 - 1,215	67	N/A	25	N/A	10,309	6,690	7,764	55

Fig. 74. Urban and Suburban Opportunities for Indoor Exercise in Broome County

Urban and Suburban Opportunities for Indoor Exercise in Broome County, 2014 - 2015					
City	School/Building	Resource	Hours	Months	Fee
Binghamton	Roosevelt Elementary School	Indoor walking	M-F, 3:15 - 4 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	East Middle School	Indoor walking	M-F, 6 - 7:30 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	West Middle School	Indoor walking	M-F, 7 - 7:30 a.m. and 4:30 - 5 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	First Ward Senior Center	Zumba	M, F, 9:30 a.m.	Year-round	\$3
		Bonesaver Class	M, F, 10 a.m. and Th 9:30 a.m.	Year-round	Free
		Chair Yoga	T, 11:00 a.m.	Year-round	\$5
		Chair Dance Party	Th, 10 - 10:30 a.m.	Year-round	Free
	Oak Street Senior Center	Exercise equipment available	M-F 9 a.m. - 4 p.m.	Year-round	Free
		Indoor walking	M, T, W, F, 9 a.m. - 1:30 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
		Zumba	F, 11 a.m.	Year-round	\$3
110 Chenango Place	Bonesaver Class	T, F, 9:45 a.m.	Year-round	Free	
	Stepping On: A Wellness Program to Prevent Falls	Th, 1:15 - 3:15 p.m.	Sept. 17 - Oct. 29	Free	
Chenango Forks	Chenango Forks High School	Indoor walking	M-F, 3:00 - 4:00 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
Chenango Valley	Chenango Valley High School	Indoor walking	T, W, Th, 6:00 - 8:00 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
Endicott	TJ Watson Elementary School	Indoor walking	M-F, 7 - 8 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	Jennie F. Snapp Middle School	Indoor walking	M-F, 3 - 5 p.m. (must enter by 3:30)	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
Endwell	Broome West Senior Center	Zumba	T, 9:30 a.m. and Th, 1 p.m.	Year-round	\$3
		Bonesaver Class	M, W, 10 a.m.	Year-round	Free
		Tai Chi	Th, 9:30 a.m.	Year-round	Free
		Line Dancing	F, 9:30 a.m.	Year-round	\$3
		Chair Exercises	T, Th, 11 a.m.	Year-round	Free
	Exercise equipment available	M-F, 9 a.m. - 3 p.m.	Year-round	Free	
	Highland Park Gymnasium	Indoor walking	M-F, 6 - 9 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
Johnson City	Johnson City Senior Center	Zumba	T, 12:30 p.m.	Year-round	\$3
		Toning and Zumba	W, 5:30 p.m.	Year-round	\$5
		Bonesaver Class	T, 10:30 a.m.	Year-round	Free
		Beginner Gentle Yoga	M, 9:30 a.m. and F, 10 a.m.	Year-round	\$3
		Tai Chi	Th, 1:00 p.m.	Year-round	\$3
		Line Dancing	M, 10:45 a.m.	Year-round	\$3
		Staying Fit and Healthy	Th, 10:30 a.m.	Year-round	Free
		Exercise equipment available	M-F, 9 a.m. - 4 p.m.	Year-round	Free
Susquehanna Valley	Brookside Elementary School	Indoor walking	M-F, 7 - 8 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	Susquehanna Valley High School	Indoor walking	M-F, 7 - 7:45 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
Vestal	Vestal Old Junior High School	Indoor walking	MWF, 8 - 9 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	Vestal High School	Indoor walking	M-F, 6 - 7 a.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free
	Vestal Senior Center	Chair Yoga	F, 1 p.m.	Year-round	\$5
Chair Dance Party		W, 10:30 a.m. - 11:30 a.m.	Year-round	Free	

*Some of the programs listed above may not currently be offered. All those interested in participating should call the sponsor organization to confirm class availability.

Fig. 75. Rural Opportunities for Indoor Exercise in Broome County

Rural Opportunities for Indoor Exercise in Broome County, 2014 - 2015						
City	School/Building	Resource	Hours	Months	Fee	
Deposit	Deposit Elementary	Indoor walking	M-F, 3-4 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free	
	First United Methodist Church of Deposit	Stepping On: A Wellness Program to Prevent Falls	T, 10:00 a.m. - 12:00 p.m.	Aug. 19 - Oct. 7, 2015	Free	
Hamersville	Eastern Broome Senior Center	Zumba	M, 1:00 p.m.	Year-round	\$3	
		Chair Exercises	T, 8:45 - 9:30 a.m.	Year-round	Free	
Whitney Point	Caryl Adams Elementary	Indoor walking	M-F, 3:30 - 5 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free	
	Northern Broome Senior Center	Bonesaver Class	T, Th, 10:15 a.m.	Year-round	Free	
		Exercise equipment available	M-F, 9:00 a.m. - 3:00 p.m.	Year-round	Free	
Windor	C.R. Weeks Elementary	Indoor walking	M-F 7:30 - 8:40 a.m. and 3:45 - 7:45 p.m. (morning walkers should use the loading dock entrance by the kitchen)	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free	
	Floyd Bell Elementary	Indoor walking	M-F 7:30 - 8:40 a.m. and 3:45 - 7:45 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free	
	Palmer Middle School	Indoor walking	M-F 3:45 - 6:30 p.m.	Nov 2, 2014 - April 30, 2015 (closed on holidays and snow days)	Free	
	Windor High School	Fitness Center	MWF 6:00 - 8:00 a.m.; M-Th 6:00 p.m. - 8:00 p.m.; Sat 7:00 a.m. - 10:00 a.m.	Year-round (check website for updates on closures)	Free for WSCD seniors over 62 with Black & Gold memberships and WSCD employees. WSCD students: \$1/day, \$2.50/week, \$7.50/month, \$37.50/6 months, \$62.50/year. WSCD adults: \$2/day, \$5/week, \$15/month, \$75/6 months, \$125/year. Family (+ pp): \$5/day, \$12.50/week, \$37.50/month, \$187.50/6 months, \$262.50/year. Non-Windor residents: \$4/day, \$10/week, \$30/month, \$150/6 months, \$250/year.	
		Indoor pool	MWF 6:00 - 8:00 a.m.; Th 6:00 p.m. - 8:00 p.m.; Sat 7:00 - 9:00 a.m.	Year-round (check website for updates on closures)	Same as fitness center fees; fee covers both	

*Some of the programs listed above may not currently be offered. All those interested in participating should call the sponsor organization to confirm class availability.

Fig. 76. Number of Business Establishments by Zip Code in Broome County

Number of Business Establishments by Zip Code in Broome County, 2013					
	Pocket Community	Number of Establishments	Paid Employees for Pay Period Including March 12	First Quarter Payroll in \$1,000	Annual Payroll in \$1,000
Rural	Castle Creek (13744)	5	0-19	N/A	N/A
	Chenango Forks (13746)	32	159	1,150	4,505
	Deposit (13754)	84	694	4,883	22,452
	Glen Aubrey (13777)	5	12	58	249
	Harpurville (13787)	33	120	656	3,322
	Kirkwood (13795)	58	1,667	14,246	60,223
	Lisle (13797)	20	37	258	1,207
	Maine (13802)	18	107	391	1,760
	Nineveh (13813)	17	136	1,075	6,145
	Ouaquaga (13826)	1	0-19	N/A	N/A
	Whitney Point (13862)	73	948	7,946	34,924
	Windsor (13865)	76	353	1,940	9,149
	Urban	Binghamton (13902)	51	2,445	31,182
Binghamton (13905)		549	8,098	70,527	299,817
Suburban	Binghamton (13903)	288	3,956	41,998	172,899
	Binghamton (13904)	225	4,789	43,193	180,997
	Binghamton (13901)	630	10,110	77,237	324,838
	Conklin (13748)	71	2,380	28,414	114,932
	Endicott (13760)	802	12,436	140,300	530,938
	Johnson City (13790)	561	11,893	97,628	390,919
	Vestal (13850)	690	12,239	92,144	370,387

Source: U.S. Census Bureau, Zip Code Business Patterns, 2013

Rural Broome Counts Survey and Methodology

The Rural Broome Counts survey was created in an effort to obtain rural Broome residents' perspectives on the major strengths, challenges, and health issues in the rural Broome region. Questions covered topics such as healthy lifestyle practices, community involvement, safety, and access to critical services. The survey was presented in two different formats: an online version available through Survey Monkey and a paper copy. The link to the online version was posted on the Rural Health Network website for approximately one month (June 2015) and shared with a few Rural Broome Counts key informants, who then shared the link with other rural Broome residents. Hard copies of the survey were dropped off at the Deposit Free Library, the Mary Wilcox Library, Lourdes Primary Care in Whitney Point, and UHS Primary Care in Deposit. Hard copy surveys were also distributed at the Community Drug Awareness and Wellness Forum at Whitney Point High School on April 22, 2015, a "Ladies Night" event at ACE Hardware in Whitney Point on May 12, 2015, the Port Crane Fire Company Chicken BBQ on May 16, 2015, and the Senior Picnic and Fun Fest on June 24, 2015. We received 154 total responses.

Key Findings

- 1.) For the majority of respondents, transportation is not an issue. 64.47% indicated that they do not struggle to access transportation; 94.12% have a reliable automobile in their household; 97.04% use a private vehicle as their means of transportation most often.
- 2.) Accessing health care services does not seem to be an issue for respondents. 84.56% of respondents have visited a primary care/medical provider in the past year and 71.24% visited a dentist in the past year. 82.67% find it easy to access medical/primary care services, and 68.92% find it easy to access oral health care services.
- 3.) The majority of respondents did not visit a mental health provider in the last year (79.08%), and 51.37% were neutral on whether they find it easy to access mental health services.
- 4.) In terms of overall health and healthy lifestyle practices: 70.67% of respondents consider their health to be "good." 67.55% of respondents engage in physical activity for at least 2.5 hours per week.
- 5.) Most respondents did not worry about having enough food last year (74.83%), and most can easily access fruits and vegetables where they live (69.59%). Most live near places where their child has safe outdoor play spaces (58.05%). Most feel safe walking around their neighborhood (84.97%).
- 6.) The majority of respondents have Internet in their homes (85.97%), and among those, about half (49.15%) have a cable modem.
- 7.) The majority of respondents have a positive relationship with their neighbors (82.88%), participate in events in their community (74.48%), and volunteer in their community (54.11%).

Limitations

This survey was distributed at events that participants could have attended only if they had transportation. Additionally, the online survey could have been completed only by those with Internet access. Rural residents without transportation and without Internet access are probably not represented among the survey respondents.

Recommendations for Future Surveys

In order to ensure that all of rural Broome is equally represented, surveys should be distributed in trailer parks and other rural centers of low income housing, where there is a higher population of rural residents without transportation or Internet access. This would ensure equity and greater reliability in the survey results.

Fig. 77. Rural Broome Counts Survey Chart 1

Rural Broome Counts Survey Responses			
	Yes	Neutral	No
I find it easy to access transportation on a daily basis.	64.47% (98)	19.08% (29)	16.45% (25)
I have a reliable automobile in my household.	94.12% (144)	1.96% (3)	3.92% (6)
In the past year, there was a time when I was worried about NOT having enough money to pay for automobile maintenance (ex: gas, repairs, insurance, car loan payments)	43.71% (66)	13.25% (20)	43.05% (65)
I engage in moderate physical activity for 2.5 hours a week.	67.55% (102)	16.56% (10)	15.89% (24)
In the past year, there was a time when I was worried about NOT having enough food.	18.54% (28)	6.62% (10)	74.83% (113)
I find it easy to access fresh fruits and vegetables where I live.	69.59% (103)	12.16% (18)	18.24% (27)
I have visited my medical/primary care provider in the past year.	84.56% (126)	1.34% (2)	14.09% (21)
I have visited a dentist in the past year.	71.24% (109)	0.65% (1)	28.10% (43)
I have visited a mental health provider in the past year.	15.69% (24)	5.23% (8)	79.08% (121)
I find it easy to access medical/primary care services.	82.67% (124)	7.33% (11)	10.00% (15)
I find it easy to access oral health services.	68.92% (102)	14.86% (22)	16.22% (24)
I find it easy to access mental health services.	28.08% (41)	51.37% (75)	20.55% (30)
I have a positive relationship with my neighbors.	82.88% (121)	15.75% (23)	1.37% (2)
I participate in events in my community.	74.48% (108)	8.28% (12)	17.24% (25)
I volunteer in my community.	54.11% (79)	11.64% (17)	34.25% (50)
I have internet in my home.	85.97% (131)	0.65% (1)	14.29% (22)
I feel safe walking near my house or in my neighborhood.	84.97% (130)	9.15% (14)	5.88% (9)
My child has access to safe outdoor play spaces.	58.05% (83)	38.46% (55)	3.50% (5)
Do you ever barter/trade labor, goods, or services to stretch your dollars?	29.53% (44)	10.07% (15)	60.40% (90)
How do you barter/trade labor, goods, or services to stretch your dollars?			
Food for services	4		
Food for food	3		
Service for service	10		
Other	7		
Total	24		

Fig. 78. Rural Broome Counts Survey Chart 2

I live with my: (Check all that apply)	
Parents	6.15% (8)
Grandparents	1.54% (2)
Children	40.00% (52)
Friends	0.77% (1)
Extended family	6.92% (9)
Other	56.15% (73)
Who do you live with? (Other category response)	
Spouse	41
Family	3
Extended family	3
Senior center	1
Total	74
I consider my health:	
Excellent	23.33% (35)
Good	70.67% (106)
Poor	6.00% (9)
What means of transportation do you use most often? (Check all that apply)	
Private vehicle	97.04% (131)
Carpool with friends/others	5.93% (8)
Public transportation (bus/van)	0.74% (1)
Walk	10.37% (14)
Bike	1.48% (2)
Other	0.00% (0)
Number of reliable automobiles in household:	
1 vehicle	23
2 vehicles	54
3 vehicles	17
4 vehicles	6
If you have internet in your home, select the type of service you have:	
Digital Subscriber Line (DSL)	31.36% (37)
Cable modem	49.15% (58)
Fiber	0.00% (0)
Mobile wireless	20.34% (24)
Satellite	5.08% (6)
Broadband over power lines	5.08% (6)
Dial-up	4.24% (5)

Fig. 79. Rural Broome Counts Survey Chart 3

Please rank the following community health priority areas, based on what you feel are the most important in your community: (1 = most important, 3 = least important)			
	1	2	3
Creating a Healthy and Safe Environment (reducing falls in older adults)	34.00% (34)	30.00% (30)	36.00% (36)
Preventing Chronic Disease (reducing obesity in children and adults; increasing access to chronic disease preventive care and management in clinical and community settings)	33.33% (33)	40.40% (40)	26.26% (26)
Promoting Mental Health and Preventing Substance Abuse	38.38% (38)	29.29% (29)	32.32% (32)
What needs to be improved in your neighborhood to make you feel safer?			
More police	4		
More lights	4		
Wildlife control	4		
Road shoulder/sidewalk	2		
Less crime	2		
Other	3		
Total	24		
What major improvements would you like to see in your community?			
Transportation	8		
Infrastructure	19		
Jobs/stores	14		
Community activities	11		
Healthcare	7		
Crime	3		
Education	3		
Other	13		
Total	78		
How do you volunteer in your community?			
Church/religious	18		
Children	14		
Fire department	5		
Senior center	3		
Other	21		
Total	43		
What community events do you participate in?			
Church/religious	22		
School	21		
Senior center	7		
Library	5		
Youth sports	10		
Ladies night	4		
Fire department	5		
Community garden	2		
Total	63		

Fig. 80. Rural Broome Counts Survey Chart 4

Survey Respondent Demographics							
Race and Ethnicity				Yearly Income			
American Indian or Alaskan Native		1.50% (2)		\$10,000-\$30,000		27.82% (37)	
Asian		0.75% (1)		\$30,000-\$50,000		21.80% (29)	
Black or African American		0.00% (0)		\$50,000-\$80,000		21.05% (28)	
Native Hawaiian or Pacific Islander		0.00% (0)		\$80,000-\$100,000		12.03% (16)	
Hispanic or Latino		(0.75% (1))		Prefer not to answer		17.29% (23)	
Non-Hispanic or Latino		3.76% (5)					
White/Caucasian		93.98% (125)					
Prefer not to answer		0.75% (1)					
Other		2.26% (3)					
How many children under 18 live in your household?							
1 child	2 children	3 children	4 children	5 children	6 children	7 children	Total
23	19	12	2	0	1	1	58
How many adults live in your household?							
2 adults	3 adults	4 adults	5 adults	6 adults	7 adults	8 adults	Total
94	18	12	1	4	2	1	176
What is your gender?							
Male				Female			Total
31				105			136
How many people in your household own a home-based farm or business?							
1 person				2 people			Total
26				3			29
How many adults in your household are employed outside the home?							
1 adult	2 adults	3 adults	4 adults	5 adults			Total
48	45	8	8	2			135
What is your age?							
0-20	20-40	40-60	60-80	80-100			Total
2	32	51	41	4			130

Fig. 81. Rural Broome Counts Survey Chart 5

What employment category does your job correspond to?	
Aerospace	2
Government	3
Education	51
Law Enforcement	2
Retail	5
Healthcare	20
Human Services	3
Retired	10
Disabled	2
Utility	1
Manufacturing	0
Truck Driving	1
Construction	1
Non-profit	1
Insurance	1
Agriculture	3
Childcare	1
Total	109

What is your town of residence?	
Apalachin*	1
Barker	6
Binghamton	10
Chenango*	7
Colesville	7
Conklin*	1
Fenton	38
Kirkwood	8
Lisle	10
Maine	1
Nanticoke	3
Sanford	9
Triangle	19
Union*	5
Vestal*	1
Windsor	14
Total	140

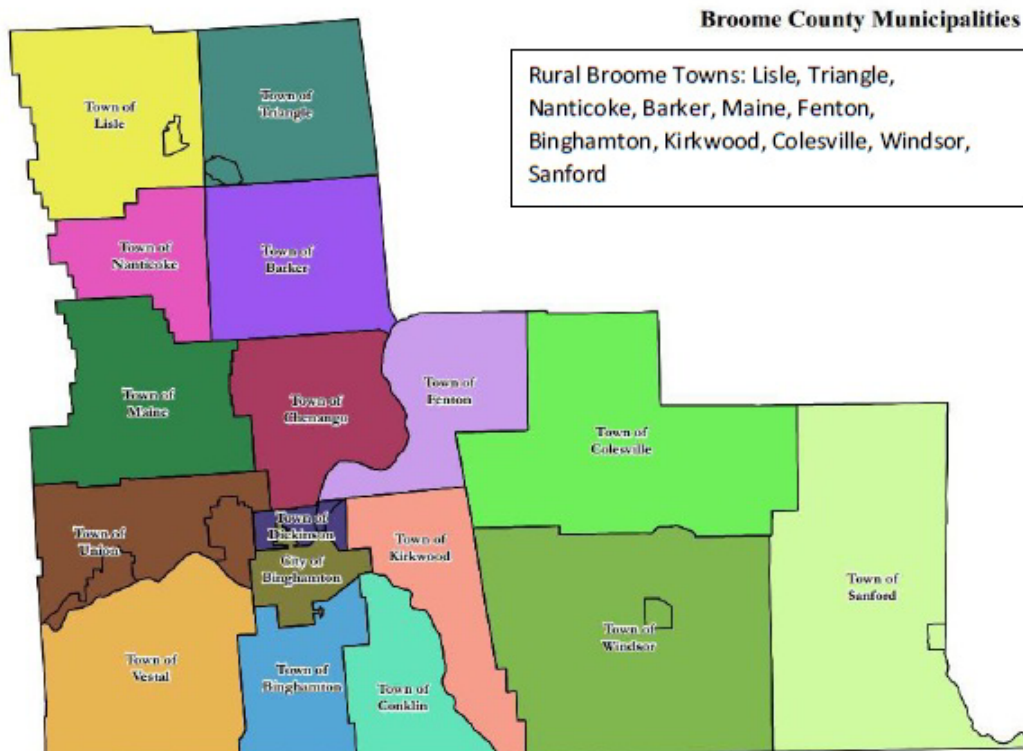
* Not a rural Broome township

RURAL BROOME COUNTS



Thank you for your help! Rural Broome Counts is gathering information about the lives and people in Rural Broome County. Your information will help us determine what the major strengths, challenges, and health issues are in the rural Broome region. This survey should only take 3-5 minutes to complete. All of the answers you provide will be kept in the strictest confidentiality. If you have any questions about this survey or the Rural Broome Counts project, please contact Rebecca Chandler, Health Care Access, Associate, at 607-692-7669 or vista2@rhnsenv.org.

We are proud to live and work in Rural Broome! Thank you for sharing your voice!





Town of Residence (Please Circle): Lisle Triangle Nanticoke Barker Maine Binghamton
Kirkwood Fenton Colesville Windsor Sanford

Rural Broome Counts			
Please choose the option that best describes your experience			
	Yes	Neutral	No
1.) I find it easy to access transportation on a daily basis.			
2.) I have a reliable automobile in my household. If yes, how many?			
3.) In the past year, there was a time when I was worried about NOT having enough money to pay for automobile maintenance (ex: gas, repairs, insurance, car loan payments)			
4.) I engage in moderate physical activity for 2.5 hours a week.			
5.) In the past year, there was a time when I was worried about NOT having enough food.			
6.) I find it easy to access fresh fruits and vegetables where I live.			
7.) I have visited my medical/ primary care provider in in the past year.			
8.) I have visited a dentist in the past year.			
9.) I have visited a mental health provider in the past year.			
10.) I find it easy to access medical/ primary care services.			
11.) I find it easy to access oral health care services.			
12.) I find it easy to access mental health services.			
13.) I have a positive relationship with my neighbors.			
14.) I participate in events in my community. If yes, what are they?			
14.) I volunteer in my community. If yes, how?			
15.) I have internet in my home. If no, where/how do you access the internet?			
16.) I feel safe walking near my house or in my neighborhood. If no, what needs to be improved:			
17.) My child has access to safe outdoor play spaces			
18.) Do you ever barter/trade labor, goods, or services to stretch your dollars? If yes, could you share an example:			

Do you consider your health?

- Excellent
- Good
- Poor

of children under 18 in your household: _____

I live with my (check all that apply):

- Parents
- Grandparents
- Children
- Friends
- Extended family
- Other _____

of adults in your household: _____

What is one major improvement that you would like to see in your community?



Town of Residence (Please Circle): Lisle Triangle Nanticoke Barker Maine Binghamton
Kirkwood Fenton Colesville Windsor Sanford

What means of transportation do you use most often (check all that apply)?

- Private Vehicle
- Carpool with friends/others
- Public Transportation (bus/van)
- Walk
- Bike
- Other: _____

If you have internet in your home, select the type of service you have:

- Digital Subscriber Line (DSL)
- Cable Modem
- Fiber
- Mobile Wireless
- Satellite
- Broadband over Power Lines
- Dial-Up

Please rank the following community health priority areas, based on what you feel are the most important in your community (1= most important, 3= least important):

____ Creating a Healthy and Safe Environment (reducing falls in older adults)

____ Preventing Chronic Disease (reducing obesity in children and adults; increasing access to chronic disease preventive care and management in clinical and community settings)

____ Promoting Mental Health and Preventing Substance Abuse

Please let us know a little about yourself. Thank you!

Age: _____ Gender: Male Female Other: _____

Ethnicity: Hispanic or Latino Non-Hispanic or Latino

Race: American Indian or Alaska Native Asian Black/African American

Native Hawaiian or Pacific Islander White Other:

How many in your household are employed outside the home? _____

How many in your household generate income through a home-based farm or business? _____

What employment category does your job correspond to? (Ex: agriculture, education, retail, healthcare): _____

Which of the following describes your yearly income level:

- \$10,000 - \$30,000
- \$30,000 - \$50,000
- \$50,000 - \$80,000
- \$80,000 - \$100,000
- I prefer not to answer

Your comments are welcome below:

Appendices

For Further Reading:

Broome County and other Regional Planning Documents

Broome County. Department of Planning. (2013). Broome county comprehensive plan. Retrieved from <http://www.gobroomecounty.com/comprehensiveplan>

Broome County. Health Department. (2013). Broome county community health assessment 2013-2017. Retrieved from <http://www.gobroomecounty.com/hd/cha>

Broome County. Binghamton Metropolitan Transportation Study. (2013). Coordinated public transit/ human services transportation plan. Retrieved from <http://bmtsonline.com/files/bmts/pdfs/FINAL%202013%20Coordinated%20Transportation%20Plan%20w%20appendicies%20for%20PRINT.pdf>

Broome County. Office for Aging. (2014). Plan for services 2015-2016. Retrieved from <http://www.gobroomecounty.com/files/senior/OFA%20Administration/Plan%20for%20Services%202015-16%20WEB%20VERSION.pdf>

Broome County. Mental Health Department. (2013). Annual report 2013. Retrieved from <http://www.gobroomecounty.com/files/mh/Broome%20Annual%20ReportNewest.pdf>

Food and Health Network of South Central New York. (2012). 2012 Regional food system assessment for South Central New York. Retrieved from <https://fahnblog.files.wordpress.com/2013/11/2012-regional-food-system-assessment-scny.pdf>

Our Lady of Lourdes Memorial Hospital, Inc. (2013). 2013-2015 Community health needs assessment. Retrieved from <https://www.lourdes.com/media/202912/chnasm.pdf>

Our Lady of Lourdes Memorial Hospital, Inc. (2013). Community health improvement plan & implementation strategy, 2013-2015. Retrieved from <https://www.lourdes.com/media/202913/chip20132015.pdf>

Our Lady of Lourdes Memorial Hospital, Inc. (2014). 2014 Community service plan. Retrieved from <https://www.lourdes.com/media/203172/csp2014.pdf>

United Health Services. (2013). UHS hospitals community service plan 2013-2015. Retrieved from <http://www.uhs.net/app/files/public/1244/UHS-Hospitals-Community-Service-Plan.pdf>

United Health Services. (2014). United Health Services Hospitals community service plan 2014 update. Retrieved from <http://www.uhs.net/app/files/public/1757/Community-Service-Plan-2014-Summary-Update-uhsh.pdf>

United Health Services. (2013). United Health Services Hospitals, Inc. community health needs assessment 2013-2016. Retrieved from <http://www.uhs.net/app/files/public/1496/UHS-Hospitals-Community-Health-Needs-Assessment.pdf>

Cornell Cooperative Extension Broome County. (2015). Retrieved from <http://broome.cce.cornell.edu/>

Rural Broome Town/Village Planning Documents and Contact Information:

(1) Town of Barker:

Contact: Town Supervisor. Lois Dilworth.

Phone: (607) 648-6880

Address: 151 Hyde Street

P.O. Box 66

Castle Creek, NY 13744-0066

(2) Town of Binghamton, NY. Retrieved from <http://www.townofbinghamton.com/>

Contact: Town Supervisor. Tim Whitesell.

Phone: (607) 772-0357 ext. 11

Address: 279 Park Avenue

Binghamton, NY 13903

(3) Town of Colesville, NY. Retrieved from <http://townofcolesville.org/content>

Contact: Town Supervisor. Glenn S. Winsor.

Phone: (607) 693-1794

Email: colesvillesupervisor@echoes.net

Address: 780 Welton St

Harpursville, NY 13787

Town of Colesville. Colesville Town Board. Comprehensive Plan Committee. (2015). Town of Colesville comprehensive plan 2015. Retrieved from: http://www.gobroomecounty.com/files/planning/_pdf/Comprehensive%20Plan/Colesville%20Draft%20Comprehensive%20Plan.pdf

(4) Town of Fenton, NY. Retrieved from <http://www.townoffenton.com/>

Contact: Town Supervisor. David Hamlin.

Phone: (607) 648-4800 ext. 113

Email: tfenton-supv@stny.rr.com

Address: Fenton Town Hall

44 Park Street

Port Crane, NY 13833

(5) Town of Kirkwood, NY. Retrieved from <http://www.townofkirkwood.org/>

Contact: Town Supervisor. Gordon E. Kniffen. TOWN OF KIRKWOD

Phone: (607) 775-1370

Address: 70 Crescent Drive

Kirkwood, NY 13795

(6) Town of Lisle:

Contact: Town Supervisor. Edward Gehm

Phone: (607) 849-6828

Address: 9234 NYS Route 79
Lisle, NY 13797

(7) Town of Maine:

Contact: Town Supervisor. Jim Tokos.

Phone: (607)862-3334

Email: jimtokos@outlook.com

Address: 12 Lewis Street PO Box 336
Maine, NY 13802

(8) Town of Nanticoke, NY. Retrieved from <http://townofnanticokeny.com/>

Contact: Town Supervisor. Donald Benjamin.

Phone: (607)692-4041 x26

Email: TownSupervisor@TownOfNanticoke.org

Address: PO Box 71
Glen Aubrey, NY 13777

(9) Town of Sanford, NY. Retrieved from <http://townofsanford.org/>

Contact: Town Supervisor. Dewey A. Decker.

Phone: (607)-467-2935

Address: 91 Second Street
Deposit, NY 13754

(10) Town of Triangle:

Contact: Town Supervisor. Stephen D. Doherty.

Phone: (607) 692-4332

Address: Triangle Town Clerk Office
2612 Liberty Street, P.O. Box 289
Whitney Point, NY 13862

(11) Town of Windsor, New York. Retrieved from <http://www.windsorny.org/index.html>

Contact: Town Supervisor. Carolyn W. Price.

Phone: (607) 655-2026

Address: Windsor Town Hall
124 Main Street
Windsor, NY 13865

Villages:

(1) Village of Deposit, NY. Retrieved from <http://www.villageofdeposit.org/>

Contact: Village Mayor. Robert Rynearson Jr.

Email: r.rynearson@tds.net

Phone: (607) 467- 2492

Address: 146 Front Street
Deposit, NY 13754-1198

(2) Village of Lisle.

Contact: Village Mayor. Gerald Mackey.

Phone: (607) 692-3763

Address: P.O. Box 365

Lisle, NY 13797

(3) Village of Whitney Point, NY. Retrieved from <http://www.whitneypoint.org/>

Contact: Mayor. Ryan Reynolds.

Phone: (607) 692-4907

Address: 2612 Liberty St

PO Box 729

Whitney Point, NY 13862

(4) Village of Windsor, NY. Retrieved from <http://www.villageofwindsor.org/>

Contact: Mayor. Ron Harting.

Phone: (607) 655-2318

Email: rharting@villageofwindsor.org

Address: 107 Main Street

P.O. Box 98

Windsor, NY 13865

Rural Challenges:

(1) Rural Assistance Center. (n.d.). Retrieved June 26, 2015, from <http://www.raconline.org/>

(2) About ARC. (n.d.). Retrieved June 30, 2015, from <http://www.arc.gov/about/index.asp>

(3) National Rural Health Association. (n.d.). Retrieved June 30, 2015, from <http://www.ruralhealthweb.org/>

(4) NYSARH-New York State Association for Rural Health. (n.d.). Retrieved June 30, 2015, from <http://www.nysarh.org/>

(5) State Offices of Rural Health and Rural Health Associations. (n.d.). Retrieved June 30, 2015, from <http://www.hrsa.gov/ruralhealth/about/directory/>

Rural Schools

(1) Cornell University. (n.d.). Retrieved June 26, 2015, from <https://cardi.cals.cornell.edu/programs/rsa>
Rural Connectivity/Broadband:

(2) Types of Broadband Connections. (n.d.). Retrieved June 26, 2015, from http://www.broadband.gov/broadband_types.html

(3) Fluharty, C. W. (President & CEO) (2014, March 19). Broadband Needs, Challenges, and Opportunities in

Rural America. Rural Broadband Workshop. Lecture conducted from Federal Communications Commission, Washington DC. http://www.rupri.org/Forms/Fluharty_FCC_March2014.pdf

(4) Whitacre, B., Gallardo, R., & Strover, S. (n.d.). Broadband's Contribution to Economic Health in Rural Areas. The Research & Policy Brief Series, (64). Retrieved February 1, 2015, from https://cardi.cals.cornell.edu/sites/cardi.cals.cornell.edu/files/shared/documents/ResearchPolicyBriefs/Policy-Brief-Feb15-draft03.pdf?utm_source=CaRDI_Communique&utm_campaign=903e341669-CaRDI_Communique_05-05-2015&utm_medium=email&utm_term=0_a1445e4b46-9

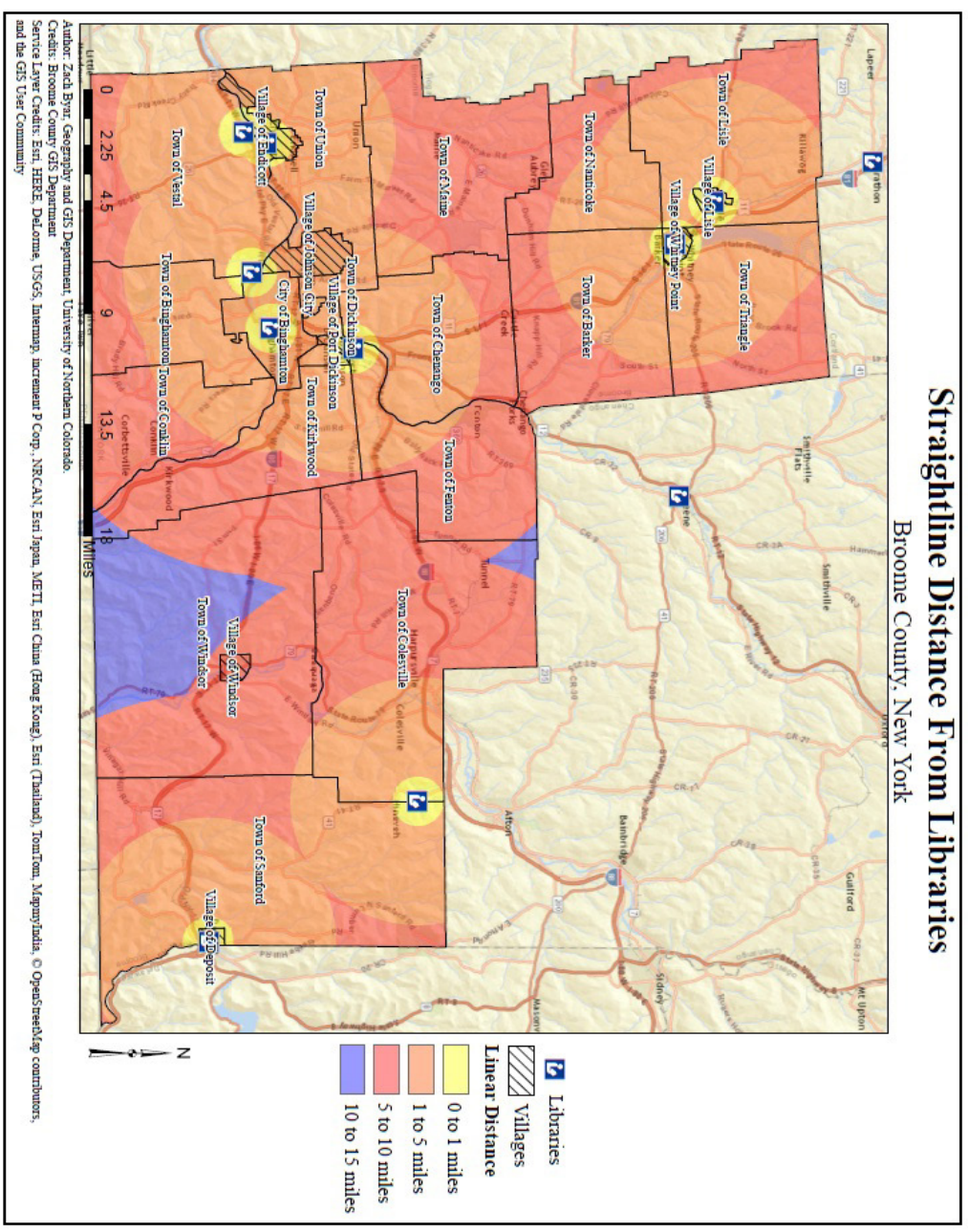
Transportation (EMS)

(1) Nicholl, J., West, J., Goodacre, S., & Turner, J. (n.d.). The relationship between distance to hospital and patient mortality in emergencies: An observational study. Retrieved June 26, 2015, from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2464671/>

(2) Blackwell, T., Kline, J., Willis, J., & Hicks, G. (n.d.). Lack of Association Between Prehospital Response Times and Patient Outcomes. *Prehospital Emergency Care Prehosp Emerg Care*, 444-450.

(3) Blanchard, I., Doig, C., Hagel, B., Anton, A., Zygun, D., Kortbeek, J., . . . Innes, G. (n.d.). Emergency Medical Services Response Time and Mortality in an Urban Setting. *Prehospital Emergency Care Prehosp Emerg Care*, 142-151.

Fig 3a. Straightline Distance From Libraries



Source: Geography and GIS Department, University of Northern Colorado

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of South Central New York, Inc.

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