CAPITAL REGION, MOHAWK AND HUDSON VALLEY DSRIP

COMMUNITY NEEDS ASSESSMENT

Albany Medical Center PPS

Ellis PPS

HEALTHY CAPITAL DISTRICT INITIATIVE

December 2014

Albany Medical Center PPS and Ellis PPS

This report is based on primary data collected by the Healthy Capital District Initiative (HCDI), available data from New York State and numerous other sources referenced within. The voluminous research assembled here wouldn't have been possible without the extraordinary efforts of Liz Kormos, of Kormos and Company LLC, John Shaw and Colleen McVeigh from Next Wave and Michael Medvesky; for which I am deeply grateful. Caution is always prudent when interpreting data as each measure and analysis is limited by the methods used. All analyses and conclusions made are based upon the information available to us at the time of the study. Due to unforeseen circumstances and/or unanticipated events, some of the assumptions may not materialize and the results achieved may vary from the report. We are not responsible for future efforts and other management actions upon which the results will depend.

An electronic copy of this report and all appendices can be found at:

CAPITAL REGION, MOHAWK AND HUDSON VALLEY 10 COUNTY DSRIP CNA or
https://drive.google.com/folderview?id=0B0Cc0mB3z7pTNHE0akNVZ052TjQ&usp=drive_web

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EXECUTIVE SUMMARY

This Community Needs Assessment (CNA) presents the greater health systems' resources and utilization, as well as the health needs for the general population, Medicaid insured and uninsured populations for 11 counties. The needs of these counties were examined to assist the Ellis PPS and Albany Medical PPS prepare proposals for the New York State Department of Health (NYSDOH) Delivery System Reform Incentive Program (DSRIP).

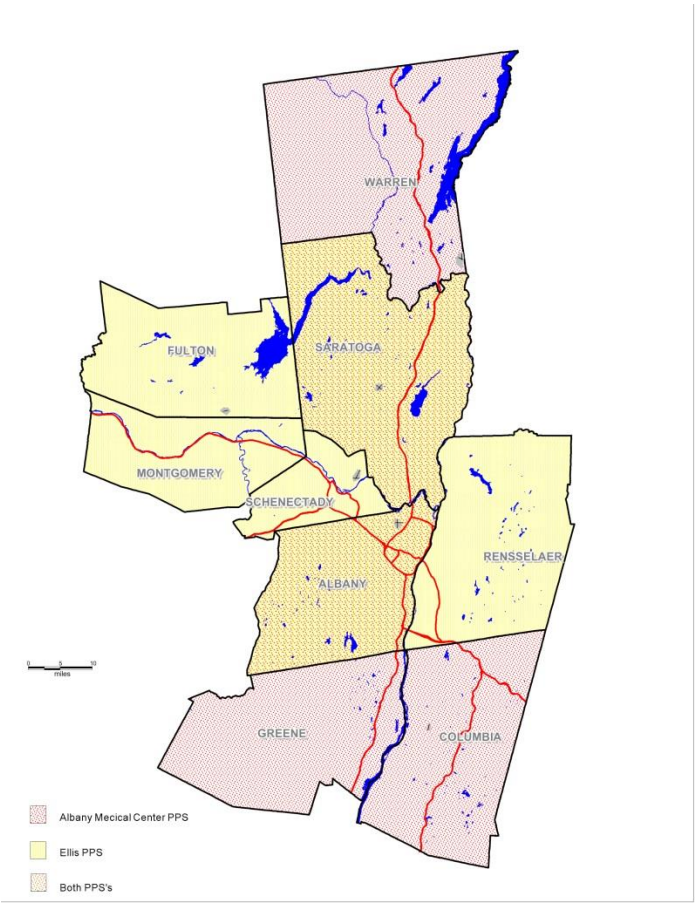
In response to parameters set by the NYSDOH stipulating which counties a PPS could serve and ongoing examination of the population health needs in the region, the final service area for the Albany Medical Center PPS changed to include Warren County and exclude Schenectady, Rensselaer, Dutchess and Ulster Counties.

As a result, the CNA presents tables and figures for 10 counties which include Dutchess and Ulster Counties, while incorporating the health needs data in the narrative for Warren County when it was greater than the upstate or 10 county averages. Other key Warren County data identifying healthcare and community based providers is in Appendix A; local Community Health Improvement Plans, Community Service Plans and public health indicators in Appendix D; targeting hotspots for service priorities in Appendix F, utilization and health data driving project selection in the Albany Medical Center Chart of Projects in Appendix H; and demographic data is in the Albany Medical Center organizational application.

The Ellis PPS includes Albany, Schenectady, Rensselaer, Saratoga, Fulton and Montgomery Counties. The current Albany Medical PPS includes Warren, Saratoga, Albany, Greene and Columbia Counties.

Albany Medical PPS and Ellis PPS

Figure 1 Albany Medical Center PPS and Ellis PPS Service Areas

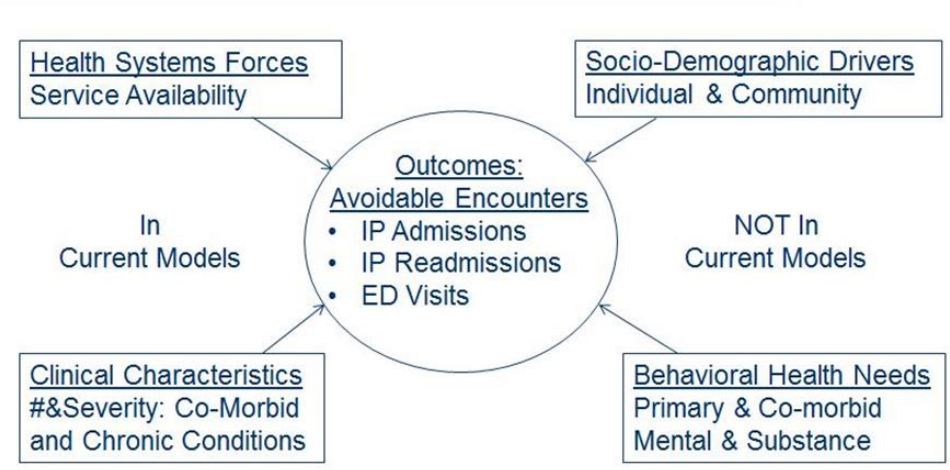


As outlined in DSRIP materials, the community needs assessment (CNA) for the performing provider system (PPS) goes beyond a traditional CNA.

- The intent of DSRIP is to rationalize the Medicaid program by focusing on reduction of avoidable hospital encounters: inpatient admissions, inpatient readmissions, and emergency department visits.
- DSRIP is focused on the Medicaid and uninsured populations rather than the total population of the entire community.
- The focus of this CNA is person-centered and looks at all major drivers of avoidable encounters in this Medicaid and uninsured population, including;
    - Service availability and clinical characteristics included in traditional models

- Socio-demographic drivers and behavioral health needs – both of which are under-recognized in current models.
- A review of the current literature suggests that each of the above bullets represent about half of the variability in avoidable encounters.

Figure 2 Person Centered: Link All Available Driver Data to Better Target Community Resources and Needs



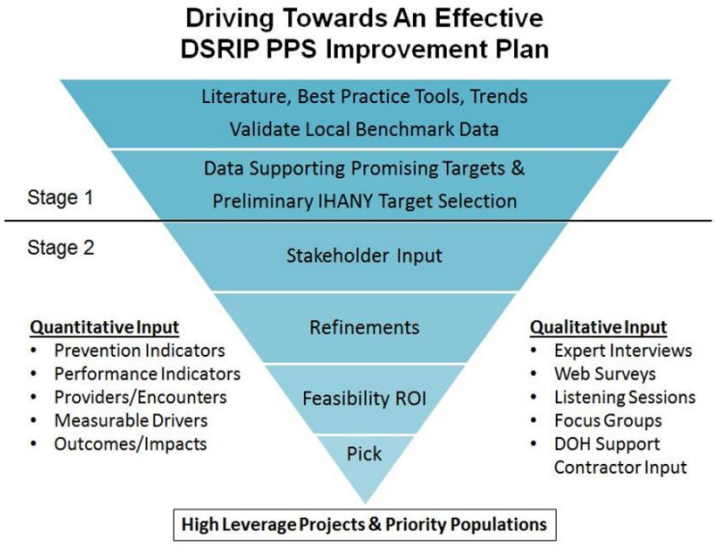
The figure below illustrates the overall CNA process followed.

- Stage 1 included literature review and secondary review of baseline information provided by the New York state Department of Health (NYSDOH), plus initial primary data analysis to refine this information. Results were used to do preliminary project selection.
- Stage 2 is an iterative refinement and focusing on picking high leverage projects (i.e. those having the largest impact on avoidable encounters). It utilized both
  - Qualitative input from all interested stakeholders, including the beneficiaries themselves and

- Quantitative input to refine opportunity gaps, evaluate the efficiency and return on investment of project approaches, and target priority populations to refine approaches and plan intervention rollouts.

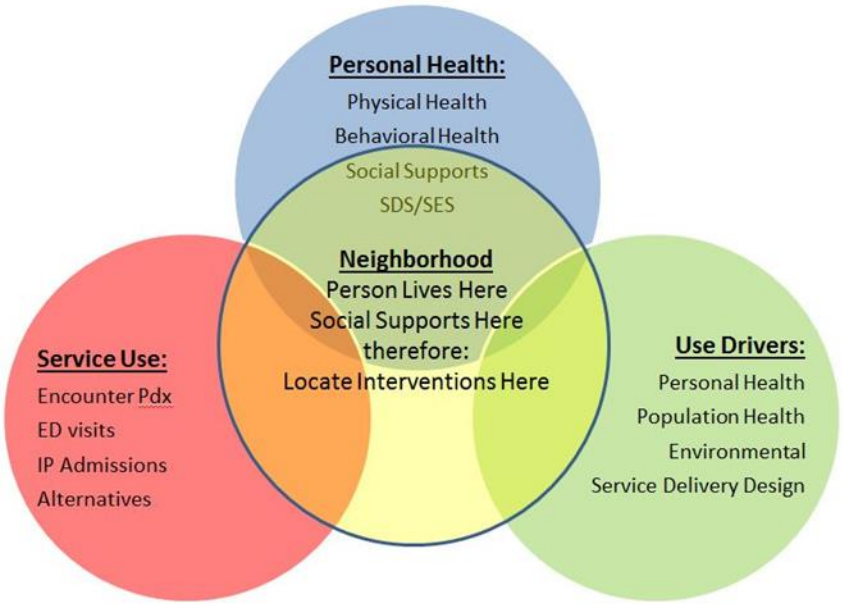
This process focus is to prioritize improvement efforts to achieve the goal of reducing avoidable encounters as quickly and effectively as possible.

Figure 3 Driving towards an effective DSRIP PPS Improvement Plan



Our person-centered CNA combines inter-related data points to focus improvements. Service use data points describe the health care services currently utilized as well as gaps and alternatives to these services. We then distinguish the characteristics of the person, their needs, and their resources vs. the services they use. The qualitative and quantitative analysis performed in Stage 1 and Stage 2 identifies which of these characteristics are drivers of or associated with avoidable service use. We then summarize the above in Neighborhoods (combinations of zip codes) across the 10 counties to help focus project intervention scale, placement, and roll-out scheduling.

Figure 4. A Person Centered Community Needs Assessment Combines Inter-related Data to Focus Improvements



1. MAJOR FINDINGS – NEEDS AND SOLUTIONS SUPPORTED

The Community Needs Analysis determined that service use was significantly impacted by widespread barriers to primary care when and where consumers need it. Insufficient care coordination is a major health service use driver as it puts greater demands on the Medicaid and Uninsured population to manage their care than they have the capacity to fulfill. This is particularly true for consumers with behavioral health or multiple chronic conditions as personal health characteristics. Avoidable utilization of hospital services is most concentrated in super-utilizers who are more likely to have substance abuse, behavioral health, or multiple chronic conditions and live in the highest need neighborhoods of the region.

1. IMPAIRED ACCESS TO NEEDED CARE

a. **Rates for Medicaid members using primary care are lower than Benchmarks in all 10 counties**, while preventable ED use is higher in all 10 counties. There are few local Patient Centered Medical Homes (PCMH) currently certified.

b. **Medicaid members and uninsured cannot find primary care services available at times or locations they need.** Common themes expressed in consumer surveys, local

listening sessions, and focus groups of this population was that life barriers prevented access to primary care and clinics at times and locations convenient to the provider. Expanded office hours and urgent care are not available where these people live. Lack of transportation, working two jobs and risking of losing them if taking time off for health appointments, child care responsibilities, and lack of informal supports make the ED the only place to obtain care in many high need neighborhoods. Poor access to care was reflected in worse rates than New York State in all counties for diabetes screening, three cancer screenings, chlamydia screening and in half the counties prenatal care, which leads to high risk and high cost low birth weight deliveries.

c. **Triage screening for appropriate ED use is not practical in the current delivery system.** When people arrive at the ED evenings and weekends currently, the only service option available is the ED itself. Even during normal business hours when other services could be available, there is insufficient Triage space or processes to screen and divert people that may need less costly services.

d. **Solutions Supported:**

i. Domain 2 Integrated Delivery System Transformation Projects like formal Integrated Delivery Systems, increased certification of Primary Care Medical Homes and/or Advanced Primary Care Models, ED care triage for at risk populations, and converting excess beds into a Medical Village can help address these access barriers – particularly in rural areas.

2. **CARE COORDINATION BARRIERS TO EFFECTIVE CARE**

a. Lack of Coordination by Providers increases demands on consumers to take up the slack. Their ability to self-manage chronic conditions is measurably impaired by:

i. Presence of moderate or significant behavioral health conditions, life management skills, stable housing, and informal supports are all challenged by mental impairments and/or substance use disorders. This diminished capacity to self-manage is frequently exceeded by the demands expected by the current delivery system to manage complex chronic conditions.

ii. Presence of multiple chronic physical conditions The complexity of and knowledge needed to effectively manage several co-morbid conditions, medications, primary and specialist appointments, and daily life places demands that exceed capacity of the general population. The dually eligible have added age and/or disability demands and reduced capacity, placing them at higher risk. In the community, increased knowledge and engagement combined with effective informal supports are necessary to avoid ED use and admissions, including community health workers and navigators where needed. This subpopulation tends to be white, educated – and overwhelmed.

b. Coordination of Behavioral Health and Physical Health Services is difficult within current delivery system. Medicaid members and uninsured with both physical and behavioral health conditions are currently treated for either one or the other condition. The current delivery system does not make treating both (i.e. the whole person) easy, or in some cases possible with current regulations and delivery silos. People with a diagnosed and treated behavioral health condition are frequently

admitted for a physical condition. Likewise, under-diagnosed depression and anxiety complicate the treatment of physical conditions and lead to excess ED visits and admissions, as does under treatment due to medication barriers and fears. When referrals between settings are made, both providers and the consumers agree that appointments take too long to secure, reducing their likelihood of being kept and often too far in the future to be effective. Substance use disorders are particularly high impact, especially in combination with either physical or mental impairments.

c. Solutions Supported:

i. Integration of behavioral health and physical health services to make cross referrals timely and effective and development and access to ambulatory detox services and implementing behavioral health crisis stabilization.

ii. Addressing cardiovascular and asthma/COPD through better use of evidence-based medicine, medication adherence, and home visits to enhance knowledge and support.

iii. Domain 4 Population efforts to strengthen the MI/SUD infrastructure, reduce tobacco use in high risk populations, and prevent major chronic conditions like CVA and cancer.

3. **HOSPITAL USE CONCENTRATED IN A FEW SUPER-UTILIZERS**

a. Eleven percent (11%) of Medicaid members and uninsured represent over half of ED visits, almost 40% of admissions, and all 30 day readmissions. These individuals were defined as having more than 2 ED visits in 6 months and/or a 30 day readmission in the last 3 years. Super-utilizers are twice as likely to have significant behavioral health conditions, twice as likely to have multiple chronic

conditions, and three times as likely to have been treated for substance abuse.

b. These super-utilizers are clustered in several high need neighborhoods. Neighborhoods like the South End in Albany and Hamilton Hill in Schenectady have high proportions and numbers of these super-utilizers, along with poverty rates almost double the regional average and a more diverse racial mix. Other high need neighborhoods like Troy/Lansingbugh and Amsterdam have elevated rates of anxiety and depression driving ED and inpatient use. The neighborhoods are identified in the CNA report, and additional indicators and characteristics are provided in Appendix F.

c. There are higher than expected proportions of Socio Demographic Status (SDS) indicators in this subpopulation. There were 6% higher poverty rates, 4% higher English language learner rates, 3% higher rates of foreign born, 3% higher rates for education less than high school graduate, and 3% higher unemployment rates in the zip codes where they live. We also found much higher numbers of Hispanics than in the overall Medicaid/Uninsured population (11.3% vs. 5.9%) and higher numbers of Blacks (17.4% vs. 15.5%).

d. **Solutions Supported:**

i. Focus piloting and roll-out of high-impact/high touch interventions across projects in the targeted sub-populations in the targeted neighborhoods. Community health workers and engaged community based organizations are critical to these efforts.

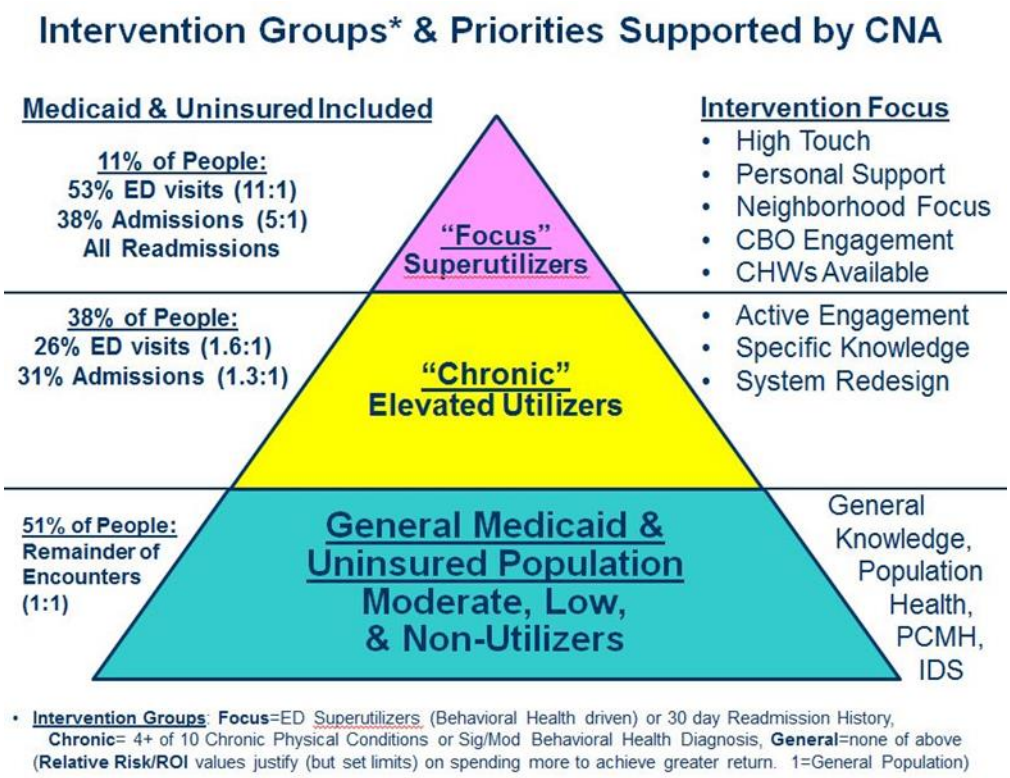
These major findings can be visualized in Figure 5 and indicate for whom the DSRIP interventions are intended:

1. Interventions to address Access issues overall through overall system redesign are at the bottom (blue) section of the pyramid. They "raise all boats" and apply to all of the subpopulations, including the General population of moderate and low utilizers.

2. Interventions to address the elevated Coordination, knowledge, and support needs of people with Chronic behavioral and physical conditions are in the middle (yellow) section of the pyramid.

3. Super-utilizers in the top (pink) section will benefit from personal high touch interventions beyond those of traditional health care delivery to address the SDS drivers of their ED and IP hospital use.

Figure 5 High Leverage Priority Interventions Pyramid



A. HEALTH CARE AND COMMUNITY RESOURCES

1. DESCRIPTION OF HEALTH CARE RESOURCES

I. Healthcare Providers

A complete assessment of the healthcare resources was conducted for the entire 11 County area including those not members of the Ellis PPS and Albany Medical PPS (there was insufficient time to update the maps in this section to include Warren County).

Table A-1 shows the more detailed number of key provider locations by type and County with data from the Managed Care Provider Network. The Managed Care Provider Network was used instead of AHRF data because AHRF data on physicians is based on the American Medical Association (AMA) database which often lists the physician's home address instead of their practice address. Studies have shown that the AMA database can overstate physician supply by as much as 20%.[12] Many physicians in the region practice over multiple counties. Table A-1 shows the number of locations instead of the number of FTE's.

[1] Konrad TR1, Slifkin RT, Stevens C, Miller J. Using the American Medical Association physician Masterfile to measure physician supply in small towns. J Rural Health. 2000 Spring;16(2):162-7.

[2] Department of Geography, University of Illinois at Urbana-Champaign, USA. Spatial and spatio-temporal epidemiology 04/2012; 3(1):31-8. DOI: 10.1016/j.sste.2012.02.004

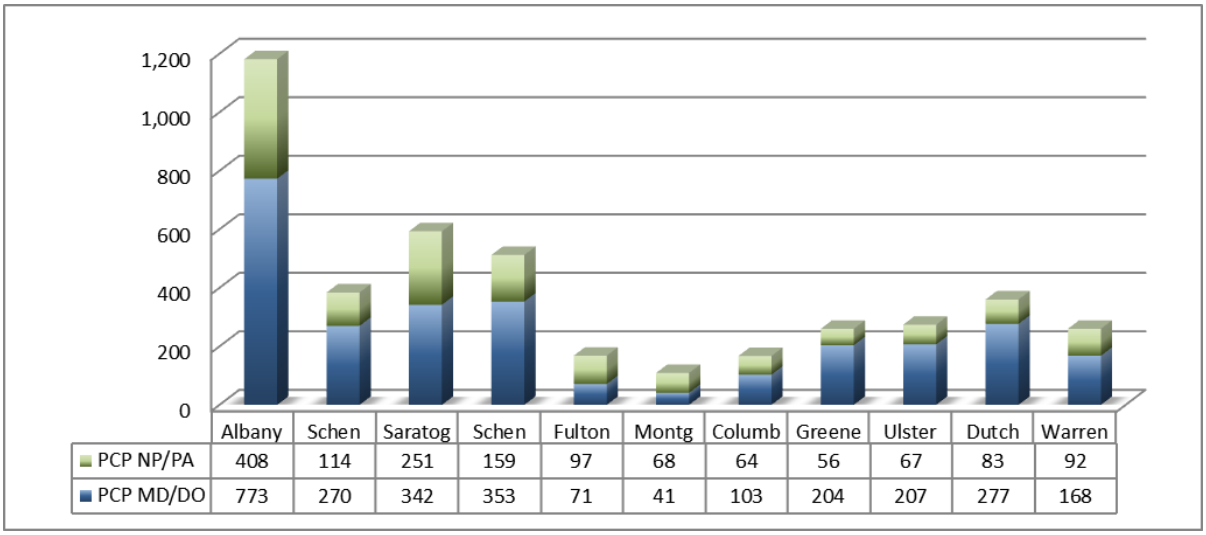
Table A-1 Numbers of Provider Locations by Type and County

Type of Provider	Albany	Rensselaer	Saratoga	Schenectady	Fulton	Montgomery	Columbia	Greene	Ulster	Dutchess	Warren	11 County
Primary Care Physicians	773	270	342	353	71	41	103	204	207	277	168	2,809
Primary Care NP/PA	408	114	251	159	97	68	64	56	67	83	92	1,459
Mental Health Pyschiatrists	176	45	52	84	12	46	12	22	187	199	17	852
Mental Health NP/PA	34	18	25	20	2	1	4	1	12	25	17	159
Mental Health Psychologists	28	8	8	3	3	7	2	0	129	142	38	368
Mental Health SW/Counselors	251	45	87	68	15	54	33	20	12	16	2	603
Counselors	34	24	19	22	6	20	4	2	22	23	6	182
Asthma Physicians (Allergy and Imm	15	7	13	8	2	1	2	0	5	19	2	74
Asthma NP/PA	6	2	3	5	0	1	0	0	0	0	5	22
Cardiac Physicians	118	37	34	47	8	8	11	6	84	112	18	483
Cardiac NP/PA	27	7	13	12	1	0	2	0	0	15	5	82
Diabetes Physicians	25	25	6	3	0	1	2	1	7	34	0	104
Diabetes NP/PA	9	4	0	0	0	0	1	0	4	0	0	18
Pain Physicians	11	1	7	0	0	2	2	0	7	20	5	55
Pain NP/PA	1	0	0	0	0	0	2	0	0	1	0	4
OB/GYN Physicians	142	23	65	36	16	11	7	2	45	115	19	481
OB/GYN NP/PA	46	10	32	26	12	8	2	3	7	20	15	181
OB/GYN Midwife	60	13	16	8	6	2	2	1	17	40	21	186
Pediatrics	97	29	56	30	6	26	7	9	73	236	46	615
Hospice Physicians	1	0	1	1	0	0	0	0	0	0	0	3
Hospice NP/PA	0	0	0	0	0	1	0	0	0	0	0	1
Nurse Practitioner	59	14	16	28	9	5	5	21	41	53	6	257
Nurses	28	9	15	11	12	55	5	30	19	36	1	221
Social Workers	496	168	171	240	33	109	54	180	753	587	109	2,900
Dentists	173	71	97	69	18	18	33	15	89	182	35	800
All Other	3,860	1,147	1,881	1,013	332	379	410	3	1,412	3,994	658	15,089
Total	**6,878**	**2,091**	**3,210**	**2,246**	**661**	**864**	**769**	**576**	**3,199**	**6,229**	**1,285**	**28,008**

Source: DSRIP Managed Care Provider Network Data https://www.health.ny.gov/health_care/medicaid/redesign/providernetwork/, Note: the numbers above represent the count of addresses and do not represent the number of FTE's. The total number of unduplicated providers in the ten county area is 11,882

Figure A-1 shows the numbers of primary care provider (PCP) locations by county. Albany County has a large number of PCP physician and physician extender locations (Nurse Practitioners and Physician Assistants). The more rural counties (Fulton, Montgomery, Greene and Columbia) have far fewer. As seen in Figure A-1 physician extenders make up a significant percentage of the number of primary care practitioners in Albany, Saratoga, Fulton and Montgomery counties.

Figure A-1 Number of Primary Care Provider Locations by Type and County



	Albany	Schen	Saratog	Schen	Fulton	Montg	Columb	Greene	Ulster	Dutch	Warren
PCP NP/PA	408	114	251	159	97	68	64	56	67	83	92
PCP MD/DO	773	270	342	353	71	41	103	204	207	277	168

Source: DSRIP Managed Care Provider Network Data, Note: the numbers above represent the count of addresses and do not represent the number of FTE's.

The percent of primary care providers by location that are PCMH certified is shown on Table A-2. Warren, Ulster and Fulton County have the highest percent of physicians certified followed by Montgomery and Schenectady County. The percent certified in the urban areas of Rensselaer and Albany are low. Columbia has only 2 PCMH certified physicians and Greene County does not have any providers that are PCMH certified.

Table A-2 PCMH and Primary Care Provider Location by County

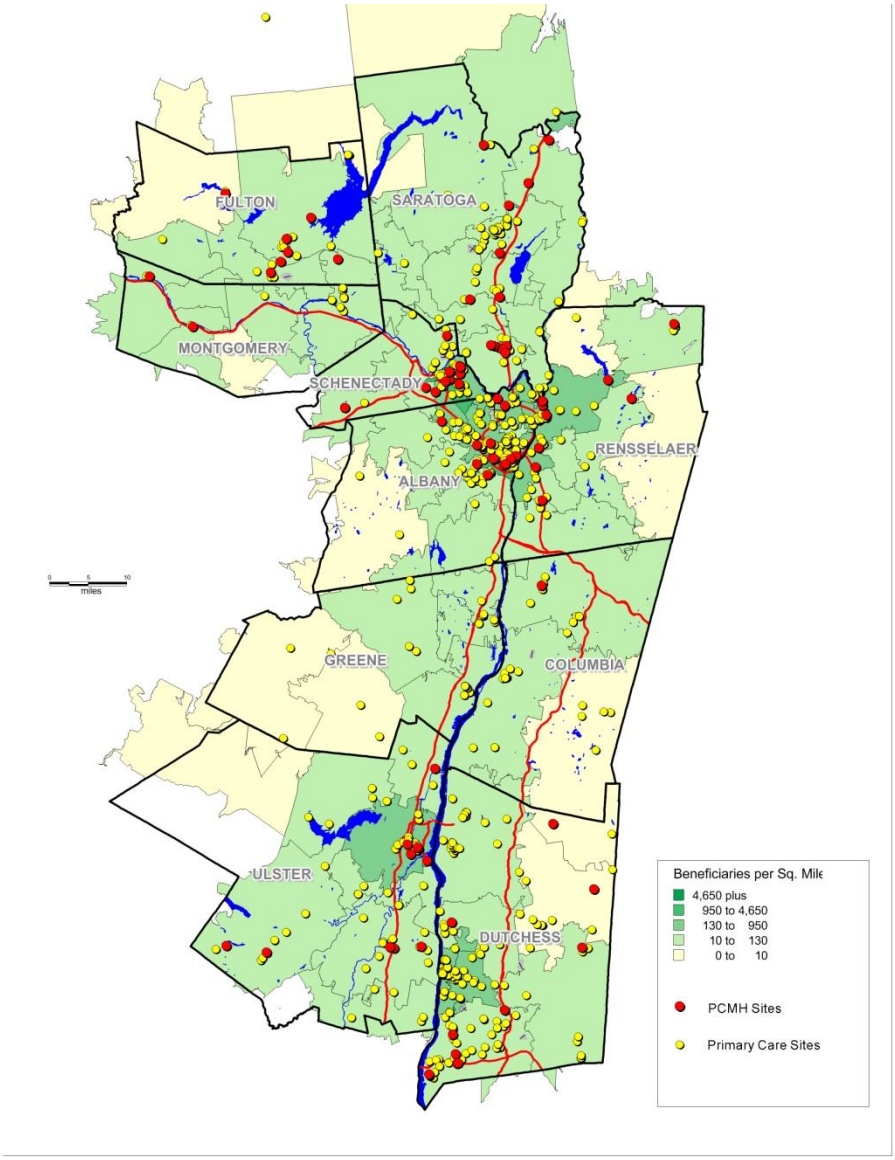
Type	Albany	Schen	Renss	Saratog	Fulton	Montg	Columb	Greene	Ulster	Dutch	Warren	11 County
PCMH Practices	16	15	10	14	8	2	1	0	10	10	9	95
												0
PCMH Certified Physician Locations	100	52	34	49	19	8	2	0	57	37	63	421
Primary Care Physician Locations	773	270	342	353	71	41	103	204	207	277	168	2,809
Percent PCMH	12.9%	19.3%	9.9%	13.9%	26.8%	19.5%	1.9%	0.0%	27.5%	13.4%	37.5%	15.0%

Source: NCQA Patient Centered Medical Recognition, DSRIP Managed Care Provider Network Data, Note: the numbers above represent the count of addresses and do not represent the number of FTE's.

The location of primary care providers, those locations with PCMH level 3 certification and the distribution of Medicaid beneficiaries per square mile is shown on Figure A-2. Except for greater Kingston, there is a relative proportional density of primary care providers in the areas where

beneficiaries are concentrated, but the numbers of providers that are PCMH certified is small in most counties as noted above.

Figure A-2 Distribution of Primary Care Providers, PCMH Certified Providers and Medicaid Beneficiaries per Square Mile by Neighborhood



Source: NCQA Patient Centered Medical Recognition, DSRIP Managed Care Provider Network Data, DSRIP Medicaid Chronic Conditions Inpatient Admissions and Emergency Room Visits by County Beginning_2012

New York State designated Health Homes provide care management for high need/high risk individuals with multiple chronic conditions. Individuals qualifying for Health Homes have one serious and persistent

mental health condition, HIV/Aids or have at least two chronic conditions including: substance abuse disorder, asthma, diabetes, heart disease, hypertension, BMI>25 or other chronic illness. Health Homes provide care management that improves the quality of health and health care, reduces costs, prevents avoidable inpatient admissions and ED visits, reduces the need for long term care, enhances the coordination/integration of medical and behavioral health, and links to community and social supports. The goals of the Health Home program align with the goals of DSRIP.

In the area there are seven Health Homes providing the majority of Health Home services (Table A-3).

Table A-3 State - Designated Health Homes and Downstream Care Management Agencies meeting Safety Net Criteria

Entity Name	Safety Net Criteria Type	Entity ID	Provider MMIS ID	Provider NPI	Health Home Type
ADIRONDACK HEALTH INSTITUTE INC	A	E0333823	3449974	1740557735	Health Home
HUDSON RIVER HEALTHCARE INC	B	E0252206	473038	1619969458	Health Home
INSTITUTE FOR FAMILY HLTH	B	E0209381	903700	1295729408	Health Home
OPEN DOOR FAMILY MEDICAL CENTER/HVCC	B	E0252207	3003578	1467487637	Health Home
SAMARITAN HOSPITAL	B	E0036493	2993713	1043267727	Health Home
ST MARYS HOSP AMSTERDAM	B	E0264004	3001310	1811977796	Health Home
VISITING NURS SVC/SCHTD & SAR CNTY	B	E0226952	2997684	1841360740	Health Home
ALBANY CNTY DEPT/CHILD Y&F MH	A	E0046990	2531542	1043379159	Care Management Agency
ALBANY COUNTY MH	A	E0183169	1167188	1952460990	Care Management Agency
CATHOLIC CHARITIES/ALBANY AI	A	E0155944	1440326	1104067024	Care Management Agency
AIDS COUNCIL OF NENY AI	A	E0157043	1429318	1265625685	Care Management Agency
CLEARVIEW CENTER MH	A	E0144346	2995811	1477695021	Care Management Agency
OFFICE MENTAL HEALTH MH	A	E0186155	1137237	1609933142	Care Management Agency
PARSONS CHILD AND FAMILY CTR	A	E0332598	2998034	1922171305	Care Management Agency
REHABILITATION SUPP SVCS C	A	E0165585	2998070	1922293745	Care Management Agency
COLUMBIA CTY MH CTR MH	A	E0166443	2996885	1689618977	Care Management Agency
ASTOR HOME FOR CHILDREN FBT	A	E0144364	2994769	1225009806	Care Management Agency
MENTAL HLTH ASSOC/DUTCHESS MH	A	E0067615	2324885	1023173820	Care Management Agency
GREEN COUNTY MENTAL HLTH MH	A	E0071970	2994907	1255360046	Care Management Agency
ST MARYS HSP AT AMSTERDAM MH	A	E0186018	1138623	1275782518	Care Management Agency
RENSSELAER CNTY UNIFIED MH	A	E0185771	1141102	1942597232	Care Management Agency
UNITY HOUSE OF TROY MH	A	E0018048	2996692	1649333485	Care Management Agency
TRANSITIONAL SVCS ASSOC INC	A	E0167467	2994672	1205974730	Care Management Agency
ELLIS HOSPITAL MH	A	E0179188	1207038	1497949622	Care Management Agency
MENTAL HEALTH ASSOCIATION IN	A	E0029044	2997313	1780882373	Care Management Agency
COMM MHC GLEN FALLS MH	B	E0177645	2997753	1871606764	Care Management Agency

Source: DOH
https://www.health.ny.gov/health_care/medicaid/redesign/docs/state_designated_health_homes_and_downstream_care_management_agencies.pdf

Criteria Used to Identify Health Home Safety Net Providers for DSRIP: A) Organization has more than $10,000 in Care Management claims billed to NYS Medicaid in 2013 (either directly or indirectly, criteria pending CMS approval), B) Organization meets Safety Net Designation based on NPI match.

Table A-4 shows the enrollment of Health Homes as of October 2014 by County. Dutchess and Schenectady Counties currently have the largest number of enrollees followed by Albany, Rensselaer and Ulster Counties.

Table A-4 NYS Health Home Enrollment as of October 2014

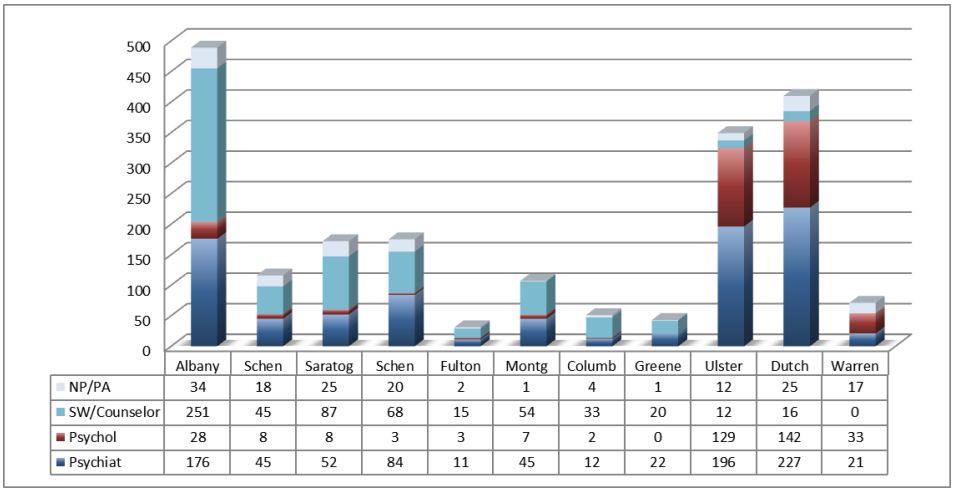
Current Health Home	Albany	Schen	Renss	Saratoga	Fulton	Montg	Greene	Columbia	Dutchess	Ulster	Warren	11 Counties
Hudson River Healthcare Inc.- Community Health Care Collab.	n/a	n/a	n/a		n/a		96	139	1,444	14		1,702
Visiting Nurse Service of Northeastern New York	16	1,162	na	92	n/a				n/a	n/a	n/a	1,291
Samaritan Hospital dba Capital Region Health Connections	542	15	515	n/a				n/a				1,086
Institute for Family Health, Health Home									86	382		468
St. Mary's Healthcare	n/a	n/a	n/a	n/a	90	136		n/a				235
Open Door Family Med Ctrs dba Hudson Valley Care Coalition	n/a							n/a	115	n/a		125
Adirondack Health Institute	n/a	n/a	n/a	62							303	71
CNYHHN, Inc	n/a	n/a	n/a					n/a				n/a
Community Care Management Partners		n/a	n/a						n/a	n/a		n/a
Niagara Falls Memorial Medical Center	n/a	n/a										n/a
North Shore Long Island Jewish Health Home									n/a			n/a
Onondaga Case Management Srvcs Inc- HH of Upstate NY-Central	n/a				n/a						n/a	n/a
Coordinated Behavioral Care, Inc. dba Pathways to Wellness									n/a			n/a
Bronx Lebanon Hospital Center		n/a										n/a
Community Health Care Network												n/a
Greater Buffalo United Accountable Healthcare Network												n/a
Southwest Brooklyn Health Home dba Brooklyn Health Home												n/a
Other	10	12	18	10	9	8	4	4	4	10		322
Total	**568**	**1,189**	**533**	**164**	**99**	**144**	**100**	**143**	**1,649**	**406**	**305**	**5,300**

Source: DSRIP Dashboard B9 as of 10/2014

Table A-5 shows the number of mental health provider locations. The numbers of locations is high in the more densely populated counties of Albany, Ulster and Dutchess. There are a very small number of mental health providers designated as substance abuse providers and counselors. There are only three physicians and five social workers who are designated as specializing in substance abuse in the whole eleven county area. This may indicate a shortage of these professionals or a lack of mental health providers designating this as a specialty. Detailed counts of health care providers by county and lists of individual providers can be found in CNA Appendix A-1.

Albany Medical PPS and Ellis PPS

Table A-5 Number of Mental Health Provider Locations by County



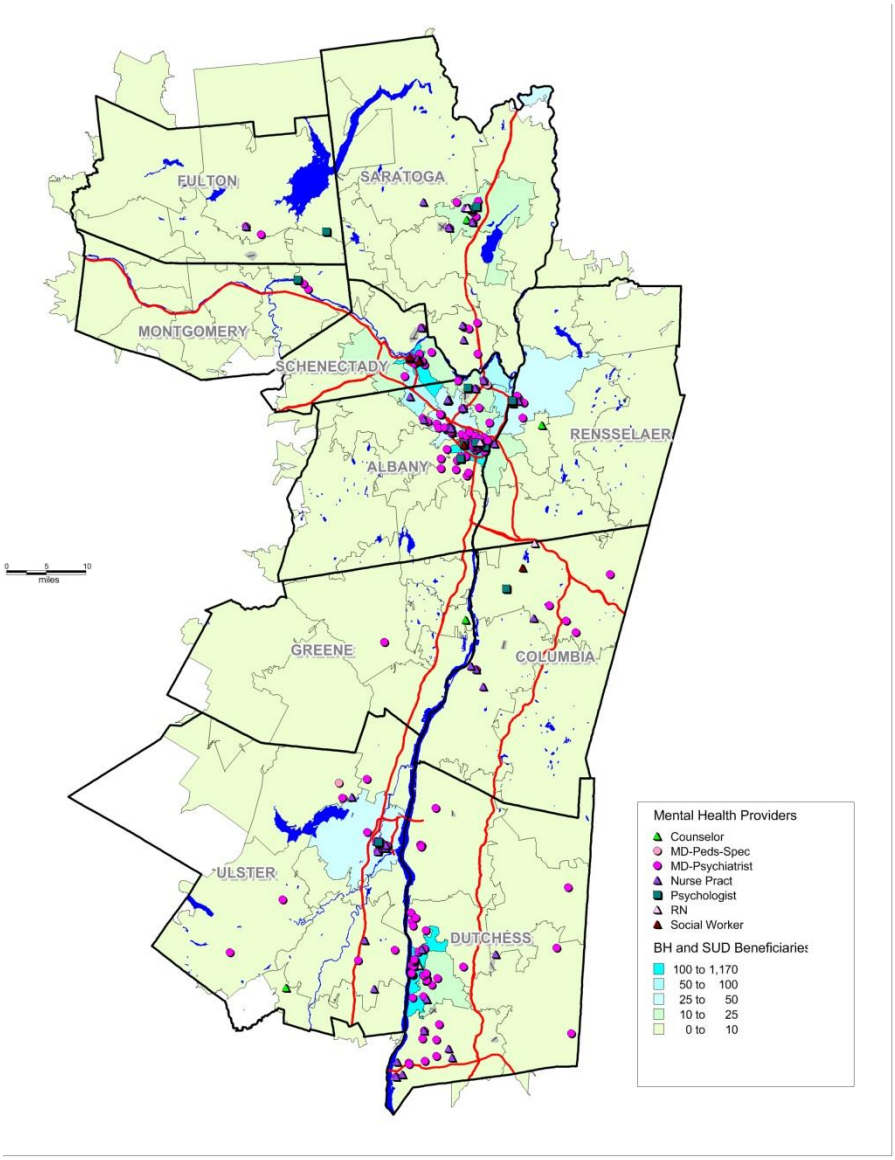
	Albany	Schen	Saratog	Schen	Fulton	Montg	Columb	Greene	Ulster	Dutch	Warren
NP/PA	34	18	25	20	2	1	4	1	12	25	17
SW/Counselor	251	45	87	68	15	54	33	20	12	16	0
Psychol	28	8	8	3	3	7	2	0	129	142	33
Psychiat	176	45	52	84	11	45	12	22	196	227	21

Source: DSRIP Managed Care Provider Network Data

The distribution of mental health provider locations in relationship to the density of beneficiaries with mental health conditions is shown in

Figure A-3. There are a large number of mental health providers in the urban areas of Albany, Dutchess and Schenectady Counties. The numbers in Troy and the rural areas of Columbia, Greene, Fulton and Montgomery are far fewer.

Figure A-3 Distribution of Mental Health Providers and Beneficiaries with Severe Mental Health per Square Mile by Neighborhood



Source: DSRIP Managed Care Provider Network Data, DSRIP Medicaid Chronic Conditions Inpatient Admissions and Emergency Room Visits by County Beginning_2012

Table A-6 shows the number of providers per 100,000 population (2013), Counties with fewer than the Upstate NY (NYS excluding NYC) average are highlighted in red. Except for a few providers notably psychologists and cardiac physicians, Albany County appears to have close to sufficient healthcare providers as compared to the Upstate averages. Montgomery and Ulster have fewer primary care physicians per 100,000 population than the other counties, but Montgomery has a high proportion of primary care physician extenders. The proportion of mental health

psychiatrists is lower than the Upstate average in Rensselaer, Saratoga, Schenectady, Fulton, Columbia and Warren. Psychologists are needed in almost every county except Warren, Ulster and Dutchess. The supply of social workers and counselors is quite high in most counties as compared to Upstate except in Warren, Ulster and Dutchess.

Table A-6 Healthcare Provider Locations per 100,000 Population by Type and County

Type of Provider	Albany	Renssel	Saratoga	Schen	Fulton	Montg	Columbia	Greene	Ulster	Dutchess	Warren	11 County	Upstate excl NYC
Primary Care Physicians	251.8	173.8	213.9	157.7	130.1	82.2	165.5	421.0	69.7	153.0	257.1	175.1	106.3
Primary Care NP/PA	132.9	73.4	157.0	71.0	177.7	136.3	102.8	115.6	22.6	45.9	140.8	90.9	48.9
Mental Health Physicians	57.3	29.0	32.5	37.5	22.0	92.2	19.3	45.4	63.0	109.9	26.0	53.1	40.5
Mental Health NP/PA	11.1	11.6	15.6	8.9	3.7	2.0	6.4	2.1	4.0	13.8	26.0	9.9	4.9
Mental Health Psychologists	9.1	5.2	5.0	1.3	5.5	14.0	3.2	0.0	43.4	78.5	58.2	22.9	23.6
Mental Health SW/Counselors	81.8	29.0	54.4	30.4	27.5	108.2	53.0	41.3	4.0	8.8	3.1	37.6	9.9
Counselors	11.1	15.5	11.9	9.8	11.0	40.1	6.4	4.1	7.4	12.7	9.2	11.3	6.8
Allergy and Immun	4.9	4.5	8.1	3.6	3.7	2.0	3.2	0.0	1.7	10.5	3.1	4.6	5.8
Asthma NP/PA	2.0	1.3	1.9	2.2	0.0	2.0	0.0	0.0	0.0	0.0	7.7	1.4	1.0
Cardiac Physicians	38.4	23.8	21.3	21.0	14.7	16.0	17.7	12.4	28.3	61.9	27.5	30.1	45.5
Cardiac NP/PA	8.8	4.5	8.1	5.4	1.8	0.0	3.2	0.0	0.0	8.3	7.7	5.1	3.9
Diabetes Physicians	8.1	16.1	3.8	1.3	0.0	2.0	3.2	2.1	2.4	18.8	0.0	6.5	5.9
Diabetes NP/PA	2.9	2.6	0.0	0.0	0.0	0.0	1.6	0.0	1.3	0.0	0.0	1.1	1.0
Pain Physicians	3.6	0.6	4.4	0.0	0.0	4.0	3.2	0.0	2.4	11.0	7.7	3.4	3.8
Pain NP/PA	0.3	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.6	0.0	0.2	0.3
OB/GYN	46.3	14.8	40.6	16.1	29.3	22.0	11.2	4.1	15.2	63.5	29.1	30.0	41.2
OB/GYN NP/PA	15.0	6.4	20.0	11.6	22.0	16.0	3.2	6.2	2.4	11.0	23.0	11.3	9.1
OB/GYN Midwife	19.5	8.4	10.0	3.6	11.0	4.0	3.2	2.1	5.7	22.1	32.1	11.6	8.2
Pediatrics	31.6	18.7	35.0	13.4	11.0	52.1	11.2	18.6	24.6	130.4	70.4	38.3	35.3
Hospice Physicians	0.3	0.0	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
Hospice NP/PA	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Nurse Practitioner	19.2	9.0	10.0	12.5	16.5	10.0	8.0	43.3	13.8	29.3	9.2	16.0	16.2
Nurses	9.1	5.8	9.4	4.9	22.0	110.2	8.0	61.9	6.4	19.9	1.5	13.8	8.1
Social Workers	161.6	108.2	106.9	107.2	60.5	218.5	86.8	371.5	253.6	324.3	166.8	180.7	120.4
Dentists	56.4	45.7	60.7	30.8	33.0	36.1	53.0	31.0	30.0	100.6	53.6	49.9	53.1
All Other	1,257.6	738.4	1,176.2	452.5	608.2	759.6	658.7	6.2	475.6	2,206.7	1,007.1	940.4	1,719.6
Total	2,240.8	1,346.1	2,007.3	1,003.3	1,210.9	1,731.6	1,235.5	1,188.7	1,077.4	3,441.5	1,966.7	1,745.6	2,320.0

Source: DSRIP Managed Care Provider Network Data, ACS 2013, note all other = other specialists

Note: May include an overestimate of provider capacity since some providers provide services at multiple locations and this analysis assumes all providers are full time at each location. Therefore the need calculations are conservative.

The numbers of primary care and mental health providers was analyzed for the top neighborhoods showing high need (See Section B for neighborhood methodology). The number of key primary care providers by neighborhood is shown on

Table A-7. Six of the need neighborhoods have no PCMH's. Only 7 high need neighborhoods have Federally Qualified Health Center's (FQHC).

Table A-7 Number of Primary Care Provider Locations in High Need Neighborhoods

Neighborhood	Primary Care MD/DO*	Primary Care NP/PA*	PCMH Providers*	PCMH Practices	FQHC
Amsterdam	34	21	14	2	1
Arbor Hill/Center Square	3	0			1
City of Poughkeepsie	101	29			3
Cohoes	9	2			
Delaware/2nd Ave	8	3	9	1	
Fishkill	134	37	26	6	1
Gloversville/Mayfield	37	38	18	3	
Goose Hill/Union	22	16	9	2	
Hamilton Hill	8	9	8	1	
Hudson Claverack	32	6			1
Kingston	92	23	36	4	
Mont Pleasant	23	6	9	2	
Rt_ 20/New Scot_:	66	16	33	4	
South End/Riverfront	21	9	10	1	
Stockade	5	0			
Troy/Lansingburg	93	35	26	6	1
Upper State Street	35	9	7	1	1
Watervliet/Green Island	10	2			
West End (incl West Hill)	45	28	4	1	
Total	778	289	209	34	9

Source: NCQA Patient Centered Medical Recognition, DSRIP Managed Care Provider Network Data, *Note: the numbers above represent the count of addresses and do not represent the number of FTE's.

Neighborhoods such as Arbor Hill, Cohoes, Watervliet, Delaware, Mont Pleasant and the Stockade had fewer than the upstate average for primary care physicians. These neighborhoods also had lower than Upstate NY numbers of primary care nurse practitioners and physician assistants (Table A-8).

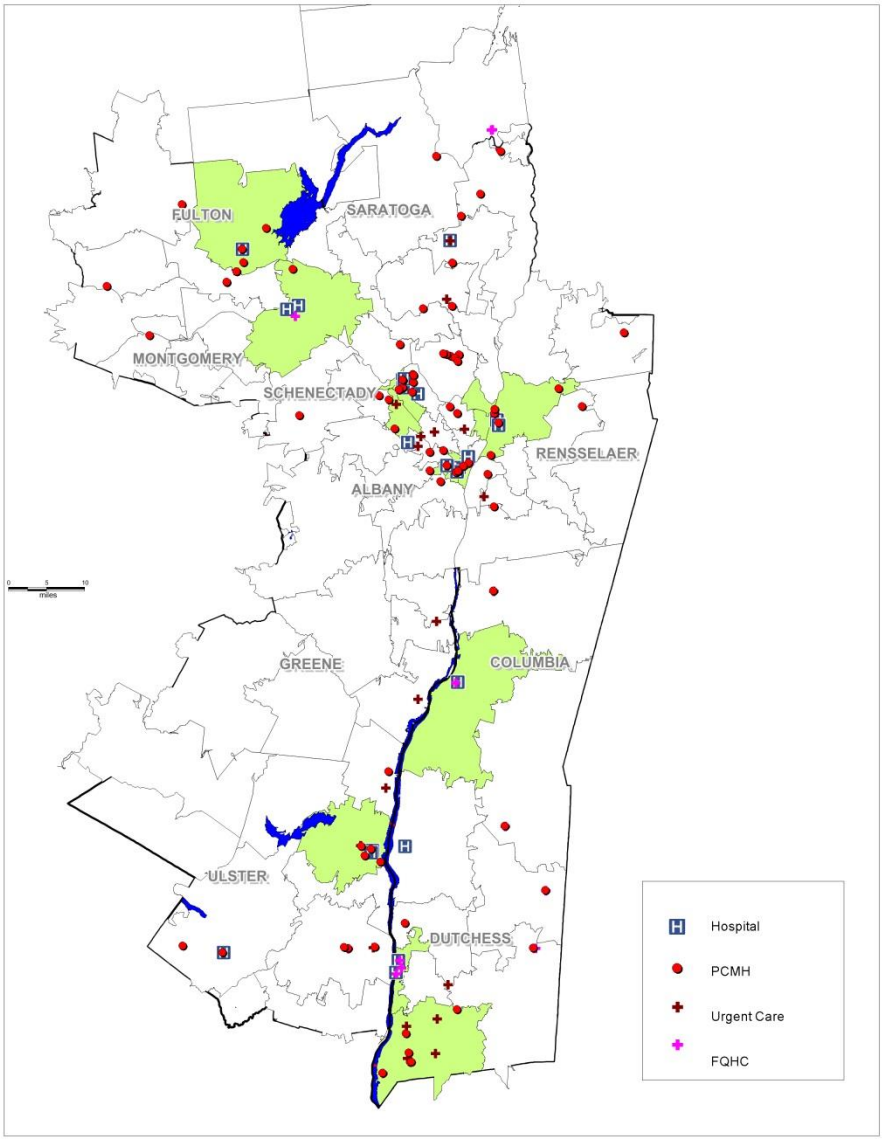
Table A-8 Number of Primary Care Provider Locations per 100,000 population for High Need Neighborhoods

Neighborhood	Primary Care MD/DO	Primary Care NP/PA
Upstate (excl NYC)	**106.3**	**48.9**
Arbor Hill/Center Square	33.4	0.0
Cohoes	45.9	10.2
Watervliet/Green Island	50.1	10.0
Delaware/2nd Ave.:	73.9	27.7
Mont Pleasant	75.9	19.8
Stockade	98.2	0.0
Hudson Claverack	110.7	20.8
Amsterdam	111.3	68.7
Hamilton Hill	114.0	128.2
Fishkill	130.9	36.1
Troy/Lansingburg	135.7	51.1
Gloversville/Mayfield	136.8	140.5
Goose Hill/Union	149.2	108.5
Upper State Street	162.0	41.7
Kingston	192.6	48.2
South End/Riverfront	193.2	82.8
City of Poughkeepsie	232.7	66.8
West End (incl West Hill)	262.1	163.1
Rt. 20/New Scot.:	308.4	74.8

Source: DSRIP Managed Care Provider Network Data, ACS 2012, Note: the numbers above were calculated with the count of addresses and do not represent the number of FTE's per 100,000.

The geographic location hospitals, urgent care, federally qualified health centers and PCMH in relationship to the neighborhoods with the highest need is shown in Figure A-4 (see Section B-1. for high need neighborhoods). The lack of urgent care, FQHC's and PCMH providers is apparent in most of the high need neighborhoods (Figure A-4).

Figure A-4 Location of Hospitals, Urgent Care, Federally Qualified Health Centers and PCMH Certified Practices



Source: DOH Hospital Profile, NCQA Patient Centered Medical Recognition, DSRIP Managed Care Provider Network Data

A similar picture was seen for mental health professionals with many of the high need neighborhoods having a lack of mental health professionals. Hamilton Hill stands out with few psychiatrists, and no psychologists or counselors. Other neighborhoods with a lack of psychiatrists include: Hudson, Rt 20 New Scotland, Delaware, Kingston, Amsterdam, Troy/Lansingburgh, Arbor Hill, and Gloversville. Psychologists appear to be more abundant. Counselors and certified social workers are lower in many of the same neighborhoods (Table A-9).

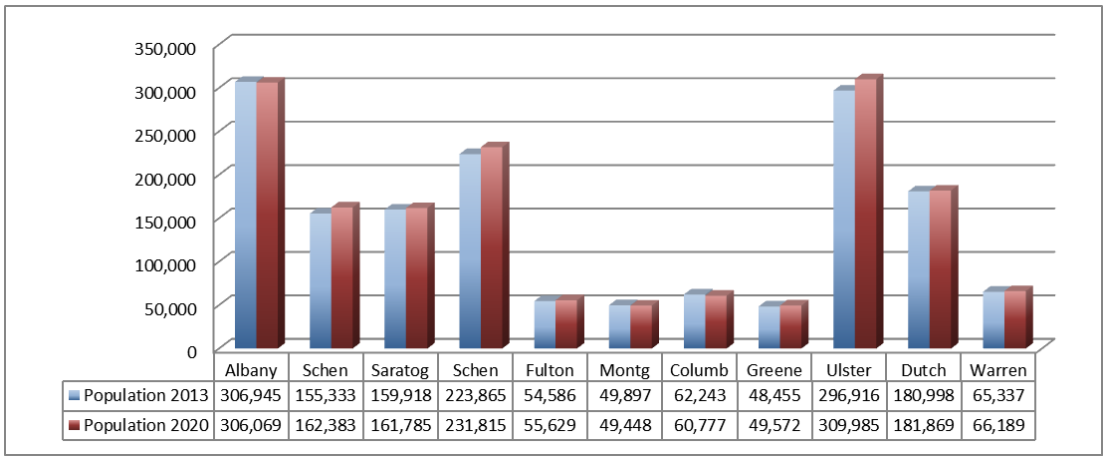
Table A-9 Number of Mental Health Providers per 100,000 population for High Need Neighborhoods

	Psychiatrist	NP/PA Psychiatry	Psychologist	Counselor	Cert Soc Worker
Upstate (excl NYC)	**40.5**	**4.9**	**23.6**	**6.8**	**120.4**
Hudson Claverack	3.5	0.0	27.7	0.0	3.5
Rt. 20/New Scot.:	4.7	0.0	247.7	4.7	4.7
Hamilton Hill	14.2	0.0	0.0	0.0	14.2
Delaware/2nd Ave.:	18.5	0.0	27.7	27.7	184.7
Kingston	18.8	8.4	92.1	6.3	75.4
Amsterdam	26.2	3.3	42.5	16.4	78.5
Troy/Lansingburg	27.7	4.4	51.1	10.2	83.2
Arbor Hill/Center Square	33.4	11.1	44.5	0.0	89.0
Gloversville/Mayfield	37.0	7.4	44.4	29.6	96.2
Fishkill	39.1	10.7	41.0	10.7	139.7
Cohoes	45.9	0.0	40.8	5.1	117.4
West End (incl West Hill)	52.4	11.6	40.8	0.0	5.8
Watervliet/Green Island	100.2	0.0	10.0	20.0	235.4
City of Poughkeepsie	101.4	9.2	55.3	11.5	320.3
Upper State Street	125.0	32.4	41.7	27.8	379.6
Goose Hill/Union	128.8	88.1	88.1	27.1	372.9
Mont Pleasant	214.6	23.1	29.7	36.3	831.8
Stockade	314.3	0.0	235.8	78.6	707.3
South End/Riverfront	423.1	18.4	82.8	27.6	892.3

Source: DSRIP Managed Care Provider Network Data, ACS 2012

An analysis was done using population projections by Cornell Program on Applied Demographics for 2020 to determine future needs. As seen below in Figure A-5 the overall population of the region is not expected to change dramatically and therefore the need for providers based on the total numbers per 100,000 will not change. The aging of the population will drive increased demand for certain specialties related to chronic care conditions (Figure A-6). The historical use rates are based on historical ways of organizing and delivering care which will likely change as more care is delivered in an integrated manor and through technological innovations such as telemedicine and remote monitoring.

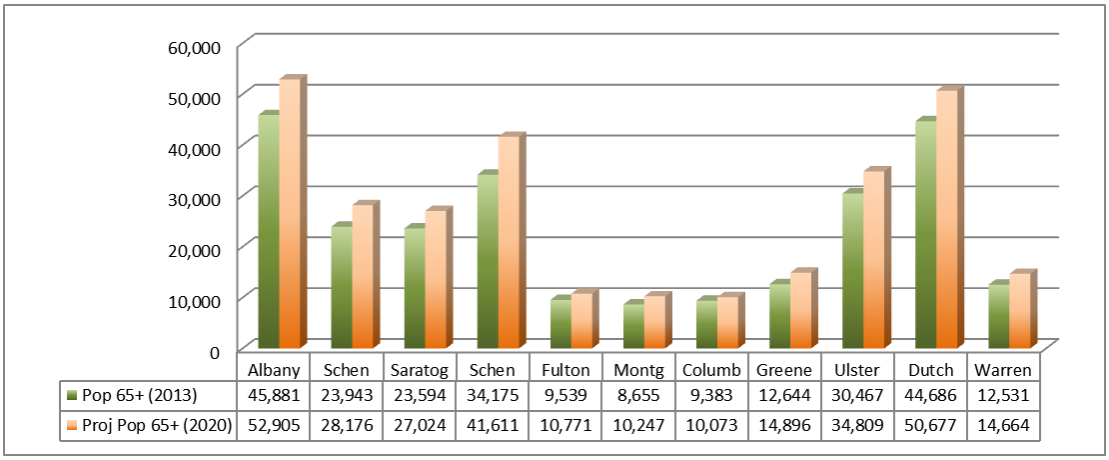
Figure A-5 2013 Population and 2020 Population Projections



	Albany	Schen	Saratog	Schen	Fulton	Montg	Columb	Greene	Ulster	Dutch	Warren
Population 2013	306,945	155,333	159,918	223,865	54,586	49,897	62,243	48,455	296,916	180,998	65,337
Population 2020	306,069	162,383	161,785	231,815	55,629	49,448	60,777	49,572	309,985	181,869	66,189

Source: ACS, Cornell Program on Applied Demographics

Figure A-6 2013 Population and 2020 Population Projections Age 65 and Older



	Albany	Schen	Saratog	Schen	Fulton	Montg	Columb	Greene	Ulster	Dutch	Warren
Pop 65+ (2013)	45,881	23,943	23,594	34,175	9,539	8,655	9,383	12,644	30,467	44,686	12,531
Proj Pop 65+ (2020)	52,905	28,176	27,024	41,611	10,771	10,247	10,073	14,896	34,809	50,677	14,664

Source: ACS, Cornell Program on Applied Demographics

Table A-10 shows all the certified healthcare facilities by type and by County.

Table A-10 Certified Healthcare Facilities by Type and by County

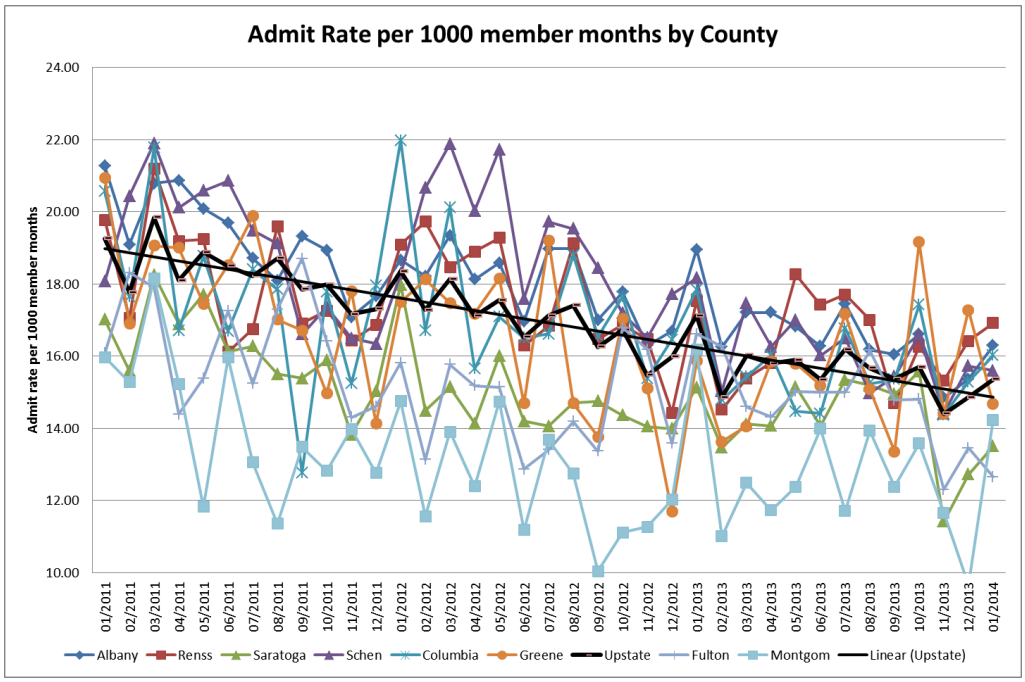
Facility	Albany	Rensselaer	Saratoga	Schenectady	Fulton	Montgomery	Columbia	Greene	Dutchess	Ulster	Warren	Totals
1. Hospitals	5	2	1	4	1	2	1	-	3	3	1	23
2. Hospital Extension Clinics	24	13	28	10	10	4	13	5	16	11	17	151
3. Ambulatory Surgical Centers	6	-	2	-	1	1	-	-	7	4	-	21
4. Urgent Care Centers	5	-	2	1	-	-	1	-	2	2	-	13
5. Skilled Nursing Facilities	11	9	4	6	3	5	4	2	14	7	4	69
6. Health Homes	1	1	1	1	1	1	1	1	2	1	1	12
7. Federally Qualified Health Centers	3	1	1	1	-	1	2	-	9	8	6	32
8. Primary Care Providers	896	219	313	276	81	108	86	61	526	213	232	3,011
9. Specialty Care Providers	1,311	160	188	273	56	124	78	19	648	176	231	3,264
10. Dental Providers	49	16	31	19	2	5	7	5	32	114	8	288
11. Rehabilitative Providers	19	7	6	5	1	1	2	1	14	12	6	74
12. Behavioral Health Providers	146	26	44	42	6	14	12	5	91	59	9	454
13. Licensed Home Care Service Agencies	24	26	20	32	25	27	31	33	72	63	18	*371
14. Certified Home Health Agencies	3	3	5	2	1	2	2	2	5	3	1	*29
15. Long Term Home Health Programs	-	-	-	-	-	-	-	-	1	1	-	*2
16. Personal Care Agencies	14	9	9	10	3	5	6	5	10	11	5	*87
17. Specialty DDS Providers	1	-	1	1	-	-	2	-	7	4	1	17
18. Pharmacies	80	30	41	40	16	17	11	13	79	43	21	391
19. DME suppliers/vision/hearing aids/orthotics	77	15	26	23	5	12	6	6	39	18	20	247

***Totals contain duplicative facilities due to home care services operating in more than one county**

Source: 1,2,3,5,6,13,14,15,16 NYSDOH Data files; 4,9,10,11,17,18,19 NPI Database; 7 HRSA data file. Database as of June 2014.

The assessment of the health care gaps or excess capacity for hospital beds and nursing home beds is based on the Department of Health bed need methodology as described by the Commission on Health Care Facilities in the 21st Century published in 2006. The number of beds per thousand has been declining since 1980. The Berger Commission made recommendation to reduce the hospital bed count by 4,200 and reduce the number of nursing home beds by approximately 3,000. In 2006 there were 3.3 hospital beds per 1,000 New Yorkers as compared to 2.8 beds per 1,000 nationally. Since then most of the Commission's recommendations have been implemented. Today there are 3.0 beds per 1,000 in New York and 2.6 beds per thousand in the U.S. As seen in Figure A-7 the numbers of inpatients continues to decline.

Figure A-7 Inpatient Trend by County



Source: DSRIP Dashboard C6

There are 3,910 certified hospital beds in 22 facilities in the 10 County area. There are 9,473 nursing home beds in 57 facilities.

Table A-11 shows the number and type of hospital beds by County. Fulton, and Greene County have no psychiatric beds. Only Albany, Rensselaer, Montgomery and Dutchess County have chemical dependency beds. AIDS, bone marrow transplant, pediatric ICU and the majority of neonatal beds are found in Albany County.

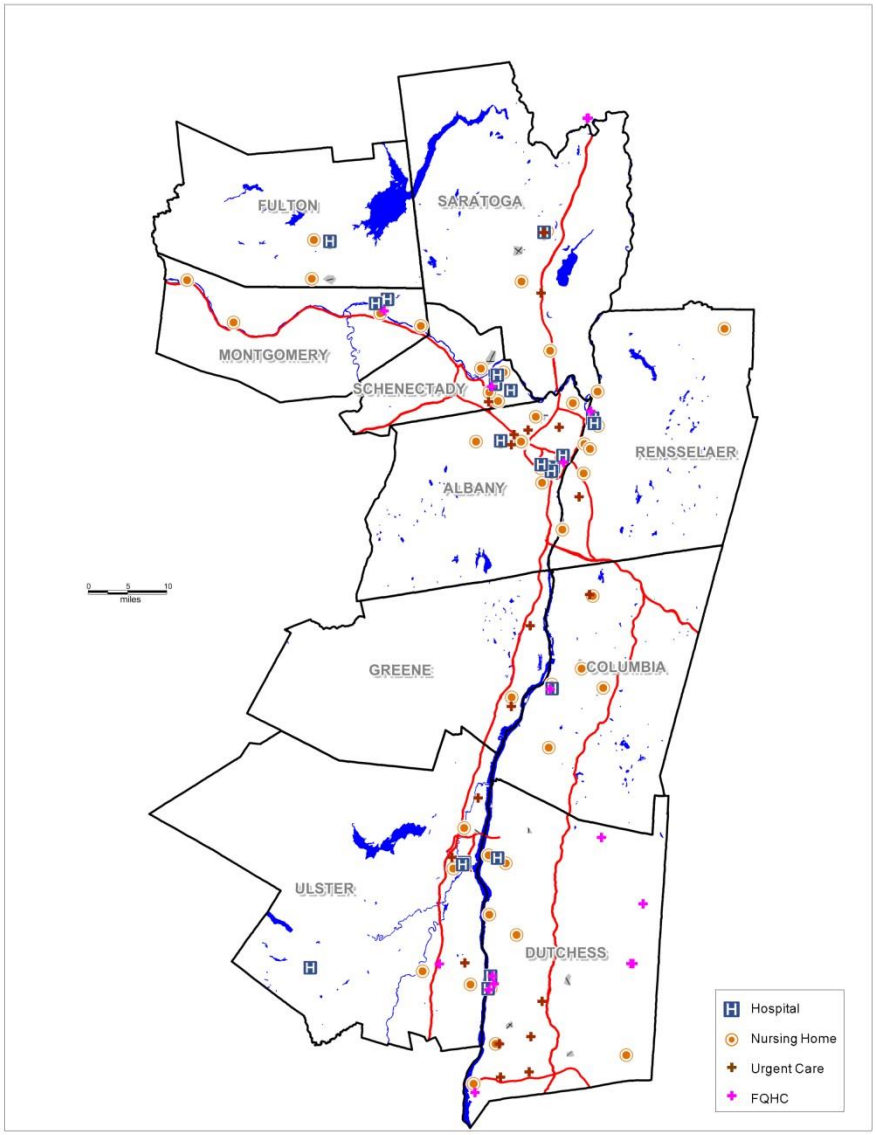
Table A-11 Hospital Beds by Type and by County

	Albany	Rensselaer	Saratoga	Schenectady	Fulton	Montgomery	Columbia	Greene	Dutchess	Ulster	Warren	11 County
Total Certified Beds	**1,381**	**408**	**171**	**553**	**74**	**130**	**192**	**-**	**676**	**325**	**410**	**4,320**
Chemical Dependence - Rehabiliation Beds	40	20	-	-	-	14	-	-	50	10		**134**
Chemical Dependence - Detoxification	18	25	-	-	-	-	-	-	10	10		**63**
Coma Recovery Beds	-	-	-	6	-	-	-	-	-	-		**6**
AIDS Beds	15	-	-	-	-	-	-	-	-	-		**15**
Bone Marrow Transplant Beds	6	-	-	-	-	-	-	-	-	-		**6**
Coronary Care Beds	39	12	7	-	-	3	-	-	17	-	12	**90**
Intensive Care Beds	84	12	7	36	8	5	9	-	29	25	12	**227**
Maternity Beds	77	8	14	-	7	8	10	-	43	11	23	**201**
Medical/Surgical Beds	906	255	115	328	47	70	151	-	416	184	300	**2,772**
Neonatal Continuing Care Beds	14	-	-	-	-	-	-	-	4	-		**18**
Neonatal Intensive Care Beds	28	-	-	-	-	-	-	-	5	-		**33**
Neonatal Intermediate Care Beds	29	-	-	15	-	-	-	-	6	-		**50**
Pediatric Beds	61	13	12	24	12	-	4	-	28	-	16	**170**
Pediatric ICU Beds	17	-	-	-	-	-	-	-	-	-		**17**
Physical Medicine and Rehabiliation Beds	21	-	-	82	-	10	-	-	28	20	15	**176**
Psychiatric Beds	26	63	16	52	-	20	18	-	40	40	32	**307**
Special Use Beds	-	-	-	-	-	-	-	-	-	25		**25**
Traumatic Brain Injury Beds	-	-	-	10	-	-	-	-	-	-		**10**

Source: DOH Hospital Profile

Figure A-8 shows the geographic location of the hospitals, nursing homes and urgent care center. As seen in Figure A-8 most of the hospitals are located in the densely populated urban areas but the urgent care centers are located in the suburban locations. This lack of urgent care close to the Medicaid and uninsured population could be a factor in why so many are disproportionate users of hospital emergency rooms as their source of primary care. As seen below there are no urgent care centers in downtown Albany, Troy, Schenectady, Amsterdam, Hudson or Johnstown. Federally Qualified Health Centers are located in the urban Tri-Cities and in Amsterdam, Hudson, Fishkill and Poughkeepsie.

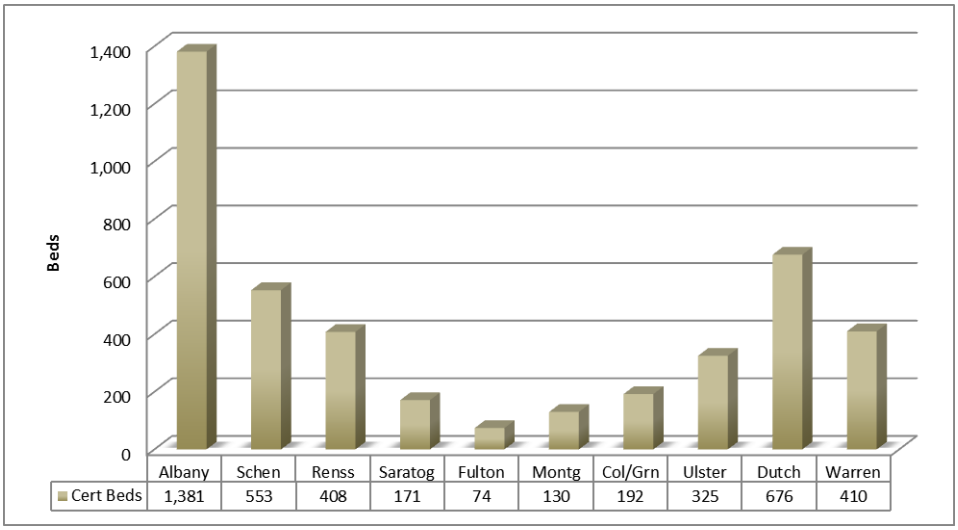
Figure A-8 Location of Hospitals, Nursing Homes, Urgent Care, and Federally Qualified Health Centers



Source: DOH Hospital and Nursing Home Profile

The number of beds by County is shown in Table A-13 and the number of beds by type is shown in Table A-13. An analysis of bed need based on NYS beds per 100,000 is shown on Table A-12. Albany County has the highest number of hospital beds. The occupancy is above the state average but a calculation of beds per 100,000 indicates an excess of 455 beds in Albany County based on 2013 patient days. Schenectady County shows an excess of 84 beds and Warren County shows an excess of 213 beds. Estimated occupancies at hospitals in Warren, Rensselaer, Fulton, Columbia, and Ulster are lower than the state average.

Figure A-9 Number of Certified Hospital Beds by County



Source: DOH NYS Hospital Profile

Table A-12 Hospital Bed Need and Comparative Occupancy

	Albany	Schen	Renss	Saratog	Fulton	Montg	Col/Grn	Ulster	Dutch	Warren	Total	NYS
Beds	1,381	553	408	171	74	130	192	325	676	410	3,910	59,295
Patient days (2013)	345,712	128,376	73,757	42,367	11,914	31,442	29,070	67,949	165,433	72,169	896,020	13,212,287
Est Occupancy	68.6%	63.6%	49.5%	67.9%	44.1%	66.3%	41.5%	57.3%	67.0%	48.2%	62.8%	61.0%
Population (2013)	306,945	155,333	159,918	223,865	54,586	49,897	110,698	180,998	296,916	65,337	1,539,156	19,651,127
Population (2020)	306,069	162,383	161,785	231,815	55,629	49,448	110,349	181,869	309,985	66,189	1,569,332	19,697,021
Beds/1,000 (2013)	4.5	3.6	2.6	0.8	1.4	2.6	1.7	1.8	2.3	6.3	2.5	3.0
Beds/1,000 (2020)	4.5	3.4	2.5	0.7	1.3	2.6	1.7	1.8	2.2	6.2	2.5	3.0
Beds at NYS Ave (2013)	926	469	483	675	165	151	334	546	896	197	4,644	59,295
Excess	(455)	(84)	75	504	91	21	142	221	220	(213)	734	0

Source: DOH NYS Hospital Profile, SPARCS 2013 patient days, American Community Survey

Note: Calculation is based on total certified beds by provider county and inpatient days provided in those beds

The number of nursing home beds by County is shown in Figure A-10 and nursing home beds by type in Table A-13 and an assessment of need is shown in Table A-14. Albany and Dutchess Counties have the highest number of nursing home beds. Rensselaer, Montgomery and Columbia Counties are shown to have a higher number of beds per population age 65 and older, and excess beds per the Berger Commission estimate of need in 2016. Schenectady County is shown to have excess beds per the Berger Commission but is slightly below the State average for beds per population age 65 and older. Population projections by Cornell Program

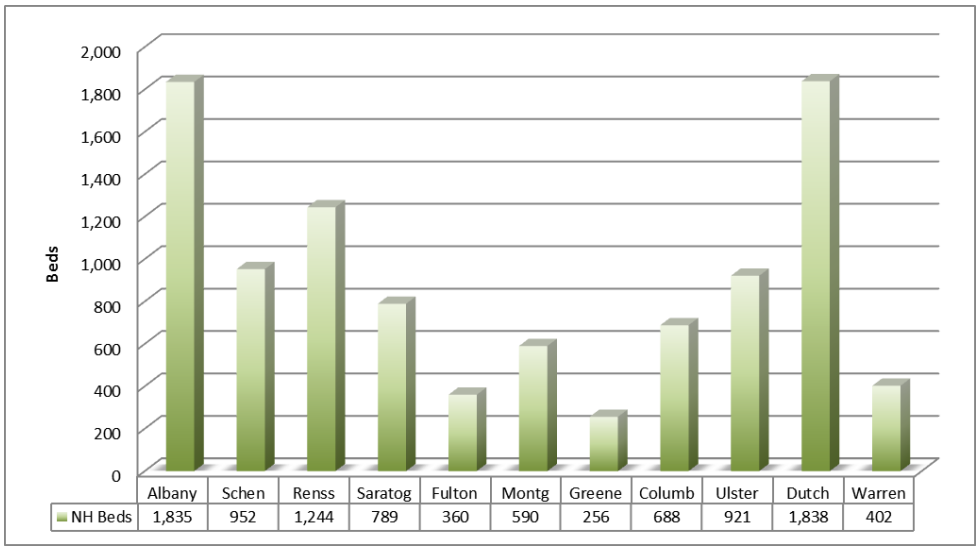
on Applied Demographics for 2020 show that the number of beds per 1,000 will decrease to 36.7 with the aging of the population (Table A-14). Rensselaer, Montgomery and Columbia will still be over today's average numbers of beds per 1,000 in 2020.

Table A-13 Number of Nursing Home Beds by Type and by County

NH Bed Type	Albany	Rensselaer	Saratoga	Schenectady	Fulton	Montgomery	Columbia	Greene	Dutchess	Ulster	Warren	Total
Residential Health Care	1,743	1,244	789	986	360	590	648	256	1,926	999	402	9,541
Ventilator Dependent	0	0	0	8	0	0	40	0	46	61	0	155
TBI Beds	0	0	0	70	0	0	0	0	0	180	0	250
Behavioral Intervention Beds	0	0	0	0	0	0	0	0	0	20	0	20
Total Certified Beds	**1,743**	**1,244**	**789**	**1,064**	**360**	**590**	**688**	**256**	**1,972**	**1,260**	**402**	**9,966**

Source: DOH Nursing Home Profile

Figure A-10 Number of Nursing Home Beds by County



Source: HealthData, Nursing Home Weekly Bed Census

Table A-14 Estimate of Nursing Home Bed Excess/Need per 1,000

	Albany	Schen	Renss	Saratog	Fulton	Montg	Greene	Columb	Ulster	Dutch	Warren	11 Counties
NH Beds	1,835	952	1,244	789	360	590	256	688	921	1,838	402	9,875
Occupancy	94.8%	95.4%	94.3%	92.4%	96.9%	96.4%	84.0%	84.2%	87.2%	92.5%	93.0%	92.5%
Pop 65+ (2013)	45,881	23,943	23,594	34,175	9,539	8,655	9,383	12,644	30,467	44,686	12,531	255,498
Proj Pop 65+ (2020)	52,905	28,176	27,024	41,611	10,771	10,247	10,073	14,896	34,809	50,677	14,664	295,853
Bed per 65+ (2013)	40.0	39.8	52.7	23.1	37.7	68.2	27.3	54.4	30.2	41.1	32.1	38.7
Bed per 65+ (2020)	34.7	33.8	46.0	19.0	33.4	57.6	25.4	46.2	26.5	36.3	27.4	33.4
Berger 2016 Need	1,844	889	1,025	1,004	411	515	408	667	1,078	1,903	417	10,161
Need	9	(63)	(219)	215	51	(75)	152	(21)	157	65	15	286

Source: HealthData, Nursing Home Weekly Bed Census, Berger Commission

II. Healthcare Provider Characteristics

A survey of both providers and community based organizations was conducted in October of 2014 to provide information on capacity, service area, Medicaid status and areas of expertise (the survey and detailed results of the survey can be found in CNA Appendix B-1).

Table A-15 shows the profile of the healthcare and community based providers surveyed. The providers were divided into three groups: those providing medical services such as hospitals, urgent care centers, health centers, dentists, skilled nursing facilities, etc. ; those community based organizations (CBO's) that are receiving Medicaid reimbursement for services such as mental health agencies, community health educators, schools, employment services, etc. ; and community based organizations not receiving Medicaid reimbursement. As seen in Table A-15 a wide variety of provider organizations that are providing Medicaid reimbursed services responded to the survey. Of the 184 total respondents 56.5% provided medical services and 27.5% were CBO's with medical and other services. The 104 medical service providers listed 189 different services and the 51 CBO's listed 109 different services.

Table A-15 Profile of Surveyed Healthcare Providers

Health Care Providers	
Medical services	64
Mental Health	44
Substance Abuse	30
LTC	51
Developmentally Disabled	14
Health Plans	10
ChildrenServices	27
Healthcare Services Subtotal	189

	Total
Healthcare Providers	104
Percent of Total Survey	56.5%

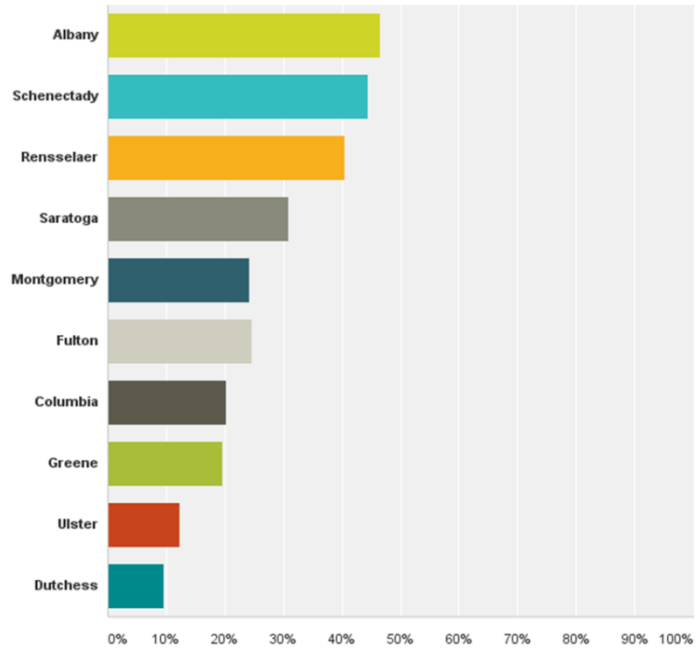
CBO's that Provide Medicaid Services	
CBO Advocacy	25
CBO Education	14
CBO Employment	21
CBO Food, Clothing, Housing	16
CBO Government	12
CBO Other	21
CBO Services Subtotal	109

	Total
CBO's with Medicaid Services	51
Percent of Total Survey	27.7%

Source: DSRIP 10 County Provider Survey

The survey asked providers which counties they served. There were multiple respondents from every county in the 10 county survey area (Figure A-11).

Figure A-11 Which Counties do the majority of your patients/clients come from?



Source: DSRIP 10 County Provider Survey

Sixty percent (60%) of the providers reimbursed by Medicaid replied that they were safety net providers. Ninety eight percent (98%)of the providers said they had the capacity to accept new patients. Ninety five percent (95%) indicated they were accepting new Medicaid patients and 69% said they were accepting new uninsured patients. Fifty four percent (54%) said they offer a sliding scale payment plan to those unable to pay.

Seventy nine (79%) of providers said they served a significant number of minority populations including inner city Hispanic (79%) and inner city black (79%) populations.

A large number of providers had services that were available 24 hours per day 7 days per week (45%). These were mostly the hospitals, nursing homes and residential providers. Another 20% of respondents offered extended and/or weekend hours (Table A-16) with 33% offering regular 5 day a week office hours.

Table A-16 List of Providers with Extended Hours

Organization	City	Extened Hours
Columbia County Department of Health	Hudson	5days early AM
Saratoga Co. Economic Opportunity Council, Inc.	Ballston Spa	5days early AM
Catholic Charities Senior and Cacregiver Support Services	Schenectady	5days early AM
St Mary's Healthcare	Amsterdam	5days early AM
BOCES CAPIT	Albany	5days LatePM
Planned Parenthood Mohawk Hudson	Schenectady	5days LatePM
Center for Disability Services	Albany	5days LatePM
fulton co office for aging	johnstown	5days LatePM
The Rose Women's Care Service: Community Resource C	Highland	5days LatePM
Catholic Charities of Columbia and Greene Counties	Hudson	5days LatePM
Hudson Mohawk Recovery Center Inc.	Troy	5days LatePM
Rensselaer County Department of MH	Troy	5days LatePM
CUTIE PHARMA-CARE, INC	Greenwich	5days LatePM
New Choices Recovery Center	Schenectady	5days LatePM
Planned Parenthood Mid Hudson Valley	Poughkeepsie	6days
Cornell Cooperative Extension, Schenectady County	Schenectady	6days
Hometown Healthcare Inc.	Watervliet	6days
Twin County Recovery Services, Inc.	Hudson	6days
Lincoln Pharmacy	Albany	6days
820 River St., Inc.	Albany	6days
391 Western Ave	Albany	6days LatePM
Schenectady County Public Library	Schenectady	6days LatePM
Lighthouseguild Inc	Albany	6days LatePM
Samaritan Hospital Behavioral Health Services	Troy	6daysearly AM latePM
855 central ave	Albany	7days
Hannaford Pharmacy	Troy	7days
Community Health Center of St. Mary's Healthcare and Nat	Johnstown	7days
Price Chopper	Schenectady	7days
Living Resources CHHA	Albany	7days
St Catherine's Center for Children	Albany	7days early AM latePM
Capital District YMCA	Albany	7days early AM latePM
Samaritan Hospital	Troy	7days early AM latePM
CapitalCare Medical Group, LLC	Albany	7days early AM latePM
Community Care Physicians	Latham	7days early AM latePM
New Dimensions in Living	Amsterdam	7days early AM latePM
The Family Counseling Center	Gloversville	7days LatePM

Source: DSRIP 10 County Provider Survey

Seventy five percent of providers are within half a mile to public transportation with 18% greater than a mile from public transportation. Eighty nine percent (89%) have sidewalks adjacent to their locations.

Almost all providers use patient satisfaction surveys, but far fewer participate in other quality measurement programs like HEDIS (7.7%), CAHPS (8.2%). Fourteen percent (14%) do participate in meaningful use of EHR technology. Thirty four percent (34%) participate in a RHIO.

The providers showed a wide area of expertise encompassing almost every area of need. Specific areas of expertise among survey respondents included chemical dependency programs, mental health programs, traumatic brain injury case management services, educational programs, vocational supports, programs for youth and adolescents, jail services, palliative care, developmental disability services, domestic violence and trauma counseling, intensive case management, maternal and child health among others.

2. DESCRIPTION OF COMMUNITY-BASED RESOURCES

I. Community Based Providers

The community based resources available in the ten county region were assessed. A total of 1,247 unique CBO's were identified. As seen in Table A-17 a wide variety of CBO's were identified including those that provide basic services such as food, clothing and shelter to the needs of fragile populations such as seniors and the mentally ill to educational services for children. These resources can be leveraged to stabilize and improve the health of the population.

Table A-17 Community Based Resources by Type

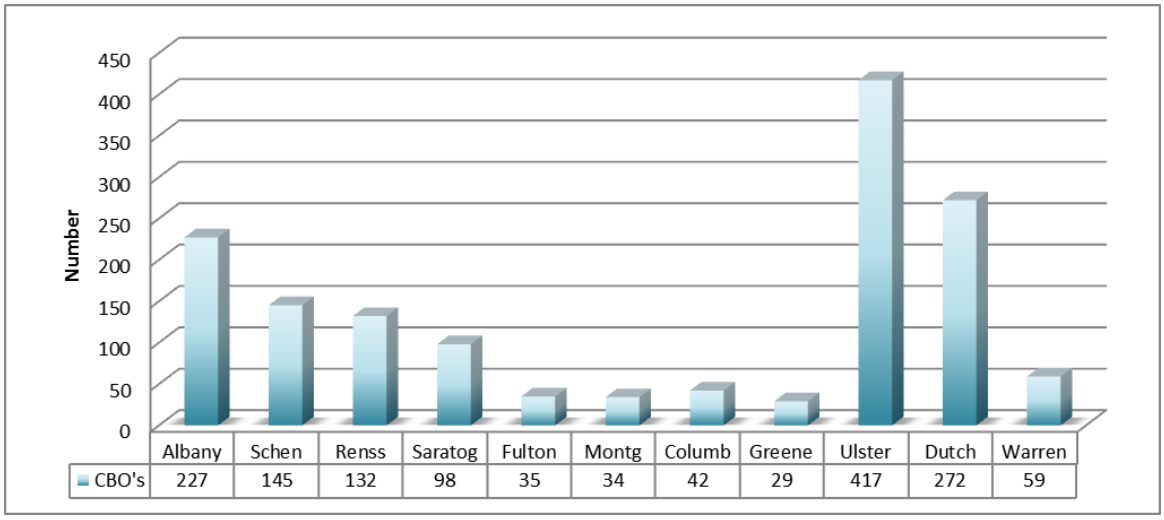
Category	11 County
Adult Day Care	5
Alternatives to Incarceration (ATI)	5
Area Health Education Centers (AHECs)	3
Business	5
Case Management	6
CBO Other	8
Churches and faith based groups	14
College/University	26
Community Agency	2
Community Based & Clinical Services for Developmentally Disabled	13
Community Based Educational Programs	18
Community Gardens	6
Community Health Educators	2
Community Outreach Agencies	51
Community Service Organizations	30
Condition Advocacy	27
County Health Agencies	8
Employment Support Services	4
Ethnic/Cultural Support	3
Family Services	85
Farmer's Market/Community Garden	134
Food Pantries, Food and Clothing Bank	134
Foundation	1
HIV Prevention/Outreach & Social Service Programs	30
Home and Community Based Service Advocacy	4
Housing	203
Housing Agency	32
Housing for Mentall Ill	2

Category	11 County
Law enforcement	1
Legal	6
Libraries with Open Assess Computers	119
Local (City) Health Agencies	1
Local Government Social Service Programs	28
Local Health Agencies	1
Local Support	56
Mental Health Advocacy	25
Mental Health Advocacy/Services	8
National Alliance on Mental Illness (NAMI)	2
Not for Profit Health and Welfare Agencies	39
OMH Waiver program	1
Peer and Family Mental Health Advocacy Organizations	24
Peer Supports (Recovery Coaches)	14
Policy Organization	7
Prevention Advocacy	21
Provider Advocacy	4
RHIO	1
School Districts	86
Self Advocacy & Family Support for Disabled Individuals	10
Senior Support	15
Shelters	52
Specialty Educational Programs for Developmentally Disabled or Behavioral Challenges	6
Substance Abuse Advocacy	1
Substance Abuse Support	2
Transportation Services	16
Unions	1
Workforce	20
Youth Services	61
Total	1,489

Source: HCDI Team Research

The largest number of CBO's are located in Ulster and Dutchess Counties. The rural counties such as Fulton, Montgomery, Columbia, Greene and Warren have far fewer CBO's to support their population. Most of the CBO's are located in the urban areas within their counties.

Figure A-12 The number of CBO's by County



Source: HCDI Team Research

II. Community Based Provider Characteristics

A survey of both providers and community based organizations was conducted in October of 2014 to provide information on the assessment of capacity, service area, certification status, population served, gaps, and areas of expertise (the survey and detailed results of the survey can be found in CNA Appendix B-1). The survey targeted community based providers (CBO's) as well as providers reimbursed by Medicaid. Table A-18shows the profile of the community based organizations surveyed. The 27 CBO's responding reported providing 37 different types of services. Given the number of CBOs in the service area is far greater than the number that responded to the survey, it is not possible to accurately characterize capacity and gaps without further data collection. It is recommended that service design include further outreach to related CBOs.

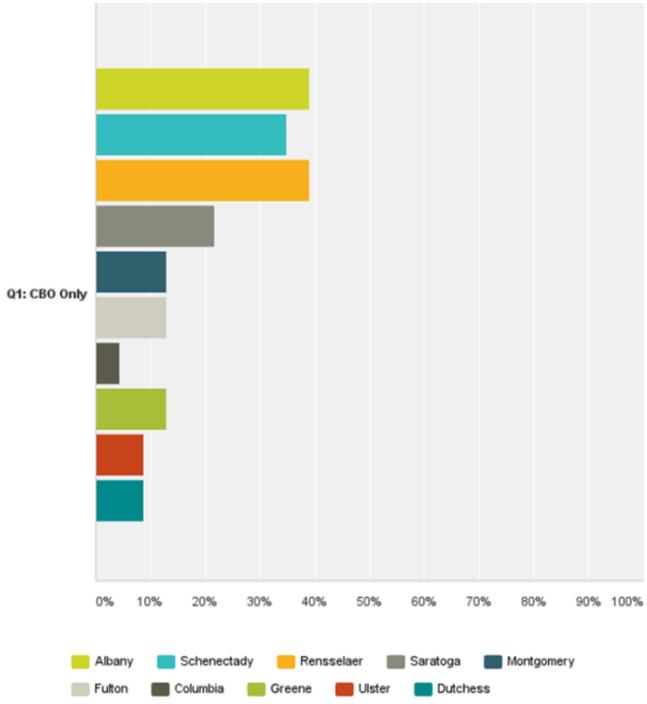
Table A-18 Community Based Organizations Surveyed

Community Based Organizations	
CBO Advocacy	8
CBO Education	8
CBO Employment	4
CBO Food, Clothing, Housing	5
CBO Government	7
CBO Other	5
CBO Services Subtotal	37
	Total
CBO Providers	27
Percent of Total Survey	14.7%

Source: DSRIP 10 County Provider Survey

The survey asked providers which counties they served. Respondents were from all 10 counties in the area (Figure A-13).

Figure A-13 Which Counties do the majority of your patients/clients come from?



Source: DSRIP 10 County Provider Survey

Ninety three percent (93%)of the CBO's said they had the capacity to accept new clients. CBO's said they served a significant number of minority populations including inner city Hispanic (71%) and inner city black (71%) populations.

Eighty percent (80%) of CBO's are within half a mile to public transportation with 6.7% of respondents greater than a mile from public transportation. Eighty five percent (85%) have sidewalks adjacent to their locations. All of the CBO's use patient satisfaction surveys.

Specific areas of expertise among CBO survey respondents included alcohol and drug prevention, educational programs, self-management programs, consumer directed personal assistance, health professional education, employment services, community drop in center and translation services among others.

B. DESCRIPTION OF COMMUNITY TO BE SERVED

The ten county area was analyzed by county and zip codes for data obtained from DOH; by census tract for data from the American Community Survey (Census); and then further refined by neighborhoods. The neighborhoods were created by grouping adjacent zip codes into areas that most closely approximated know neighborhoods or areas in the case of more rural regions. Table B-1 shows the 84 neighborhoods derived from 296 zip codes.

Table B-1 10 County Neighborhoods by County

Neighborhood	County	Neighborhood	County
Bethlehem	Albany	Amsterdam	Montgomery
Center Square	Albany	Canajohaire	Montgomery
Cohoes	Albany	Esperance	Montgomery
Colonie	Albany	Fonda	Montgomery
Delaware/2nd Ave.:	Albany	Fort Plain	Montgomery
Guilderland	Albany	Fultonville	Montgomery
Hill Towns	Albany	Johnstown	Montgomery
Latham	Albany	Palatine Bridge	Montgomery
Loudonville	Albany	S Central Montgomery	Montgomery
Melrose/Manning	Albany	Saint Johnsville	Montgomery
New Scotland	Albany	East Greenbush	Rensselaer
North Albany/Menands	Albany	Rensselaer	Rensselaer
Ravena, Coeymans,Selkirk	Albany	Rensselaer Central	Rensselaer
Rt. 20/New Scot.:	Albany	Rensselaer East	Rensselaer
South End/Riverfront	Albany	Rensselaer NE	Rensselaer
Watervliet/Green Island	Albany	Rensselaer NW	Rensselaer
West End (incl West Hill)	Albany	Rensselaer SW	Rensselaer
Hudson Claverack	Columbia	Troy/Lansingburg	Rensselaer
KInderhook Chatham	Columbia	W. Sand Lake/Wyn	Rensselaer
SE Columbia	Columbia	Ballston Spa	Saratoga
W Ulster	Delaware	Burnt Hills	Saratoga
City of Poughkeepsie	Dutchess	Clifton Park West	Saratoga
Dover Pawling	Dutchess	Northeast Saratoga	Saratoga
Fishkill	Dutchess	Northwest Saratoga	Saratoga
Hyde Park Arlington	Dutchess	Saratoga Springs	Saratoga
Millbrook Stanford	Dutchess	South Glens Falls	Saratoga
Poughkeepsie	Dutchess	Waterford/Mechanicville	Saratoga
Red Hook Rhinebeck	Dutchess	Goose Hill/Union	Schenectady
Broadalbin	Fulton	Hamilton Hill	Schenectady
Gloversville/Mayfield	Fulton	Mont Pleasant	Schenectady
Northville	Fulton	Niskayuna	Schenectady
NW Fulton	Fulton	Rotterdam	Schenectady
Ashland Lexington	Greene	Schenectady Rural West	Schenectady
Cairo Durham Greenville	Greene	Scotia/Glenville	Schenectady
Catskill Athens	Greene	Stockade	Schenectady
Coxackie	Greene	Upper State Street	Schenectady
Hunter Tannersville	Greene	Kerhonkson	Ulster
New Baltimore	Greene	Kingston	Ulster
		New Paltz	Ulster
		Rosendale	Ulster
		Saugerties	Ulster
		Walkill	Ulster
		Woodstock	Ulster

Figure B-1, Figure B-2, and Figure B-3 show the location of the various neighborhoods. Due to the way zip codes are configured some of the urban areas such as Troy and Amsterdam are larger, less homogeneous areas that consist of urban and suburban components.

Figure B-1 Close up of Tri City (Albany, Schenectady, Troy) Neighborhoods

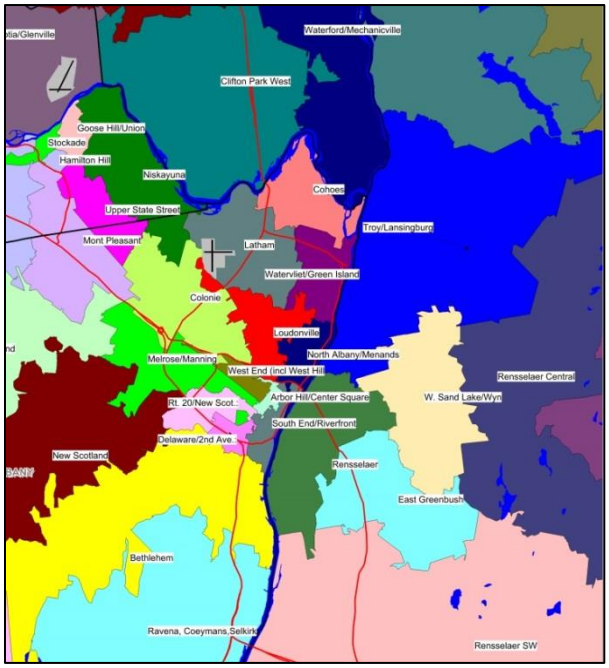


Figure B-2 Close up of Fulton and Montgomery Neighborhoods

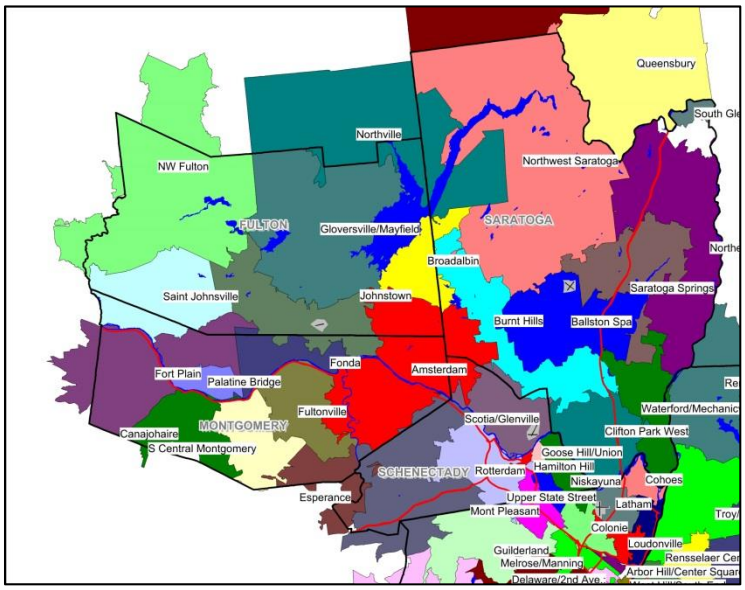
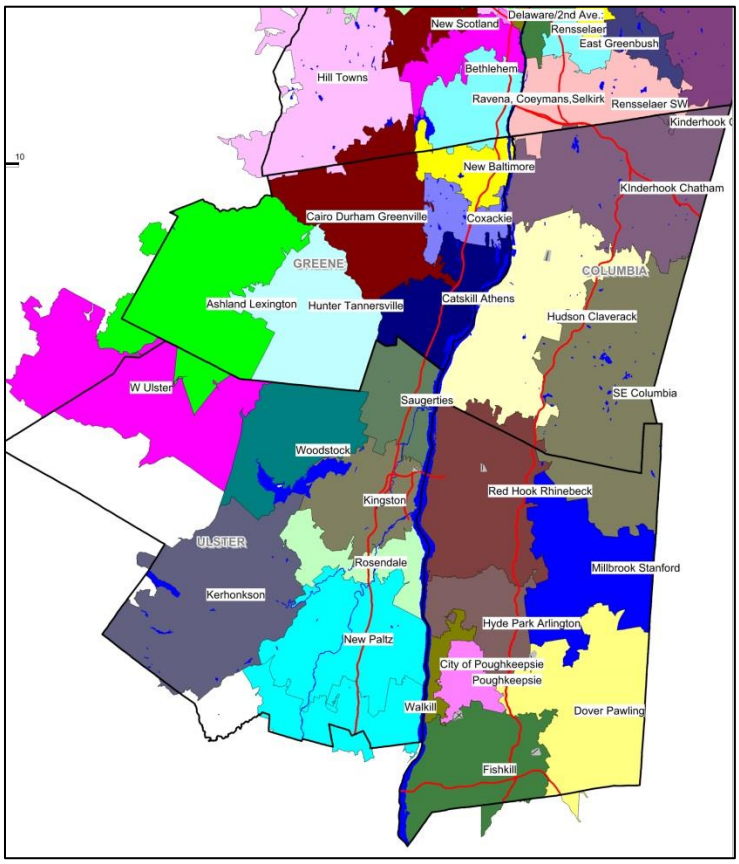


Figure B-3 Close up of Columbia, Greene, Ulster and Dutchess Neighborhoods



1. HOT SPOTS ACROSS PHYSICAL AND BEHAVIORAL NEEDS

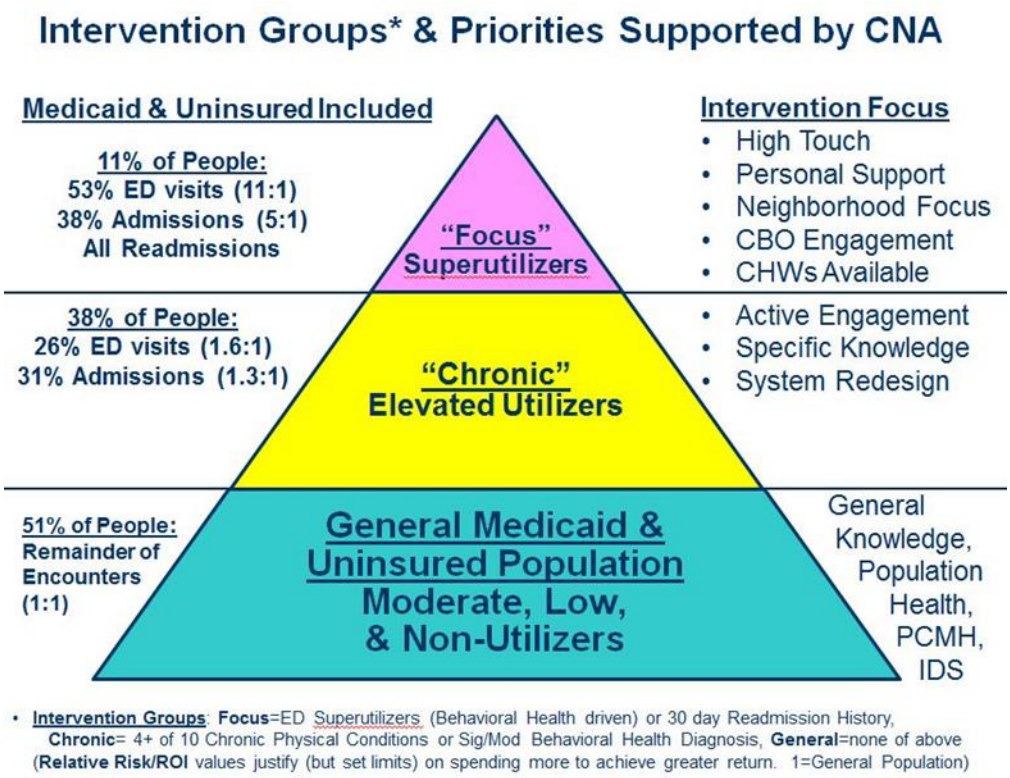
"Hot spotting" is the process of identifying where the greatest opportunity exists to improve utilization of services (e.g. the most avoidable encounters for fewest people). In Figure B-4, this population is referred to as the "Focus" population. They are the individuals with the highest utilization ratio compared to the general population. Given the number of avoidable visits this group could avoid, more labor intensive interventions aligned with the needs of this population (e.g. high touch home visits) can be cost effective.

To improve the overall avoidable use of hospital ED and IP services, and expand scale of those engaged, we added the concept of "warm spotting." It is similar to hot spotting, but the utilization rates aren't as disproportional to the general population, so less intensive engagement is merited. These are people with elevated use of services identified as "Chronic" in our intervention priority pyramid. Specific interventions aligned with their needs (e.g. specific knowledge and improved engagement in self-care – Domain 3) can be cost effective at modest increased cost per person.

System Transformation can move the baseline and "raise all boats" – for the above as well as the remainder of the population (e.g. the General Medicaid and Uninsured populations at the bottom of our pyramid). Specific interventions include Domain 2 system transformation and Domain 4 population health interventions can improve utilization for all.

This can be seen graphically in the figure below that summarizes our findings:

Figure B-4 High Leverage Priority Interventions Pyramid



Source: SPARCS Encounter data, CNA analysis

I. Designing the Model

The literature review identified that disproportionate avoidable hospital use is concentrated in a few super-utilizer beneficiaries. Dr. Jeffrey Brenner's Camden Coalition is the most frequently cited where he found 50% encounter and cost savings in this targeted population using coordinated patient centered approaches[3]. Key informant interviews of PPS teams indicated that this is common in the local region as well. They suggested that more than 2 ED visits in a 6 month period represented a Super-utilizer/frequent flier. When we tested this definition

[3]http://www.rwjf.org/content/dam/farm/meetings_and_conferences/speeches_and_presentations/2012/rwjf72538 RWJF Aligning Forces for Quality (AF4Q) announces Dr. Brenner's success (costs cut by 50% for super-utilizers that in turn consumed 50% of cost = 25% overall savings) lead to two more pilots, plus 6 more starting in 2012.

quantitatively, we found that 6.2% of people on Medicaid or uninsured using the hospital represented 48% of the total ED visits across the 10 counties. Similarly, we found that on the Inpatient side, 3.2% of people on Medicaid or uninsured using the hospital represented 23% of the total admissions. Details by county can be found in CNA Appendix F-2.

The interventions matched to this very high need population tend to be costly, e.g. high touch personal home visits. The repeat encounter rates justify spending more to achieve a greater return for this group of people that may not be feasible for people with more moderate needs.

To better understand the dynamics and drivers of frequent hospital ED and IP use for further refinement, we ran a statistical analysis to determine the top 10 major factors associated with the inpatient and ED categories identified above are listed in Figure B-5.

Figure B-5 Top 10 Super-utilizer Characteristics

Inpatient Frequent Fliers:	ED Frequent Fliers:
• Assoc. w Increased Use	• Assoc. w Increased Use
– Anxiety	– Anxiety
– Chronic Kidney	– Tobacco
– Home Health	– Asthma
– Pneumonia	– UTI
– BH_Significant	– Preventable Composite*
– ESRD	– Depression
– UTI	– Opoid Overuse
– HF	– HTN_Malig
– RA_OA	• Assoc. w Decreased Use
• Assoc. w Decreased Use	– Age 65 plus
– Age 65 plus	– Nursing Home

*NYSDOH uses in NH Quality Pool – Dxs for infections, fluid balance, CHF, etc.

As you can see in Figure B-5, anxiety was associated with both inpatient and ED frequent use. A significant behavioral health diagnoses was a characteristic for inpatient while depression and opioid overuse (an AHRQ metric) were characteristics for the ED. Seniors, as an age group, was associated with decreased use for both inpatient and ED use.

Several chronic physical health conditions appear on the lists, with a NYSDOH composite measure also associated with frequent ED use.

Using the super-utilizer definitions, which are largely driven by behavioral health characteristics and chronic physical conditions, we explored combinations of these indicators associated with high encounter rates for ED visits, admissions, and readmissions per year. We looked for combinations that represented the largest number of encounters for the fewest number of people. The two combinations with the highest predictive rates were:

- People who have at least one 30 day readmission and/or
- People who are ED super-utilizers.

The total of these groups represent 11% of Medicaid Beneficiaries and uninsured and 53% of the ED visits, 38% of the admissions, and all of the readmissions in the 10 Counties. For drill-down analysis, we considered these people to be priority hotspot targets – the "Focus" group.

Upon review of the major characteristics of super utilizers outlined above, project teams suggested that multiple chronic physical conditions be explored for further drill down in addition to the specific chronic conditions analyzed to date. "Multiple chronic conditions" are frequently cited as drivers of hospital use. However, the Agency for Healthcare Research and Quality (AHRQ), the Centers for Medicare & Medicaid Services Chronic Condition Warehouse (CCW), the Robert Wood Johnson Foundation (RWJF), and others each define "multiple chronic conditions" with a different number, type and threshold of chronic conditions.

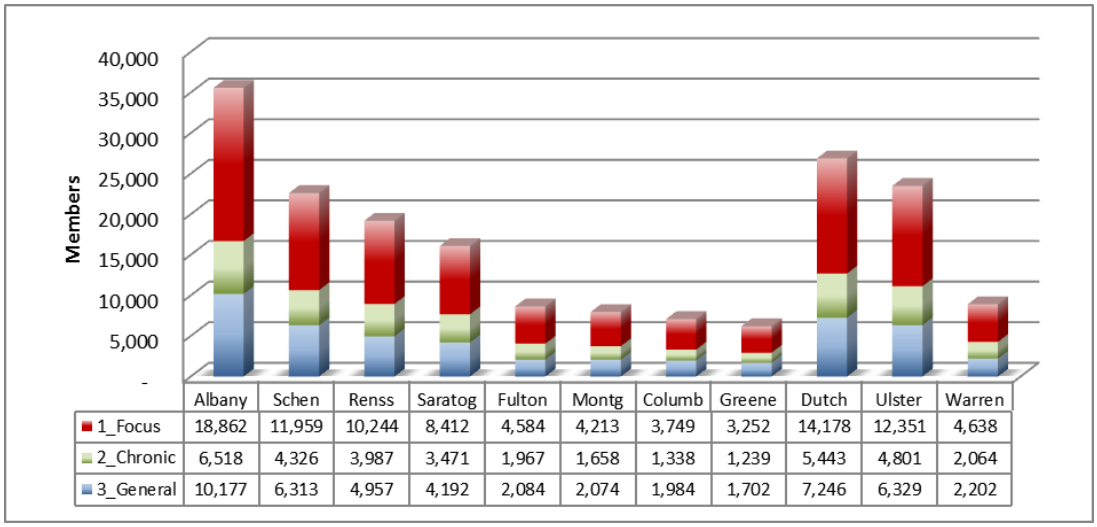
For the CNA analysis, we started with the above definitions, then utilized the clinical judgment of physicians from both local PPS's, with several rounds of evidence-based data validation to pick 10 chronic physical conditions: atrial fibrillation, acute myocardial infarction, hypertension, malignant hypertension, asthma, COPD, chronic kidney disease, end-stage renal disease, diabetes, and pneumonia. We then ran a sensitivity analysis and determined that people on Medicaid or uninsured with four or more of these 10 conditions represented 7.3% of the people and 23.1% of the encounters used in this definition.

We examined the remaining use rates for Medicaid and Uninsured patients after removal of the focus super-utilizers, and found elevated

use rates (30-60% vs. the remaining general Medicaid and Uninsured population) for those with a moderate or significant Behavioral Health diagnosis or Multiple Chronic Physical Conditions as defined above. We labeled this subpopulation "Chronic" and the process "Warm spotting." The remaining Medicaid members and uninsured were labeled as "General Medicaid and Uninsured."

We utilized this refined three-tier risk stratification in further drill-down reports throughout our analysis. Figure B-6 shows the number and distribution of the three tiers by County.

Figure B-6 Members by Target Groups



	Albany	Schen	Renss	Saratog	Fulton	Montg	Columb	Greene	Dutch	Ulster	Warren
1_Focus	18,862	11,959	10,244	8,412	4,584	4,213	3,749	3,252	14,178	12,351	4,638
2_Chronic	6,518	4,326	3,987	3,471	1,967	1,658	1,338	1,239	5,443	4,801	2,064
3_General	10,177	6,313	4,957	4,192	2,084	2,074	1,984	1,702	7,246	6,329	2,202

II. Target Group Overlap with Socio Demographic Status (SDS) Indicators

We also examined Socio-Demographic Status (SDS) disparity indicators in the zip code where the Medicaid Member or Uninsured person lives, and possible racial differences associated with each of the Target Groups and found:

1. For the Focus Target Group, we found as expected higher proportions of SDS indicators – 6% higher poverty rates, 4% higher English Language Learner, 3% higher foreign born, 3% higher Education less than High School Graduate, 3% higher unemployment in the zip codes where they live. We also found much higher numbers of Hispanics than in the overall

Medicaid/Uninsured population (11.3% vs. 5.9%), higher numbers of Blacks (17.4% vs. 15.5%), and somewhat higher numbers of Whites (66.5% vs. 64.3%).

2. For the Chronic Target Group, we found lower numbers of SDS indicators above, but slightly higher numbers for College Graduates (0.6% higher for Associates Degree, 1.1% higher for 4 year Degree, 1.5% higher for more than 4 yr.). There was a disproportionately higher number of Whites in this subpopulation (73.3% vs. 64.3%) and lower numbers for the other race/ethnicity categories.
3. For the General Population Group, we found slightly higher SDS indicators – 2% higher foreign born, 1% higher English Language Learners, 1% higher poverty rates. There were lower proportions of Whites and Hispanics in this group (due to higher numbers above), and higher proportions for Blacks (16.8% vs. 15.5%), Asian/Pacific Islanders (1.6% vs. 1.1%), Native Americans (0.11% vs. 0.09%, and "Other" (19.6% vs. 13.2%). Note that the high proportion in "Other" may be a coding issue in claims, particularly maternity, during busy times of day, and hospitals out of area, where registrars are rushed.

III. Target Group Overlap with Neighborhoods

The top twenty neighborhoods based on both the number of persons and the concentration (number per square mile) of "Focus" or Chronic" members is shown in Table B-2. For these neighborhoods, there are more individuals who fit the Focus definition than are members of the general population, suggesting that interventions can target neighborhoods as well as patients.

Table B-2 Top Tier (Super-utilizers and Chronic) Neighborhoods

Neighborhood	County
Amsterdam	Montgomery
Arbor Hill/Center Square	Albany
City of Poughkeepsie	Dutchess
Cohoes	Albany
Delaware/2nd Ave	Albany
Fishkill	Dutchess
Gloversville/Mayfield	Fulton
Goose Hill/Union	Schenectady
Hamilton Hill	Schenectady
Hudson Claverack	Columbia
Kingston	Ulster
Mont Pleasant	Schenectady
Queensbury	Warren
Rt 20/New Scot	Albany
South End/Riverfront	Albany
Stockade	Schenectady
Troy/Lansingburg	Rensselaer
Upper State Street	Schenectady
Watervliet/Green Island	Albany
West End(incl. West Hill)	Albany

Source: SPARCs Analysis
Super-utilizer = person is ED Super-utilizer and/or had a 30 day all cause Readmission 2011-2013
Chronic = Multiple Chronic Physical Condition or Moderate or Significant Behavioral Health

Neighborhoods like the South End in Albany and Hamilton Hill in Schenectady have high proportions and numbers of these super-utilizers, along with poverty rates almost double the regional average and a more diverse racial mix. Other high need neighborhoods like Troy/Lansingbugh and Amsterdam have elevated rates of anxiety and depression driving ED and inpatient use.

IV. Focusing Interventions and Measuring Scale

The Intervention Group framework is designed to focus interventions on the people, locations, and ED/admission drivers associated with both. In addition, speed and scope need to be specified in the DSRIP PPS Application. Detailed drill-downs are provided in the Section F Appendices to facilitate this.

Detailed listings of the number of people, encounters (ED visits, admissions, and readmissions), encounter rates, and relative encounter risk can be found in CNA Appendix F-3 along with county and neighborhood drill-down data.

Similar information for the uninsured and low Medicaid utilizer (Project 11) population can be found in CNA Appendix F-4.

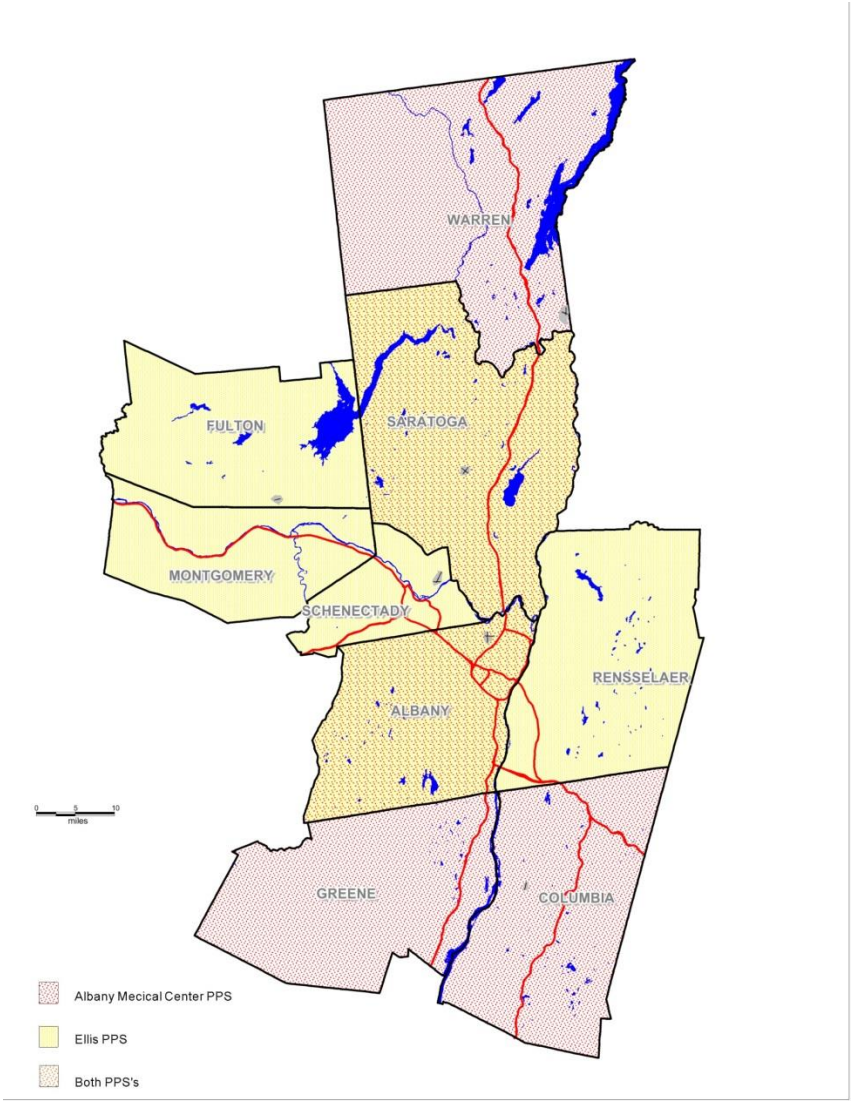
The top ED Presenting and inpatient principal diagnoses by County and neighborhood can be found in CNA Appendix F-5 for the Medicaid and uninsured population and CNA Appendix F-6 for the uninsured and low Medicaid utilizer (Project 11) population.

The single most common ED patient diagnosis across most counties and Neighborhoods is “Symptoms; signs; and ill-defined conditions”. This is primarily related to the 2_Chronic target group (Multiple Chronic Physical Conditions and/or moderate or significant behavioral health diagnosis).

2. DEMOGRAPHICS OF POPULATION SERVED

This section describes both the overall community demographics of the 10 county area and the demographics of the Medicaid population. The community demographics include information on the uninsured, illegal immigrant and homeless populations. The Ellis PPS includes Albany, Schenectady, Rensselaer, Saratoga, Fulton and Montgomery Counties. The current Albany Medical PPS includes Warren, Saratoga, Albany, Greene and Columbia Counties (Figure B-7).

Figure B-7 Albany Medical Center PPS and Ellis PPS Service Areas



I. Community Demographics

A) POPULATION DEMOGRAPHICS

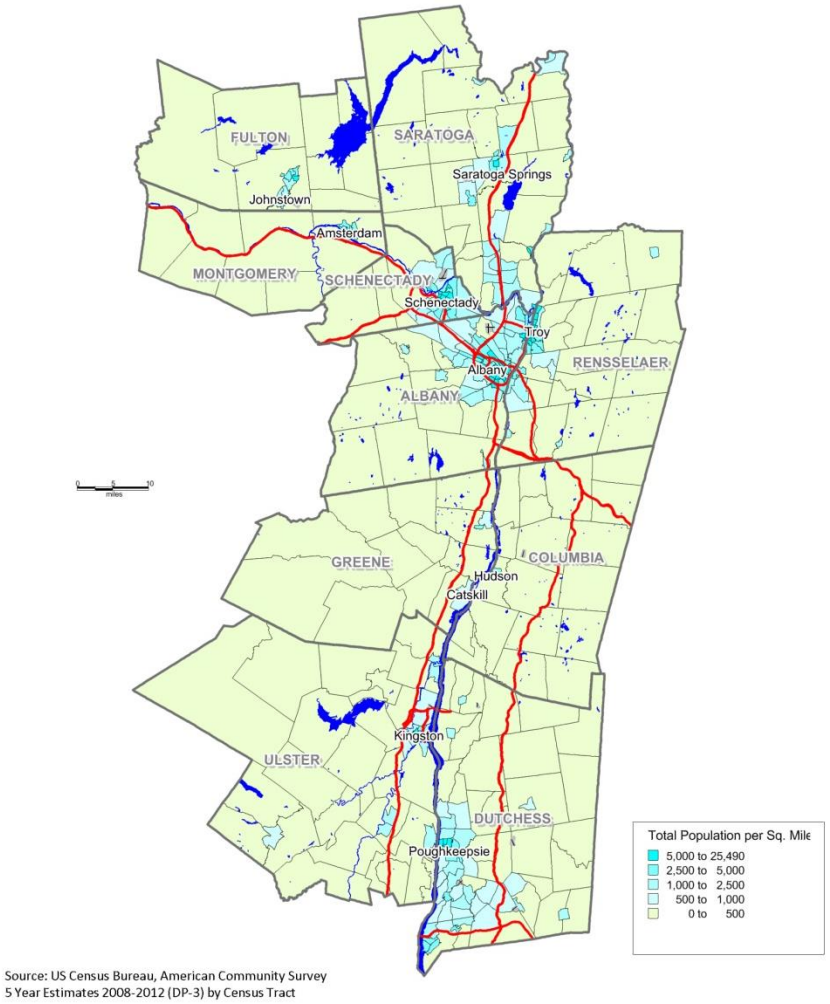
The 10 county service area includes a 2013 estimated total population of 1,539,156. The county populations range from Albany County's 306,945 to Greene County's 48,455. There is also a mix between urban and rural counties (CNA Appendix C-1).

Comparing population density per square mile, the 10 counties range from 758.5 for Schenectady and 584.3 for Albany to the rural counties with 75.2 for Greene and 75.6 for Warren (Figure B-8)(CNA Appendix C-2). All but one of the 10 counties had municipalities with populations over 10,000 in 2010 (CNA Appendix C-3). The exception was Columbia County where the City of Hudson had a 2010 population of 6,713.

Compared to New York State (NYS), the 10 county service area had smaller childhood and larger elderly populations (for <15 years of age: NYS-17.8%; 10 county-15.4%; for 65+ years of age: NYS-14.5%; 10 county-17.5%). Of the 10 counties, Montgomery (18.8%) and Schenectady (18.1%) counties had the largest < 15 year old populations, while Greene (14.1%), Columbia (15.1%), and Ulster (15.2%) had the smallest childhood populations. For the senior population, 75 years of age and older, the rural counties of Columbia (8.6%), Montgomery (8.5%), and Fulton (7.9%) had the largest percentages. Saratoga (6.3%) and Rensselaer (6.4%) counties had the lowest percent of the population over 75 years of age (CNA Appendix C-1).

The 10 counties exhibited similar population shifts between the 2000 and the 2010 Census (CNA Appendix C-4). All the counties exhibited an increase in the total population. The aging "baby-boomers" can be seen in the 45-64 year, and 65-74 year age groups. All counties exhibited major increases in the 45-64 year age group, and all but 3 counties showed increases in the 65-74 year age group. Montgomery (13.9%) and Fulton (7.8%) counties showed the largest decreases in the 75 + age group, while Saratoga (24.1%) and Dutchess (22.8%) counties showed the largest increases.

Figure B-8 Total Population per Square Mile

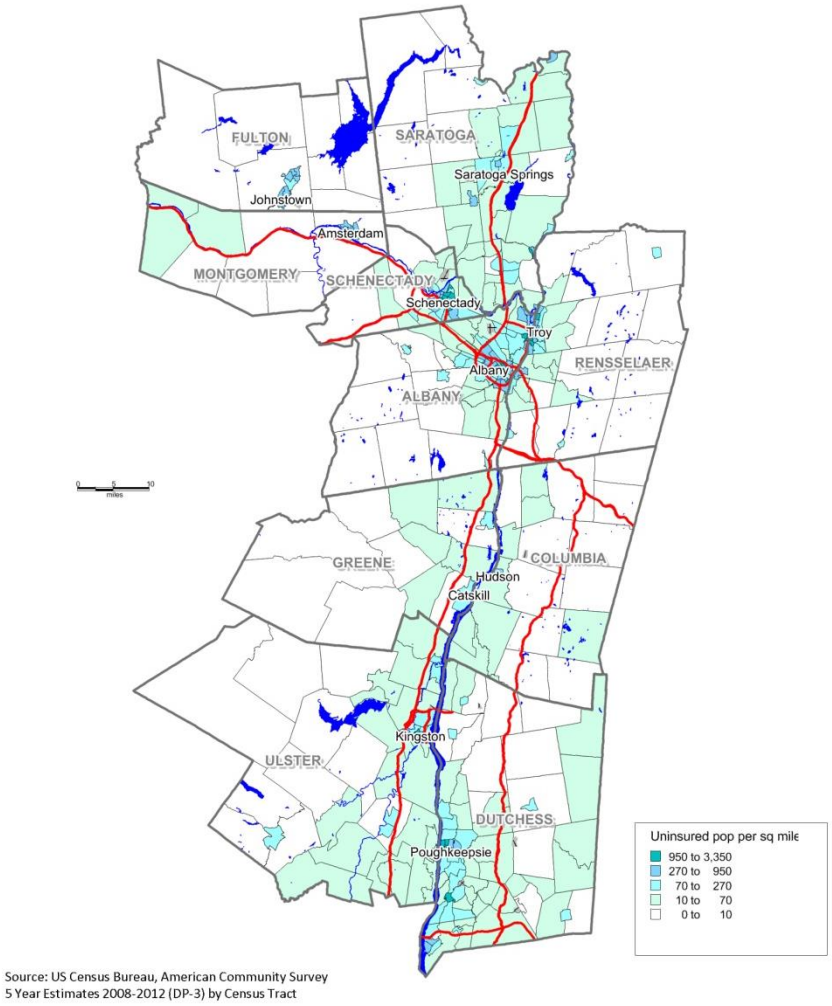


According to 2011 Census estimates, the 10 county area had approximately 15,700 children 0-19 years of age, and 122,000 adults 18-64 years old, without health insurance. The service area had similar percentage of total population for uninsured children (4.2%) compared to NYS (4.1%), and a lower rate for adults (12.3%) compared to NYS (16.3%). For children, Columbia (5.2%, n=713) and Greene (4.9%, n=520) had the highest rates of uninsured. Of the uninsured children, Dutchess (21.2%, n=3,464) and Albany (19.8%, n=2,974) had the highest percentage living in their county. For the 18-64 year old population, all counties were below the NYS average (CNA Appendix C-5).

Of the approximately 122,000 adults who were uninsured, 21.0% (n=24,651) resided in Dutchess, 17.4% (n=22,222) in Albany, and 13.8%

(n=18,181) in Ulster counties (CNA Appendix C-5). The uninsured congregate in the urban areas, but pockets are seen in western Fulton and Montgomery, northern Saratoga, western Greene, eastern Columbia, northeast Dutchess and southwest Ulster counties. (Figure B-9).

Figure B-9 Uninsured Population per Square Mile



Information was obtained from the Pew Research Center of ratios of illegal immigrants using the foreign born data available from the American Community Survey. Based on this data an estimate of illegal immigrants was made for the region and is shown on Figure B-10 which shows that Dutchess County has the largest population of illegal immigrants followed by Albany County. Illegal immigrants are a greater

proportion of the population in Dutchess, Albany and Schenectady Counties (Figure B-11).

Figure B-10 Estimate of Illegal Immigrants by County

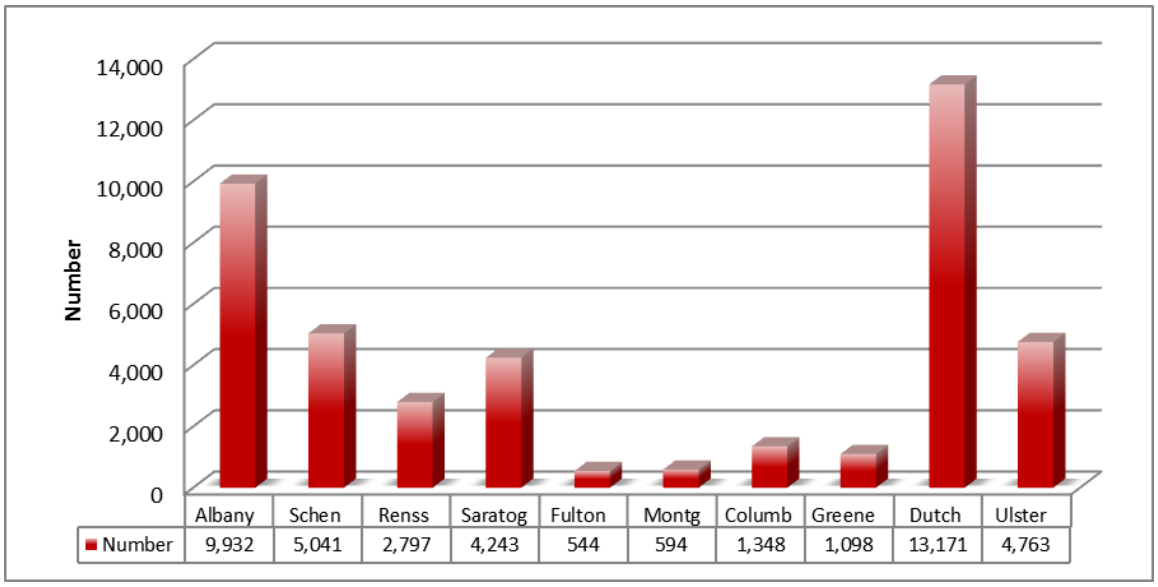
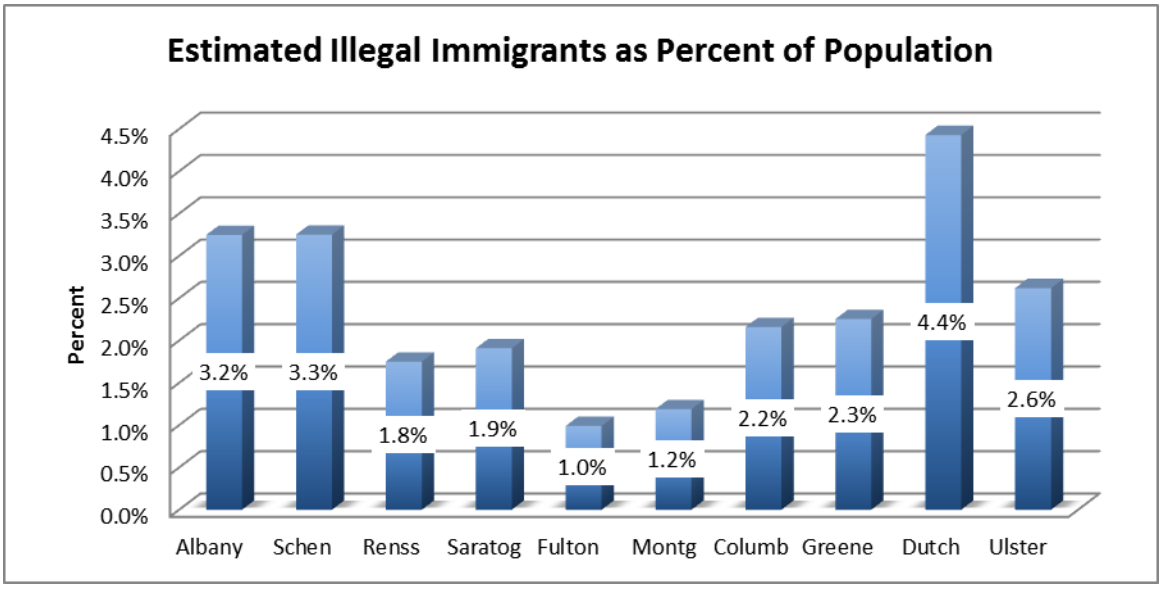


Figure B-11 Estimated Illegal Immigrants as Percent of Population



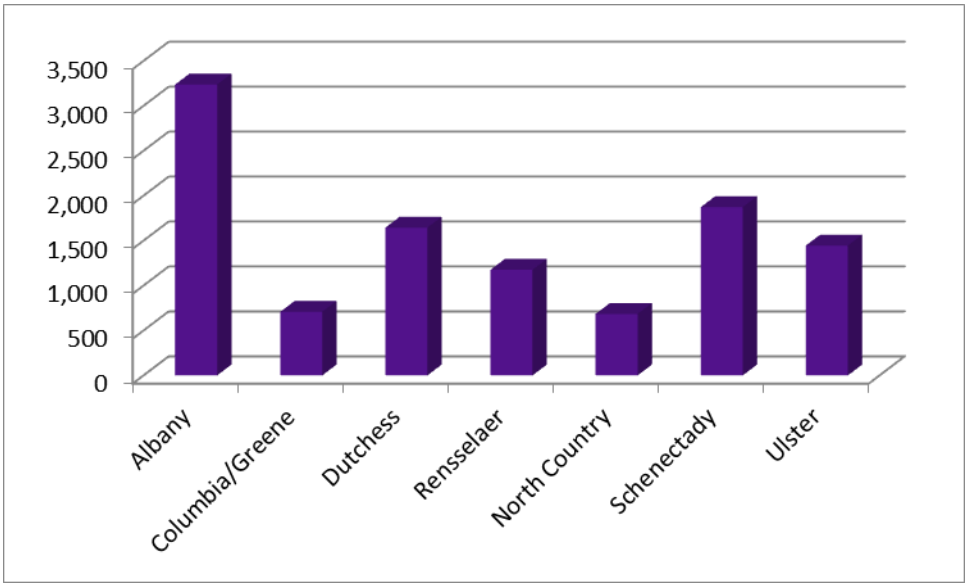
Statistics on the numbers of homeless was obtained from The Supportive Housing Network of New York. Table B-3 shows the proportion of homeless by age group. The largest numbers of homeless are in Albany, Schenectady and Dutchess Counties (Figure B-12).

Table B-3 Numbers of Homeless Individuals

Calendar Year-to-Date 2014						
01/01/2014 to 10/01/2014						
	TOTAL	**55-64**	**65-74**	**75+**	**TOT 55+**	**% 55+**
Albany	3,236	*332*	*56*	*10*	398	12.3%
Columbia/Greene	707	*39*	*5*	*3*	47	6.6%
Dutchess	1,644	*168*	*18*	*10*	196	11.9%
Rensselaer	1,175	*73*	*4*	*2*	79	6.7%
North Country	684	*84*	*7*	*0*	91	13.3%
Schenectady	1,872	*161*	*25*	*2*	188	10.0%
Ulster	1,445	*67*	*8*	*0*	75	5.2%
Total	10,763	924	123	27	1,074	10.0%

Source: The Supportive Housing Network of New York

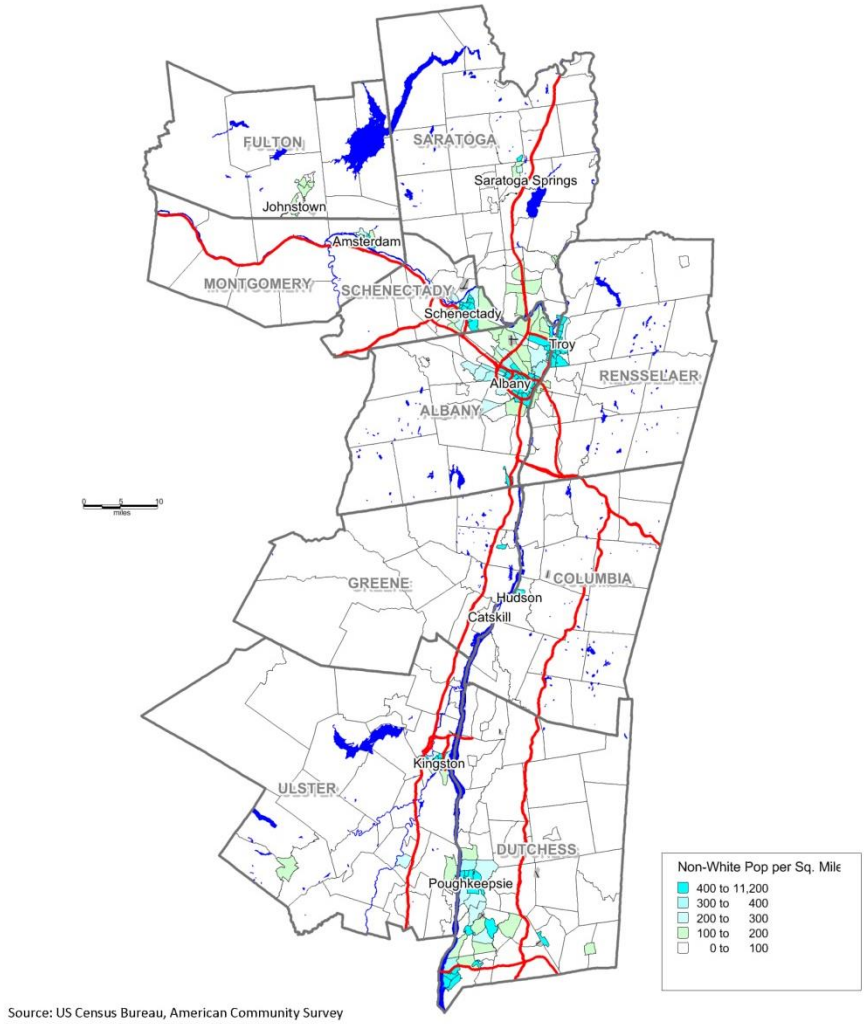
Figure B-12 Numbers of Homeless by Area



Source: The Supportive Housing Network of New York

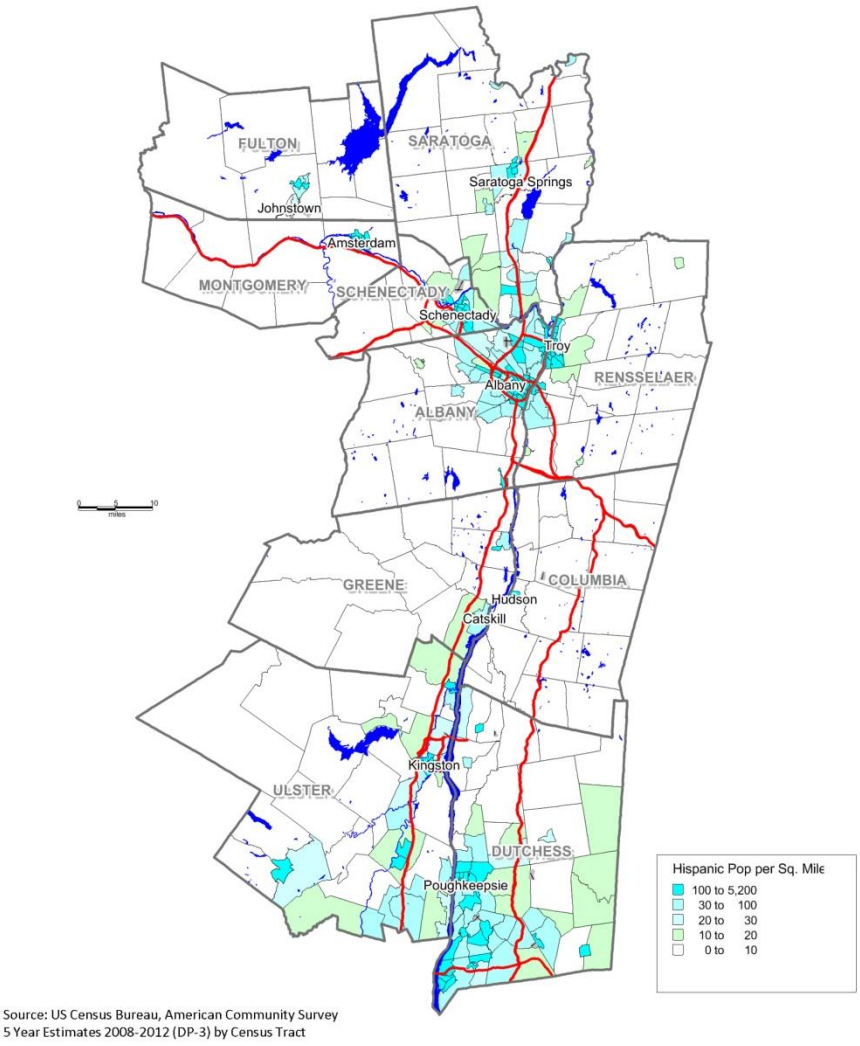
Fulton, Warren and Montgomery counties had predominantly White non-Hispanic populations, while Dutchess, Albany, and Schenectady counties had the largest minority populations. Albany, Schenectady and Dutchess counties had Black non-Hispanic populations greater than 10%; Montgomery and Dutchess counties had Hispanic populations of greater than 10% (CNA Appendix C-6).

Figure B-13 Non White Population per Square Mile



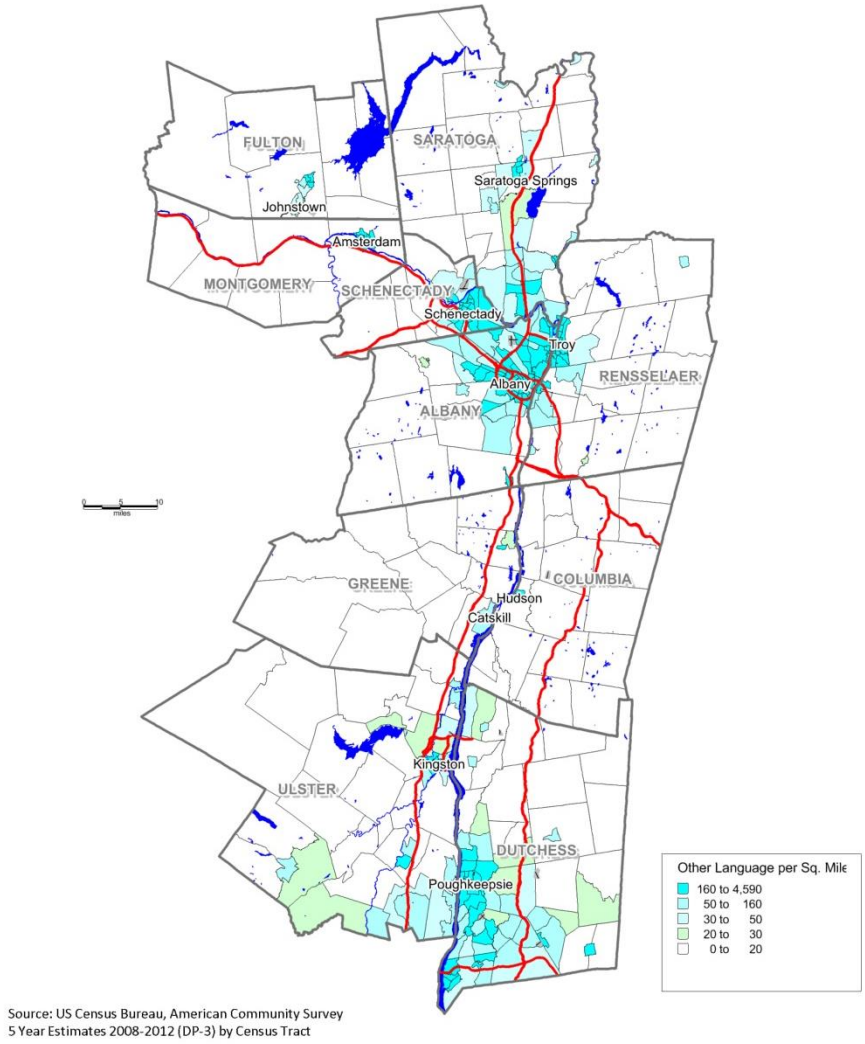
Source: US Census Bureau, American Community Survey
5 Year Estimates 2008-2012 (DP-3) by Census Tract

Figure B-14 Hispanic Population per Square Mile



Over 151,000 service area residents (10.4%) spoke a language other than English at home, with 50,000 residents (3.4%) speaking English "less than very well". Dutchess and Montgomery counties had the largest number of non-English speaking residents as well as those who didn't speak English well. Montgomery County had the largest Spanish-speaking population (CNA Appendix C-7).

Figure B-15 Population with Other Language Spoken per Square Mile



Of the 10 service area counties, almost 115,000 residents were foreign-born (7.4%). Dutchess and Albany counties had the largest foreign-born populations. About 54% of the foreign-born population were naturalized citizens (CNA Appendix C-8).

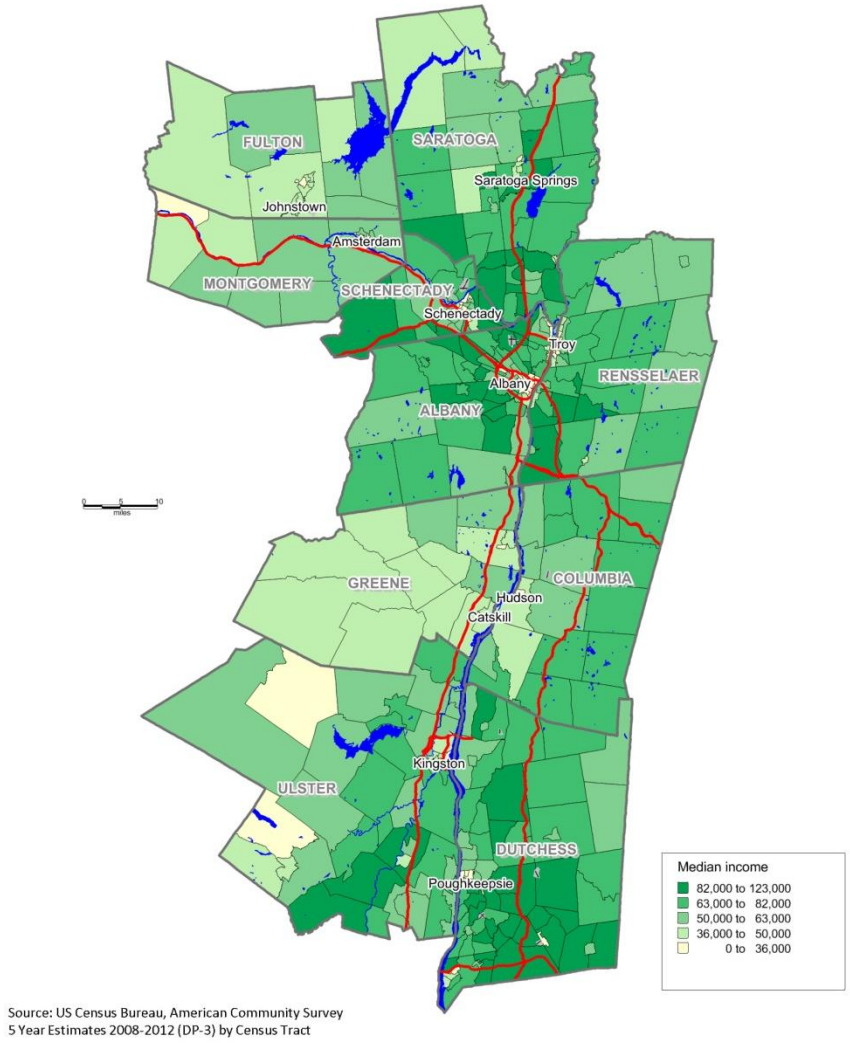
When reviewing educational attainment in the 10 county service area, about 107,000 residents, aged 25 years and older, had less than a high school education, or 10.2% of the population. While this rate was better than the NYS average of 15.1%, two counties were above the NYS average: Montgomery (16.5%) and Fulton (15.2%), with Greene County

close at 14.7%. (CNA Appendix C-9). For residents with a four year college degree or greater, the 10 county service area had a rate of 31.2%, slightly lower than the NYS rate of 32.7%. Fulton (14.5%), Montgomery (16.1%), and Greene (19.1%) counties had the lowest rates for residents with a bachelor's degree or greater.

B) ECONOMIC DEMOGRAPHICS

Median household income ranged from $42,830 for Montgomery, and $45,333 for Fulton counties, to $67,712 for Saratoga and $71,508 for Dutchess counties (CNA Appendix C-10). There were over 117,000 households with incomes under $25,000 per year in the 10 County service area (19.7%). Fulton and Montgomery counties had the largest percentages, while Saratoga and Dutchess the smallest percentage of such households (CNA Appendix C-10). White non-Hispanic and Asian non-Hispanics had higher median household incomes in the 10 county service area compared to Black non-Hispanic and Hispanic households (CNA Appendix C-6).

Figure B-16 Median Income



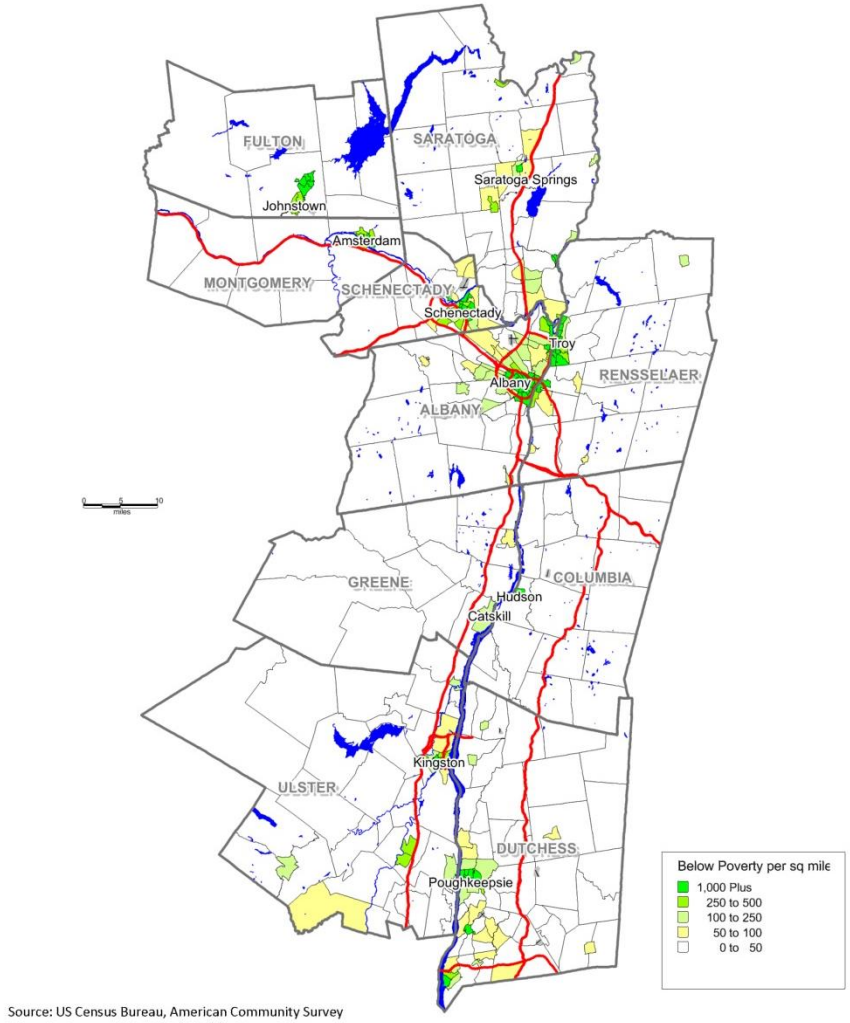
Over 75,000 service area residents (5.1%) were living at <50% of the FPL; 167,000 (11.3%) at < 100% FPL; and 213,000 (14.5%) at < 125% FPL (CNA Appendix C-11). Across the three FPL's, Montgomery and Fulton counties had the highest percentages, while Dutchess and Saratoga counties the smallest percentage living below the FPLs. The geographic distribution of those living below the poverty line is shown in Figure B-17. The greatest concentrations are in the Tri City urban area as well as in Amsterdam, Johnstown, Kingston, Hudson and, Poughkeepsie. There are also pockets of poverty in Ballston Spa and Saratoga Springs. (CNA Appendix C-11).

For the 10 County service area: females had higher % living below the FPLs compared to males; the % living below the FPLs decreased with age;

and people with disabilities had a higher % living below the FPLs compared to the population without a disability (CNA Appendix C-11). Approximately 185,000 residents of the 10 county service area, or 12.3%, indicated that they lived with a disability. The Black non-Hispanic and Hispanic families had a higher percent living at < 100% FPL, compared to White non-Hispanic and Asian non-Hispanic families (CNA Appendix C-6).

While the 10 county service area's unemployment rate of 8.0% as of July 2013 is better than the NYS rate of 8.5%, there were still approximately 61,000 individuals who were looking for work but unemployed (CNA Appendix C-12). As with other socioeconomic indicators, Fulton (10.6%), Montgomery (10.4%) and Greene (9.4%) counties had the largest rates of unemployment.

Figure B-17 Population Below Poverty per Square Mile

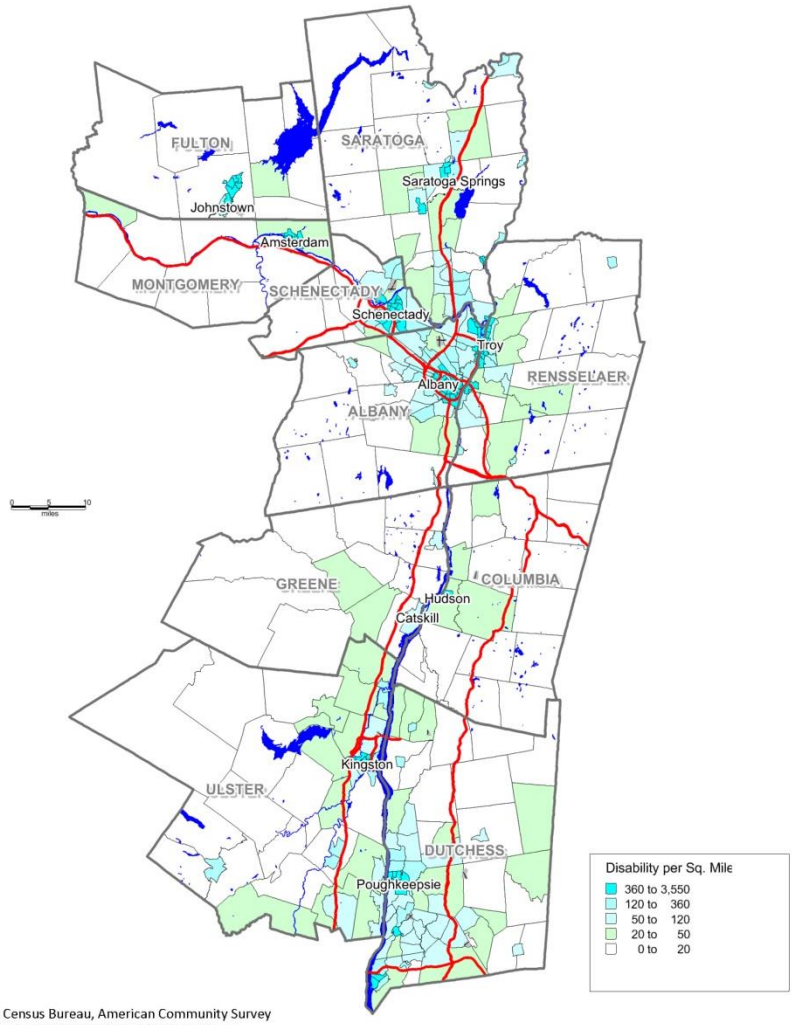


Source: US Census Bureau, American Community Survey
5 Year Estimates 2008-2012 (DP-3) by Census Tract

C) DISABILITY

Approximately 185,000 residents of the 10 county service area, or 12.3%, indicated that they lived with a disability. This percentage is higher than the NYS average of 10.9%. All but Saratoga County (10.1%) had percentages higher than the State average. Fulton County at 16.4% (n=8,871) and Montgomery County at 16.1% (n=7,921) had the highest disability percentages of the 10 counties (Figure B-18) (CNA Appendix C-13). As one would expect, the percentage of disabled increases with age in the 10 county service area: 5.1% (n=16,687) in the < 18 year age group; 10.0% (n=96,086) in the 18-64 year age group; and 33.8% (n= 77,228) in the 65+ age group. Fulton and Montgomery counties had the highest disability rates across the age groups.

Figure B-18 Disabled Population



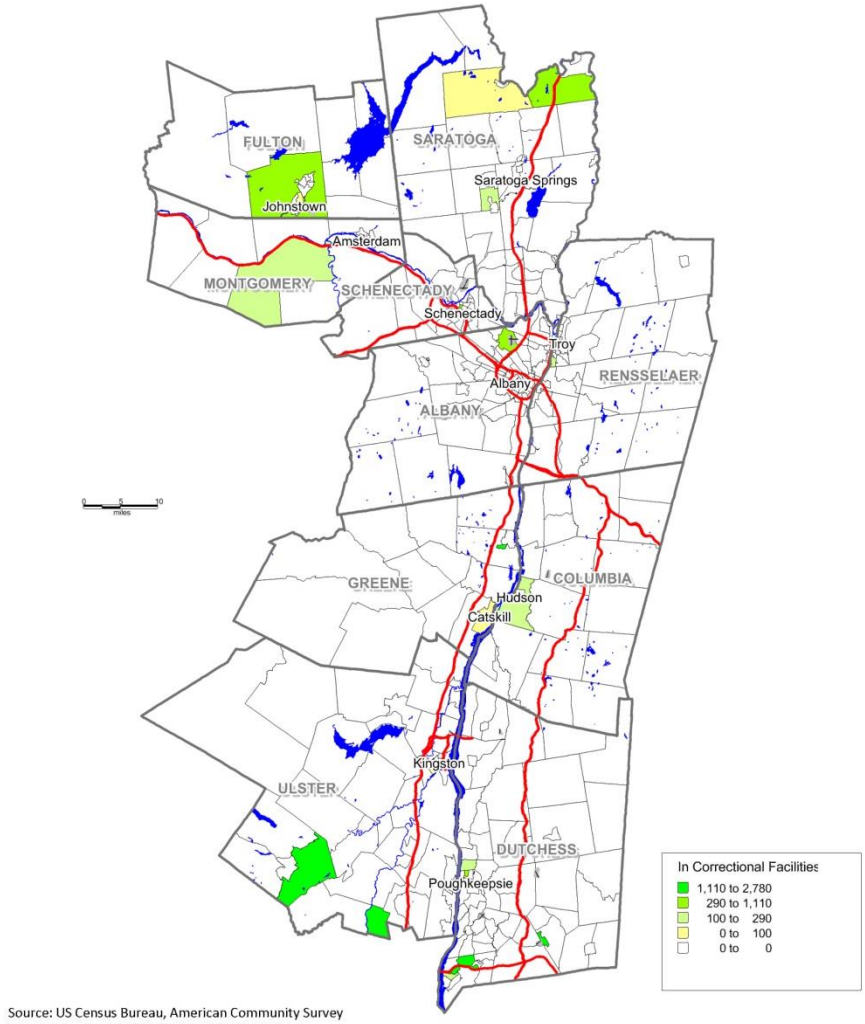
Source: US Census Bureau, American Community Survey
5 Year Estimates 2008-2012 (DP-3) by Census Tract

D) GROUP QUARTERS

Most census-based demographic information represents the resident population. Group quarters information from the Bureau of Census (2010 Census) offers information on specific types of the institutionalized and non-institutionalized populations. There were almost 71,000 individuals living in group quarters in the 10 County service area. Of this group, approximately 15,900 (22.4%) were in adult or juvenile correctional facilities; 10,200 (14.5%) in nursing or skilled nursing facilities; 29,900 (42.3%) in college or university housing; and 14,000 (19.9%) in other non-institutionalized facilities such as emergency and transitional shelters, adult group homes, or adult residential treatment centers. There were large correctional facility populations in Greene, Dutchess and Ulster counties. Dutchess (n=2,300), Albany (n=1,831), Ulster (n=1,273), Rensselaer (n=1,133) and Schenectady (n=988) counties had large nursing home populations. Albany, Dutchess, Rensselaer, Ulster, Saratoga, and Schenectady counties had large student populations (CNA Appendix C-14).

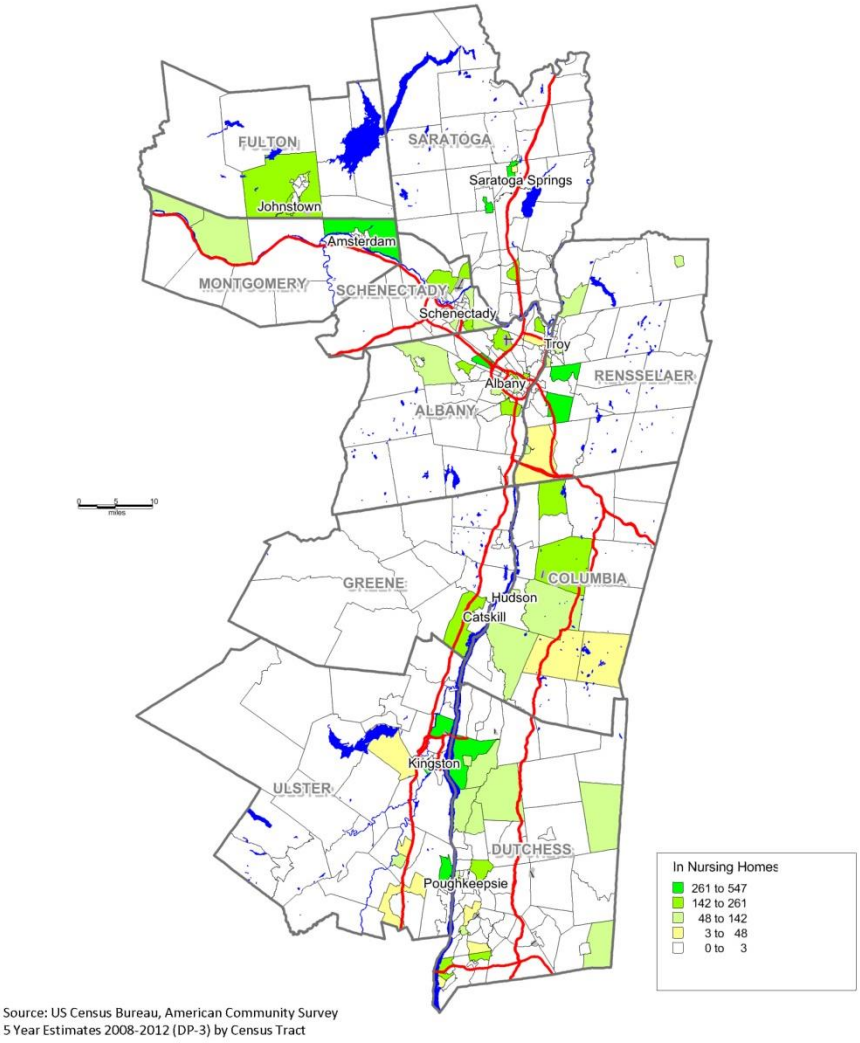
Figure B-19 shows the distribution of institutionalized population in correctional facilities. The population residing in nursing homes is shown in Figure B-20. The correctional facility population shows the rural settings where most prison are located. The distribution of the nursing home population reflects the breadth of nursing homes scattered throughout the region.

Figure B-19 Population in Correctional Facilities



Source: US Census Bureau, American Community Survey
5 Year Estimates 2008-2012 (DP-3) by Census Tract

Figure B-20 Population in Nursing Homes

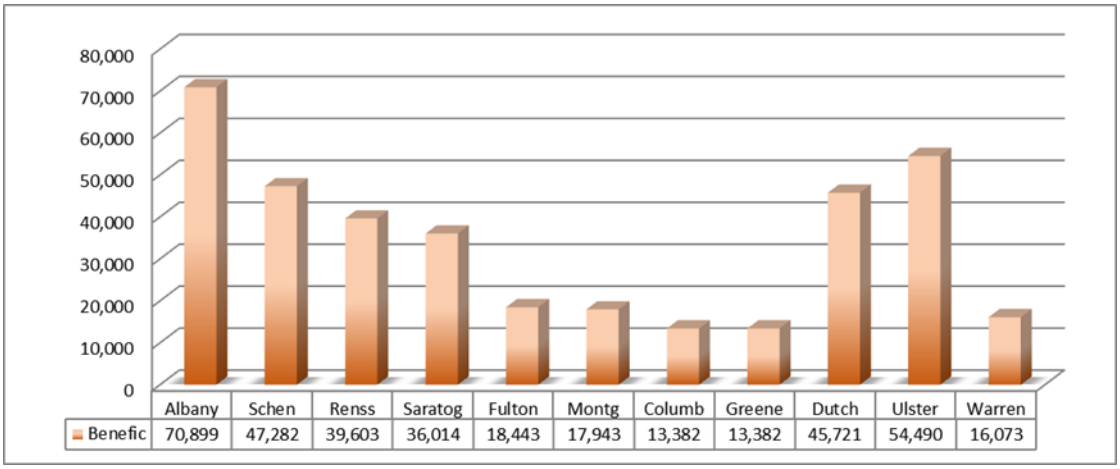


II. Medicaid Member Demographics

There were 373,232 unique Medicaid members enrolled between March 2013 and February 2014 in the 11 county service area, or 23.3% of the population. This was slightly lower than the NYS, excluding NYC (Upstate) rate of 23.2%. Montgomery (35.3%, n=17,615) and Fulton (33.2%, n=18,103) counties had the highest rates of Medicaid enrollees, while Dutchess (17.4%, n=51,533) and Saratoga (15.5%, n=34,757) counties had the lowest rates. Of the roughly 345,000 Medicaid enrollees, 19.9%

(n=68,554) lived in Albany, 14.9% lived in Dutchess, and 12.5% (n=43,315) lived in Ulster counties (Figure B-21, CNA Appendix C-15). Medicaid beneficiaries seem to also congregate in the urban areas. However, as with the previous maps, there are pockets of Medicaid enrollees in the rural areas. (Figure B-22).

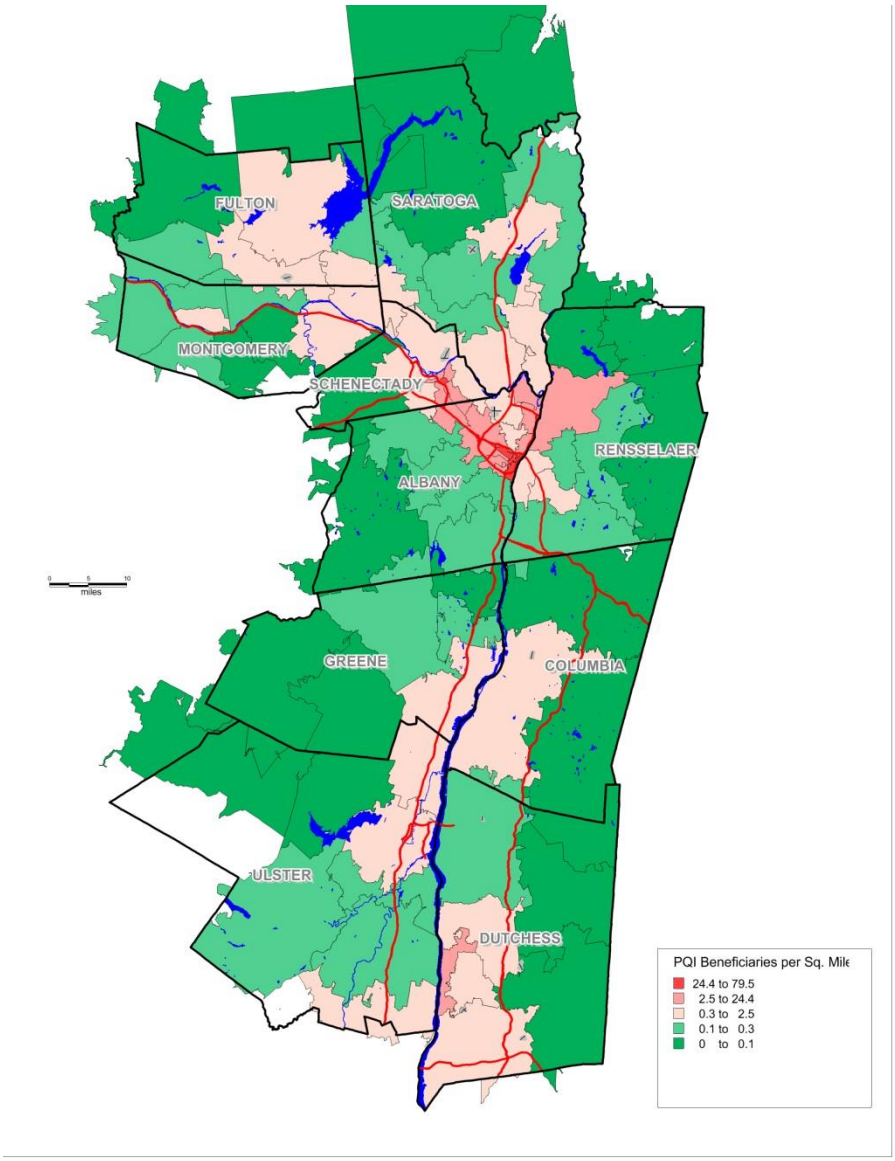
Figure B-21 Medicaid Beneficiaries by County as of May 2014



Source: NYSDOH DSRIP Medicaid Dashboards, DSRIP-B-8 Medicaid Enrollment

Albany Medical PPS and Ellis PPS

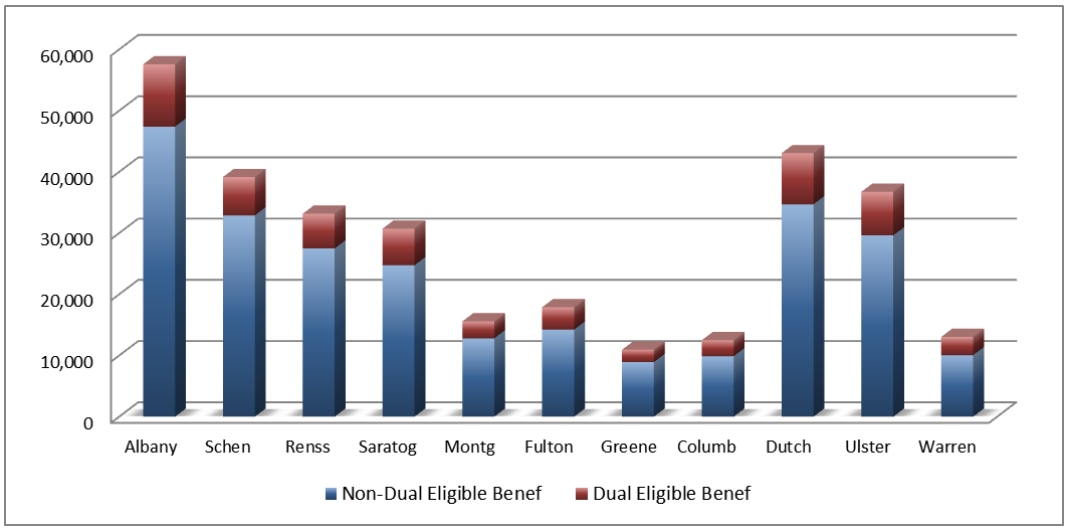
Figure B-22 Medicaid Beneficiaries per Square Mile by Neighborhood



Source: DSRIP Medicaid Beneficiaries Inpatient Admissions and Emergency Room Visits by Zip Code Beginning_2012

Figure B-23 shows the breakdown of dual eligible versus non dual eligible beneficiaries in 2012 (the most recent data available with breakdown by dual eligible).

Figure B-23 Medicaid Beneficiaries by County and Dual Eligibility (2012)

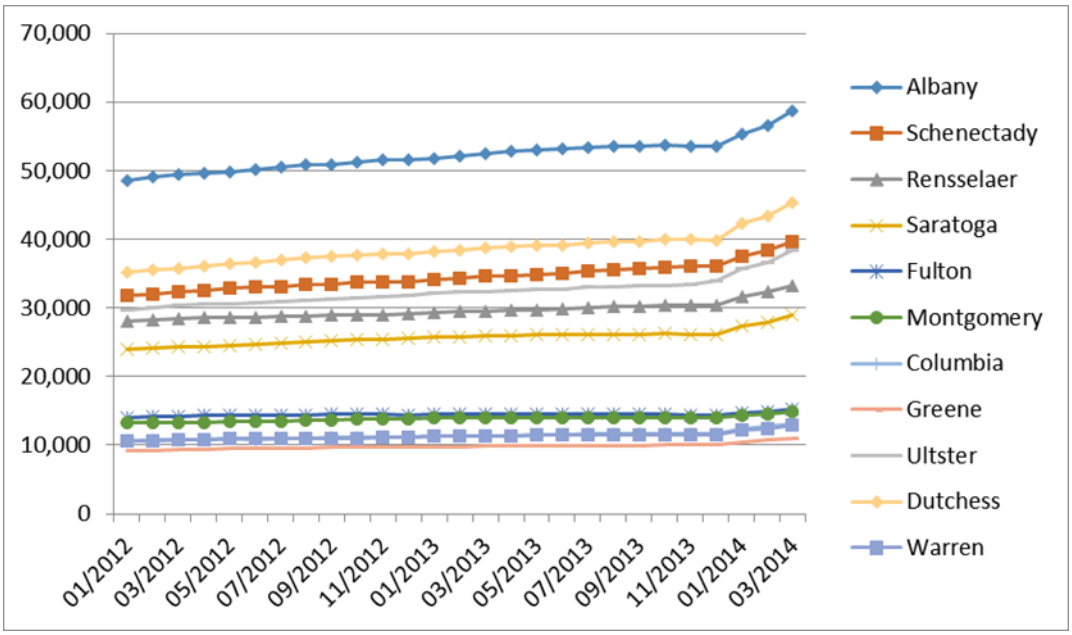


Source: Beneficiaries, Inpatient Admissions and Emergency Visits by county, 2012

An increasing number of Medicaid enrollees have been seen in all of the counties within the service area, with the 10 county numbers increasing 13.4% from March 2013 to March 2014. Counties with the largest increases in Medicaid enrollees during this period include Ulster (18.5%) and Dutchess (17.2%) counties. The smallest increases occurred in Fulton (4.6%) and Montgomery (5.8%) counties (Figure B-24,,CNA Appendix C-16).

Albany Medical PPS and Ellis PPS

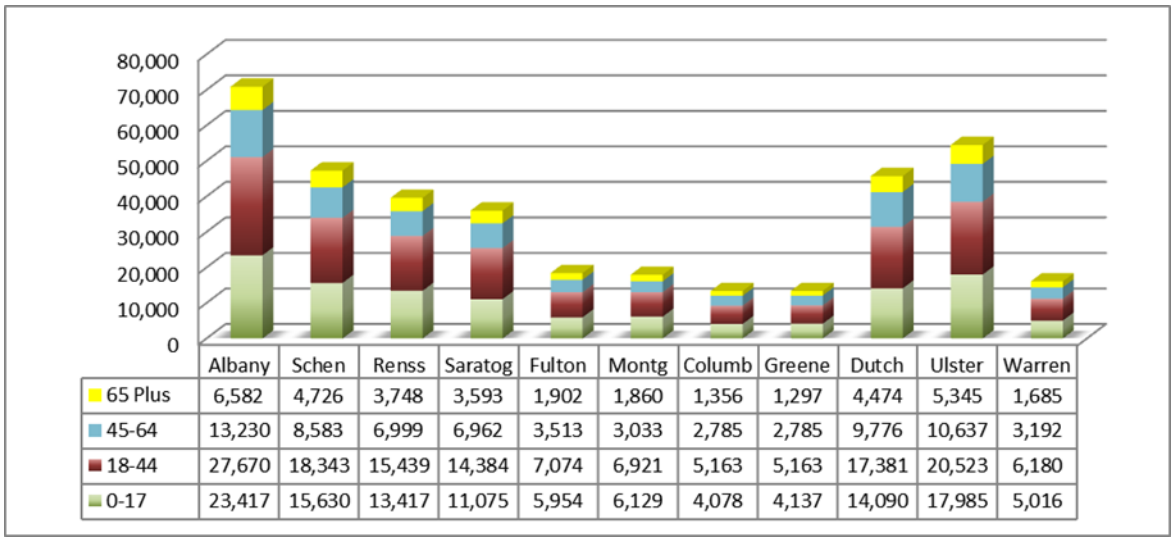
Figure B-24 Medicaid Enrollment Trend



Source: Source: NYSDOH DSRIP Medicaid Dashboards, DSRIP-B-8 Medicaid Enrollment

The Medicaid enrollment rates for each of the 10 counties decreases with age. The 10 county rates were: 47.3%--0 to 5 years; 36.2%--6 to 11 years; 26.9%--12 to 17 years; 24.7%--18 to 44 years; 14.4%--45 to 64 years; and 13.8%--65 years and older. Of the approximately 115,000 childhood Medicaid enrollees in the service area, 19.9% (n=22,872) resided in Albany, 15.1% (n=17,331) resided in Dutchess, and 14.1% (n=16,145) resided in Schenectady counties. Of the 197,000 enrollees age 18 to 64 in the service area, 19.8% (n=39,086) lived in Albany, 14.7% (n=28,901) lived in Dutchess, and 13.0% (n=25,520) lived in Schenectady counties. Of the 33,442 Medicaid enrollees 65+ years of age, 19.7% (n=6,596) resided in Albany, 15.6% (n=5,301) resided in Dutchess, and 13.7% (n=4,568) resided in Ulster counties. (Figure B-25,CNA Appendix C-15).

Figure B-25 Medicaid Beneficiaries by County and Age Group



	Albany	Schen	Renss	Saratog	Fulton	Montg	Columb	Greene	Dutch	Ulster	Warren
65 Plus	6,582	4,726	3,748	3,593	1,902	1,860	1,356	1,297	4,474	5,345	1,685
45-64	13,230	8,583	6,999	6,962	3,513	3,033	2,785	2,785	9,776	10,637	3,192
18-44	27,670	18,343	15,439	14,384	7,074	6,921	5,163	5,163	17,381	20,523	6,180
0-17	23,417	15,630	13,417	11,075	5,954	6,129	4,078	4,137	14,090	17,985	5,016

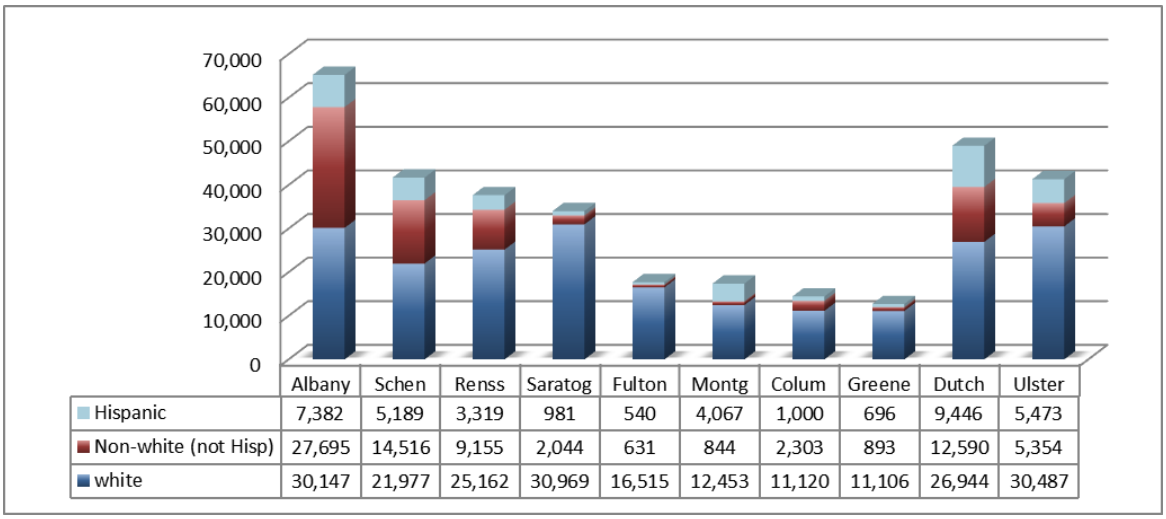
Source: NYSDOH DSRIP Medicaid Dashboards, DSRIP-B-8 Medicaid Enrollment

When reviewing the 10 county Medicaid enrollees by gender, 192,068 were female, and 150,706 were male. The Medicaid enrollment rate was higher for females (24.6%) than males (19.9%). This was also true across each of the 10 counties. The 10 county rates were slightly lower than the Upstate rate for females (24.8%) and males (20.4%) (CNA Appendix C-17).

Of the 345,347 Medicaid enrollees in the 10 counties: 62.8% were White non-Hispanic; 15.0% were Black non-Hispanic; 11.0% were Hispanic; 4.3% were Multiple Race; 2.7% were Asian; 0.3% were American Indian; and 3.9% were Unknown race/ethnicity. Montgomery County had the largest Hispanic Medicaid enrollment of 65.9% (n=4,067), with Schenectady's rate also high at 52.0% (n=5,189). The 10 county Medicaid enrollment rate for the Multiple Race population of 50.3% was higher than the Upstate rate of 40.9%. Schenectady had the highest Multiple Race enrollment rate of 72.5% (n=3,248) with Albany's rate at 63.3% (n=4,013) (Figure B-26)(CNA Appendix C-18).

Albany Medical PPS and Ellis PPS

Figure B-26 Number of Medicaid Beneficiaries by White, Non-White and Hispanic



	Albany	Schen	Renss	Saratog	Fulton	Montg	Colum	Greene	Dutch	Ulster
Hispanic	7,382	5,189	3,319	981	540	4,067	1,000	696	9,446	5,473
Non-white (not Hisp)	27,695	14,516	9,155	2,044	631	844	2,303	893	12,590	5,354
white	30,147	21,977	25,162	30,969	16,515	12,453	11,120	11,106	26,944	30,487

Source: NYSDOH DSRIP Medicaid Dashboards, DSRIP-B8-Medicaid Enrollment by Member County. US Bureau of Census 2013 Population Estimates

3. HEALTH STATUS OF THE POPULATION

I. Health Status of the General Population

A) PREVENTION AGENDA PLANNING EFFORTS

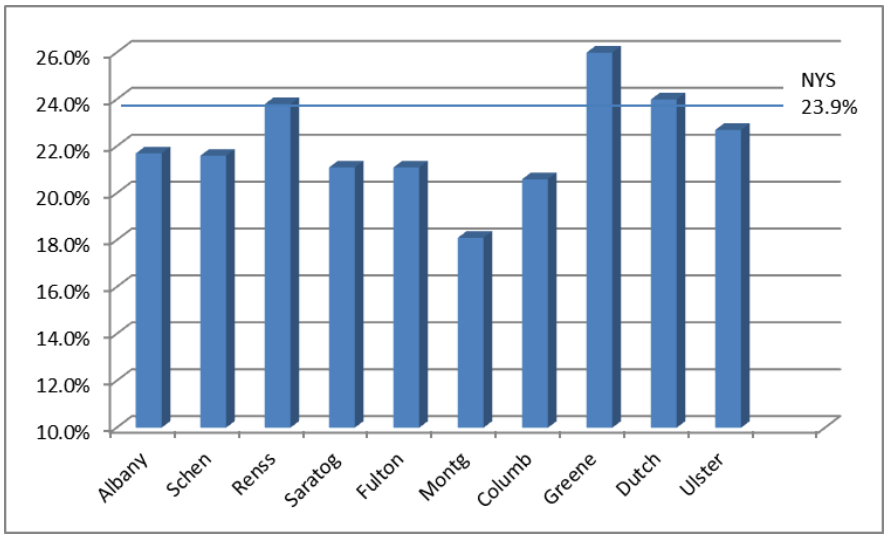
Prevention Agenda planning efforts were recently completed by the health departments and hospitals in the 11 County service area. Priority Focus Areas included: obesity/diabetes (11 counties); mental health/substance abuse (11 counties); chronic disease preventive care and management (7 counties); asthma (3 counties); smoking-related illness (3 counties) maternal and infant health (2 counties) (CNA Appendix D-1).

B) GENERAL MORTALITY

The service area averaged about 13,500 deaths per year. All 10 counties had age-adjusted mortality rates higher than NYS. Fulton, Montgomery, Columbia, and Greene counties age-adjusted mortality rate fell into the 4th quartile of NYS counties (CNA Appendix D-2).

There were over 3,000 premature deaths (< 65 years) in the service area. Greene County fell into the 4th quartile with a rate of 26.0% (Figure B-27, CNA Appendix D-3).

Figure B-27 Premature Death (<65) Rate by County



Source: NYSDOH Prevention Agenda Dashboard, NYS excluding NYC

The Leading Causes of Death for the 10 counties mimicked Upstate: 1-Heart Disease; 2-Cancer; 3-Chronic Lower Respiratory Disease (CLRD); 4-Stroke; 5- Unintentional Injury (CNA Appendix D-4).

The Leading Causes of Premature Death for the 10 counties mimicked Upstate for the 2 leading causes: 1-Cancer; 2-Heart Disease. The 3rd and 4th leading causes of premature death fluctuate between Unintentional Injury (5 counties) and CLRD (5 counties). The 5th leading cause of death varies between stroke, diabetes, and suicide (CNA Appendix D-5).

C) HOSPITALIZATIONS AND ED VISITS

The 10 County service area averaged over 15,500 adult preventable hospitalizations per year. Fulton County's rate of 163.7/10,000 fell into the 4th quartile and Montgomery (138.5) and Warren (134.6) counties into the 3rd quartile of NYS counties (CNA Appendix D-6).

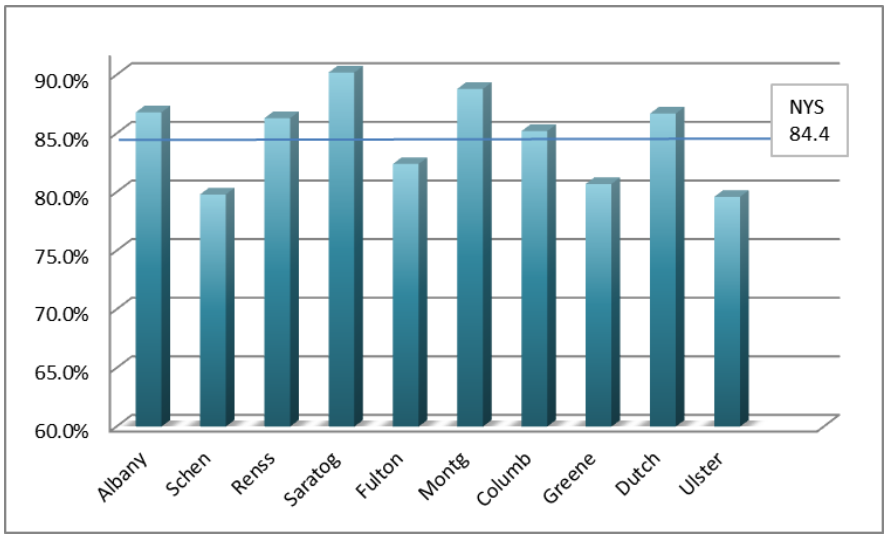
The service area averaged about 175,000 hospitalizations per year. Fulton (1,290/10,000) and Montgomery (1,266) counties had age-adjusted hospitalization rates in the 4th quartile , while Warren County (1,182) fell into the 3rd quartile (CNA Appendix D-6).

The service area averaged 560,000 ED visits per year. Montgomery (6,462/10,000), Fulton (4,834) and Schenectady (4,710) had adjusted ED visit rates that fell into the 4th quartile (CNA Appendix D-6).

D) ACCESS TO CARE INDICATORS

When reviewing the % of adult residents with a regular health care provider, 3 service area counties fell into the 4th quartile: Ulster (79.6%); Schenectady (79.8%); and Greene (80.4%) (Figure B-28, CNA Appendix D-7).

Figure B-28 Age-Adjusted Percent of Adults (=18) with Regular Health Care Provider



Source: NYSDOH Prevention Agenda Dashboard; County Health Rankings; EBRFSS 2008-09 Report, NYS excluding NYC

Eight of the 10 service area counties had physician to population ratios higher than NYS. The highest ratios occurred in Greene (2,880:1) and Fulton (2,044:1) counties (CNA Appendix D-7).

Seven of the 10 service area counties had mental health provider to population ratios higher than NYS. Greene (1,532:1), Montgomery (1,376:1) and Fulton (1,149:1) counties ratios fell into the 4th quartile of NYS counties (CNA Appendix D-7).

E) CANCER

The 10 County service area averaged 820 cases and 292 deaths per year from colorectal cancer. Eight of the 10 counties had age-adjusted incidence rates above NYS, with Columbia (53.1/100,000) and Montgomery (49.4) counties falling into the 4th quartile. Seven counties had age-adjusted colorectal mortality rates above NYS. Fulton

(21.1/100,000) and Columbia (18.7) counties fell into the 4th quartile (CNA Appendix D-8).

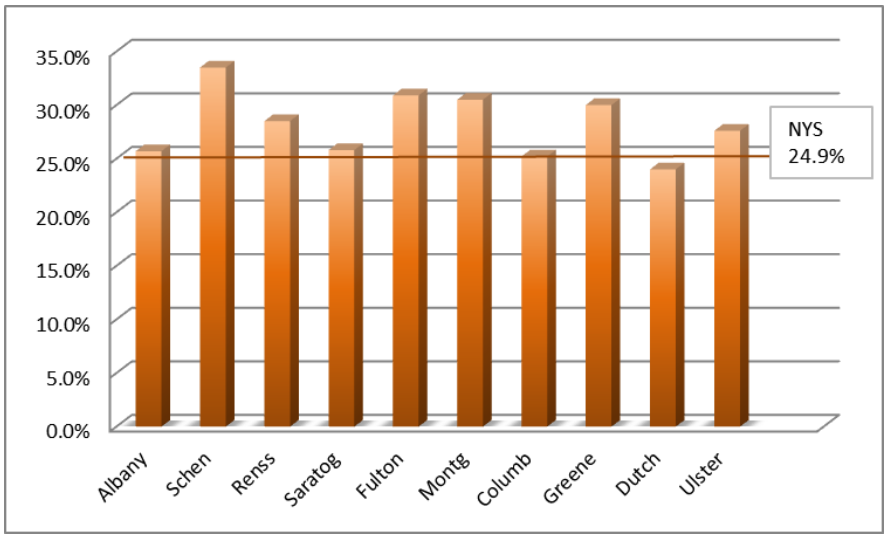
Of the service area residents, 50-75 years of age, who received appropriate colorectal screening, 7 of the 120 counties had lower screening rates than NYS. Fulton (59.3%), Columbia (59.3%), and Montgomery (61.6%) had the lowest screening rates of the 10 counties (CNA Appendix D-8).

The 10 County service area averaged 1,270 cases of female breast cancer with 227 deaths per year. Albany (141.0/100,000) and Dutchess (138.4) counties had age-adjusted incidence rates that fell into the 4th quartile, while 5 counties had age-adjusted mortality rates that were in the 4th quartile: Greene (26.2/100,000); Warren (24.5); Saratoga (24.4); Albany (23.5) and Dutchess (23.0) counties (CNA Appendix D-8).

F) OBESITY

When reviewing the % of Adults who are obese in the service area, 8 of the 10 counties showed rates increasing from 2008-09 to 2013-14. Nine of the 10 counties had obesity rates higher than NYS (CNA Appendix D-9). Schenectady County's rate of 33.5% put it in the 4th quartile, while Fulton (30.9%), Montgomery (30.5%), Warren (30.5%), and Greene (30.0%) counties had obesity rates in the 3rd quartile of NYS counties (Figure B-29) (CNA Appendix D-10).

Figure B-29 Adult Obesity Rates by County



Source: NYSDOH Prevention Agenda Dashboard; Community Health Indicator Reports, NYS excluding NYC

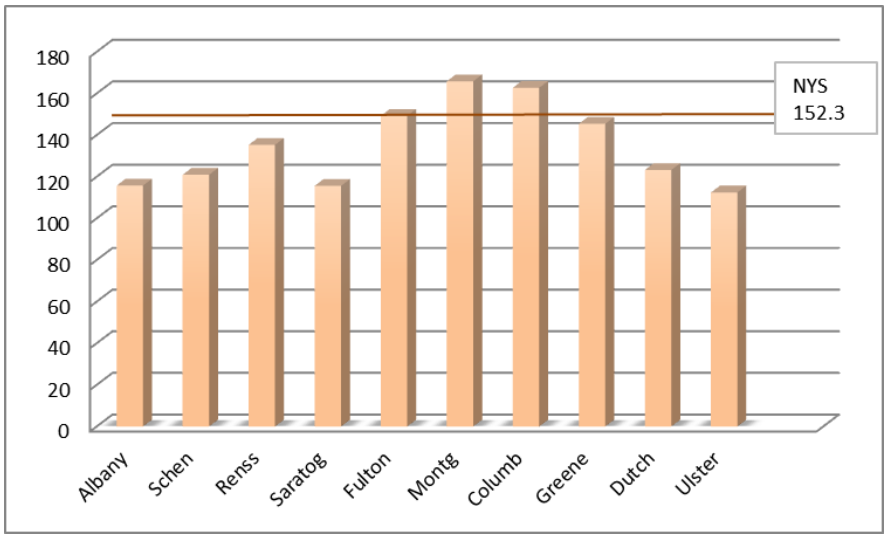
Eight of the 10 service area counties had school student obesity rates higher than NYS. Greene County (20.4%) had the highest student obesity rate, followed by Warren (19.7%), Schenectady (19.5%) and Columbia (19.1%) counties (CNA Appendix D-10).

G) CARDIOVASCULAR DISEASE

There was an average of 2,725 heart attack hospitalizations and 550 heart attack deaths per year in the 10 County service area. Fulton (24.6/10,000) and Montgomery (22.4) counties had age-adjusted heart attack hospitalization rates falling into the 4th quartile, while Schenectady (18.9) and Warren (17.6) fell into the 3rd quartile. Only Montgomery County's age-adjusted heart attack mortality rate of 37.0/100,000 fell into the 3rd quartile of NYS counties (CNA Appendix D-11).

The 10 County service area averaged 5,177 hospitalizations and 2,465 deaths per year due to coronary heart disease. Only Fulton (38.6/10,000) and Montgomery (38.5) age adjusted hospitalization rates fell into the 3rd quartile. For age-adjusted coronary heart disease mortality rates, Montgomery (165.8/100,000) and Columbia (162.7) counties were in the 4th quartile of NYS counties (Figure B-30) (CNA Appendix D-11).

Figure B-30 Coronary Heart Disease Mortality Age Adjusted Rate



Source: NYSDOH Community Health Indicator Reports

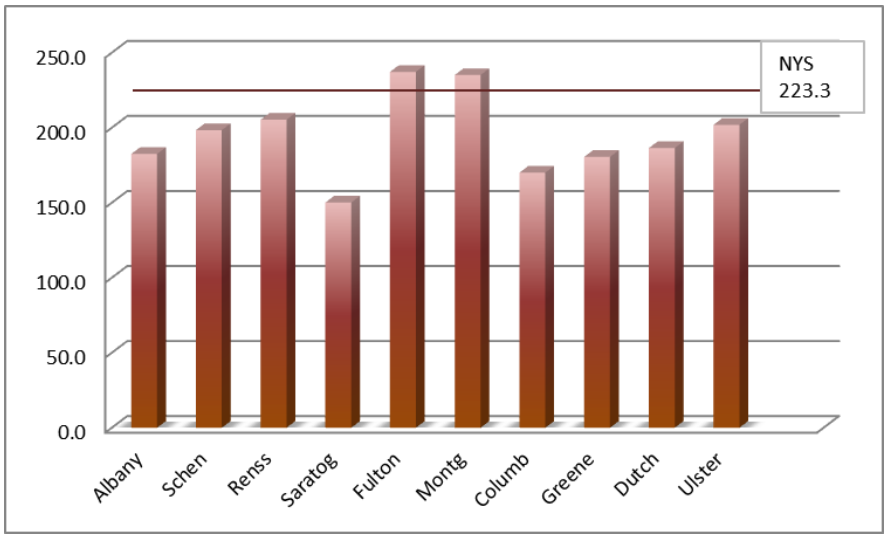
There were 4,279 Congestive Heart Failure (CHF) hospitalizations and 357 deaths per year in the 10 County service area. Only 3 counties had CHF hospitalization rates greater than NYS. Montgomery County's age-adjusted CHF hospitalization rate of 32.6 per 10,000 put it into the 4th quartile of NYS counties. However, all service area counties had age-adjusted CHF mortality rates equal to, or above, NYS. Montgomery (23.7/100,000), Rensselaer (22.3), Albany (20.0), and Schenectady (19.8) counties fell in the 4th quartile (CNA Appendix D-12).

The 10 County service area had approximately 4,500 cerebrovascular (stroke) hospitalizations and 600 deaths per year. Ulster (29.1/10,000), Fulton (28.5), and Montgomery (27.6) counties had age-adjusted stroke hospitalization rates in the 4th quartile of NYS counties. Rensselaer (36.6/100,000), Fulton (36.0), and Saratoga (35.4) had age-adjusted stroke mortality rates in the 3rd quartile of NYS counties (CNA Appendix D-12).

H) DIABETES

The service area averaged 2,184 hospitalizations per year where diabetes was the primary diagnosis, but 34,217 where diabetes was listed in any diagnosis. For the age-adjusted diabetes (primary diagnosis) hospitalization rate, only Fulton County's rate of 19.2/10,000 fell into the 4th quartile. Warren (17.6), Montgomery (16.9), Rensselaer (15.2) and Albany (14.2) counties rates fell into the 3rd quartile. Fulton (237.2) and Montgomery (235.1) counties fell into the 4th quartile for diabetes age-adjusted hospitalizations (any diagnosis); Warren (210.6), Rensselaer (205.3), and Ulster (201.9) counties fell into the 3rd quartile (Figure B-31) (CNA Appendix D-13).

Figure B-31 Diabetes (Any Diagnosis) Hospitalization Rate by County



Source: NYSDOH Community Health Indicator Reports

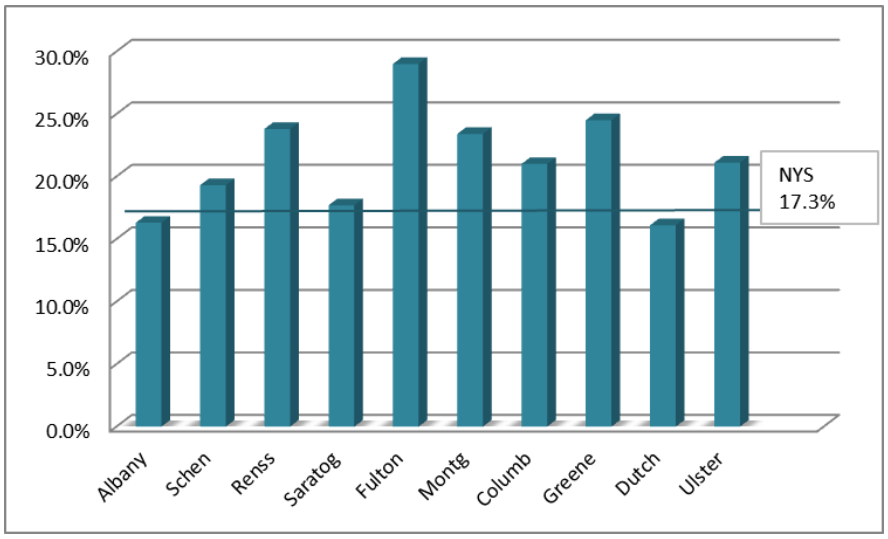
Warren County's age-adjusted diabetes mortality rate of 22.9/100,000, and Montgomery County's rate of 19.4/100,000 were in the 4th quartile, while Schenectady and Rensselaer rates were in the 3rd quartile of NYS counties (CNA Appendix D-13).

The 10 County service area averaged about 660 Diabetes short-term complication hospitalizations per year in the 18 year and older population. Both Fulton (8.6/10,000) and Montgomery (8.3) fell into the 4th quartile, while Schenectady and Rensselaer counties fell into the 3rd quartile of NYS counties (CNA Appendix D-14).

I) RESPIRATORY DISEASES

Five of the 10 service area counties have seen their smoking prevalence rates similar or increasing from 2008-09 to 2013-14. Eight of the 10 counties had higher smoking prevalence rates than Upstate, with Fulton (29.0%), Greene (24.5%), and Rensselaer (23.8%) having rates in the 4th quartile, and Montgomery (23.4%), and Columbia (21.0%) falling into the 3rd quartile of NYS counties (CNA Appendix D-9).

Figure B-32 % Cigarette Smoking in Adults (18+yrs)

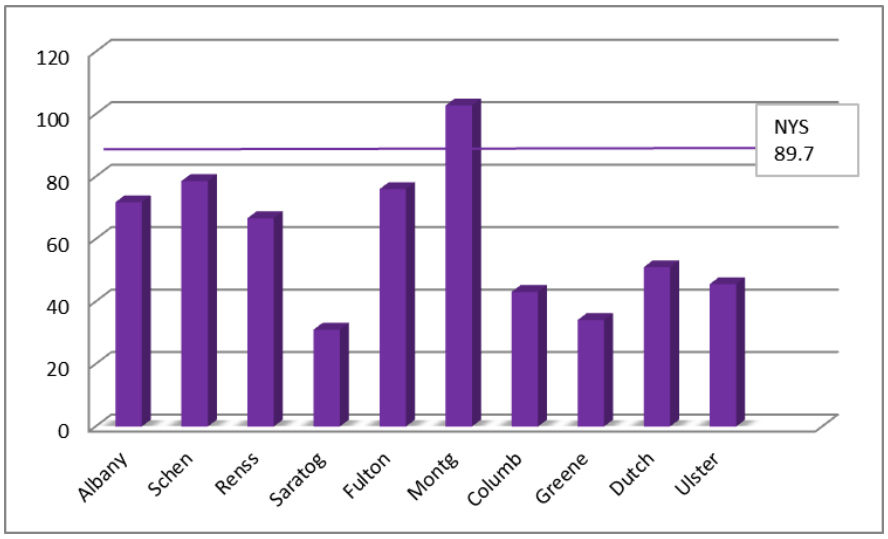


Source: Expanded Behavioral Risk Factor Surveillance System (EBRFSS)- Prevention Agenda Tracking Indicators

Results from the consumer survey showed that 10% smoked every day and another 10% smoked some days. The total rate of 20% is somewhat lower than the published data.

The 10 County service area averaged 1,600 hospitalizations. For the age-adjusted asthma hospitalizations rates, Fulton (15.6/10,000), Warren (12.5) and Albany (12.3) fell into the 4th quartile, while Rensselaer, Dutchess, Montgomery, Ulster, and Schenectady counties fell into the 3rd quartile of NYS counties (Figure B-33) (CNA Appendix D-15).

Figure B-33 Asthma Emergency Department Visits per 10,000 Population



Source: Community Health Indicator Reports; Information on Asthma in NYS-ED Visits

There was an average of about 8,200 ED visits for asthma for the 10 county total population. For the age-adjusted ED visit rates, Montgomery (102.8/10,000), Schenectady (78.6), Fulton (76.0), Albany (71.8) and Rensselaer (66.7) fell into the 4th quartile of NYS counties (CNA Appendix D-15).

There was an average of 5,250 hospitalizations, and 812 deaths due to CLRD per year in the service area. Warren (47.3/10,000), and Fulton (47.2) fell into the 4th quartile, while Rensselaer (35.7) and Montgomery (32.0) were in the 3rd quartile of counties for age-adjusted CLRD hospitalization rates. For age-adjusted CLRD mortality, Fulton County (75.5/100,000) fell into the 4th quartile while Rensselaer (54.6), Columbia (48.0), and Warren (47.3) fell into the 3rd quartile of NYS counties (CNA Appendix D-16).

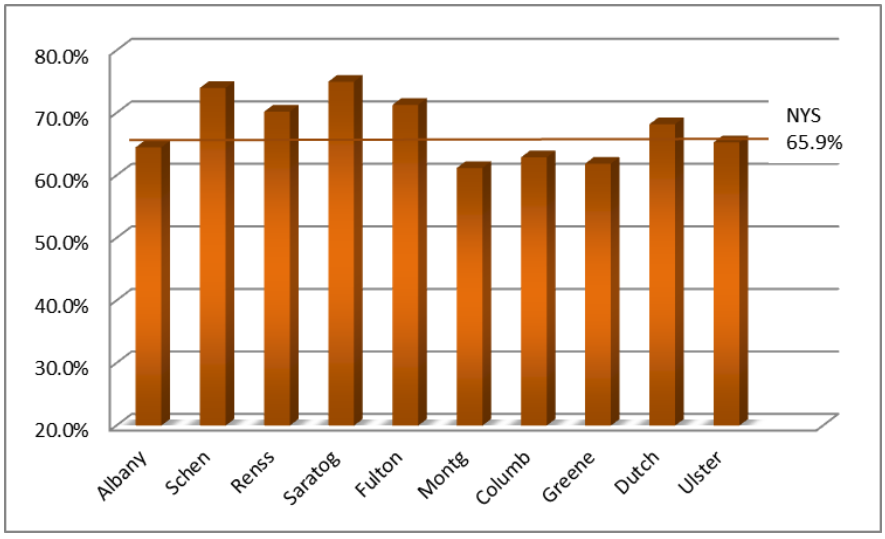
J) MATERNAL AND CHILD HEALTH

There was an average of over 1,500 premature (< 37 weeks gest.) births per year in the 10 County service area for a rate of 10.6% of all births. Greene County (13.3%) fell into the 4th quartile, and Albany (11.3%), Schenectady (11.2%), Montgomery (10.9%) and Warren (10.5%) counties fell into the 3rd quartile of NYS counties (CNA Appendix D-17).

For the premature birth rate in the Medicaid population, Greene (16.9%), Columbia (13.0%), and Schenectady (11.8%) were higher than NYS (11.7%). Five of the 10 counties had lower prematurity rates for the Medicaid births than non-Medicaid births. The lowest ratios were in Montgomery (0.79) and Saratoga (0.80) counties. Greene (1.31) and Columbia (1.25) counties had Medicaid/non-Medicaid prematurity ratios in the 4th quartile (CNA Appendix D-17).

Approximately 4,500 births in the 10 County service area were without adequate prenatal care (as defined by the Kotelchuck index). Warren (54.9%), Montgomery (61.2%), Greene (61.9%), and Columbia (62.9%) counties fell into the 4th quartile. Albany, Ulster, and Dutchess counties were in the 3rd quartile for adequate prenatal care (Figure B-34)(CNA Appendix D-18).

Figure B-34 Percent of Births with Adequate Prenatal Care



Kotelchuck Index takes into consideration time of 1st visit, number of visits and estimated gestational age at delivery

Source: NYSDOH Community Health Indicator Reports

There was an average of 100 infant deaths per year in the 10 County service area, for an infant mortality rate of 6.2 per 1,000 live births, and higher than the NYS rate of 5.1/1,000. Albany (8.6), Warren (8.6), Greene (8.3) and Schenectady (7.0) fell into the 4th quartile of NYS counties;

Columbia and Montgomery counties were in the 3rd quartile (CNA Appendix D-19).

The latest NYS birth defects data available from the Congenital Malformations Registry is for 2005-2007 births. The 10 county prevalence rates per 10,000 births were slightly higher than the Upstate prevalence rates for all the selected birth defects. Montgomery, Ulster and Dutchess had the highest of the 10 county rates for Cleft Lip/Palate; Greene and Schenectady for Downs Syndrome; Schenectady and Montgomery for Hypospadias; Dutchess for Spina Bifida; and Montgomery for Upper/Lower Limb Deficiencies (CNA Appendix D-20).

Of those children covered by government-sponsored insurance programs in the 10 County service area, less than 400 children aged 0-15 months did not get the number of recommended well child visits; 3,800 children 3-6 year olds did not receive the recommended number of recommended visits; and 13,250 children, 12-21 years, did not receive the recommended number of well child visits. For the children 0-15 months, the area rate was 90.1% and only Albany (83.4%) was in the 4th quartile. For children 3-6 years, the area rate was 79.7% with Ulster (75.4%), Schenectady (76.1%) and Albany (76.5%) counties falling into the 3rd quartile. For the children 12-21 years, the area rate was 59.3% with Ulster (52.7%), Schenectady (57.1%) and Albany (57.4%) counties in the 3rd quartile (CNA Appendix D-21).

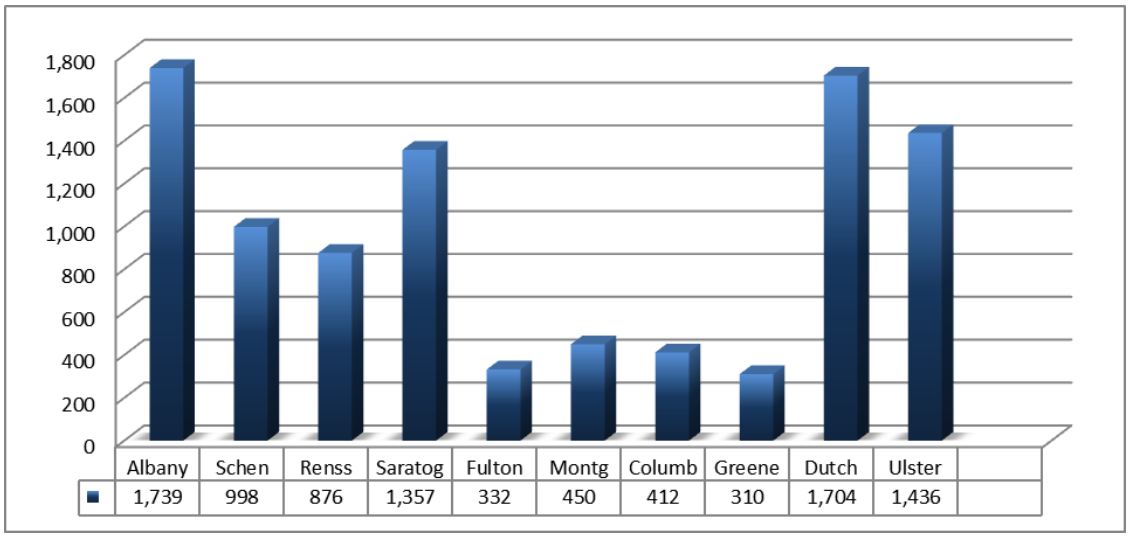
There were approximately 250 service area children per year, less than 72 months of age, with high blood lead levels (10+ ug/dl) for a rate of 9.8 per 1,000 children tested. Every county was above the NYS rate, with Montgomery (29.8), Fulton (27.5), Columbia (14.1), Albany (13.4) and Rensselaer (11.2) falling into the 4th quartile of NYS counties (CNA Appendix D-22).

The 10 County service area experienced 500 adolescent (15-17 years) pregnancies in 2012 for a rate of 17.1 per 1,000 women. Schenectady (31.3), Montgomery (27.9), Albany (22.6) and Fulton (22.5) counties were in the 4th quartile, and Rensselaer and Warren (17.4) in the 3rd quartile of NYS counties (CNA Appendix D-23).

K) IMMUNIZATIONS

Approximately 9,600 children in the 10 County service area, aged 19-35 months, were not fully immunized for an area rate of 56.6%. Ulster (38.2%), Montgomery (42.7%), and Columbia (46.4%) were in the 4th quartile, and Warren (52.0%), Fulton (53.8%) and Dutchess (54%) fell into the 3rd quartile of NYS counties (Figure B-35, CNA Appendix D-24).

Figure B-35 Number of Children Age 19-35 months Not Immunized (2013-14)



Source: NYSDOH Prevention Agenda Dashboard, NYS excluding NYC

The service area had over 31,000 females, 13-17 years of age, not fully immunized for HPV, for an area rate of 26.4%. Ulster (20.8%), and Fulton (20.9%) counties fell into the 4th quartile, while Dutchess (21.9%), and Columbia (27.9%) fell into the 3rd quartile of NYS counties (CNA Appendix D-24).

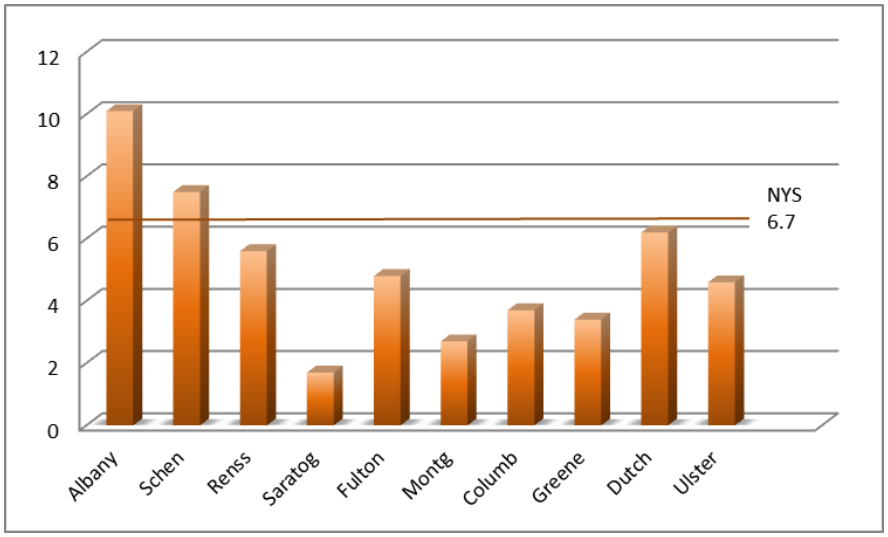
There were approximately 61,000 service area adults, 65 years of age and older, who did not receive an influenza immunization in the past year, for an area rate of 74.9%. Greene (63.7%), and Fulton (68.9%) counties were in the 4th quartile, while Montgomery (69.3%), Albany (72.7%), Warren (73.4%) and Ulster (73.6%) counties fell into the 3rd quartile (CNA Appendix D-24).

L) INFECTIOUS DISEASES

There was an average of 90 new HIV cases per year in the service area, for a rate of 5.9/100,000. Albany (10.1) and Schenectady (7.5) counties

had rates in the 4th quartile, with Dutchess (6.2), Rensselaer (5.6), Fulton (4.8) and Ulster (4.6) in the 3rd quartile of NYS counties (CNA Appendix D-25).

Figure B-36 HIV Rate per 100,000 (2010-2012)



Source: NYSDOH Prevention Agenda Dashboard, NYS excluding NYC

There were almost 400 cases of gonorrhea in the service area for women 15-44 years of age; a service area rate of 133.0/100,000. Schenectady (197.6), Albany (173.4) and Dutchess (173.7) counties had rates in the 4th quartile, while Fulton, Ulster, Greene and Rensselaer counties fell into the 3rd quartile of NYS counties (CNA Appendix D-26).

The 10 County service area had almost 3,400 women, 15-44 years of age, diagnosed with a chlamydia infection in 2012 for a rate of 1,151.4/100,000. Schenectady (1688.3), and Albany (1,444.8) were in the 4th quartile, while Fulton, Montgomery, Rensselaer, and Greene counties fell into the 3rd quartile for chlamydia infections (CNA Appendix D-26).

The 10 County service area had 2,800 cases of Lyme disease per year. Columbia County at 574.6/100,000, Greene County at 521.6, and Rensselaer County at 310.0, had the three highest Lyme disease rates in NYS. In addition, Ulster, Saratoga, Dutchess and Albany counties also fell into the 4th quartile for Lyme disease rates. (CNA Appendix D-27).

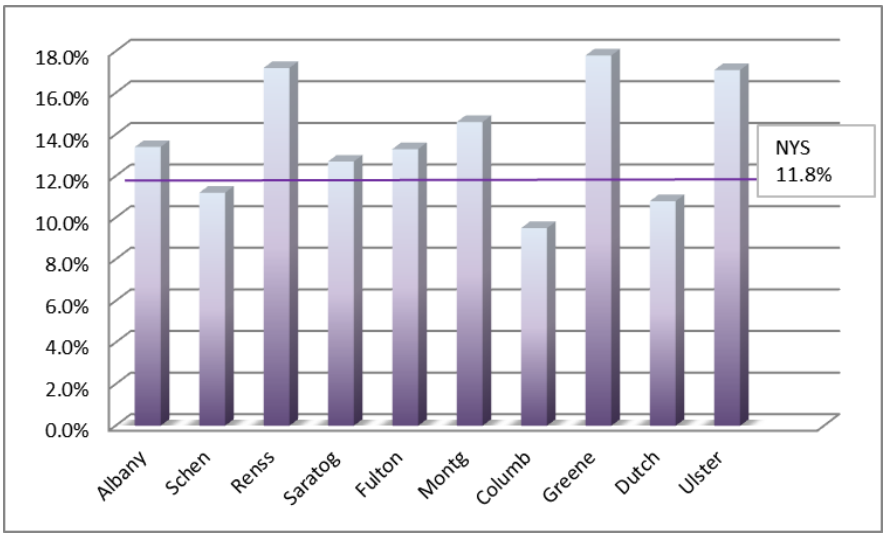
M) MENTAL HEALTH AND SUBSTANCE ABUSE

Seven of the 10 service area counties had rates of binge drinking higher than the Upstate average of 17.4%. Greene (25.3%) and Fulton (22.8%) counties fell into the 4th quartile, while Columbia (20.1%), Saratoga (18.9%), Montgomery (18.9%), Rensselaer (18.6%), and Warren (18.2%) counties fell into the 3rd quartile (CNA Appendix D-9).

The 10 County Service are averages 422 cirrhosis hospitalizations per year. Warren(3.6/10,000), Montgomery (3.0) and Rensselaer (2.6) counties fell in the 4th quartile for the age-adjusted rates. The service area averaged 150 cirrhosis deaths per year. All counties had age-adjusted cirrhosis mortality rates higher than NYS. Fulton (11.9/100,000), Rensselaer (10.8) and Greene (10.6) counties fell into the 4th quartile of NYS counties (CNA Appendix D-28).

When reviewing the service area for adults with 14 or more poor mental health days in the past month, 8 counties had rates higher than Upstate (11.8%). Greene (17.8%), Rensselaer (17.2%), Ulster (17.1%) and Montgomery (14.6%) fell into the 4th quartile while Albany, Fulton, Saratoga and Warren fell into the 3rd quartile of NYS counties (Figure B-37)(CNA Appendix D-9)

Figure B-37 Percent of Adults (18+) with Poor Mental Health for 14+ days last month



Expanded Behavioral Risk Factor Surveillance System (EBRFSS)- Prevention Agenda Tracking Indicators 2012-2013

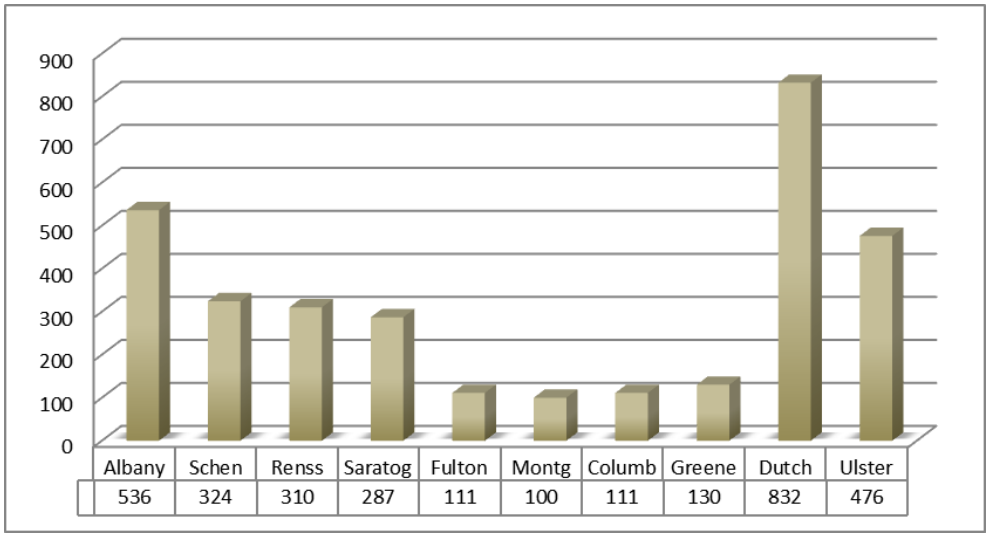
The 10 County area had an average of almost 1,200 self-inflicted injury hospitalizations. Nine of the 10 counties had age-adjusted rates higher

than NYS. Warren (13.6/10,000), Schenectady (12.1), Montgomery (12.0), and Fulton (11.6) counties had self-inflicted hospitalization rates in the 4th quartile, while Rensselaer and Saratoga in the 3rd quartile (CNA Appendix D-29).

There was an average of 162 suicides per year in the service area. Every county in the service area had an age-adjusted suicide mortality rate higher than NYS. Warren County (14.7/100,000) fell into the 4th quartile, and Montgomery (12.3), Saratoga (12.1) and Schenectady (11.6) counties fell into the 3rd quartile of NYS counties (CNA Appendix D-29).

There were over 3,200 drug-related hospitalizations in the 10 County service area (Figure B-38). Greene (30.4/10,000), Dutchess (29.0), and Ulster (27.5) counties had age-adjusted drug-related hospitalization rates in the 4th quartile, while Fulton, Schenectady, Montgomery and Fulton counties fell into the 3rd quartile (CNA Appendix D-30).

Figure B-38 Drug Related Hospitalizations 2010-2012



Source: NYSDOH Community Health Indicator Reports

The service area averaged over 150 drug-related newborn discharges per year for a rate of 104.6 per 10,000 newborns. Schenectady's rate of 207.7 was the highest of the 10 counties and in the 4th quartile; Warren County (145.4) also fell into the 4th quartile. Fulton, Greene, Rensselaer, Albany and Montgomery counties were in the 3rd quartile of NYS counties (CNA Appendix D-30).

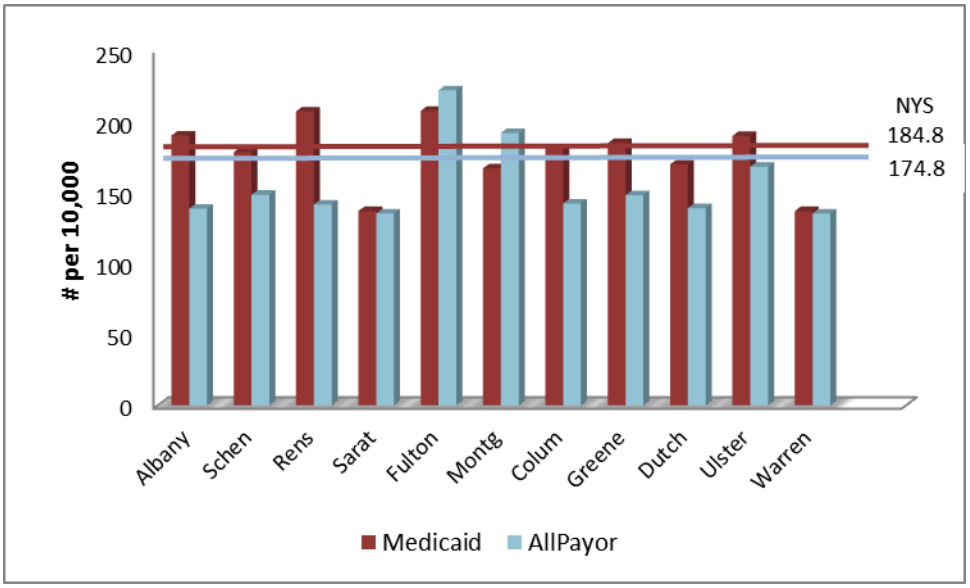
Information from the above Section is also contained in CNA Appendix D-31, 10 County Public Health Indicator Matrix. The appendix presents rates and populations at risk for 148 indicators by Prevention Agenda Priority Areas. County rates were identified as being in the 3rd or 4th quartile for all NYS counties.

II. Health Status of the Medicaid Population

A) PREVENTABLE ADMISSIONS AND VISITS - MEDICAID VS. ALL PAYER POPULATION

Prevention Quality Indicators (PQI) represent conditions that could be prevented or reduced with appropriate primary care. For the AMC/Ellis PPS service area, when comparing all payers to the Medicaid population for the composite PQIs, the county Medicaid population usually had higher rates than the all payer population. The exception was Montgomery County where the Medicaid population had better PQIs for Overall Composite as well as the Chronic, Circulatory and Diabetes Composites. (Figure B-39) (CNA Appendix E-1).

Figure B-39 Prevention Quality Indicators (PQI) Overall Composite All Payer & Medicaid

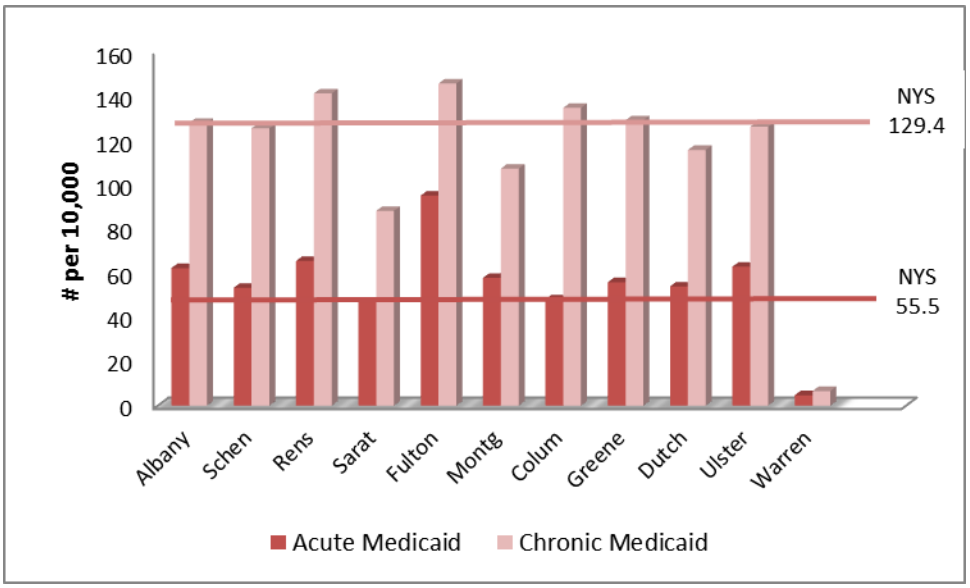


Source: Salient Performance Data - Hospital Inpatient Prevention Quality Indicators by County

For the Circulatory Composite, 7 of the 10 service area counties also had the Medicaid population doing better than the all payer population (CNA Appendix E-1). When reviewing the Composite PQI categories for the all payer population, Fulton County was higher than the NYS rate for all categories, and Montgomery County was higher for all but the Respiratory Composite. Ulster County had higher all payer PQIs than the

NYS rate for Acute, Chronic, Circulatory and Respiratory Composites. (Figure B-40).

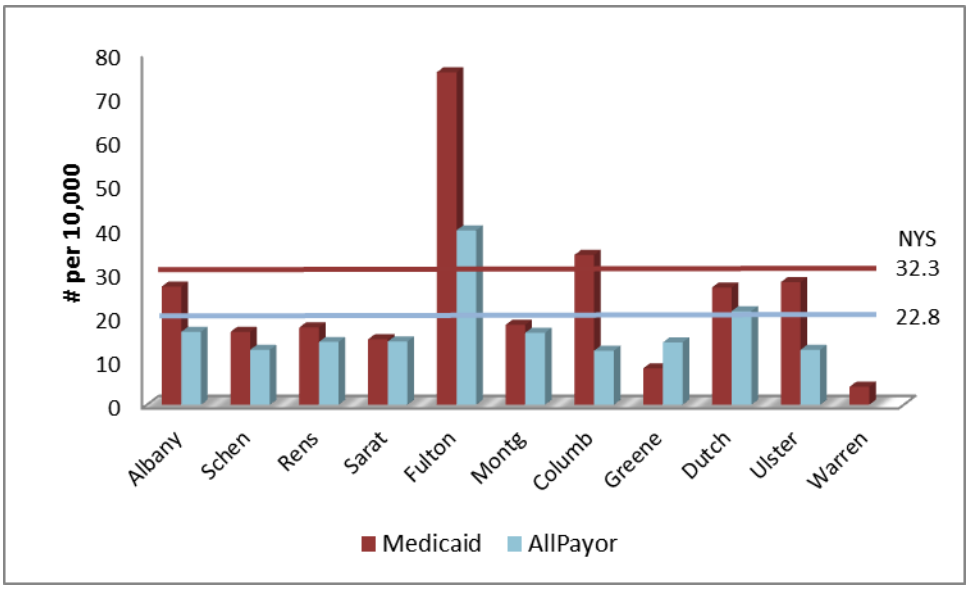
Figure B-40 Prevention Quality Indicators (PQI) Acute and Chronic Medicaid Rates



Source: Salient Performance Data - Hospital Inpatient Prevention Quality Indicators by County

The Pediatric Prevention Quality Indicators (PDI) are ambulatory care sensitive indicators but for the childhood population. Similar to the 10 County service area PQIs, the childhood Medicaid population usually had higher PDIs than the all payer population. The exception was Greene County, where the Medicaid population fared better than the all payer population for all the PDI Composite rates, and Saratoga County's Medicaid population had better Chronic and Pediatric Asthma Composite rates than the all payer population (Figure B-41). When reviewing the all payer PDI rates, Fulton County was higher than NYS for Overall, Chronic, and Pediatric Asthma Composite PDI rates, while Albany County was higher than NYS for the Acute PDI Composite rate (CNA Appendix E-2).

Figure B-41 Pediatric Quality Indicators (PDI) Overall Composite All Payer & Medicaid Rate

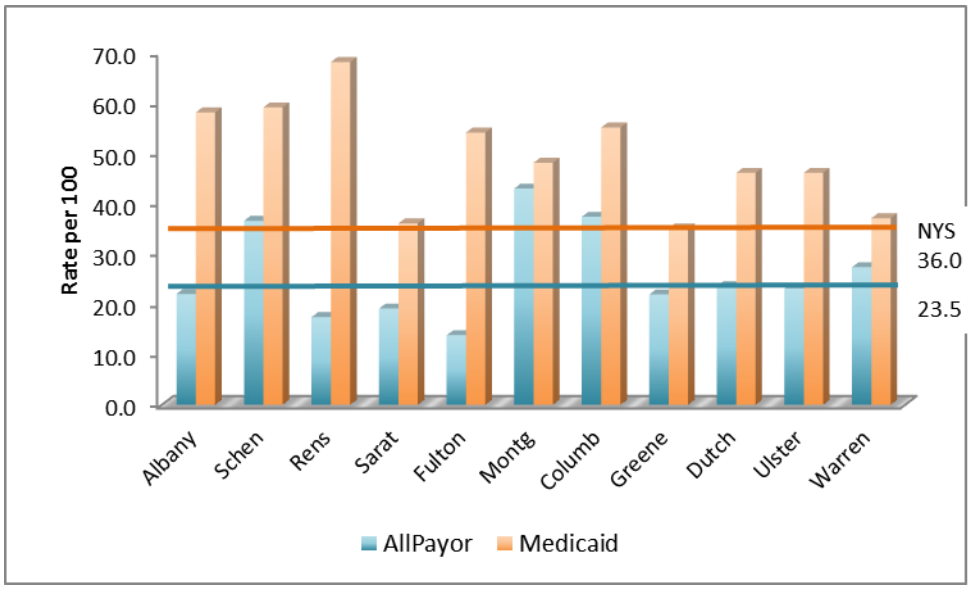


Source: Salient Performance Data - Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011

When reviewing the Potentially Preventable Emergency Department Visits (PPV) for the 10 county service area, all counties had much higher Medicaid rates compared to the all payer rates (Figure B-42) While the NYS difference between the PPV all payer versus Medicaid population is 12.5 per 100 (Medicaid-36.0; all payer-23.5), 6 of the 10 counties had differences over 20 per 100: Rensselaer-50.6; Fulton-40.2; Albany-36.0; Ulster-22.9; Schenectady-22.5; and Dutchess-22.5. Four counties had higher all payer PPV rates than NYS (23.5 per 100): Montgomery- 42.9; Columbia-37.3; Schenectady-36.5; and Warren (27.4) (CNA Appendix D-31).

Albany Medical PPS and Ellis PPS

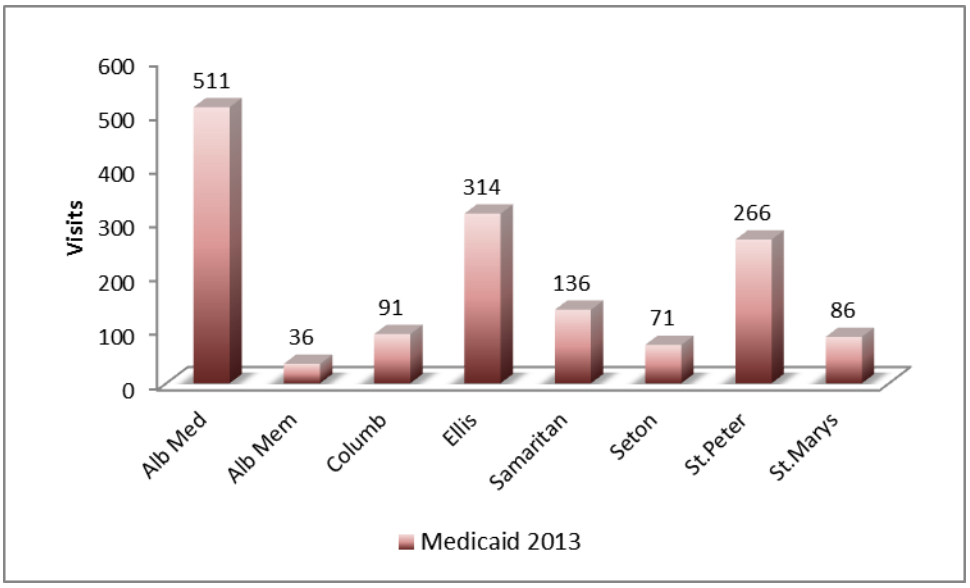
Figure B-42 Potentially Preventable ED Visits All Payer & Medicaid Rate



Source: Salient Performance Data - Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011

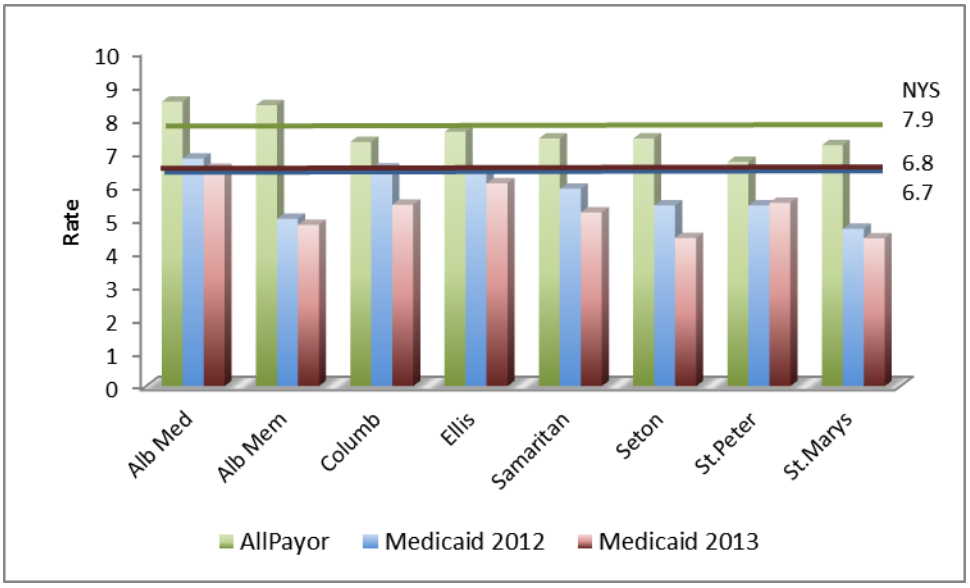
Potentially Preventable Readmissions (PPR) determines whether a readmission is clinically related to a prior admission based on the patient's diagnosis, procedures in the prior admission, and the reason for readmission. High PPR rates indicate a need to coordinate post-hospital care. The 2011-12 NYS PPR rate per 100 at risk admissions was 7.9 for all payers and 6.8 for the Medicaid population. All Capital District hospitals had Medicaid PPR rates lower than the comparable all payer rates. The 2013 NYS PPR rate for the Medicaid population of 6.31 per 100 at risk admissions was a reduction from the 2011-12 rate. All the Capital District hospitals also showed a reduction in the PPR rate except St. Peters Hospital which showed a slight increase from 5.4 to 5.48 per 100. Albany Medical Center was the only hospital with a Medicaid PPR rate (6.49) greater than NYS. Albany Medical Center Hospital (n=511), Ellis Hospital (n=314) and St. Peters Hospital (n=266) had the largest number of potentially preventable Medicaid readmissions in 2013 (Figure B-43 and Figure B-44)(CNA Appendix D-31).

Figure B-43 Potentially Preventable Re-admissions (PPR)



Source: Salient Performance Data - Medicaid Hospital Inpatient Potentially Preventable Readmission Rates by Hospital: Beginning 2011

Figure B-44 Potentially Preventable Re-admissions (PPR) Rate Risk Adjusted



Source: Salient Performance Data - Medicaid Hospital Inpatient Potentially Preventable Readmission Rates by Hospital: Beginning 2011

B) PREVENTABLE ADMISSIONS (PQI) - MEDICAID POPULATION

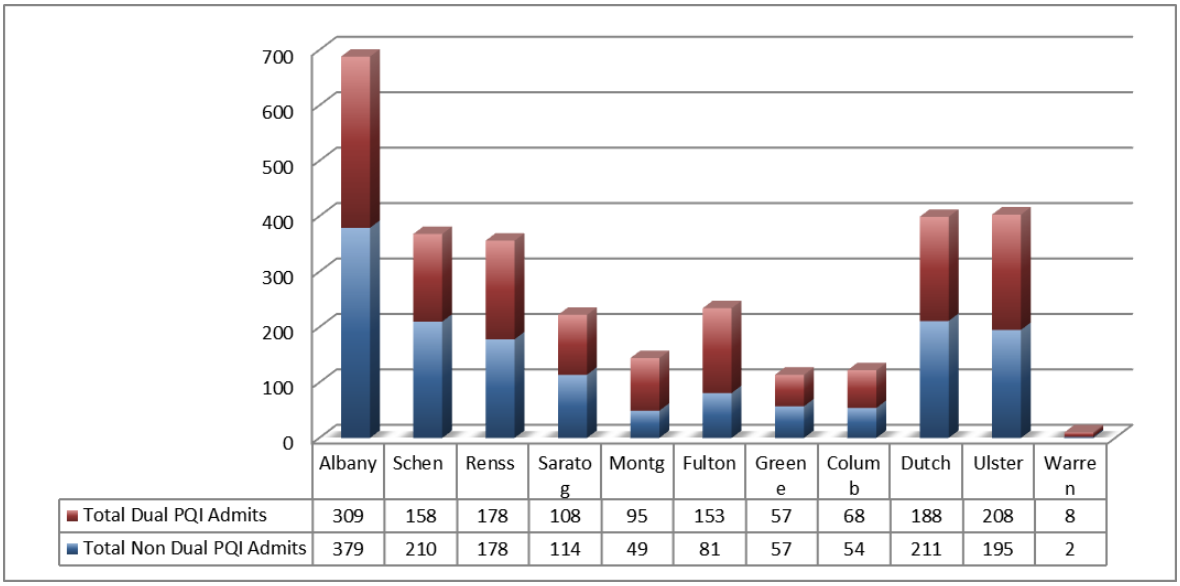
There were approximately 3,200 adult PQI hospitalizations per year in the Medicaid population residing in the AMC/Ellis PPS service area. Of these PQIs, 21% were from Albany, 15% from Dutchess, and 12% from Rensselaer counties. NYS had a PQI Overall Composite rate of 184.8 per 10,000 Medicaid recipients. Of the 10 counties in the service area, 4 had rates higher than NYS, and fell into the 4th or 5th Quintile of NYS counties: Fulton (247.7); Rensselaer (206.9); Albany (189.9); and Ulster (189.7) counties.

There were over 1,100 Medicaid Acute Composite PQIs per year in the service area. Of these, 20% were from Albany, 15% from Dutchess, and 12% from Rensselaer. Six of the 10 counties had Acute PQI rates greater than NYS (55.5 per 10,000), with Fulton (94.8) and Rensselaer (65.3) counties falling in the 4th or 5th Quintile of all NYS counties. There were about 2,100 Medicaid Chronic Composite PQIs per year in the service area. Of these, 22% were from Albany, 15% from Dutchess and 12% from Schenectady counties. There were 3 counties with rates higher than NYS (129.4 per 10,000), but 4 counties falling into the 4th or 5th Quintile for Chronic Composite PQIs: Fulton (145.4); Rensselaer (140.9); Columbia (134.9); and Greene (128.8). (CNA Appendix E-5).

There were an equal number of Dual and Non-Dual PQI admissions in the 10 County service area (Figure B-45).

Geographically, the Medicaid PQI admissions come predominantly from the urban areas of Albany, Schenectady, Troy, Kingston, Poughkeepsie and Beacon (Figure B-47). The top neighborhoods for PQI are Troy/Lansingburg (Rensselaer County), Arbor Hill/Center Square and South End/Riverfront, West End, Delaware/2nd Avenue in Albany County and Northeastern Saratoga County.

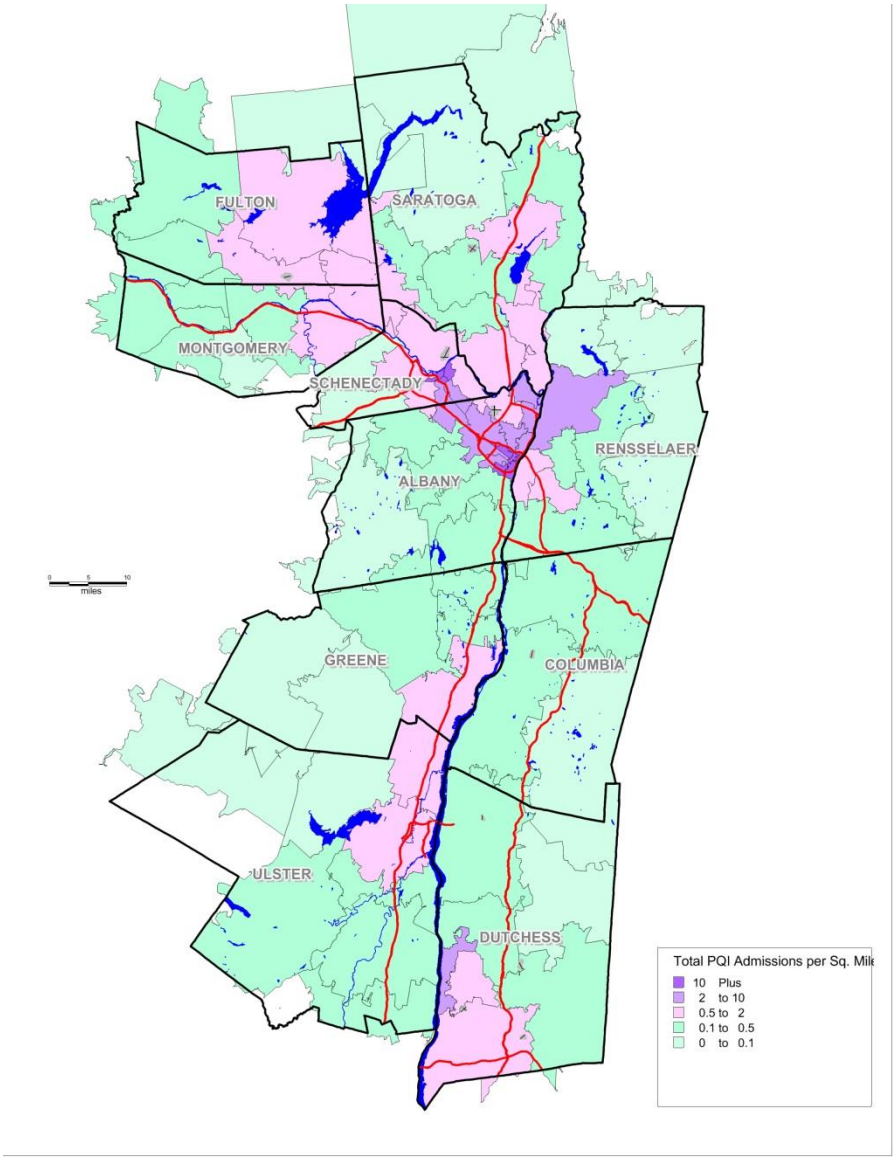
Figure B-45 Prevention Quality Indicators (PQI) Dual and Non-Dual Admissions



	Albany	Schen	Renss	Saratog	Montg	Fulton	Greene	Columb	Dutch	Ulster	Warren
Total Dual PQI Admits	309	158	178	108	95	153	57	68	188	208	8
Total Non Dual PQI Admits	379	210	178	114	49	81	57	54	211	195	2

Source: Salient Performance Data - Hospital Inpatient Prevention Quality Indicators by County

Figure B-46 Prevention Quality Indicators (PQI) Overall Composite Medicaid by Neighborhood per Square Mile



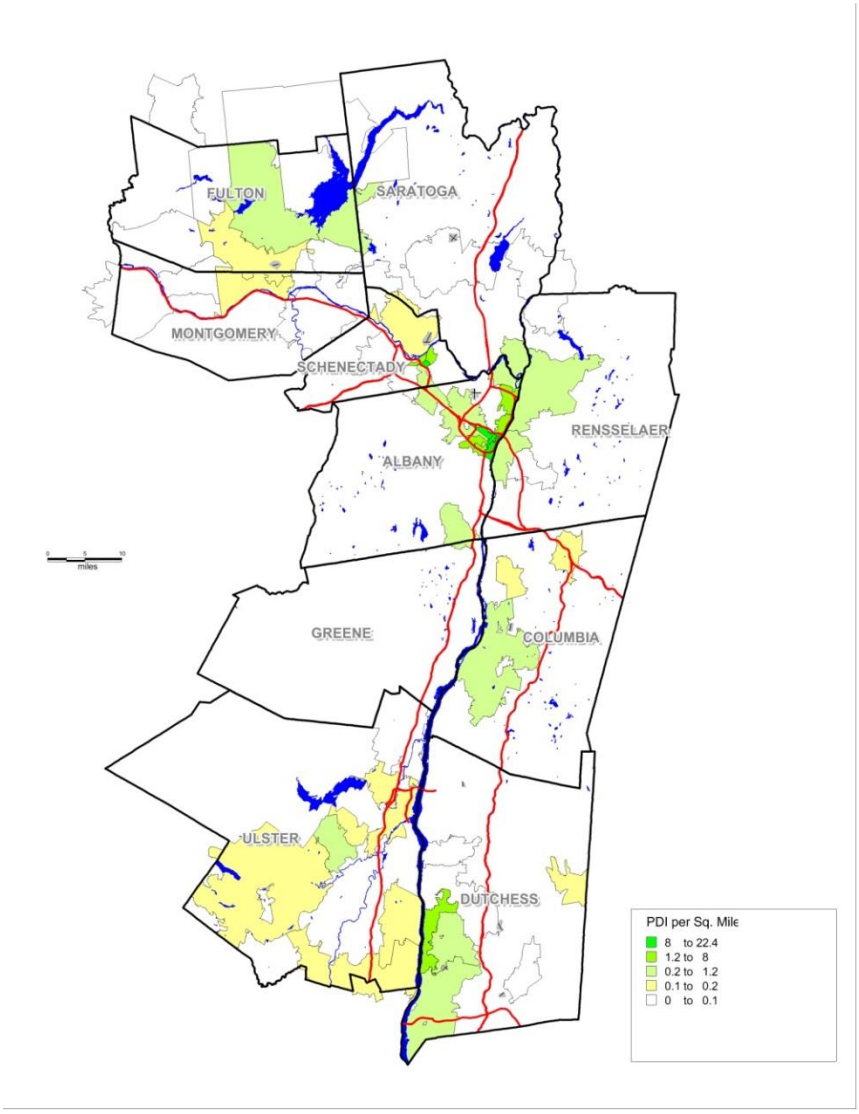
Source: DSRIP Medicaid Beneficiaries Inpatient Admissions and Emergency Room Visits by Zip Code Beginning_2012

C) PEDIATRIC PREVENTION QUALITY INDICATOR (PDI)

There were about 220 Medicaid Overall PDIs per year in the 10 County service area: 25% from Albany; 18% from Dutchess; and 13% from Ulster counties. The NYS Overall PDI Composite rate was 32.3 per 10,000 Medicaid recipients. Fulton (75.7), Columbia (34.1), Ulster (27.9), Albany (26.9) and Dutchess (26.7) counties all fell in the 4th or 5th Quintile for all NYS counties. There was an average of 34 Acute and 85 Chronic

Composite Medicaid PDIs in the AMC/Ellis PPS service area. Albany (11.2 per 10,000), Fulton (8.1), Ulster (8.0), and Saratoga (7.7) fell into the 4th or 5th Quintile for the PDI Acute Composite, and were all higher than the NYS rate of 7.5 per 10,000. The NYS rate for the PDI Chronic Composite was 24.8 per 10,000 Medicaid recipients. Fulton County (71.6) was almost 3 times the NYS rate, and together with Columbia (28.7), and Dutchess (21.5) counties, fell in the 4th or 5th Quintile of all NYS counties (CNA Appendix E-5). The geographic distribution of the PDIs is similar to that of the PQIs (Figure B-47).

Figure B-47 Pediatric Prevention Quality Indicators (PDI) Medicaid per Square Mile by Neighborhood

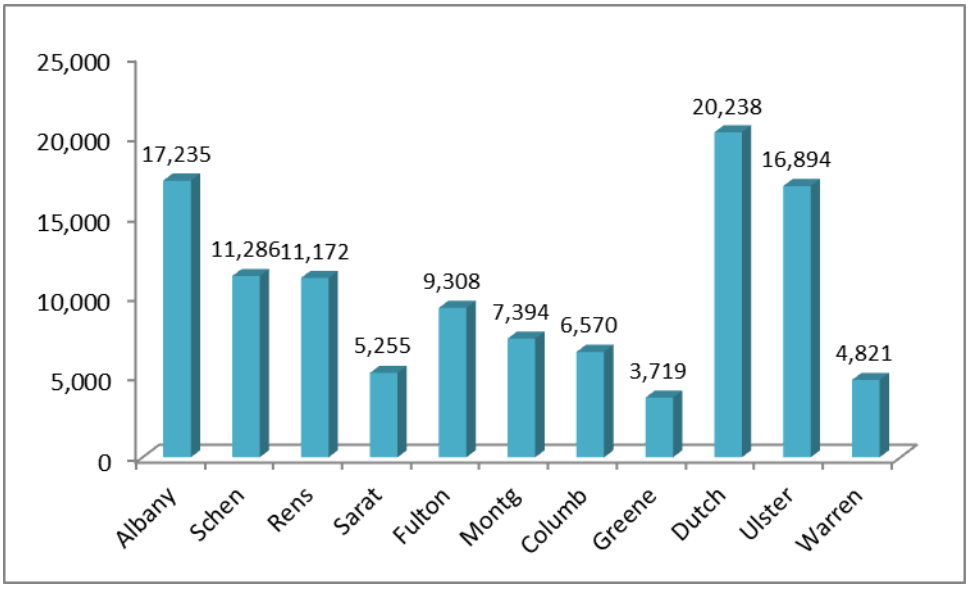


Source: Salient Performance Data - Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient Zip Code: Beginning 2011

D) POTENTIALLY PREVENTABLE EMERGENCY VISIT (PPV)

There was an average of 154,000 Medicaid PPVs in the 10 County service area (Figure B-48). Of these 22% were from Albany, 15% from Schenectady, and 15% from Rensselaer. All 10 counties had equal to or greater Medicaid PPV rates than NYS (35 per 100 Medicaid recipients). Rensselaer (68), Schenectady (59), Albany (58) and Columbia (55) counties were in the 4th or 5th Quintile of all NYS counties for Medicaid PPVs. (CNA Appendix E-5).

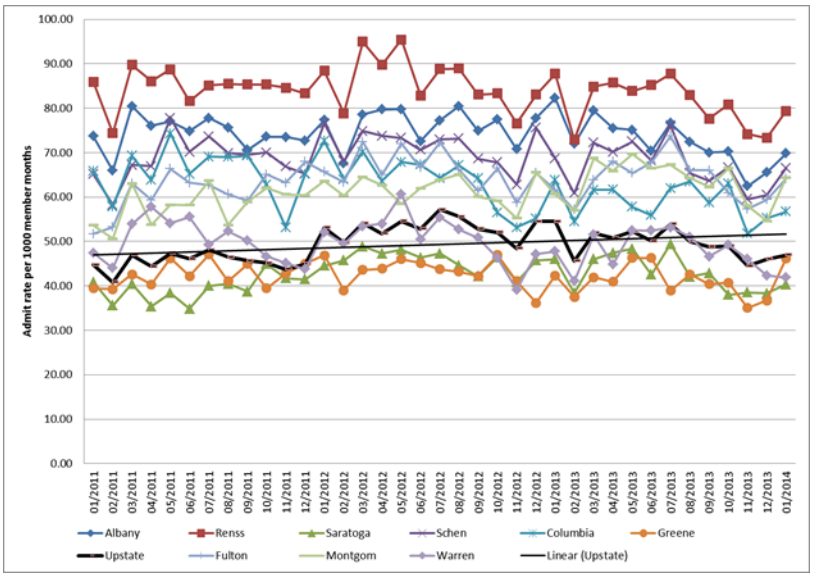
Figure B-48 Potentially Preventable ED Visits (PPV)



Source: DSRIP Salient Performance Data - Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011

ED visits have trended up slightly between January 2011 and January 2014. The ED visit rates in all counties in the service area were above the Upstate average with the exception of Saratoga, Greene and Warren counties (Figure B-49).

Figure B-49 ED Rate per 1,000 Member Months by County

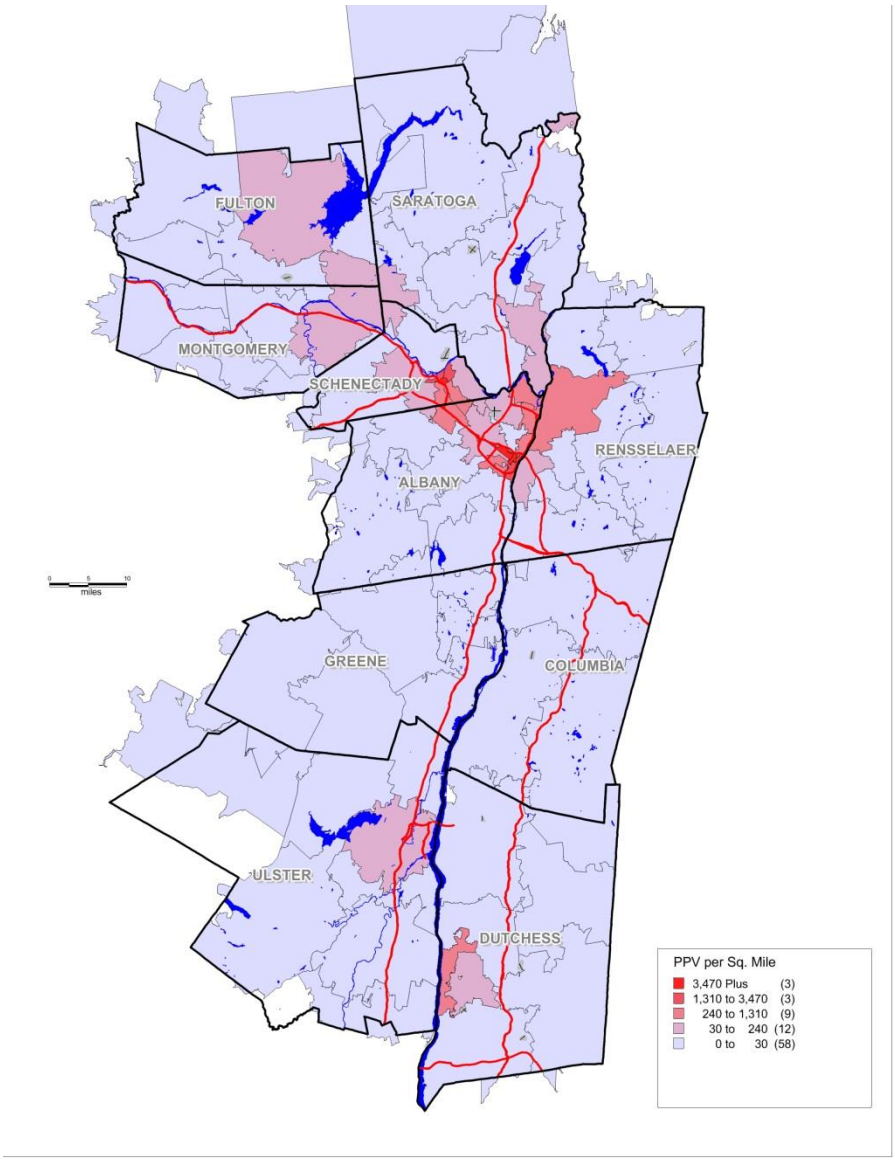


Source: DSRIP Dashboard C2

The PPV geographic distribution is similar to the PQI and PDI distributions (Figure B-51). The greatest concentrations of PPV is found in the Schenectady County neighborhood Hamilton Hill followed by Arbor Hill/Center Square and West End (including West Hill) in Albany County.

Albany Medical PPS and Ellis PPS

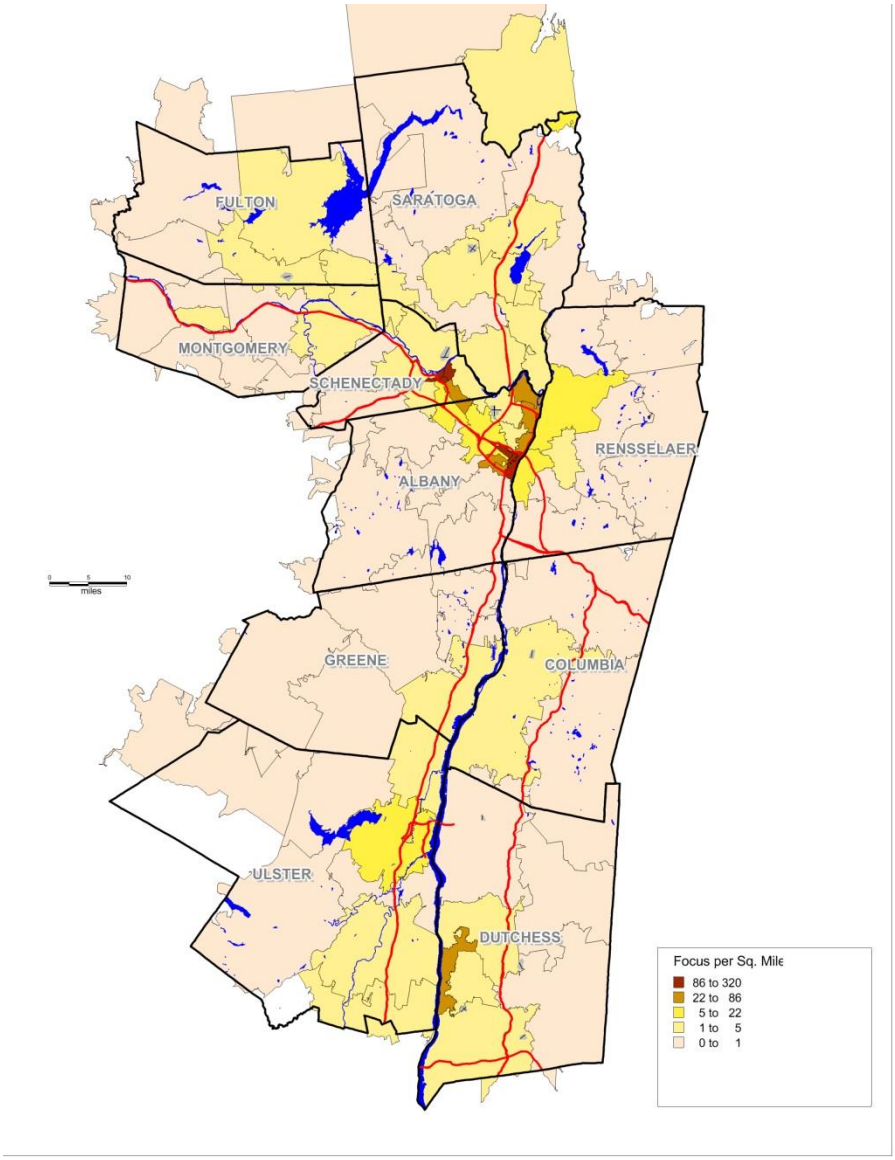
Figure B-50 Potentially Preventable ED Visits (PPV) Medicaid per Square Mile by Neighborhood



Source: DSRIP Salient Performance Data - Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient Zip Code: Beginning 2011

SPARCs analysis was performed to identify the super-utilizers of the ED defined as those using the ED two or more times in a 6 month period. The geographic distribution of the super-utilizers (Figure B-51) is similar to the geographic pattern of the preventable ED visits. The top neighborhoods for super-utilizers were Hamilton Hill in Schenectady County, Troy/Lansingburgh in Rensselaer County followed by West End, Arbor Hill/Center Square and the South End/Riverfront in Albany County. Gloversville/Mayfield in Fulton County also ranked high for super-utilizers.

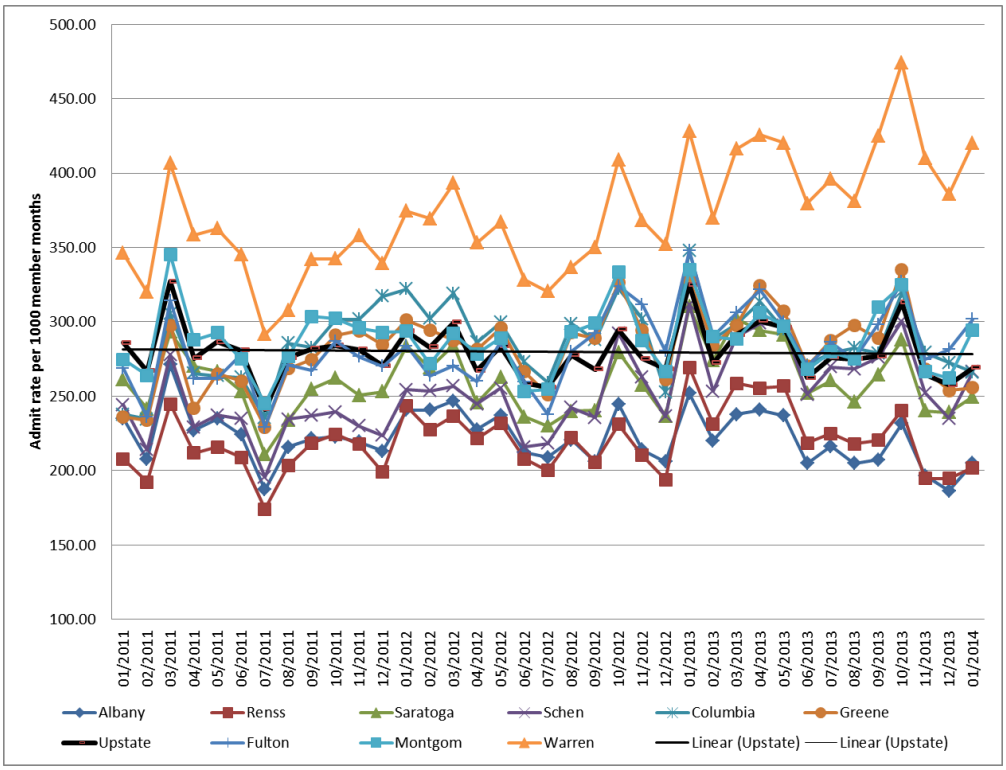
Figure B-51 Focus Group – ED Super-Utilizer and/or 30 day all cause Re-admission 2011-2013



E) PRIMARY CARE VISIT RATES

An indicator of over utilization of the ED is the primary care visit rate. Primary care visit rates have remained stable from January 2011 to January 2014 for the Service Area, with only Warren, Fulton and Montgomery counties having rates at or above the Upstate rate (Figure B-52). All Service Area counties have primary care visit rates lower than the Upstate NY rate of 316 visits per 1,000 member months (2013) except for Warren and Dutchess Counties (409)(Figure B-53). The percent of members with primary care visits were lowest in Rensselaer, Albany, Greene and Schenectady counties indicating an underutilization of primary care (Figure B-54).

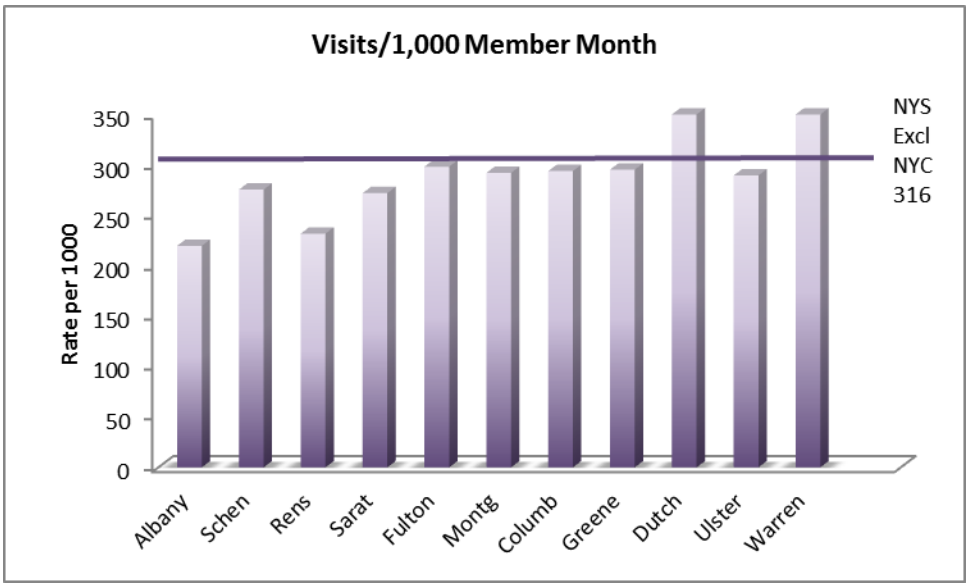
Figure B-52 Primary Care Visit Rate per 1,000 Member Months



Source: DSRIP Dashboard C4

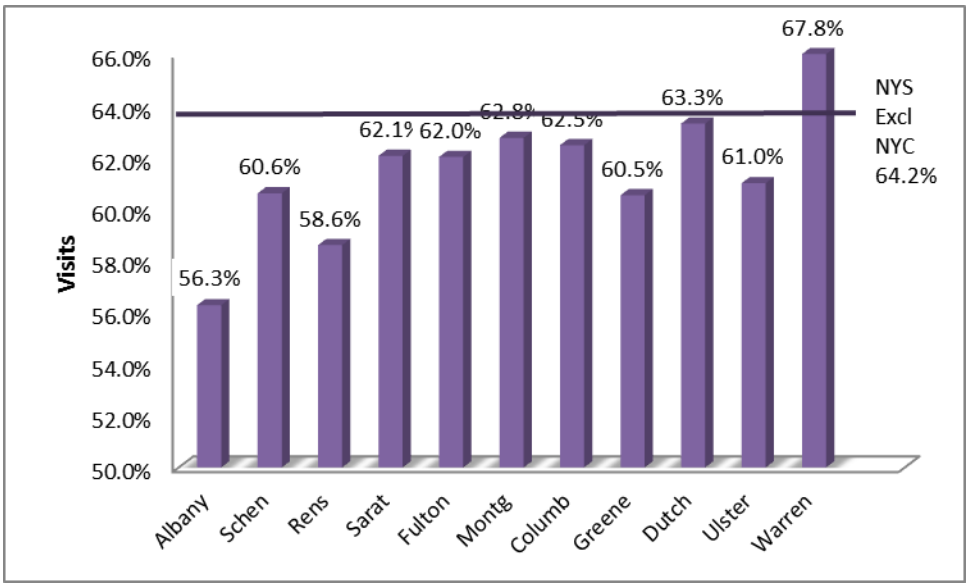
Albany Medical PPS and Ellis PPS

Figure B-53 Medicaid Primary Care Visit Rate



Source: DSRIP Dashboard C4

Figure B-54 Percent of Members with Primary Care Visits



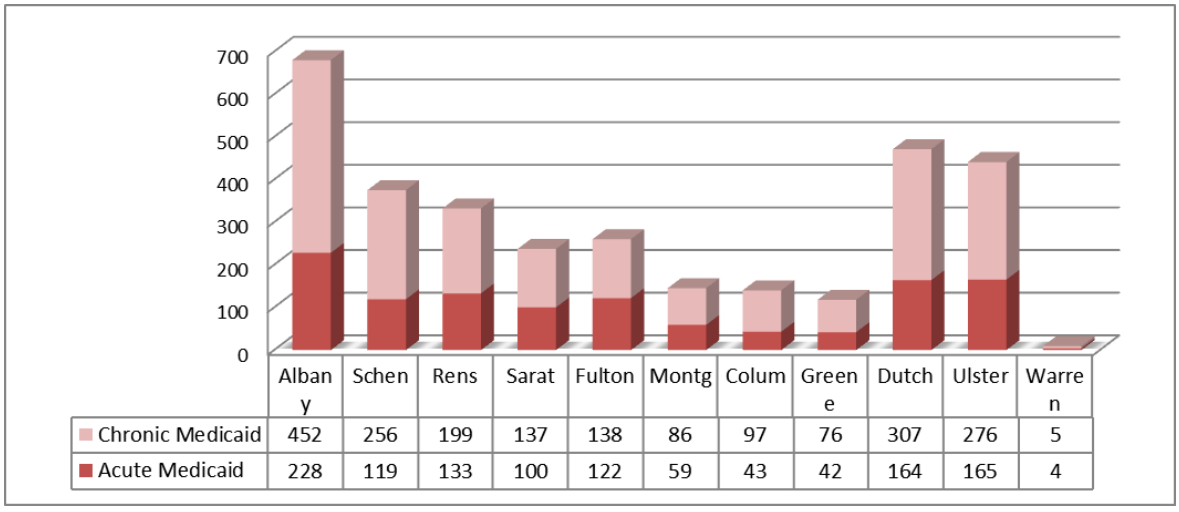
Source: DSRIP Dashboard C4

III. Medicaid Chronic Care

A) CHRONIC CARE OVERVIEW

For the 11 County Service Area, there are 1 ½ to 2 times the Chronic PQIs than Acute PQIs in the Medicaid population (Figure B-55).

Figure B-55 Prevention Quality Indicators (PQI) Acute and Chronic Medicaid Admissions

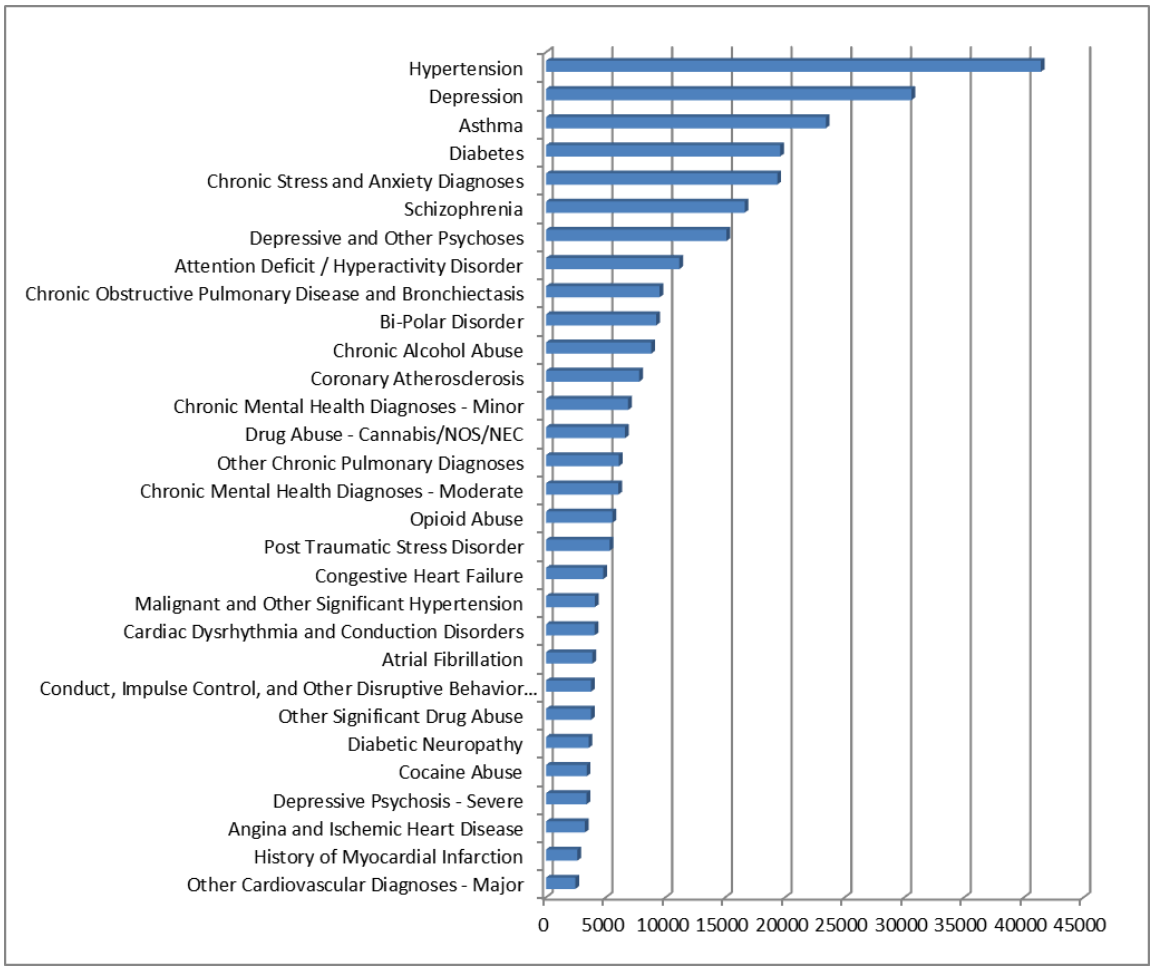


	Albany	Schen	Rens	Sarat	Fulton	Montg	Colum	Greene	Dutch	Ulster	Warren
Chronic Medicaid	452	256	199	137	138	86	97	76	307	276	5
Acute Medicaid	228	119	133	100	122	59	43	42	164	165	4

Source: DSRIP Chartbooks (Average of 2011 and 2012 visits), Census 2011

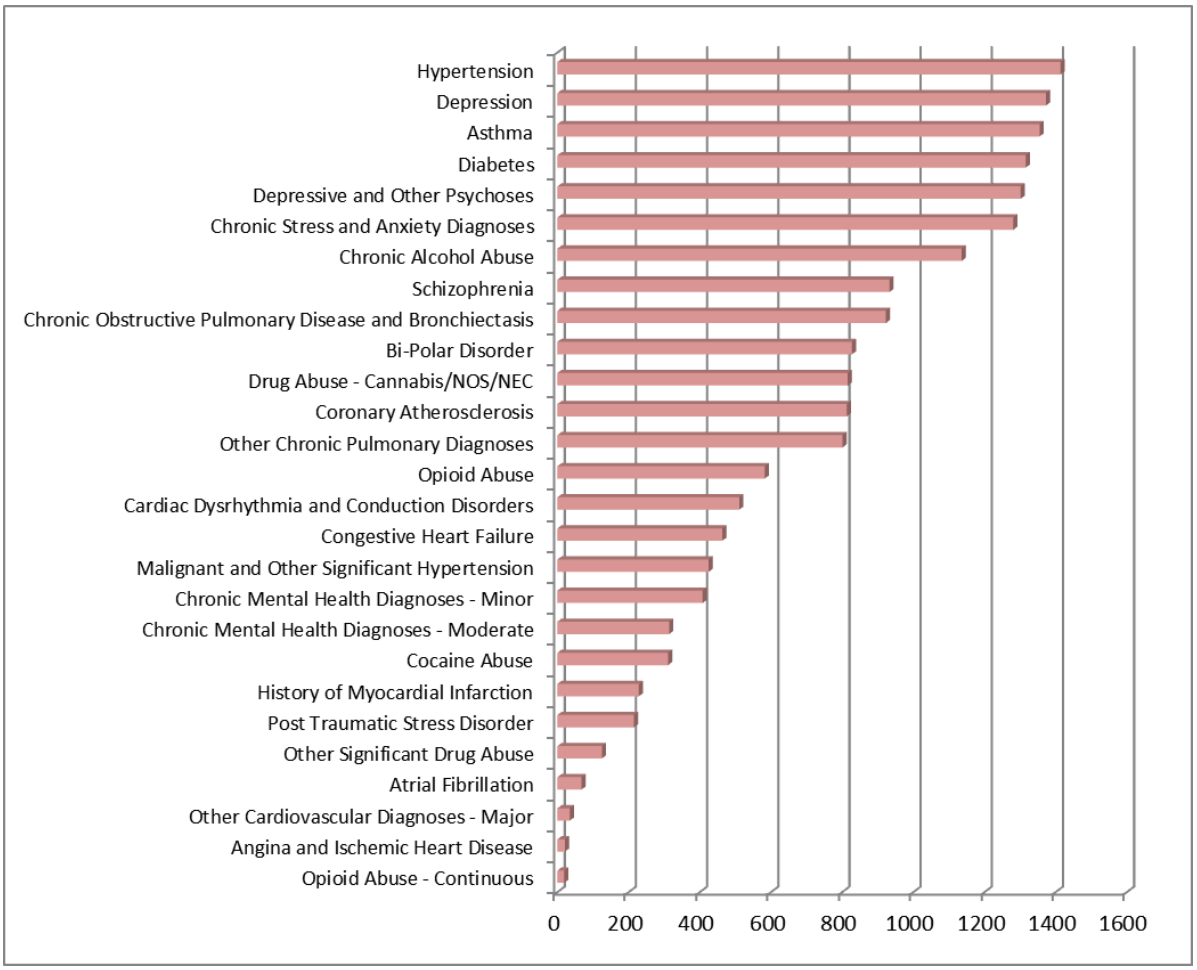
The 5 leading Chronic Conditions in the 10 County Medicaid population were: hypertension; depression; asthma; diabetes; and chronic stress and anxiety (Figure B-56). Similarly, the leading causes of Medicaid inpatient admissions were: hypertension; Depression and other depressive psychoses; asthma; diabetes; and chronic stress and anxiety diagnoses (Figure B-57). For ED visits the 5 leading conditions are chronic stress and anxiety diagnoses, schizophrenia, depression, diabetes and bi-polar disorder (Figure B-58).

Figure B-56 Medicaid Beneficiaries by Chronic Condition



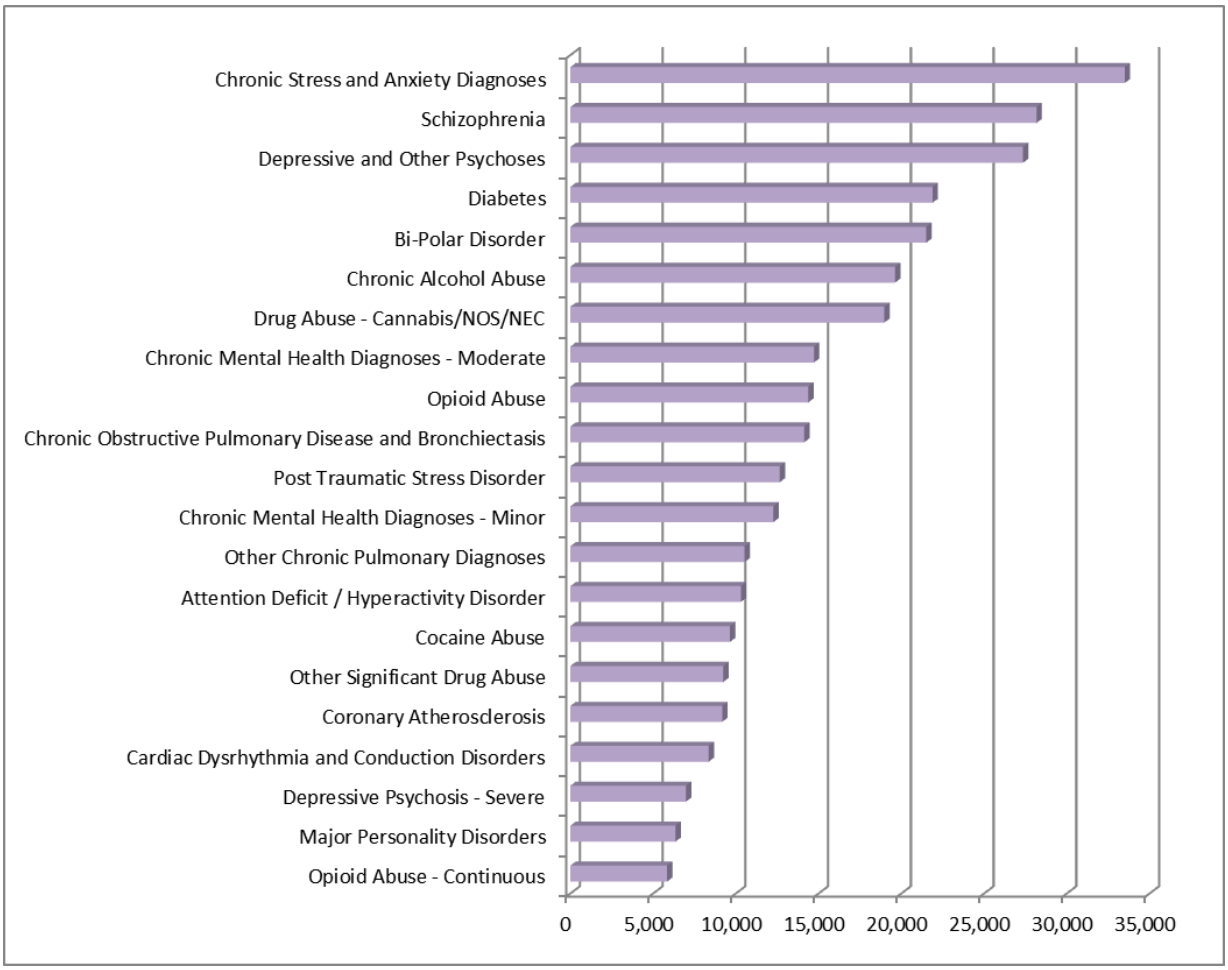
Source: Salient PerformanceData - DSRIP Medicaid Chronic Conditions 10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Figure B-57 Medicaid Inpatient Admissions by Chronic Condition



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

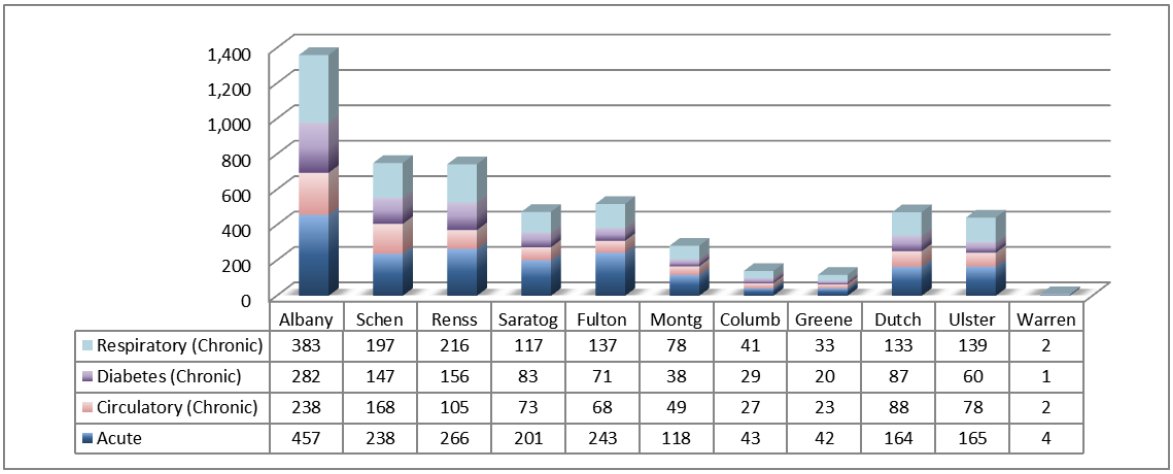
Figure B-58 Medicaid ED Visits by Chronic Condition



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

When breaking down the Chronic PQIs by specific composites, there are more Respiratory PQIs, followed by Diabetes and Circulatory Composite PQIs (Figure B-59).

Figure B-59 Prevention Quality Indicators (PQI) Composite Count

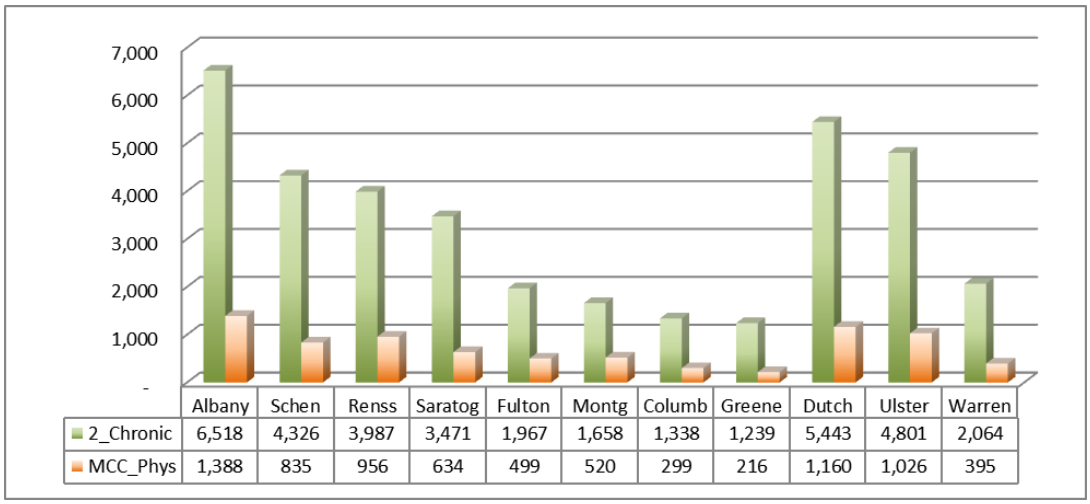


	Albany	Schen	Renss	Saratog	Fulton	Montg	Columb	Greene	Dutch	Ulster	Warren
Respiratory (Chronic)	383	197	216	117	137	78	41	33	133	139	2
Diabetes (Chronic)	282	147	156	83	71	38	29	20	87	60	1
Circulatory (Chronic)	238	168	105	73	68	49	27	23	88	78	2
Acute	457	238	266	201	243	118	43	42	164	165	4

Source: DSRIP Chartbooks and the PQI dataset for Medicaid Recipients

As seen Figure B-57 and Figure B-58 above, those with chronic conditions and with behavioral health issues constitute the heavy users of both ED and inpatient services. SPARCS analysis identified a target group (2_Chronic) that has multiple chronic physical conditions and/or moderate or significant behavioral health disorders. Figure B-61 shows the geographic distribution of these chronic individuals. Figure B-60 shows the number and concentration by county. The highest concentrations are in the urban tri city areas, especially Hamilton Hill in Schenectady and Troy/Lansingburgh in Rensselaer and West End in Albany county, with pockets in Fulton (Gloversville) , Ulster (Kingston) and Dutchess Counties (Poughkeepsie).

Figure B-60 Number of Chronic (2_chronic) and Multiple Chronic Condition (MCC_Phys) People



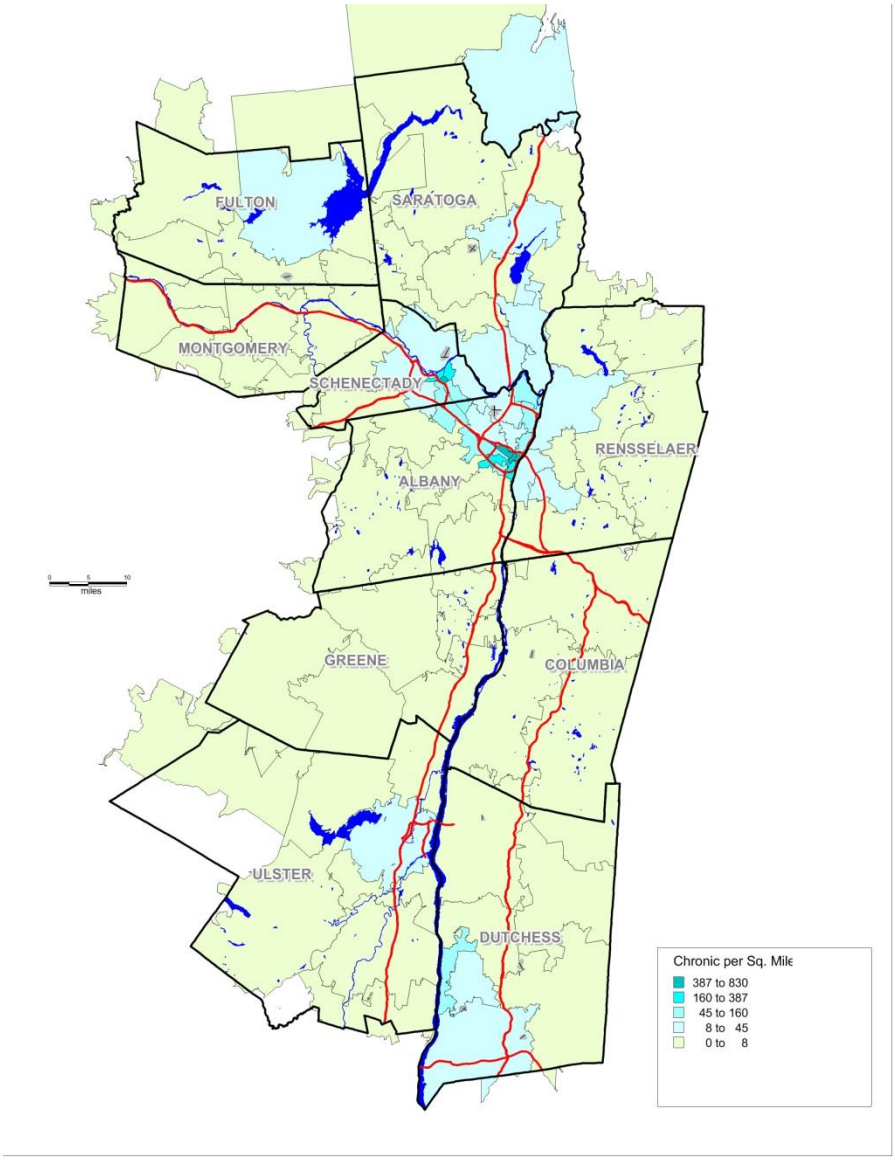
	Albany	Schen	Renss	Saratog	Fulton	Montg	Columb	Greene	Dutch	Ulster	Warren
2_Chronic	6,518	4,326	3,987	3,471	1,967	1,658	1,338	1,239	5,443	4,801	2,064
MCC_Phys	1,388	835	956	634	499	520	299	216	1,160	1,026	395

Source: SPARCs Analysis
2_Chronic = Multiple Chronic Physical Condition or Moderate or Significant Behavioral Health
MCC_Phys = Multiple Chronic Physical Condition = 4+ of 10 Chronic Physical Conditions

SPARCs analysis was done to further define a sub-group of those with four or more of the 10 most common chronic physical conditions. These individuals are a good proxy for palliative care because of the likelihood of also having pain and other disease management issues (Note: the difference between the total 2_Chronic bar and the MCC_Phys bar represents Medicaid members and Uninsured with a moderate or significant behavioral health diagnosis and less than 4 chronic physical conditions). Figure B-60 shows the numbers and distribution by County.

The geographic distribution is similar to the broader chronic group with some differences (Figure B-62). The top neighborhoods for the this group were Troy/Lansingburg in Rensselaer County, Kingston in Ulster, Poughkeepsie and Fishkill in Dutchess, Hamilton Hill in Schenectady County, West End in Albany County and Gloversville in Fulton County.

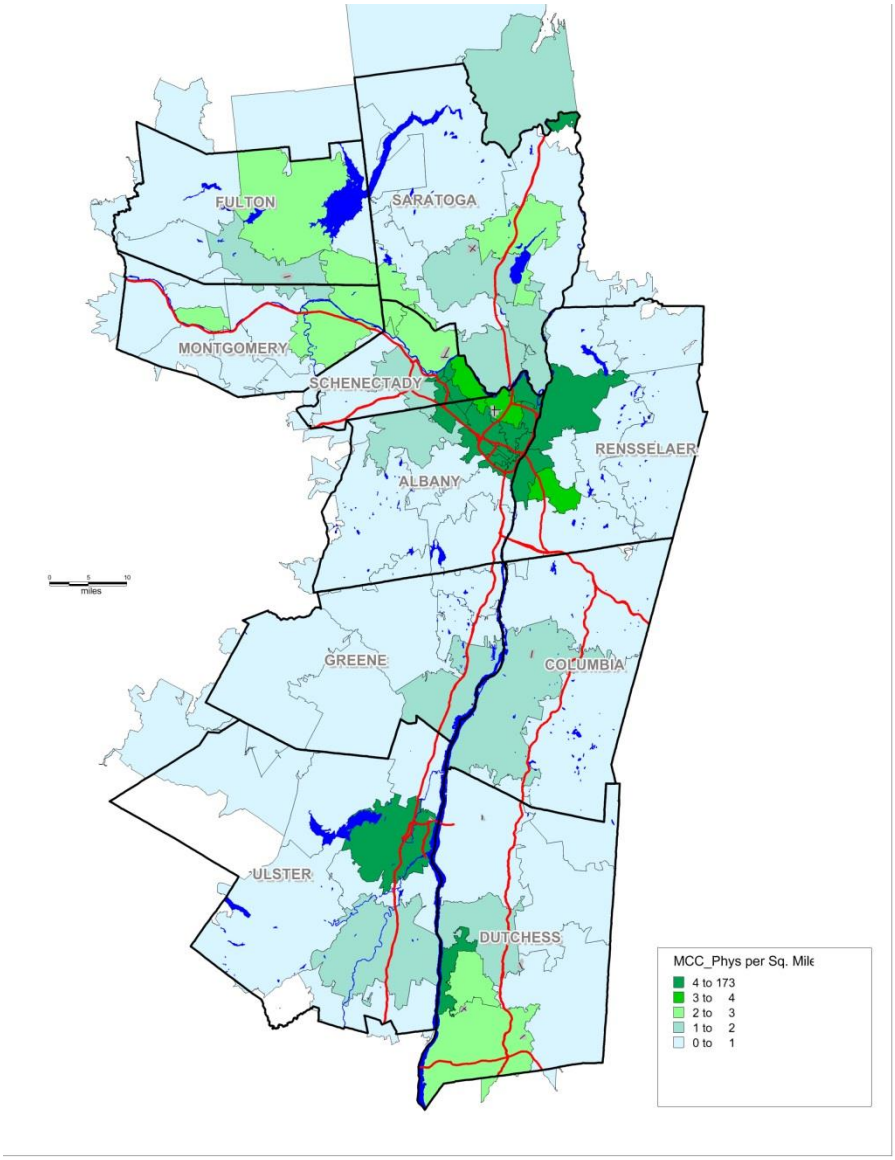
Figure B-61 Map of Chronic Utilizers



Sources: SPARCS Analysis, Multiple chronic physical conditions or Moderate or Significant Behavioral Health

Albany Medical PPS and Ellis PPS

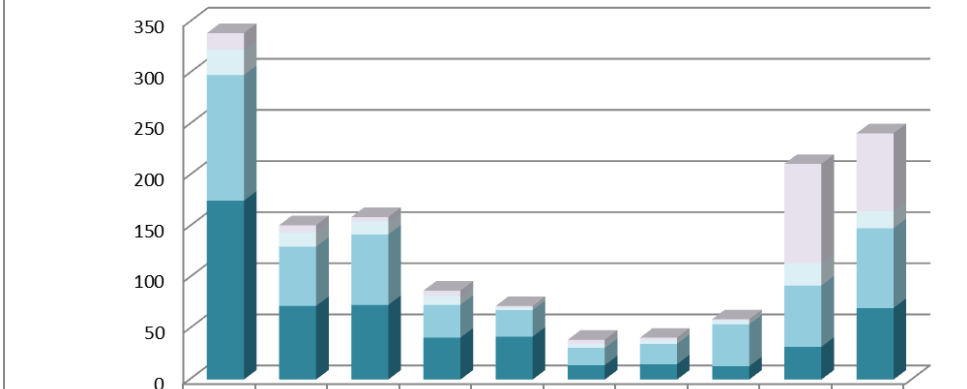
Figure B-62 Four or More Chronic Conditions



A) DIABETES

The 10 County service area averaged 584 Medicaid Diabetes Composite PQIs per year. Most were comprised of Diabetes Long Term (n=262) and Short Term (n=249) Complication PQIs. In addition, the service area averaged 56 Adult Uncontrolled Diabetes PQIs and 28 Lower Extremity Amputations in Diabetics PQIs for Medicaid recipients (Figure B-63). Of the average 584 Medicaid Diabetes Composite PQIs, 24% were from Albany, 15% from Dutchess, and 13% from Rensselaer counties. Four of the 10 counties had Medicaid Diabetes Composite PQI rates higher than the NYS rate of 37.2 per 10,000 Medicaid recipients, and fell into the 4th or 5th Quintile: Rensselaer (44.9); Columbia (42.4); Albany (38.8); and Fulton (38.6) counties.

Figure B-63 Diabetes PQI by Diagnosis



	Albany	Schen	Rens	Sarat	Fulton	Montg	Green	Colum	Ulster	Dutch
Diab Amput	16	7	4	5	1	4	2	1	97	76
Diab Uncont	25	14	13	9	3	4	4	4	22	17
Diab LT	123	58	69	32	26	17	20	41	60	78
Diab ST	175	72	73	41	42	14	15	13	32	70

Source: Salient Performance Data - Hospital Inpatient Prevention Quality Indicators by County

Of the average 262 Medicaid Diabetes Long Term Complication PQIs per year, 23% were from Albany, 15% from Dutchess, and 13% from Rensselaer counties. Two counties were higher than the NYS Medicaid Long Term Diabetes Complication PQI rate of 20.3 per 10,000 Medicaid recipients, and fell into the 4th or 5th Quintile: Columbia (31.1); and Rensselaer (21.6) counties. For the average of 249 Medicaid Diabetes Short Term Complication PQIs per year, 25% were from Albany, and 15% were from Schenectady and 15% from Rensselaer counties. Five of the

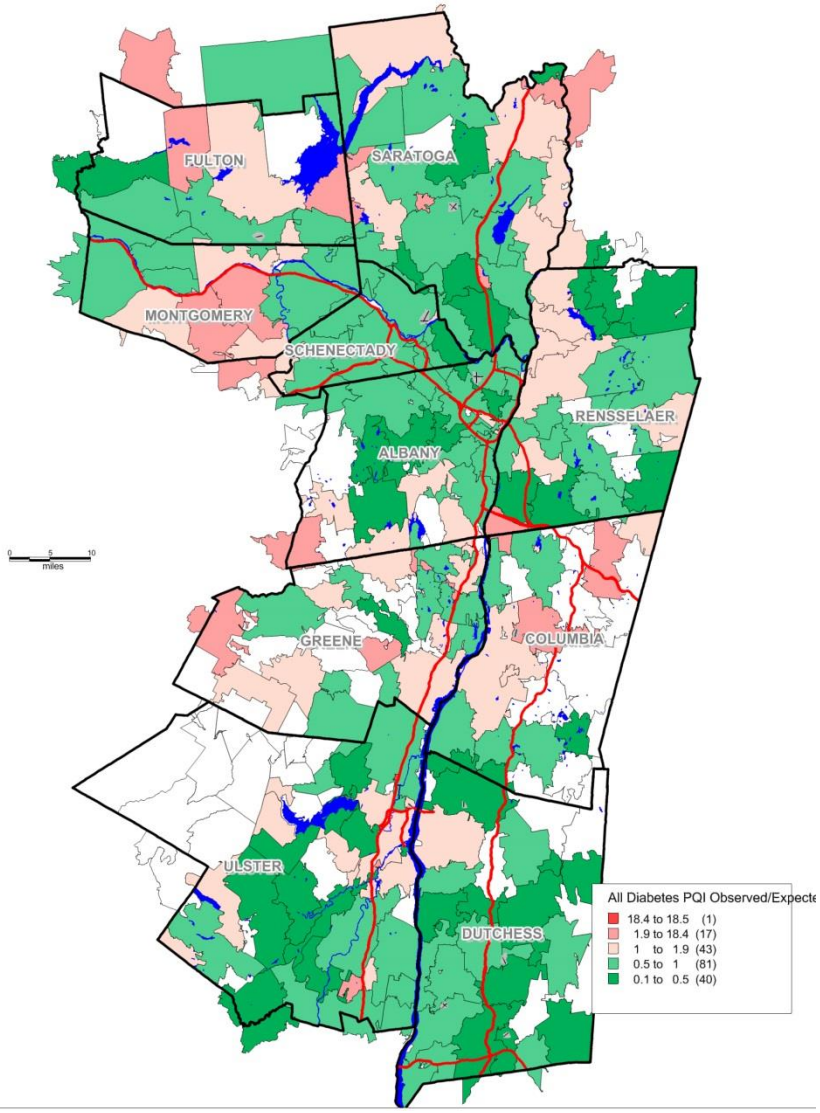
10 service area counties had Medicaid Diabetes Short Term Complication PQI rates higher than the NYS rate of 11.3 per 10,000 Medicaid recipients. Four of these counties were also in the 4th or 5th Quintile: Fulton (19.1); Rensselaer (17.3); Albany (15.1); and Schenectady (14.6) counties. Of the 56 Medicaid Uncontrolled Diabetes PQIs in the service area, 22% were from Albany, 20% from Ulster, and 15% from Dutchess counties. Only Ulster (5.9 per 10,000) and Rensselaer (4.5) counties fell into the 4th or 5th Quintile for Medicaid Uncontrolled Diabetes PQIs (CNA Appendix E-6).

There were an average of only 15 Medicaid Pediatric Diabetes Short Term Complication PDIs in the AMC/Ellis PPS service area. Although the PDI rates are unstable due to the small numbers, Columbia County at 11.0/10,000 Medicaid recipients, Albany (5.8) and Montgomery (4.6) counties were in the 4th or 5th Quintile for all NYS counties for Short Term Diabetes Complication PDIs (CNA Appendix E-6).

A Clinical Improvement Metric, Comprehensive Diabetes Care, is the percentage of Medicaid recipients living with diabetes, who received at least one HbA1c test within the past year. All of the 10 service area counties had rates below the NYS rate of 80%. Six of the counties were in the 4th or 5th Quintile for Comprehensive Diabetes Care: Ulster (65%); Columbia (69%); Dutchess (70%); Saratoga (71%); Fulton (72%) and Greene (72%) counties (CNA Appendix E-6).

The geographic distribution of observed over expected Diabetes Composite PQIs is presented in Figure B-64. While many of the risk areas are urban, there are a number of rural pockets in the 10 county service area.

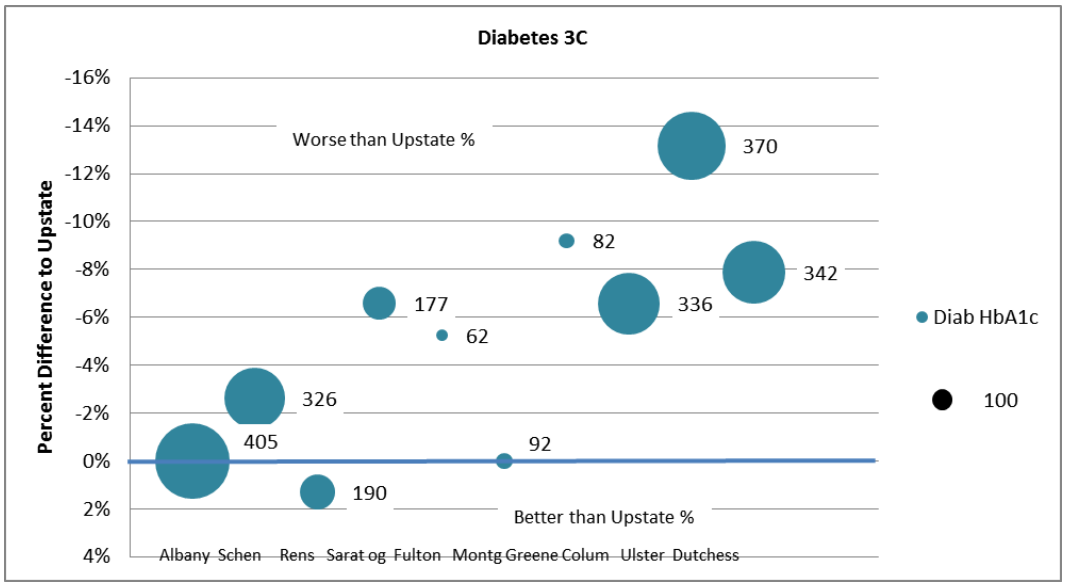
Figure B-64 Diabetes PQI Observed over Expected (2012)



Source: HealthData Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges for Patient Zip Codes: Beginning 2011

All the Service area counties are below the NYS average for the Comprehensive Diabetes Care-HbA1c clinical improvement metric. When compared to Upstate all counties except Rensselaer were below the Upstate average (Figure B-65; CNA Appendix E-13).

Figure B-65 Diabetes Clinical Process Improvement Metrics



B) RESPIRATORY HEALTH

The 10 County service area had an average of 910 Medicaid Respiratory Composite PQIs; 805 (88%) of these were COPD/Asthma in Older Adults PQIs, and 105 (22%) were Asthma in Younger Adults PQIs. Of the 910 Medicaid Respiratory Composite PQIs, 21% were from Albany, and 15% from Ulster and Dutchess counties. Seven of the 10 counties had Medicaid Respiratory Composite PQI rates higher than NYS (50.0 per 10,000 Medicaid recipients); 5 of these fell in the 4th or 5th Quintile: Fulton (65.8); Rensselaer (60.8); Ulster (59.1); Albany (54.1) and Columbia (53.1) counties.

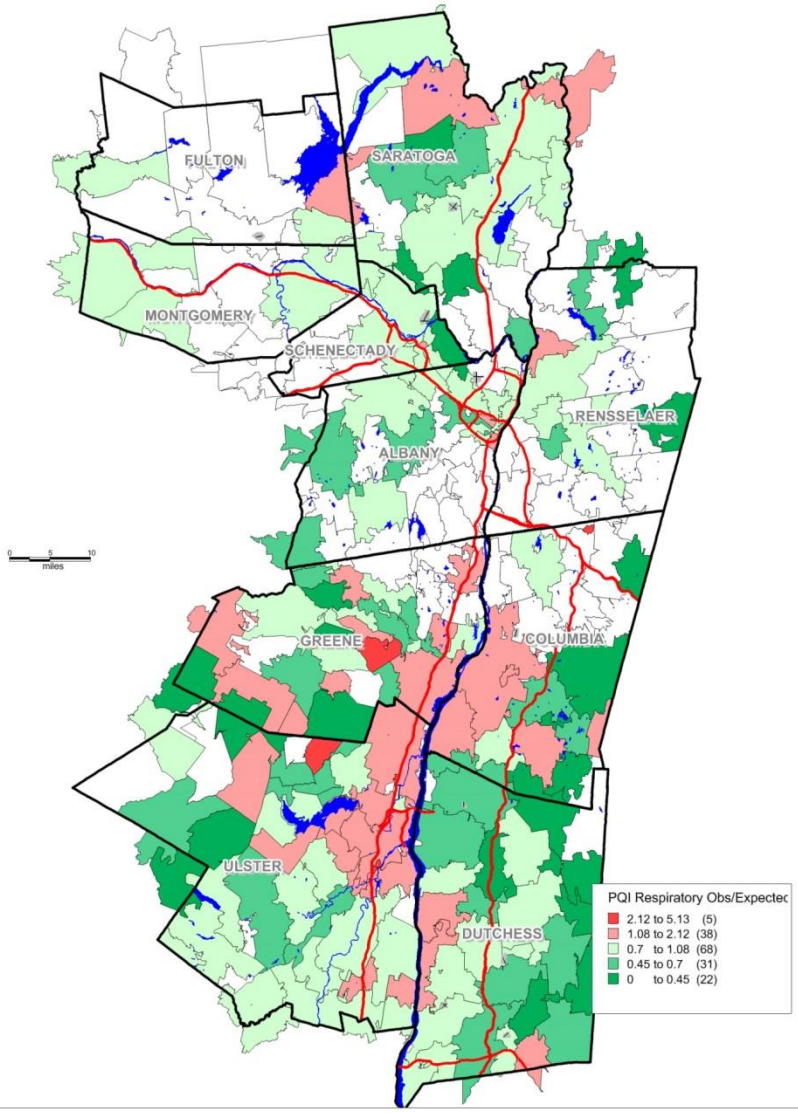
A similar county distribution was seen for the 805 Medicaid COPD/Asthma in Older Adults PQIs. Six of the 10 service area counties had Medicaid COPD/Asthma in Older Adults PQI rates higher than the NYS rate of 81.4 per 10,000 Medicaid recipients. Three of these counties fell into the 4th or 5th Quintile: Fulton (102.8); Rensselaer (102.7) and Ulster (100.3) counties.

For the average of 105 Medicaid Asthma in Younger Adults PQIs, 30% were from Albany, 18% from Dutchess and 11% from Rensselaer counties. Seven of the 10 service area counties fell into the 4th or 5th Quintile for Asthma in Younger Adults PQIs: Fulton (24.8per 10,000

Medicaid recipients); Montgomery (17.3); Albany 17.2); Columbia (17.2); Dutchess (15.5); Rensselaer (12.5) and Greene (11.3) counties. (Figure B-66, CNA Appendix E-7).

The geographic distribution of observed over expected Respiratory Composite PQIs is presented in Figure B-66. While many of the risk areas are urban, there are a number of rural pockets in the 10 county service area, including northern Saratoga, southeastern Columbia, central and western Greene, and northeastern Ulster counties.

Figure B-66 Respiratory PQI Observed over Expected (2012)



Source: HealthData Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges for Patient Zip Codes: Beginning 2011

The AMC/Ellis PPS service area averaged 138 Medicaid Pediatric Asthma PDIs; 27% were from Ulster, 23% from Albany counties, and 13% from Fulton County, even with its small number of pediatric Medicaid recipients. Fulton County's Medicaid Pediatric Asthma PDI rate of 90.6 per 10,000 Medicaid recipients was about 3 tomes the NYS rate of 31.9 per 10,000. In addition to Fulton, Dutchess (31.8) and Ulster (21.2) counties had Medicaid Pediatric Asthma PDI rates that fell into the 4th or 5th Quintile of all NYS counties (CNA Appendix E-7).

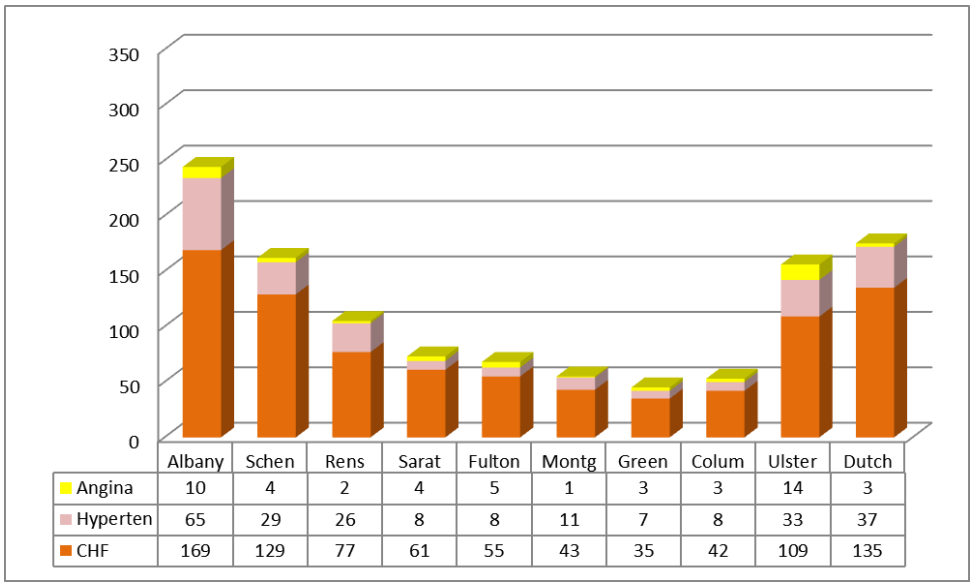
C) CARDIAC HEALTH

The 10 County service area experienced an average of 568 Medicaid Circulatory Composite PQIs per year; roughly 75% of these were Adult Heart Failure PQIs (n=428), 21% Adult Hypertension PQIs (n=116) and 4% Adult Angina without Procedure PQIs (n=24). For the 568 Medicaid recipients with the Circulatory Composite PQI, 21% were from Albany, 15% from Dutchess and 15% from Schenectady counties. The Circulatory Composite PQI rate was 42.2 per 10,000 Medicaid recipients. Schenectady (44.0 per 10,000), Greene (43.4); and Fulton (39.1) counties fell into the 4th or 5th Quintile for all NYS counties.

Of the average 428 Medicaid Adult Heart Failure PDIs, 20% were from Albany, 16% from Dutchess, and 15% from Schenectady counties. While only 3 counties were equal to or higher than the NYS rate of 29.2 per 10,000 Medicaid recipients, 5 of the 10 counties had Medicaid Adult Heart Failure PQI rates that fell into the 4th or 5th Quintile: Schenectady (33.4); Greene (31.6); Fulton (29.2); Columbia (28.7); and Montgomery (28.1) counties.

There were an average of 116 Medicaid Adult Hypertension PDIs per year, with 28% from Albany, 16% from Dutchess, and 14% from Ulster counties. The Medicaid Adult Hypertension PDI rate for NYS was 10.4 per 10,000 Medicaid recipients. Five of the 10 service area counties fell into the 4th or 5th Quintile for Medicaid Adult Hypertension: Albany (9.9 per 10,000); Rensselaer (9.5); Ulster (9.4); Montgomery (9.1); and Greene (8.4) counties (Figure B-67, CNA Appendix E-8).

Figure B-67 Cardiac PQI by Diagnosis

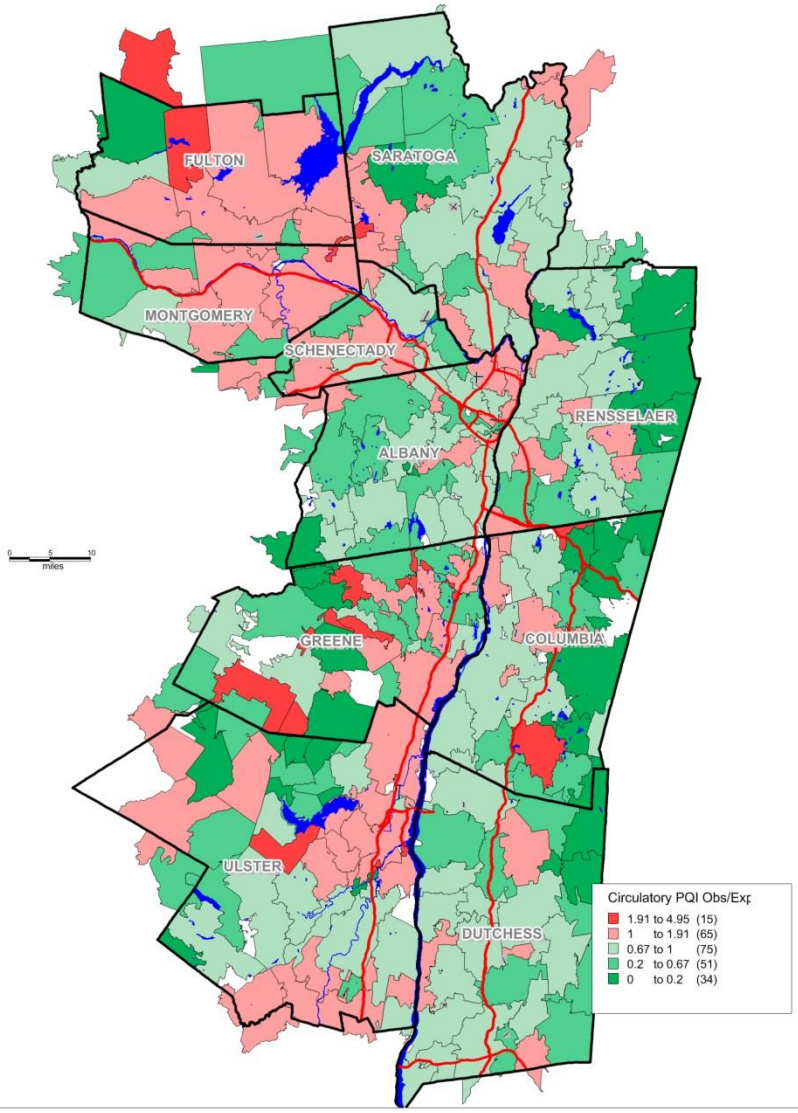


	Albany	Schen	Rens	Sarat	Fulton	Montg	Green	Colum	Ulster	Dutch
Angina	10	4	2	4	5	1	3	3	14	3
Hyperten	65	29	26	8	8	11	7	8	33	37
CHF	169	129	77	61	55	43	35	42	109	135

Source: Salient Performance Data - Hospital Inpatient Prevention Quality Indicators by County

The geographic distribution of observed over expected Circulatory Composite PQIs is presented in Figure B-68. While some of the risk areas are still in urban areas, there are a number of rural pockets in the 10 county service area, including most of Fulton and Montgomery counties, and pockets in Greene, and Ulster counties.

Figure B-68 Circulatory PQI Observed over Expected (2012)

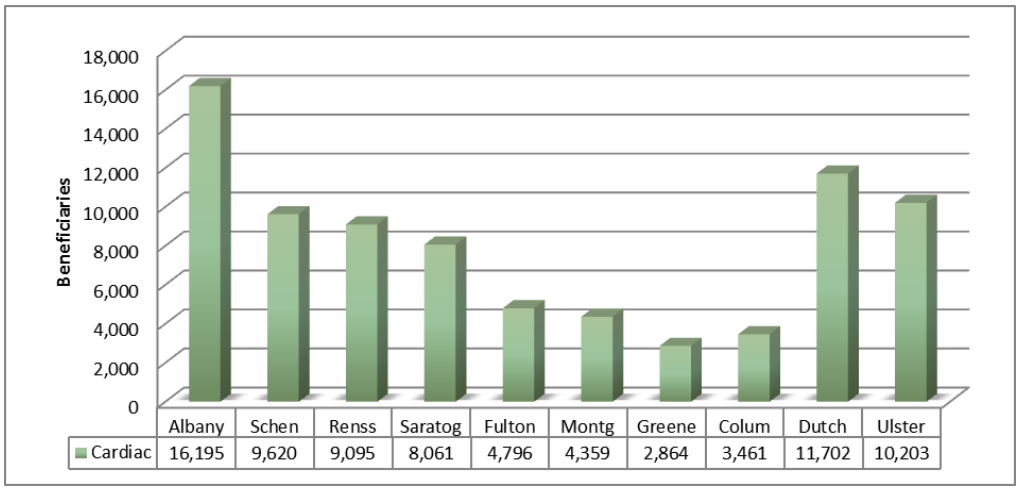


Source: HealthData Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges for Patient Zip Codes: Beginning 2011

There were over 80,000 Medicaid beneficiaries with cardiac conditions in the 10 County area (Figure B-69). These beneficiaries had 65,525 in-patient admissions in 2012 (Figure B-70).

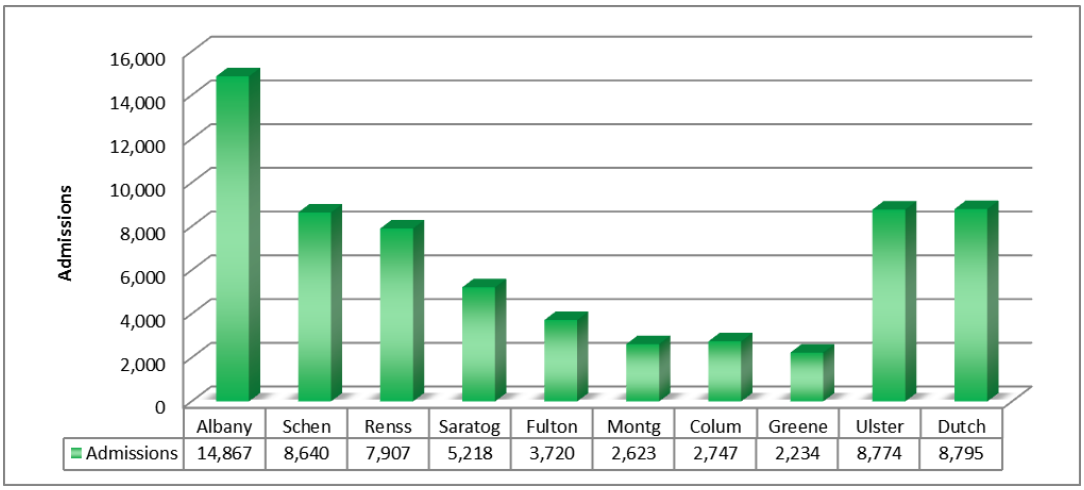
Albany Medical PPS and Ellis PPS

Figure B-69 Medicaid Beneficiaries with Cardiac Conditions by County



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

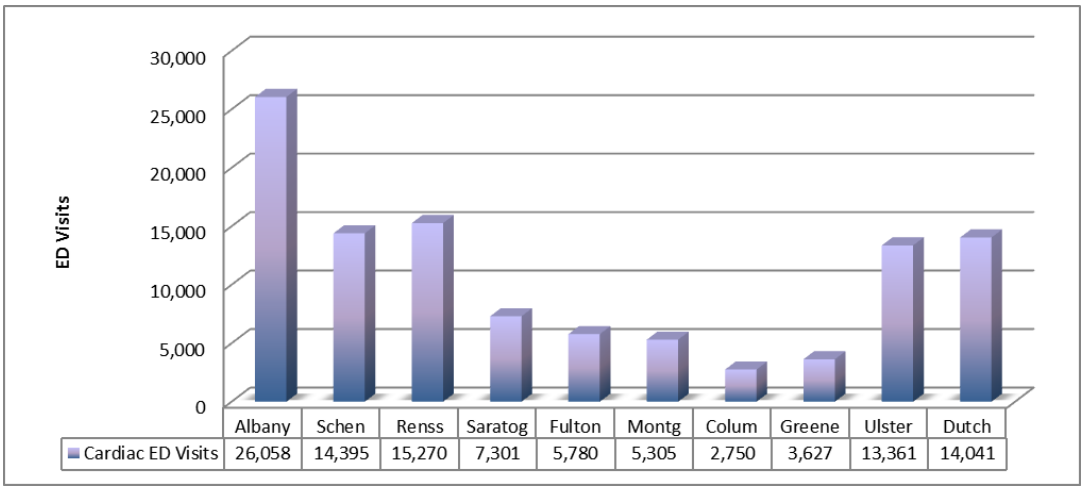
Figure B-70 Medicaid Cardiac Admissions



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

There were almost 108,000 cardiac-related ED visits by Medicaid beneficiaries in the 10 County Service Area in 2012.

Figure B-71 Medicaid Cardiac ED Visits



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

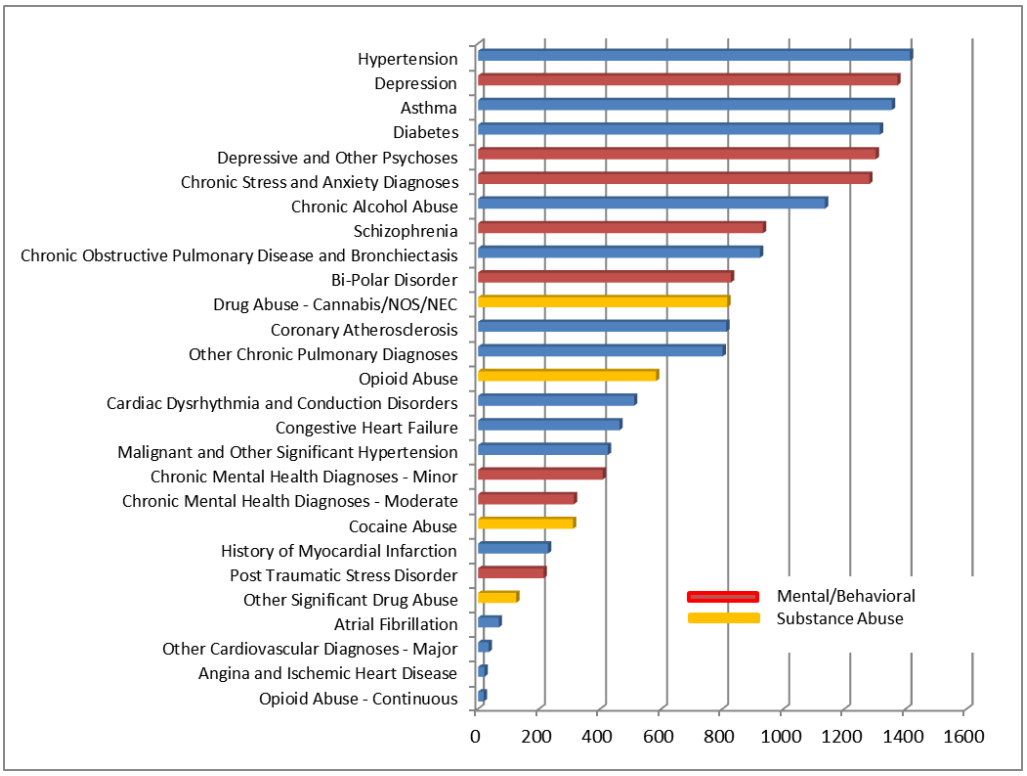
D) RENAL DISEASE

While neither PPS utilizing this CNA has a specific renal disease project, chronic renal disease is a major chronic driver of ED and inpatient use. Many of the PPS DSRIP projects utilize chronic disease focused interventions. We therefore incorporated both chronic renal disease and end stage renal disease (ESRD) in our Multiple Chronic Physical Condition metric (MCC_phys) developed for the CNA to assure these needs are both identified and addressed. This combination metric as well as individual metrics for chronic renal disease and ESRD were included in County and Neighborhood scale and speed drill down targeting reports in Appendix F-3.

E) BEHAVIORAL HEALTH

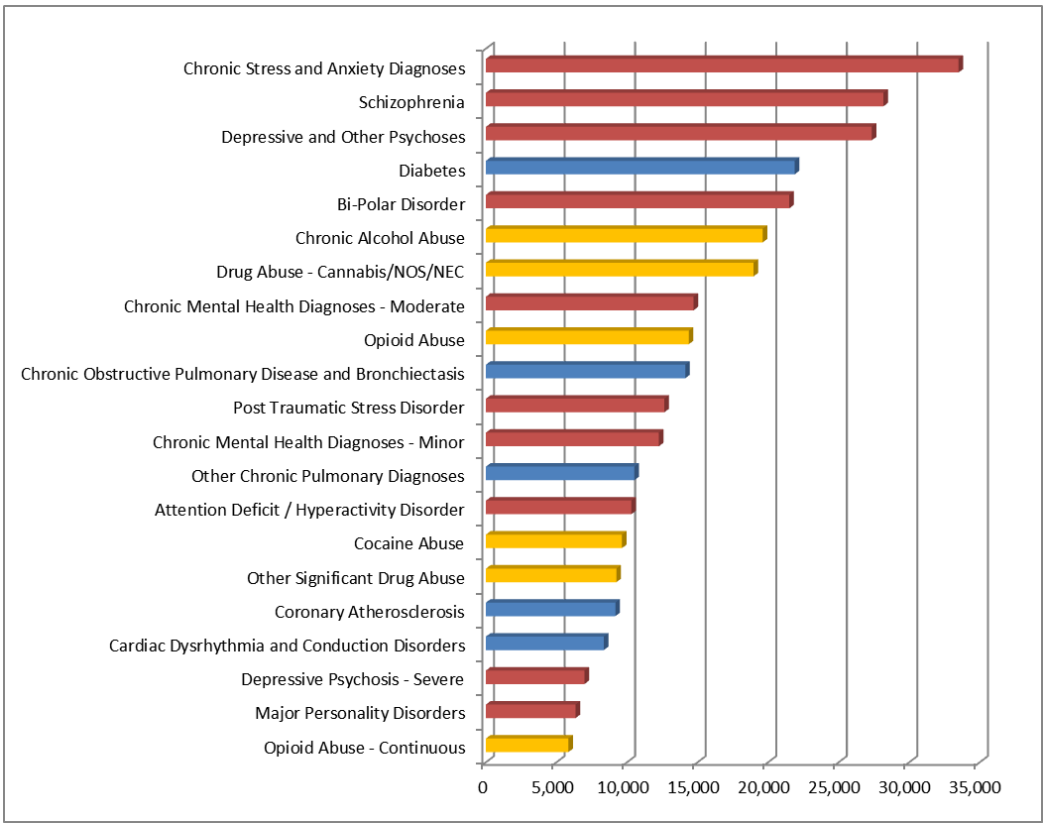
As can be seen in Figure B-72 and Figure B-73, mental health and substance abuse are major causes of hospitalizations and ED visits in the 10 County Service Area Medicaid population during 2012.

Figure B-72 Inpatient Admissions by Chronic Condition



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Figure B-73 ED Visits by Chronic Condition

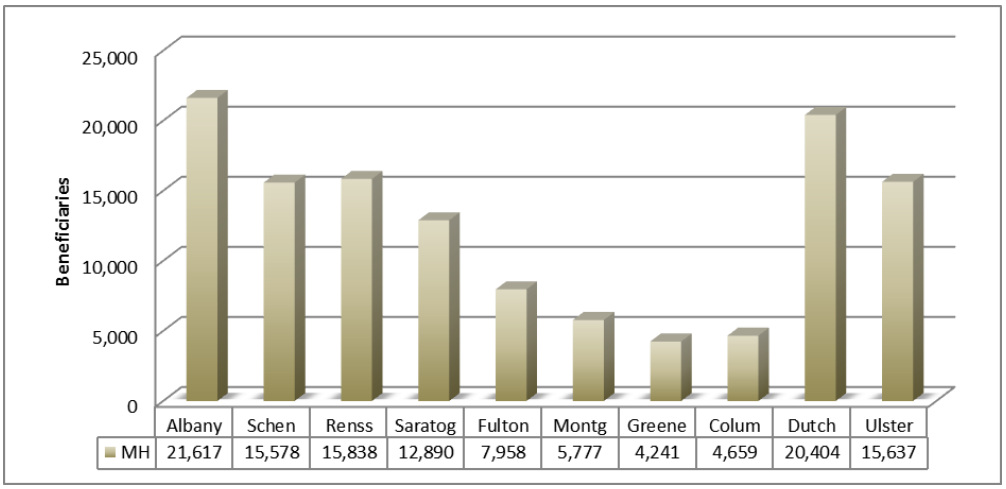


Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

There were approximately 125,000 Medicaid beneficiaries in the 10 County service area with mental health conditions in 2012. (Figure B-74). Depression and Depression Psychoses, Stress and Anxiety, Schizophrenia; and ADHD are the leading diagnoses in the Medicaid population (Figure B-75). There were almost 75,000 mental health-related hospitalizations to the Medicaid population in the 10 County service area in 2012. (Figure B-76. The 10 County service area Medicaid population had almost 236,000 mental health-related ED visits in 2012. (Figure B-77).

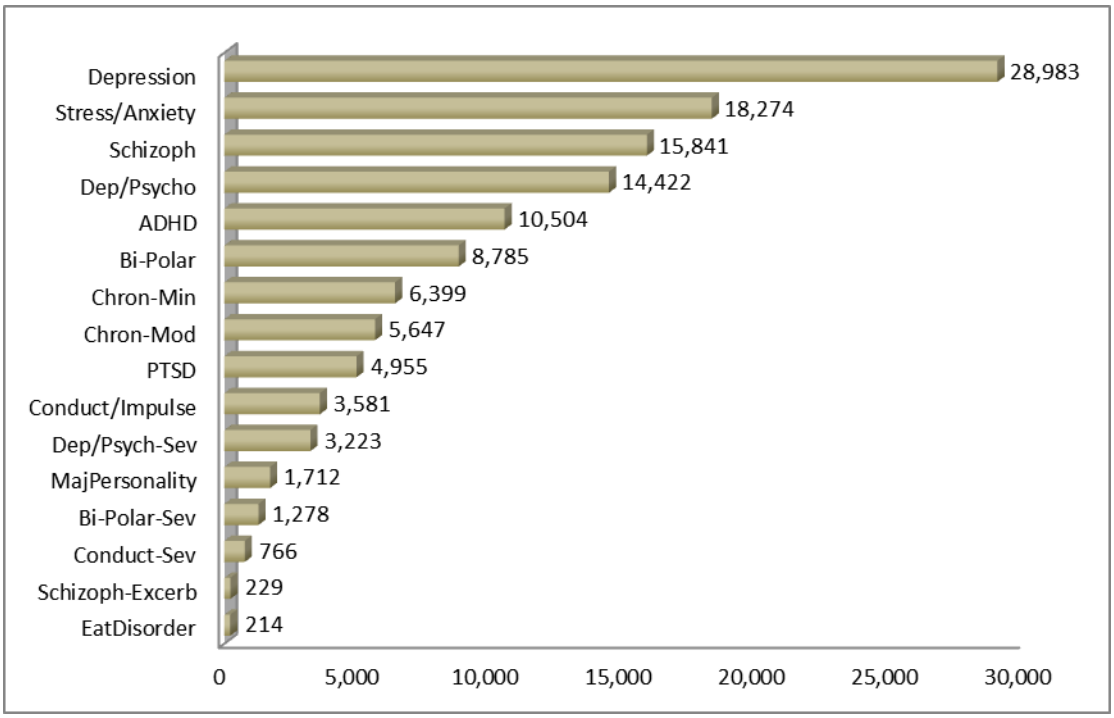
Figure B-74 Medicaid Mental Health Beneficiaries by County

Albany Medical PPS and Ellis PPS



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

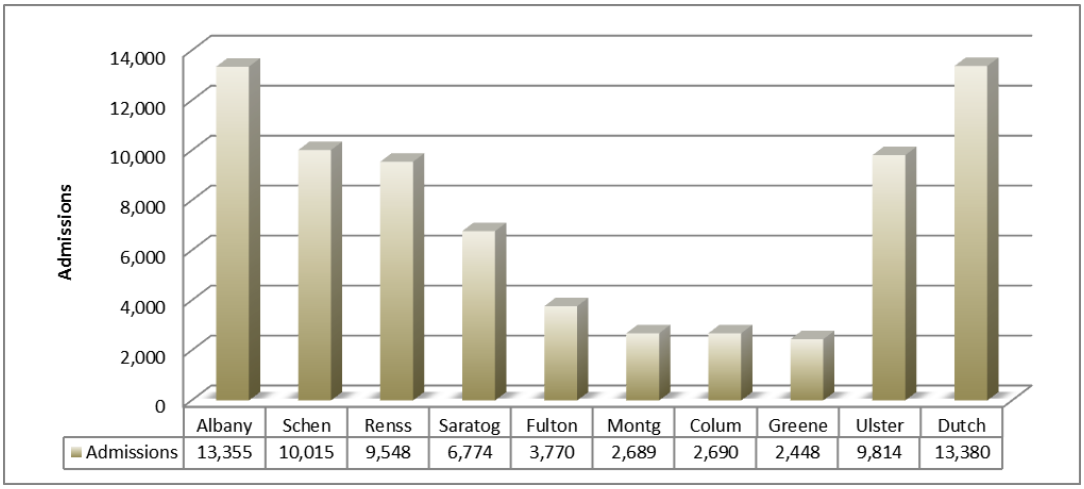
Figure B-75 Medicaid Beneficiaries by Mental Health Diagnosis



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

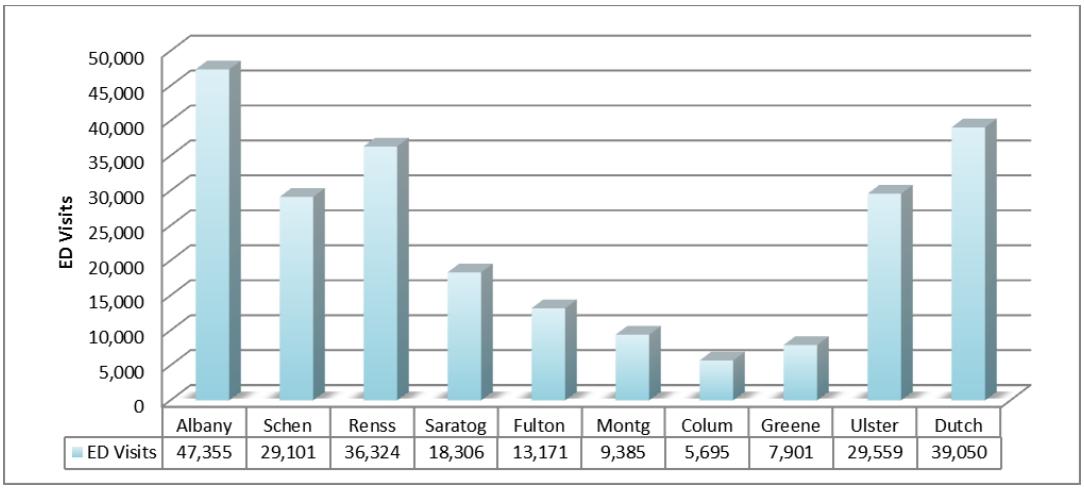
Figure B-76 Medicaid Mental Health Admissions

Albany Medical PPS and Ellis PPS



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

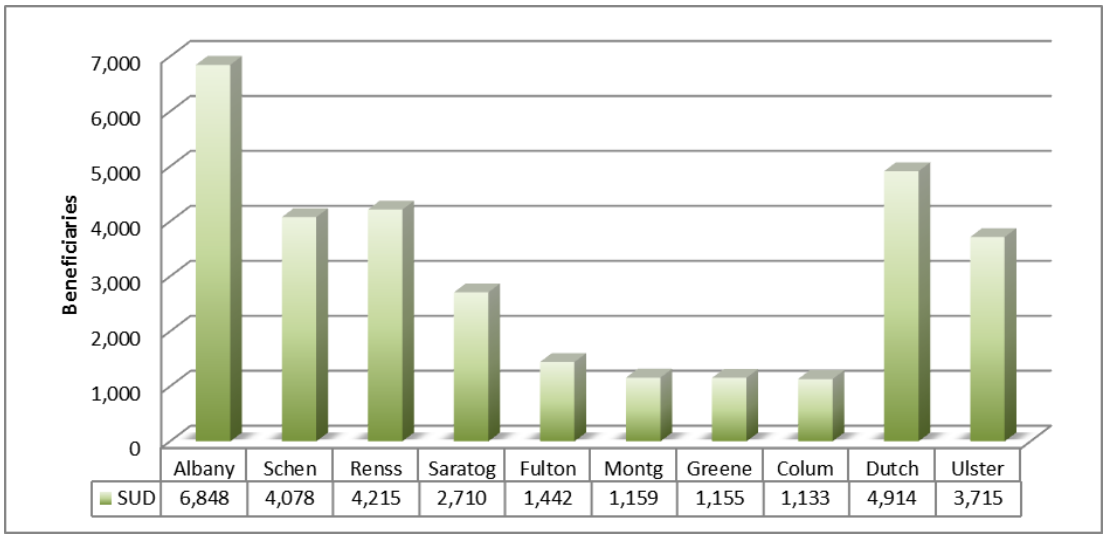
Figure B-77 Medicaid Mental Health ED Visits



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Substance abuse was also problematic, with over 31,000 for the Medicaid beneficiaries in the Service area having a substance abuse diagnosis. (Figure B-78).

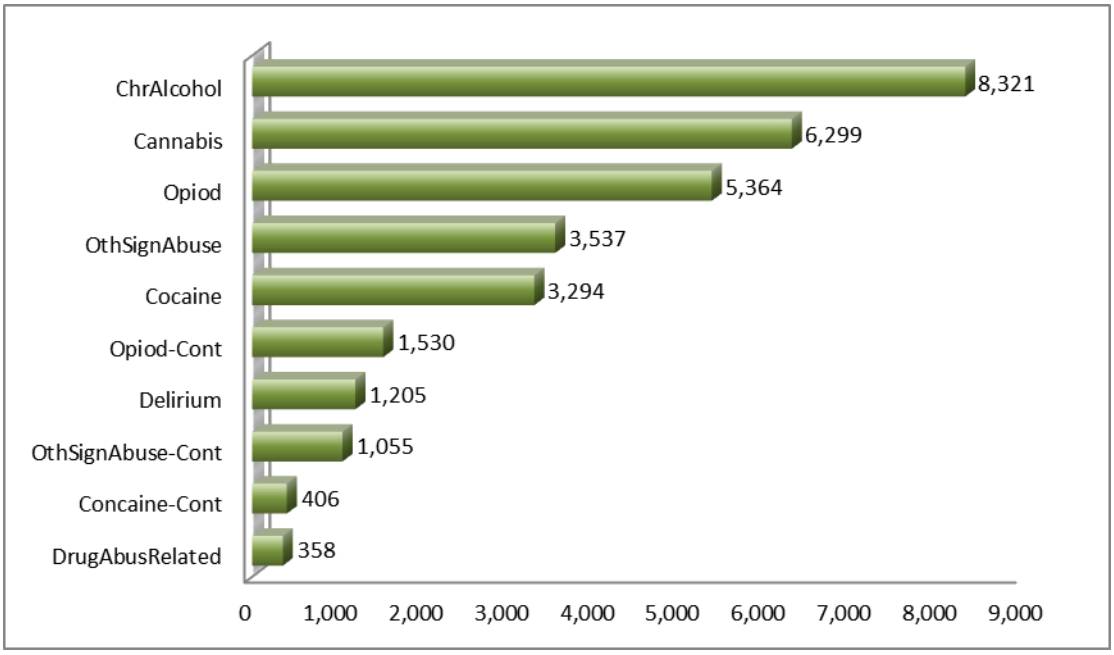
Figure B-78 Substance Abuse Beneficiaries by County



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

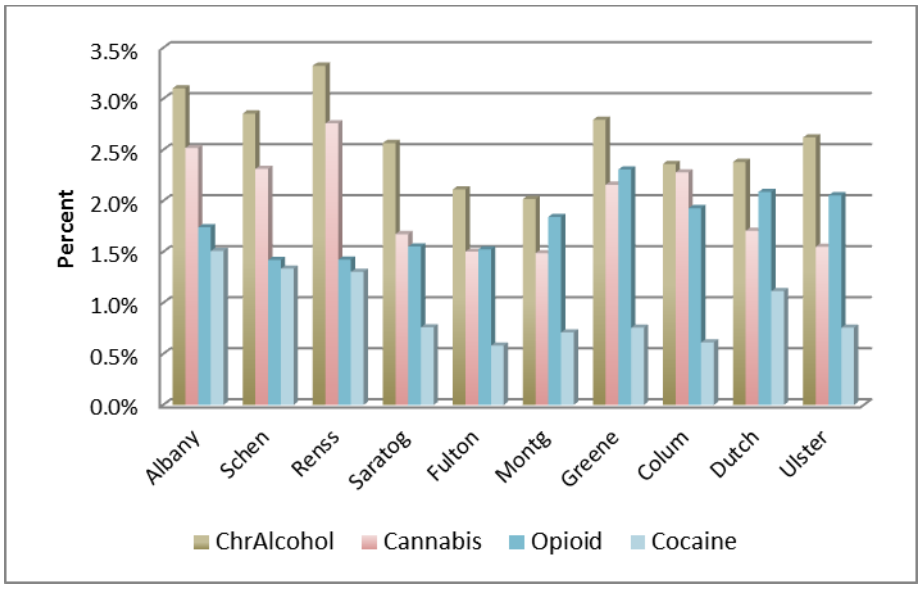
The leading substance abuse diagnoses were chronic alcohol use, cannabis use, and opioid use (Figure B-78). There is a growing problem with opioid use where the percent is higher than cannabis use in half of the counties. (Figure B-79 and Figure B-80).

Figure B-79 Medicaid Substance Abuse Beneficiaries by Diagnosis



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

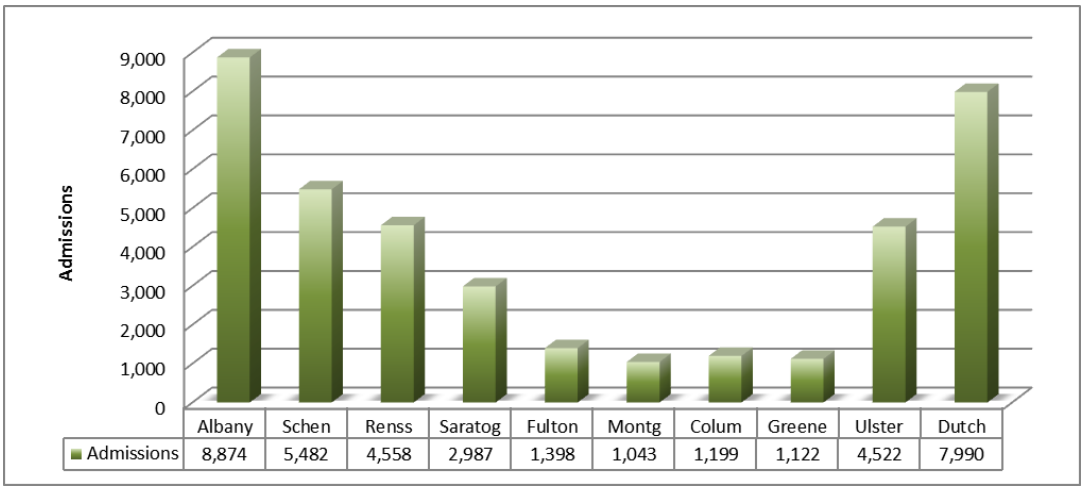
Figure B-80 Percent of Beneficiaries by Type of Substance Abuse Diagnosis



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Substance abuse diagnoses caused over 39,000 hospitalizations, and almost 90,000 ED visits in the 10 County service area Medicaid population in 2012. (Figure B-81 and Figure B-82).

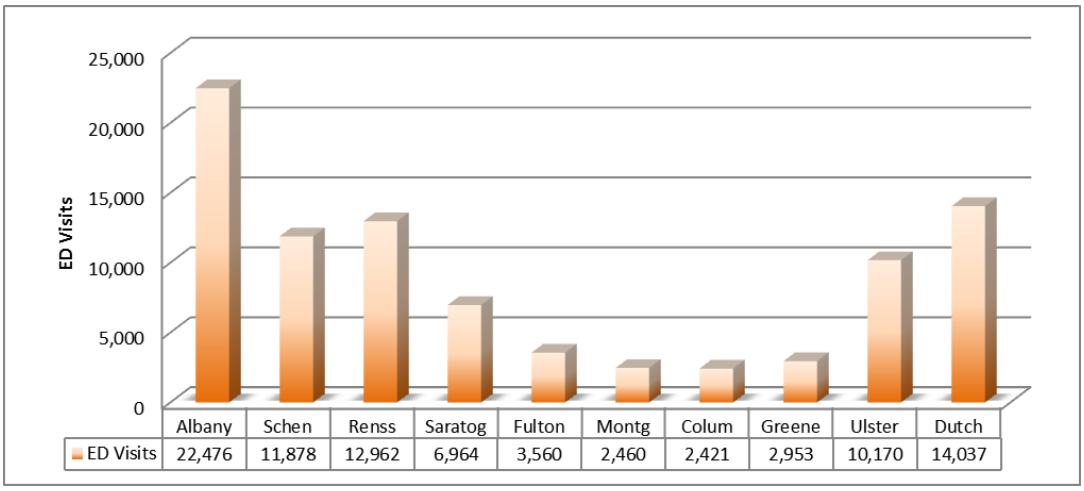
Figure B-81 Medicaid Substance Abuse Disorder Admissions



	Albany	Schen	Renss	Saratog	Fulton	Montg	Colum	Greene	Ulster	Dutch
Admissions	8,874	5,482	4,558	2,987	1,398	1,043	1,199	1,122	4,522	7,990

Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Figure B-82 Medicaid Substance Abuse Disorder ED Visits

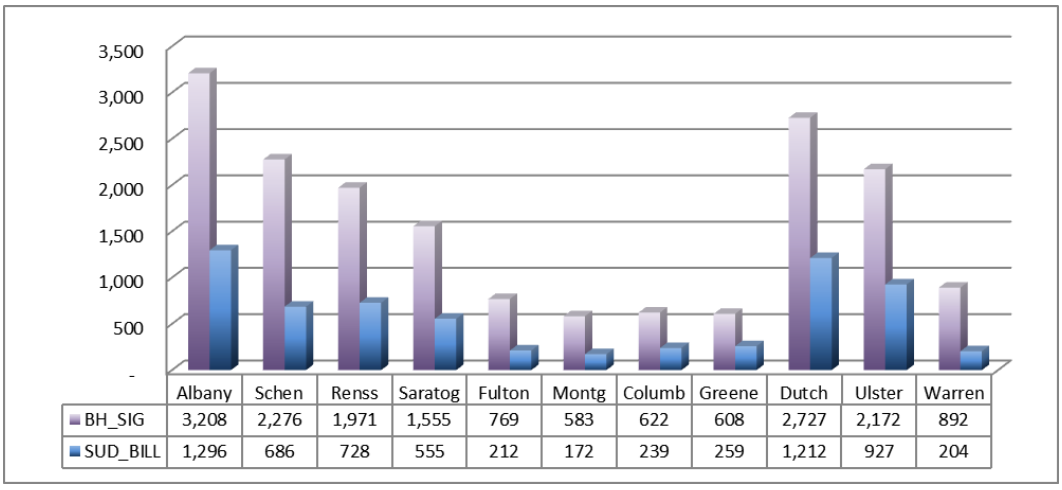


	Albany	Schen	Renss	Saratog	Fulton	Montg	Colum	Greene	Ulster	Dutch
ED Visits	22,476	11,878	12,962	6,964	3,560	2,460	2,421	2,953	10,170	14,037

Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

SPARCs analysis was used to further refine the analysis to those with severe mental health and/or substance abuse disorders (3rd or 4th quartile) (coded as BH_SIG) and those with a principal presenting diagnosis of substance abuse disorders (coded as SUD_Bill). (Figure B-83).

Figure B-83 Members with Significant Behavioral Health Disorders and Substance Abuse by County



	Albany	Schen	Renss	Saratog	Fulton	Montg	Columb	Greene	Dutch	Ulster	Warren
BH_SIG	3,208	2,276	1,971	1,555	769	583	622	608	2,727	2,172	892
SUD_BILL	1,296	686	728	555	212	172	239	259	1,212	927	204

Source: SPARCs Analysis

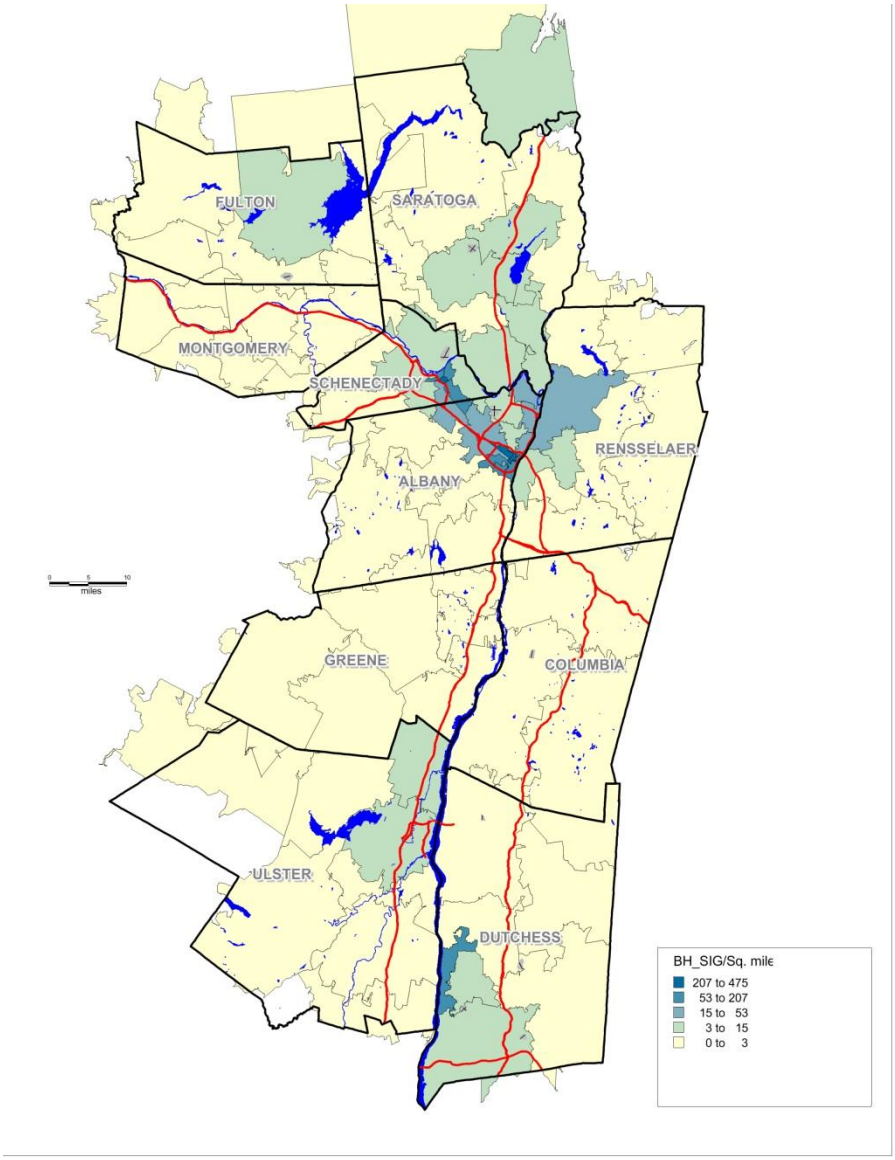
Total persons with Significant Behavioral Health dx (Both MI/SUD or Severity of either 3 or 4)

Multiple Chronic Physical Condition = 4+ of 10 Chronic Physical Conditions

Figure B-84 shows the geographic distribution of the population with severe mental health and/or substance abuse disorders. The majority of that population is concentrated in the tri city urban areas with additional concentrations in urban Tri city neighborhoods and in Kingston, Poughkeepsie, Kingston, and Gloversville. Figure B-85 shows the geographic distribution of those with a principal presenting diagnosis of substance abuse disorders. The concentrations are found in the urban Tri city neighborhoods and in Kingston, Fishkill, Poughkeepsie and Amsterdam.

Albany Medical PPS and Ellis PPS

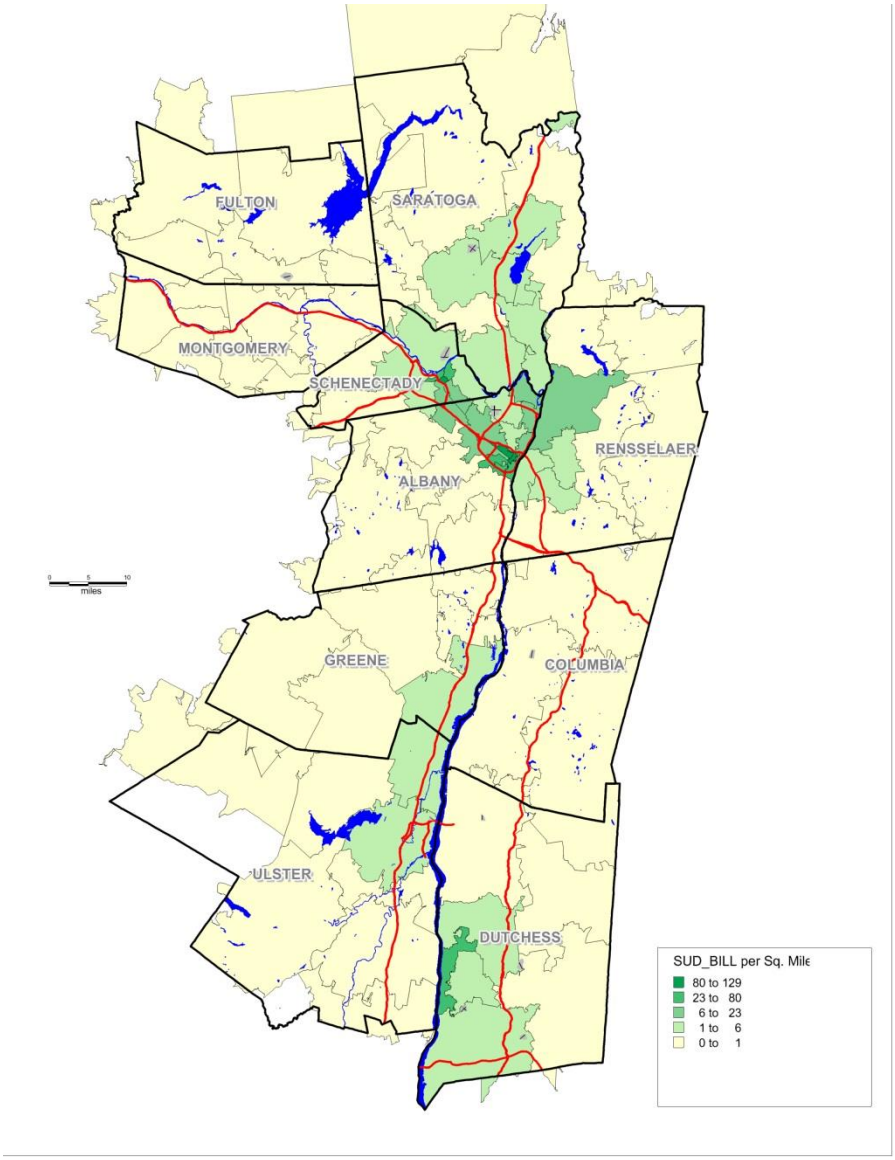
Figure B-84 Persons with Significant Behavioral Health Diagnosis



Source: SPARCs Analysis

Note: Both mental health and substance abuse disorder or mental health severity of 3rd or 4th quartile

Figure B-85 Presenting or Principal Substance Abuse Diagnosis by Neighborhood



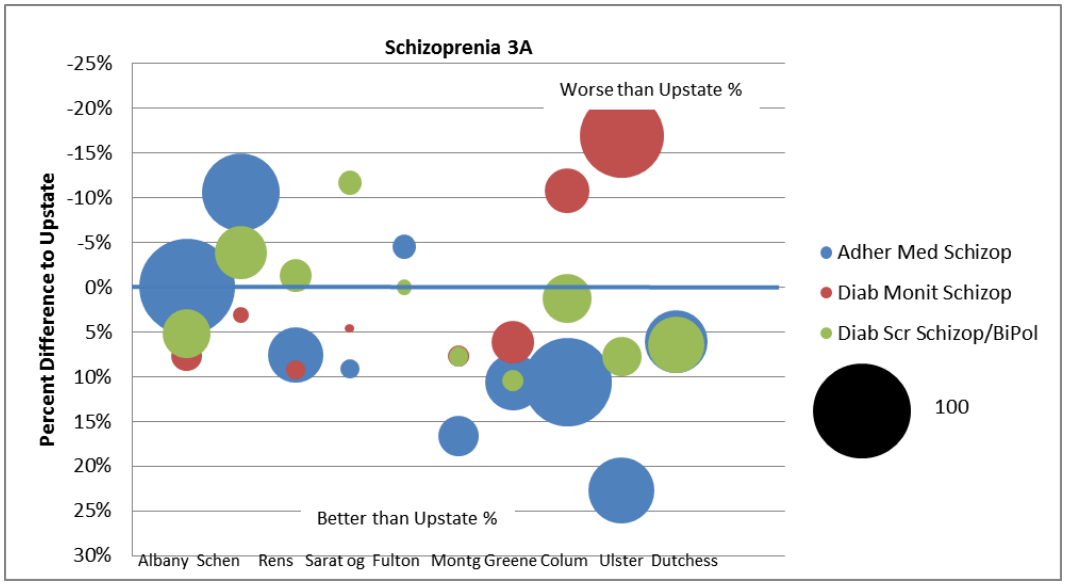
Source: SPARCs Analysis

Note: At least 1 Claim for SUD = Presenting or Principal diagnosis is SUD

There are eleven Clinical Improvement Metrics available for Behavioral Health. Adherence to Antipsychotic Medications for People Living with Schizophrenia is defined as the percentage of Medicaid recipients living with schizophrenia, ages 19 to 64 years, who were dispensed and received an antipsychotic medication for at least 80% of their treatment period. The 2013 NYS rate for the "Adherence" indicator was 61.6%. Three of the service area counties fell below the State rate: Albany

(55.5%); Schenectady (56.7%); and Greene (56.7%) counties. Five of the 10 counties experienced a decrease in the rates from 2010 to 2013 (Figure B-86,CNA Appendix E-9).

Figure B-86 Schizophrenia Process Improvement Metrics



Source: DSRIP Clinical Metrics Beginning 2012

Antidepressant Medication Management-Effective Treatment for Acute Phase is defined as the percentage of Medicaid recipients who received an antidepressant medication during the entire 12-week acute treatment phase. The 2013 NYS rate for the "Antidepressant Medication-Active" indicator was 46.8%. Two of the 10 service area counties had rates that fell below the State average: Montgomery (46.7%) and Schenectady (46.8%) counties. However, 8 of the 10 counties showed decreases in the rates between 2012 and 2103. (CNA Appendix E-9; Figure B-87).

Antidepressant Medication Management-Effective Treatment for Continuation Phase is defined as the percentage of Medicaid recipients who received an antidepressant medication during continuation treatment phase. The 2013 NYS rate for the "Antidepressant Medication-Continuation" indicator was 38.6%. Two of the 10 service area counties had rates that fell below the State rate: Montgomery (32.8%); and Schenectady (38.5%) counties. All counties showed improvement in the rates between 2012 and 2103 (CNA Appendix E-9).

Diabetes monitoring for People Living with Diabetes and Schizophrenia is defined as the percentage of Medicaid recipients living with schizophrenia and diabetes, ages 18 to 64 years, who have both LDL-C test and an HbA1c test. The 2013 NYS rate for the "Diabetes Monitoring" indicator was 68.8%. Of the 5 service area counties, with information available, 3 had rates in the 4th or 5th Quintile: Ulster (38.9%-2012); Dutchess (53.9%); and Schenectady (61.0%) counties, whereas three of the four counties, using data for both 2012 and 2013, showed decreasing rates (CNA Appendix E-9; Figure B-87).

Diabetes Screening for People Living with Schizophrenia or Bipolar Disorder Who are Using Antipsychotic Medications is defined as the percentage of Medicaid recipients living with schizophrenia or bipolar disorder, ages 18 to 64 years, who were dispensed an antipsychotic medication and had a diabetes screening test. The 2013 NYS rate for the "Diabetes Screening" indicator was 75.4%. Of the 10 service area counties, 4 fell below the NYS average: Saratoga (57.4%); Dutchess (71.1%); Rensselaer (74.2%); and Schenectady (75.3%) counties. Six of the 8 counties, for which there was information available, showed decreasing rates between 2012 and 2013 (CNA Appendix E-9; Figure B-87)

Follow-up after Hospitalization for Mental Illness within 30 Days is defined as the percentage of Medicaid recipients who were seen on an ambulatory basis or who were in intermediate treatment with a mental health provider within 30 days of discharge following a mental health related admission. The 2013 NYS rate for the "30 Day Follow-up" indicator was 54.4%. Only 2 of the 10 service area counties had rates that fell below the NYS rate: Dutchess (49.5%), and Albany (54.2%) counties. Six of the 10 counties showed decreased rates between 2012 and 2013 (CNA Appendix E-10; Figure B-87).

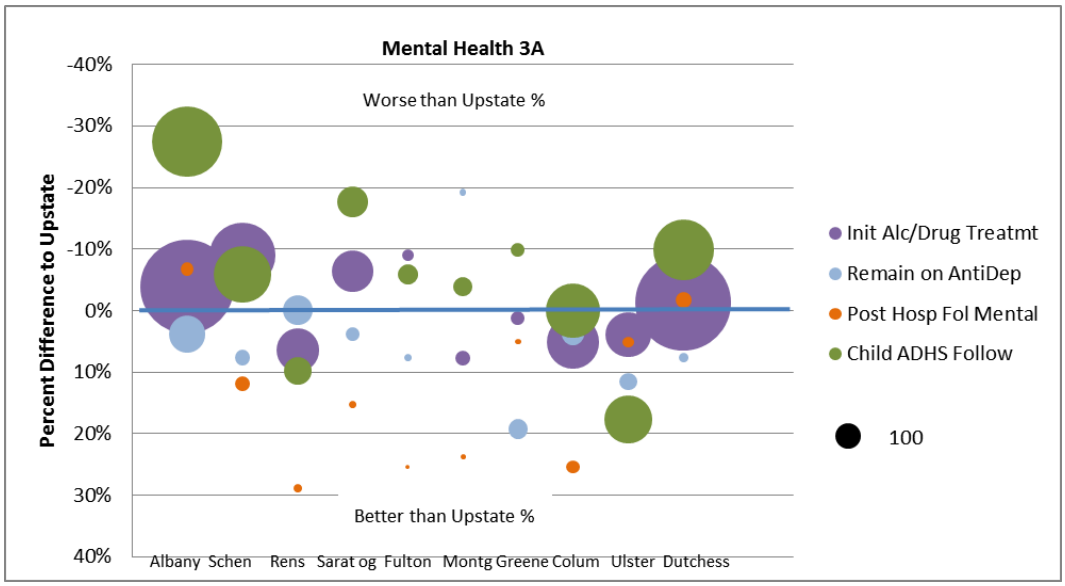
Follow-up after Hospitalization for Mental Illness within 7 Days is defined as the percentage of Medicaid recipients who were seen on an ambulatory basis or who were in intermediate treatment with a mental health provider within 7 days of discharge following a mental health related admission. The 2013 NYS rate for the "7 Day Follow-up" indicator was 38.5%. Only 3 of the 10 service area counties had rates that fell below the NYS average: Dutchess (35.3%); Albany (35.4%); and Ulster (41.9%) counties (CNA Appendix E-10).

Follow-up Care for Children Prescribed ADHD Medication-Initiation Phase is defined as the percentage of Medicaid children with a new prescription for ADHD medication and who had one follow-up visit with a practitioner within 30 days after starting the medication. The 2103 NYS rate for the "ADHD Follow-up-Initiation" indicator was 54.7%. Four service area counties had rates that fell below the NYS average: Dutchess (49.5%); Warren (52.8%); (Albany (54.2%); and Ulster (55.9%) counties. Six of the 10 counties had decreased rates between 2012 and 2013 (CNA Appendix E-10; Figure B-87).

Follow-up Care for Children Prescribed ADHD Medication-Continuation Phase is defined as the percentage of Medicaid children with a new prescription for ADHD medication and who remained on medication for a period of 7 months and who, in addition to the initiation phase, had at least 2 follow-up visits with a practitioner within 9 months. The 2013 NYS rate for the "ADHD Follow-up-Continuation" indicator was 58.8%. Four of the 7 service area counties with information available had rates that fell below the NYS average: Albany (29.3%); Saratoga (38.6%); Rensselaer (50.0%); Schenectady (52.6%) and Warren (53.3%) counties (CNA Appendix E-10).

Initiation of Alcohol and Other Drug Dependence Treatment is defined as the percentage of Medicaid recipients who initiated treatment after 14 days of the diagnosis after the first new episode of alcohol or drug dependence. The 2012 NYS rate for the "Initiation of Treatment" indicator was 78.0%. Five of the 10 service area counties had rates that fell below the NYS rate: Fulton (70.9%); Schenectady (71.4%); Saratoga (72.5%); Albany (75.1%); and Dutchess (76.7%) counties (CNA Appendix E-10; Figure B-87).

Figure B-87 Mental Health Process Improvement Metrics



Source: DSRIP Clinical Metrics Beginning 2012

Engagement of Alcohol and Other Drug Dependence Treatment is defined as the percentage of Medicaid recipients who initiated treatment and who had 2 or more additional services with a diagnosis of AOD within 30 days of the initiation visit. The 2013 NYS rate for the "Engagement of Treatment" indicator was 24.8%. Four of the 10 service area counties had rates that fell below the NYS average: Saratoga (20.7%); Fulton (21.2%); Montgomery (21.8%); and Columbia (23.9%) counties (CNA Appendix E-10).

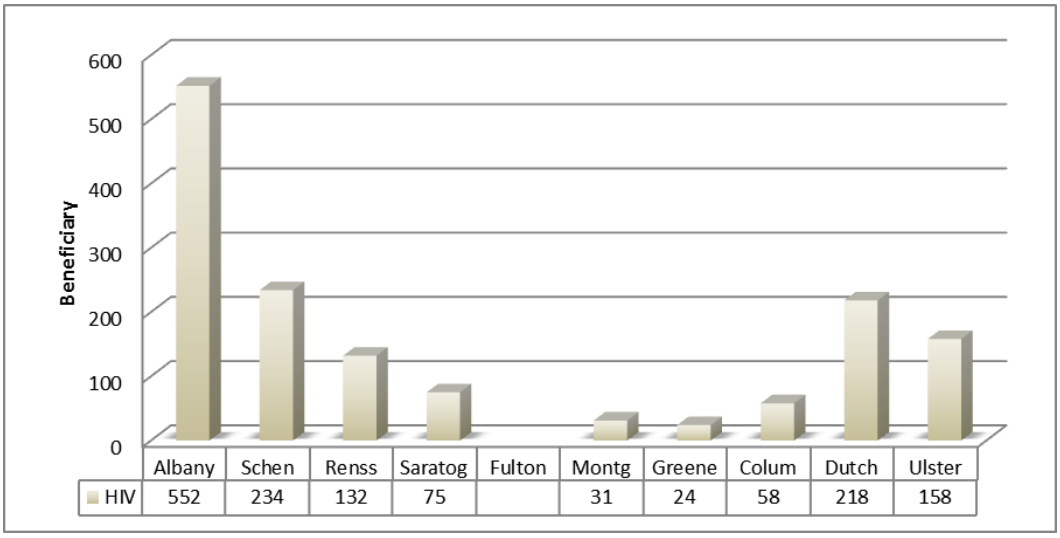
One hundred and fifteen physicians responded to a survey about primary care and behavioral health (Appendix B-5). Of the physicians surveyed 53% said they currently integrated behavioral health (mental health and/or substance abuse disorders (SUD)) into their practice. Although a majority were very or somewhat confident in providing mental health services a majority were not confident in providing SUD services, especially medication treatment. When asked where those that have both medical and behavioral health disorders should be treated, 42% said in a co-located setting with another 40% indicating in a behavioral health setting. Only 10% said these patients should be treated in a primary care setting. Forty seven percent (47%) of respondents were not using any behavioral health screening tools. A large percentage of respondents

(77%) said they would be willing to deploy evidence based models of care for these patients. When physicians were asked if they were licensed to prescribe buprenorphine/Suboxone with only 6% responding yes and less than half of those currently prescribing (3 out of 115 respondents) . The main reason given for not being licensed was training and inadequate support systems. The next question provided a list of additional services and incentives such as on-site behavioral personnel, advanced training and technical assistance, on-site care coordination, financial support to offset training and licensure costs and asked which would make them more likely to prescribe buprenorphine/Suboxone. Sixty one percent (61%) said none of these would make them more willing. The remaining respondents choose a variety of the options (5-9%) with another 8% saying all of these would be necessary.

F) HIV/AIDS

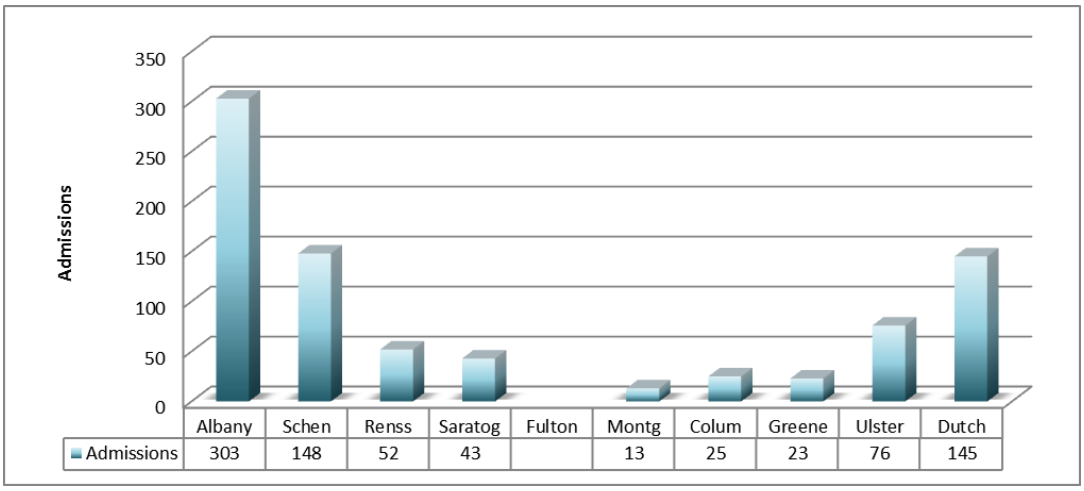
There were almost 1,500 Medicaid beneficiaries with an HIV/AIDS diagnosis in the 10 County service area in 2012, with Albany, Schenectady and Dutchess counties having the largest populations (Figure B-88). This population had over 800 HIV/AIDS-related hospitalizations (Figure B-89), and 2,400 HIV/AIDS-related ED visits (Figure B-90).

Figure B-88 Beneficiaries with HIV



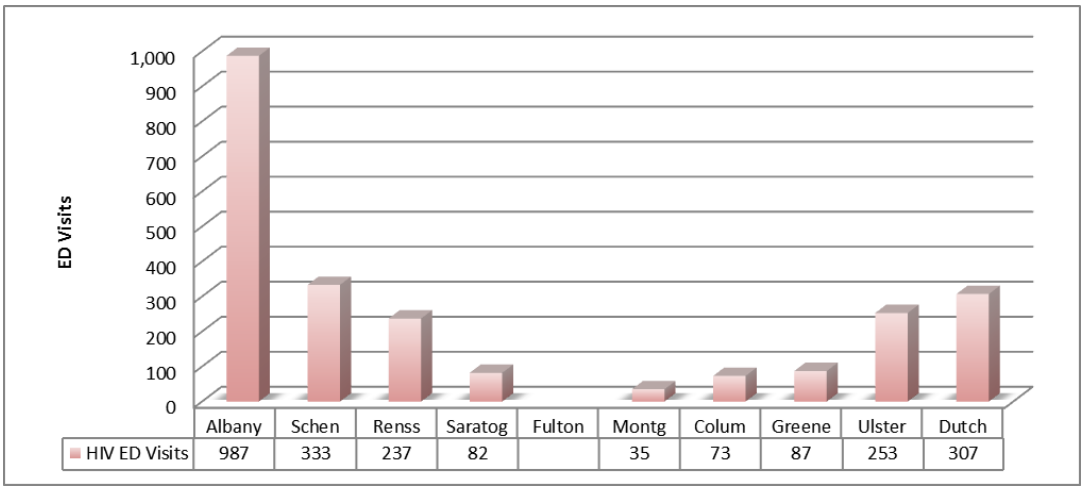
Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Figure B-89 HIV Admissions



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

Figure B-90 HIV ED Visits



Source: Salient Performance Data - Medicaid_Chronic_Conditions__10 County Inpatient_Admissions_and_Emergency_Room_Visits_by_County__Beginning_2012

There were 3 Clinical Improvement Metrics available for HIV/AIDS: Comprehensive Care for People Living with HIV or AIDS-Engagement in Care, Comprehensive Care for People Living with HIV or AIDS-Syphilis Screening and Comprehensive Care for People Living with HIV or AIDS-Viral Load Monitoring.

Albany Medical PPS and Ellis PPS

Comprehensive Care for People Living with HIV or AIDS-Engagement in Care is defined as the percentage of Medicaid recipients living with HIV/AIDS, ages 2 years and older, who had two visits for primary care or HIV-related care with at least one visit during each half of the year. The 2013 NYS rate for "Engagement in Care" indicator was 89.3%. Of the 5 service area counties with information, only Dutchess County at 87.2% had a rate that was lower than NYS. Four of the 5 counties had their rates decrease between 2012 and 2013 (CNA Appendix E-11;

Figure B-91).

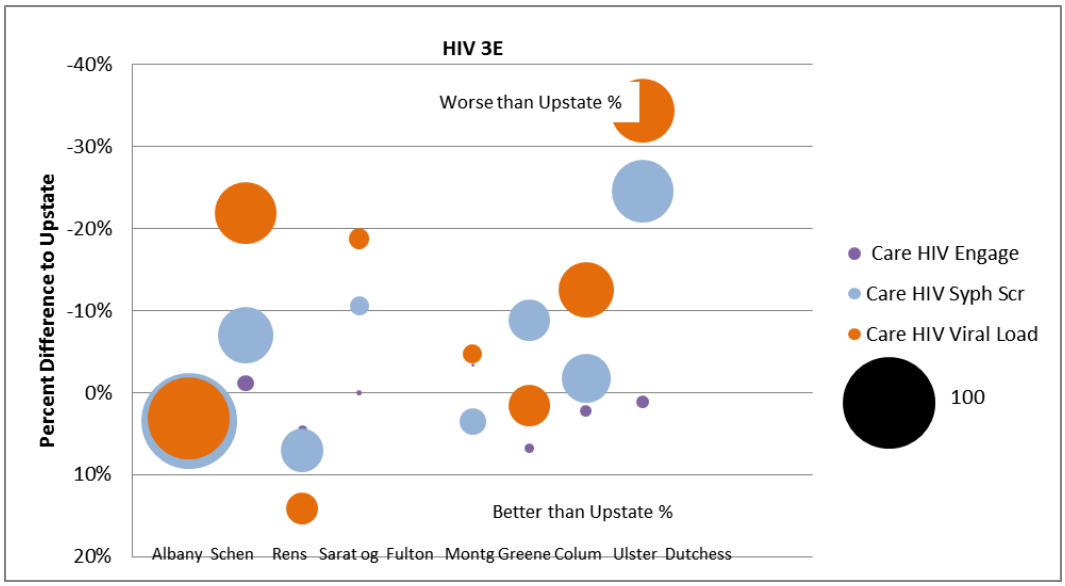
Comprehensive Care for People Living with HIV or AIDS-Syphilis Screening is defined as the percentage of Medicaid recipients living with HIV/AIDS, ages 19 years and older, who were screened for syphilis in the past year. The 2013 NYS "Syphilis" indicator was 71.0%. Again, of the service area counties with information, four of 5 fell below the NYS rate: Ulster (37.0%); Schenectady (45.7%); Albany (59.2%); and Dutchess (64.4%) counties. Three of the 5 counties had their rates decrease between 2012 and 2013 (CNA Appendix E-11;

Figure B-91).

Comprehensive Care for People Living with HIV or AIDS-Viral Load Monitoring is defined as the percentage of Medicaid recipients living with HIV/AIDS, ages 2 years and older, who have two viral load tests performed with at least one test during each half of the past year. The 2013 NYS rate for the "Viral Load Monitoring" indicator was 66.1%. Of the 5 service area counties with information, three had rates that fell below the NYS rate: Ulster (41.3%); Schenectady (45.0%); and Dutchess (59.6%) counties. Two of the 5 counties had their rates decrease between 2012 and 2013 (CNA Appendix E-11;

Figure B-91).

Figure B-91 HIV Clinical Process Improvement Metrics



Source: DSRIP Clinical Metrics Beginning 2012

G) DISEASE SCREENING AND WELL CHILD VISITS

There were 5 Clinical Improvement Metrics available for Disease Screening, Management and Well Child Visits.

Cervical Cancer Screening is defined as the percentage of Medicaid women ages 24 to 64 years, who had cervical cytology performed every 3 years, or women ages 30 to 64 years, who had cervical cytology/human papillomavirus (HPV) co-testing performed every 5 years. The 2013 NYS rate for the "Cervical Cancer Screening" indicator was 70.1%. All of the 10 service area counties had cervical cancer screening rates that were below the Upstate NY rate. All 10 county rates fell below the NYS average, with 8 falling in the 4th quartile of NYS counties: Columbia (49.8); Dutchess (53.0%); Greene (53.2%); Albany (54.7%); Rensselaer (55.1%); Saratoga (58.0%); Ulster (58.5%); and Schenectady (60.2%). All counties showed an increase in screening rates between 2012 and 2013 (CNA Appendix E-12).

Chlamydia Screening among Young Women was defined as the percentage of Medicaid sexually active young women, ages 16 to 24 years, who had at least one test for chlamydia during the past year. The 2013 NYS Chlamydia screening rate was 68.2%. Nine of the 10 counties had lower screening rates than the NY rate. Four of these counties,

Warren (43.0%), Columbia (52.3%), Ulster (53.5%) and Saratoga (57.5%) had rates that fell into the 4th Quartile All counties showed an increase in screening rates between 2012 and 2013. (CNA Appendix E-12).

Breast Cancer Screening among Women is defined as the percentage of Medicaid women, ages 50 to 74 years, who had a mammogram anytime between October 1 two years prior to the measurement year and December 31 of the measurement year. The 2012 NYS rate for the "Breast Cancer Screening" indicator was 63.0%. All of the 10 service area counties had breast cancer screening rates lower than the NYS rate, but only Ulster County's rate of 48.9% was in the 4th quartile (CNA Appendix E-12).

Colorectal Cancer Screening is defined as the percentage of Medicaid Adults ages 50-75 years, who had appropriate screening for colorectal cancer. The 2013 NYS rate for the "Colorectal Screening" indicator was 50.2%. All 10 service area counties had colorectal screening rates below the NY rate. Only Ulster (37.3%) Columbia (38.2%) and Greene (38.3%) counties had screening rates that fell into the 4th quartile. Four of the 10 counties had screening rates that decreased between 2012 and 2013 (CNA Appendix E-12).

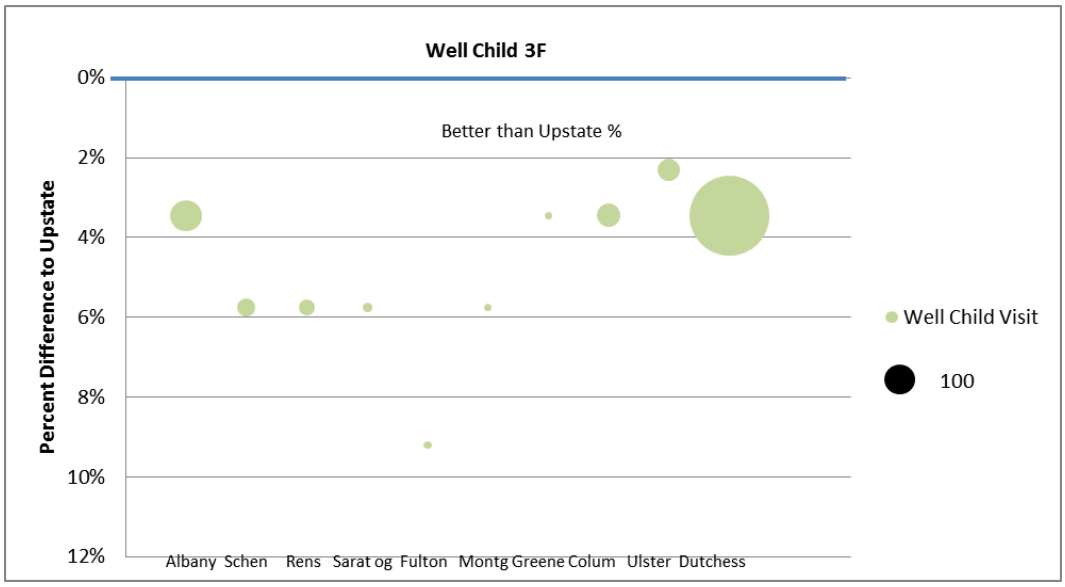
Well-Child Visits in the First 15 Months of Life is defined as the percentage of Medicaid children who had five or more well-child visits with a primary care provider in the first 15 months of life. The 2012 NYS rate for the "Well-Child" indicator was 85.0%. All the 10 service area counties had rates that were higher than the NYS rate, with only Ulster (88.8%) and Albany (89.6%) falling below 90% (CNA Appendix E-12; Figure B-92).

Comprehensive Diabetes Care-HbA1c Screening is defined as the percentage of Medicaid recipients living with diabetes who received at least one Hemoglobin A1 (HbA1c) test within the past year. The 2013 NYS rate for the "Diabetes-HbA1c" indicator was 80.7%. Nine of the 10 counties had screening rates below the NYS average, with Schenectady County (71.7%) falling in the 4th quartile, and Ulster (73.1%); Dutchess (73.9%); Fulton (74.2%); and Saratoga (74.2%) counties falling in the 3rd quartile of NYS counties. Only 2 counties showed decreased rates between 2012 and 2013 (CNA Appendix E-13).

Comprehensive Diabetes Care-Lipid Profile Screening is defined as the percentage of Medicaid recipients living with diabetes who received at least one Lipid Profile test within the past year. The 2013 NYS rate for the "Diabetes-Lipid Profile" indicator was 76.6%. All of the 10 counties had screening rates below the NYS average, with Schenectady (56.9%), Ulster (59.0%), and Dutchess (63.2%) counties falling in the 4th quartile, and Saratoga (68.5%) and Columbia (68.9%) falling in the 3rd quartile of NYS counties. (CNA Appendix E-13).

Asthma Medication Ratio (AMR) is the ratio of controller medication to the total asthma medication used by a patient with asthma. An AMR of 5.0 or lower is an indication for asthma medication consultation. The 2013 NYS average for Medicaid recipients is 62.1% with appropriate ratios. Six of the 10 counties had rates below NYS. Columbia (53.7%), Montgomery (55.5%), Warren (56.1%), and Ulster (57.8%) counties fell into the 4th quartile, while Albany (59.8%), Schenectady (61.1%), and Rensselaer (61.7%) fell into the 3rd quartile of NYS counties (CNA Appendix E-13).

Figure B-92 Well Child Clinical Process Improvement Metrics



Source: DSRIP Clinical Metrics Beginning 2012

H) PALLIATIVE CARE

Palliative care provided several challenges in determining need. A review of the literature indicated a number of need targeting methodologies, however, each of them provided different definitions. These need targeting methodologies primarily addressed chronic conditions associated with palliative care need. In order to address this lack of consensus, we asked local palliative care providers to indicate the need drivers most frequently observed in their practices. We incorporated this input into our Multiple Chronic Physical Condition metric (MCC_phys) definition. We also incorporated a combination metric they identified (diabetes and anxiety). Our scale and speed targeting analysis by county and Neighborhood in Appendix F-3 incorporates both of these metrics, as well as related metrics for Diabetes & Depression and Diabetes & Significant Mental Impairment. Additional input from the Salient data became available subsequent to completion of the CNA analysis. This utilized yet another target list of palliative care related chronic conditions for specific Medicaid members attributed to the PPS. This information was also provided to the PPS as input to their speed and scale estimates.

Current provider knowledge and use of palliative care was gathered from two rounds of provider surveys. One hundred and fifteen physicians responded to a survey about palliative care (Appendix B-5). Forty four percent (48%) of the physicians responding were primary care or primary and specialty care. The majority of physicians currently address advance illness in their practices with discussion of medical options (75%) and conversation regarding end of life choices (73%). Whereas 52% of respondents used palliative care interventions, 30% of respondents were not familiar with palliative care interventions indicating an opportunity to expand palliative care into practices. Up to 30% of physicians were planning to incorporate various interventions or were open to receiving education on palliative care interventions. The largest gap where providers indicate they would incorporate if given education is in complex family dynamic discussions. This education combined with effective targeting of hotspot need provides a direction for effective palliative care intervention initiatives.

C. CHALLENGES FACING THE COMMUNITY

1. CONTRIBUTING CAUSES OF POOR HEALTH STATUS

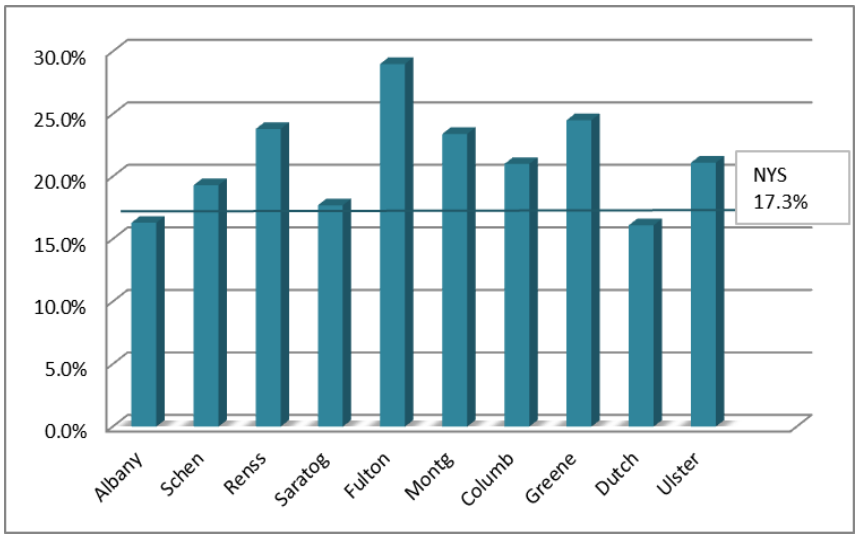
I. Behavioral Risk

Tobacco use is the leading cause of preventable death in the United States[4]. It affects not only those who use tobacco, but also people who live and work around smokers. In the recent Prevention Agenda planning efforts of counties and hospitals in the 10 County service area, three counties (Schenectady, Columbia, Ulster) identified reduction of smoking-related illness as a focus area, while three counties (Albany, Rensselaer, Schenectady) had reduction of smoking prevalence in the population with mental illness, as a priority focus area. (CNA Appendix D-1).

The recent 2013-14 EBRFSS data on adult (18+ years) smoking prevalence indicate that recent gains in the reduction of smoking has leveled off in a number of Service Area counties. Five of the 10 counties have actually seen the rates similar or increasing from 2008-09 (CNA Appendix D-9). Eight of the 10 counties had higher smoking prevalence than Upstate (17.3%). Fulton (29.0%), Greene (24.5%) and Rensselaer (23.8%) had rates in the 4th quartile if NYS counties, while Montgomery (23.4%) and Columbia (21.0%) counties fell in the 3rd quartile (Figure C-1).

[4] CDC, Smoking and Tobacco Use
http://www.cdc.gov/chronicdisease/resources/publications/aag/osh.htm

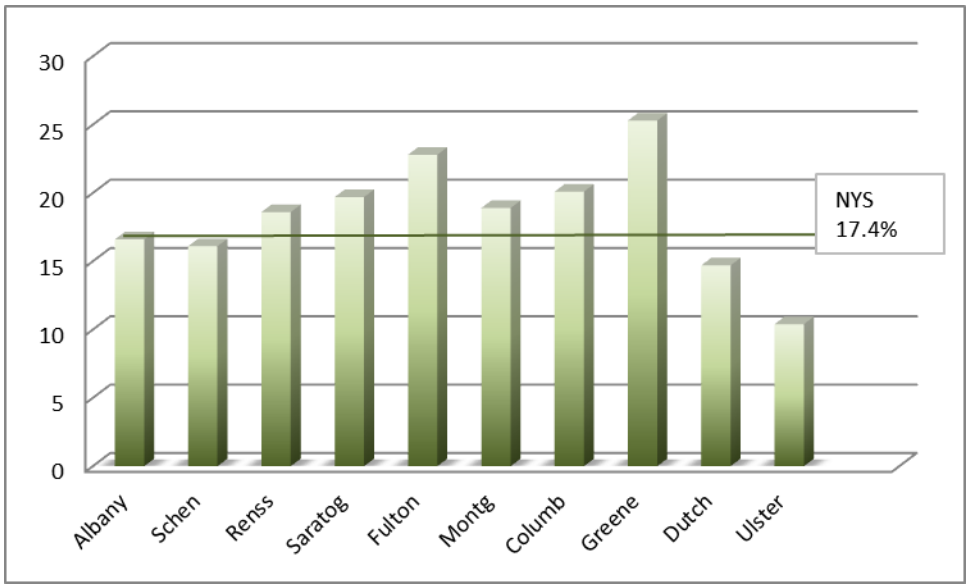
Figure C-1 Percent Cigarette Smoking in Adults (18+yrs)



Source: Expanded Behavioral Risk Factor Surveillance System (EBRFSS)- Prevention Agenda Tracking Indicators, NYS excl NYC

Excessive use of alcohol is harmful not only to the health of those who drink, but also to the health and well-being of their families. Excessive and chronic alcohol use can lead to injuries, hospitalizations and death. Binge drinking is an alcohol-related indicator collected by the EBRFSS. Binge drinking is defined as males having 5 + drinks, or females having 4+ drinks at a time at least once in the past month. Six of the 10 service area counties had 2013-14 rates of binge drinking higher than the Upstate average of 17.4%. Greene (25.3%) and Fulton (22.8%) counties fell into the 4th quartile, while Columbia (20.1%), Saratoga (18.9%), Montgomery (18.9%) and Rensselaer (18.6%) were in the 3rd quartile of all NYS counties for rates of binge drinking. Four of the 10 counties had binge drinking rates increase from 2008-09 to 2013-14 (CNA Appendix D-9). The Service Area averaged 422 cirrhosis hospitalizations per year, with Montgomery (3.0/10,000) and Rensselaer (2.6/10,000) falling into the 4th quartile of risk. The Area also averaged 150 cirrhosis deaths per year, with Fulton (11.9/100,000), Rensselaer (10.8/100,000) and Greene (10.6/100,000) falling into the 4th quartile (CNA Appendix D-28).

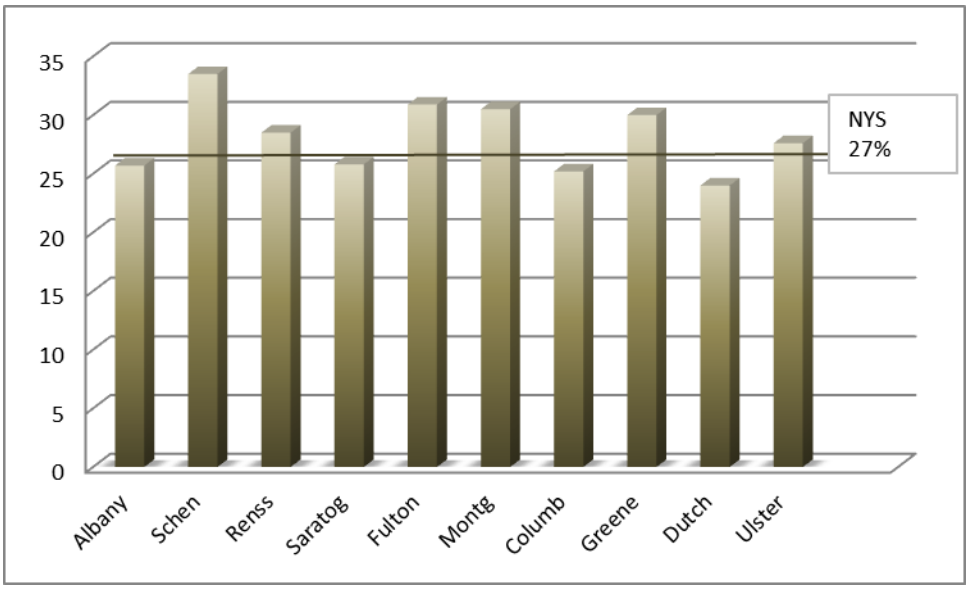
Figure C-2 Percent of Adults (18+ years) Binge Drinking during the past month



Source: Expanded Behavioral Risk Factor Surveillance System (EBRFSS)- Prevention Agenda Tracking Indicators, NYS excl NYC

Good nutrition and regular physical activity are important to health. However, excessive calorie consumption and insufficient physical activity can lead to overweight and obesity and thus to increased risk for conditions such as coronary heart disease, diabetes, and some cancers. When reviewing the recent 10 county Prevention Agenda planning efforts, every county identified obesity/diabetes as a priority focus area (CNA Appendix D-1). The 2013-14 EBRFSS figures on the percent of adults who are obese show increasing obesity rates, compared to the 2008-09 rates, for 8 of the 10 service area counties (CNA Appendix D-9). Nine of the 10 counties also had obesity rates higher than the NYS average of 24.9%. Schenectady had the highest adult rate of 33.5%, and fell into the 4th quartile of all NYS counties; Fulton (30.9), Montgomery (30.5%) and Greene (30.0%) counties fell into the 3rd quartile. (Figure C-3, CNA Appendix D-9).

Figure C-3 Percent Adults (18+ years) who are Obese



Source: Expanded Behavioral Risk Factor Surveillance System (EBRFSS)- Prevention Agenda Tracking Indicators, NYS excl NYC

Seven of the 10 counties had school student obesity rates higher than the Upstate average of 17.7%. Greene County had the highest student obesity rate at 20.4%, followed by Schenectady (19.5%) and Columbia (19.1%) counties. For children, aged 2-4 years, in the WIC program, 14.4% were obese in NYS. Seven of the 10 counties had higher WIC children obesity rates. Columbia (17.8%) and Ulster (17.5%) fell into the 4th quartile off all NYS counties. No leisure time physical activity has been associated with obesity. The Upstate adult rate for no leisure time physical activity was 21.2% in 2008-09, the latest year available. Of the 10 service area counties, Ulster (24.4%) fell into the 4th quartile, and Fulton (24.3%), Montgomery (24.1%), and Rensselaer (23.6%) fell into the 3rd quartile of all NYS counties. (CNA Appendix D-1,CNA Appendix D-10).

The recent Prevention Agenda planning effort also identified mental health and substance abuse as a major issue. All 10 counties identified mental health/substance abuse as a priority focus area. The recent EBRFSS collected data on adults (18+ years) with 14 or more poor mental health days in the past month. The Upstate rate for poor mental health days was 11.8% of the adult population. Seven of the 10 Service Area counties had rates higher than Upstate. Greene (17.8%), Rensselaer (17.2%), Ulster (17.1%) and Montgomery (14.6%) fell into the 4th quartile of all NYS counties. Albany (13.4%), Fulton (13.3%) and Saratoga (12.7%)

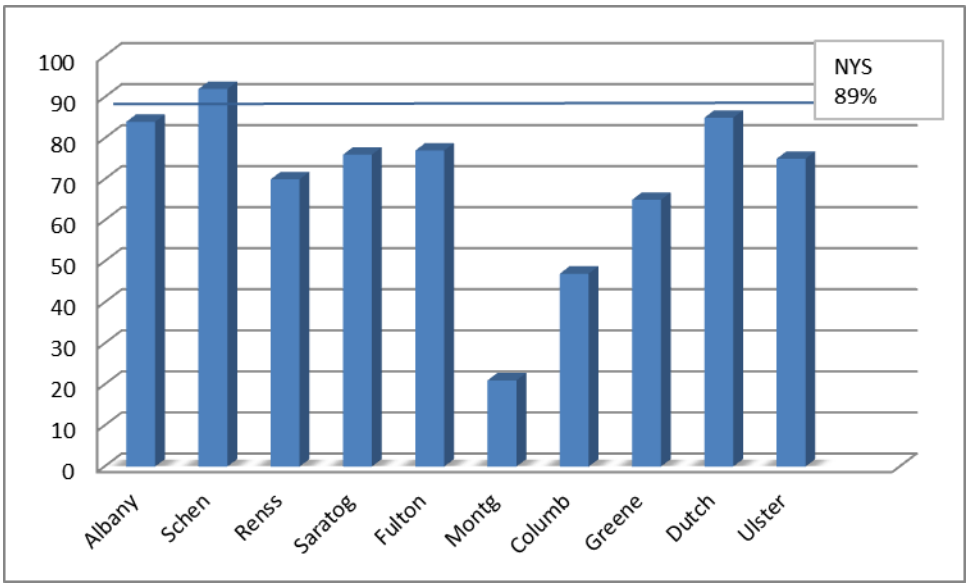
counties were in the 3rd quartile (CNA Appendix D Attachment-1; CNA Appendix D-9). The service area averaged 1,200 self-inflicted injury hospitalizations with Schenectady (12.1/10,000), Montgomery (12.0/10,000) and Fulton (11.6/10,000) falling into the 4th risk quartile. The 10 County area also averaged 162 suicides per year. Montgomery (12.3/100,000), Saratoga (12.1/100,000) and Schenectady (11.6/100,000) counties fell into the 3rd quartile of NYS counties (CNA Appendix D-29).

II. Environmental Factors

Clean air and water are core components of a healthy community. Air pollutants such as fine particulate matter are harmful to the population's health and environment. Contaminants in drinking water can lead to poisoning, illness, and increased cancer risk. The 10 County service area have fine particulate matter (PM2.5) measures lower than the NYS (11.7). The counties range from 10.9 in Dutchess and Rensselaer counties to 11.3 in Fulton and Montgomery counties (CNA Appendix G-1). When reviewing the percent of the population exposed to water exceeding a violation limit, only Warren (35%) and Rensselaer County (32%) had a rate higher than the NYS population average of 27%. Considering the data being heavily influenced by large public water supplies, the county rates were mostly lower than the overall population average. In addition to Rensselaer, Greene (21%) and Ulster (19%) counties fell into counties in the 4th quartile, while Saratoga County (9%) fell into the 3rd quartile for all counties (CNA Appendix G-1). The NYSDOH Prevention Agenda Dashboard includes information on the percentage of the population that lives in a jurisdiction that adopted the Climate Smart Communities pledge for 2013. Counties ranged from 100% for Albany, Schenectady, and Ulster, to 0% for Fulton and Montgomery counties (CNA Appendix G-1).

The built environment can play a role in promoting a healthy community. Having adequate access to locations for physical activity can be a factor in reducing obesity in the population. When reviewing the percent of the population with adequate access, 7 of the 10 service area counties had percentages lower than the NYS rate of 89%. Montgomery (21%) and Columbia (47%) fell into the 4th quartile, while Greene (65%) fell into the 3rd quartile of NYS counties (Figure C-4) (CNA Appendix G-2).

Figure C-4 Percent of Population with Adequate Access to Locations for Physical Activity, 2010 and 2012



Source: County Health Rankings and Roadmaps, NYS 2014

Safe roads and automobile travel is another component of a health built environment. There were about 120 motor vehicle-related deaths per year in the Service Area. While 8 of the 10 service area counties had motor vehicle mortality rates higher than NYS rate of 6.1/100,000 (only Albany and Schenectady had lower rates), Greene County with a rate of 12.6 was the only county that fell into the 3rd quartile of risk. When reviewing alcohol-related motor vehicle injuries and deaths there were about 750 Service Area injuries/deaths per year. All 10 counties had higher rates than NYS (33.0/100,000). Fulton (66.4), Warren (66.0), Ulster (62.2), and Greene (61.3) fell into the 4th quartile while Columbia (55.3), Saratoga (52.1), and Montgomery (51.3) fell into the 3rd risk quartile (CNA Appendix G-3).

A poor built environment can lead to falls, especially in the vulnerable populations of the elderly and children. The Service Area averaged almost 4,600 elderly fall hospitalizations per year. The 10 County fall hospitalizations in the elderly (65+ years) population of 193.8/10,000 was comparable to the NYS rate of 193.4. However, Montgomery (255.8), Warren (232.0), Albany (222.6), and Ulster (210.3) counties fell into the

4th quartile, while Rensselaer (191.8), Greene (191.7) and Fulton (183.2) counties fell into the 3rd quartile of all NYS counties. The 10 County service area averages over 3,000 fall-related ED visits to children 1-4 years of age. Five of the counties had rates higher than NYS (504.1/10,000). Fulton (723.2), Montgomery (653.5) and Albany (615.0) fell into the 4th quartile (CNA Appendix G-4).

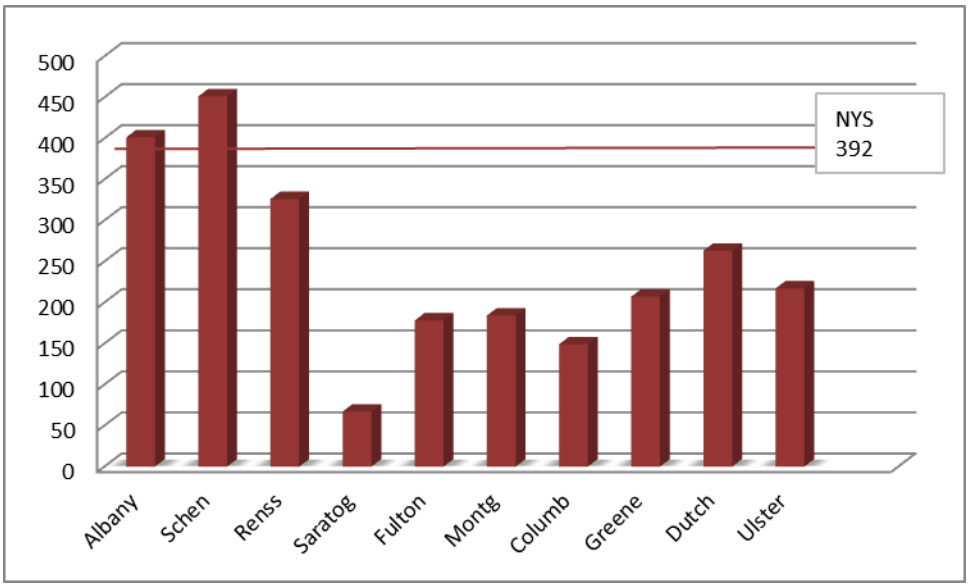
A safe workplace is also an important component to a health community. The 10 County service area averaged about 1,600 work-related hospitalizations to employed persons 16+ years of age. The Service Area rate of 223.8/100,000 was higher than the NYS rate of 167.1. Fulton (269.5), Columbia (269.2), and Greene (260.7) counties had rates that fell into the 4th quartile, while Ulster (249.5) and Dutchess (244.6) counties fell into the 3rd quartile. There was an average of 485 occupational-related ED visits in the 15-19 year old Service Area population. Again, the 10 County rate of 40.1/10,000 was higher than the NYS rate of 28.1. Warren (76.5) and Montgomery (74.0) counties fell into the 4th quartile, while Columbia (54.2), Schenectady (54.2) and Ulster (53.4/10,000) fell into the 3rd risk quartile (CNA Appendix G-5).

The NYSDOH Heavy Metals Registry collects occupational blood lead levels for the NYS population. There was an average of about 170 elevated blood lead levels per year in the 10 County service area. The Area rate of 24.1/100,000 employed persons 16+ years of age was slightly higher than the NYS rate of 23.4. Four counties fell into the 4th quartile: Columbia (58.8); Fulton (42.8/100,000); Greene (40.1/100,000); and Dutchess (34.5). Ulster (26.6), Warren (24.4), and Saratoga (23.6/100,000) fell into the 3rd quartile of risk (CNA Appendix G-5).

Community Safety is another important component of a healthy community. Unsafe neighborhoods can cause anxiety, depression, and stress. Fear can also keep people indoors and away from exercise and healthy foods. Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery and aggravated assault. The NYS violent crime rate was 392/100,000. Two of the Service Area counties, Schenectady (451) and Albany (401) had rates higher than NYS, and fell into the 4th quartile. Rensselaer (326) and Dutchess (263) also fell into the 4th risk quartile. Four of the 10 counties also fell into the 3rd

quartile: Ulster (217); Greene (207); Montgomery (184/100,000) and Fulton (1780) (Figure C-5).

Figure C-5 Violent Crime Rate



Source: NYSDOH Community Health Indicator Reports; County Health Rankings and Roadmaps, NYS 2014

The 10 County service area averaged 390 assault hospitalizations per year. While all Service Area counties had rates less than NYS (4.4/10,000), Dutchess (3.5) and Albany (3.4) counties fell into the 4th risk quartile. Five counties fell into the 3rd quartile: Schenectady (3.0); Rensselaer (3.0); Greene (2.1); Montgomery (2.0/10,000) and Ulster (1.9). The Service Area averaged 34 homicide deaths per year. Only 2 of the 10 county rates were higher than the NYS rate of 4.1/100,000. Schenectady (4.7), Montgomery (4.2/100,000) and Rensselaer (3.1) counties fell into the 4th quartile, while Dutchess (2.4) and Albany (2.1) counties fell into the 3rd quartile (CNA Appendix G-6).

III. Socioeconomic Status

Socioeconomic status is a key factor in the health of a community. Income provides resources that affect choices about housing, education, childcare, food and medical care. Employment, not only provides income, but also other benefits such as health insurance. Poor educational attainment has been linked with lower incomes. The low

socioeconomic status population has higher risk factors such as obesity rates and smoking prevalence.

Median household income ranged from $42,830 for Montgomery, and $45,333 for Fulton counties, to $67,712 for Saratoga and $71,508 for Dutchess counties. There were over 117,000 households with incomes under $25,000 per year in the 10 County service area (19.7%). Fulton and Montgomery counties had the largest percentages, while Saratoga and Dutchess the smallest percentage of such households (CNA Appendix C-9). Over 75,000 service area residents (5.1%) were living at <50% of the FPL; 167,000 (11.3%) at < 100% FPL; and 213,000 (14.5%) at < 125% FPL. Across the three FPL's, Montgomery and Fulton counties had the highest percentages, while Dutchess and Saratoga counties the smallest percentage living below the FPLs (CNA Appendix C-9). About 107,000 service area residents, 25 years of age and older, were without a high school education. Montgomery, Fulton and Greene counties had the highest percentages in the 10 counties (CNA Appendix C-9). There were about 61,000 Service Area residents unemployed, but seeking employment (8.0%). Fulton and Montgomery counties had the highest unemployment rates (CNA Appendix C-12).

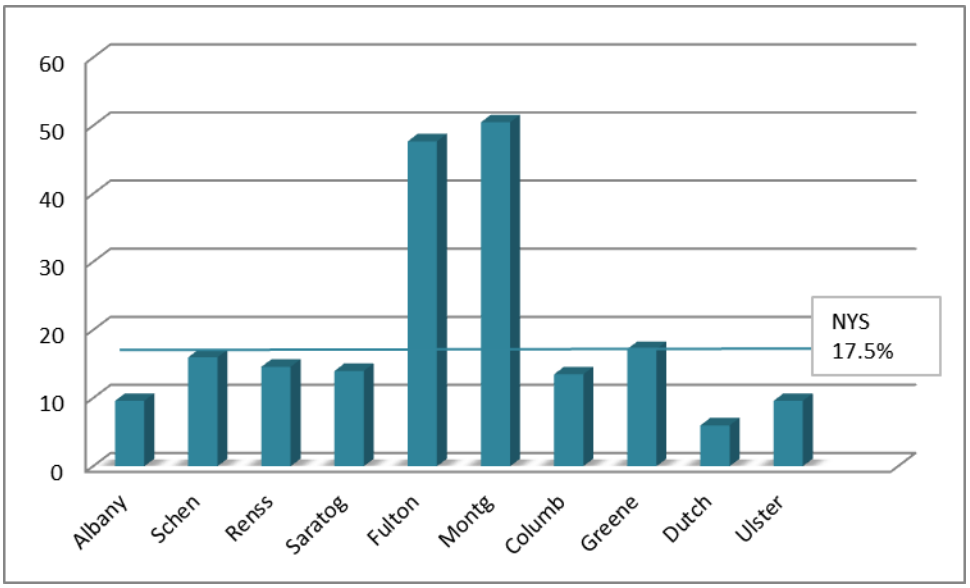
The NYS poverty rate (<100%FPL) for children < 18 years of age was 23%. Only 2 counties were at or above the NYS rate: Montgomery (31%; 4th quartile) and Fulton (23%; 3rd quartile). When reviewing the percent of children living in households headed by a single parent, 6 counties were greater or equal to the NYS rate of 35%. Counties in the 4th quartile include: Fulton (48%); Montgomery (39%); Albany (36%); and Schenectady (36%). Rensselaer (35%), Columbia (35%), Greene (32%), and Ulster (32%) counties fell into the 3rd quartile of NYS counties (CNA Appendix G-7).

IV. Housing and Access to Affordable Food

Poor, dilapidated housing can be a detriment to the health of the community. Poor housing conditions have been associated with lead poisoning and asthma, while crowding eases the spread of communicable diseases. Pre-1960 housing has a higher risk for exposure to lead based paint. Approximately 47.6% of the Service Area housing units were "Pre-1960", lower than the NYS rate of 57.8%. However, Montgomery

(66.6%), Schenectady (64.5%) and Fulton (59.6%) had percentages higher than NYS. When reviewing owner occupied housing units < $100,000, the 10 County service area rate of 14.0% was lower than the NYS rate of 17.5%. Montgomery (50.5%) and Fulton (59.6%) had rates much higher than NYS (Figure C-6).

Figure C-6 Owner Occupied Housing Units <$100,000



Source: US Census Bureau, American Community Survey 5 Year Estimates 2008-2012 (DP-4); County Health Rankings and Roadmaps, NYS 2014.

Extreme crowding can be defined as the percentage of housing units with 1.51+ occupants per room. The 10 County rate of 0.5% was lower than the NYS rate of 1.7%. Columbia (0.8%) Albany (0.6%), Dutchess (0.5%), and Ulster (0.5%) had the highest rates in the Service Area. While dated (2006-2010), information is available on severe housing problems. This is defined as the percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities. While none of the 10 counties had percentages higher than the NYS rate of 24%, Ulster (19%), and Dutchess (18%) counties fell into the 4th quartile. Counties in the 3rd quartile included: Greene (17%); Fulton (16%); Albany (16%); and Schenectady (16%) (

CNA Appendix G-8).

Access to affordable, healthy foods is a key ingredient to a healthy community. Poor nutrition can hinder growth and development, while consumption of unhealthy foods can lead to obesity. "Food Insecurity" represents the percentage of the population who did not have access to a reliable source of food during the past year. All of the Service Area counties had percentages lower than the NYS rate of 15%. However, Albany (12%), Fulton (12%) and Montgomery (12%) counties fell into the 4th risk quartile, while Greene County (11%) fell into the 3rd quartile of NYS counties. "Limited Access to Healthy Foods" is defined as the percentage of the population who are low income and do not live close to a grocery store. Living close to a grocery store is defined differently in rural and non-rural areas; in rural areas it means living less than 10 miles from a grocery store, whereas in non-rural areas, it means less than 1 mile. Low income is defined as < 200% FPL. All 10 counties had percentages of limited access greater than NYS (2%). Counties in the 4th quartile included: Montgomery (19%); Schenectady (10%); Dutchess (6%) and Ulster (6%). Albany (5%), Rensselaer (5%) and Columbia (5%) counties fell into the 3rd quartile. The "Food Environment Index" is a measure ranging from 0 (worst) to 10 (best) which equally weights two indicators of the food environment: limited access to healthy foods; and food insecurity. Only Montgomery (6.9) and Schenectady (8.1) counties had an index lower than NYS (8.3) and both fell into the 4th quartile of NYS counties. Albany (8.4), Fulton (8.4), Rensselaer (8.5), and Ulster (8.5) counties fell into the 3rd quartile (CNA Appendix G-9).

2. STAKEHOLDER FEEDBACK

To determine the challenges facing the community the Community Needs Assessment included a number of methodologies to reach a variety of stakeholders in the DSRIP process. Beyond the input garnered from each PPS's PAC and their project teams and membership, the CNA team engaged stakeholders through a provider and CBO survey, a consumer survey, 8 focus groups and 6 listening sessions. The listening sessions and focus groups were held in six counties:(Albany, Schenectady, Rensselaer, Saratoga, Fulton and Montgomery). The eight focus groups were held with Medicaid members and the uninsured and concentrated on three groups: chronic disease, mental health and substance abuse (CNA Appendix B-3). Three listening sessions were held with providers, including physicians and CBO's and five sessions were held with members and the general community (CNA Appendix B-2).

An online survey was made available to a broad variety of providers and CBO's including those not members of either PPS (CNA Appendix B-1). The consumer survey was directed primarily to the Medicaid and uninsured population. Detailed information on the surveys, focus groups and listening sessions can be found in CNA Appendix B-1 Provider Survey, CNA Appendix B-2 Listening Sessions, CNA Appendix B-3 Focus Groups, and CNA Appendix B-4 Consumer Survey.

While approaching the issues and concerns to be addressed from different perspectives, there was general agreement on major themes, resources, and possible solutions. The major themes arose in all forms of stakeholder feedback.

Major themes common to all stakeholders included the following (each explored in more detail in the following sections):

1. Confusion/Knowledge Gap
2. Convenient Service Access
3. Lack of Member Engagement
4. Communication & Listening
5. Transportation

6. Home Environment and Living Conditions (Unstable Housing, Frequent Moves, Lack of Social Supports and Communication Resources)
7. Lack of Coordination & Consistent Follow-up
8. High Numbers of Members with Anxiety, Depression, and Chronic Conditions
9. Regulatory Barriers
10. Under-resourced CBOs
11. Lack of Adequate Staff
12. Lack of Adequate Financial Resources

I. Confusion & Knowledge Gaps

Most people, even those working in health care, lack a full grasp of the current complex and fragmented health delivery system – and their own role in relation to the total. Lack of understanding can lead to frustration and feelings that there is nothing they can do to improve their situation. Members described the anger they felt when they discovered (after the fact) that their Medicaid coverage didn't actually cover the services their children needed. They declared bankruptcy after trying to pay on their own.

In each session, participants of all backgrounds continually expressed that they were not aware of system aspects that others were sharing. Members routinely confuse Medicare and Medicaid.

Members and uninsured attending sessions appeared initially withdrawn, resigned, and sad. They expressed personal experiences they interpreted as discriminatory because of their Medicaid or no-pay status. As they learned more, they became more engaged in the discussions, started asking questions or offering thoughts about how they could improve their own situation, and in some cases, left with a plan of how to do so – with a smile.

When asked how they respond if they get sick – do they seek care in the ED, one Uninsured participant said they rely on themselves, and go to

work sick if they need to. Another expressed that they rely on "Dr. Jesus". They had not explored applying for Medicaid, presuming that they would not qualify, and didn't want to waste the effort.

In the focus groups most individuals reported that the biggest issues were what Medicaid does and does not cover and understanding the information presented to them.

This was especially prevalent in regards to Primary Care providers and where they can receive mental health or behavioral services. This is complimented by many cases what participants in groups referred to as "red tape" or unnecessary measures or procedures in regards to getting services such as going through multiple channels when it could be streamlined with one source.

Individuals across condition types find that it is incredibly difficult to digest the information that is presented to them. That the language associated with collateral materials regarding medication prescribed and conditions to which they are diagnosed are not written in language that is comprehensible to their abilities. To add to this frustration, when individuals seek out professionals to assist them with understanding the collateral material, they find that individuals are not very helpful, and that the lack of communication between agencies increases the level of difficultly for those to understand and utilize health care services.

In the consumer survey over 40% of respondents said they did not know where to go for substance abuse services and 30% did not know where to go for mental health services. Given the high prevalence of mental health and substance abuse issues in the Medicaid population, this lack of knowledge indicates a gap in care. Twenty five percent said they didn't know where to go for diabetes testing, 35% for cancer screening, 41% for weight loss programs and 25% for HIV and STD testing.

Over fifteen percent of consumers said lack of information on what services are available was a major barrier to getting good health and healthcare for themselves and their families.

Many of them need/ desire a better way to receive information about the services available, why some services may not be available, where they can find health care providers and how they could get to those health care providers (transportation options).

II. Convenient service access

Preventive health services are last on a Member's priority list. They are worried about food, eviction, struggling with babies, or caring for elderly parents. Even necessary follow-up orders and filling of prescriptions will not happen if it is not convenient. Focus group participants wanted to have healthy lifestyles and mentioned wanting to lose weight or quit smoking. They seemed very aware of the benefit of healthy eating and said that obtaining food was not an issue in our area.

Many of the focus group-individuals feel there are not enough clinics or providers in general throughout the counties where they can go to receive care. Additionally those with chronic health would like assistance in the evening or after surgeries as they are not capable to help themselves. Limited hours of operation and out of area location were cited by all. Transportation limitations make it incredibly inconvenient for individuals to get the services they need.

Across all focus groups in this study, wait time is the largest contributing factor as a barrier to receiving appropriate health care services. Wait times along with the lack of communication when scheduling appointments made it feel impossible for those to obtain the care they need. This is especially problematic for those with substance abuse and mental health. Focus group participants from multiple geographic locations said that they tried to schedule appointments when symptoms and stressors first arise that cause complications to their mental health. However, due to the wait times in conjunctions with the lack of communication, many individuals had to go to extreme lengths (i.e. suicide attempts) before they were brought to a facility or seen by an individual who could provide them the care they needed. Lack of communication, coupled with short appointment visits and long lead times has also caused them not receive medication in a timely manner, thereby compromising their mental, emotional, and physical state of health.

"Mental health services are one of the worst in this area as for services, waiting period if you come out of the hospital to wait for an appointment. If you have a crisis, needing medications, all kinds of big problems in the mental health resources. So there's money being cut. So you go in this week and next week you got a different job. So there's a lot

of problems with that. And finding someone that does take Medicaid if you're in the system."(focus group participant)

The working poor use the ED because they have no time available to make an appointment with a physician during business hours and may not have a PCP. Members will not take an hour or more off of work to go to an appointment – they cannot afford to. As one participant characterized their frustration as "Member waiting times are ignored altogether". The free clinic in Schenectady went bankrupt paying for prescriptions, eliminating a key source of services for the many uninsured.

Forty nine percent of the consumer survey respondents said they had received care in the emergency room in the last year. Half of those used the emergency room more than once, with 35% using it more than 3 times. The main reason for using the ED was pain (44%), the problem was getting worse (30%) and seriousness of the condition (26%). Twenty five percent (25%) said they went to the ED because their doctor's office was not open and 17% said they were told to go to the ED by their health provider. Twenty percent said going to the ED was quicker.

Thirty percent said they use the ED as their usual place to get healthcare services. Interestingly 93% said they also used a doctor's office and use a doctor's office when they are sick indicating that most have a primary care physician but that they still use the ED for non-emergent services. Eighty five percent said they had visited a doctor for a routine exam or checkup. Of those that hadn't seen a doctor in the last two years, 30% said the reason was they couldn't afford the charges.

The most prevalent condition reported by consumers was high blood pressure (41.4%), followed by dental problems (33%), arthritis (32%), visual problems (32%), diabetes (27%), stomach/intestinal problems (27%), mental health (21%). Clearly this population has a number of significant chronic conditions but many are not accessing care for those problems. In the last 12 months, 41% of consumers said they did not have a cholesterol testing, 53% did not have cancer screening, 76% no nutrition education and 45% did not see a dentist.

Only 55% had seen a dentist in the last year. The major reasons for not seeing a dentist were cost (41%) or that they did not like going or were

afraid to go (24%). Focus group participants also mentioned dentistry saying they would rather have them pull your teeth than give you a root canal because it cost less.

Twenty six percent of consumers leave their county for healthcare, the majority traveling between adjacent counties such as Albany County (20%), Schenectady (12%), Rensselaer (12%). Twelve percent travel to New York City for care when leaving their county. Most of the travel was to access specialty services (35%) but 26% left for primary care services. Twenty seven percent were referred by their primary care physician out of the county and 23% said the provider they needed was not available in their home county. A respondent to the consumer survey commented that there are few places for mental health and eating disorders in Columbia County.

Fifteen percent of consumers answered that there were barriers that made it difficult for them to get healthcare. Language was only mentioned by 2.8% as a barrier reflecting the relatively low percentage of foreign speakers. When asked what were barriers to good health and healthcare 14% of consumers chose lack of healthcare services on the weekends and evenings as a major problem.

III. Lack of Member Engagement

Members not only need to be engaged, but empowered to have a voice in their own care. Some Members noted the difficulty of understanding all the complex processes needed to manage their own health, they conclude that their providers or the system does not care about them (in some cases feel discriminated against), and don't have the time to deal with an additional complication in their complex lives (see also Confusion and Knowledge Gaps).

IV. Communication & Listening

Sixty-two different languages are spoken in some areas. Rushed providers may not have the time or take the time to listen effectively. Cultural norms, language other than English, overall literacy, technical Health Care literacy, and overly brief encounters are all challenges for good communication. Language and cultural competence was mentioned as a barrier by 34% of the provider survey respondents and

38% mentioned incompatible computer and communications technology. In the consumer survey only 3% mentioned language as a barrier (the survey was made available in Spanish and English).

Members, particularly minorities, can be distrustful of healthcare providers. Members complained that providers would not listen to their repeated concerns. "I told my PCP for years that I had a bladder problem, but they wouldn't listen. I finally went to an Urologist for a second opinion, who did tests and confirmed I had a physical anomaly causing the problem - which they treated successfully. I changed PCPs."

Frequently, when providers don't listen, Members interpret it as discrimination because they are on Medicaid rather than just poor care delivery. When other participants shared similar poor care experiences that were not Medicaid related, the Members appeared to relax.

Many of the focus group participants across all health conditions felt they were not being heard, that appointments were rushed, and with mental health they were just pushed to use a variety of medications based on which doctor they saw, not that they were properly diagnosed with the medication that was appropriately needed. Time seemed to be a large barrier. Many felt that doctors would see them for 10 minutes then bill them for an hour so they could see as many people as possible. Because of this mindset the quality of care and doctor relations is poor and individuals do not feel they are really being helped or that their health is being appropriately attended too.

One of the largest complaints for individuals facing different health conditions was the communication and discrepancies of coverage associated with Medicaid, specifically CDPHP. Many individuals found that they were not aware of what was and was not covered prior to signing up for Medicaid. Additionally, frustration arose from individuals when they believe that certain care was covered but found it laborious to locate a provider for that particular healthcare service that also accepted Medicaid. This was especially prevalent for individuals who have been diagnosed with mental and behavioral issues as facilities and practitioners who accept their insurance is limited in the counties that participated within this study.

Other issues with communication are between mental health professionals and the primary care physicians. In one mental health session, it was stated that their PCP claims their problems are mental, while mental health claims the individuals problems are physical.

There was also miscommunication from the physician who was not listening to the patient and stated they did not need the medication they came for.

V. Transportation

Getting the right services to the right person at the right time can be accomplished by either moving the patient to the services or moving the services to the patient.

Many members rely on public transportation, family, friends, and available community transportation services. The ED is usually on a bus line, while the PCP may not be. The logistics of transportation to and from appointments can be extremely difficult and time consuming to manage.

Seventy percent of the providers responding to the survey reported being within a quarter mile of public transportation, with 17% being more than a mile away. Eighty eight percent of provider survey respondents had sidewalks adjacent to their location and only 10% said there were any barriers that made it difficult for handicapped person to access their location.

Consumer survey respondents reported that 78% use their own car to get to healthcare services, with 21% using a friend or relative and 11% using public transportation. Six and a half percent use a taxi and 5% use an ambulance.

Focus group participants complained about the rules around getting Medicaid paid transportation. They could get a Medicaid 'cab' but only for a specific reason or visit. One participant said all she wanted was a bus pass but they won't provide one and told her to use the more expensive service. Child care and transportation were mentioned by many.

Areas outside of Albany and Schenectady (especially Fulton and Montgomery Counties) make it difficult for individuals to get to the

services they need. Calling 3 to 5 days in advance for transportation, that sometimes comes late and people miss their appointments anyway. For one focus group held in Amsterdam (Montgomery County) this was associated with the fact that transportation comes from Syracuse and therefore makes it difficult to get transportation in a timely manner. If they are late, regardless whose fault it is they lose their appointment and have to start the whole process again. Often transportation will bring individuals to their appointments, but not to get their medication after their appointments.

VI. Home Environment and Living Conditions (Unstable Housing, Frequent Moves, Lack of Social Supports and Communication Resources)

The Medicaid and Uninsured populations, particularly in urban areas, do not have stable housing or communication tools, leading to many barriers. They are at high risk for a cascading downward spiral from a single event (lose job, get sick, eviction, foreclosure, bankruptcy, etc.). These poor conditions and the stress they cause lead to undiagnosed PTSD that impacts other health conditions. Forty four percent of provider survey respondents mentioned safe and adequate housing as a major barrier.

When asked about local Community supports, some Medicaid Members and Uninsured expressed that they didn't really have any, since they recently moved to the area – they were on their own, socially isolated. One Focus group participant had recently arrived in Albany because his landlord in NYC raised his rent $300 a month and he was in danger of becoming homeless. He was very concerned about being able to manage a transfer from his managed care plan in NYC to the Medicaid in Albany.

Frequent changes of address, combined with impaired communication access (internet, changing cell numbers or running out of minutes on minutes-only phones, etc.) make it difficult to coordinate care over time.

In the focus groups it was stated that for many the lack of rehabilitative housing for those with substance abuse and mental health issues they are forced to stay in the hospital a lot longer than what would be necessarily.

Only 36% of the consumers responding to the survey said they owned their own home, with 42% renting and 12% living temporarily with friends or family.

Housing CBOs expressed that much of the available housing stock is old and in such poor repair that it represents a health risk (mold, asbestos, pest control, lead, etc.).

Providers expressed that they frequently had to deal with barriers to a safe discharge. It was stated in the Focus Group that for many, because of the lack of rehabilitative housing for those with substance abuse and

mental health, they are forced to stay in the hospital a lot longer than what would be necessary, and that is charged to their Medicaid.

VII. Lack of Coordination & Consistent Follow-up

Many stories shared of one health care provider not talking to another, inability for them to connect on a timely basis and member frustration – leading to lack of follow-up – too hard to manage multiple appointments over time.

PCPs noted the difficulty in getting a timely BH consult. Similarly, BH providers noted the difficulty in obtaining needed and timely physical care for patients. Others noted a gap in communication between hospitals and nursing homes, resulting in long ED wait times for nursing home residents.

In the focus groups it was discussed that follow up appointments were just as difficult to obtain than original appointments, months out and sometimes they would need care sooner than what was possible. In many cases these follow up appointments would occur several months after the original appointment. This became an issue especially for individuals with mental health and behavioral issues as well as those with chronic illnesses as in some instances they would need care sooner than what was possible through their primary care services. This would thereby force individuals to attend urgent care or the hospital for issues that could have been assisted through a traditional primary care visitation.

Coordination between agencies, scheduling, and the process of switching care between counties was also discussed as laborious and difficult. Processes and protocols involved with many of these communication methods was stated to be time consuming, ranging from weeks to months at a time to change services to a new county, to update a prescription, or to schedule an appointment to meet with their primary care physician to discuss their health needs. People stated that have to make sure they have enough meds to last them 1 to 2 months because the transition process takes that long and if they don't they go without life necessary medication.

Seventy percent of provider survey respondents said uncoordinated care was a major impediment to the delivery of healthcare for their Medicaid and uninsured patients and clients. Forty one percent of open ended responses to the provider survey said that lack of coordination was a major barrier.

Consumers mentioned difficulty navigating the healthcare system as one of the major problems in getting good health and healthcare for themselves and their families (12.6%).

Service navigation and coordination is difficult to manage, and requires sufficient knowledge of options.

VIII. High Numbers of Members with Anxiety, Depression, Substance Use Disorders, and Chronic Conditions

Mental health was mentioned as a condition by 21% of the consumer survey respondents.

Medications are the major treatment component for these disorders. However PCPs are frequently not comfortable managing these medications without behavioral health involvement. There is considerable anxiety over being able to refill needed medication especially when moving from one county to the next.

All individuals in the focus groups struggle with these issues, there is a large population whose needs are currently not appropriately addressed to the best that they could be from patient perspective.

Within the mental health and behavioral condition groups, it was often expressed during this study that individuals felt they were not heard or treated till they took drastic measures. "I had to get arrested before they would pay attention. I had to take drastic measures and do something bad to get noticed." "Me too, I had to cut my wrists and walk into urgent care before anyone would listen to me, and then they just put me on a 72 psych hold."

IX. Regulatory Barriers

There are significant regulatory barriers to providing a range of needed services at a single site. The most frequent frustration expressed was barriers to co-locating physical health, mental health, and substance

services. Provider, CBO, and Member Stakeholders all mentioned that if needed services were not immediately and conveniently available, these necessary encounters are not likely to occur. Both Members and Providers mentioned common waits of weeks or months for an appointment. Providers are discouraged and frustrated with the pace of change and the silos of care. Tele-health was mentioned by providers as a means to providing care to nursing homes and other facility based sites. The current regulations only allow for tele-health use in rural areas. The current reimbursement is also not conducive to encouraging providers to outlay the needed capital for tele-health.

In the focus groups uninsured participant said: "I haven't had health insurance for 2.5 years. I can't get help from Medicaid or DSS because I make x amount of dollars over. I went on the website NY state. I can't get any help for that. What's stopping me is nobody will take into consideration the $1500 a month I'm paying in child support. So I can't afford my own health insurance. Now if I make more money, they take out more money for child support. And I'm still not making any headway. So this is my dilemma."

The difficulty in maintaining coverage when moving from one part of the region or state to another is a serious problem; especially for those with chronic conditions, mental health and substance abuse disorders. One respondent to the consumer survey stated: "The difficulty is continuing to re-certify for services whether it is health care, food stamps. It is degrading, humiliating and exhausting. Even with a Master's degree it is difficult to understand the forms. The workers are cruel and impatient. It is beyond frustrating to have to deal with the system. We don't want to have to do this and see it as a temporary fix but even in that situation we are treated like we are trying to scam the system. It is so sad that people have to be treated like this." Another said "No one takes straight Medicaid and Medicare or they aren't accepting new patients or they give you a new patient appointment at the end of dec..." "But I think people are really judged by the service and the insurance they have. I've had my own experience with that. And I think it's sad. I think it's sad. I think that we all deserve to have health care."

The current time consuming Certificate of Need (CON) based process for skilled nursing facilities (SNF) to add Home Care and Day Care services

limits the feasibility to provide these lower cost services. Particularly in rural areas, there may be no access for Members, since there is insufficient volume to make services efficiently available on a stand-alone basis.

X. Under-resourced Community Based Organizations

Community Based Organizations (CBOs) expressed that they were already overtaxed, thought DSRIP initiatives would offload large responsibilities to them from health providers, but did not see any specific funding or other support for this. CBOs expressed strongly that they do not understand their future role in DSRIP. They want to help meet DSRIP goals, but are not clear how to do so.

Some, particularly those that do not currently bill Medicaid services, expressed the fear that the DSRIP limit of only 5% of funding for non-safety net stakeholders will guarantee that insufficient resources will be available to them.

Grant-funded and self-funded CBO programs face a constant risk of losing that funding. They worry about ongoing resources for sustainability. For example, the YMCA offers disease management programs (diabetes, Parkinson's, etc.) designed to help people self-manage at home. They worry about another economic downturn forcing them to discontinue these programs.

Fifty three percent of provider survey respondents said that a lack of community resources and support was a major impediment to the delivery of healthcare.

XI. Lack of Adequate Staff

There is a large and growing identified need for Community Health Workers (CHWs) and service Navigators. Some participants characterized the need as "drastic". A lack of sufficient Behavioral Health professionals was frequently mentioned, particularly in rural areas. Care management services are needed to arrange for and follow a person across levels and providers.

Fifty eight percent (58%) of provider survey responses and 55% of the open ended responses to the provider survey mentioned inadequate

staff, especially qualified mental health professionals (58%), specialists (47%) and clinical staff (38%).

In the focus groups overall the lack of staff available to treat people on a regular basis was mentioned by all groups. An opiate addict responding to the consumers survey stated that it is hard to find physicians that prescribe suboxone or methadone.

For chronic care patients it was the quality and transition of nursing staff where they had the greatest problems. This is particularly prevalent for individuals who need daily assistance based on their conditions (paraplegics, blindness, etc.). They citied that with the introduction of new or additional staff, more time is spent on the part of the patient to re-teach the aids then to actually receive care. Additionally, quality of services, with specific regard to housekeeping, is inconsistent across staff.

Lack of staff creates stress for the medical community as well as those who wish to receive care. Many people would love to be a caregiver to their parent, but they can't because they would lose their job. Providing training and paying informal care givers would allow individuals to assist their family, reduce stress on staff, and allow them to make money.

A number of focus group participants stated that they would love to be a caregiver to those with chronic health issues (parents, aunts, uncles, etc.) but they can't because they would have to sacrifice their current employment Many of these individuals stated that if facilities were to provide them training, they would become informal caregivers to assist their family members and allow them to make money/be employed. Informal Caregivers are a critical resource for care in the community, but under recognized, under- valued, and their numbers shrinking as the population ages. Volunteers can also provide Community supports and substitute for other formal and informal care.

XII. Lack of Adequate Financial Resources

Lack of sufficient dollars was expressed by all Stakeholder groups. There still appears to be no strong incentive to either provide or receive primary care. Many providers do not accept Medicaid. Focus group participant mentioned having a hard time finding a specialist for her condition because they would not accept Medicaid.

Gaps in Medicaid covered services limited valued treatment (e.g. not enough rehab/physical therapy after an accident to allow Member to stand in shower and bathe and be self-sufficient.

Many are caught in an area where their spend down funds are too high or they make slightly above the economic limits to gain the care they need. Therefore this causes many people to choose between having an okay job that may lead to something better while sacrificing care, or have no job and take what care they can.

Many have stated, time and time again, that they want to work but they feel as though people want to keep them down because they do not see a way out to better their situation and have affordable care.

Forty five percent of open ended responses to the provider survey mentioned lack of financial resources. Interestingly, 54% of the provider survey respondents said they offered a sliding scale payment plan. It is possible that members are not aware that providers are willing to do a sliding scale or offer extended payment terms.

In the consumer survey the cost of healthcare services was the top choice (22% major problem) for barriers to good health and healthcare, with insurance not being accepted for needed services (15%) and the lack of insurance coverage next (11%).

XIII. Other Barriers

Other barriers, such as environmental issue were not as important as the ones above. Only 3.5% of provider survey respondents mentioned environmental issues as a major problem. Twenty five percent mentioned access to nutritious food, 44% access to adequate and safe housing.

XIV. Service Delivery Integration Flow and Waste

In summary, qualitative input to the CNA identified that Medicaid consumers were generally satisfied with individual services provided, but less so in how these services are connected. They were particularly dissatisfied with paperwork, coverage/payment, and regulatory constraints impeding access to combinations of medical, mental, and

substance services needed. Consumers and providers alike expressed a need for:

- More readily available information about services available (including whether they are actually covered or not), particularly mental and substance services.
- More convenient service location (including transportation to get there), particularly alternatives to ED like Urgent care, primary care, and co-located primary care and mental/substance abuse disorder services.
- Less waiting time to schedule needed appointments and consultations, less time spent in waiting rooms, and more appointment times convenient to the consumer. This lack of convenience was identified by consumers as a major cause of missed appointments and preventive care. In addition, socio-demographic factors such as unstable housing, frequent moves, and the lack of communication resources contribute to the consumer not even being available for future appointments. This waste of consumer time leads to unnecessary waste of provider time and resources through more paperwork as well as more ED and inpatient hospital use to fix problems that could have been prevented.
- Better listening and communication between providers and consumers, as well as between providers during transition handoffs, and coordination between physical and behavioral health providers.

Comparing this qualitative input with quantitative Neighborhood hotspots of opportunity showed a correlation between the needs identified by both. This can easily be seen when comparing the maps provided throughout the CNA. Overall, improving immediate and convenient flow of consumers to the services they need was identified as a way to remove waste without affecting quality. Providers and consumers alike expressed hope that reforms implemented as a result of DSRIP regulatory waivers and PPS service integration and coordination improvements would make this possible.

D. ASSETS AND RESOURCES

One of the most illustrative ways to understand the assets and resources that can be mobilized and employed to support DSRIP strategies is to review how local health departments, hospitals, healthcare professionals, community-based organizations and the general population were involved with the development and implementation of the recent Community Health Assessments (CHA), Community Health Improvement Plans (CHIP), and Community Service Plans (CSP).

Albany Medical PPS and Ellis PPS

Table D-1 Prevention Agenda (CHA/CHIP/CSP)Priorities, Partners and Links to Community

Organization Submitting CHA/CHIP or CSP: Rest of NYS (Rev 05/28/2014)		Prevention Agenda Priorities						Implementing Partner Organizations, in addition to LHDs and Hospitals, identified in plans.											
HOSPITAL	LHD	Prevent Chronic Diseases	Promote a Healthy and Safe Environment	Promote Healthy Women, Infants and Children	Promote Mental Health and Prevent Substance Abuse	Prevent HIV/STDs, Vaccine-Preventable Diseases and Healthcare-Associated Infections		Community Health Centers	Health Plans	Business	Philanthropy	Colleges/University	School	Faith-Based	Housing	Mental/Behavioral Health Organizations	Transportation	Social Services	Media
	Albany County Dept of Health	X			X			X	X	X		X	X		X	X			X
Albany Medical Center		X			X			X	X	X		X	X	X		X			
St. Peter's Health Partners: St. Peter's Hospital		X			X			X	X	X		X	X	X		X			
St. Peter's Health Partners: Albany Memorial Hospital		X			X			X	X	X		X				X		X	
	Columbia County Dept of Health	X			X								X			X			
Columbia Memorial Hospital		X			X			Not Specified											
	Dutchess County Dept of Health	X	X		X			X		X			X			X	X		
HealthQuest: Vassar Brothers Medical Center, Northern Dutchess Hospital					X	X		X			X	X				X		X	
	Fulton County Public Health Dept	X		X									X					X	
Nathan Littauer Hospital		X		X									X					X	
	Greene County Public Health Nursing	X			X				X	X	X	X	X			X		X	
	Montgomery County Public Health	X	X							X								X	
Ascension Health: St. Mary's Hospital		X	X							X	X		X	X					
	Rensselaer County Dept of Health	X			X	X						X				X		X	
Burdett Care Center		X						X	X	X		X	X						
St. Peter's Health Partners: Samaritan Hospital		X		X				X	X	X		X	X						
St. Peter's Health Partners: St. Mary's Hospital		X			X			X	X	X		X	X						
	Saratoga County Public Health Nursing	X						Not Specified											
Saratoga Hospital		X		X	X	X				X		X	X		X	X		X	
	Schenectady County Public Health	X		X	X			X							X			X	
Ellis Medicine: Ellis Hospital		X	X	X	X			X							X			X	
Northeast Health: Sunnyview Rehabilitation Hospital		X		X	X			X	X			X						X	
	Ulster County Health Dept	X			X			X				X	X			X		X	
Ellenville Regional Hospital		X			X			X				X				X			
Health Alliance of Hudson Valley: Broadway & Mary's Avenue Campus Hospital		X			X				X				X			X		X	

Source: NYSDOH -Prevention Agenda 2013-2017: NYS's Health Improvement Plan

Table D-1 presents a listing of local health departments and hospitals involved in the CHA/CHIP/CSP process for each of the 10 Service Area counties. Also included were the partner organizations that assisted in the development and implementation of the Plans. The following types of organizations were involved across the 10 counties: community health centers; health plans; local business; philanthropy; colleges/universities; school districts; faith-based; housing; mental/behavioral health; transportation; social services; and media.

An excellent example of such collaboration/mobilization is the Ellis Hospital-Schenectady County Public Health Services (SCPHS) CHA/CHIP/CSP effort. Both hospital and health department were part of a regional Capital District Public Health Priorities Task Force that also included: Albany and Rensselaer County Health Departments; St. Peters Health Partners and Albany Medical Center; CDPHP, Fidelis Care, Blue Shield of NENY; Schenectady Free Clinic, Whitney Young Health Services; Price Chopper, CAPCOM Federal Credit Union; Albany and Rensselaer County Departments of Mental Health; Albany City School District; Catholic Charities; Interfaith Partnership for the Homeless; Hudson-Mohawk Area Health Education Center; the Capital District Tobacco Free Coalition; the American Cancer Society; the Capital District Coalition for AIDS; SUNY School of Public Health; the Commission on Economic Opportunity and the Capital District Community Gardens. Ellis Hospital and SCPHS helped draft the CHIP for the Capital Region and together with 117 members from 77 organizations, are actively involved with the Asthma, Mental Health and Diabetes Task Force efforts.

In addition to working with the Regional CHA/CHIP/CSP effort, Ellis Hospital and SCPHS were involved with a more focused Schenectady County effort. A Schenectady Coalition for a Healthy Community was formed. The Coalition comprised of 62 organizations and held 28 meetings during the course of the Assessment and Plan development. In addition to the information from the 3 County HCDI Community Survey, Ellis/SCPHS undertook a door to door “U Matter Schenectady” survey that included high risk neighborhoods with large Medicaid populations. There were over 2,000 community respondents to the survey. As a result of planning effort, Schenectady County Health Priorities included: Smoking and Asthma; Diabetes and Obesity; Inappropriate Use of ED;

Mental Health/Substance Abuse; and Adolescent Pregnancy. Ellis Hospital and SCPHS are presently implementing their joint CHIP/CSP.

A review of the key partners working on the Ellis/SCPHS CHIP/CSP initiatives show the assets and resources that are presently being utilized. Smoking and Asthma: Hometown Health; Schenectady Strategic Alliance for Health; Asthma Coalition of the Capital Region; Sunnyview Rehabilitation Hospital; Center for Smoking Cessation; Schenectady Municipal Housing Authority; Schenectady Department of Social Services; City of Schenectady; Schenectady United Neighborhoods; League of Women Voters; Schenectady County Office of Community Services; and the YMCA. Diabetes and Obesity (non-duplicative of partners listed above): Schenectady Inner City Ministry; Cornell Cooperative Extension; Catholic Charities; Schenectady ARC; City Mission; Schenectady City School District; Union College; Schenectady County Community College; and Capital Care. Inappropriate ED Utilization (non-duplicative of partners listed above): Mohawk Ambulance. Mental Health/Substance Abuse (non-duplicative of partners listed above): National Alliance on Mental Illness; Schenectady County Probation; and Healthy Schenectady Families. Adolescent Pregnancy (non-duplicative of partners listed above): Planned Parenthood; Girls Inc.; Boys and Girls Club; and Schenectady Day Nursery.

Utilizing these assets and resources to address specific challenges facing the community outlined in Section C above is a problem-solving exercise. We outline in broad terms the assets and resources that the Community can bring to bear for each stage in the following sections and with a few key examples for each. For a full description of Providers and Community-Based Organization (CBO) assets, see Appendix A. For a full description and discussion of results of the Qualitative provider and consumer surveys, listening sessions, and focus group analysis, see Appendix B.

1. PROBLEM DEFINITION AND COMMITMENT TO CHANGE

The first step in any effective problem solving is to define the problem. It is clear from results of the qualitative analysis that there is a broad recognition and understanding of each of the major challenge areas outlined in the previous section across all stakeholder groups.

- Providers, community-based organizations, the general public, and individual Medicaid members and uninsured people all commented on these issues in the surveys, listening sessions, and focus groups.
- Of even more importance, all of the participating stakeholders demonstrated strong personal commitment and dedication to helping the Medicaid and uninsured populations to the best of their ability (including individual's commitment to improving their own personal health) and to the fullest extent that their organizational or personal resources will allow.

2. POSSIBLE ACTIONS

The next problem-solving step is to identify possible actions to address the identified challenges. The Prevention Agenda process of creating Community Health Improvement Plans and Community Service Plans (CHIP/CSP) assembled a broad coalition of community institutions to address prioritized public health needs for the general population. The DSRIP process engaged coalitions of providers, CBOs, and consumers to drill deeper into the high needs of the Medicaid and Uninsured populations. These local coalitions have been growing, getting stronger and coordinating their activities. Each county has identified two public health priorities and built CHIP plans to address these priorities. Many of those priorities are the same across counties, particularly mental health and addressing chronic disease. This process has already brought together varied professions that have not worked as closely together in the past. DSRIP personnel and financial resources can build upon these coalitions. Stakeholders outlined a broad range of interventions for each challenge area, particularly:

- Coordination and follow-up (particularly between Physical and Behavioral Health providers);
- High need challenges for people with anxiety, depression, and chronic conditions;
- Lack of adequate staff or reliable funding sources; and
- Convenient service access.

3. TESTING POSSIBLE SOLUTIONS

Once there is knowledge of the problem, a commitment to address it, and how - the next step is testing possible solutions to see if they work.

There is good distribution of primary care providers and CBOs in the areas where beneficiaries are concentrated implementing initiatives aligned with DSRIP goals (see Figure A-2 and Figure A-11 above). In highest need neighborhoods, there are Federally Qualified Health Centers (FQHCs), and free primary care services (Troy's Roarke Center, HCDI's Poverello Center in Albany, the Interfaith Partnership for the Homeless's Drop-in Health). Stakeholders described a wide range of local actions that were already working effectively, or could be improved to increase effectiveness. Some of these interventions are part of ongoing region-wide CHIP/CSP efforts, while others are local initiatives. Of note, many of these initiatives were not widely known across stakeholders from other local communities or areas of focus (housing, transportation, nutrition, social services, etc.). Participation in a learning collaborative within the region (and statewide as envisioned under DSRIP) promises to improve the value of this idea cross-fertilization. Some examples of solution testing locally include:

- Experience in building formal Accountable Care Organization (ACO) networks by both local PPSs has built organizational capacity for integration and has laid some of the important foundational elements for greater integration under DSRIP PPS initiatives.
- St. Peters Health Partners has been integrating and right-sizing the operations of 4 hospitals in the region, likewise building experience and organizational capacity.
- HCDI has been bringing providers, public health departments, insurers and community organizations together since 1998 to improve access to health care and health coverage as its core mission. This work has resulted in shared regional health priorities, community health improvement task forces and plans, grant and partner funded initiatives to address these priorities.
- The collaborative work of building the PPS with broad institutional partners and the investment in HIXNY (our local Regional Health Information Organization- RHIO) results in the majority of patients in the region having their health records on a platform accessible to the breadth of their providers (and themselves).

- New York State, particularly the DOH is a major asset for this region as we have found, with expertise available to draw upon and assist with accessing best practices as well as helping to engage constituencies. They are also funding regional planning through the Population Health Improvement Program that will add data analysis capacity, strengthen shared health workforce development strategies, fortify the participation of community partners particularly those with disparate health needs, and mobilize public engagement in population health improvement.
- Many stakeholders discussed involving local faith communities in health improvement efforts. Advantages cited include a location within the community, combined with a role as a trusted resource more likely to engage the local population.
    - Faith community nurses (FCN – sometimes called parish nurses) provide services, often on a volunteer basis, to members of religious congregations. Their work is focused on prevention and support rather than the provision of hands-on clinical services to congregants. The services provided by parish nurse/FCNs include health education, personal health counseling, referrals, and advocacy. A study profiling FCNs was performed by the Center for Health Workforce Studies in the School of Public Health at the University at Albany.[5] There is an active FCN program in the region already that can serve as a model for expansion to other local communities.
    - The Schenectady Inner City Ministry (SICM) is an ecumenical partnership, founded in 1967, of 54 congregations (15 denominations) for ministries of social service and social justice. Ministers meet monthly to plan and implement initiatives to address current issues such as food insecurity, affordable housing initiatives, health and fitness, and economic development. It can also serve as a model for other local communities.

[5] http://www.albany.edu/news/fcn2007.pdf

- Transportation coordination (and from the Medicaid member and uninsured person's view – convenience and effort) have a variety of formal (Capital District Transportation Authority – CDTA – STAR and ACCESS programs) and informal (faith community volunteers) programs available. Other health delivery providers and CBOs also provide transportation. Stakeholders suggested pooling all these resources to provide:
    - Coordinated Scheduling and resource pooling for all of these programs, and/or
    - Transportation Navigators to assist individuals.

4. BRINGING SOLUTIONS TO SCALE

Bringing successful interventions to scale is necessary to improve the population health of the region. The power of good practical ideas is a strength to build upon. Stakeholders heard about improvement efforts underway in other local communities in the listening sessions. The excitement and enthusiasm at the potential for duplicating these efforts in their own local community led to immediate requests for more information and contacts. Building upon this stakeholder engagement, "Champions" identified during the community needs assessment process are already conducting outreach to their colleagues to engage them to assist in carrying DSRIP projects forward to implementation. Some infrastructure initiatives already under way to bring initiatives to scale were also identified. Some of the major initiatives underway include:

- The local coalitions formed to develop the CHIP/CSP improvement plans remain engaged in Task Forces to implement these efforts. Many of these efforts complement DSRIP projects. In the case of Asthma, the local Performing Provider Systems are implementing two complementary DSRIP projects with broad input from the Task Forces, the local Asthma Coalition, and other engaged CBOs.

This approach leverages current evidence in the literature[6] that multiple messaging sources combined with multiple complementary interventions have a multiplier effect in successful efforts to reduce avoidable hospital encounters.

- Many of the survey respondents stressed the need for stronger integration of social services into the delivery of care. The "Bridges Out of Poverty" program[7] based in Schenectady focuses on building an understanding of socio-demographic factors and drivers in disadvantaged populations. Training and support is available to interested stakeholders across the region to assist in overall improvement of non-healthcare related determinants of health (social determinants) in local communities.
- Housing was described as an area that could readily be available for community engagement if they were given sufficient resources to do so, particularly improving the quality of existing housing stock. Local organizations such as the Troy Rehabilitation and Improvement Program[8] are making a difference locally. They support efforts to improve living spaces and housing stock one neighborhood at a time, including management of micro-grants to allow homeowners to help themselves and the neighborhoods where they live. Local county offices of the Cornell Cooperative Extension[9] have county-wide programs in lead abatement, environmental asthma trigger reduction, integrated pest management, etc.
- Developing a program to make homes, particularly senior homes, more accessible was suggested by a variety of stakeholders as a way to assist in keeping members in the community longer. Umbrella of the Capital Region (http://theumbrella.org) which

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[6] Leppin AL, et. al. "Preventing 30-Day Hospital Readmissions: A Systematic Review and Meta-analysis of Randomized Trials" JAMA Intern Med. doi:10.1001/jamainternmed.2014.1608, Published online May 12, 2014.

[7] http://schenectadybridges.com

[8] TRIP - http://triponline.org

[9] http://www.cce.cornell.edu/learnAbout/Pages/Local_Offices.aspx

serves Albany, Schenectady, Rensselaer, and Saratoga counties is an organization that matches homeowners in need of help with handypersons recruited in large part from the retired workforce. It was honored with the national Met Life/Civic Ventures Encore Award for its program. TRIP has a related repair program in rural areas in Rensselaer County.

- Schenectady County Community College is adding a formal curriculum focused on development of effective Community Health Workers (CHW) to address the future workforce gap identified by many stakeholders. The curriculum is being developed with input from local providers and CBOs. Related CHW training and support programs are being implemented by local providers and CBOs.
- The State University of New York at Albany (SUNYA) and its School of Public Health is a significant local resource.
    - The Center for Health Workforce Studies is a national resource funded by HRSA. Staff are actively involved with the National Quality Forum's Workforce initiatives and very active in Academy Health's Annual Research Meeting.
    - The Institute for the Advancement of Healthcare Management sponsored multi-stakeholder breakfast meetings, health reform and health IT projects, and national speakers for Community-wide health improvement forums for over a decade.
    - Their Center for Excellence in Aging and Community Wellness is a Quality and Technical Assistance Center supporting evidence based health, particularly for diabetes and heart health;
    - The Center for the Elimination of Minority Health Disparities has been supported by the National Institutes of Health since 2004 to study and address minority health disparities in the greater capital region. They also have a certificate program to develop the cultural competence and leadership skills of graduate students to address issues of health disparities.

  - They are also working on curriculum to develop care coordinators.

- Other local colleges are focused on health issues as well, providing educated and motivated interns to local organizations to assist in health improvement efforts.
  - Rockefeller University facilitated student capstone projects for the past two years using the Rethink Health Simulator Model to predict multi-year impacts of system changes. Many local health experts served as mentors for these students.
  - Rensselaer Polytechnic Institute President Shirley Jackson served on the President's Council of Advisors on Science and Technology (PCAST), including release of a 2014 Report to the President: Better Health Care and Lower Costs: Accelerating Improvement through Systems Engineering.
  - Union Graduate College is now offering a focus in Health Analytics.
- The Affordable Care Act has supported the expansion of navigator services throughout the region in health care institutions and community organizations. Each community has multiple organizations that can assist with enrollment into health insurance. These organizations can be a great resource for activating new enrollees in their health services in a manner that is most beneficial to them and cost-effective for the health care system.
  - These trained Community Resources can provide a model for other recommended Navigators – how to effectively utilize new coverage, how to coordinate transportation and multiple providers, etc.
- The Schenectady Coalition for a Health Community with the support of the Schenectady Foundation, performed a door to door consumer survey of the Medicaid and Uninsured population. This activity has resulted in a branded community engagement program with 10 focus areas. They have engaged over 150 people from over 100 organizations in their work. More on this can be found in their community health needs assessment.

- A growing number of School Districts are holding Asthma Education sessions for all their School Nurses to address pediatric Asthma and environmental triggers. Local Asthma Educator training was recently opened up to current and potential CHWs as well as a growing number of health care professionals.
- The regional YMCA offers disease management programs (diabetes, Parkinson's, etc.) designed to help people self-manage at home. These programs are offered throughout the region - where people live and congregate.

E. CHART OF PROJECTS

The accompanying Excel spreadsheet (CNA Appendix H-1) identifies the top five data points for each of the projects selected by either or both of the PPS's. They are focused primarily on "threshold" determination of need for the project.

These top five data points have changed and will continue to change as new data becomes available (e.g. the Stage 2 Qualitative results and Stage 2 Quantitative drill-downs) and Workforce and Financial considerations are added.

Initial priority data points were largely based upon:

- Gaps identified in DSRIP measures (PQI, PDI, PPR, PPV)
- Gaps identified in chronic disease drill downs
- Gaps identified in population health prevention agenda metrics
- Domain 3 Clinical Improvement Metrics
- Initial primary data analysis of Behavioral Health drivers of avoidable use

The current data points add consideration for:

- Stage 2 Qualitative analysis results
  - Survey of Providers and CBOs
  - Survey of Consumers
  - Provider/CBO and Beneficiary/Community Listening Sessions
  - Focus Groups
- Stage 2 Quantitative analysis results
  - Recent incorporation of Multiple Chronic Physical Conditions
  - Recent "Hot Spot" and "Warm Spot" targeting
  - Results of recent project-specific Drill Downs

- New data sources and analysis

Note that secondary data points to inform the specifics of the interventions in each project and priority locations for implementation roll-out can be gleaned from the full CNA and project specific drill-downs.

F. PROCESS AND METHODOLOGY

The HCDI-AMC/Ellis PPS CNA was completed in two phases. The Phase 1 objective was to provide information to clarify possible projects and target potential communities for these projects. Existing secondary data from NYSDOH and other sources were analyzed; preliminary analyses of SPARCS encounter data performed; and a series of small area maps were developed for AMC PPS and Ellis PPS for review. Phase 1 results were presented in person to both the AMC PPS Guidance Committee, and the Ellis PPS Steering Committee, and via individual Webinars to the AMC Project Advisory Committee members, and to a broader audience of Ellis PPS providers and other partner stakeholders. Results included summary of County CHA/CHIPs and the Hospital CSPs; analysis of 148 county-specific health indicators; PQI, PDI, PPV, and PPR rates all-payer vs. Medicaid; multivariate analyses of SPARCS Medicaid Inpatient and ED encounters, and small area geographic analyses of key indicators. AMC PPS and Ellis PPS "Proposed Projects" were categorized as: having sufficient evidence of need; not yet having sufficient evidence to continue; or other projects where evidence of need was found, but not identified as a "proposed project".

Phase 2 involved collection of additional information to: identify population needs; clarify the specific DSRIP projects; and target high need sub-populations, their service use rates, drivers of excess use, and geographic areas for project start-up. Both AMC PPS and Ellis PPS providers and stakeholders formed Sub-Committees to assist with this effort. HCDI staff worked closely with these Sub-Committees during Phase 2 to provide relevant data and address questions.

1. SURVEYS

AMC PPS and Ellis PPS assisted in the creation of the provider and CBO lists for the provider survey, key informant interviews, and provider/CBO listening sessions. AMC PPS and Ellis PPS also assisted with the identification of beneficiaries for the consumer survey, community listening sessions, and focus groups. Sub-committee discussions helped focus questions for the listening sessions and focus groups. The provider survey was designed to ask for information not readily available from

secondary sources such as whether they were a safety net providers, hours of operation, profile of patients, whether they were accepting new patients, accessibility, access to public transportation, sliding scale payment, participation in quality measurement programs, RHIO use, and specific expertise. The remainder of the survey asked about barriers to care and which services would prevent avoidable inpatient admissions, re-admissions and ED visits. The web-based healthcare and community based organization (CBO) survey was conducted in October. Survey links were emailed to the PPS's membership consisting of 237 healthcare and community based organization (CBO) providers. An additional 279 CBO's identified from web searches without email addresses (516 total). These organizations were sent a postcard requesting their participation. Two additional email reminders were sent by the PPS's to the providers. The response rate was 35.7% (n=184).

An additional survey was sent to 540 physicians in November with 115 responses or a 21.3% response rate. Physicians were asked specific questions about behavioral and primary care and palliative care. Questions included question on how physicians address advanced illness, familiarity with palliative, integration of primary and behavioral health (BH) care, screening for BH, and referral patterns for behavioral health disorders (CNA Appendix B-5).

A web based consumer survey was designed to ask Medicaid and the uninsured about their health status and conditions, use of tobacco products, alcohol and drug use, where they usually go to get healthcare and dental care, emergency room use, knowledge of healthcare services, traveling to healthcare services, healthcare literacy, barriers to care, and recommendations on how to improve the delivery of healthcare and community based services. The web-based consumer survey (n=120) was conducted in October and early November. Medicaid and uninsured consumers for this survey were identified from PPS email lists (N=9,690) and from a purchased mail list from ExactData (N=8,295). Emails were sent to those with email addresses and postcards were sent to those without email address inviting them to participate. Several local CBOs also distributed the postcards to their clients. A drawing for prizes of $500, $250 and $100 were offered as an incentive for participation. A reminder email was sent one week later to 6,639 email addresses. In addition several local CBO's distributed postcards to their clients.

Detailed information on the provider survey can be found in CNA Appendix B-1 and information on the Consumer Survey in CNA Appendix B-4.

2. KEY INFORMANT INTERVIEWS, FOCUS GROUPS & LISTENING SESSIONS

In addition to the surveys described above, three methods were used to incorporate the knowledge and experience of providers, community organizations and consumers: key informant interviews, focus groups and listening sessions. Key informant interviews conducted between October and November. One key informant consisted of a group of local Emergency Department staff who shared their perception of drivers of avoidable ED use. Eight focus were held with three targeted to those with chronic diseases, two for people with behavioral health needs, two addressing substance abuse and one covering those with both substance abuse and mental health needs. The eight focus groups were held in six different counties in highly assessable locations that were reachable by public transportation. A number of participants in the chronic care focus group in Fulton County (which included individuals that were blind and wheelchair users) were provided transportation to the focus group site.

Three provider/CBO listening sessions and five community/CBO listening sessions were conducted in different counties to gather provider, CBO and consumer input. Listening sessions were held in 5 different counties. Open-ended questions were posed to the participants, with follow-up questions to clarify initial responses.

Provider/CBO examples include:

- How might you better integrate physical and behavioral health?
- What are the regulatory barriers that might be waived under DSRIP that could improve outcomes?
- What do your Medicaid and Uninsured patients say needs to be fixed?
- If you were in charge of Medicaid, what is the first thing you would change?

Community/Beneficiary examples include:

- What can be done to improve my health care experience?

  - Who should do it?
- What would help keep me from needing to go to the Hospital or ER?
  - Who could help me more than they do now?
- What worries me most about my health?
- What would make life easier for me or my family or my neighbors that have BOTH physical and depression/mental/substance health issues?

Details on the surveys, focus groups and listening sessions can be found in CNA Appendix B-2 and CNA Appendix B-3.

3. SPARCS ANALYSIS

AMC PPS and Ellis PPS Sub-Committees worked closely with HCDI on project-specific analytic requests utilizing SPARCS 2011-2013 inpatient and 2012 outpatient data, as well as additional small-area geographic analyses.

The community needs team designed further SPARCS analysis to identify high utilizer sub-populations and organize them into intervention groups aligned with the types of interventions appropriate to each (see Section B.2.III for further details). Refinements for these groups included adding secondary diagnosis and socio-economic factors. The group analysis included looking at Medicaid and Uninsured people who:

- Are Super-utilizers for both inpatient admissions and ED visits
- Have Individual Chronic Conditions and a Multiple Chronic Condition Composite
- Are in a Specific chronic care cluster for palliative care
- Have a Mental Impairments (MI) by type
- Have a Substance Use Disorder (SUD) by type of substance
- Have a Moderate or Severe Behavioral Health (BH) condition – MI and/or SUD
- Have combined BH and physical heath indicators
- Have or live in zip codes with disproportionate Socio Demographic Status indicators (Poverty, language, race, ethnicity, etc.)

These analyses allowed for the identification of the types of beneficiaries most likely to have preventable inpatient admissions, re-admissions and ED visits. Results from the specific drill-down analysis was then integrated into a framework to measuring scale and facilitate targeting subpopulations with elevated relative risk for ED or IP encounters (Section B.1 Hot-spotting). Specific physical health and behavioral health indicators linked to projects selected by target group as well as summaries by local Neighborhood were generated and can be found in Appendix F.

4. DATA PRESENTATION

Key data was mapped using MapInfo and charted using Microsoft Excel. Consolidating zip codes into neighborhoods and density mapping (number per square mile) assisted the PPS's in identifying hot spots. Healthcare providers and CBO locations were geocoded and mapped. These maps provided a visual means of identifying potential gaps in care. Neighborhood analyses were conducted for PQI, PDI, PPV, PPR, chronic diseases, behavioral health and top primary diagnoses to further refine hot spots and target project efforts. Neighborhoods were formed from adjacent zip codes reducing the data from 300 zip codes in the 10 county area to 85 neighborhoods. Analysis by number and number per square mile combined with provider locations allowed for identification of highest need neighborhoods.

AMC PPS, Ellis PPS, and HCDI reviewed the quantitative and qualitative information to couple identified need with the appropriate DSRIP projects.

5. IDENTIFICATION OF DATA SOURCES

In addition to the SPARCS data, sources of primary data included: provider survey; consumer survey; focus groups; listening sessions; and key informant interviews. Secondary "demographic" data sources included the US Bureau of Census's: 2013 Population Estimates; 2000 and 2010 Census (DP-1; P-42); American Community Survey 5 year estimates (DP-2; DP-3; S-1703); 2011 Bridge file; and 2011 Small Area Health Insurance Estimates (SAHIE) file. Unemployment data came from the Dept. of Labor-July 2013. Demographic information from the NYSDOH included: Vital Statistics of NYS-2012 (Tables 2 and 53); and the DSRIP Dashboard B-8, Medicaid Enrollment by Member County. Prevention Agenda County (CHA/CHIP) and Hospital (CSP) Plans came from their Individual County or hospital websites. Data sources for general population health status included the following from NYSDOH: NYS Prevention Agenda Dashboard; Community Health Indicator Reports (CHIR); County Health Assessment Indicators (CHAI); County Health Indicators by Race/Ethnicity (CHIRE); Leading Causes of Death in NYS; Expanded BRFSS Reports (2003; 2008-09); Environmental Public Health Tracker-Birth Defects. National data source used was the County Health Rankings and Roadmaps (RWJ Foundation). Avoidable hospitalization/ED data sources included: Health Data NY for "All-Payer" PQI, PDI, and PPV events by county and Zip Code, and PPR events by hospital; and for Medicaid - Avoidable Hospitalization Chart Book; and the PQI, PDI, PPV, and PPR data sets for Medicaid recipients by county and Zip Code. Medicaid hospitalization and ED data sources included: Clinical Metrics Chart Book; Medicaid Chronic Conditions, Inpatient Admissions and ER Visits by county and Zip Code data sets; and the DSRIP Dashboards B-2, B-3, B-4, B-5, B-7, B-8, C-1, C-2, C-3, C-4, C-5 and C-6. Provider information sources included: AMC PPS and Ellis PPS provider listing; Salient Provider and Member Work Books; and DSRIP Dashboards B-1 and B-6. Detailed demographic and health status information can be found in Appendix C and E.

Provider information was obtained using DSRIP Managed Care Provider Data, the PPS's own lists of providers and an analysis of SPARCS data for Medicaid providers. PCMH providers were identified from the NCQA Patient-Centered Medical Recognition website. CBO's were identified

through web searches and partner referrals. Gaps based on numbers of providers per 100,000 residents were completed using the American Community Survey population statistics. Certified health care facilities were identified from NYSDOH data files, NPI database and the HRSA data file. Hospital and nursing home data was obtained from the NYS DOH website and HealthData, Nursing Home Weekly Bed Census. Bed need analysis was based on beds per population (ACS data) and need rates as found in the Berger Commission report. Providers were categorized into service categories and geocoded and mapped. Detailed healthcare provider and community based organization data can be found in Appendix A.

In addition to the SPARCS data mentioned above, the statistical analysis utilized tools and information from :

- The NYSDOH (e.g. PQI/PDI/PPV/PPR, Chronic Conditions, Medicaid beneficiaries and use rates by county and zip, preventable hospital use indicators from the Nursing Home Quality Pool),
- The Agency for Healthcare Research and Quality (AHRQ – e.g. PQI/PDI definitions and software, the Clinical Classification Software, an Opioid Overuse composite measure),
- The National Quality Forum (NQF – e.g. measure specifications and history for NQF endorsed measures, tools for risk adjustment for socio-demographic status and population health),
- The Centers for Disease Control (CDC – e.g. Asthma Clinical Guidelines),
- The Environmental Protection Agency (EPA – e.g. successful Asthma intervention program initiatives),
- The Centers for Medicare and Medicaid Services (e.g. the Chronic Conditions Warehouse definitions and Medicare and Medicaid data),
- The US Census (e.g. demographics – especially identified socio-demographic drivers of health care utilization) and
- Qualitative input and feedback from the PPS project teams. This is the same source information utilized by NYSDOH for their analysis, but combined in multivariate analysis.

Results from these standard data sources, using SPSS statistical tools yield valid, reliable and reproducible results.

A. APPENDIX – PROVIDER AND COMMUNITY BASED ORGANIZATIONS (CBO)

Counts of Healthcare and CBO providers by specialty by county and detailed lists of providers and CBO's can be found at the following links:

CNA Appendix A-1 Healthcare Providers by Specialty by County

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTbUZEX29aLXI3ZlU&usp=sharing

CNA Appendix A-2 List of Healthcare Providers

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTbUZEX29aLXI3ZlU&usp=sharing

CNA Appendix A-3 Community Based Providers by Type

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTbUZEX29aLXI3ZlU&usp=sharing

CNA Appendix A-4 List of Community Based Provider

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTbUZEX29aLXI3ZlU&usp=sharing

B. APPENDIX – SURVEYS, FOCUS GROUPS AND LISTENING SESSIONS

Links to surveys, focus group and listening session discussion guides and detailed notes and results can be found at the following links:

CNA Appendix B-1 Provider Survey and Detailed Results

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMnh3N0lzN0w5N1E&usp=sharing

CNA Appendix B-2 Listening Session Discussion Guide and Notes

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMnh3N0lzN0w5N1E&usp=sharing

CNA Appendix B-3 Focus Group Discussion Guide, Notes and Transcripts

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMnh3N0lzN0w5N1E&usp=sharing

CNA Appendix B-4 Consumer Survey and Detailed Results

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMnh3N0lzN0w5N1E&usp=sharing

CNA Appendix B-5 Physician Survey and Detailed Results

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMnh3N0lzN0w5N1E&usp=sharing

C. APPENDIX- COMMUNITY DEMOGRAPHIC INFORMATION

CNA Appendix C-1 Pop est. and % by age and sex-summary and 10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-2 Population Density-10 Counties

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-3 Municipalities over 10,000 population

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-4 Pops. and %change 2000-2010-summary and 10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-5 Without Insurance – 10 County

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-6 Socio-demographic indicators by R-E--10 counties

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-7 Language and summary -10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-8 Foreign Born and Citizenship -10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-9 Educational Attainment and summary-10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-10 Household Income and summary-10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-11 Poverty Levels--10 counties and summary

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-12 Percent Unemployed and summary-10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-13y Status and summary -10 counties

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-14 Group Quarters Population by Group Quarters Type -10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-15 Age and summaries-Unique Medicaid Member Enrollment--3-13 to 2-14

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-16 Medicaid Trends-10 County

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-17 Sex-Unique Medicaid Member Enrollment--3-13 to 2-14

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

CNA Appendix C-18 Race-Ethnicity-Unique Medicaid Member Enrollment--3-13 to 2-14

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTaHU2Qk84c2p6Z2M&usp=sharing

D. HEALTH STATUS OF THE GENERAL POPULATION

CNA Appendix D-1 10 County summaries of CHIP and CSP strategies

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-2 10 County Death Statistics

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-3 County Premature Deaths and ratios

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-4 County-Leading Causes of Death

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-5 County-Leading Causes of Premature Death

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-6 County Prev. Hospitalization rate and overall hospital and ED rate

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-7 Access to Care

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-8 Cancer Indicators

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-9 EBRFSS Summary for 10 Counties

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-10 County obesity rates

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-11 10 County Heart Attack and Coronary Heart Disease

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-12 10 County CHF and Stroke

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-13 Diabetes hospitalization and mortality

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-14 Diabetes short term complications

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-15 10 County Asthma

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-16 10 County CLRD hospitalization and mortality

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-17 10 County Premature Births

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-18 10 County Prenatal Care

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-19 10 County IMR, LBW and C-Section

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-20 Birth Defects

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-21 10 County Well Child Visits-recommended

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-22 10 County Childhood Lead

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-23 10 County Teen and Unintended Pregnancy

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-24 10 County Immunizations

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-25 A 10 County HIV

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-26 Table HS-28 B 10 County STD's

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-27 10 County Lyme and Pertussis

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-28 10 County Cirrhosis

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-29 10 County Suicide

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-30 10 County Drug Related Hospitalizations

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

CNA Appendix D-31 10 County PH Indicator Matrix

https://drive.google.com/folderview?id=0Bwe2-1qjao3LY1RHRG15RHZGYTg&usp=sharing

E. HEALTH STATUS OF THE MEDICAID POPULATION

CNA Appendix E-1 PQI s for 10 counties-Medicaid and total

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-2 PDI s for 10 counties-Medicaid and total

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-3 PPV rates for 10 Counties

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-4 PPR s for Capital Area hospitals

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-5 10 County Domain 2 Preventive Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-6 10 County Diabetes Preventive Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-7 10 County Respiratory Preventive Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-8 10 County Circulatory Preventive Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-9 10 County new 2012-13 MH Clinical Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-10 10 County new 2012-13 MH-Substance Abuse Clinical Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-11 10 County new 2012-13 HIV Clinical Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-12 10 County new 2012-13 Disease Screening and Well-Child Clinical Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

CNA Appendix E-13 10 County new 2012-13 Diabetes and Asthma Clinical Indicators

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTZXhmbHlQS1RQdFE&usp=sharing

F. APPENDIX ADDITIONAL SPARCS ANALYSIS

CNA Appendix F-1 Admission and ED Visit Opportunity Gaps by County

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMlNwVzdBbl9GWm8&usp=sharing

CNA Appendix F-2 Superutilizers by County

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMlNwVzdBbl9GWm8&usp=sharing

CNA Appendix F-3 Detailed listings of people, encounters (ED visits, admissions, and readmissions), encounter rates, and relative encounter risk by county, PPS, and ZIP Code

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMlNwVzdBbl9GWm8&usp=sharing

CNA Appendix F-4 Detailed listings of people, encounters (ED visits, admissions, and readmissions), encounter rates, and relative encounter risk by county, PPS, and Neighborhood – for the Uninsured and Low Medicaid Utilizers (Project 11)

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMlNwVzdBbl9GWm8&usp=sharing

CNA Appendix F-5 Top ED Presenting and IP Principal Diagnoses by County and Neighborhood for the Medicaid and Uninsured

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMlNwVzdBbl9GWm8&usp=sharing

CNA Appendix F-6 Top ED Presenting and IP Principal Diagnoses by County and Neighborhood for the Uninsured and Low Medicaid Utilizers (Project 11)

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTMlNwVzdBbl9GWm8&usp=sharing

G. APPENDIX CONTRIBUTING CAUSES OF POOR HEALTH STATUS

CNA Appendix G-1 10 County Air and Water

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-2 10 County Access to Exercise

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-3 10 County Motor Vehicle

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-4 10 County Falls

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-5 10 County Occupational Health

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-6 10 County Assault and Homicide

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-7 10 County childhood poverty and inadequate. social support

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-8 Housing Statistics-10 county

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

CNA Appendix G-9 10 County Food Insecurity and access

https://drive.google.com/folderview?id=0B0Cc0mB3z7pTb3VhLVNqeURqSjA&usp=sharing

H. CHART OF PROJECTS

CNA Appendix H-1 Chart of Projects Link