

Community Health Needs Assessment



St. Joseph's Hospital Health Center
FY17 – FY19

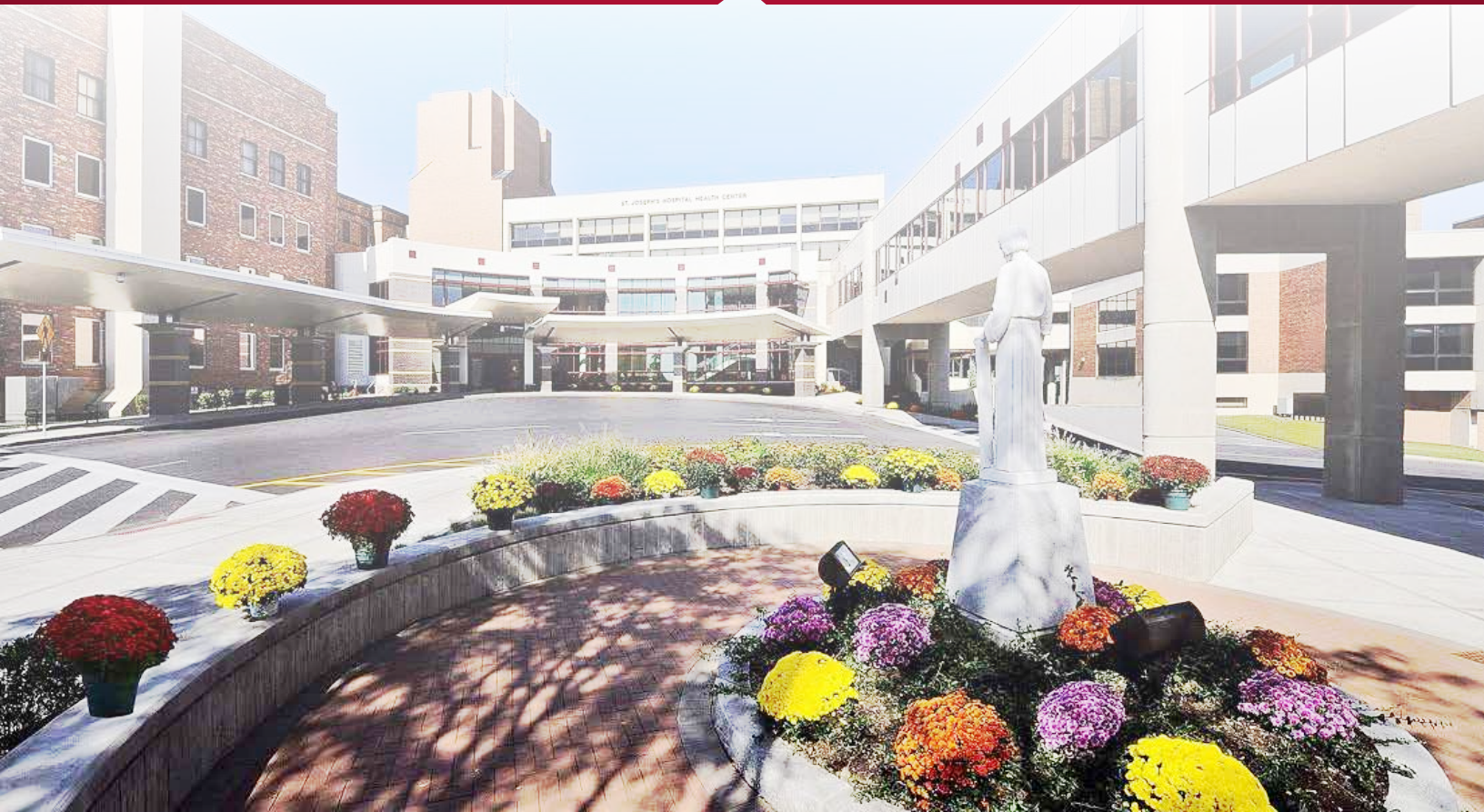


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Introduction

The mission of St. Joseph's Hospital Health Center (SJHHC) is:

We, St Joseph's health and Trinity health, serve together in the spirit of the Gospel as a compassionate and transforming healing presence within our communities.

In this spirit we are passionate healers, dedicated to honoring the sacred in our sisters and brothers, ensuring we that we continue to meet the needs of the communities we serve, especially the poor an underserved.

In 2013, St. Joseph's drafted its first ever Community Health Needs Assessment (CHNA) and Implementation Plan. While St. Joseph's serves several counties in Central New York, the selected community focus for the 2013 Community Health Needs Assessment was Onondaga County, NY.

The Onondaga County Health Department partnered with the hospitals in Onondaga County (St. Joseph's, Crouse Hospital, Upstate University Hospital) to conduct a community health assessment process that engaged leaders of health improvement efforts that were already underway, and also drew on other local resources.

Data from a number of sources were utilized, including the New York State Prevention Agenda, the 2013 Community Needs Assessment Report developed by the United Way of CNY, as well as internal information from the health department and hospitals. Students from Syracuse University's Lerner Center for Public Health Promotion Masters in Public Health program were engaged to support the community health assessment effort.

Through discussions with the task force and the leadership of the health department and the hospitals, and after careful consideration of all data and prioritization criteria, the five priority areas chosen from the needs assessment, along with their implementation tactics included:

1. Prevention of Chronic Disease

- a. Promote the use of evidence-based care to manage chronic disease.

- a.i. Participate in the development of community health programming as part of the Near Westside Initiative Health Committee.
- a.ii. Implement an Enhanced Diabetes Education Program in the hospital primary care clinics (PCC-West and PCC-Main).
- b. Improve health outcomes for adults with two or more chronic conditions in Onondaga County.
 - b.i. Improve health outcomes for Medicaid patients with 2+ chronic conditions through the implementation of the Health Home care coordination program.
- c. Improve access to primary care and other community-based services.
 - c.i. Implement a patient navigator program in the Emergency Department to ensure access to primary care services and improve patient management of chronic health conditions.
- d. Improve access to dental care.
 - d.i. Expand existing dental services program to include oral health services provided by a dental hygienist at the Westside Family Health Center.

2. Reduce Obesity in Children and Adults

- a. Create community environments that promote and support healthy food and beverage choices and physical activity.
 - a.i. Participate in the Healthy Shopper Rewards program, a linkage between the Westside Family Health Center and Nojaim Brothers supermarket.

- a.ii. Provide access to fruits and vegetables for individuals and families who receive food from the Assumption Food Pantry/Soup Kitchen.
- a.iii. Develop policies that support the use of healthy, locally-grown foods in its cafeteria and on its patient room service menu.
- a.iv. Support Syracuse City School District school-based health clinics with obesity prevention programs.
- a.v. Support a Syracuse Grows sponsorship of community gardens.

3. **Reduce Illness, Disability and Death Related to Tobacco Use and Secondhand Smoke Exposure**

- a. Prevent initiation of tobacco use by youth and adults, especially among new socioeconomic populations.
 - a.i. Participate in a community-wide initiative to educate youth on tobacco use.
- b. Promote Tobacco Cessation Especially Among Lower Socioeconomic Populations and Those with Poor Mental Health.
 - b.i. The Cessation Center will work with St. Joseph's Personal Recovery Oriented Services (PROS) program to implement evidence-based treatment recommendations from the Clinical Practice Guidelines for Treating Tobacco Use and Dependence.

4. **Promote Mental Health and Prevent Substance Abuse**

- a. To improve maternal and infant health, St. Joseph's will reduce the incidence of neonatal abstinence syndrome.
 - a.i. Increase patient education regarding neonatal abstinence syndrome.
 - a.ii. Increase provider education on safe prescribing practices to pregnant women.
 - a.iii. Participate on the Syracuse Healthy Start-Perinatal Substance Abuse Committee.
- b. To promote mental, emotional and behavioral well-being, St. Joseph's will implement evidenced based practice in screening and prevention of behavioral health concerns.
 - b.i. Seek to increase early detection of behavioral health concerns in children and adults within the primary care clinics.

5. **Promote a Healthy and Safe Environment**

- a. To reduce fall risks among vulnerable populations, St. Joseph's will partner with county agencies on education programs.

- a.i. Educate primary care providers about the Community-Based Falls Prevention Programs. In addition, all providers will have resource materials, including strategies to reduce falls in a home-setting, they can make available to patients and families.

FY17 – FY19 CHNA Process

The current CHNA, which will guide the hospital's FY17 – FY19 implementation plan, is built largely off of the CHNA undertaken with the Central New York Care Collaborative (CNYCC), published in November of 2014. The full report can be found at: <https://cnycare.org/media/1063/cnycc-community-needs-assessment.pdf>.

St. Joseph's was an active participant on the CNYCC Advisory Committee guiding the CNYCC's Community Health Needs Assessment process. While this collaborative needs assessment process was undertaken with the goal of outlining priority projects for Central New York's Delivery System Reform Incentive Payment Program (DSRIP), the scope of the resulting CHNA is comprehensive in nature, covering both the needs of the uninsured and Medicaid populations, as well as it explores the broader health needs of our community beyond this population.

Specifically, the DSRIP program aims to not only reduce hospital admissions, but improve health and public health measures, and have a lasting impact upon the leading causes of illness and death.¹ In this way, the scope of the CHNA is well aligned with St. Joseph's efforts to identify community health needs and thereafter develop interventions that will impact those needs.

Supplementing the data presented in the DSRIP CHNA is an assessment completed by the Onondaga County Health Department in April 2016, in preparation for the NYS DOH-mandated Community Service Plan in collaboration with the county health department as well as the other hospitals in Onondaga County. The findings of this study largely confirm and in some circumstances further underscore community health needs that surfaced in the comprehensive DSRIP analysis.

Project Overview and Community Served

Geographic Area Served

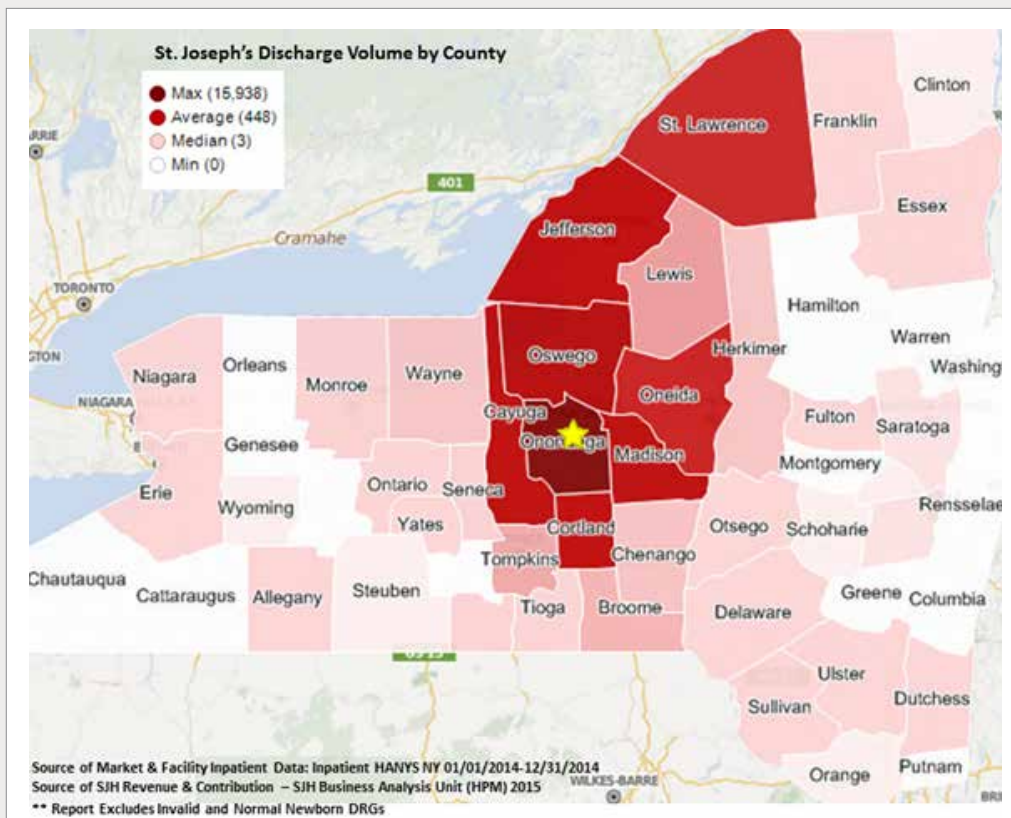
The service area for the CNYCC spans six counties in the Central portion of Upstate New York from Lewis County in the North Country near the Canadian border, to Madison County in the south, to Cayuga County in the west, and Oneida County in the east. Specifically, the CNYCC encompasses the following [six] Counties: Cayuga, Lewis, Madison, Oneida, Onondaga, and Oswego.²

While the six counties covered by the full CNYCC CHNA are closely aligned with St. Joseph's growing regional service area, the hospital has chosen to focus on the Onondaga County-specific report included in this study to drive St. Joseph's Hospital CHNA for the following reasons:

Approximately 67% of St. Joseph's inpatient market share (see map below) is attributable to Onondaga County alone, and the majority of current outpatient hospital-based services and clinics are located within Onondaga County.

In addition, St. Joseph's is required by New York State to complete a Community Service Plan (CSP) in collaboration with our local health department (Onondaga County Health Department) and the other hospitals within Onondaga County (Crouse Hospital and Upstate Medical University Hospital). Similar to the CHNA, the CSP is a community health assessment and planning process, focused on primary/secondary disease prevention, promoting access to quality health care services, and eliminating health care disparities. Focusing on Onondaga County specifically will enable St. Joseph's to work towards alignment between the CHNA and CSP processes and implementation plans.

Within this report, sections of the Onondaga County CHNA will be referenced to provide supporting details around the assessment and assessment findings. In addition, select sections of the full 6-county assessment will also be referenced to provide relevant background details related to the methodology employed for the analysis of data, and related to the methods used for soliciting community input.



St. Joseph's Services

Below is a service map reflecting St. Joseph's services throughout the region, including the 5 counties outside of Onondaga County, and Onondaga County (Onondaga County in light blue call-out diagram), at the center of this analysis.

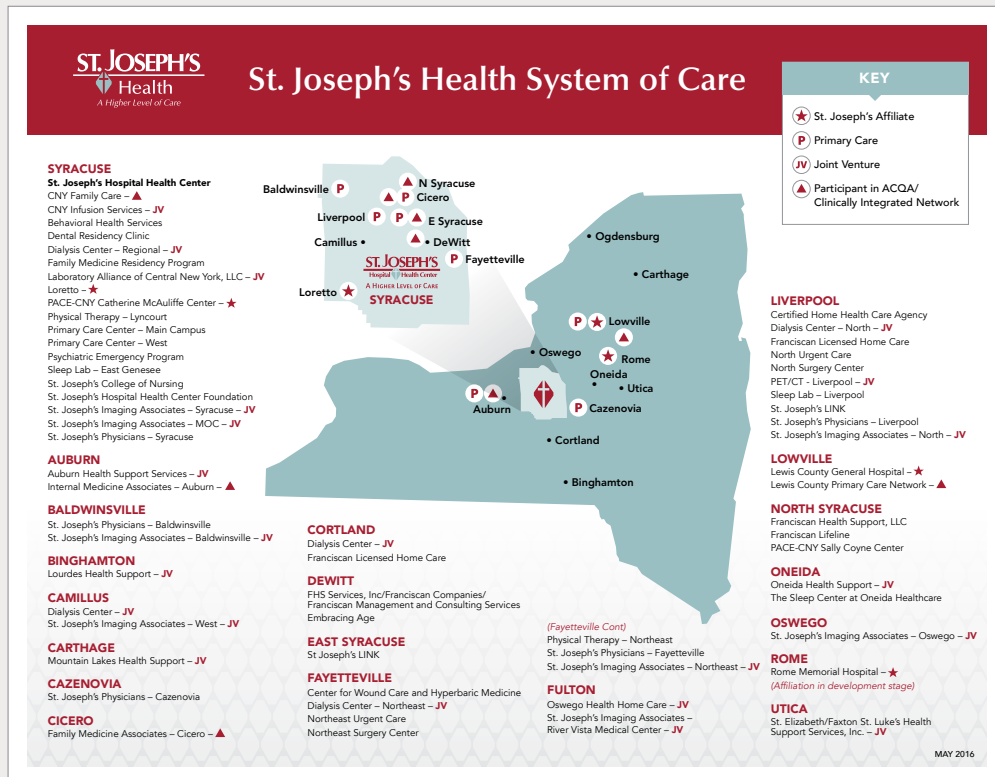
The System of Care map outlines each of the health facilities and services operated fully or in part by the entities within the St. Joseph's Health system. While the hospital, one entity within St. Joseph's Health, operates several outpatient services reflected on the map, the diagram is inclusive of all St. Joseph's Health system services.

St. Joseph's Hospital Health Care Center serves as the backbone of our integrated system. The hospital services include but are not limited to, medical/surgical inpatient care, OB/GYN services, medical imaging, lab, and other ancillary services, outpatient dialysis, primary care (primary care clinics) inpatient and extensive outpatient behavioral health services, a Certified Home Health Care Agency, a College of Nursing, a Pharmacy Residency Program and a Family Medicine Residency Program.

St. Joseph's primary care clinics (2 hospital-based clinics) and physician practices are evolving as role model for excellence in primary care, with all 9 sites having achieved Level 3 Patient Centered Medical Home Certification. Both of the hospital-based clinics are designated Health Professional Shortage Areas (HPSA).

St. Joseph's continuum of care has expanded in recent years to now include a Clinically Integrated Network and ACO; designation as the lead Health Home³ in Onondaga, Oswego, Madison, Oneida, Lewis and Cayuga Counties; participation in the CNYCC DSRIP program in a 6-county region (same as aforementioned 6 counties); and the innovative development of new programs to support value-based care, such as telemedicine and patient navigator programs.

Franciscan Companies provides a variety of health-related services, products and programs to enable people to live home and live well. Services include home medical equipment, respiratory therapy, sleep disorder treatments, home care, senior programs, wellness initiatives, Lifeline medical alert, medication dispensers and tele-health. More than a dozen companies fall under the Franciscan umbrella serving nearly 40,000 patients annually.



³ Health Home provides care coordination/care management services for Medicaid enrollees with 2+ chronic conditions, inclusive of mental and behavioral health

Demographics

The following excerpt from the CNYCC's Onondaga County CHNA provides further detail on the geographic region selected for this CHNA.

Onondaga County is home to the City of Syracuse, which is the largest city in Central New York. It is bordered by Oswego, Madison, Cortland, and Cayuga County. More than 466,000 people live in Onondaga County, about a third of whom live in county seat of Syracuse. Although Onondaga has just the one city of Syracuse, the County also has 14 villages, 19 towns, and part of the Onondaga Nation territory. Interstates 90 and 81 are the major east-west and north-south highways in Onondaga County.

The average population density throughout the County is 599 people per square mile; the density higher around Syracuse, and lower away from Syracuse, around the edges of the County. Onondaga County is predominantly White population, though there is a higher proportion of racial minorities living in Syracuse compared to the rest of the County. Onondaga's socioeconomic conditions are fairly similar to those of Upstate New York (Upstate NY), but Syracuse tends to fare worse in terms of education, poverty levels, and access to health care.

These differences between Syracuse and rest of Onondaga are important contextual factors to consider in reviewing the key health concerns in Onondaga County, and how to address them. This profile of Onondaga County will describe the population in further detail, offer data on health indicators for Onondaga's overall population and Medicaid population, describe the County's capacity for health care services, and highlight the key findings from the quantitative data and interviews conducted.

Onondaga County has a population of over 466,000. About a third of Onondaga's residents live in Syracuse, although 87.4% of the Onondaga population lives in an urban rather than rural area. The majority of Onondaga's population is White (81.6%), though there is a higher proportion of racial minorities living in Syracuse compared to the rest of Onondaga. For instance, nearly a third of Syracuse's residents are Black (29.5%), which is high compared to Onondaga as a whole (10.8%), Upstate NY (8.7%), and New York State (15.7%). There is also a higher concentration of foreign-born residents in Syracuse than in Onondaga as a whole (11.1% versus 7.2%, respectively).

Onondaga's high school education rates, median household income, unemployment rate, and poverty levels are roughly comparable to those of Upstate NY. However, Syracuse fares worse on these measures compared to Onondaga overall. The proportion of

residents with less than a high school education is nearly double that of Onondaga (19.9% vs. 10.6%, respectively). Syracuse's median household income is about 60% of Onondaga's (\$31,459 vs. \$53,593), the unemployment rate is more than 50% higher (11.4% vs. 7.2%), and the percent living in poverty is more than double than in Onondaga (33.6% vs. 14.3%).

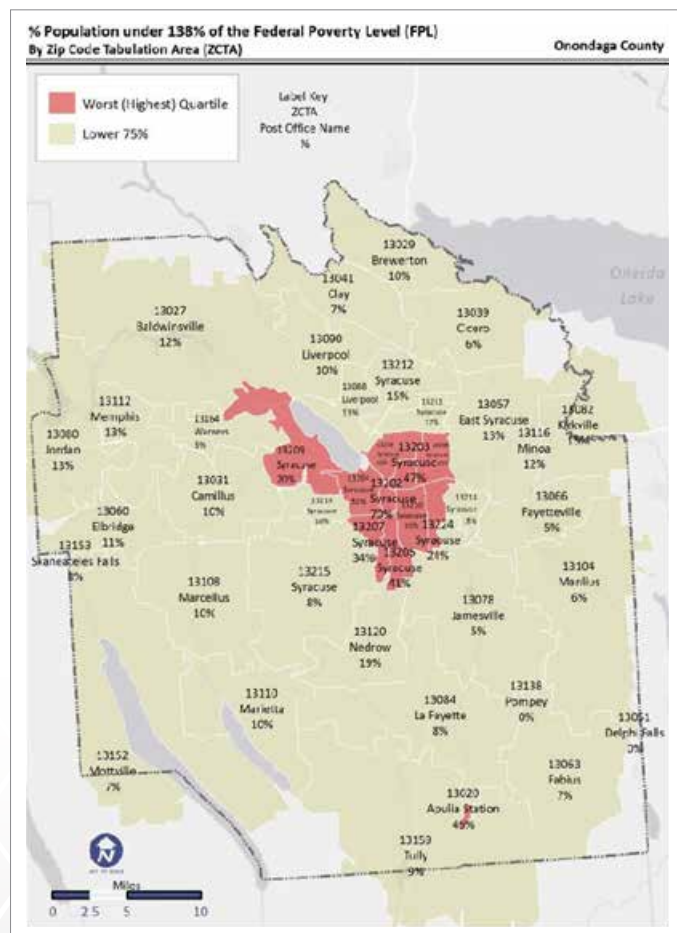
Table 1 Demographic, Socio-Economic, and Insurance Information

| | Syracuse | Onondaga | Upstate NY ¹ | NY State |
|---|----------|----------|-------------------------|------------|
| Total Population Size | 144,669 | 466,179 | 11,198,904 | 19,398,125 |
| Gender | | | | |
| Male | 48% | 48% | 49.1% | 48.4% |
| Female | 52% | 52% | 50.9% | 51.6% |
| Race/Ethnicity | | | | |
| White | 56% | 81.6% | 81.8% | 66% |
| Black | 29.5% | 10.8% | 8.7% | 15.7% |
| Asian | 5.5% | 3.2% | 3.5% | 7.5% |
| American Indian/ Alaska Native (AI/AN) | 1.1% | 0.8% | 0.3% | 0.4% |
| Hispanic | 8.3% | 4.0% | 9.7% | 17.7% |
| Foreign-born Population | 11.1% | 7.2% | 11.1% | 22% |
| Education | | | | |
| Less than High School Education | 19.9% | 10.6% | 11.1% | 15.1% |
| Employment & Income | | | | |
| Median Household Income | \$31,459 | \$53,593 | \$54,125* | \$57,683 |
| Unemployed | 11.4% | 7.2% | 7.7% | 8.7% |
| In Poverty (Below 100% FPL) | 33.6% | 14.3% | 11.2% | 14.9% |
| Below 138% FPL | | 20.4% | 16.6% | 21.5% |
| Below 200% | | 29.6% | 25.7% | 31.6% |
| 200% FPL - 400% FPL | | 30.5% | 29% | 27.9% |
| Above 400% FPL | | 39.9% | 45.3% | 40.5% |
| Insurance | | | | |
| Uninsured | 13.0% | 8.7% | 9.1% | 11.3% |
| Medicaid | | 17.0% | 14.9% | 20.9% |
| Urban/Rural | | | | |
| Urban | 100% | 87.4% | 79% | 87.9% |
| Rural | 0% | 12.6% | 21% | 12.1% |

Data Source: American Community Survey, 5-Year Estimate 2008-2012
*Average of median household incomes in Upstate NY counties

The proportion of Medicaid beneficiaries in Onondaga is higher than in Upstate NY (17.0% vs. 14.9%), but lower than in NY State (20.9%). Although the data for percent of Syracuse residents on Medicaid is unavailable, Syracuse does have a higher proportion of uninsured residents (13.0%) than in Onondaga, Upstate NY, and NY State (8.7%, 9.1%, 11.3%, respectively). In that lower socio-economic status is correlated with poor health, the map on the following page highlights the Syracuse ZIP codes that are noted as having a high percentage, of their residents living below 138 percent of the Federal poverty level (FPL). Being poor, and all its concomitant consequences, such as poor education, lack of transportation, substandard housing, and residence in resource poor communities was identified by several key informants as an overall issue impacting health care access, health care utilization, and mental and physical health status.

Nine Syracuse ZIP codes (from census ZIP code tabulation areas – ZCTA) are highlighted as within in the worst quartiles for percent of their residents living below 138 percent of the Federal poverty level (FPL): 13202, 13203, 13204, 13205, 13207, 13208, 13209, 13210, and 13224.



Process and Methods Used

The process and methods used in completing this CHNA are outlined in the following excerpt from the full CNYCC CHNA.⁴ It should be noted that a separate needs assessment was conducted for each of the 6 counties discussed in the full report, and then these findings were compiled into a broader assessment of the 6-county region. The process and methods described in the full report, therefore, reflect the strategies used to conduct the Onondaga County-specific assessment, and are pertinent to the data included in St. Joseph’s CHNA.

The collaborative partners participating on the DSRIP CHNA Steering Committee, outlined in the Acknowledgments section of the final report, include the following community leaders:

- Kristen Heath** (St. Joseph’s Health)
- Joseph Reilly** (St. Joseph’s Health)
- Cynthia Jaconski** (Upstate Medical University Hospital)
- Shawna Craigmile** (Upstate Medical University Hospital)
- Tom Quinn** (Upstate Medical University Hospital)
- Tom Filiak** (Auburn Community Hospital)
- Cheryl Perry** (Faxton-St. Luke’s Hospital)
- John Snow, Inc. Project Team**

Process and Methods Used – Overview Text From the Full DSRIP CHNA:

1. Summary Approach

The goal of the community needs assessment... was to provide an understanding of the CNY region’s population to be served, health status and clinical care needs, and available health care and community wide systems to address those needs. The results of this process provided the foundation for DSRIP strategy selection, ensuring that the strategies chosen reflect the actual needs of the community and that they will have a meaningful impact on Triple Aim goals: improved health, lower costs, and improved quality.

2. Summary Methods

To understand the key challenges and resources available, a significant amount of quantitative data was identified and reviewed. In addition to this quantitative review, qualitative data was acquired through a survey of PPS partners, in-depth key informant interviews, consumer engagement activities, and a review of past needs assessments. The final phase in the CHNA process was to communicate findings to community leaders to elicit feedback on and responses to the data. This section provides a brief overview of the methods used to develop this CHNA.

3. Quantitative Data Analysis

The quantitative assessment involved a review of the data elements outlined in the DSRIP guidance according to the domains: Domain 2) System Transformation, Domain 3) Clinical Improvement, and Domain 4) Population-wide Strategy Implementation. Data sources, including those available on the Department of Health's Health NY website, were reviewed. Data elements for the counties included in the PPS were extracted and compared to Upstate and New York State averages, when available.⁵

Community Input

Input was garnered from the community according to multiple methodologies, most notably consisting of Key Informant Interviews (industry experts) and Consumer Engagement Activities (community residents).⁶ The partner survey was conducted in the field between August 15 - September 30, 2014; the key informant interviews were conducted between August 15 - October 15, 2014; and the listening sessions were held with communities from September 15 - October 31, 2015.

The full interview guide for the Key Informant Interviews are included in Appendix H of the full DSRIP CHNA report (<https://cnycares.org/media/1063/cnycc-community-needs-assessment.pdf>), with the participants from Onondaga County listed at right (from Appendix I).

| Onondaga County | | |
|--------------------|---|----------------------------|
| Interviewee Name | Organization Name | Organization Type |
| Aileen Balitz | St. Camillus Residential Health Care | Other Health Care Provider |
| Carl Coyle | Liberty Resources | Other Health Care Provider |
| Elizabeth Crockett | REACH CNY, Inc. | Community Based Resource |
| Joan Dadey | Crouse Hospital | Hospital |
| Marta Durkin | Liberty Resources | Other Health Care Provider |
| Scott Ebner | Onondaga Case Management Services | Other Health Care Provider |
| Susan Furtney | St. Joseph's Hospital | Hospital |
| Bob Long | Department of Mental Hygiene | Other Health Care Provider |
| Jan Moag | SPOA Coordinator for Onondaga County | Community Based Resource |
| Mat Roosa | Department of Mental Health | Other Health Care Provider |
| Tim Scanlon | Franciscan Health Support Services, LLC | Other Health Care Provider |
| Kimberly Townsend | Loretto Health & Rehabilitation Center | Other Health Care Provider |
| John Warren | CNY Services, Inc. | Other Health Care Provider |
| Linda M. Wright | The Salvation Army | Community Based Resource |

In addition to the Key Informant Interviews, leaders from the following community-based organizations provided detailed feedback on community health needs through an online survey tool.

Partner Survey Respondents:

- 1199SEIU United Healthcare Workers East
- St. Joseph's Hospital Health Center
- Hutchings Psychiatric Center
- Upstate University Medical Associates at Syracuse, Inc
- Prevention Network
- The Salvation Army
- Planned Parenthood of Central and Western New York
- Van Duyn Center for Rehabilitation and Nursing
- Rescue Mission Alliance, Inc.
- VNA HOMECARE
- Onondaga County Department of Children and Family Services
- Rescue Mission
- Christian Health Service of Syracuse
- KPH Healthcare Services/Kinnney Drugs
- Crouse Hospital
- Syracuse Brick House, d/b/a Syracuse Behavioral Health
- Loretto Health and Rehabilitation Center
- Family Care Medical Group, PC
- The Centers at St. Camillus
- St Camillus RHCF
- James Square Health and Rehabilitation Center
- SUNY Upstate University Hospital
- Onondaga Case management Services, Inc.
- ARISE Child and Family
- Onondaga County
- Catholic Charities of Onondaga County
- Hillside Children's Center
- Central New York Services, Inc.
- Liberty Resources, Inc.
- Onondaga County Adult & LTC
- Onondaga County Health Department
- REACH CNY, Inc.
- Genesee Home Healthcare Products
- Arc of Onondaga
- American Cancer Society

Last, community members were directly engaged through open listening sessions. A full separate report regarding Consumer Engagement Activities, "CNYCC Stakeholder Interviews – Final Report," is also available at: https://cnycare.org/media/1050/cnycc-stakeholder-engagement-report_1.pdf. The methodology employed included facilitated open group conversations with stakeholders within each DSRIP county. In Onondaga County, three such "forums" were held, with the following community-based organizations hosting: Catholic Charities; Hutchings Members Support Center; and Sunrise Recovery Center.

The organizations engaged in each of these activities (interviews, survey and stakeholder listening session host-sites) represent a spectrum of services within Onondaga County, including services for low-income, medically underserved and minority individuals. Specifically, the community needs or groups that were represented and their respective organizations are listed below:

No Health Insurance/Underinsured

- Christian Health Service of Syracuse

Housing Vulnerable/Basic Need Support

- Salvation Army
- Rescue Mission

Disabled Children and Adults

- ARISE Child and Family
- Arc of Onondaga

Basic Needs Support and Refugee Resettlement Services

- Catholic Charities of Onondaga County

Child and Family Support Services

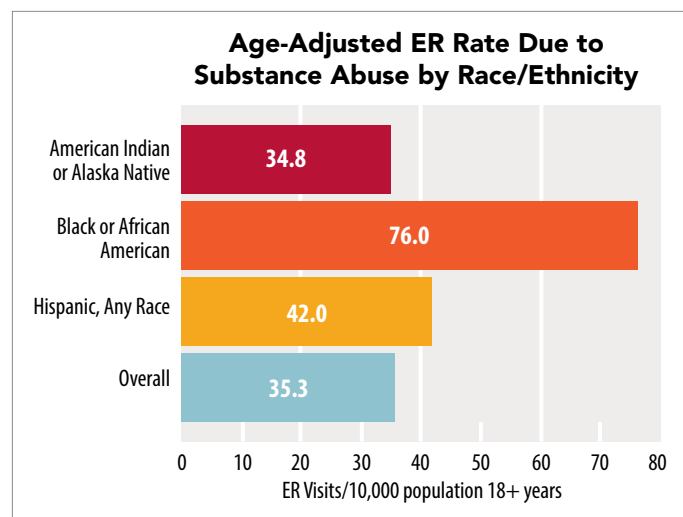
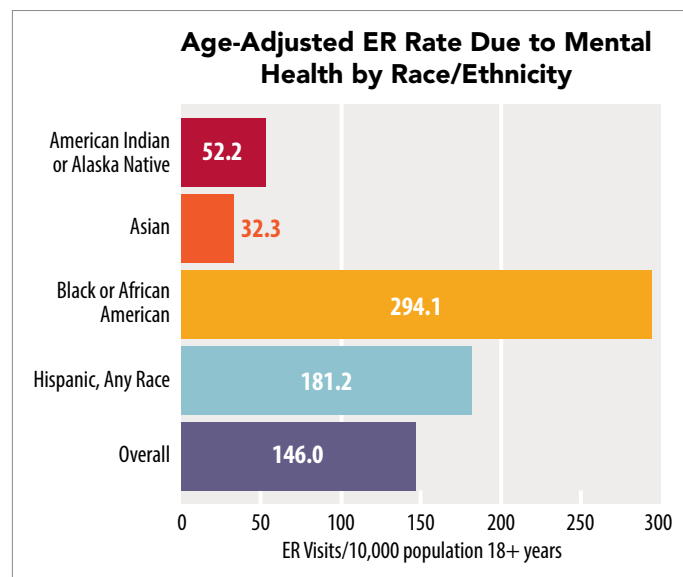
- Onondaga Dept. of Children and Family Services
- Hillside Family of Agencies
- REACH CNY, Inc.
- Onondaga Case Management Services, Inc.

Behavioral & Mental Health Support Services

- CNY Services
- Liberty Resources, Inc.
- Syracuse Behavioral Health Care
- Prevention Network
- Hutchings Psychiatric Center/Sunrise Recovery Ctr.
- Onondaga County Dept. of Mental Health

All of the agencies represent a diverse set of underrepresented populations. Specifically, Behavioral and Mental Health services are particularly relevant

in that the agencies not only represent a great need in Onondaga County (see Section IV: Needs Assessment Findings); but data shows that mental and behavioral health needs are disproportionately prevalent among minority groups in the community.⁷



The data from the interviews, surveys and facilitated stakeholder discussions relating to Onondaga County specifically were summarized in the Onondaga County report, and are outlined in the excerpt which follows:

In addition to the quantitative data, rich information was gleaned from interviews with health care and community based organization leaders in Onondaga. They identified several underlying challenges that contribute to avoidable readmissions among the Medicaid population.

⁷ Data Source: HealtheCNY.org – New York Statewide Planning and Research Cooperative System (SPARCS), measurement period 2012-2014

They are:

Lack of post-discharge in-home support

- Difficult to stay connected with patients due to changing addresses and phone numbers
- Interviewees felt that unnecessary readmissions could be decreased through offering more in-home support, such as community health workers, home health aides, care coordinators, navigators, and telemonitoring
- There is a lack of funding/reimbursement for this type of support. Lack of housing generally and supportive housing particularly
- Lack of decent affordable housing, which serves as a barrier to discharge from hospital, rehabs, and long-term care facilities
- Lack of supportive housing for persons with mental health, substance abuse, physical disabilities, and frail elderly housing services' waiting lists full

Lack of integration between medical care and behavioral health systems

- Lack of awareness within medical community of behavioral health resources
- Lack of assessment/screening for behavioral health issues, including SBIRT specifically
- Lack of information sharing across settings; behavioral health providers behind on electronic medical records due to lack of funding
- Sharp increase in opiate abuse but few resources to manage it

Lack of behavioral health and dental providers and services

- Methadone treatment program has six to eight month wait time; Crouse is only hospital to offer inpatient detox in the area
- Shortage of child & adult psychiatrists
- Few dental providers willing to take Medicaid-insured patients and long waiting list for dental services for providers who do accept Medicaid
- Existing regulations decrease opportunities for providing dental services in the community

Access

- History and/or culture of using emergency department for non-emergency care
- Transportation a barrier to getting to services and following through on care

- Language - on site interpreter services inadequate due to number of languages and dialects (including the refugee population); refugee population is a vulnerable group in this way; phone translation is available but less effective

The Onondaga County health Department participated in the aforementioned DSRIP partner survey process, but to supplement their participation in that process and call out more specifically the Health Department's current priorities in anticipation of the Community Service Plan, St. Joseph's engaged the Health Department in responding to some questions regarding community health needs. Those questions and the associated responses from the Health Department follow:

What do you identify as 3-5 of Onondaga County's top community health needs?

As identified in the 2013-2017 Community Health Assessment, the top community health needs are preventing chronic disease, with particular emphasis on improving nutrition and reducing obesity; and promoting mental health and preventing substance abuse, with a focus on reducing neonatal abstinence syndrome. Other issues that have more recently been identified as needs include the heroin/opioid abuse issue, which has resulted in a startling increase in overdose deaths over the last several years. We've also seen high rates of sexually transmitted diseases in some key target populations, and have noted that smoking rates have not continued to decline.

How did you prioritize identification of the 3-5 selected needs?

The needs were prioritized based on quantitative data from a wide variety of respected sources, as well as qualitative data obtained from community focus groups. Fortunately, the community feedback aligned well with what the quantitative data were showing, so the priority areas were very easy to identify. The key stakeholder group, consisting of health department, hospital, and university representatives reviewed input from all sources before identifying the above areas as the highest priority. Concern regarding heroin use in our community has been communicated by partner organizations from a number of sectors, and the quantitative data support these concerns.

How is this aligned with or how does this differ from the priorities that the Onondaga County Health Department focused on as a result of the last Community Service Plan?

The priorities are still closely aligned with those identified during the last planning process. The neonatal abstinence syndrome issue has broadened to include the overall heroin / opioid use issue countywide, and with that has come increased efforts around prevention and treatment.

In order to address the identified needs, what community partners or resources do you anticipate will be essential to the contemplation of a response effort/plan?

To address the needs described above, a strong network of partners is necessary. This includes local public health, hospitals, community based organizations, medical providers, human service agencies, mental health providers, etc. With respect to heroin/opioid use, collaboration with law enforcement, corrections and elected officials is essential to developing successful policy proposals and securing funding.

Many of these connections exist already and need to be maintained to realize success. Increased resources for drug abuse prevention and treatment programs will also be needed to fully address the community's needs.

Lastly, in order to round out stakeholder feedback, St. Joseph's sought feedback on the 2013-2016 CHNA, as the organization did not receive specific feedback on the assessment or implementation plan after it was published in 2013. St. Joseph's reached out to seven community leaders by email to solicit input on the 2013-2016 assessment and implementation plan, but no responses were received. Within this plan, directions are provided to guide those interested in providing feedback to the possible methods of doing so (see the back cover of this report for further information).

Needs Assessment Findings

Assessment Overview

The Onondaga County assessment analyzes both health indicators related to the County population overall, as well as it explores in further detail the health indicators and service utilization statistics for the Medicaid population specifically.

The general Onondaga County data explores the leading causes of premature death and hospitalization, population health indicators, major risk factors and access to care.

The Medicaid-specific data explores "... the prevalence of chronic conditions, leading causes of emergency room visits, prevention quality indicators (PQIs) and pediatric quality indicators (PDIs), and rates of preventable emergency room visits and inpatient admissions. These data offer insight into priority areas for reducing readmissions among Medicaid beneficiaries."⁸

Taking a more in-depth look at the Medicaid-specific population will help confirm the needs of this vulnerable community, and inform prioritization of the CHNA Implementation Plan relative to the health needs explored therein, with the goal of improving this population's health beyond the clinical setting.⁹

Findings – Key Community Health Needs

The key community health needs that surfaced from the Onondaga County CHNA have been distilled down to four main categories which will drive the focus of St. Joseph's CHNA Implementation Strategy. These priorities were selected largely based on the incidence of specific diagnoses, diseases and behaviors, supplemented by valuable feedback from county constituents regarding perceived community needs.

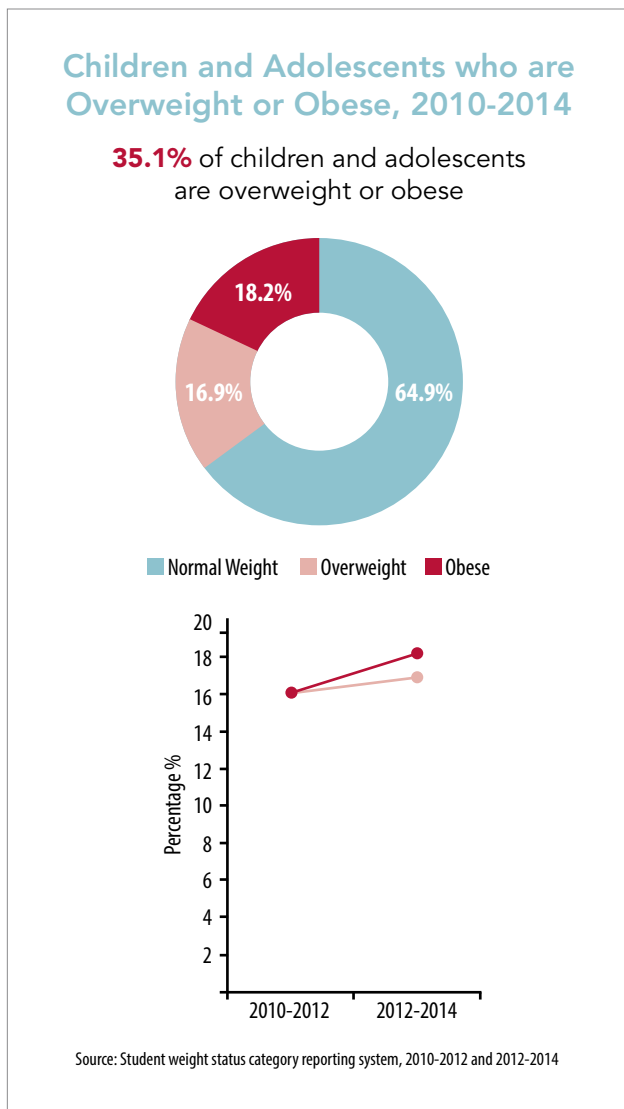
Prevention of Chronic Disease

1. Obesity
 - Healthy People 2020 - Nutrition and Weight Status
 - NYS Prevention Agenda 2013-2018 Prevent Chronic Diseases, Focus Area 1: Reduce Obesity in Children and Adults

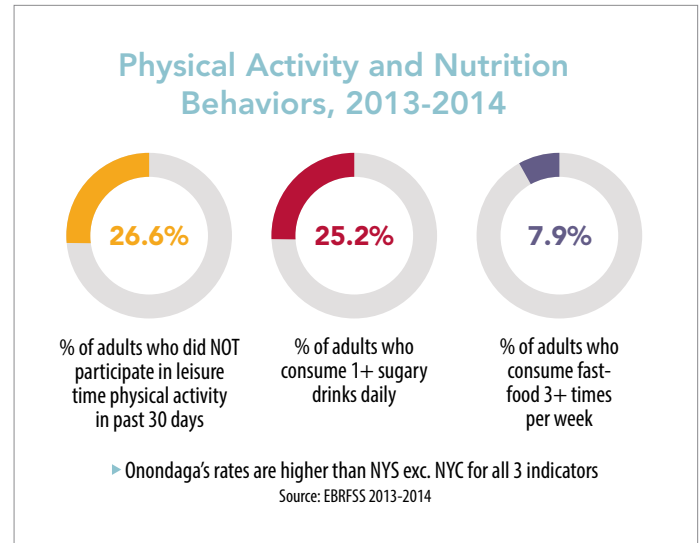
The data within the DSRIP CHNA points to diabetes as the 3rd leading cause of hospitalization for the Onondaga County population. The Prevention Agenda 2017 goal for the rate of hospitalizations for short-term complications of diabetes per 10,000 age 18+ is 4.86, and the Onondaga County rate is 6.10 Hypertension (13.13%) and Diabetes (6.82%) also account for the #1 and #3 top chronic conditions for Medicaid patients respectively.¹¹

⁸ CNY DSRIP Collaborative Needs Assessment – Onondaga County p.8
⁹ Source: 2014 990 – internal St. Joseph's Hospital Health Center Data
¹⁰ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.5
¹¹ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.10

As obesity significantly increases the risk for Type 2 Diabetes, exploring the rates of obesity provides another critical insight into meeting this community need. While the DSRIP CHNA data outlines obesity rates and health-related behavior rates that appear to perform better than the whole of Upstate New York,¹² updated data distilled from the Expanded Behavioral Risk Factor Surveillance Survey (eBRFSS) Health Indicators by County, included in the 2016 Community Service Plan/CHIP Data Review, suggest that these trends have worsened from 2012-2014 (see below).¹³



In addition to the increasing obesity trends, the updated CSP/CHIP report findings also suggest that the rates of certain risk behaviors related to obesity reported by Onondaga County residents between 2013-2014 are trending higher than both New York City and the whole of New York State.¹⁴



2. Tobacco Use

- Healthy People 2020 – Tobacco Use
- NYS Prevention Agenda 2013-2018 Prevent Chronic Diseases, Focus Area 2: Reduce Illness, Disability and Death Related to Tobacco Use and Secondhand Smoke Exposure

Risk factors for four out of five of the leading causes of premature death (before age 65) in Onondaga County are increased by the incidence of smoking.¹⁵ Further compounding the data regarding the incidence of premature death are the statistics related to disparities between the rates of premature death for white county residents, and the rates for minority populations, with current ratios in excess of 2017 Prevention Agenda goals.¹⁶

| Table 2: Premature Death (Before Age 65 yrs) in General County Population | | | | |
|---|------|------|-------|-----------------------------|
| | 2010 | 2011 | 2012 | Prevention Agenda 2017 Goal |
| Percentage of Premature Death (Before Age 65 Yrs) | 22.1 | 21.6 | 22.9* | 21.8 |
| Ratio of Black Non-Hispanics to White Non-Hispanics | 2.53 | 2.53 | 2.44 | 1.87 |
| Ratio of Hispanics to White Non-Hispanics | 2.53 | 2.83 | 2.85 | 1.86 |

*Worse than Upstate NY
Data Source: http://apps.health.ny.gov/doh2/applinks/ebi/SASStoredProcess/guest?_program=/EBIPHIG/apps/dashboard/pa_dashboard - accessed 10/13/14

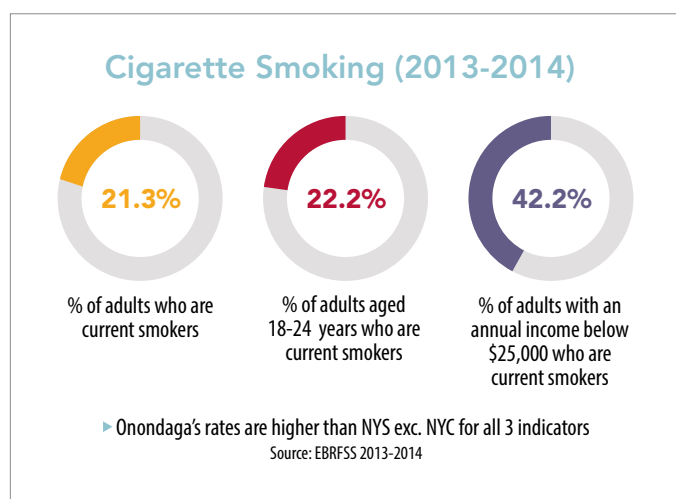
¹² CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.6
¹³ 2016 Onondaga County Community Service Plan/CHIP Data Review, p.5
¹⁴ 2016 Onondaga County Community Service Plan/CHIP Data Review, p.7
¹⁵ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.4
¹⁶ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.4

Table 3: Leading Causes of Premature Death in General Conty Population

| Leading Causes | Total Number | Rate |
|---------------------------------------|--------------|------|
| 1. Cancer | 1564 | 331* |
| 2. Heart Disease | 785 | 166 |
| 3. Unintentional Injury | 291 | 70 |
| 4. Chronic Lower Respiratory Diseases | 223 | 53* |
| 5. Stroke | 158 | 38* |

*Rate higher than Upstate NY
Data Sources: Vital Statistics Data as of March, 2014
Notes: Premature death data by county includes data from 2010-2012. Rate is the age-adjusted rate per 100,000.

One of the “Population Health Indicators and Major Risk Factors” that had an incidence rate in Onondaga County that is higher than that of Upstate New York is the percent of adults who are current smokers, with Onondaga at 20.0% compared to 18.9% in Upstate New York.¹⁷ The CSP/CHIP Data review further affirms this data, with worsening rates reported 2013-2014.¹⁸



Promotion of Mental Health and the Prevention of Substance Abuse

1. Mental Health

- Healthy People 2020 - Mental Health and Mental Disorders
- NYS Prevention Agenda 2013-2018 Promote Mental Health and Prevent Substance Abuse, Focus Area 1: Promote Mental, Emotional and Behavioral Well-Being in Communities

The reported rate of “Adults with Poor Mental Health for 14 or More Days in the Last Month” is 12.0%, compared with the Upstate NY average of 10.9%.¹⁹ Further, Depression is the second highest reported Major Chronic Condition for Medicaid beneficiaries in Onondaga County (11.94% of beneficiaries), followed by other mental health diagnoses on the top 10 list: Chronic Stress and Anxiety Diagnoses (#6); Schizophrenia (#7); Attention Deficit/Hyperactivity Disorder (#8); and Chronic Mental Health Diagnoses (#10).²⁰ Further affirming that mental health is a major need of Onondaga County’s underserved population, Mental health-related diagnoses account for approximately 28% of the top 10 causes of Emergency Department visits from Medicaid patients.²¹

Last, in the summary report from Onondaga County stakeholder interviews, the shortage in child and adult psychiatrists was noted as a community need, in addition to the noted lack in assessment and screening for behavioral health issues, and the lack in awareness of behavioral health resources among the medical community.²²

2. Substance Abuse

- Healthy People 2020 - Substance Abuse
- NYS Prevention Agenda 2013-2018 Promote Mental Health and Prevent Substance Abuse, Focus Area 2: Prevent Substance Abuse and other Mental Emotional Behavioral Disorders

The second leading cause of hospitalization among the general Onondaga County population is due to Newborn drug-related diagnoses (257.1 per 10,000 discharges).²³ The rate of drug-related hospitalizations reported in the DSRIP CHNA for Onondaga County (21.2 per 10,000) is similar to the Upstate NY average (21.3 per 10,000), however, updated data demonstrates that some drug use-related trends have been increasing at an alarming rate in recent years.²⁴

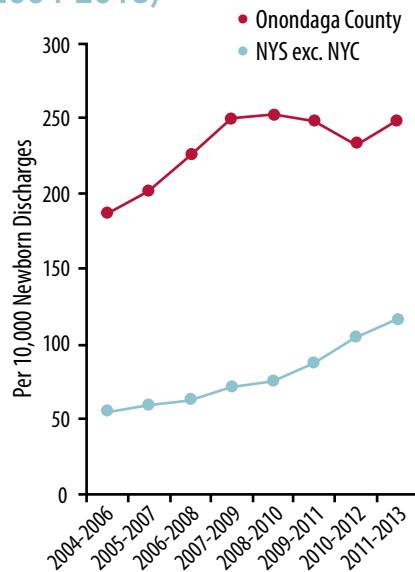
In the Onondaga County CSP/CHIP data review, the number of opioid and heroin-related deaths has been on the rise from 2010-2015.²⁵ Also reflected in this report, Newborn Drug-Related Discharge Rates have been increasing as well, consistently exceeding the New York State average.²⁶

¹⁷ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.6
¹⁸ 2016 Onondaga County Community Service Plan/CHIP Data Review, p.12
¹⁹ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.6
²⁰ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.10
²¹ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.11
²² CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.24
²³ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.5
²⁴ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.6
²⁵ 2016 Onondaga County Community Service Plan/CHIP Data Review, p.15
²⁶ 2016 Onondaga County Community Service Plan/CHIP Data Review, p.14

Newborn Drug-Related Discharge Rates (2004-2013)

7.9%
Percent of mothers who report illegal drug use during pregnancy (2015)

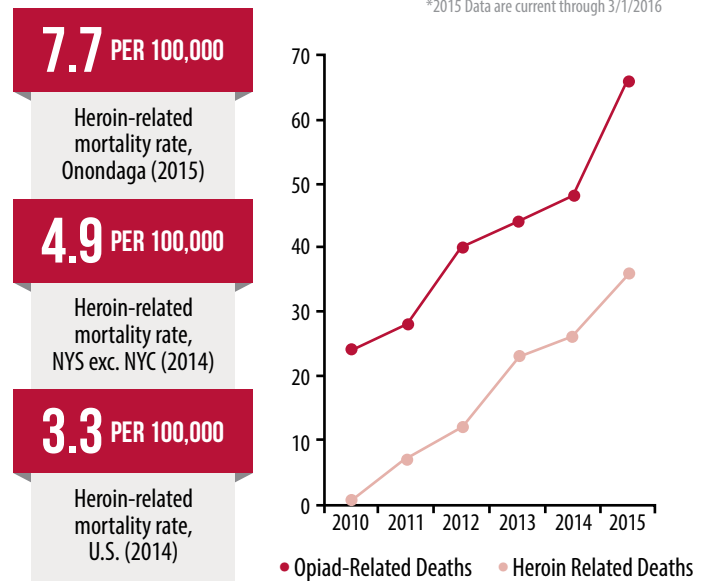
66
Number of infants born dependent on opiates at Crouse Hospital (2014)



Sources: SPARCS 2004-2013, Crouse Hospital (2015)

Opiad and Heroin Mortality (2010-2015)*

*2015 Data are current through 3/1/2016



Sources: Onondaga County Medical Examiner's Office, CDC WONDER

Last, affirming the essentiality of prioritizing substance abuse as a community health need in Onondaga County is some of the feedback gleaned from stakeholder interviews, noting the sharp increase in the rate of opiate abuse and the lack in resources to manage this trend. Specific feedback regarding the shortage in treatment options highlighted the shortage in methadone treatment options in the community.

These three community trends point to an opportunity to address falls in the community among a growing age demographic, examining noted deficits in the availability of in-home support as an area of potential focus for improvement/future work.

Promotion of a Healthy and Safe Environment

1. Falls Among Those Aged 65+

- Healthy People 2020 – Environmental Health
- NYS Prevention Agenda 2013-2018 Promote a healthy and Safe Environment, Focus Area 4: Injuries, Violence and Occupational Health

Onondaga County is projected to see a 1.2% decline in the adult population age 18-64 between 2015-2020, however, the age 65+ demographic is projected to grow over the same time period by 15.5%.²⁷ Falls account for both the #1 (Aged 85+; 410/10,000), #6 (Aged 75-84; 159.7/10,000) and #9 (Aged 65-74; 51.7/10,000) of the top 10 leading causes of hospitalizations among the general Onondaga County population.²⁸

Stakeholder feedback points to a perceived lack in supportive housing for the frail elderly, and to a belief that waiting lists for housing services are full.²⁹

Promotion of Healthy Women, Infants and Children

1. Maternal and Infant Health

- Healthy People 2020 – Maternal, Infant and Child Health
- NYS Prevention Agenda 2013-2018 Promote Healthy Women, Infants and Children, Focus Area 1: Maternal and Infant Health

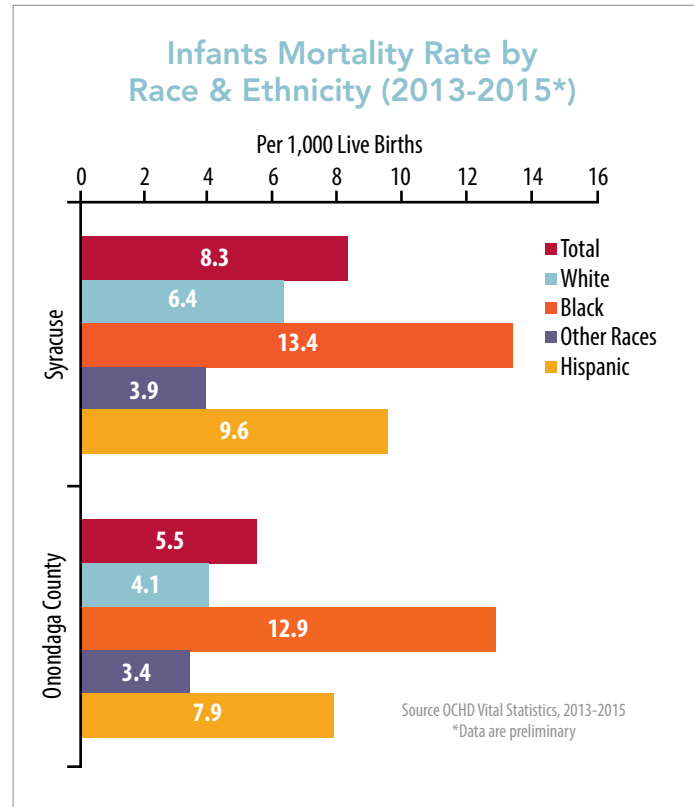
Within the DSRIP CHNA, one area of need that was acknowledged to be covered in the previous community's CHNA, but was not covered in detail within the current CHNA is an exploration of maternal and infant health indicators. Most indicators related to maternal and infant health reflected in the DSRIP CHNA fared better than Upstate New York, with one indicator reflecting an incidence rate higher than that of Upstate New York: low birth weights, at 8.1% for Onondaga County compared with 7.8% for greater Upstate New York.³⁰

²⁷ Truven Health Analytics, Inc. – Demographics Expert 2.7 (2016)
²⁸ CNY DSRIP Collaborative Needs Assessment – Onondaga County, p.5
²⁹ p.24
³⁰ p.6

Analysis of Prevention Quality Indicator (PQI) data for the Medicaid population in Onondaga County, which explores chronic disease, emergency department utilization and inpatient utilization rates revealed significant health disparities, pointing to residents of the city of Syracuse as those with higher health risks than the greater Onondaga County population. Further, the DSRIP CHNA report notes that "... the vast majority of the county's minority populations live in Syracuse, and the State's Prevention Agenda dashboard shows large inequities in health status, including the premature death rate, for minority populations compared to White populations."³¹

While this analysis does not speak to maternal and infant health specifically, the general PQI findings and associated disparities pointed to a need to further analyze the data behind maternal and child health within the city population specifically.

The Onondaga County CSP data report that is included for supplemental information noted a rate of pre-term births in the city of Syracuse that is 12%. Further, the likelihood of preterm birth for minority infants is higher than that of white infants (see below).

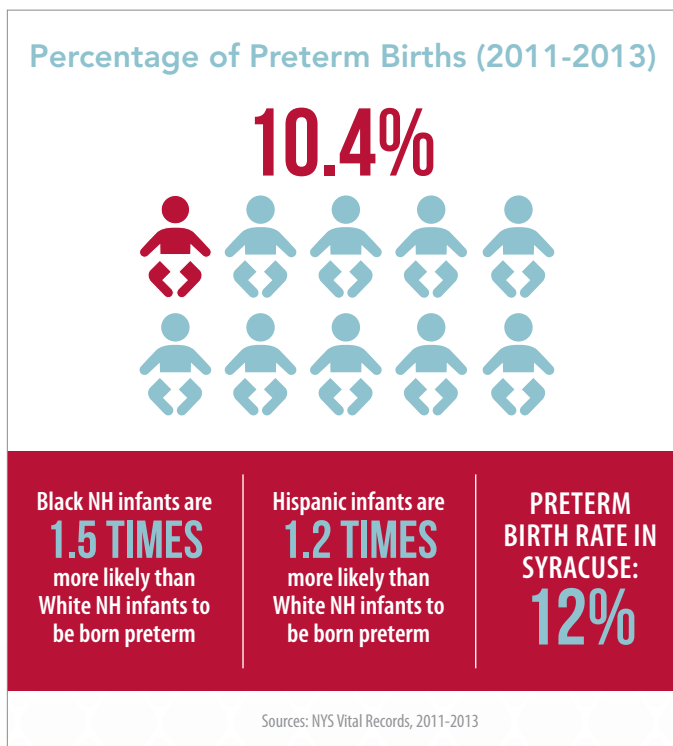


The infant mortality rate included in the CSP report reflects similar disparities. The rate overall is nearly 3% higher for city of Syracuse infants vs. Onondaga County, and across the board, the mortality rate reported for black and Hispanic infants is higher than that of the other races/ethnicities reported.

The preliminary look at general health disparities in the DSRIP CHNA led to further exploration of maternal and infant health indicators, specifically through supplemental sources. The findings strongly suggest that this is an area of great need, in particular for Syracuse and minority residents.

Potential Resources to Address Significant Health Needs

Numerous resources are outlined in the full DSRIP CHNA report under "Appendix B - Inventory of Resources by County." The comprehensive list includes: hospitals, diagnostic and treatment centers, hospital-based clinics, FQHC's (including school-based health centers), additional safety-net clinics, health home partners, dental providers, behavioral health providers, post-acute care, palliative/hospice care, HIV/AIDS resources, and other non-medical community based organizations.



Impact of Prior CHNA Implementation Plan

Overall, the impact of the prior CHNA Implementation Plan is varied, and in some cases, difficult to determine due to the difficulty in tracking the impact of initiatives as they relate to health outcomes vs. initiative outputs that are easier to track, such as participation rates in a program or service.

Below is an overview of the impact by strategy plan focus areas.

Prevention of Chronic Disease

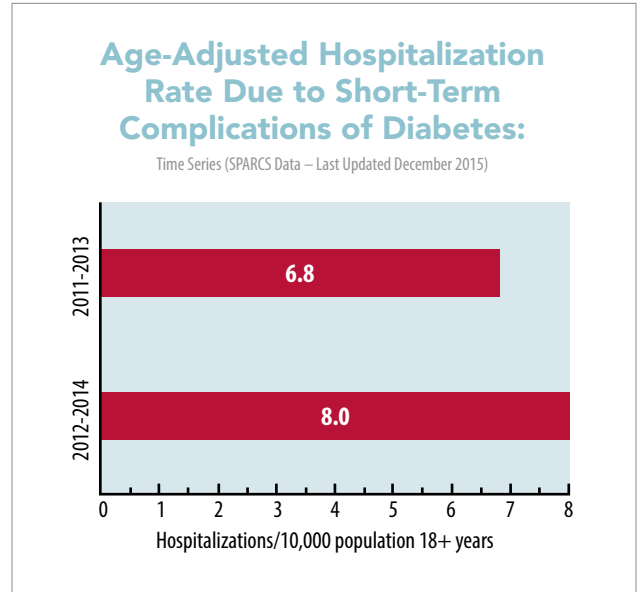
1. Promote the use of evidence-based care to manage chronic disease.

To prevent chronic disease, specifically, to impact diabetes, St. Joseph's included in its implementation plan a strategy for implementing screening practices within its primary care centers, and partnering with other community based organizations to engage patients in diabetes management initiatives. St. Joseph's was successful in the establishment of screening and counseling practices within its primary care centers, with significant participation recorded. The formation of collaborative partnerships with St. Joseph's Primary Care Center West was successful, but client participation in the diabetes management program that was implemented was poor. It is deduced that the participation was less than expected due to difficulty accessing the program and required follow-up services.

Key Measures

St. Joseph's was successful in meeting the measure of increasing the number of patients who have learned how to manage their symptoms, as demonstrated through the number of counseling sessions reported. For example, it was reported that 576 patients received nutritional counseling over 2015 through the Family Medicine Center/Main Campus Primary care Clinic.

The second measure related to diabetes specifically targeted a reduction in the rate of hospitalizations for short-term complications of diabetes. According to 2011-2014 SPARCS data, this rate increased. Further tracking through 2015-2016 will be required to assess trending over the full implementation plan time period.



2. Improve health outcomes for adults with two or more chronic conditions in Onondaga County.

The main strategy behind impacting health outcomes for adults with 2+ chronic conditions in Onondaga County was the implementation of the Health Home program, a care management program to provide care coordination services for Medicaid patients with 2+ chronic conditions, including behavioral health.

Key Measures

One targeted measure to assess the impact of this program was the overall utilization of the Emergency Department and CPEP program, with the goal of reducing utilization by 5% over a 3-year period. According to the data below, St. Joseph's did not meet its goal of reducing utilization to-date by 5%, however, there was a reduction. Year-end 2016 data will help confirm these results.³²

| Year | 2013 | 2014 | 2015 |
|-----------------------------|--------|--------|--------|
| Emergency Department Visits | 70,046 | 72,345 | 69,846 |

Preliminary data demonstrates that the health home team successfully made an impact on the health home enrollee population served within our network with a decrease in avoidable ED visits/Medical Hospitalizations per 100 enrollees per month, and a decrease in the cost of care per member per month for dual-eligible enrollees. Specifically, engagement in the Health Home through 12/31/15 resulted in 26% less inpatient admissions, 74% less ED visits, and 8.5% less charges than if no intervention had been performed.

3. Improve access to primary care and other community-based services.

The strategy related to this component of the implementation plan was the implementation of a patient navigator program within our hospital emergency department. The ultimate goal of this intervention was to decrease unnecessary utilization of the Emergency Department by assisting patients with gaining access to primary care.

While 2016 data at year-end will help round out an analysis of the cases treated in the Emergency Department, internal program data shows that in 2015, approximately 3800 unique patients interacted with a navigator, with approximately 1237 primary care appointments scheduled for those patients who did not have an established primary care physician. Of all of the patients interacting with a navigator, approximately 256 referrals were made to connect uninsured patients with facilitated enrollers. The program-level data indicates that access to primary care was improved through this service.

4. Improve access to dental care.

To increase access to dental care, St. Joseph's planned to expand its existing dental services program to include oral health services provided by a dental hygienist at the Westside Family Health Center.

After years of planning through 2013 and 2014, at the end of 2015/start of 2016, a mobile dental program was launched, targeting the hospital clinics as host sites for the provision of dental services to many of our community's underserved patients. Very preliminary data show that St. Joseph's is having an impact on the improvement of access, as those who have gone without dental care are being scheduled in full blocks when the mobile clinic is available.

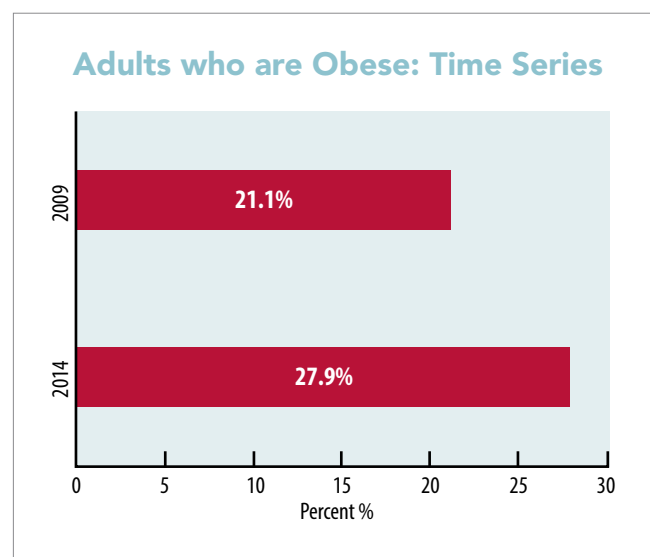
Reduce Obesity in Children and Adults

1. Create community environments that promote and support healthy food and beverage choices and physical activity.

There were several strategies employed to address this goal, including the development of a "healthy shopper reward program" in collaboration with St. Joseph's Primary Care Center West, Nojaim's supermarket and Syracuse University's Lerner Center for Public Health Promotion; provision of fresh produce to a local food pantry; sponsorship of a community garden; development of workplace nutrition policies; and implementation of school-based educational programs regarding nutrition.

Key Measures

St. Joseph's aimed to reduce the number of adults diagnosed as obese, which, according to the data, did not improve 2009-2014.³³



According to this data, there is still significant opportunity to impact the rising rates of obesity in our community.

St. Joseph's was successful in working towards the implementation of the "Healthy shopper" program with Nojaim's supermarket, but the program, while fully implemented in the supermarket has not yet been fully optimized in engagement with clinic patients. The partners will continue to focus on opportunities to optimize the system in collaboration with one another in coming years.

St. Joseph's was successful in providing fresh produce to the Assumption food pantry through the establishment of a program to regularly supplement the pantry's offerings with produce deliveries. St. Joseph's also met the goal of sponsoring a community garden by providing support for a garden in 2015, and will examine opportunities to sponsor another garden within the city of Syracuse in 2016.

At year-end 2015, just over 65% of meal offerings on average per month were determined to be "healthy," an increase of 5% over year-end 2014 (179 healthy/275 average meals per month), and just over 53% of food sales per month on average were related to "healthy" offerings. These percentages fell short of the goal of 80%, but demonstrated significant progress in developing a focus on impacting choices in the workplace.

The last strategy of engaging in school-based programs with the City of Syracuse has not yet been launched. Over the course of the last CHNA implementation cycle, an opportunity surfaced which will provide St. Joseph's a collaborative platform to engage in the Onondaga County Health Department's "Healthy Schools and Communities" initiative. This initiative is a new grant program led by the Health Department with the goal of impacting policies and systems within the Syracuse City Schools to improve health outcomes, including obesity.

Reduce Illness, Disability, and Death Related to Tobacco Use and Secondhand Smoke Exposure

- 1. Prevent initiation of tobacco use by youth and adults, especially among new socioeconomic populations.**
- 2. Promote Tobacco Cessation Especially Among Lower Socioeconomic Populations and Those with Poor Mental Health.**

To meet the above goals, St. Joseph's planned to initiate a community-based educational initiative with key partners; utilize the CNY Regional Center for Tobacco Health Systems run by St. Joseph's to assist in the adoption of a system to screen all patients for tobacco use; and to utilize the Regional Center to train providers in providing cessation support.

The collaboration intended to support community-based education programs did not succeed in launching a community-wide program, however, in early 2016 an initiative was led by St. Joseph's to re-convene the Onondaga County Tobacco Coalition, which had been dormant for the previous 2-3 years.

The focus of the Coalition will be to re-energize the collaboration in order to develop cohesive community-wide strategies that will ultimately reduce tobacco use.

In alignment with the strategies utilizing the expertise of the CNY Regional Center for Tobacco Health Systems, St. Joseph's successfully trained 150 clinicians in Onondaga County in tobacco cessation strategies over 2015, and a screening process has effectively been built within the electronic health record utilized at all St. Joseph's points of care.

Promote Mental Health and Prevent Substance Abuse

- 1. To improve maternal and infant health, St. Joseph's will reduce the incidence of neonatal abstinence syndrome.**

St. Joseph's aimed to progress the goal above through the education of patients, providers, and through participation on the Syracuse Healthy Start-Perinatal Substance Abuse Committee.

St. Joseph's was successful in the broad education of staff in the SBIRT program, a best practice substance abuse intervention: Screening, Brief Intervention, and Referral to Treatment (SBIRT). Through the DSRIP Program, further work will be done to integrate best practice protocols within standard patient care. Currently, all patients are screened for substance abuse, and patients who are pregnant are counseled on the risks associated with risk behaviors.

Last, since the development of the last CHNA implementation plan, St. Joseph's continued participation on the Syracuse Healthy Start-Perinatal Substance Abuse Committee, working as a community collaborative toward the reduction of risk behaviors.

It is difficult to discern if activities over 2013-2016 have had an impact on newborn health, as the available data is on a time lag that does not provide feedback on recent years. The following table reflects currently available data on the NYS DOH website, with 2013 representing the most current data:

| Newborn drug-related Hospitalizations – Onondaga County (Crude Rate per 10,000) | | | |
|--|--------------------|-----------------------|---------------------|
| Year | Single Year | 3-Year Average | NYS exc. NYC |
| 2011 | 257.1 | 233.3 | 105.8 |
| 2012 | 216.5 | 248.8 | 116.7 |
| 2013 | 273.7 | | 147.7 |

2. To promote mental, emotional and behavioral well-being, St. Joseph's will implement evidenced based practice in screening and prevention of behavioral health concerns.

St. Joseph's successfully met the goal of increasing the early detection of behavioral health concerns through the integration of a behavioral health screening process within all patient intakes. In addition, St. Joseph's has expanded behavioral health care access within the primary care clinics, and has conversely co-located primary care within St. Joseph's main behavioral health outpatient clinic, therefore expanding a model of caring for the medical and psychosocial needs of patients in one location.

Promote a Healthy and Safe Environment

1. To reduce fall risks among vulnerable populations, St. Joseph's will partner with county agencies on education programs.

St. Joseph's successfully hosted 5 falls awareness education programs over 2014 and 2015 combined, with total attendance of approximately 2,260 combined. In 2016, St. Joseph's falls education team will educate community-based providers with the goal of ultimately reducing falls.

Summary

In summary, several of the targeted interventions were successfully implemented, while some interventions, some community-based collaborative projects, in particular, are still in need of further work.

Impact measurements for targeted interventions were much more accessible when internal St. Joseph's data was selected as the relevant measure. Data regarding community health indicators, however, while accessible on-line, is difficult to tie back to determining the specific impact that a program or strategy has had upon broader health trends.

Appendix

Onondaga County - CNY DSRIP Collaborative Needs Assessment

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Onondaga County

Onondaga County is home to the City of Syracuse, which is the largest city in Central New York. It is bordered by Oswego, Madison, Cortland, and Cayuga County. More than 466,000 people live in Onondaga County, about a third of whom live in county seat of Syracuse.

Although Onondaga has just the one city of Syracuse, the County also has 14 villages, 19 towns, and part of the Onondaga Nation territory. Interstates 90 and 81 are the major east-west and north-south highways in Onondaga County.

The average population density throughout the County is 599 people per square mile; the density higher around Syracuse, and lower away from Syracuse, around the edges of the County.

Onondaga County is predominantly White population, though there is a higher proportion of racial minorities living in Syracuse compared to the rest of the County. Onondaga's socioeconomic conditions are fairly similar to those of Upstate New York (Upstate NY), but Syracuse tends to fare worse in terms of education, poverty levels, and access to health care.

These differences between Syracuse and rest of Onondaga are important contextual factors to consider in reviewing the key health concerns in Onondaga County, and how to address them. This profile of Onondaga County will describe the population in further detail, offer data on health indicators for Onondaga's overall population and Medicaid population, describe the County's capacity for health care services, and highlight the key findings from the quantitative data and interviews conducted.

The Onondaga County Population

Onondaga County has a population of over 466,000. About a third of Onondaga's residents live in Syracuse, although 87.4% of the Onondaga population lives in an urban rather than rural area. The majority of Onondaga's population is White (81.6%), though there is a higher proportion of racial minorities living in Syracuse compared to the rest of Onondaga. For instance, nearly a third of Syracuse's residents are Black (29.5%), which is high compared to Onondaga as a whole (10.8%), Upstate NY (8.7%), and New York State (15.7%). There is also a higher concentration of foreign-born residents in Syracuse than in Onondaga as a whole (11.1% versus 7.2%, respectively).

Onondaga's high school education rates, median household income, unemployment rate, and poverty levels are roughly comparable to those of Upstate NY. However, Syracuse fares worse on these measures compared to Onondaga overall. The proportion of residents with less than a high school education is nearly double that of Onondaga (19.9% vs. 10.6%, respectively). Syracuse's median household income is about 60% of Onondaga's (\$31,459 vs. \$53,593), the unemployment rate is more than 50% higher (11.4% vs. 7.2%), and the percent living in poverty is more than double than in Onondaga (33.6% vs. 14.3%).

Table 1: Demographic, Socio-Economic, and Insurance Information

| | Syracuse | Onondaga | Upstate New York ¹ | New York State |
|---------------------------------------|----------|----------|-------------------------------|----------------|
| Total population size | 144,669 | 466,179 | 11,198,904 | 19,398,125 |
| Gender | | | | |
| Male | 48% | 48% | 49.1% | 48.4% |
| Female | 52% | 52% | 50.9% | 51.6% |
| Race/Ethnicity | | | | |
| White | 56% | 81.6% | 81.8% | 66% |
| Black | 29.5% | 10.8% | 8.7% | 15.7% |
| Asian | 5.5% | 3.2% | 3.5% | 7.5% |
| American Indian/Alaska Native (AI/AN) | 1.1% | 0.8% | 0.3% | 0.4% |
| Hispanic | 8.3% | 4.0% | 9.7% | 17.7% |
| Foreign-born population | 11.1% | 7.2% | 11.1% | 22% |
| Education | | | | |
| Less than high school education | 19.9% | 10.6% | 11.1% | 15.1% |
| Employment and Income | | | | |
| Median household income | \$31,459 | \$53,593 | \$54,125 ^a | \$57,683 |
| Unemployed | 11.4% | 7.2% | 7.7% | 8.7% |
| In poverty (below 100% FPL) | 33.6% | 14.3% | 11.2% | 14.9% |
| Below 138% FPL | | 20.4% | 16.6% | 21.5% |
| Below 200% | | 29.6% | 25.7% | 31.6% |
| 200% FPL-400% FPL | | 30.5% | 29% | 27.9% |
| Above 400% FPL | | 39.9% | 45.3% | 40.5% |
| Insurance | | | | |
| Uninsured | 13.0% | 8.7% | 9.1% | 11.3% |
| Medicaid | | 17.0% | 14.9% | 20.9% |
| Urban/Rural | | | | |
| Urban | 100% | 87.4% | 79% | 87.9% |
| Rural | 0% | 12.6% | 21% | 12.1% |

Data source: American Community Survey, 5-Year Estimate 2008-2012
^aAverage of median household incomes in Upstate New York counties.

The proportion of Medicaid beneficiaries in Onondaga is higher than in Upstate NY (17.0% vs. 14.9%), but lower than in NY State (20.9%). Although the data for percent of Syracuse residents on Medicaid is unavailable, Syracuse does have a higher proportion of uninsured residents (13.0%) than in Onondaga, Upstate NY, and NY State (8.7%, 9.1%, 11.3%, respectively). In that lower socio-economic status is correlated with poor health, the map on the following page highlights the Syracuse ZIP codes that are noted as having a high percentage, of their residents living below 138 percent of the Federal poverty level (FPL). Being poor, and all its concomitant consequences, such as poor education, lack of transportation, substandard housing, and residence

¹Upstate New York (NY) refers to State of New York less the city of New York City

in resource poor communities was identified by several key informants as an overall issue impacting health care access, health care utilization, and mental and physical health status.

Nine Syracuse ZIP codes (from census ZIP code tabulation areas – ZCTA) are highlighted as within in the worst quartiles for percent of their residents living below 138 percent of the Federal poverty level (FPL): 13202, 13203, 13204, 13205, 13207, 13208, 13209, 13210, and 13224.

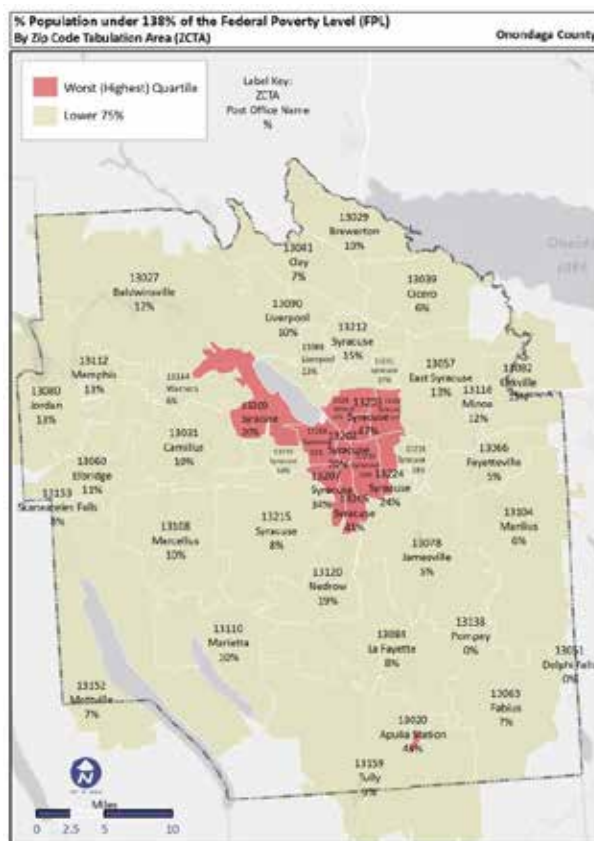
Overview of County Population Health

This section offers data on the needs in Onondaga by describing health indicators for Onondaga’s residents overall, and utilization and health indicators among Onondaga’s Medicaid beneficiaries. Examining the leading causes of death and hospitalization, major health risk factors, and service utilization rates for Onondaga’s population can help inform population health goals. These indicators may suggest principal areas of concern for systemic changes to Onondaga County’s health care services.

Leading Causes of Premature Death and Hospitalizations

The leading causes of premature death and hospitalization in Onondaga represent important opportunities for prevention-related efforts. In some cases, the incidence rate for these leading causes is higher in Onondaga County than in Upstate NY.

Table 2 presents trend data for the percentage of premature death before age 65 years old, an indicator on New York State’s Prevention Agenda 2017 (PA 2017). Table 2 shows that the trend has not changed much in the last three years; Onondaga County falls just short of meeting the State’s 2017 goal for premature death overall for its population but has a higher 2012 percentage than Upstate NY. Disparities between White and minority populations are quite high; in 2012 the premature death rate of minority populations in Onondaga County was 2.44 to 2.85 times that of the White population and falls far short of the State’s Prevention Agenda goals.



| | 2010 | 2011 | 2012 | Prevention Agenda 2017 Goal |
|---|------|------|-------|-----------------------------|
| Percentage of premature death (before age 65 years) | 22.1 | 21.6 | 22.9* | 21.8 |
| <i>Ratio of Black non-Hispanics to White non-Hispanics</i> | 2.53 | 2.53 | 2.44 | 1.87 |
| <i>Ratio of Hispanics to White non-Hispanics</i> | 2.53 | 2.83 | 2.85 | 1.86 |
| *Worse than Upstate NY Data Source: https://apps.health.ny.gov/doh2/applinks/ebi/SASStoredProcess/guest?_program=/EBI/PHIG/apps/dashboard/pa_dashboard - accessed 10/13/14 | | | | |

Table 3 includes the top five causes of premature death are cancer, heart disease, unintentional injury, chronic lower respiratory disease (CLRD), and stroke. Three of the five leading causes of premature death for residents of Onondaga County have rates higher than Upstate NY. They are cancer, CLRD, and stroke.

| Leading Causes | Total Number | Rate |
|--|--------------|------|
| 1. Cancer | 1564 | 331* |
| 2. Heart Disease | 785 | 166 |
| 3. Unintentional Injury | 291 | 70 |
| 4. Chronic Lower Respiratory Diseases | 223 | 53* |
| 5. Stroke | 158 | 38* |
| *Rate higher than Upstate NY Data Sources: Vital Statistics Data as of March, 2014 Notes: Premature death data by county includes data from 2010-2012. Rate is the age-adjusted rate per 100,000. | | |

Table 4 presents the leading causes of hospitalizations at the population level. Two of the top five leading causes of hospitalizations include rates higher than Upstate NY. The two causes with higher rates include: newborn drug related and pneumonia/flu - aged 65 years and older. Data from the Onondaga County Medical Examiner’s Office showed a more than 20-fold increase in mortality from heroin-related overdoses from .21 per 100,000 population in 2010 to 4.5 per 100,000 population in 2013 (Onondaga County Community Health Assessment and Improvement Plan 2014-2017). This same issue was mentioned by several key informants as a growing and concerning problem in the County. It is potentially related to the high rate of newborn drug-related hospitalizations.

Table 4: Leading Causes of Hospitalizations in General County Population

| Leading Causes | Rate |
|---|----------------------|
| 1. Falls - Aged 85 years and older | 410.7 |
| 2. Newborn drug-related | 257.1 ^{b,*} |
| 3. Diabetes (any diagnosis) | 194.8 ^a |
| 4. Unintentional injury - Aged 65 years and older | 188.2 |
| 5. Pneumonia/flu (aged 65 years and older) | 167.2* |
| 6. Falls - Aged 75-84 years | 159.7 |
| 7. Cardiovascular disease | 132.6 ^a |
| 8. Disease of the heart | 85.3 ^a |
| 9. Falls - Aged 65-74 years | 51.7 |
| 10. Unintentional injury | 45.3 ^a |
| *Rate higher than Upstate NY | |
| Data sources: SPARCS/NY STATE Community Health Indicator Reports (CHIRS) 2011 | |
| Rate is crude rate per 10,000 unless otherwise noted. | |
| ^a Rate is age-adjusted per 10,000. | |
| ^b Crude rate per 10,000 newborn discharges. | |

Other NY State Prevention Agenda 2017 goals focus on hospitalizations for chronic disease. State goals are indicated below along with Onondaga’s 2012 rate and the comparison with Upstate NY and NY State. Onondaga’s 0-4 year old asthma ED visit rate is above the rate for Upstate NY. Hospitalizations for short-term complications from diabetes (both adult and child) are above the rates of Upstate NY and fall short of the PA 2017 goals for these indicators.

- Asthma emergency department visit rate per 10,000
PA 2017 goal – 75.1
Onondaga – 41.1, lower than Upstate NY and NY State
- Asthma emergency department visit rate per 10,000 - Aged 0-4 years
PA 2017 goal – 196.5
Onondaga – 121.6, higher than Upstate NY
- Rate of hospitalizations for short-term complications of diabetes per 10,000 - Aged 6-17 years
PA 2017 goal – 3.06
Onondaga – 3.3, higher than Upstate NY and NY State
- Rate of hospitalizations for short-term complications of diabetes per 10,000 - Aged 18+ years
PA 2017 goal – 4.86
Onondaga – 6, higher than Upstate NY

Population Health Indicators and Major Risk Factors

Population health indicators may suggest priorities for public health interventions, including interventions that focus on personal health behaviors that play a key role in premature morbidity and mortality.

Table 5 presents key population health indicators for Onondaga County, NY. Several measures across three of the five categorical indicator areas include rates that are worse than those presented for Upstate NY. Of the **maternal and infant health** measures, low birth rate births are worse than Upstate NY. Other topical areas that include rates worse than Upstate NY include: **tobacco, alcohol, and substance use** (specifically: adults who are current smokers) and **mental health** (specifically: adults with poor mental health for 14 or more days in the past month).

| Table 5: Population Health Indicators and Major Risk Factors in General County Population | | |
|---|----------|------------------|
| Health and Risk Factors | Onondaga | Upstate New York |
| Maternal and Infant Health** | | |
| Births with late or no prenatal care (%) | 3.5 | 3.9 |
| Exclusive breastfeeding (%) | 55.4 | 48.1 |
| Cesarean section delivery (%) | 32.2 | 35.8 |
| Infant mortality (per 1,000 live births) | 5.5 | 5.6 |
| Preterm births (%) | 10.7 | 11.0 |
| Low birth weight births (%) | 8.1 | 7.8 |
| Tobacco, Alcohol, and Substance Use | | |
| Adults who are current smokers (%)* ^a | 20.0 | 18.9 |
| Binge drinking within the past month among adults - age adjusted, %)* | 18.7 | 19.8 |
| Alcohol related motor vehicle injuries and deaths (per 100,000)** | 37.3 | 45.3 |
| Drug-related hospitalizations (Age-adjusted, per 10,000)** | 21.2 | 21.3 |
| Mental Health | | |
| Adults with poor mental health for 14 or more days in past month (%)* ^a | 12.0 | 10.9 |
| Obesity and Related Indicators | | |
| Percent of children and adolescents (students) who are overweight or obese(%)*** | 32.1 | 33.7 |
| Adults who are obese (%)* ^a | 21.1 | 24.3 |
| Adults with diabetes (%)* ^a | 7.6 | 8.5 |
| Adults consuming 5 fruits or vegetables per day (Age-adjusted %)* | 33.7 | 27.7 |
| Adults with no leisure-time physical activity (Age-adjusted, %)* | 20.3 | 21.1 |
| Safety | | |
| Age-adjusted rate of motor-vehicle mortalities per 100,000** | 7.0 | 8.2 |
| Data sources: *BRFSS 2009, **CHAI 2011, *** CHAI 2012 | | |
| Note: Other variables are available in complete data set. | | |
| ^a Rate is age-adjusted | | |

Access to Health Care

Measuring access to health care is an essential way to understand how well people are able to utilize health care services, beyond availability of services in the community. The New York State Department of Health’s Prevention Agenda identifies access to quality health care as a priority area, and includes enrollment in health insurance and preventive health indicators as indicators of access.

Table 6 provides an overview of potential indicators related to access to health care for residents of Onondaga County, NY. Generally, Onondaga fares better than Upstate NY on these health care access measures. Only one measure represents a rate worse than Upstate NY: the percentage of adults with regular health care providers.

| Table 6: Access to Health Care | | |
|---|----------|------------------|
| Service Utilization | Onondaga | Upstate New York |
| Adults with health insurance (%) ^a | 91.0 | 89.9 |
| Adults with regular health care providers (%) ^a | 85.9 | 87.1 |
| Adults with dental visits in past year (%) ^a | 73.9 | 72.7 |
| Women aged 40 and older who had mammograms in the past two years (%) ^a | 87.5 | 81.9 |
| Women who had pap tests in the past three years (%) ^a | 89.4 | 82.6 |
| Adults aged 50 and older who ever had sigmoidoscopies or colonoscopies (%) ^a | 73.2 | 68.4 |
| Adults age 65 and older who had flu shots in the past year (%) ^a | 82.4 | 76.0 |
| Adults age 65 and older who ever had pneumonia vaccinations (%) ^a | 83.0 | 71.2 |
| Data source: BRFSS County-Specific Prevention Agenda Highlights 2009 | | |
| Note: Other variables are available in complete data set. | | |
| ^a Rate is age-adjusted | | |

Utilization Indicators and Health Outcomes among County Medicaid Beneficiaries

This section focuses on Onondaga’s Medicaid beneficiaries, rather than all residents of Onondaga County. Specific to Medicaid beneficiaries, it describes service utilization rates,

prevalence of chronic conditions, leading causes of emergency room visits, prevention quality indicators (PQIs) and pediatric quality indicators (PDIs), and rates of preventable emergency room visits and inpatient admissions. These data offer insight into priority areas for reducing readmissions among Medicaid beneficiaries.

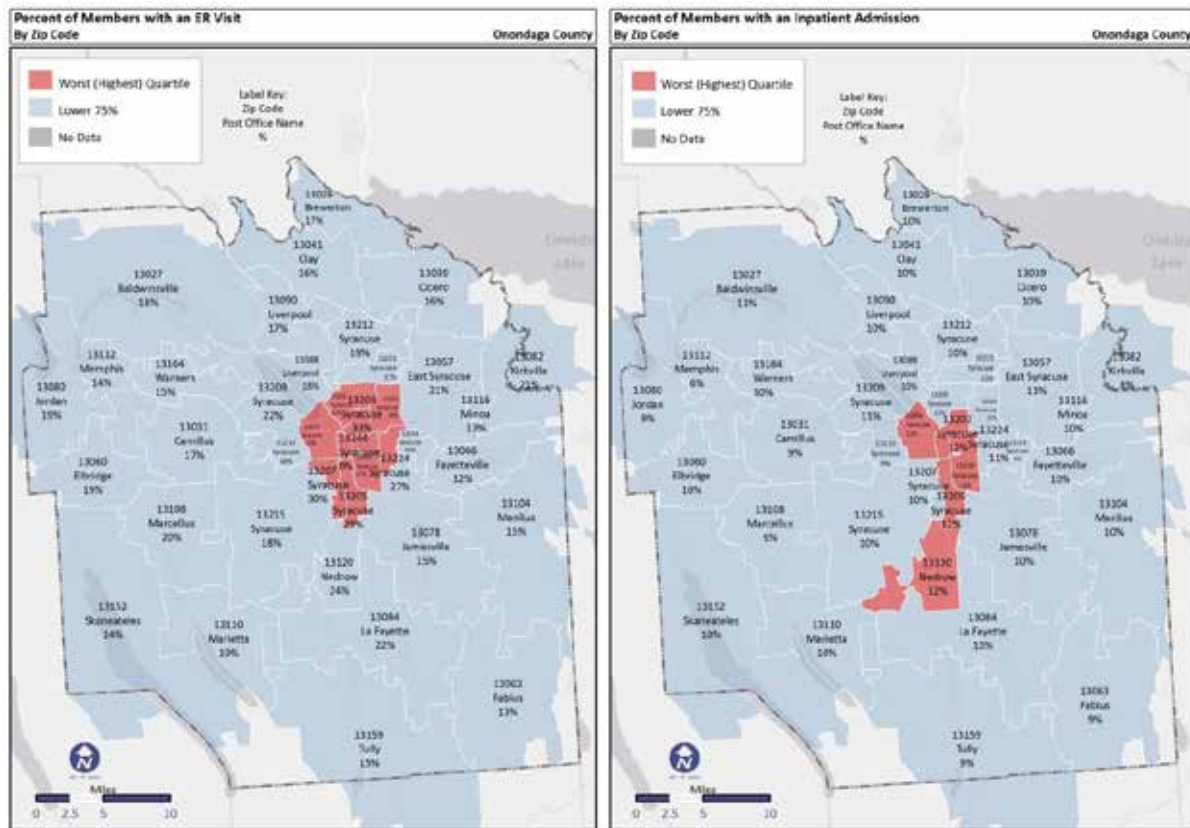
In 2012, Onondaga had 106,388 Medicaid beneficiaries, 16,271 of whom were dual eligible. Adults represented 65,310 beneficiaries and children represented 39,078 beneficiaries. ZIP codes having greater than 5,000 beneficiaries, with a range from 5,010 to 12,869, are as follows: 13208, 13204, 13205, 13203, 13207, 13210 (from highest to lowest); all are within Syracuse.

Service Utilization

Table 7 provides a description of the Medicaid service utilization for Onondaga County, NY for primary care, emergency room, and inpatient admissions. In 2013, 118,159 Medicaid beneficiaries accessed services, of which approximately 62% of beneficiaries accessed primary care services. In 2012, 106,388 Medicaid beneficiaries accessed services, of which 26% used the emergency department and 11% had an inpatient admission. Medicaid beneficiaries in Onondaga County had higher utilization than the state in terms of visits per member for the emergency department, based on 2012 data.

| Table 7: Service Utilization | | | |
|--|---------------------|-----------------------|----------------------------|
| Service Utilization | Primary Care | Emergency Room | Inpatient Admission |
| Percent of County Beneficiaries With a Visit | 62.48 | 26.24* | 11.24 |
| Total Number of Visits | 322,240 | 62,063 | 17,004 |
| Visits per Beneficiary | 2.73 | 0.58* | 0.16 |
| *Rate higher than state | | | |
| Data sources: Health Data New York 2013 (Primary Care), Health Data New York 2012 (ER/Inpatient) | | | |

The maps on the following page demonstrate geographic differences in ER utilization and inpatient admissions. Syracuse (ZIP code 13203) was in the highest quartile of utilization for both indicators. Other ZIP codes with high utilization are highlighted.



Causes of Utilization

Leading chronic conditions and causes of emergency room uses and inpatient admissions among the Medicaid beneficiary population can reveal some of the medical and psychosocial issues that are associated with avoidable hospitalizations. The high prevalence of behavioral health issues in Onondaga (see Tables 8, 9, 10) is particularly notable.

Table 8 describes the percent of Medicaid beneficiaries with chronic conditions in Onondaga County, NY. Seven of the top ten chronic conditions represent rates higher than NY State. The major chronic conditions that are higher than NY State include: depression (11.94%), drug abuse (5.59%), chronic stress and anxiety diagnoses (4.5%), schizophrenia (4.11%), attention deficit / hyperactivity disorder (2.55%), chronic alcohol abuse (2.33%) and chronic mental health diagnoses (2.15%). Of note: all seven rates that are higher than the State are for mental health/behavioral health conditions.

Table 8: Percent of Beneficiaries with Chronic Conditions

| Major Chronic Conditions | Number of Beneficiaries (County) | % of Beneficiaries (County) | Number of Beneficiaries (State) | % of Beneficiaries (State) |
|--|----------------------------------|-----------------------------|---------------------------------|----------------------------|
| 1. Hypertension | 13,973 | 13.13 | 949,018 | 16.26 |
| 2. Depression | 12,699 | 11.94* | 562,887 | 9.65 |
| 3. Diabetes | 7,260 | 6.82 | 562,637 | 9.64 |
| 4. Asthma | 6,668 | 6.27 | 383,754 | 6.58 |
| 5. Drug Abuse | 5,949 | 5.59* | 267,936 | 4.59 |
| 6. Chronic Stress and Anxiety Diagnoses | 4,786 | 4.5* | 205,298 | 3.52 |
| 7. Schizophrenia | 4368 | 4.11* | 188231 | 3.23 |
| 8. Attention Deficit / Hyperactivity Disorder | 2708 | 2.55* | 92534 | 1.59 |
| 9. Chronic Alcohol Abuse | 2479 | 2.33* | 102962 | 1.76 |
| 10. Chronic Mental Health Diagnoses | 2286 | 2.15* | 105662 | 1.81 |
| *Rate higher than NY State Data source: Health Data New York 2012 | | | | |

Table 9 describes the leading causes of ER Visits for Medicaid beneficiaries in Onondaga County, NY. The table includes both the number of beneficiaries with the condition and the number of visits per beneficiary with that condition. It is striking that behavioral health conditions comprise 81 percent of the 10 leading causes of ER visits. Drug abuse and chronic alcohol abuse alone account for over half (51 percent) of the 10 leading causes of ER visits. In all 10 leading causes of ER visits, Onondaga beneficiaries with each condition had more ER visits per beneficiary than all state beneficiaries with the same condition. While the first three conditions listed in the table account for the highest visit rate, the number of beneficiaries with the condition is quite low. It is the conditions of drug abuse, bi-polar disorder, chronic alcohol abuse, and chronic mental health diagnoses that are of most concern in terms of volume given the number of beneficiaries with such conditions as well as the high number of visits per beneficiary. Key informants' opinions support the data indicating that persons suffering with behavioral health conditions, especially mental illness and alcohol abuse, use the emergency room often. Key informants attributed this to the lack of appropriate settings of care for this population, including a lack of crisis care facilities and mid-level facilities that have behavioral health expertise but are not as restrictive as detox centers.

Table 9: Leading Causes of ER Visits for Medicaid Beneficiaries

| Leading Causes Ranked by Rate | Number of Beneficiaries with Condition (County) | Visits per Beneficiary with Condition (County) | Number of Beneficiaries with Condition (State) | Visits per Beneficiary with Condition (State) |
|---|---|--|--|---|
| 1. Major Personality Disorders | 118 | 5.5* | 5,861 | 2.93 |
| 2. History of Myocardial Infarction | 209 | 3.06* | 10,238 | 1.26 |
| 3. Post Traumatic Stress Disorder | 519 | 3.04* | 17,265 | 2.07 |
| 4. Drug Abuse | 3,656 | 2.93* | 160,938 | 2.5 |
| 5. Bi-Polar Disorder | 1,133 | 2.86* | 51,292 | 2.1 |
| 6. Chronic Alcohol Abuse | 1,492 | 2.6* | 61,089 | 2.52 |
| 7. Chronic Mental Health Diagnoses | 1,161 | 2.53* | 47,819 | 1.66 |
| 8. Atrial Fibrillation, Cardiac Dysrhythmia, and Conduction Disorders | 874 | 2.41* | 40,368 | 1.21 |
| 9. Chronic Bronchitis and other Chronic Pulmonary Diagnoses | 936 | 2.22* | 30,896 | 1.32 |
| 10. Angina and Ischemic Heart Disease | 303 | 2.18* | 30,151 | 0.96 |

*Rate higher than NY State
Data source: Healthy Data New York 2012

Table 10 describes the leading causes of inpatient admissions for Medicaid beneficiaries in Onondaga County, NY. The table includes both the number of beneficiaries with the condition and the number of admissions per beneficiary with the condition. While the first three conditions listed in the table account for the highest visit rate, the number of beneficiaries with the condition is quite low. It is the conditions of drug abuse; chronic alcohol abuse; atrial fibrillation, cardiac dysrhythmia, and conduction disorders; and cardiomyopathy, congestive heart failure and other cardiovascular major diagnoses that are of most concern in terms of volume given the number of beneficiaries with such conditions as well as the number of visits per beneficiary.

Table 10: Leading Causes of Inpatient Admissions

| Leading Causes Ranked by Rate | Number of Beneficiaries with Condition (County) | Admissions per Beneficiary with Condition (County) | Number of Beneficiaries with Condition (State) | Admissions per Beneficiary with Condition (State) |
|--|---|--|--|---|
| 1. Major Personality Disorders | 98 | 2.18* | 6,851 | 2.14 |
| 2. History of Myocardial Infarction | 309 | 1.47 | 22,442 | 1.87 |
| 3. History of Percutaneous Transluminal Coronary Angioplasty | 94 | 1.42 | 14,429 | 1.79 |
| 4. Atrial Fibrillation, Cardiac Dysrhythmia, and Conduction Disorders | 1,072 | 1.34 | 73,859 | 1.38 |
| 5. Cardiomyopathy, Congestive Heart Failure and Other Cardiovascular Major Diagnoses | 1,011 | 1.32 | 84,687 | 1.37 |
| 6. Drug Abuse | 3,194 | 1.3 | 155,363 | 1.87 |
| 7. Congenital and Cardiac Defects/Anomalies | 162 | 1.27* | 17,159 | 1.14 |
| 8. Chronic Alcohol Abuse | 1,313 | 1.19 | 65,535 | 1.86 |
| 9. Angina and Ischemic Heart Disease | 322 | 1.15* | 45,690 | 1.13 |
| 10. Chronic Bronchitis and other Chronic Pulmonary Diagnoses | 902 | 1.13* | 32,592 | 1.02 |
| *Rate higher than NY State Data source: Healthy Data New York 2012 | | | | |

Prevention Quality Indicators

Prevention quality indicators (PQIs; adults) and pediatric quality indicators (PDIs; children) reflect quality of care for “ambulatory care sensitive conditions,” and can suggest opportunities for improving outpatient care and prevention to avoid the need for hospitalization, and complications or progression of diseases.

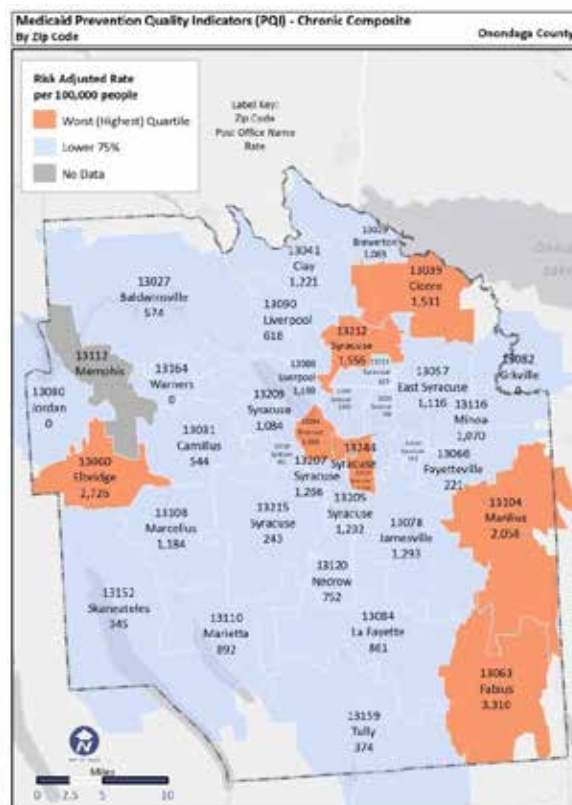
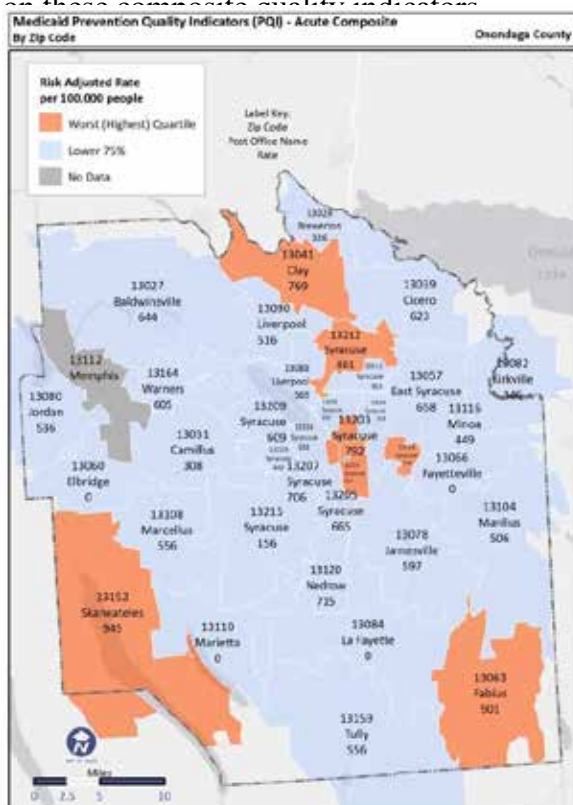
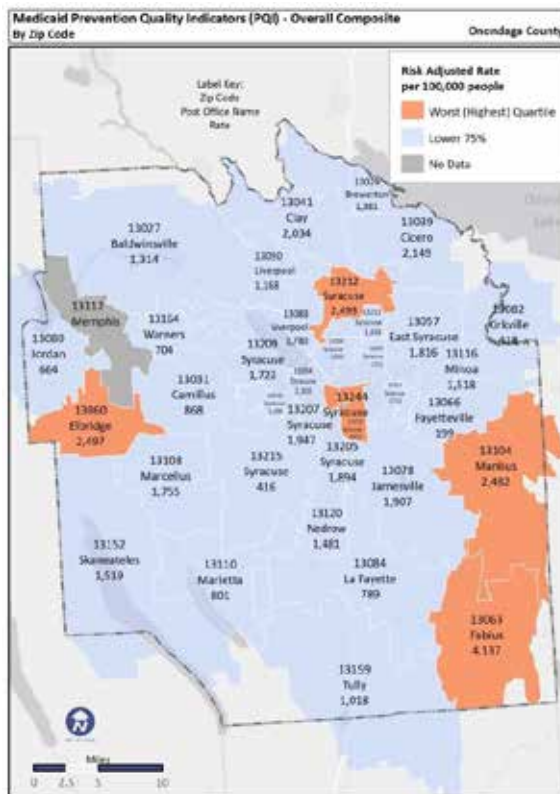
Total PQI admissions are 1,187, of which 535 of which are dual PQI admits and 652 non-dual PQI admits. For both the dual and non-dual admits, the ZIP codes with the highest PQI admissions are 13208, 13204, 13205, 13203, 13207, 13210, all of which are located in Syracuse.

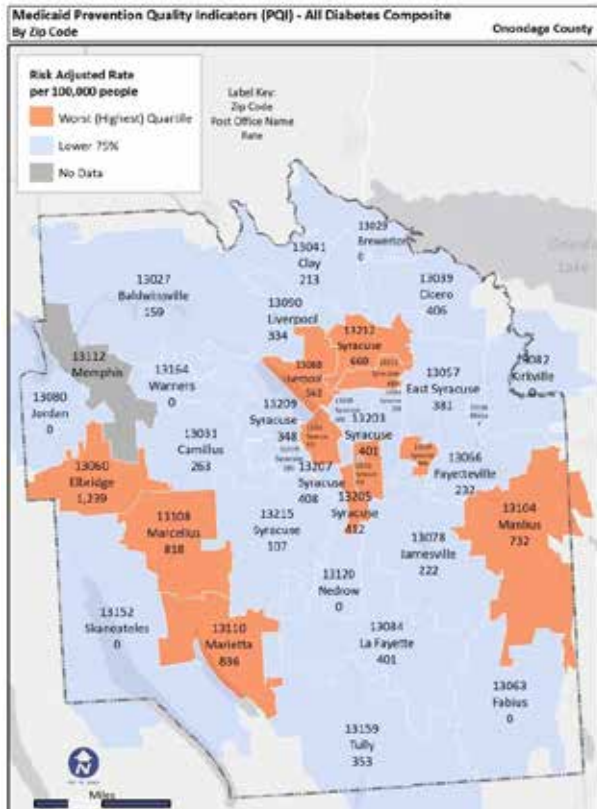
Table 11 lists the prevention quality indicators for Onondaga County, NY. The table includes both PQIs and PDIs. Comparisons of both the PQI and PDI to Upstate NY indicators are also provided in the table. The PQIs that are higher than Upstate NY include: diabetes short-term complications, diabetes long-term complications, heart failure, dehydration, bacterial pneumonia, urinary tract infection and lower extremity amputation (among those with diabetes). The composite PQIs higher than Upstate NY include the overall, acute, and chronic composites, as

well as the circulatory and diabetes composites. Diabetes with short-term complications is the only PDI that is higher than Upstate NY. There are no composite PDIs higher than Upstate NY.

| Table 11: Prevention Quality Indicators (2012) | | |
|---|-----------------|-------------------------|
| Metric | Onondaga | Upstate New York |
| Medicaid Inpatient Prevention Quality Indicators (PQIs) | | |
| Diabetes Short-term Complications | 158.7* | 128 |
| Diabetes Long-term Complications | 208.51* | 182 |
| Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults | 779.56 | 800 |
| Hypertension | 72.14 | 80 |
| Heart Failure | 332.01* | 264 |
| Dehydration | 127.91* | 110 |
| Bacterial Pneumonia | 322.62* | 276 |
| Urinary Tract Infection | 203.44* | 179 |
| Angina without Procedure | 12.4 | 22 |
| Uncontrolled Diabetes | 31.29 | 42 |
| Asthma in Younger Adults | 49.55 | 110 |
| Lower Extremity Amputation (among those with Diabetes) | 22.86* | 18 |
| Medicaid Inpatient PQI – Composite Measures | | |
| Overall Composite PQI | 1933.49* | 1783 |
| Acute Composite PQI | 654.92* | 566 |
| Chronic Composite PQI | 1272.35* | 1213 |
| Diabetes Composite | 415.1* | 364 |
| Circulatory Composite | 419.42* | 366 |
| Respiratory Composite | 436.9 | 481 |
| Medicaid Inpatient Pediatric Quality Indicators (PDIs) | | |
| Asthma | 106.02 | 320.6 |
| Diabetes Short-term Complications | 44.39* | 32.51 |
| Gastroenteritis | 72.54 | 119.64 |
| Urinary Tract Infection | 34.65 | 47.64 |
| Medicaid Inpatient PDI – Composite Measures | | |
| Overall Composite PQI | 149.81 | 322.83 |
| Acute Composite PQI | 55.46 | 74.51 |
| Chronic Composite PQI | 96.98 | 248.32 |
| *Rate higher than Upstate NY. Note: Rate is risk-adjusted rate per 100,000 admissions. Data sources: Health Data NY 2012 (county data); DSRIP Performance Chartbooks 2011-2012 (Upstate NY data) | | |

The maps below highlight Zip Codes in the county with high PQI composite scores, which are an indication of high rates of potentially avoidable hospitalizations. The first map is of the composite PQI indicator, which includes admissions for one of the following conditions: diabetes with short-term and long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure, angina without a cardiac procedure, dehydration, bacterial pneumonia, or urinary tract infection (UTI). The other maps reflect county performance on composite indicators for acute (dehydration, bacterial pneumonia, or UTI) and chronic (diabetes with short-term or long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure, or angina without a cardiac procedure) illnesses. Across the board, Syracuse (13212), Elbridge (13060) Fabius (13063) perform poorly on these composite quality indicators.



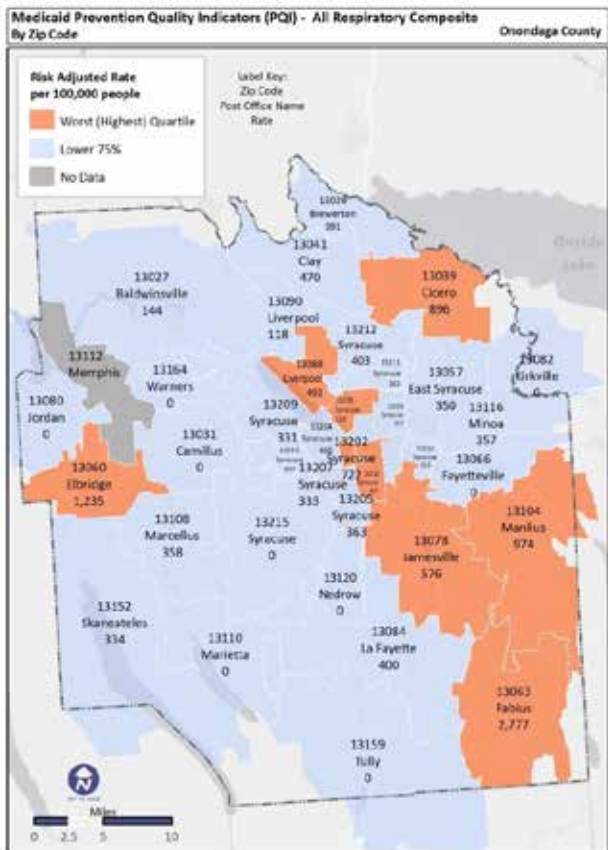
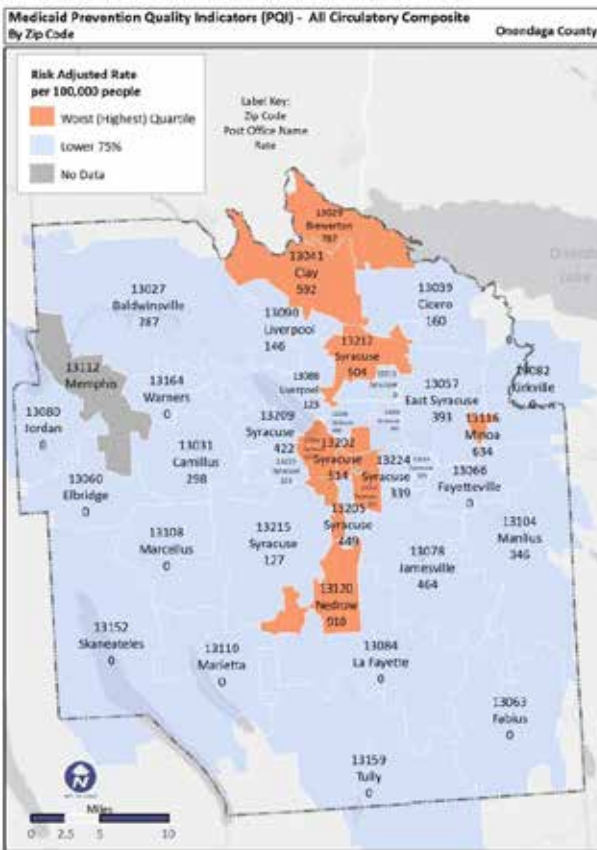


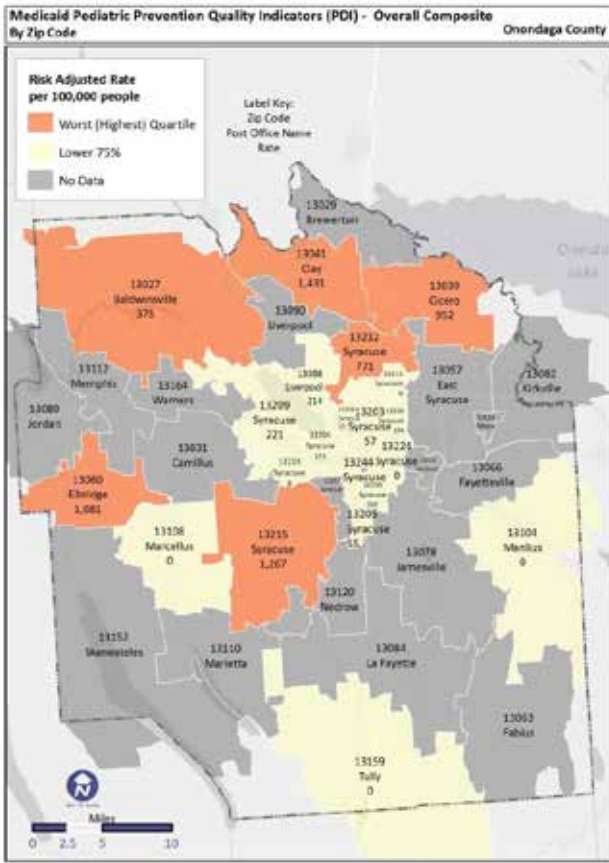
The second set of maps highlights county performance on composite measures for diabetes, respiratory disease, and circulatory disease.

ZIP Codes with the worst performance on diabetes measures include: Elbridge (13060), Marietta (13110), Marcellus (13108), Manlius (13104), and Syracuse (13212).

Circulatory disease is more concentrated in Nedrow (13120), Brewerton (13029), Clay (13041), and Minoa (13116). Several Syracuse ZIP codes also performed in the worst quartile.

ZIP codes with the highest rates of respiratory illness include Fabius (13618), Elbridge (13060), Manlius (13104), and Cicero (13039).

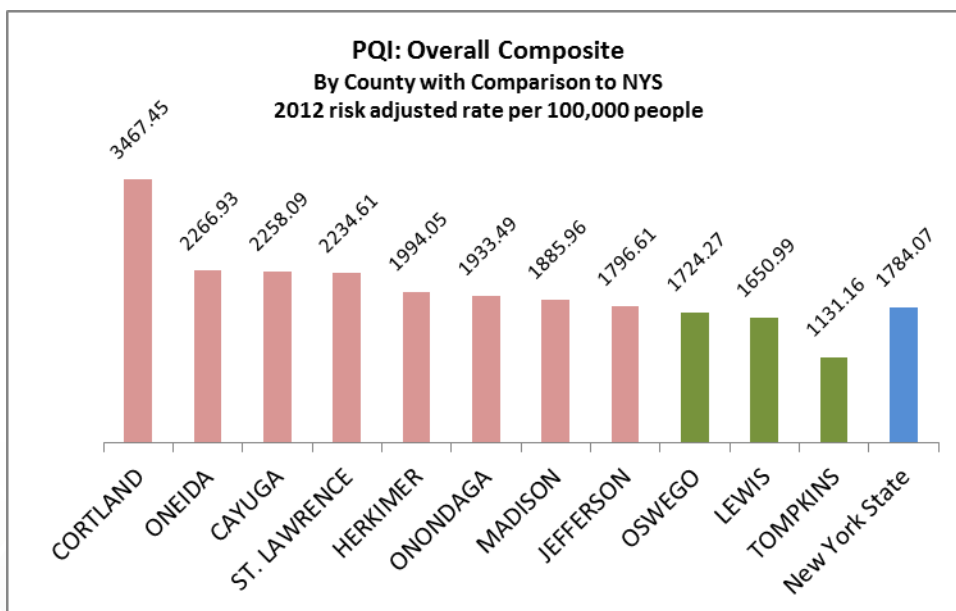




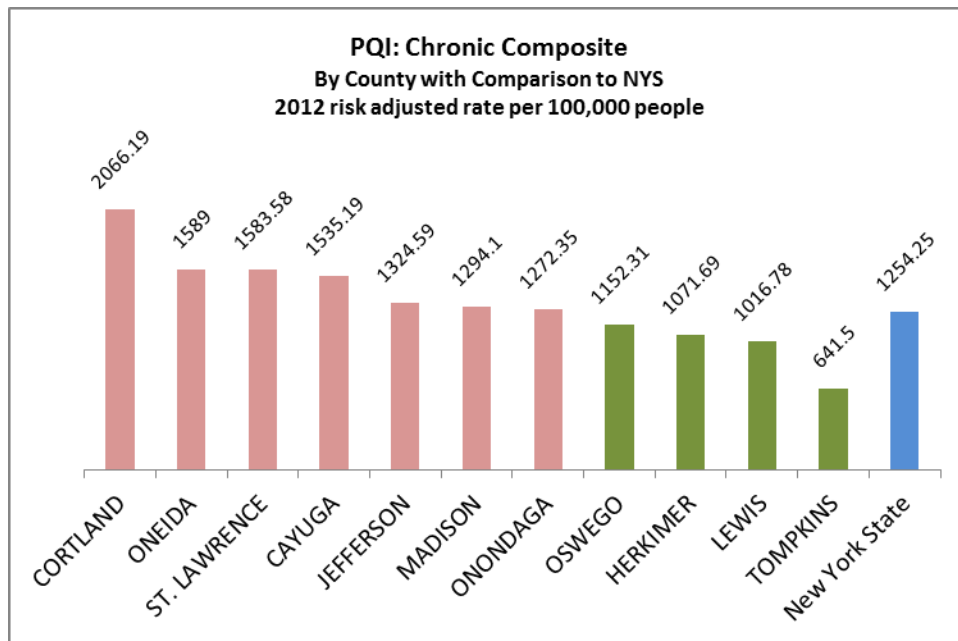
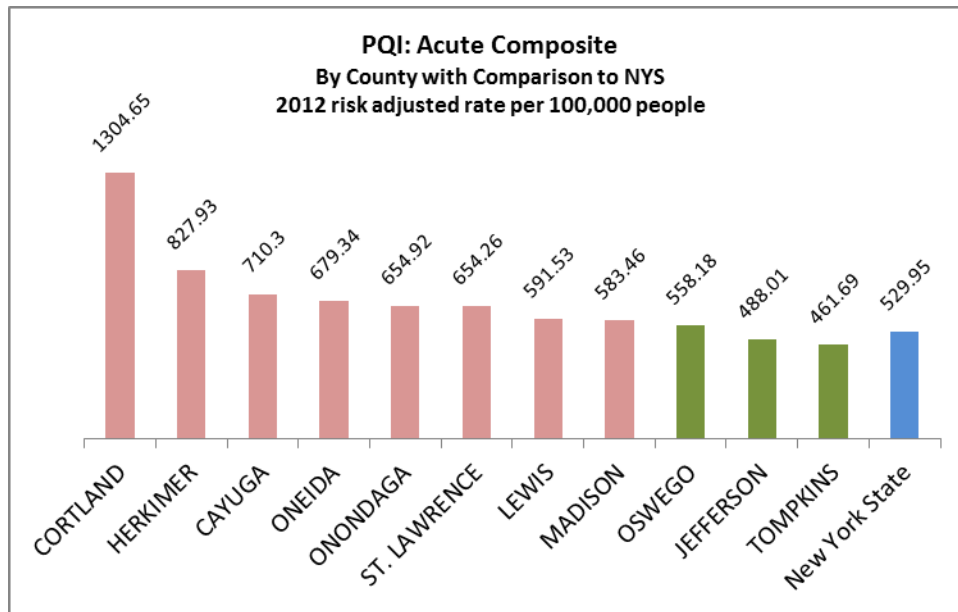
The final map is of the overall composite PDI measures. This measure includes admissions for one of the following conditions, among pediatric patients age 6-17 years: asthma, diabetes with short-term complications, gastroenteritis, or urinary tract infection.

Clay (13041), Syracuse (13215 and 13212), Elbridge (13060), Cicero (13039), and Baldwinsville (13027) have worse performance on this pediatric indicator, compared to other areas in the county.

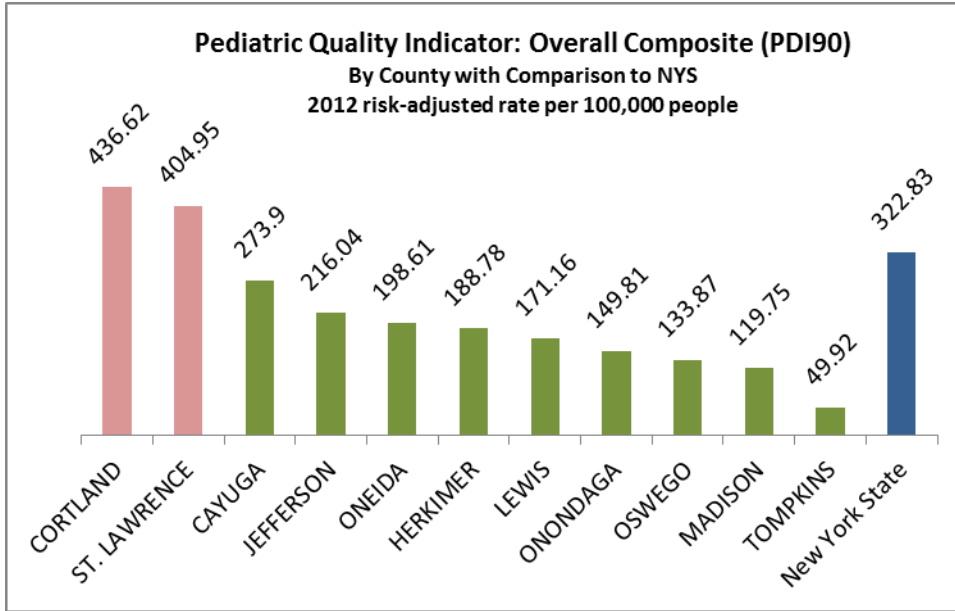
The following charts compare Onondaga County to ten other nearby counties. Onondaga performs similarly to nearby counties, but worse than the state average on overall PQI composite score (1,933 per 100,000 compared to 1,784 for the state).



Although Onondaga performs better on the chronic composite PQI indicator than acute, both indicators are worse than NY State and several nearby counties.



Compared to nearby counties, Onondaga performs relatively better on the composite PDI (Pediatric) indicator – with a rate that is lower than seven of ten nearby counties, and also performed better on the PDI composite indicator than the state average (149.81 in Onondaga vs. 322.83 at the state level).



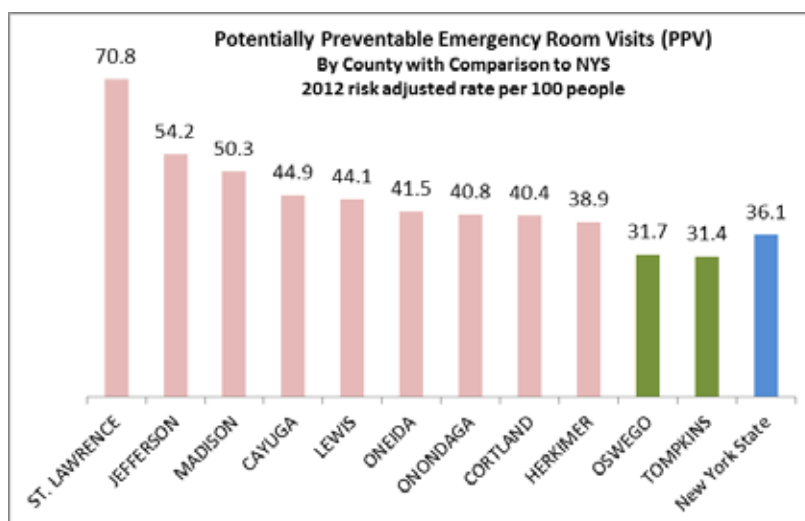
Potentially Preventable ER Visits (PPV) and Readmissions (PPR)

Preventable ER visits and readmissions among Medicaid beneficiaries are central measures of concern for New York’s DSRIP projects.

Four ZIP codes represent high rates of potentially preventable ER visits for Medicaid beneficiaries, all within Syracuse: 13202, 13204, 13203, and 13208, ranging from 47 to 59 compared to a county rate of 39 and a statewide rate of 36 per 100 people. For the three hospitals for which data was reported, PPR ranged from 5.67 to 6.82, compared to a statewide average of 6.73.

| Rank | Hospital | Rate of PPR |
|-----------------------------------|-------------------------------------|-------------|
| 1. | University Hospital @ Syracuse | 6.82* |
| 2. | St. Joseph Hospital Health Syracuse | 6.54 |
| 3. | Crouse Hospital | 5.67 |
| Statewide Rate | | 6.73 |
| *Rate higher than statewide | | |
| Data source: Health Data NY 2012. | | |

The graph below compares Onondaga County to other counties in the Upstate NY area. Compared to ten nearby counties, Onondaga County performs better than six counties, with a rate of 40.8 potentially preventable emergency room visits per 100 people in the County. This compares unfavorably with the state average of 36.1 visits per 100 people.



Within Onondaga, there are a number of ZIP codes with PPV rates higher than the county rate. These ZIP codes include: 13235, 13290, 13218, 13137, 13201, 13203, 13208, 13202, 13204.

Onondaga County Health Care and Community Resources

Onondaga County has many medical service providers, behavioral health providers, and community-based resources who often collaborate in order to address the health care needs of Onondaga County residents. However, the Health Resources and Services Administration (HRSA) has given Onondaga County a number of Health Professional Shortage Area (HPSA) designations, which are all located in Syracuse. For primary care, HRSA has designated the Onondaga Nation of New York, Syracuse Community Health Center service area, the Medicaid Eligible population for Syracuse, and dozens of census tracts as HPSAs. For both mental health and dental care, HRSA has designated the city of Syracuse, the Medicaid eligible population in Syracuse, and Syracuse Community Health Center service area as HPSAs; additionally, Hutchings Psychiatric Center service area is also a HPSA.

HRSA's Medically Underserved Area/Population (MUA/P) designation applies to service areas in which populations are underserved, based on ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. HRSA has identified 10 census tracts in Onondaga County as a MUA/P, and geographically, they are all located in Syracuse, with the exception of one in Nedrow, which is contiguous to and southwest of Syracuse.

| Table 13: Designated Shortage Areas | | |
|-------------------------------------|---------------|------------------------|
| | | Number of Designations |
| HPSA | Primary Care | 36 |
| | Dental | 3 |
| | Mental Health | 4 |
| | TOTAL | 43 |
| MUA/P | | 10 |
| Data source: HRSA 8/29/2014 | | |

There are six hospitals within Onondaga County: Upstate University Hospital Community Campus, Crouse Hospital, St. Joseph’s Hospital Health Center, Upstate University Hospital (including Golisano Children’s Hospital), Syracuse VA Medical Center, and Hutchings State Psychiatric Center. A full profile of primary care providers does not exist, although in 2010, physicians per 100,000 population in Onondaga compared favorably to NY state and Central NY (see the Onondaga County Community Health Assessment and Improvement Plan 2014-2017). However, geographic distribution was not known, nor the extent to which physicians accepted Medicaid-insured patients. The following maps illustrate where these primary care, dental, and mental health services are located. Medical service providers most densely populate the city of Syracuse, and stretch outwards as far as Minoa and Baldwinsville. Mental health providers are fewer in number, and span as far as Eastern Syracuse. The dental service providers in Onondaga are all located in Syracuse. Despite the number of service providers available in Syracuse, given the HPSA and MUA/P designations, it seems that there is still a major shortage of providers in the city.

A survey of existing resources was conducted to determine the nature of the safety net in Onondaga County. A total number of 57 individuals from Onondaga County responded to the 2014 Survey of PPS Partners. Those responses detailed the medical services providers, behavioral health service, and community-based resources available in the county as well as provider capacity to meet the needs of specific populations.

In the survey, providers were also asked about the capacity level of their services. Survey respondents generally reported being at or under capacity for their services. Among survey respondents, medical service providers tended to say that they were ‘under capacity’ for the services they provided (17) or ‘at capacity’ (12), with only 2 saying that they were ‘over capacity.’ Most behavioral health providers who responded to the survey said that they were ‘at capacity’ (9) or ‘under capacity’ (6), with only 1 saying that they were ‘over capacity.’ The community-based resource respondents did not report on capacity.

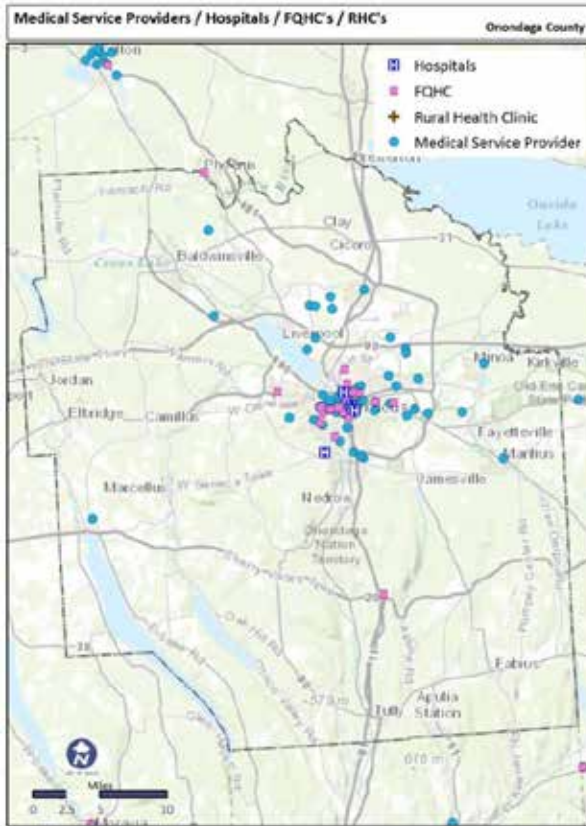
These survey responses on capacity are notable, because they contrast with key informant interviewees’ perceptions about the lack of services available. For instance, interviewees reported a lack of behavioral health and dental providers, but more than a third of behavioral health providers in the survey responded as being ‘under capacity,’ and the two providers of

dental services both reported being ‘under capacity.’ Although it is probable that the survey responses regarding capacity are not representative of Onondaga service providers more generally, it is clear that some providers believe that they could take on more patients. Providers were also asked about general capacity rather than capacity specific to Medicaid patients, which may limit the application of these findings to the Medicaid population. However, these findings may suggest that there is an opportunity for improving integration of services, as well as referral and supportive services, with providers that are able to take on more patients.

Understanding a community’s assets is a critical step in identifying what strategies will be most effective to improve community health. There are a number of resources in Onondaga County outlined in the table below that have been identified as leading or key providers in the County. These resources include three hospitals, and several primary care safety net providers, behavioral health providers, dental, and post-acute providers in the health care sector. Additionally, there are a number of community service providers.

| Table 14: Key Onondaga County Providers | |
|---|---|
| Category | Key Providers |
| Hospital | Crouse Hospital St. Joseph’s Hospital Upstate University Hospital |
| Primary Care Safety Net | Syracuse Community Health Center |
| Behavioral Health | Hillside Children’s Center Liberty Resources Onondaga County Department of Mental Hygiene Prevention Network |
| Dental | Syracuse Community Health Center |
| Post-acute | Franciscan Health Support Services, LLC Hospice of Central New York James Square Health and Rehabilitation Center Loretto Health & Rehabilitation Center Onondaga County Department of Adult and Long Term Care Services St. Camillus Residential Health Care Facility VNA Homecare |
| Community Health Providers | ARC of Onondaga Arise, Inc. Aurora of Central New York Enable Liberty Resources Onondaga County Health Department REACH CNY, Inc. The Salvation Army, Syracuse Area Services |
| Data source: 2014 Survey of Health Care and Community Resources; Key Informant Interviews | |

Additionally, a map of safety net providers funded by the Health Resources and Services Administration (HRSA) and mapped using their Uniform Data System (UDS) is included in Appendix B.



Key Health/Health Care Challenges

Understanding the health and health care status of Onondaga's residents is an important prerequisite to developing strategies to address their unmet needs. This section contextualizes these findings within major underlying drivers of avoidable hospital use.

Key Underlying Challenges in Onondaga County

The data clearly show that **substance abuse** and **mental health disorders** are key drivers of ER use and inpatient admissions. Within this grouping, **drug abuse** and **alcohol abuse**, particularly, account for a majority of ER visits and inpatient admissions, a finding endorsed by multiple key informants. Onondaga County also has higher rates of **chronic disease PQIs** than Upstate NY, most notably for most diabetic conditions as well as the **diabetes** composite PQI measure. However, with the exception of the respiratory composite measure, all of Onondaga's **PQI composite measures (overall, acute, chronic, and circulatory)** are of concern because they are worse than rates in Upstate NY. For children, Onondaga's **PDI diabetes short term complications rate** is of concern and is higher than the rate in Upstate NY. It is clear that residents in **Syracuse** are among the highest risk population, based on ZIP code analysis, particularly the ZIP codes of 13210, 13204, 13205, 13212, and 13208. The vast majority of the county's **minority populations** live in Syracuse, and the State's Prevention Agenda dashboard shows large inequities in health status, including the premature death rate, for minority populations compared to White populations. Syracuse is also home to a population of approximately **6,000 refugees** from Southeast Asia and the Middle East. Although there are no statistics related to health care access and utilization, consideration must be provided in terms of culture and language sensitivities and overall challenges this population may have accessing care. Additional areas of concern outside of Syracuse are **Memphis** (13112) and **Elbridge** (13061) based primarily on their PQI scores. Areas of concern for children's health are different than for adult indicators. Based on the PDI composite score, Syracuse (13212 and 13215), Elbridge (13061), Clay (13041), Cicero (13039), and Baldwinsville (13027) were in the highest quartile for that indicator.

In addition to the quantitative data, rich information was gleaned from interviews with health care and community based organization leaders in Onondaga. They identified several underlying challenges that contribute to avoidable readmissions among the Medicaid population. They are:

Lack of post-discharge in-home support

- **difficult to stay connected** with patients due to changing addresses and phone numbers
- interviewees felt that unnecessary readmissions could be decreased through offering **more in-home support**, such as community health workers, home health aides, care coordinators, navigators, and telemonitoring
- there is a **lack of funding/reimbursement** for this type of support

Lack of housing generally and supportive housing particularly

- **lack of decent affordable housing**, which serves as a **barrier to discharge** from hospital, rehabs, and long-term care facilities
- **lack of supportive housing** for persons with mental health, substance abuse, physical disabilities, and frail elderly
- housing services' **waiting lists full**

Lack of integration between medical care and behavioral health systems

- **lack of awareness within medical community** of behavioral health resources
- **lack of assessment/screening** for behavioral health issues, including SBIRT specifically
- **lack of information sharing** across settings; behavioral health providers behind on electronic medical records due to lack of funding
- sharp **increase in opiate abuse** but few resources to manage it

Lack of behavioral health and dental providers and services

- **methadone treatment** program has six to eight month **wait time**; Crouse is only hospital to offer inpatient detox in the area
- **shortage of child & adult psychiatrists**
- **few dental providers** willing to take Medicaid-insured patients and long waiting list for dental services for providers who do accept Medicaid
- existing **regulations decrease opportunities for providing dental services** in the community

Access

- history and/or culture of using **emergency department for non-emergency care**
- **transportation** a barrier to getting to services and following through on care
- **language** - on site interpreter services inadequate due to number of languages and dialects (including the refugee population); refugee population is a vulnerable group in this way; phone translation is available but less effective

Comparison to Past Needs Assessments

The recent *Onondaga County Community Health Assessment and Improvement Plan, 2014-2017* (CHA/CHIP)² examined important health indicators, health challenges, and resources, and outlined priorities and strategies to improve the health of Onondaga County. The previous needs assessment identified improving health status and health disparities, preventing chronic disease, promoting a healthy and safe environment, promoting healthy women, infants, and children, promoting mental health and preventing substance abuse, and preventing HIV/STDs, vaccine preventable diseases, and health care associated infections as the major areas of health concerns in Onondaga County. To address these concerns, there is large and strong network of partners

² Morrow CB and Shultz R. The Onondaga County Community Health Assessment and Improvement Plan 2014-2017. Onondaga County Health Department.

described in the CHA/CHIP that is collaborating and will continue to collaborate on these efforts.

The objective of the current needs assessment differs from that of Onondaga County Health Department's in that it is focused on reducing avoidable hospitalizations among the Medicaid population, rather than improving health outcomes for the County's population at large. Similar to the past needs assessment, the current one identifies the premature death rate, health inequities (White vs. minority populations), chronic disease prevention, and mental health care as major health concerns for Onondaga overall. However, Onondaga's Medicaid population faces particular challenges in the areas of substance abuse, PQIs, and diabetes PDI. The difficulty of addressing these challenges among Medicaid enrollees is compounded by lack of integration between behavioral health and medical services and lack of support in the community, including housing, transportation, care coordination, and home health care, which was not highlighted in the previous needs assessment. In order to improve the health and reduce readmissions among Onondaga's Medicaid population, the current needs assessment discusses strategic areas of focus in the following section.

St. Joseph's Hospital Health Center
301 Prospect Ave
Syracuse, NY 13203

This document can be accessed at:
<http://www.sjhsyr.org/news-media-center/publications>

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