New Jersey Rural Health Needs Assessment
Executive Summary

Prepared by: Institute for Families**-**School of Social Work**;** Rutgers, The State University of New Jersey

Principal Investigator: Donna Van Alst, PhD **Project Director:** Theresa Fox, MSW

Project Coordinator: Robert Carney, MPH

Research Assistants: Alicia Guajardo, Stephanie Lupinacci, Joseph Gallo, Ji-Hyun Kim, Philip Gallo, German Hidalgo, Delmy Perez, Gigi Ager, Whitney Wantong

OVERVIEW

The New Jersey Department of Health, Office of Primary Care and Rural Health was charged with assessing the healthcare needs of the state's rural residents. As part of our effort, the Office of Rural Health contracted with the Institute for Families at the Rutgers School of Social Work to analyze archival data and to collect and analyze primary data to assess these needs.

To further describe the areas of need illustrated by the county and municipal level statistical data, focus groups with NJ rural health and healthcare service providers were conducted throughout the state. Providers consisted of staff at federally-qualified health centers, local public health departments, prevention coalitions, and various community service providers. A sample of 17 individuals from seven organizations located throughout the state participated. Findings were analyzed using standard content analysis procedures and reported by region (northern, central and southern).

In exploring the health needs of rural residents, interviews were conducted with rural residents throughout the state. The survey that was administered was adapted from the Center for Rural Health Works Community Needs Assessment. A sample of 287 individuals from northern, central and southern municipalities responded to a brief healthcare survey that describes use and accessibility. Respondents were given the option of filling out the survey independently or having the survey read to them. Surveys were administered in Spanish when needed. Basic analyses included frequencies and means. Analysis of variance (ANOVA) was conducted to explore regional differences, as well as differences related to insurance type. When statistically-significant differences were identified, post hoc tests were computed using the Dunnet's C procedure. This test is designed to compare the mean for each group to the mean for other groups (in this case either based on region or insurance type).

ASSESSMENT

New Jersey has a population of over 8 million residents of which nine percent of the state's population live in rural areas. The Federal definitions of "rural" do not adequately describe rural New Jersey. All the state's counties are contained within Metropolitan Statistical Areas. The

Rural Urban Commuting Area (RUCA) codes include some smaller boroughs and villages; however, the townships with the lowest population density revert to the RUCA code of their county.[1] The codes do not recognize that all areas in NJ are incorporated into municipalities. Thus, the NJSORH defines rural counties and rural communities as those having a population density of fewer than 500 people per square mile. This agrees with the 2010 Census definition of areas outside urban areas or urban clusters. Seven of the twenty-one counties meet this density definition of rural and are in the northwestern and southern sections of the state. These counties are: Sussex, Warren, Hunterdon, Cumberland, Salem, Atlantic and Cape May Counties. One hundred twenty-three municipalities have a population density of fewer than 500 people per square mile, 12 have a population density of fewer than 100 people per square mile and 12 have a density of fewer than 50 people per square mile.

In analyzing both archival data and primary data of the state's rural residents; analysis at the county level, all counties with population densities lower than the state's average level (1134.4 people per square mile) were considered rural, except for Monmouth which was selected as rural due to its high number of municipalities with low population densities and remote locations (See Table 1). Therefore, many counties may not be considered rural when compared nationally, but for New Jersey they are rural compared to more highly urbanized areas of the State.

RURAL NEW JERSEY DEMOGRAPHICS[2]

Population

New Jersey overall is a densely-populated state with many rural, non-urbanized areas. The least population dense counties are Salem, Sussex, Hunterdon and Warren (See Table 1).

Table 1. Population Statistics of Rural Counties in New Jersey

Population Demographics	Population	Population change (2000-2010) %	Population Density (Per Square Mile)
USA	316,128,839	9.7%	34.1
New Jersey	8,899,339	4.49%	1134.4
Rural Counties			
Atlantic	275,862	0.32%	495.6
Burlington	450,838	0.58%	565.2
Cape May	95,897	-1%	383
Cumberland	157,332	0.56%	326.2
Gloucester	290,265	0.45%	899.3
Hunterdon	126,250	-1.03%	297
Monmouth	629,627	-0.16%	1342.6
Morris	499,397	1.15%	1082.2
Ocean	582,414	0.67%	923.2
Salem	65,166	-0.47%	198.2
Sussex	145,992	-1.25%	284.1
Warren	107,379	-0.96%	301.6

Health Status

Age: The rural counties in New Jersey have higher percentages of the populations above the age of 65, when compared to the state average (See Table 2). Similarly, rural New Jersey Counties have more households with people over 65 years of age than the rest of the state (41.4% in Cape May) and higher rates of persons' age 65 and living alone (particularly 17.8% in Ocean County). Less than twenty percent (20%) of households in rural New Jersey have children under the age of 18 years as well.

Table 2. Age of Rural New Jersey Counties

Age Demographics	People Age < 18	People Age > 65	Households with children Age < 18	Households with people 65 years +	Households with householder alone and over 65 years
New Jersey	23.5%	13.5%	50.1%	27.2%	10.11%
Atlantic	22.40%	15.4%	20.5%	30.7%	11.2%
Burlington	22.10%	15.2%	19.2%	29.8%	10.5%
Cape May	18.00%	23.7%	13%	41.4%	16.6%
Cumberland	23.70%	13.3%	19.6%	28.5%	10.1%
Gloucester	23.30%	13.7%	16.9%	26.9%	8.3%
Hunterdon	21.30%	15.2%	7.4%	28.8%	8.8%
Monmouth	22.60%	15.2%	14.7%	29.8%	10.6%
Morris	22.60%	15.2%	17.3%	28.6%	10.2%
Ocean	23.50%	21.8%	23.9%	41.2%	17.8%
Salem	22.60%	16.1%	25.1%	30%	11.3%
Sussex	22%	14.1%	19.1%	26.3%	9.4%
Warren	12.00%	15.6%	19.9%	27.9%	9.4 %

New Jersey shares population health challenges with many other rural communities in the U.S. However, rural communities in New Jersey differ in demographic composition and present some unique health issues. When examining chronic disease indicators by county, local differences were observed in rural counties. The State's heart disease rate is 172.1 per 100,000 residents. However, heart disease death rates in Cape May (413.2), Cumberland (407.9), Atlantic (404), Ocean (399.3), Sussex (369.2), Salem (383.9), Gloucester (374.7), and Burlington (359.4) were higher than the state average. Cancer incidence rates were above the state average in Cape May (881.5), Ocean (774), Salem (639.1), Monmouth (626.8) and Burlington (626.7). All of these counties exceeded the national average (171.6) as well.

Compared to state rates, diabetes prevalence was higher in Cumberland (11.8%), Salem (11.6%), Cape May (11.2%), Ocean (11.2%), Gloucester (10.7%), Atlantic (10.1%), Burlington (9.7%), Warren (9.1%), Monmouth (8.7%), and Sussex (8.5%).

State asthma prevalence rates and rates (per 100,000 residents) of hospitalization related asthma were 8.8 and 169.02 respectively. Both asthma and hospitalization rates were higher in Atlantic (11.3%, 19.6), Cumberland (13.9%, 22.2). Monmouth (9.1%), Salem (12.8%), Sussex (9.4%) and Warren (9.9%) had higher rates of asthma prevalence only. Salem had the highest asthma prevalence and Cumberland had the highest rates of asthma

hospitalization. Regarding the percent of adults that were overweight or obese, Cumberland (33.7%), Salem (33.5%), Gloucester (28.8%), Burlington (27.7%), Atlantic (27.5%), and Cape May (26.5%) had prevalence rates above the state level. In addition, Cumberland and Salem had rates that exceeded the national level.

Chronic Disease Summary[3]

Generally, rural counties in New Jersey have higher chronic disease indicators than the state overall and the average of non-rural counties. Rural New Jersey has higher rates of heart disease deaths, cancer incidence, diabetes prevalence, asthma prevalence, and prevalence of overweight and obese adults. Cancer rates in rural NJ are notably higher than the state rate and the national rate. Despite asthma being more prevalent in rural areas, hospitalization rates for asthma are lower as compared to non-rural counties. This may indicate an access issue or disparity in the severity of asthma cases.

Chronic disease appears to be more prevalent and at higher rates in rural areas than the rest of New Jersey. Counties of Concern are:

Higher Heart Disease Death Rates

- Atlantic, Burlington, Cape May, Cumberland, Gloucester, Ocean, Salem, and Sussex

Higher Cancer Incidence Rates

- Burlington, Cape May, Monmouth, Ocean, and Salem

Higher Diabetes Prevalence

- Atlantic, Burlington, Cape May, Cumberland, Gloucester, Monmouth, Morris, Ocean, Salem, Sussex, and Warren

Higher Asthma Prevalence

- Atlantic, Cumberland, Monmouth, Salem, Sussex, and Warren

Higher Asthma Hospitalization

- Atlantic and Cumberland

More Overweight/Obese Adults

- Atlantic, Burlington, Cape May, Cumberland, Gloucester, and Salem

An analysis of the Behavioral Risk Factor Surveillance System (BRFSS) survey revealed that New Jersey rural residents have higher incomes than other New Jersey's residents and the national income average and the number of residents living in poverty was significantly lower. Rural New Jersey also has a lower unemployment rate than both non-rural New Jersey and the national average. Rural New Jersey residents have longer average commuting times to work than the rest of New Jersey and the United States. These demographic differences when compared to national demographic trends in rural communities should be taken into consideration when adopting and implementing rural health intervention models.

The Office of Primary Care and Rural Health collected health trend data from Federally Qualified Health Centers (FQHC's) which serve the southern and northwestern regions of the state. Based on SFY 2015 data from 8 FQHCs serving Atlantic, Burlington, Cape May, Cumberland, Monmouth, Morris, Ocean and Salem counties, there were 11,838 diabetes patients, 21,534 hypertension patients and 7,449 asthma patients. Based on information from the Northeast Region Migrant Health Profile-2011, it's evident that the most frequent diagnostic health problems for NJ farm workers are: hypertension, mental health, diabetes, late entry to prenatal care and dental problems.[4] This is further compounded by access to care (e.g. transportation, fear) and provider care issues (e.g. low Medicaid reimbursement). This is truly a concern for the Federally Qualified Health Centers (FQHC's) serving these areas.

This rural health assessment revealed that the health issues of rural New Jersey related to maternal and child health involved alcohol and drug use, domestic violence and mental health concerns. Rural New Jersey residents reported lower rates of having late to no prenatal care, though they report higher instances of using tobacco, drugs and alcohol during pregnancy than non-rural New Jersey. Based on the latest data available, rates of domestic violence related arrests in rural New Jersey increased 2.8% from 2007 to 2008 while those same related arrests decreased on average throughout the state level. Rural residents reported significantly higher alcohol use than non-rural residents. Rural New Jersey residents also had higher rates of suicides among their total reported deaths.

The rural health assessment data showed that New Jersey overall is racially diverse with higher percentages of African American, Asian, Multi-racial and Hispanic individuals than the U.S. average. However, Atlantic, Burlington, Cumberland and Salem counties have a higher percentage of African American residents than the state average. Morris County has a higher percentage of Asian residents than the state average. Atlantic and Burlington counties have higher percentage of multi-racial residents than the state average. Atlantic and Cumberland counties have high percentage of Hispanic communities when compared to the state, with Cumberland having significantly more Hispanic residents than both the state and the national average (28.6% of the population). When mapping the location of residents whose primary language is Spanish, it is observed that the majority of these individuals are located in central and southern New Jersey around Cumberland and Atlantic counties. Washington Township in northern New Jersey also had a large percentage of residents with Spanish as their primary language.

Overall, this rural health assessment data shows that in rural New Jersey, where the burden of chronic diseases continues to rise and disproportionately impact racial and ethnic minorities and those with lower socio-economic status, initiatives must focus on systems change to promote optimal healthcare services to these at risk rural populations.

SUMMARY:

- Generally, rural New Jersey has lower population density
- Rural NJ residents are older, with more individuals above the age of 65.
- There are many solely Spanish-speaking communities scattered throughout the state
- Rural NJ has a lot of households headed by single females with children.
- Rural NJ has more people with a high school degree, and less people with college degrees.
- Rural NJ have higher rates of suicide, cancer, diabetes, asthma and obesity.

RECOMMENDATIONS:

- Increase the number of people in rural regions with health insurance;
- Enhance prevention and health education programming targeted to rural residents to address cultural devaluation of general health;
- Consider employing community health workers/navigators to help address insurance and prevention/health education issues;
- Investigate alternative transportation options for rural areas;
- Provide mobile services to the most isolated rural populations; and
- Increase access to specialist services including dental, obstetrics-gynecology, and mental health.

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