AUGUSTA
UNIVERSITY

Roosevelt Warm Springs Rehabilitation & Specialty Hospitals, Inc.

Community Health Needs Assessment

December 2019

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1. INTRODUCTION

As part of the Patient Protection and Affordable Care Act ruling in 2012, all hospitals are required to complete a Community Health Needs Assessment (CHNA) every three years. This is the second CHNA report completed by Roosevelt Warm Springs Rehabilitation & Specialty Hospitals, Inc. ("RWSH")

RWSH came under the leadership of AU Health System, Inc. ("AU Health") in 2014. With collaboration with AU Health – a leader in neurological and stroke care - and through its Joint Commission Accredited Stroke Program, the focus of the 2016 Community Health Needs Assessment project for RWSH was stroke care. The results from the 2016 CHNA are found within this CHNA. For the 2019 Community Health Needs Assessment, the focus is upon mental health disorders.

2. BACKGROUND

2.1 Organization Structure and History

Started in 1927 by Franklin Delano Roosevelt as a place of healing and rehabilitation for those with polio, the historic facility in Warm Springs, GA has evolved into today's RWSH, with an expanded mission to serve as a comprehensive rehabilitation center dedicated to service, technological advancement, program diversity and continuing education on behalf of persons with disabilities. Its mission is to empower individuals with disabilities to achieve personal independence and employment success. Additionally, it now serves as the umbrella for two hospitals: Roosevelt Warm Springs Rehabilitation Hospital and Roosevelt Warm Springs Long Term Acute Care Hospital.

In 2014, RWSH became an extension of Augusta University's health system ("AU Health"), which is located in Augusta, Georgia, is a cooperate organization of the Board of Regents of the University System of Georgia, and provides support to Augusta University through its Academic Medical Center and other clinical facilities throughout the state of Georgia . This not-for-profit enterprise has a nearly 200-year history of providing health professionals to both Georgia and nationally, and is known for health-related activities and contributions of its faculty, staff, and students to the uninsured and under-insured members of the community. Augusta University strives to be a top-tier university with a mission of providing leadership and excellence in teaching, discovery, clinical care, and service as a student-centered research university and academic health center. Augusta University embodies the application of research, education, and service to enhance the health of the community, producing tangible and measureable results. AU Health has both nationally and internationally recognized programs in areas such as neurological conditions and stroke, and it has been on the cutting edge of research in such areas as cancer, women's health, and preventative care.

With the combined efforts of AU Health and of RWSH, the mission of RWSH has expanded to provide intensive rehabilitation services in a caring compassionate atmosphere through the Joint Commission Accredited hospital. RWSH accepts patients referred from acute care hospitals from all over the state of Georgia and surrounding states. Patients participate in a very structured program that includes building strength, endurance, and self-care while having

medical issues managed all to prepare patients to return home and resume their lives. Focus is on early intervention for conditions affecting mobility, activities of daily living, and swallowing and cognitive abilities. Part of the day is devoted to follow-up medical care addressing ongoing medical issues and part of the day involves therapy to help the patient build up strength and skills. Psychological support is also offered, as physical trauma can be emotionally draining. Each patient is served by an interdisciplinary team lead by a physician specially trained in physical medicine and rehabilitation. The physician provides daily medical and physical management with the rehabilitation registered nurses providing 24 hour care. Each patient's treatment program is individualized and modified according to the progress made toward discharge goals. Other members of the team who work closely to coordinate the patient's specific treatment include: Physical Therapist, Occupation Therapist, Speech language Pathologist, Psychologist, Respiratory Therapist, Registered Dietician, RN Case Manager/ Discharge Planner, Pharmacist Consultant. Additionally, families and primary caregivers are very important members of the team and are encouraged to interact with the team, ask questions, and attend education sessions.

As RWSH includes two specialized hospitals with a specialized population, a community resource assessment was not created. However, RWSH is itself a community resource through staff commitment and participation in programs such as the March of Dimes campaign, community health education efforts by Nurse Navigators, and leadership participation in community talks about RWSH and the scope of services it provides.

2.2 The 2019 Community Health Needs Assessment Team

The 2019 CHNA team is made of staff from both the RWSH including:

- Chief Executive Officer
- Chief Medical Officer
- Chief Nursing Officer
- Director, Business Development
- Director, Finance
- Director, Case Management

The AU Health Population Health department and the AU Health executive leadership team provided additional guidance and support for the RWSH team.

2.3 Service Area

RWSH is located in the city of Warm Springs, Georgia in Meriwether County, which is in mid-Western section of the state. The scope of both the LTAC and the IRF Hospitals' services are very specialized, and they accept patients from other Georgia hospitals and surrounding states, though almost 95% of the patients have a home address in Georgia. Therefore, the state of Georgia has been identified as the market and service area on which to focus.

Table 1: RWSH Long Term Acute Care Hospital Admission Volumes by Top 10 Referring Hospitals, 2019

Hospital	Location	Admission #s	% of Total Admissions
St. Francis Hospital	Columbus, GA	92	19.37%
Wellstar West GA Health System	LaGrange, GA	63	13.26%
Midtown Medical Center	Columbus, GA	58	12.21%
AU Medical Center	Augusta, GA	43	9.05%
Upson Regional Medical Center	Thomaston, GA	36	7.58%
Piedmont Newnan Hospital	Newnan, GA	30	6.32%
Piedmont Fayette Hospital	Fayette, GA	26	5.47%
Grady Health System	Atlanta, GA	17	3.58%
Emory University Hospital	Atlanta, GA	14	2.95%
Piedmont Atlanta Hospital	Atlanta, GA	12	2.53%

Source: Internal Reporting

Table 2: RWSH Rehabilitation Hospital Admission Volumes by Top 10 Referring Hospitals, 2019

Hospital	Location	Admission #s	% of Total Admissions
West GA Health System	LaGrange, GA	204	17.60%
St. Francis Hospital	Columbus, GA	188	16.22%
Piedmont Columbus – Midtown	Columbus, GA	148	12.77%
Roosevelt WS LTAC	Warm Springs, GA	110	9.49%
Upson Regional Medical Center	Thomaston, GA	69	5.95%
AU Medical Center	Augusta, GA	60	5.18%
Navicent	Macon, GA	59	5.09%
Piedmont Newnan Hospital	Newnan, GA	45	3.88%
Grady Hospital	Atlanta, GA	40	3.45%
Piedmont Fayette Hospital	Fayette, GA	33	2.85%

Source: Internal Reporting

2.4 Results of the 2016 CNHA – Stroke Care and Prevention

For the 2016 Community Health Needs Assessment, RWSH joined in Augusta University's mission "to be the regional leader in stroke care: by providing exceptional, state-of-the-art quality and expertise in patient care; by educating our patients, community, healthcare partners and trainees in stroke prevention and treatment; and by fostering research into innovative treatments for stroke patients" www.augusta.edu/mcg/neurology/specialties/stroke/index.php)

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The actions designed were to increase patient and family education throughout their stay in our facility thus providing them with the knowledge needed to make lifestyle changes to prevent future strokes for current patients and primary strokes in their family members. We also implemented post-discharge follow-ups with the patient and/or family to ensure appropriate post hospital services have been initiated and to also track progress with their integration back into the community. The goal of these

implemented efforts was to discharge more patients back home to the community versus transitioning into a nursing home care environment.

Patient Education was presented at 92% compliance rate in 2016, 91% compliance rate in 2017 and 82% compliance rate in 2018. Post follow up call had incomplete data collection for 2016; however, for the 8 months that data was collected calls were done at 72% compliance rate. Follow up calls were at 100% compliance rate in 2017 and 97% compliance rate for 2018.

This resulted in a significant increase in community discharges for 2016 and 2017. There was a decline in community discharges for 2018; however the data is trending back up for 2019 (Figure 3).

Figure 1: Stroke Education Compliance, 2016 - 2018

Stroke Education	2016	2017	2018
% compliance with daily education documentation	92%	91%	82%

Source: Internal Reporting

Figure 2: Post-Discharge Follow-up Call Compliance, 2016-2018

Stroke Follow-Up Call	2016	2017	2018
Compliance	incomplete data for this year; however of the 8 months that had complete data collection, 72%	100%	97%

Source: Internal Reporting

Figure 3: Stroke Patient Discharge Destination, 2013 – June 2019

Discharge Destination	2013	2014	2015	2016	2017	2018	Jan-June 2019
Community/Home	77 (70%)	63 (72.4%)	61 (61.6%)	23 (79.31%)	83 (76.85%)	73 (63.48%)	36 (76.60%)
SNF/Subacute	28 (25.5%)	14 (11.5%)	26 (26.3%)	2 (6.9%)	9 (8.33%)	27 (23.48%)	3 (6.38%)
Acute Care Hospital	5 (4.5%)	10 (16.1%)	12 (12.1%)	4 (13.79%)	15 (13.89%)	14 (12.17%)	8 (17.02%)
Expired	0	0	0	0	1 (0.93%)	0	0

Source: Internal Reporting

3. ANALYSIS AND CURRENT PROJECT

3.1 Methods

This Community Health Needs Assessment utilized both primary and secondary data as well as recommendations from the facility's medical staff to determine the focus for the project.

As part of the secondary data analysis, data from the Census Bureau's 2014 and 2016 American Community Survey was used to determine the overall population trends of Georgia as well as the demographic (e.g., race, gender, age) and socioeconomic (e.g., poverty levels, education) make-up of the state. A comparative trend analysis was made for Georgia against data for the United States.

In order to begin narrowing down the potential scope of the CHNA and of the project(s) to be incorporated, the top conditions seen in Georgia were determined and reviewed using recent data from the CDC, Census Bureau, Healthy People, Robert Wood Johnson Foundation, Health Communities, state led health agencies, and the Agency for Health Research and Quality (AHRQ). Each of these organizations have either synthesized available local and national health data or have conducted large scale surveys of individuals about health conditions, access, and behaviors.

After the initial list of top conditions seen in Georgia were created and secondary data gathered, information was reviewed by the CHNA Team to determine the path for the assessment.

3.2 Analysis of Findings

3.2.1 Analysis of Findings – Secondary Data

3.2.1a Population Analysis

The prevalence and severity of disease states within a community depends on several factors, including the demographics of the population. The differences in population groups require different types and approaches to health care and inform the resulting project for this needs assessment.

Population Demographics

Georgia and the United States also both follow the pattern of a predominantly female population at slightly more than 50% (Table 3).

Table 3: Gender Breakdown for Georgia and the United States of America

	Georgia	USA
Females	5,176,849 (51.4%)	161,792,840 (50.8%)
Males	4,922,471 (48.7%)	156,765,322 (49.2%)

Source: American Community Survey, Census Bureau, 2016

When looking at race, nationally, the population is predominately white (n = 241,955,396), and this is also the case for Georgia (n = 6,220,737). (Table 4). However, for Georgia, Black or African American follows closely in population totals and together they make up just over 91% of Georgians. Since the Black or African American race has a higher predisposition for several chronic conditions, including diabetes, certain cancers, and stroke, this means that Georgia as a whole tends to be at a higher risk not only culturally but also through demographics.

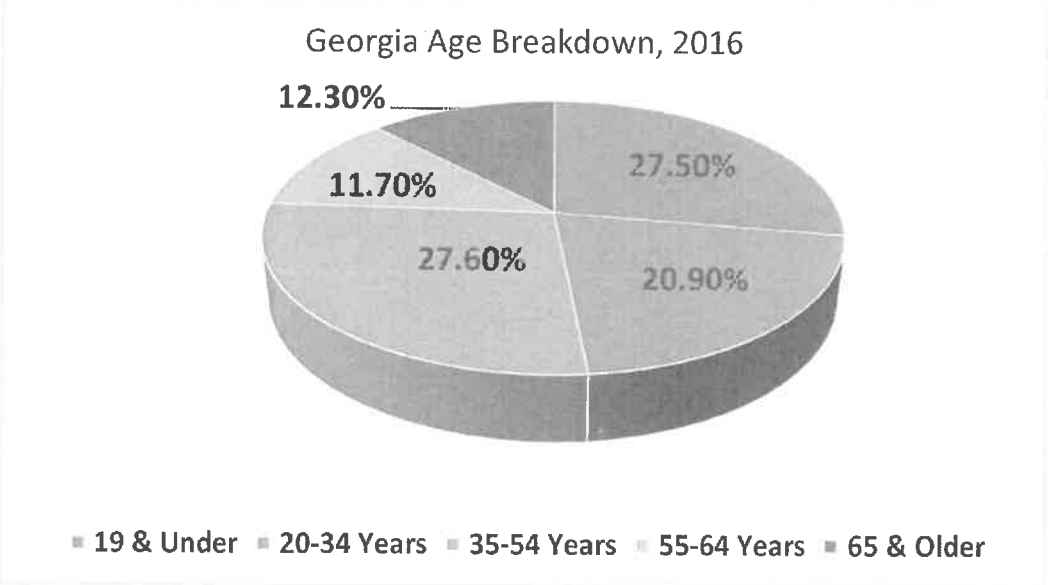
Table 4: Georgia and the United States Racial Breakdowns, 2016

	GEORGIA	UNITED STATES
White	6,220,737 (60.15%)	241,955,396 (73.75%)
Black/African American	3,271,240 (31.63%)	44,088,615 (13.44%)
Asian	433,946 (4.20%)	19,663,833 (5.99%)
American Indian	84,912 (0.82%)	5,399,769 (1.65%)
All Other Races	330,993 (3.20%)	16,970,334 (5.17%)

Source: American Community Survey, Census Bureau, 2016

The overall age breakdown for Georgia shows that 28% of the population are under 19 and 28% are between the ages of 35 and 54. Only 11.5% of the population are elderly adults aged 65 and older (Figure 4).

Figure 4: Georgia Age Breakdown, 2016



Source: American Community Survey, Census Bureau, 2016

3.2.1b Social and Economic Determinants of Health

Income, Poverty, and Education

Within the United States, Georgia is considered to be a rural and lower income state with approximately 18% of its population living in poverty. Within the U.S., Georgia ranks #33 out of 50 based on median household incomes from the 2014 Census Bureau's American Community Survey results (Table 5 for Georgia statistics).

Table 5: Comparison of Poverty and Income between Georgia and USA, 2014

	Georgia	USA
% Living in Poverty	18.3%	11.5%
Avg. Median Household Income	$49,342	$53,482

Source: Census Bureau's American Community Survey, 2014

When looking at lack of education, approximately 15% of Georgians aged 25 and older have less than a high school education, which is higher than the 13.7% in the United States as a whole.

Access to Care (health insurance, rural pops, HPSAs/MUAs)

One aspect of access to care is being able to pay for the medical care through using some form of health insurance. However, despite the Affordable Care Act initiatives that began in 2012, 12.0% of Georgians were still without health insurance in 2017 (Table 6).

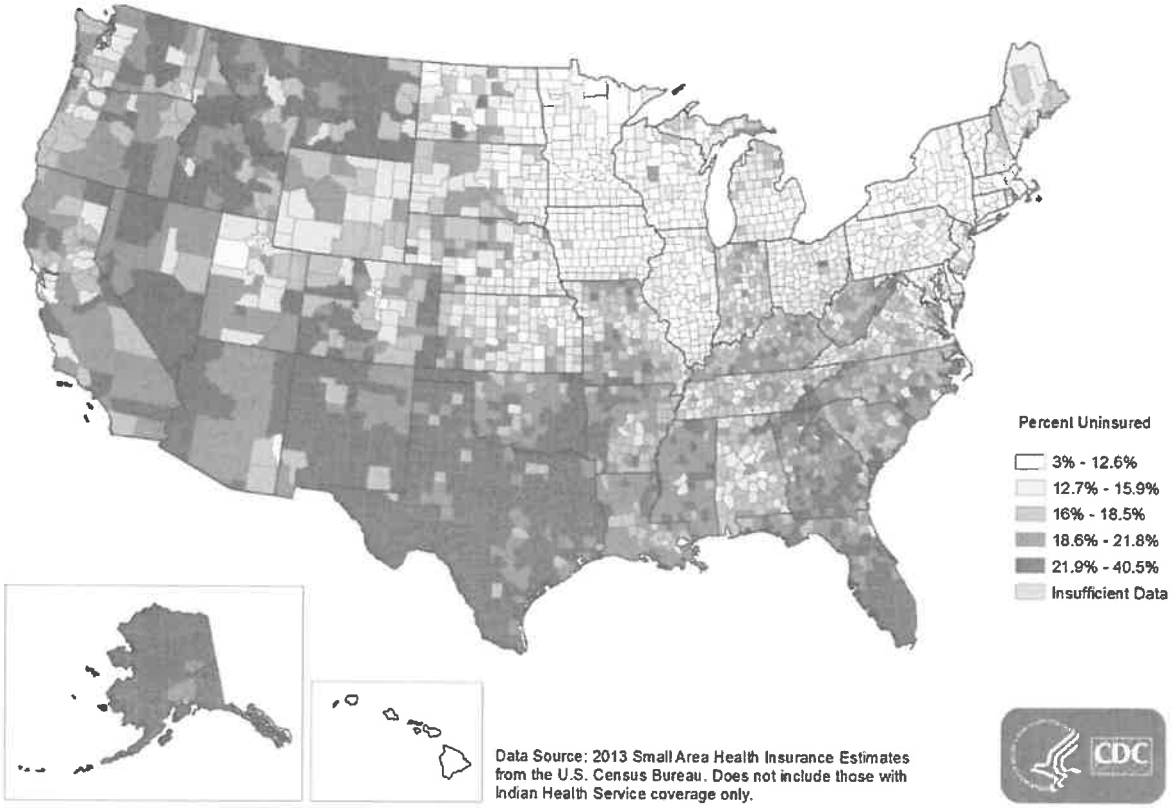
Table 6: Comparison of Health Insurance Status for Adults 18-64

	Georgia	USA
Overall		
Private Insurance	6,497,755	212,459,414
Public Insurance (i.e., Medicaid, Medicare)	3,037,676	106,925,261
No Health Insurance	1,264,208	28,338,960
Employed		
No Health Insurance	755,740	17,895,130
Unemployed		
No Health Insurance	155,991	3,165,880
Not in the Labor Force		
No Health Insurance	352,417	7,187,950

Source: American Fact Finder, Census Bureau, 2017

This rate of uninsured increases when looking at those that are 65 years and younger. When reported in 2014, over 75% of Georgia counties in 2013 had uninsured rates of 18.6% or higher for older and elderly adults (Figure 5).

Figure 5: Percent of Adults 65+ without Insurance, CDC, 2013



In addition to also a fifth of the population being uninsured, much of Georgia is rural and medically underserved. In 2016, of the 159 counties in Georgia, 148 either are fully designated as a medical underserved area or have parts within the county that are. Likewise, all Georgia counties have at least one area that is considered a Health Professional Shortage Area.

3.2.1c State and National Disease Comparisons

Data was compiled from multiple sources, including national survey results, Healthy People 2020, and state data. This data was then compared against services available and types of patients seen at Roosevelt Warms Springs Rehabilitation and Specialty Hospitals to narrow the focus of the state and national comparisons for some of those conditions.

Heart and Vascular Disease

Heart and vascular diseases are also among the more prevalent chronic conditions in the United States with nearly a third of the population having been diagnosed with one or more of the conditions, including heart disease, hyperlipidemia, and hypertension. For all of the conditions, the prevalence rates remain higher in Georgia when compared against the rates in the United States. (Table 7)

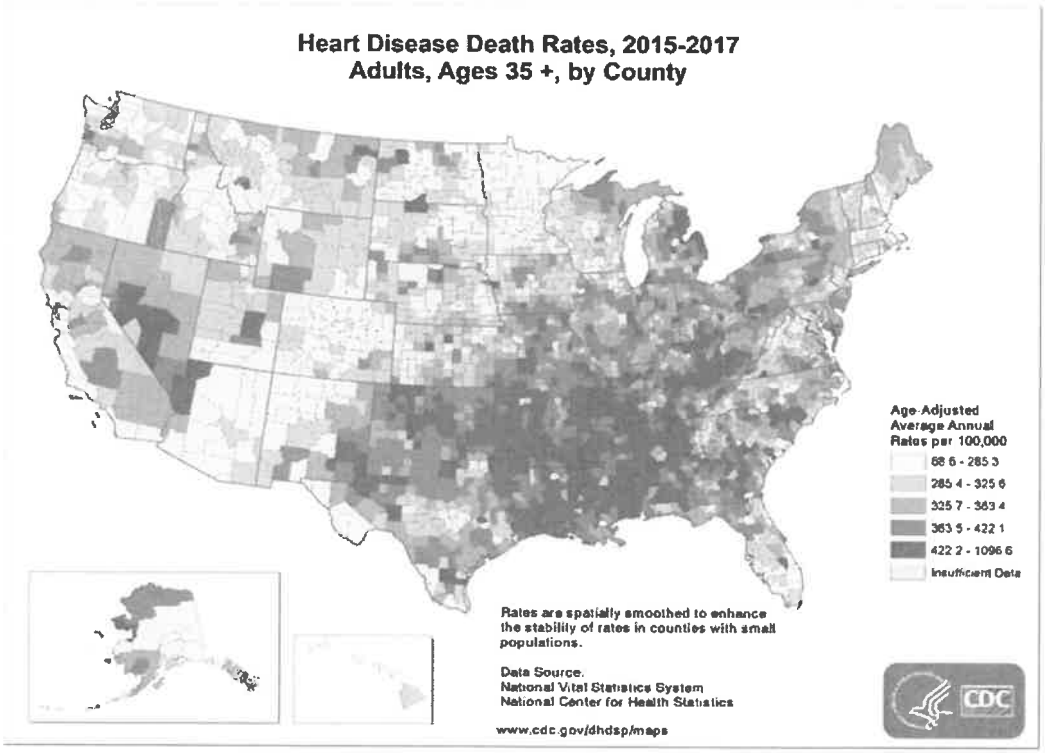
Table 7: Prevalence Rates of Heart and Vascular Diseases in Georgia and the United States

	Georgia	USA	Time Period
Hyperlipidemia Prevalence*	31.1%	33.0%	2017
Hypertension Prevalence*	38.1%	32.4%	2017
# of Hospitalizations from MI >65yo, per 1,000 beneficiaries	10.8	323,29	2016

Source: CDC BFRSS, 2016

As with many of other chronic conditions, overall death rates from the disease remain concentrated within the Southeastern portion of the United States (Figure 6).

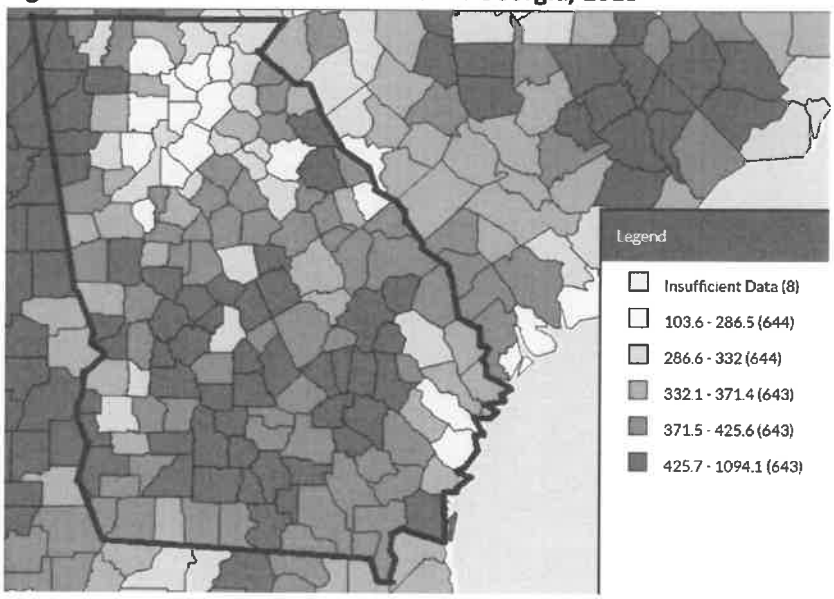
Figure 6: Death Rates per 100,000 from All Heart Disease, 2015-2017, Age 35+



Source: CDC Interactive Atlas of Heart Disease and Stroke, 2015-2017

Within Georgia, high rates of heart disease related death are more prevalent in the more rural sections of the state, including Meriwether County where Roosevelt Warm Springs Rehabilitation Hospital is located (Figure 7).

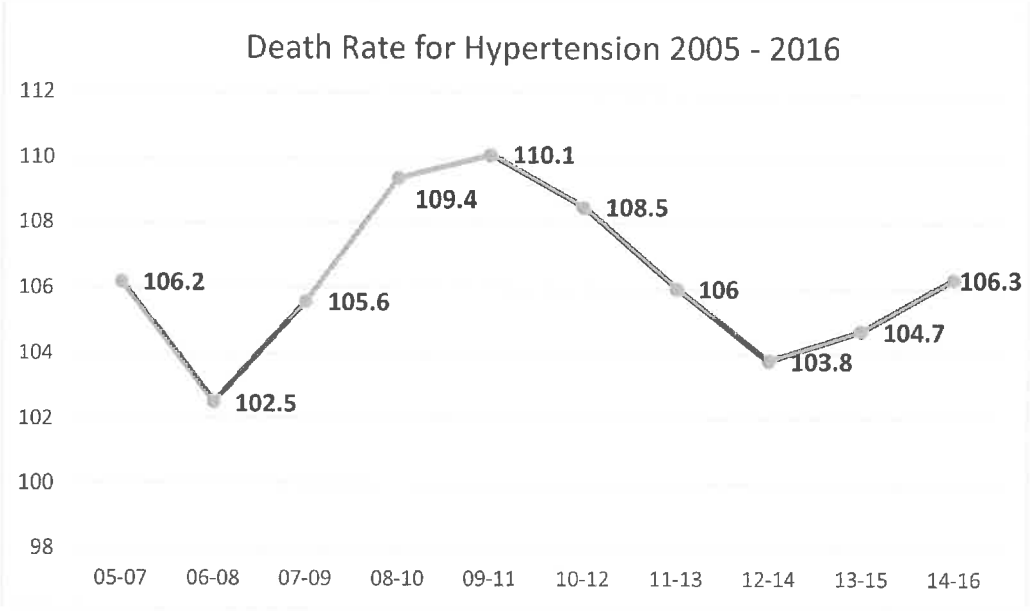
Figure 7: Rate of Heart Disease Death in Georgia, 2013



Source: CDC Interactive Maps

According to CDC, death due to Major Cardiovascular Diseases is worse in Georgia than the United States (241.4 per 100,000 and 219.8 per 100,000 respectively). Death related to hypertension has remained steady since 2005 with a spike in 2008 – 2011 (Figure 8).

Figure 8: Death Rate (per 100,000) due to Hypertension in Georgia, 2005 - 2016

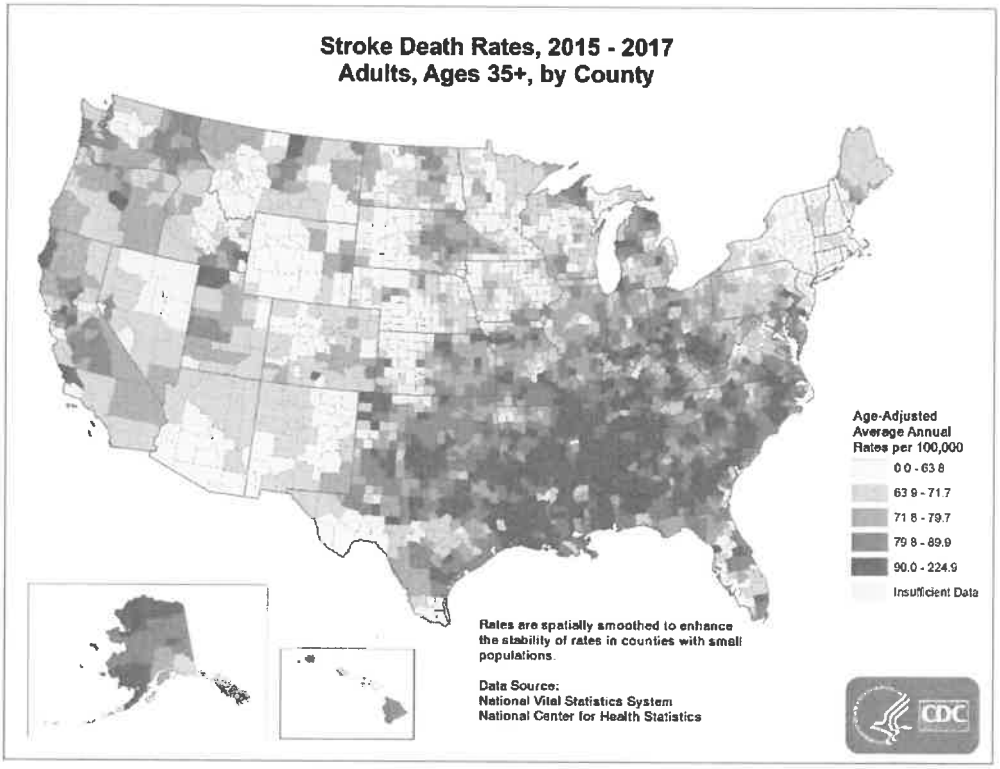


Source: CDC, Stats of the State of Georgia, 2005-2016

Stroke

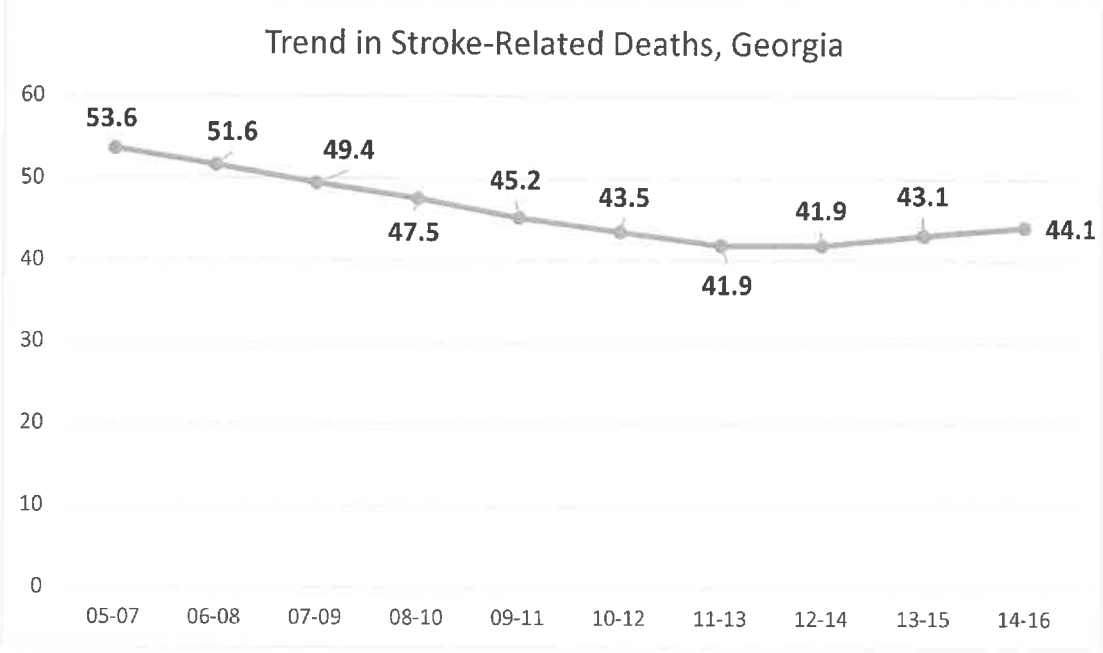
According to the American Stroke Association, stroke is the 5th cause of death and the leading cause of adult disability in the United States. And, while Healthy People 2020 does not have any goals specific to stroke, as with all other disease related topic areas there is a desired decrease in the mortality rate from strokes. Georgia as a whole tends to appear on the higher end of the stroke mortality spectrum as it is located in the "buckle' of the southeastern "Stroke Belt". This "Stroke Belt", according to the Centers for Disease Control (CDC), is where the incidence and mortality from stroke is the highest in the United States (Figure 9). Looking at the mortality statistics from the CDC (2014-2016), Georgia's mortality rate ranks at 85.5 out of a 100,000 for those 35 and older, and the rate of hospitalization from stroke for residents 65+ ranges from 23.8 per 1,000 Medicare beneficiaries (Georgia) to 22.5 out of 1,000 (USA).

Figure 9: Stroke Death Rates, 2011 to 2013, Adults Aged 35+, by County (Source: CDC)



With an increased awareness of stroke prevention, the CDC data from 2005-2016 shows that Georgia stroke death rates show an overall improvement. Although there was an initial decline in stroke deaths between 2008 and 2011 but a slight upswing in stroke death has begun to occur over the last three years of available data (Figure 10).

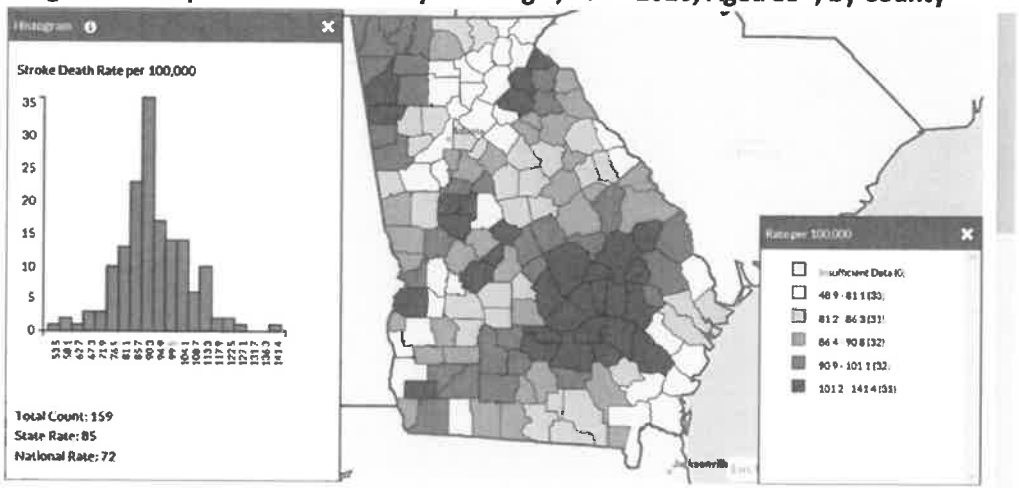
Figure 10: Trend in Stroke-Related Deaths, Georgia, 2005-2016, all ages



Source: CDC, Stats of the State of Georgia, 2017

The goal of Healthy People 2020 is the reduction of mortality from diseases and chronic conditions, like stroke. One-year mortality risk for stroke patients decreased by 23% for those who received neurological care. However, when filtered down to look only at Georgia with an overlay of hospitals offering neurological services, CDC's map of stroke mortality (Figure 11) shows that the majority of Georgia counties have a death rate from stroke of at least a 74.3 per 100,000 adults aged 35 and over. Yet, despite this high mortality rate and the empirical evidence of the benefit of neurology care for stroke patients, only 48 hospitals within Georgia offer neurological specialty services, and only a handful of those also offer inpatient rehabilitation services equipped to handle this follow-up care of this population.

Figure 11: Map of Stroke Mortality in Georgia, 2014-2016, Aged 35+, by County



Source: CDC Interactive Maps

Respiratory Diseases

Within the spectrum of respiratory diseases, both asthma and chronic obstructive pulmonary disease (COPD) have moderate prevalence in the United States and, unlike other chronic conditions, have both lower prevalence and mortality rates in Georgia in comparison to the United States rates (Table 8).

Table 8: Comparison of Mortality and Prevalence Rates between Georgia and US

	Georgia	USA	Time Period
Asthma Prevalence (Adults)	8.4%	7.9%	2017
Asthma Mortality Rate	10.1	9.9	2017
COPD Deaths (cases per 100,000)	45.7	40.3	2017
COPD Prevalence	6.7%	5.9	2017

Source: CDC BFRSS

Looking at a trend of state data from the CDC, mortality rates for asthma are lower than Chronic Obstructive Pulmonary Disease (COPD). According to Healthy People 2020, more than 23 million people living in the United States have asthma. In a trend comparison from 2001 to 2009, the CDC found that there were 2.1 million asthma related ED visits in 2009 – A number that stayed fairly consistent throughout the whole trend period. Of those ED visits, more were in children and Black/African Americans (Figure 12) (CDC, National Surveillance of Asthma: United States, 2001-2010).

Figure 12: Asthmas Emergency Department Visits Rates by Age, Sex, Race, Ethnicity, and Geographic Region, 2016

Table B. Emergency department visits (ED) with asthma as the primary diagnosis per 10,000 population, by selected patient characteristics: United States, 2016

Characteristics	2016 Emergency Department (ED) Visits		
	Weighted No. of Visits	Standard Error of Weighted No. of Visits	Rate* (SE)
Total	1,776,851	204,136	55.9 (6.4)
Child (aged 0-17 years)†	546,013	98,935	74.3 (13.5)
Adult (aged 18+ years)†	1,230,838	162,841	50.3 (6.7)
Sex			
Male	701,071	98,657	45.1 (6.3)
Female	1,075,780	149,922	66.2 (9.2)
Race, not considering ethnicity			
White	1,051,527	166,935	42.9 (6.8)
Black	670,940	94,570	161.1 (22.7)
Other§	54,384	19,670	—
Ethnicity			
Hispanic or Latino	452,265	100,494	79.6 (17.7)
Not Hispanic or Latino	1,324,586	154,961	50.7 (5.9)
Age Group			
0–4 years	175,200	44,039	87.9 (22.1)
5–17 years	370,813	74,511	69.2 (13.9)
18–34 years	594,213	108,041	80.9 (14.7)
35–64 years	505,449	84,062	41.0 (6.8)
65+ years¶	126,480	50,342	—
U.S. Census Region			
Northeast	353,039	77,788	63.6 (14.0)
Midwest‡	334,786	74,236	50.0 (11.1)
South	648,023	128,009	54.0 (10.7)
West	441,004	117,146	58.4 (15.5)
MSA status			
MSA	1,481,170	188,938	54.1 (6.9)
Non-MSA¶	295,682	122,585	—

Abbreviations: MSA, Metropolitan Statistical Area; SE, standard error.

Source: CDC, Most Recent National Asthma Data, 2017

Healthy People 2020's overall goal for respiratory diseases is to "promote respiratory health through better prevention, detection, treatment, and education efforts" (https://www.healthypeople.gov/2020/topics-objectives/topic/respiratory-diseases). Also, as with other conditions, Healthy People 2020 has specific data-driven target goals associated with the reduction of asthma associated deaths, hospitalizations, and emergency room visits (Table 9). However, this data was only available from Healthy People 2020 at the national level and not the state level, so comparisons between the service areas of Georgia with Healthy People 2020 data could not be made. Despite targets to reduce negative impacts of asthma, deaths due to asthma have remained either steady or have increased for anyone under 65. For those 65 and older mortality have rates have declined, and for all age groups emergency room visits have declined.

Table 9: Healthy People 2020 Goals for Reduction of Asthma Related Deaths, Hospitalizations, and ED Visits

Reduction of Asthma Related Deaths by Age Group							
Age Range	2009	2010	2011	2012	2013	% Change	2020 Target
0-17	2.8	2.5	2.7	2.4	3	7.1	NA
18-34	4.7	4.3	4.4	4.7	4.5	-4.3	NA
35-64	10.8	11.3	10.8	11.9	12	11.1	4.9
65+	38.8	37.7	36	35.7	35.7	-8	21.5
Reduction of Hospitalizations from Asthma by Age Group							
Age Range	2006	2007	2008	2009	2010	% Change	2020 Target
0 - 4	43.3	41.4	35.4	40.6	null	-6.2	18.2
5 - 17	null	13.4	11.2	10.5	12.4	-7.5	NA*
18 - 44	null	7.1	7.7	8	7.2	1.4	NA*
45 - 64	null	16	17	16.7	14.7	-8.1	NA*
65+	23.7	25.3	25.2	29	25.5	7.6	20.1
Reduction of Emergency Room Visits from Asthma by Age Group							
	1995-1997	1998-2000	2001-2003	2005-2007	2009-2011	% Change	2020 Target
0 - 4	150	159.6	153.7	132.8	125.8	-16.1	98.7
5 - 17	null	null	null	73.6	91.1	23.8	NA*
18 - 44	null	null	null	62.3	59.6	-4.3	NA*
45 - 64	null	null	null	37.3	44.5	19.3	NA*
65+	29.5	31.5	30.9	21.9	26.8	-9.2	13.7

Source: Healthy People 2020, https://www.healthypeople.gov/2020/data-search/Search-the-Data?&f[0]=field_topic_area%3A3503

**Reduction of ED visits for ages 5-64 were rolled into one group at the high level where the target was listed (8.7 for hospitalizations and 49.6 for ED Visits). However, for sake of comparison and differences in age groups, data was listed using the expanded population data for the goal.*

According to Healthy People 2020, while 13.6 million adults in the US have had a diagnosis of COPD, it is estimated that nearly the same amount have yet to be diagnosed. COPD is also the 4th leading cause of death in the United States, though it is preventable since most cases are related to cigarette use (CDC, National Center for Health Statistics, Compressed Mortality file 1999-2006). As with asthma, Healthy People 2020 has set data-driven target goals for the reduction of COPD-related deaths, hospitalizations and ED visits; however, all have increased rather than decreased (Table 10).

Table 10: Reduction of COPD-related deaths, hospitalizations, and ED visits, age 45+

	2007	2008	2009	2010	2011	2012	2013	% Change	2020 Target
Deaths	113.9	123.5	117.9	116.6	117.7	114.8	116.5	2.3	102.6
Hospitalizations	56	61.4	62.4	58.7	null	null	null	4.8	50.1
ED Visits	81.7	110.1	117.3	92.9	103.1	null	null	26.2	56.8

Source: Healthy People 2020

Mental Health, Mental Disorders, & Addictive Behaviors

Mental health issues and addictive behaviors can be underlying issues for or could lead to chronic conditions later on. Unlike with other issues, Georgia is actually below the national average for alcohol usage, and below average for current smoking behavior.

Table 11: Prevalence of Alcohol & Tobacco Use: GA and the USA

Prevalence (%)	Georgia	USA	Time Period
Alcohol Use (Adults)	48.6%	53.8%	2018
Binge Drinking Prevalence (Adults)	14.5	16.2	2018
Heavy Drinking Prevalence (Adults)	5.8	6.5	2018
Current Smokeless Tobacco Use (Adults), every day; some days	2.3	2.3	2018
Current Smoking (Adults)	16.1	16.1	2018

Source: CDC, BFRSS, 2018

Healthy People 2020 has a goal of reducing the proportion of adults who experience major depressive episodes from a baseline of 6.5% nationally to a target of 5.8%; however, the percentage has increased as of 2013 to 6.7%. Likewise, Georgia has experienced a 14.29% increase from 2008 to 2013. South Carolina has seen a reduction from 7.8% to 7.2% from 2008 to 2013, though it started much higher than the national average and remains higher than the US's rate of 6.7% in 2013 (Table 12).

Table 12: Major Depressive Episode Trends, 2011 – 2016, Healthy People 2020

	2011	2012	2013	2014	2015	2016
US	6.6	6.9	6.7	6.6	6.7	6.7
	2008-2011		2009-2012		2012-2015	
Georgia	6.3		6.4		7.0	
South Carolina	7.8		9		6.3	

Source: Healthy People, 2020

Healthy People 2020 desired targeted goal is to increase to 75.9% treatment. The state of Georgia has seen an increase in treatment, but with changes in legislation and reimbursement pressures on behavioral health providers, this number could decrease over time. There are significant limitations on behavioral health providers in the nation and that trend is expected to continue, especially in adult behavioral health providers. Psychiatrists are the primary caregivers in mental health, with an estimated 39,180 psychiatrists providing mental health services to adults (age 18 and over) and 6,210 providing care to children and adolescents (age <18) in 2016. By 2030, the supply of psychiatrists is expected to decrease by approximately 27%. (HSRA Health Workforce, Behavioral Health Workforce Projections 2016 – 2030: Psychiatrists (Adult), Child and Adolescents Psychiatrists).

3.2.2 Primary Data Analysis

3.2.2a RWSH Patient Data

As RWSH is an umbrella for two separate hospitals – Rehabilitation and Long Term Acute Care (LTAC), both will be covered separately for internal data.

Roosevelt Warm Springs Rehabilitation Hospital ("RWSHR") is a 52-bed licensed facility that is staffed to accommodate 20 to 24 patients. Looking at calendar years 2016 through 2018, the rehabilitation hospital majority of admission were for orthopedic (i.e., fracture of the femur, joint replacement, etc.) and stroke issues (Table 13).

Table 13: Primary Conditions Seen at RWSRH, 2016 - 2018

Condition	2016 # of Admissions	2017 # of Admissions	2018 # of Admissions
Orthopedic	75	85	94
Stroke	121	106	117
Neurological	59	92	69
General Rehabilitation/ Medicine	36	9	40
SCI	39	31	42
Brain Injury	64	71	42

Source: Internal Discharge Data

The patients in the rehabilitation hospital are primarily white and African American/Black, which make up over 99% of the patient population since 2016. There is a relatively equally split between male and female, although males encompass a slightly larger population with an average of 53% from 2016. The Primary payment sources were split between Medicare and another source of payment (Table 14).

Table 14: RWSHR Admissions by Primary Payer, 2016 – 2018

Primary Payment Source	Admission Volumes
Medicare	568
Medicaid	262
Third Party/Commercial	212

Source: Internal Reporting

Roosevelt Warm Springs LTAC Hospital ("RWSHL")has 32 licensed beds are staffed for 15-16 patients. Services available include: ventilator weaning, respiratory distress, wound management, status post failed surgery care, and cardiac. Within calendar year 2016 through 2018, the LTAC had the majority of their admissions seen for respiratory conditions, skin ulcers, digestive disorders, and circulatory system disorders (Table 15).

Table 15: RWSHL Admissions by System Impacted or Major Condition, 2016 - 2018

System	2016 # of Admissions	2017 # of Admissions	2018 # of Admissions
Respiratory System	96	90	85
Skin, Subcutaneous Tissue & Other	19	9	15
Circulatory System	10	12	5
Infectious & Parasitic	8	9	7
Nervous System	7	10	9
Digestive System	5	14	9

Source: Internal Reporting

3.3 Project(s) Design and Goals

From the conditions seen at RWSH, along with trends in public health concerns and National Patient Safety Goals, the final consensus of focus for RWSH FY19 CHNA and CHNA project is mental health disorders and suicide prevention. While this is a narrowly focused issue, this chronic condition comes in many forms, complicating and complicated by other chronic conditions. The risk of depressive disorders post-stroke is reported to be 33.5% (95% CI=30.3% to 36.8%)[i]. Amputation is reported to increase the risk of depression by more than 2.5 times.[ii] ICU survivors are known to have long term psychological morbidity, with a third of ICU survivors reporting depression at 3 and 12 months after hospital discharge. [iii] A meta-analysis demonstrated that early post-ICU depressive symptoms were a strong risk factor for subsequent depressive symptoms[iv], suggesting that intervention in the early phase may have long term benefit.

Anecdotally, in a survey of our hospital providers, 60% reported a high frequency of unmet mental health needs in patients under their care at RWSH, and 80% felt that mental health needs were inadequately addressed during the preceding hospitalization. It is from this perspective that we are pursuing the development of strategies to facilitate mental health care in our community. (Appendix A for survey)

3.3.1 Tactics to Improve Mental Health Care in the Patients We Serve

Although psychology services have been available for our inpatients, this has been limited to weekly consultation on a limited number of patients. Likewise, although all patients are assessed for immediate risk of suicide, patients with new disability may face increasing levels of depression as they rehabilitate and then try to reintegrate into the community. Once discharged they may or may not have access to mental health care, nor know whom to ask. To begin to meet these needs we have developed the following plan:

- Hire a full time psychologist to work between the two hospitals coordinating a multi-pronged approach to facilitate mental health care both during and after hospitalization.
- Develop a telehealth relationship with a psychiatric provider to augment the medical management of patients with significant mental health disorders, both those previously diagnosed and those newly identified.
- Begin a psychologist led group therapy/support group for patients and their families on the IRF.
- Begin a psychologist led support group for family members on the LTAC to help tackle the adjustment to being a caregiver.
- Train all nurses, physicians and non-physician providers to perform suicide risk assessments using validated tools. These will be performed at admission, near discharge, and at standard intervals for patients with prolonged admissions, to facilitate intervention during admission as well as referrals to appropriate care after discharge. The Psychologist will be responsible for referring for follow up care for those demonstrating need, including the identification of free or reduced cost services when necessary.
- Engage community pastors to provide spiritual support to our inpatients on a volunteer basis.

Success will be measured according to participating in the interventions and patient/family satisfaction with our efforts. Specifically our outcome measures are:

- Percent participation in group therapy sessions
- Number of outpatient referrals made
- Patient satisfaction as measured during post-discharge surveys and follow up phone calls

3.3.2 Tactics to Improve Mental Health Care in our Immediate Community

Our facility provides specialty inpatient services, with no outpatient or direct community interface. Nonetheless, we are committed to improving the care of those in our immediate community: our employees and the employees and students of the Georgia Vocational Rehabilitation Administration (GVRA), which shares our campus. We think that serving this immediate community also serves the greater community of patients served, particularly as we recognize the frequency with which we admit family members of our employees. To that end we have developed the following plan to contribute to the mental health needs of our community:

- Initiate and support an anonymous 12 step group on our campus which may be attended by hospital employees, GVRA employees and students, as well as members of the community.
- Develop a crisis intervention plan through Human Resources to facilitate interventions for employees with acute mental health needs

Due to the necessity of anonymity, participation in these projects will not be tracked.

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[iv] Davydow DS, Gifford JM, Desai SV, Bienvenu OJ, Needham DM. Depression in general intensive care unit survivors: a systematic review. Intensive Care Med. 2009;35(5):796–809.

2019 Roosevelt Community Health Needs Assessment

1. What are the major barriers to discharging patients to home? (Select all that apply.)

- ☐ Transportation
- ☐ Assistance at home
- ☐ Mental health issues
- ☐ Medical follow-up
- ☐ Other (please specify)

2. How frequently do you identify unrecognized or unmet mental health issues in your patients?

- ○ A great deal
- ○ A lot
- ○ A moderate amount
- ○ A little
- ○ None at all

3. How well are mental health issues addressed in our setting?

- ○ Very well
- ○ Fairly well
- ○ Hit or miss
- ○ Not well at all
- ○ Not sure

4. How well are mental health issues prior to patient's arrival at Roosevelt?

- ○ Very well
- ○ Fairly well
- ○ Hit or miss
- ○ Not well at all

- Not sure

5. If you could add one resource to the care of our patients, what would it be?

6. Do you work primarily in...

- LTAC
- IRF
- Both

APPENDIX B: Sources

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