# Vulnerability Assessment Report and Jurisdictional Plan: South Carolina

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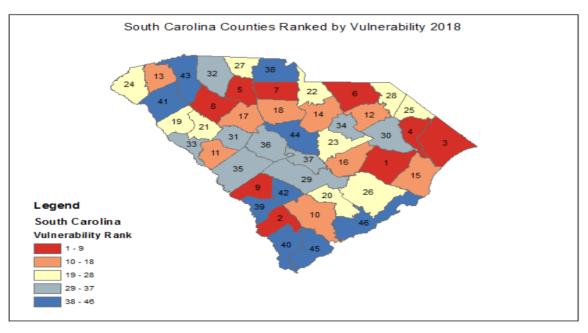
Grant Acknowledgement and Release of Liability

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## **Executive Summary**

*Background*: In November 2014, Scott County, IN, experienced simultaneous outbreaks of Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV). Investigators were able to attribute the outbreaks to needle-sharing among the rural county's prescription opioid abusers, which ultimately resulted in 215 new cases of HIV; over 90% of these HIV cases had coinfections of HCV.

*Purpose*: The purpose of this report is threefold: first, to **identify the South Carolina (SC) counties at the highest risk for injection drug use and resultant bloodborne infection outbreaks**; second, to **identify the resources SC currently has that could help ameliorate the burden of addiction and bloodborne infection outbreaks**; and last, to **present evidence-based interventions and identify preventative services at both the state- and county-level that may lead to reducing the risk of substance abuse and infection outbreaks resulting from unsafe injection drug use (IDU)**.



Key Messages:

- The counties identified as most vulnerable to bloodborne infection outbreaks as a result of unsafe injection practices among persons who inject drugs are concentrated in the Pee Dee region of the state. The highest risk counties, in order, are: Williamsburg, Hampton, Horry, Marion, Union, Chesterfield, Chester, Laurens, and Barnwell.
- Opioid abuse is still a problem in South Carolina, and has begun to cross previous demographic boundaries introduction of injection drug use to new demographic categories increases the risk of bloodborne infection transmission.
- Prevention and treatment services for both substance use disorders and bloodborne infections are concentrated in urban areas, leaving rural populations particularly vulnerable to outbreaks of bloodborne infections.
- Implementation of evidence-based solutions, in conjunction with current efforts across the state, could minimize the risk of bloodborne infection outbreaks as a result of the sharing of

**injection drug equipment among persons who inject drugs (PWID).** These include, but are not limited to:

- Increase naloxone distribution and accessibility
- Increase the number of MAT-waivered primary care providers and promote full utilization of MAT waivers to dispense and oversee medicated-assisted treatment for opioid use disorder, particularly in rural areas of the state
- Introduce syringe service programs that provide risk-reduction education and sterile injection equipment to reduce the spread of bloodborne infections, link persons who inject drugs to HIV and hepatitis C testing and treatment as well as substance use disorder treatment options, offer vaccinations to prevent other illnesses, distribute naloxone for overdose reversals, dispose of used needles to reduce needlesticks of law enforcement and other first responders, and provide other medical, social, and mental health services to those in need
- Increase hepatitis C screening efforts to include all adults ages 18-79 in accordance with US Preventive Services guidelines and promote routine hepatitis C screening in persons with any known risk factor(s) for HCV

*Methods*: A Social Vulnerability approach (Flanagan et al, 2011) was used to rank SC counties on their overall vulnerability to substance abuse and possible bloodborne infection outbreaks resulting from IDU. Based on literature and feedback from statewide stakeholders, several relevant variables were identified; advisors from Centers for Disease Control and Prevention (CDC) provided further guidance on categorizing the variables, resulting in an Overdose and Bloodborne Infection Index (OBII) with two domains: risk factors and mitigating factors. Z-scores for each variable in the Risk and Mitigating domains were calculated and summed by county; overall Vulnerability was calculated by subtracting the sum of the Mitigating Factors from the sum of the Risk Factors.

Variables Used: All data is from the year 2018 and measured at the county level.

Risk Factors: Percent Unemployment, Morphine Milligram Equivalents per capita, Drug deaths per 100,000, HIV incidence per 100,000, Opioid overdoses per 100,000, Naloxone administrations per 100,000, Drug crimes per 100,000, Endocarditis cases per 100,000, Acute HCV (defined as any HCV case diagnosed in persons under 40 years) cases per 100,000, Percent rural, Difference in HCV and HIV prevalence (per 1,000) rates, Medicaid opioid treatment claims per 100,000, HIV cases who reported IDU per 100,000.

Mitigating Factors: Per Capita Income, Substance abuse clinics per 100,000, EMS personnel per 100,000, Urgent Care facilities per 100,000, Mental health clinics per 100,000, Buprenorphinewaivered providers per 100,000, Law enforcement personnel per 100,000, Hospitals/Emergency departments per 100,000, Primary care providers per 100,000, Presence of major highway within 5 miles of county border (Y/N), Population density, Mental health providers per 100,000, designated Opioid treatment clinics per 100,000.

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#### Part I: Vulnerability Assessment

#### 1.a. Background & Rationale

November 2014 saw the beginning of an outbreak of human immunodeficiency virus (HIV) among the residents of Scott County, IN. Within the following year, a total of 181 new HIV cases were diagnosed in the area, in stark contrast to the five cases diagnosed in the ten years prior. Most (87.7%) of those diagnosed with HIV between November 2014 and November 2015 reported having injected a prescription opioid; furthermore, 92.3% of these new HIV cases were coinfected with hepatitis C virus (HCV) (Peters et al, 2016). Scott county had no HIV or HCV testing sites, limited substance abuse treatment facilities, no syringe service programs (SSPs), and was overall unprepared to handle the outbreaks. The lack of resources in the community contributed to the quick and pervasive spread of disease.

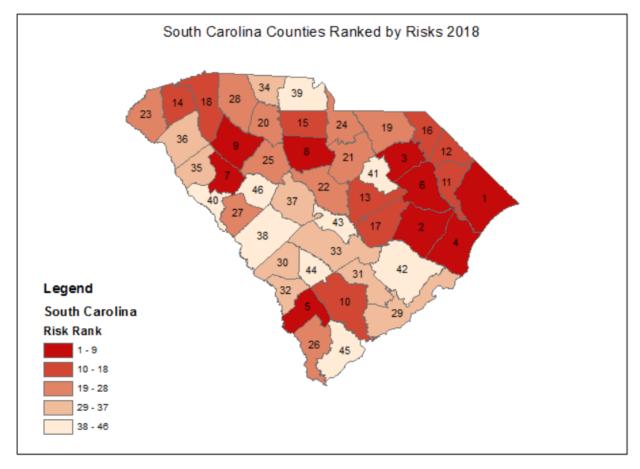
The relative speed and ease with which the HIV and HCV infections spread through Scott County highlighted not only the opioid epidemic that has been building in the US since the early 2000s, but the additional public health burdens that may occur in tandem. HCV is the most common infection associated with injection drug use (IDU); prevalence estimates of HCV among long term (>3 years) persons who inject drugs (PWID) are 75%-90% and 18%-38% in short term (<3 years) PWID (Amon et al 2008). While HIV is not as easily transmitted via the sharing of drug injection equipment, the Scott County outbreak illustrates that the introduction of a single HIV strain into the close community of PWID can have far-reaching consequences.

In response to the Scott County outbreaks of HIV and HCV, the Centers for Disease Control and Prevention (CDC) recognized the threat of additional HIV/HCV outbreaks in areas with similar conditions. Using acute HCV cases as a proxy for IDU, Van Handel et al (2017) conducted a vulnerability assessment where they built a prediction model using indicators of IDU (drug overdoses, prescription opioid sales, median per capita income, percent white population, percent unemployed, and buprenorphine prescribing potential) and HIV proximity (likelihood of HIV introduction by neighboring areas) to identify counties at a high risk of HIV and HCV outbreaks as a result of the sharing of injection drug use equipment among PWID. Because of constraints inherent in national analyses, and a lack of follow up on both suspected and confirmed HCV cases in the state, South Carolina received funding to conduct their own vulnerability assessment using data and methods at their discretion. This report details the findings and methodology of that assessment, as well as suggestions for decreasing vulnerability to HIV/HCV outbreaks via IDU across the state.

The vulnerability assessment of South Carolina has 3 domains: Risks, Mitigators, and Overall Vulnerability. The Risks domain includes variables that help describe each county's risk for opioid overdose and transmission of HIV/HCV from needle sharing among PWID. The Mitigator domain includes variables that help describe each county's ability to prevent and treat opioid abuse and incident cases of HIV/HCV cases. Scores for the Risk and Mitigator domains were calculated by summing the *z*-scores (a standardization transformation that relates each county's data point for a variable to the distribution of that variable for all counties) for all variables within each domain. The Overall Vulnerability domain contains no unique variables, but simply weights each county's risk factors in relation to its mitigators; the Overall Vulnerability score for each county was calculated by subtracting its Mitigators score from its Risks score.

### \*All data presented is for the year 2018

## 1.b. Overdose and Bloodborne Infection Risk Factors



List of variables

- Percentage Unemployed
- Morphine milligram equivalents per capita
- Drug deaths per 100,000
- HIV Incidence per 100,000
- Percentage Overdose due to Opioids
- Naloxone per 100,000
- Drug Crime per 100,000
- Cases of Endocarditis per 100,000
- Cases of Acute HCV per 100,000
- Percentage Rural
- Difference of HCV and HIV prevalence rates (per 1,000)
- Opioid Medicaid per 100,000
- Prevalence of Injection Drug Use among HIV+ per 100,000

#### Methodology

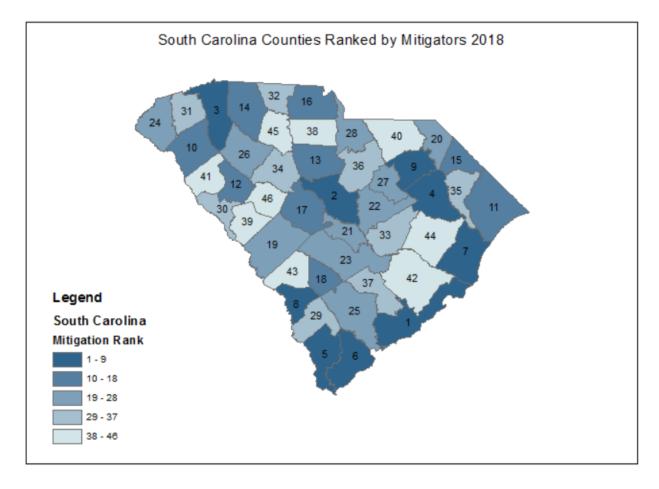
For details on where data for each variable was obtained, the raw data for each variable by county, the z-scores for each variable by county, and how z-scores are calculated, please refer to Part III: Technical Notes – Methods. For county rank maps of each risk variable, please refer to Part III: Technical Notes – Indicator Maps.

#### Comments

The risk ranking map includes data only on factors that were determined to quantify potential risk of outbreaks of bloodborne infections as a result of needle sharing. The counties that had the highest risk, according to 2018 data, are (in order, highest first): Horry, Williamsburg, Darlington, Georgetown, Hampton, Florence, Greenwood, Fairfield, and Laurens. The counties with the least risk, according to 2018 data, are (in order, lowest first): Saluda, Beaufort, Bamberg, Calhoun, Berkeley, Lee, McCromick, York, and Aiken.

In the above map we see a cluster of counties in the northeast section near the state in what is called the PeeDee Region. Horry county, the highest-ranked county for risk, is a known hot spot of opioid abuse, and has greater potential for HIV and hepatitis transmission due to its larger population size. The surrounding counties are thought to be high risk because of their proximity to Horry county and the I-95 interstate, which is a commonly used thoroughfare for transporting both drugs and people. The other high-risk counties outside of the PeeDee region (Hampton, Greenwood, Fairfield, and Laurens) achieved their ranks through a combination of high rates of bloodborne infection transmission, drug use and crime, as well as high levels of rurality despite bordering a more populous county.

## 1.c. Overdose and Bloodborne Infection Mitigating Factors



List of variables

- Per Capita Income
- Substance Abuse Clinics per 100,000
- Emergency Medical Service Personnel per 100,000
- Urgent Care facilities per 100,000
- Mental Health Clinics per 100,000
- Buprenorphine Doctors per 100,000
- Law Enforcement Officers per 100,000
- Hospitals and Emergency Departments per 100,000
- Primary Care Providers per 100,000
- Highway (Y/N)
- Population Density
- Mental Health Providers per 100,000
- Opioid Treatment Clinics per 100,000

#### Methodology

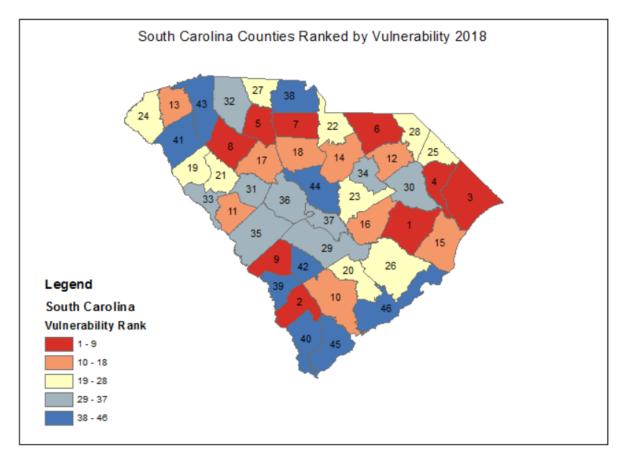
For details on where data for each variable was obtained, the raw data for each variable by county, the z-scores for each variable by county, and how z-scores are calculated, please refer to Part III: Technical Notes – Methods. For county rank maps of each mitigating variable, please refer to Part III: Technical Notes – Indicator Maps.

#### Comments

The mitigator ranking map includes data only on factors that were determined to quantify the ability to prevent or treat substance misuse or bloodborne infection. The counties that showed to have the highest mitigating factors according to 2018 data, in order, are: Charleston, Richland, Greenville, Florence, Jasper, Beaufort, Georgetown, Allendale, and Darlington. The counties with the least mitigating factors according to 2018 data, in order, are: Saluda, Union, Williamsburg, Barnwell, Berkeley, Abbeville, Chesterfield, Edgefield, and Chester.

The top five highest mitigating counties have two things in common: the populations in each of these counties is larger than most of the other counties and the per capita income is higher. This translates into greater tax revenue for publicly-funded services, and greater competition to provide for-profit services. Florence and Darlington counties are unique in that they are high in both risks and resources; please refer to the next page for how this affects their overall vulnerability. The counties with the fewest mitigators are the more rural, less populated, and least funded counties of the state – addressing resource gaps will need to begin with providing additional funding to these areas.

#### 1.d. Overall Vulnerability for Overdose and Bloodborne Infection



#### Methodology

The Overall Vulnerability score is a function of how many overdose and disease risks remain in a county after accounting for the resources available to that county for prevention and treatment of substance abuse and bloodborne infection.

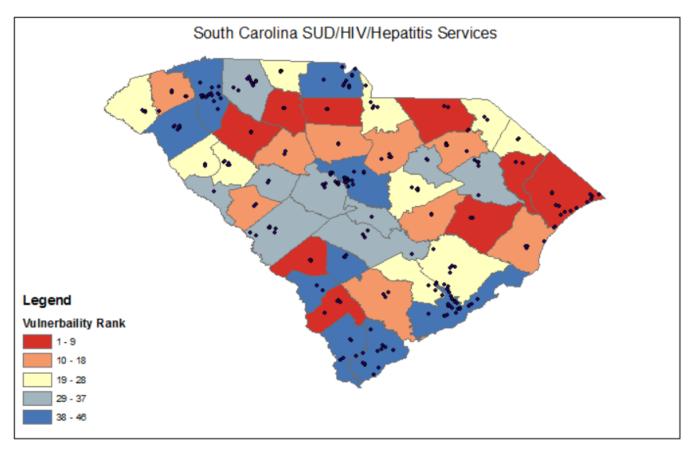
#### Comments

The above map displays the overall Vulnerability Rank for each county in the state of South Carolina. Risk factors and mitigating factors were considered in producing the ranks for each county. The most vulnerable counties identified based on this approach, in order, are: Williamsburg, Hampton, Horry, Marion, Union, Chesterfield, Chester, Laurens, and Barnwell. The least vulnerable counties according to 2018 data, in order, are: Charleston, Beaufort, Richland, Greenville, Bamberg, Anderson, Jasper, Allendale, and York. It is most likely assumed that all the counties that are most vulnerable or least vulnerable have many factors in common. However, when considering a county like Horry, one of the most vulnerable counties, its coastal geography, high in population, and tourism economy contrasts starkly with Union county, a land-locked rural county with a manufacturing-based economy. Counties adjacent to Horry are suspected to be highly vulnerable due to their proximity to Horry and the I-95 interstate highway. The cluster of Union, Chester and Laurens counties is near one of the least

vulnerable counties, York. This could be a factor of lack of resources to deal with possible overflow of HIV incidence and drug related crime in the highly populated York county and Charlotte metropolitan area. Within the least vulnerable counties, there is a common theme associated with most: Charleston, Richland, Greenville, and York are some of the highest per capita income counties in the state. They also have an abundance of resources to mitigate the impact of an HIV/HCV outbreak and address substance abuse disorders. Counties with low vulnerability scores, such as Charleston, may have high rates of drug crime or other risk factors but also have large numbers of police officers and medical personnel and substance abuse clinics. When discussing vulnerability among the counties in South Carolina, it is important to not only identify which counties are most vulnerable, but also try to identify what is contributing to these counties' vulnerability. Further maps (Part III: Technical Notes, Indicator Maps) go into more detail on the contributing factors of the ranking system.

## Part II: Resource Inventory, Resource Gaps, and Jurisdictional Plan

# 2.a. Resource Inventory



\*Resources reflect those available as of September 2019; for interactive map and full contact information for state-acknowledged HIV, HCV, sexually transmitted disease, and substance use disorder testing and treatment facilities, please visit <u>gis.dhec.sc.gov/HIVLocator/</u>.

The map above shows where the listed services are available across South Carolina in relation to vulnerability status:

- HIV testing (HIV tst)
- HIV treatment (HIV trt)
- HIV linkage and re-engagement services (HIV link)
- HCV testing (HCV tst)
- HCV treatment (HCV trt)
- Substance Use Disorder treatment (SUD trt)

For a complete listing of each agency/provider, location, and specific services provided, please see Appendix 1 – Resource Inventory.

#### 2.b. Resource Gaps

As a country, every state has different challenges. This also applies at the county level, and South Carolina has a surplus of evidence to show this. With no true metropolitan areas, rurality is common and the disbursement of these areas into every sector of the state is uneven, as shown by this project and the generated maps. A large proportion of the counties that were identified as highly vulnerable were resource deprived: they had fewer available services, lower proximity to populationdense areas, and lower per capita income. For example, the counties identified as having the greatest risk have an average rural percentage of 56.8 and five of the nine counties are classified as being 50% or more rural. Further, the per capita income among the most vulnerable counties is on average \$18,769 compared to an average \$27,550 per capita income among the least vulnerable counties.

The state of South Carolina is challenged by the distribution of its populace and lack of adequate services within reasonable reach of its residents. This study provides evidence that living in a rural area and having a low income can contribute to an increased risk for HIV and HCV acquisition due to opioid use. Allocation of resources to the areas identified should be prioritized, due to the lack of access and availability of preventative programs and treatment options.

#### **Jurisdictional Plan**

#### 2.c. Strategy Recommendations

#### Increased Naloxone distribution and overdose patient follow up

Naloxone (often identified by the brand names Narcan<sup>®</sup> and Evzio) is a medication used to treat opioid (including heroin, morphine, oxycodone, etc.) overdoses. It is an opioid antagonist that works by temporarily blocking opioid receptor sites in the nervous system. Naloxone can be administered by injection (intramuscular, subcutaneous, or intravenous) or intranasal spray. Multiple doses can be used safely if the primary dose does not restore respiratory function, and naloxone has no effect if the person has not used opioids. This versatility allows nonmedical respondents, such as police officers or family members, to easily and effectively use naloxone when an overdose occurs. Given the ease of administration and safety of ingestion, naloxone has become a primary treatment of opioid overdose.

Beginning in 2016, federal funding from the Substance Abuse and Mental Health Services Administration (SAMHSA) via DAODAS expanded S.C.'s naloxone distribution to law enforcement officers through the LEON (Law Enforcement Officer Narcan) program, which provides Narcan to police officers and trains them on opioid overdose identification, treatment, and reporting. Since implementation in 2016, the LEON program has trained and equipped 10,705 officers across 228 agencies, and they continue to expand; total Narcan administrations equal 1,718 among 1,605 persons treated, with an estimated 95.0% successful rate of opioid overdose reversal. 2020 Narcan administrations currently tally at 544 (as of September 17, 2020), which is a 30% increase in administration over the same period in 2019. Fire departments across the state also have the option of enrolling in ROLL (Reducing Opioid Loss of Life), which provides education, training, and overdose reversal kits. Enrollment in ROLL includes 108 departments with 1,736 firefighters, and in 2020 the program has logged 178 Narcan administrations (as of Sept. 17), which is more than twice the total number of ROLL administrations during the entire year in

2019 (n=72). All training and supplies are fully funded to maximize utilization among the state's emergency services.

Another program being implemented in South Carolina is the Community Outreach Paramedic Education (COPE) program, a joint effort between paramedics and law enforcement that is focused on facilitating entry into treatment programs for patients who survived an overdose event. After a Narcan administration or opioid overdose-related hospital discharge, a paramedic and police officer follow-up with the overdose survivors at their residence to educate them and any household members on substance abuse treatment options. If the person is willing to enter treatment that day, they are escorted to a treatment facility and enrolled immediately, which removes the barrier of waiting that prohibits many from entering treatment (MacMaster 2005; Redko, Rapp & Carlson 2006). Originally begun a joint project between S.C.'s DAODAS and DHEC, DHEC is hoping to expand the program by enrolling more agencies after evaluating the 2019 statistics on treatment utilization.

To further the accessibility of naloxone, The South Carolina Overdose Prevention Act was passed in 2015, laying the foundation for South Carolina to apply for federal funds to distribute naloxone on a population scale and pass good Samaritan laws. In 2016, DAODAS received federal funding for the Overdose Prevention Project, which allowed prescribers to issue standing orders of naloxone for first responders and persons with OUD plus their caregivers and prevented criminal prosecution for those administering naloxone in perceived overdose situations. **By 2017, a joint protocol signed by the SC Board of Medical Examiners and the SC Board of Pharmacy) authorized any pharmacist practicing and licensed in SC to dispense Naloxone to persons without a prescription; this allows anyone to legally obtain naloxone as a preventative measure.** The benefits of the described legislation would be maximized by increasing awareness of naloxone's availability to the community at large, as the public remains confused on the legality of obtaining and using naloxone; further promotion of the public awareness campaign at justplainkillers.com on naloxone's availability and use would decrease ambiguity regarding the legality of naloxone possession, encourage education on naloxone administration techniques, and promote procurement among citizens concerned about family and friends currently abusing opioids.

In May 2018, the S.C. Overdose Prevention Act was amended to allow organizations that provide substance use disorder services and assistance to apply for designation as Community Distributors of naloxone. Under the new law, any organization that is interested in providing naloxone to the public as part of their counseling, advocacy, harm reduction, or drug and alcohol screening and treatment services may apply to S.C.'s Department of Alcohol and Other Drug Abuse Services (DAODAS) is designated as a Community Distributor of Narcan and they have 32 counties AOD sites that are community distributors of Narcan. DHEC regional pharmacies serve as the pharmacy hubs to receive the Narcan and to then ship to county agencies (as is required by law). Community distributors can acquire quantities of naloxone without the need for the medication to be patient specific.

#### Increased medicated assisted treatment (MAT) access, particularly in rural areas

Medication-assisted treatment (MAT) for opioid use disorder, including opioid substitution therapy (OST), helps curtail transmission of HIV and HCV among PWID by replacing injection opioid use with administration of controlled level medication that alleviates withdrawal symptoms and psychological cravings. **MAT is not simply replacing one drug for the other; rather, MAT allows for the cessation of illicit drug use while minimizing the negative physical and psychological consequences of** 

#### withdrawal and usually includes additional therapy and behavioral modification strategies.

Administration of MAT is closely supervised by a physician and may continue for as long as deemed necessary.

There are three medications currently approved for MAT of OUD: methadone, buprenorphine, and naltrexone. Each medication offers its own benefits and drawbacks. Methadone has been used for decades to successfully treat substance abuse disorders and is the only MAT option approved for use in pregnant and breastfeeding women. The biggest concern with methadone MAT is that methadone itself can become addictive, so administration (oral) is closely monitored (at least initially) and requires physical presence at a Substance Abuse and Mental Health Services Administration (SAMHSA)-certified opioid treatment program (OTP). This inhibits use among rural and poor populations, where daily transportation to and from the OTP site is unfeasible. Since methadone is the only option for pregnant and breastfeeding women and some patients require high levels of supervision during treatment, increasing the number of OTPs offering methadone in rural and suburban settings should be a priority.

Naltrexone is another MAT treatment option and can be dispensed by any health care provider authorized to prescribe medications. For OUD, it is commonly administered as an extended-release injectable but requires a full 7-10 days of detoxification from opioids and may result in life-threatening conditions if drugs or alcohol are taken while on naltrexone. This is because naltrexone does not activate opioid receptors in the nervous system, as methadone and buprenorphine do, but blocks them; this can increase sensitivity to previously tolerable levels of opioids and alcohol. Therefore, close supervision of patient intake is required for naltrexone use and may not be a good option for patients with multiple relapse episodes or unstable conditions. In conjunction with therapy and good social support, naltrexone is a safe (non-habit forming) option for OST and should be promoted as part of a comprehensive recovery plan.

The last FDA-approved medication to treat OUD is buprenorphine. While the chemical effects of buprenorphine are like those of methadone, buprenorphine has been approved for both prescribing and dispensing outside of certified OTPs; this greatly increases the availability and convenience of MAT to those with OUD in rural and suburban settings. Because buprenorphine is an opioid partial agonist which can produce the euphoric effects of opioid drugs, it has potential for misuse and abuse. To counteract this, buprenorphine is often combined with naloxone into tablets that when taken orally can safely satisfy cravings while blocking withdrawal; injection of crushed pills, however, results in onset of withdrawal and acts as a deterrent to misuse.

Currently, the federal government requires registration of health care professionals with SAMSHA's Center for Substance Abuse Treatment (CSAT) prior to any buprenorphine treatment. Registration for buprenorphine waivers is an approval process, and practitioners must wait up to 45 days after application submission for final determination. Once approved, the number of patients receiving buprenorphine from the provider is limited to 30; waivers to increase the number of patients receiving buprenorphine can be applied for after a year from the date of the initial application. **Amendments to the current process, including shorter physician approval times and waiver distribution based on need and utilization, could increase timely access to care in areas where it is most needed, particularly in rural and underserved parts of the state. The South Carolina Office of Rural Health (SCORH) is using monies from the Rural Communities Opioid Response Program implementation grant to coordinate the expansion of MAT providers and services, tandem psychosocial**  interventions, and cost-coverage of medication and treatment with several state agencies to better serve South Carolina's rural populations.

## Introduction of syringe service programs (SSPs) in South Carolina

Syringe service programs (SSPs), also known as needle and syringe programs (NSPs), are an evidence-based intervention that provides education and materials to reduce the risk of transmission of bloodborne infections among PWID. According to the latest CDC statistics, injection drug use is the most common risk factor identified in new HCV diagnoses and is a reported risk factor in approximately 10% of new HIV/AIDS diagnoses. Both the U.S. Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) acknowledge SSPs are a key component of comprehensive strategies aimed at treating substance abuse disorders and preventing the spread of infectious disease through injection drug use (USDHHS 2019, CDC 2019). Services offered by SSPs include, but are not limited to:

- Sterile needle and syringes, safe equipment disposal, education, and counseling
- HIV, HCV, and sexually transmitted disease screenings
- Naloxone for overdose reversals, treatment referrals, medical care, and mental health services
- Vaccination services and pre-exposure/post-exposure prophylaxes (Prep & PEP)

Thirty years of scientific literature show that SSPs are safe and effective at preventing bloodborne disease transmission and engaging PWID in treatment services at a cost savings to taxpayers; there is no evidence that SSPs promote illegal drug use or crime (CDC 2019).

In January 2019, CDC verified that South Carolina is at high-risk for HIV and HCV outbreaks due to increased opioid use and unsafe drug injection practices across the state; they recommended the establishment of SSPs as part of the state's public health intervention for these co-occurring epidemics. However, SSPs are currently illegal to operate in South Carolina. According to Article 7, Sections 44-53-391 of South Carolina Code of Laws it is unlawful to "manufacture, possess, sell, or deliver ... paraphernalia" (including hypodermic needles and syringes) or provide "instructions, written or oral, with the [paraphernalia] concerning its use" or any other "descriptive materials accompanying the [paraphernalia] which explain or depict its use." Section 44-53-930 of the same Article stipulates that hypodermic needles and syringes be sold only by "registered pharmacists or registered assistant pharmacists through a permitted pharmacy" or "persons lawfully selling veterinary medicines." If state law were amended, South Carolina DHEC and DAODAS are prepared to submit federal funding applications that specifically request monies for the establishment of SSPs as part of comprehensive community-based interventions addressing both opioid and bloodborne infection epidemics in accordance with CDC guidance.

A recent (December 2019) policy brief titled "Addressing the Opioid Epidemic and Preventing the Spread of Infectious Disease Through the Provision of Syringe Services Programs" drafted by the South Carolina Institute of Medicine & Public Health (SC IMPH) explains the interrelatedness of the opioid, HIV, and HCV epidemics currently affecting South Carolina and highlights the many ways SSPs attenuate all three problems at savings to the state. To read the full report, please visit <a href="http://imph.org/wp-content/uploads/2019/12/PolicyBrief\_OpioidEpidemicInfectiousDisease.pdf">http://imph.org/wp-content/uploads/2019/12/PolicyBrief\_OpioidEpidemicInfectiousDisease.pdf</a>.

#### Increased Hepatitis C testing

Previous HCV screening recommendations only covered specific populations at increased risk of hepatitis C infection. In response to the increased cases of HCV observed nationally, the US Preventive Services Task Force (USPSTF) released a new screening recommendation in March 2020 advocating for one-time HCV testing for all American adults ages 18-79, and repeat testing for high-risk groups. They recognize that the most important risk factor for HCV is injection drug use, and that the national opioid epidemic has spread HCV to previously low-risk populations.

Treatment options have improved, and early treatment is more cost-effective; increasing HCV testing in South Carolina is the first step to reducing the spread and eventually eradicating HCV in the state. Current surveillance methods of HCV do not differentiate between acute and chronic types well and reporting of both has been limited. Educating primary care providers on the symptoms of acute HCV, risk factors for HCV transmission, and benefits of early detection would improve state surveillance and, over time, decrease the number of new infections. SC DHEC is also funding a pilot program for rapid HIV/HCV testing among persons who are administered naloxone; rapid testing takes 1-5 minutes and helps health officials identify those potentially spreading the infection among PWID. **Ultimately, integration of HCV testing into standard blood panels across SC healthcare systems would identify more hepatitis C cases and provide more opportunities to link HCV+ persons to treatment and care resources.** 

# Part III: Technical Notes

## 3.a. Stakeholder Input

-	SC Vulnerability Assessment	- Stakeholders (Internal & External)
	Stakeholder	Organization
	Ali Mansaray	DHEC - STD/HIV & Viral Hepatitis
	Andrew Fogner	DAODAS - Epidemiologist
	Antony Price	DHEC - STD/HIV, Intervention Specialist
	Arnold Alier	DHEC - EMS &T
	Brittany Vannort	SC Harm Reduction CoAl - Director of Outreach
	Claire Youngblood	DHEC - Acute Disease Epi, Research Analyst
	Clayton Catoe	Lancaster EMS
	Daniela Nitcheva	DHEC - Vital Statistics
	Danielle Henderson	DHEC - Health Improvement
	Demetria Carswell	SCDHHS - Director of Enterprise Reporting
	Elona Rhame	DHEC - Immunization
	Emma Kennedy	DHEC - STD/HIV, HIV Surveillance Coordinator
	Harley Davis	DHEC - PHSIS
	Jim Maxwell	DAODAS - Statistician
	Joe Lane	Sumter Police - Sgt.
	Keneisha Whittington	DHEC - STD/HIV, HS
	Kennard DuBose	DOC - Behavioral/Mental Health & Substance Abuse Services
	Kenneth Polson	DHEC - EMS &T
	Khosrow Heidari	DHEC - Drug Control, Senior Epidemiologist
	Linda Bell	DHEC
	Linda Brown	DAODAS
	Marya Barker	DHEC- Acute Disease Epi
	Maurice Adair	AID Upstate, Prevention Coordinator
	Melanie Davis	DOC - Infection Control Officer
	Natalia Rice	SLED - SCIBRS
	Pam Davis	DHEC - STD/HIV, Lab Consultant
	Teresa Foo	DHEC - Immunization
	Terri Stevens	DHEC - Surveillance & Technical Support
	Thomas VanDemark	Myrtle Beach Fire Dept.
	Victor Grimes	DHEC - EMS &T
	Zakiya Grubbs	DHEC - STD/HIV, CDC Assignee (HCV)
	Sazid Khan	DAODAS
	Kenric Ware	South Univeristy
	Kabra Benford	ECCHC
	Divya Ahuja	USC Med School
	Eric Meissner	MUSC
	Stephen Feetham	SCDHHS
	Nandini Sen	DHEC

Meisha Thomas	CareSouth-Carolina
Susannah Smalls	Opioid Team, DHEC contractor
Katherine Richardson	DHEC
Ronnie Goodman	Wright Wellness Center

**MINUTES:** South Carolina Vulnerability Assessment Stakeholder's Meeting February 25 & July 16, 2020

- Introductions
  - Welcome to all the new participants and welcome back to all the returning ones!
  - Josh Mercadel has been moved to Ending the Epidemic efforts and no longer handles VA data or presentations (February 25,2020)
- Survey
  - Pre-involvement survey was administered to the in-person participants to get baseline knowledge and assess post-involvement satisfaction (February 25,2020)
  - Survey can be completed by those unable to attend (see attached in email) and submitted to Lara (<u>schneilr@dhec.sc.gov</u>) (February 25,2020)
  - Post-involvement survey was administered virtually- plan to complete it again had low survey completion rate (n=4 July 16, 2020)
- Briefly reviewed VA methodology
  - Methodology
    - Due to modelling issues, went with a Social Vulnerability approach
    - Identified 'indicator variables': data with known relationship to drug use, HIV incidence/prevalence/transmission, HCV incidence/prevalence/transmission, medical and emergency services, and treatment/prevention services for drug use/HIV/HCV
    - Calculated scores for 3 domains: risk, mitigation, and overall vulnerability
      - Risk: included 12 variables with association to drug use/HIV/HCV (for list of variables, see PowerPoint)
      - Mitigation: included 12 variables with association to treatment/prevention of drug use/HIV/HCV (for list of variables, see PowerPoint)
      - Overall Vulnerability: Risk score Mitigation score; high scores a function of more risks and fewer mitigators
  - Results (for full results, see PowerPoint)
    - **2017** 
      - Risk ranks
      - Mitigation Ranks
      - Overall Vulnerability
        - 1. Williamsburg
        - 2. Hampton

- 3. Marion
- 4. Georgetown
- 5. Horry
- 6. Lee
- 7. Chester
- 8. Lancaster
- 9. Union
- **2018** 
  - Updated data to 2018 and replaced % and counts with rates, when able
  - New variables changed rankings, significantly in some cases (see slides)
    - 1. Williamsburg
    - 2. Hampton
    - 3. Horry
    - 4. Marion
    - 5. Union
    - 6. Chesterfield
    - 7. Chester
    - 8. Laurens
    - 9. Barnwell
  - Will be reviewing variables one-by-one to ensure scoring most accurately reflects areas of high drug use, HIV, HCV
- Jurisdictional Plan
  - Part of report that prioritizes problems and offers solutions
  - Analysts' priority suggestions:
    - 1. Increased Naloxone distribution
    - 2. Increased access to medicated assisted treatment (MAT)
    - 3. Introduction of syringe service programs (SSPs)
    - 4. Increase HCV testing
  - Further suggestions provided on slides
- Dissemination
  - Previous efforts
    - Online posting to justplainkillers.com
    - SHAPE Upstate meeting (Oct 9)
    - SC HIV, STD, Viral Hepatitis Conference (Oct 16)
    - PeeDee Regional Managers meeting (Nov 12)
    - Data Walks (various)
    - Still planning
    - Future scheduled efforts
      - Upstate Regional Managers mtg. (3/17)
      - Governor's Opioid Summit (3/25- cancelled due to COVID-19)
      - Viral Hepatitis Committee mtg. (3/31)

- SCPHA conference (4/22- cancelled due to COVID-19)
- Data Walks (various)
- Dissemination materials
  - Resource Guides
    - Suggested compiling several available resources (e.g., DHEC HIV/HCV/STD treatment locator, SAMHSA resource locator) for a comprehensive substance use disorder/HIV/hepatitis resource list
      - Feedback
        - Need to implement procedures for assuring up-to-date and accurate info (possibly subcommittee or specific point people to verify)
        - o Creating interactive GIS-based service locator map
  - Fact Sheets
    - Intended to be short and simple data highlights
      - Feedback
        - Different fact sheets for different audiences (e.g. decision makers vs. persons who abuse substances or have HIV/HCV)
        - Distill to 1 page for ease of reading
  - Funding Opportunities
    - VA analyst will proactively look for funding opportunities for stakeholders targeted at prevention and treatment of substance abuse, HIV, hepatitis
- Requests for data
  - If you or anyone you work with needs or wants more information, please email Samira Khan (<u>khans1@dhec.sc.gov</u>)

NOTE: Due to COVID-19 several conferences and state level meetings were cancelled, we had one stakeholders' meeting on July 16, 2020. In this meeting we provided a brief overview of 2018 VA report; show comparison between 2017 and 2018 data and county rankings and we conducted a post-involvement survey virtually. We had a low survey completion rate, so we plan to conduct this survey again in future. We have updated annual report with 2018 data and created flyers and other educational materials to help our stakeholders help us disseminate information during this pandemic.

We would like to specifically acknowledge our Stakeholders for donating their time, expertise, and energy on this project; their contributions were invaluable, as is their commitment to reducing substance abuse and bloodborne infection transmission.

## 3.b. Methods

The 2018 South Carolina Vulnerability Assessment (SC VA) the second iteration of this analysis and follows the pilot study funded on NCHHSTP's Opioid Crisis CoAg grant (Grant TP18-1802-Opioid Supplemental) and guided by the Centers for Disease Control and Prevention. The intended methodology for the pilot study was meant to closely follow that of Van Handel, et al. (2016) and Rickles, et al. (2017), who used counts of acute hepatitis C virus (HCV) as a proxy for injection drug use in Poisson regression analyses to predict counties with high risk of injection drug use (IDU) and incident human immunodeficiency virus (HIV) and HCV infections resulting from needle sharing among persons who inject drugs (PWID). Due to issues with model fit and questions of data quality, a social vulnerability approach was used instead.

The Social Vulnerability Index (SVI) was created to identify socially vulnerable populations and rank US census tracts according to their ability to respond to and recover from a disaster (natural or otherwise) based on the resident population's demographics. It ranks four domains (Socioeconomic Status, Household Composition & Disability, Minority Status & Language, Housing & Transportation) based on 2-5 demographic indicators in addition to Overall Vulnerability, which aggregates all the indicators into a single summary rank. A complete description of the Social Vulnerability Index methodology is detailed in the 2011 article by Flannagan et al.

This vulnerability index serves a similar purpose, in that it identifies geographic areas at risk for the specific disasters of overdose and bloodborne infection outbreaks based on each area's resident population, precipitating events, and available aid services. The Overdose and Bloodborne Infection Index (OBII) includes 2 domains, one to quantify and rank each SC county's risk of overdose and one to quantify and rank each SC county's services and ability to prevent and treat overdose and bloodborne infection. When approached this way, overall vulnerability become a function of how high a county's risk is minus how may services to prevent and treat are in that county:

## Overall Vulnerability = Risk Factors – Mitigating Factors

We felt it important to have an equal number of risk factors and mitigating factors, so that in theory, a county's overall vulnerability could be 0, representing a situation where a county's risk of overdose and bloodborne infection outbreak is equal to its ability to treat such events. It is also important to note that a negative vulnerability score is also possible; this indicates that a county's ability to respond to an outbreak event is greater than its risk.

Twenty-six variables thought to quantify risk and prevention/treatment capacity were pulled at the county level from mostly publicly available sources; hospitalization data and internal SC Department of Health and Environmental Control (DHEC) data were obtained with permission through data sharing agreements. Table 1 lists all the variables included in the SC VA, where the data was obtained, and the year data was collected. The decision to include each of these variables was thoroughly considered in the pilot study; the 2020 analyses used the same variables for comparison between the results.

Indicator	Source	Type & Year
Percent Unemployed	ACS	%, 2018
MME per capita	SCRIPTS	Rate, 2018

Drug Deaths per 100,000	SC DHEC – Vital Statistics	Rate, 2018	
HIV Incidence per 100,000	SC DHEC - STD/HIV/AIDS	Rate, 2018	
Percent Overdose due to	RFA	%, 2018	
Opioids			
Naloxone per 100,000	RFA	Rate, 2018	
Drug Crime per 100,000	SLED	Rate, 2018	
Endocarditis per 100,000	RFA	Rate, 2018	
Acute HCV per 100,000	SC DHEC – STD/HIV/AIDS	Rate, 2018	
Percent Rural	CHR	%, 2018	
HCV HIV Difference per 1,000	Derived from SC DHEC - STD/HIV/AIDS	Rate difference, 2018	
Opioid Medicaid per 100,000	SAMHSA	Rate, 2018	
IDU HIV prevalence per 100,000	SC DHEC - STD/HIV/AIDS	Rate, 2018	
Per Capita Income	ACS	Population Average, 2018	
Substance Abuse Clinics per 100,000	SAMHSA	Rate, 2018	
EMS personnel per 100,000	SC DHEC - EMS	Rate, 2018	
Population Density	ACS	Raw count, 2018	
Mental Health Providers per 100,000	SAMHSA	Rate, 2018	
Buprenorphine-waivered Drs per 100,000	SAMHSA	Rate, 2018	
Law Enforcement Officers per 100,000	SLED	Rate, 2018	
Hospitals/ED per 100,000	SCHA	Rate, 2018	
Primary Care Providers per 100,000	SAMHSA	Rate, 2018	
Highway	SC DOT	Dichotomous (Y/N), 2019	
Urgent Care per 100,000	SolvHealth urgent care registry	Rate, 2018	
Opioid Treatment Clinics per 100,000	SAMHSA	Rate, 2018	
Mental Health Clinics per 100,000	SAMHSA	Rate, 2018	
Abbreviations: ACS=American Community Survey, CHR=County Health Rankings, RFA=SC Revenue and Fiscal Affairs Office, SAMHSA=Substance Abuse and Mental Health Services, SC DHEC=South Carolina Department of Health and Environmental Control, SC DOT=South Carolina Department of Transportation			

The decision to include each indicator was a combination of evidence from the Poisson and Negative Binomial exploratory regressions (i.e., magnitude of beta coefficient) from the pilot study, stakeholder input (i.e., singled out as important to include), and logistic considerations (i.e., reciprocal variables). While not a perfect reciprocal match, each risk factor identified as important by either Stakeholders or analyses was then matched with a mitigating factor that would counteract that risk. For example, the risk 'Drug Crime per 100,000 population' was matched with 'Law Enforcement Officers per 100,000 population'. This was done to approximate balance across the risks and mitigators. The list of Risks, along with their Mitigating counterparts is below. Table 2: Matched Risk to Mitigator Variables

Risks	Mitigators
% Unemployed	Per Capita Income
Rx Drugs per 100,000	Substance Abuse Clinics per 100,000
Drug Deaths per 100,000	EMS personnel per 100,000
HIV Incidence per 100,000	Population Density
% Overdose due to Opioids	Mental Health Providers per 100,000
Naloxone per 100,000	Buprenorphine-waivered Drs per 100,000
Drug Crime per 100,000	Law Enforcement Officers per 100,000
Endocarditis per 100,000	Hospitals
Acute HCV per 100,000	Primary Care Providers per 100,000
% Rural	Highway (Y/N)
HCV HIV Difference	Urgent Care (Y/N)
Opioid Medicaid per 100,000	Opioid Treatment Clinics per 100,000
IDU HIV prevalence per 100,000	Mental Health Clinics per 100,000

In order to rank each county on its risk, mitigation, and overall vulnerability, the decision was made to calculate a z-score for each variable by county. A z-score is a standardized score that relates each county's indicator value to how many standard deviations away it is from the indicator's mean value. The formula is shown below:

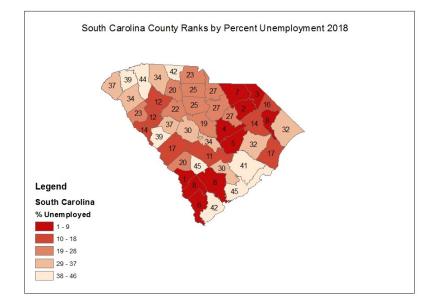
$$Z = \frac{x - \bar{x}}{s}$$

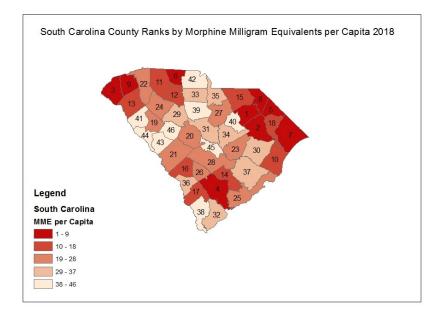
Where x equals the county's indicator value, x bar equals the mean indicator value for all counties, and s equals the standard deviation of the indicator's distribution. Standardizing each indicator allows for intradomain addition and interdomain subtraction by scaling each variable into a unitless value that represents the direction and relative magnitude of that county to the mean value (with z-scores, the mean always equals zero). Z-scores were calculated for all risk and mitigator indicators, then summed by county to create the Risk and Mitigation scores, respectively. The Overall Vulnerability score was, as stated, simply the Risk score minus the Mitigation score. These scores were then ordered from highest to lowest, with the highest in each category receiving a rank of '1' and the lowest receiving a rank of '46' to convey that the county in each domain with the highest score represented the county with the highest level of risk, resources, and overall vulnerability to overdose and bloodborne infection outbreak. These ranks were then categorized into 'high' (ranks 1-9), 'above average' (ranks 10-18), 'average' (ranks 19-28), 'below average' (ranks 29-37), and 'low' (ranks 38-46) to focus attention on counties with the most risks and/or lowest resources.

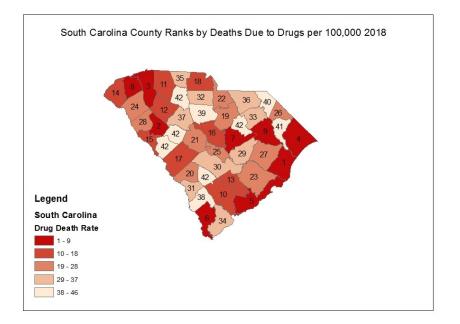
Preliminary analyses and ranks were derived using Microsoft Excel (Office ProPlus); all maps were generated using ArcGIS<sup>®</sup> ArcMap<sup>™</sup> 10.7 (Esri<sup>®</sup>, Redlands, CA).

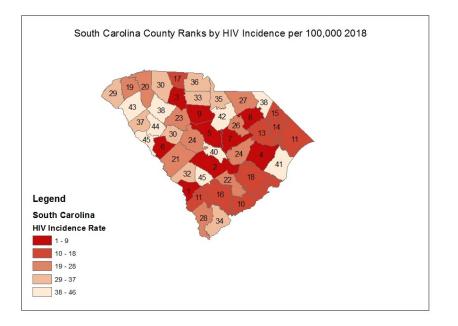
# 3.c. Indicator Maps

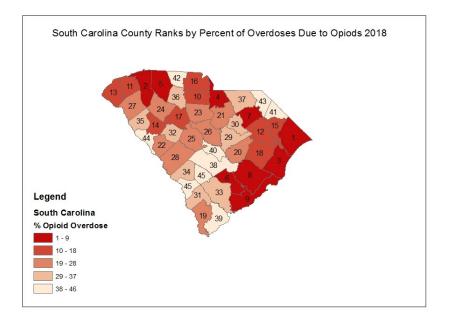
### **Risk Indicators**

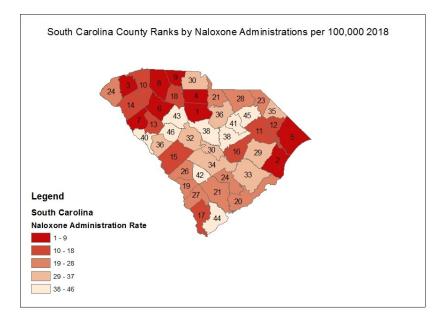


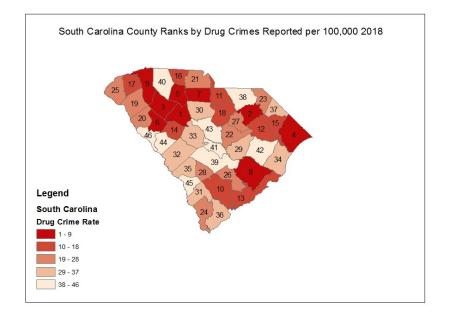


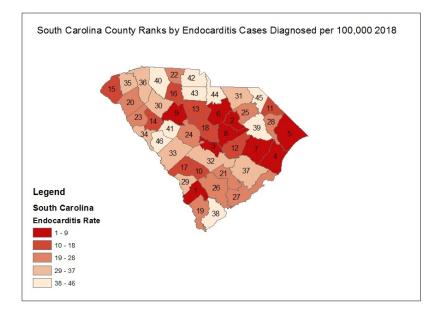


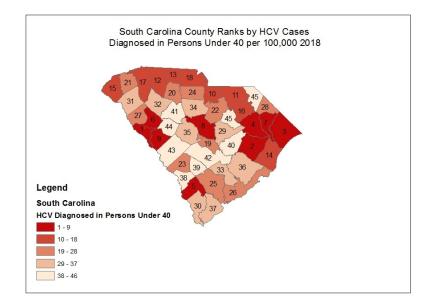


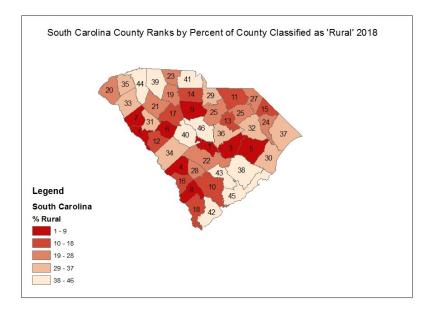


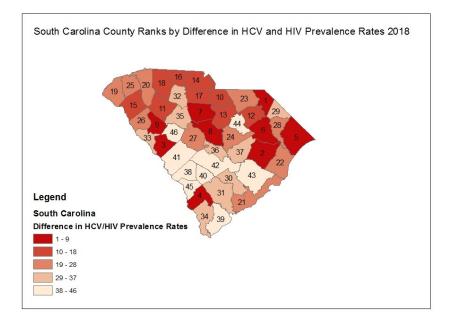


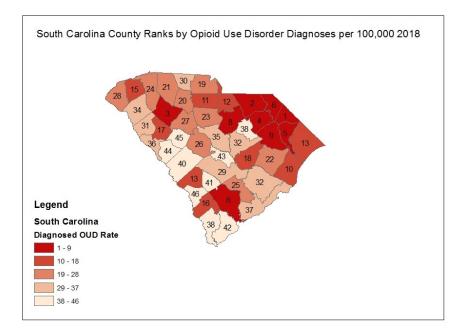


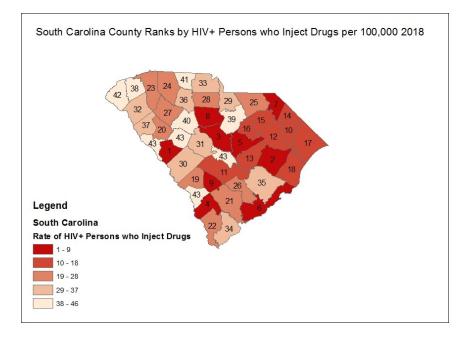




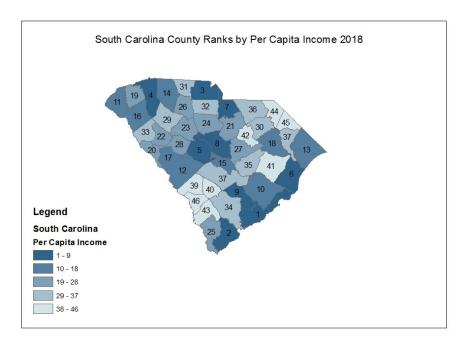


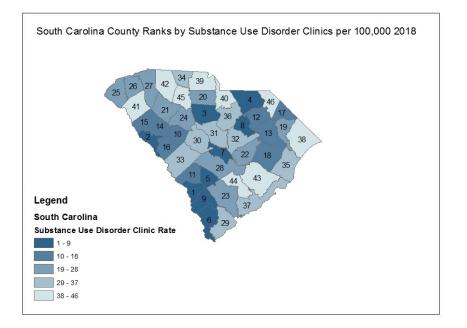


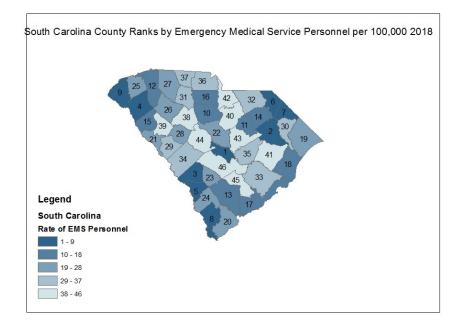


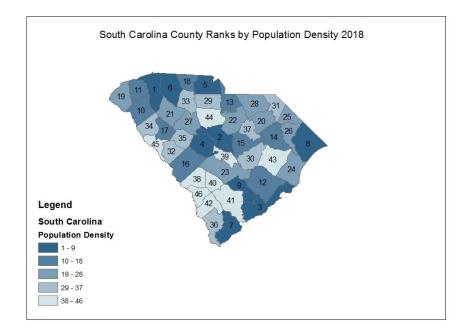


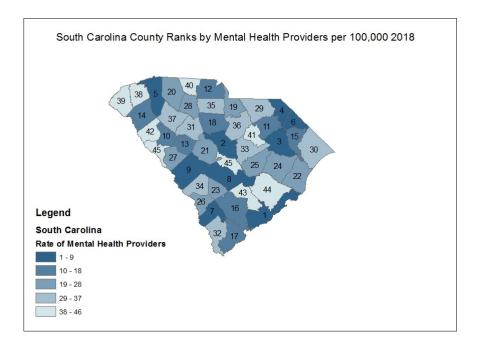
# Mitigation Indicators

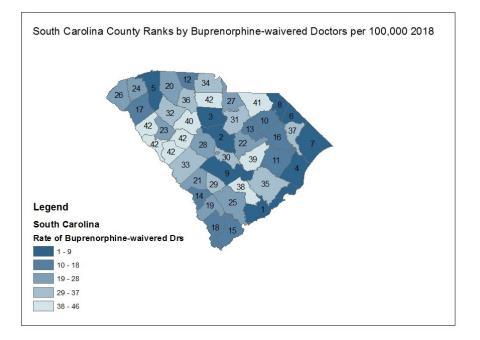


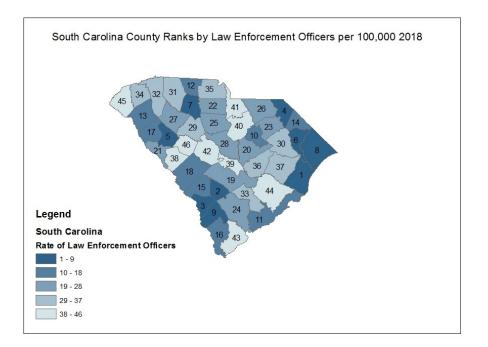


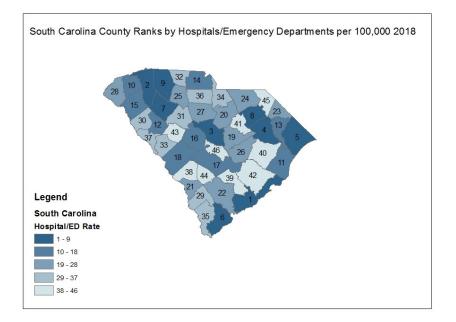


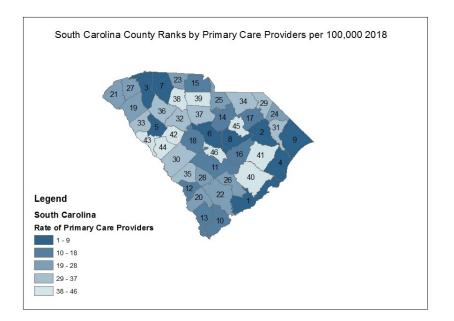


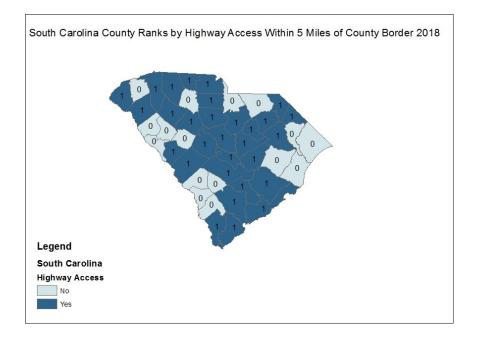


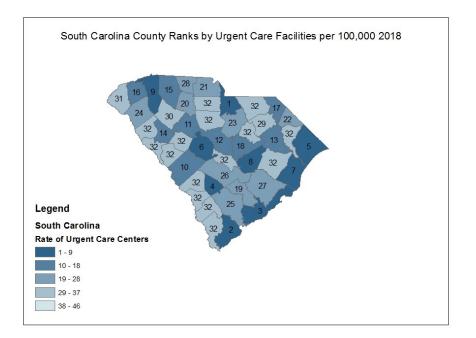


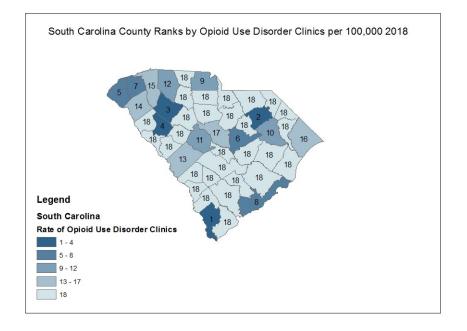


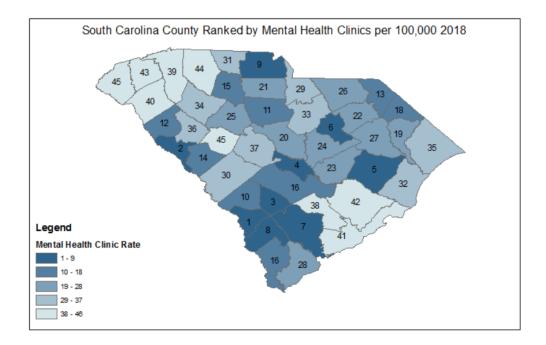












2018						R	ISKS												міт	GAT	ORS						SU	MMA	١RY
Name 🔻	<ul> <li>Unemployed</li> </ul>	MME	<ul> <li>ug Mortality</li> </ul>	<ul> <li>Incidence</li> </ul>	<ul> <li>ug Crimes</li> </ul>	<ul> <li>ioid Overdoses</li> </ul>	<ul> <li>Ioxone Admins</li> </ul>	<ul> <li>docarditis Cases</li> </ul>	▲ ute HCV	<ul> <li>Rural</li> </ul>	VIH - V	<ul> <li>ID Midicaid</li> </ul>	<ul> <li>J among HIV+</li> </ul>	<ul> <li>pulation Density</li> </ul>	r Capita Income	<ul> <li>prenorphine Drs.</li> </ul>	<ul> <li>Trt Centers</li> </ul>	<ul> <li>D Trt Center</li> </ul>	<ul> <li>H Centers</li> </ul>	shway Access	<ul> <li>gent Care</li> </ul>	C.	<ul> <li>H Providers</li> </ul>	spitals/Eds	<ul> <li>lice Officers</li> </ul>	IS personnel	+ ks	<ul> <li>▲ tigators</li> </ul>	<ul> <li>Inerability</li> </ul>
Abbeville	23	41	28	37	20	35	7	23	27	7	26	31	37	34	33	42	18	15	12	Ν	29	33	42	30	17	15	35	41	19
Aiken	17	21	17	21	32	28	15	33	43	34	41	40	30	16	12	33	13	33	30	Y	10	30	9	18	18	34	38	19	35
Allendale	1	36	31	1	45	45	19	29	38	16	45	46	43	46	46	14	18	1	1	Ν	29	12	26	21	3	5	32	8	39
Anderson	34	13	24	43	19	27	14	20	31	33	15	34	32	10	16	17	14	41	40	Y	22	19	14	15	13	4	36	10	41
Bamberg	45	26	42	45	28	45	42	10	39	28	40	41	9	40	40	29	18	5	3	Ν	4	28	23	44	2	23	44	18	42
Barnwell	20	16	20	32	35	34	26	17	23	4	38	13	19	38	39	21	18	11	10	Ν	29	35	34	38	15	3	30	43	9
Beaufort	42	32	34	34	36	39	44	38	37	42	39	42	34	7	2	15	18	29	28	Y	2	10	17	6	43	20	45	6	45
Berkeley	41	37	23	18	8	8	33	37	36	38	43	32	35	12	10	35	18	43	42	Y	24	40	44	42	44	33	42	42	26
Calhoun	34	45	25	40	41	40	30	3	19	1	36	43	43	39	15	30	18	7	4	Y	29	46	45	46	39	1	43	21	37
Charleston	45	25	5	10	13	9	20	27	26	45	21	37	6	3	1	1	8	37	41	Y	3	1	1	1	11	17	29	1	46
Cherokee	42	6	35	17	16	42	9	22	13	23	16	30	41	18	31	12	18	34	31	Y	29	23	40	32	12	37	34	32	27
Chester	25	33	32	33	7	10	4	43	24	14	17	11	28	29	32	42	18	20	21	Y	29	39	35	36	22	16	15	38	7
Chesterfield	7	15	36	27	38	37	28	31	11	11	23	2	25	28	36	41	18	4	26	Ν	29	34	29	24	26	32	19	40	6
Clarendon	5	23	29	24	29	20	16	12	40	3	37	18	13	30	35	39	18	22	23	Y	8	16	25	26	36	35	17	33	16
Colleton	8	4	10	16	10	33	21	26	25	10	31	6	21	41	34	25	18	23	7	Υ	29	22	16	22	24	13	10	25	10
Darlington	2	1	33	8	2	7	45	25	16	25	12	4	15	20	30	10	2	12	22	Y	25	17	11	8	23	14	3	9	12
Dillon	16	5	26	15	37	41	35	11	28	15	29	1	14	25	45	6	18	17	18	Y	19	24	6	23	14	7	12	15	25
Dorchester	30	14	13	22	26	6	24	21	33	43	30	25	26	9	9	38	18	44	38	Υ	18	26	43	39	33	45	31	37	20
Edgefield	39	43	42	6	44	22	36	46	9	12	3	44	1	32	17	42	18	16	14	Y	29	44	27	33	38	29	27	39	11
Fairfield	25	39	39	9	30	23	1	13	34	9	7	23	8	44	24	3	18	3	11	Y	29	37	18	27	25	10	8	13	18
Florence	14	2	9	13	12	12	11	39	4	32	6	9	12	14	18	16	10	13	27	Y	13	2	3	4	30	2	6	4	30
Georgetown	17	10	1	41	34	3	2	4	14	30	22	10	18	24	6	4	18	35	32	Ν	7	4	22	11	1	18	4	7	15
Greenville	44	22	3	20	9	2	10	36	17	44	20	24	23	1	4	5	15	27	39	Y	9	3	5	2	32	12	18	3	43
Greenwood	12	19	2	44	6	14	13	14	6	31	9	17	20	17	22	23	4	14	36	Ν	14	5	10	12	5	39	7	12	21
Hampton	8	17	38	11	31	31	27	1	5	8	4	16	4	42	43	19	18	9	8	Ν	29	20	7	29	9	24	5	29	2
Horry	32	7	4	11	4	1	5	5	3	37	5	13	17	8	13	7	16	38	35	Ν	5	9	30	5	8	19	1	11	3
Jasper	6	38	6	28	24	19	17	19	30	18	34	38	22	36	25	18	1	6	16	Y	29	13	32	35	16	8	26	5	40
Kershaw	27	27	19	42	18	21	36	6	22	26	13	8	39	22	21	31	18	36	33	Y	21	14	36	20	40	40	21	36	14
Lancaster	27	35	22	35	11	4	21	44	10	29	10	12	29	13	7	27	18	40	29	Ν	1	25	19	34	41	42	24	28	22
Laurens	12	24	12	38	3	24	6	30	32	21	11	3	27	21	29	32	3	21	34	Y	26	36	37	7	27	26	9	26	8
Lee	27	40	42	26	27	30	41	2	45	13	44	38	16	37	42	13	18	8	6	Y	29	45	41	41	10	11	41	27	34
Lexington	30	20	21	24	33	25	32	24	35	40	27	26	31	4	5	28	11	30	37	Y	6	18	21	16	42	44	37	17	36
Marion	8	18	41	14	15	15	12	28	7	27	28	5	10	26	37	37	18	19	19	Ν	20	31	15	13	6	30	11	35	4
Marlboro	3	8	40	38	23	43	23	45	45	1	1	6	7	31	44	8	18	46	13	Y	29	29	4	45	4	6	16	20	28
McCormick	14	44	15	45	46	44	40	34		24	33	36	43	45	20	42		2	2	Ν	29	43	45	37	21	21	40	30	33
Newberry	22	29	37	23	1	17	43	9	41		35	27	40	27	23		18	24		Y	11	32	31	31	29	38		34	17
Oconee	37	3	14	29	25	13	24	15	15		19	28	42	19	11	26	5	25		Y	28	21	39		45	9		24	24
Orangeburg	11	28	30	2	39	38	34	32	42		42	29	11	23	37		18	28		Y	23	11	8	17	19	46		23	29
Pickens	39	9	8	19	17	11	3	35	21		25		38	11	19	24	7	26		Ν	16	27	38	10	34		14	31	13
Richland	19	31	16	5	43	26	38	18		46	8	35	3	2	8		17		20	Y	12	6	2	3	28	22		2	44
Saluda	37	46	42	30	14	32	46	41	44	6	46	45	43	35	28	42		10		Ν	29	42	13	43	46	28		46	31
Spartanburg	34	11	11	30	40	5	8	40	12		18	21	24	6	14		12	42		Y	15	7	20	9	31	27		14	32
Sumter	4	34	7	7	22	29	38	8		36	24	32	5	15	27	22	6	32		Y	17	8	33	19	20	43		22	23
Union	20	12	42	3	5	36	18	16	20		32	20	36	33	26		18	45		Ν	29	38	28	25	7	31		45	5
Williamsburg	32	30	27	4	42	18	29	7	2		2		2	43	41	11		18	5	Ν	29	41		40	37	41		44	1
York	23	42	18	36	21	16	30	42	18	41	14	19	33	5	3	34	9	39	9	Y	27	15	12	14	35	36	39	16	38

Table 3: County Ranks for each Risk Indicator, Mitigating Indicator, and Overall Vulnerability

## Appendix 1. Resource Inventory

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Abbeville	Abbeville County Health Department	X				X			x		X	X		
Abbeville	Cornerstone	Х											Х	
Aiken	Aiken County Health Department	Х				Х			Х		х	Х		
Aiken	Palmetto Gastro & Hepatology							х						
Aiken	Aiken Center for Alcohol and Other Drug Services												х	
Aiken	BHG Aiken Treatment Center												х	Х
Aiken	CVS MinuteClinic										Х	Х		
Aiken	CVS MinuteClinic										Х	Х		
Aiken	HopeHealth- Aiken	Х	Х	Х	Х	Х	Х	Х			Х			
Allendale	Allendale County Health Department	Х				х			X		Х	Х		
Allendale	Low Country Health Care System				х									
Allendale	Lowcountry Heath Care Systems			х										
Anderson	Anderson County Health Department	Х				Х			Х		Х	х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Anderson	AnMed Health Gastroenterology Specialists				TEQ	<b>_</b>		×	<u> </u>					
Anderson	AnMed Health Infection Management							х						
Anderson	Southwest Carolina Treatment Center												Х	Х
Anderson	CVS MinuteClinic										Х	Х		
Bamberg	Bamberg County Health Department	Х				Х			Х		Х	Х		
Bamberg	Tri-County Commission on Alcohol and Drug Abuse												Х	
Barnwell	Barnwell County Health Department	х				х			х		х	Х		
Barnwell	Palmetto Gastro & Hepatology							Х						
Barnwell	Axis I Center of Barnwell												Х	
Barnwell	Low Country Health Care System				Х									
Beaufort	Leroy E. Browne Medical Center	х	Х	Х										
Beaufort	Elijah Washington Medical Center	х	Х	Х										
Beaufort	Port Royal Medical Center	Х	Х	Х										
Beaufort	Beaufort County Health Department- Main Office	х				Х			Х		Х	х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Beaufort	Beaufort County Health Department- Bluffton	Х				х			х		Х	Х		
Beaufort	Beaufort Memorial Lowcountry Medical Group							х						
Beaufort	HH Gastroenterology							Х						
Beaufort	Coastal Gastroenterology- Bluffton							Х						
Beaufort	Coastal Gastroenterology- Hilton Head							х						
Beaufort	Medical Associates of the Lowcountry Gastroenterology- Hardeeville							X						
Beaufort	Medical Associates of the Lowcountry Gastroenterology- Beaufort							x						
Beaufort	Good Neighbor Free Medical Clinic of Beaufort							Х						
Beaufort	Beaufort County Alcohol and Drug Abuse Department												х	
Beaufort	CVS MinuteClinic										Х	Х		
Beaufort	CVS MinuteClinic										Х	Х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Beaufort	Ruth P. Field Medical Center (Chelsea)	х	Х	Х										
Berkeley	Fetter Health Care Network- Rose D. Gibbs Health Center	Х	Х		х	Х	Х				Х	Х	х	
Berkeley	Fetter Health Care Network- Elijah Wright Health Center	Х	Х		X	Х	X				Х	Х	Х	
Berkeley	Berkeley County Health Department- Moncks Corner	Х				Х			Х		Х	Х		
Berkeley	Berkeley County Health Department	Х				Х			Х		Х	Х		
Berkeley	Palmetto Digestive Health Specialists- Moncks Corner							Х						
Berkeley	Palmetto Digestive Health Specialists- Moncks Corner							Х						
Berkeley	Palmetto Primary Care Physicians							Х						
Berkeley	Palmetto Digestive Health Specialists- Summerville							Х						
Berkeley	Ernest E. Kennedy Center	Х	Х			Х	Х						Х	
Calhoun	Calhoun County Health Department	х				Х			Х		Х	Х		
Calhoun	Tri-County Commission on Alcohol and Drug Abuse												Х	

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Camden	Kershaw Health				Х									
Charleston	Medical University of South Carolina, Infectious Disease Clinic	х	X		X	Х		x			х	x		х
Charleston	Fetter Health Care Network	Х	Х	Х			X				Х	Х		
Charleston	Palmetto Community Care	Х	Х	Х	Х	Х			Х	Х				Х
Charleston	Charleston Center	Х	Х			Х	Х						Х	Х
Charleston	Medical University of South Carolina			Х										
Charleston	Fetter Health Care Network- Hollywood Health Center	Х	Х	Х	X	Х	Х				Х	X	Х	Х
Charleston	Fetter Health Care Network- Enterprise	Х	Х		X	Х	X				Х	Х	Х	Х
Charleston	Roper St. Francis Healthcare, The Wellness Center	Х		Х	X								X	
Charleston	Charleston County Health Department- Johns Island	Х				Х			х					
Charleston	Charleston County Health Department- Mt. Pleasant	Х				Х			х					
Charleston	Charleston County Health Department- Northwoods	х				Х			Х					

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Charleston	Palmetto Community Care, Truesdale Medical Center			Х							Х	Х		
Charleston	Medical University of South Carolina Women's Health							Х						
Charleston	Charleston Gastroenterology Specialists							Х						
Charleston	Barrier Islands Free Medical Clinic							Х						
Charleston	Medical University of South Carolina, Digestive Disease Center							Х						
Charleston	Digestive and Liver Disease Care							Х						
Charleston	Lowcountry Gastroenterology Associates							Х						
Charleston	Lowcountry Infectious Diseases & Infusion Center- Charleston							х						
Charleston	Palmetto Digestive Health Specialists- Mt. Pleasant							Х						
Charleston	Palmetto Digestive Health Specialists- West Ashley							Х						

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Charleston	Ralph H Johnson VA Medical Center							х						
Charleston	Charleston County Health Department- North Area										Х	х		
Charleston	Crossroads Treatment Center of Charleston												х	Х
Charleston	Center for Behavioral Health South Carolina												х	Х
Charleston	CVS MinuteClinic										Х	Х		
Charleston	CVS MinuteClinic										Х	Х		
Charleston	CVS MinuteClinic										Х	Х		
Charleston	CVS MinuteClinic										Х	Х		
Charleston	CVS MinuteClinic										Х	Х		
Cherokee	Cherokee County Health Department	Х				х			х		Х	х		
Cherokee	Cherokee County Commission on Alcohol and Drug Abuse												х	
Cherokee	Clear Skye Treatment Centers												Х	Х
Chester	Chester County Health Department	Х				х			Х		Х	х		
Chester	Hazel Pittman Center												Х	
Chesterfield	Chesterfield County Health Department	Х				Х			Х		Х	х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Chesterfield	The ALPHA Behavioral Health Center	Х											Х	
Clarendon	Clarendon Behavioral Health Services	Х	Х										Х	Х
Clarendon	Clarendon County Health Department	Х				Х			Х		Х	Х		
Colleton	Fetter Health Care Network- Walterboro	Х	Х		х	Х	Х				Х	Х	Х	
Colleton	Colleton County Health Department	Х				Х			Х		Х	Х		
Colleton	Colleton County Commission on Alcohol and Drug Abuse												х	
Darlington	Darlington County Health Department	Х				Х			Х		Х	Х		
Darlington	Darlington County Health Department- Hartsville Clinic	Х				Х			Х		Х	Х		
Darlington	Rubicon Family Counseling Services	Х											Х	
Darlington	Pee Dee Health Care							Х						
Darlington	Starting Point of Darlington												Х	Х
Darlington	CareSouth Carolina, Care Innovations - Hartsville	Х	Х	х	Х	Х	Х	Х	Х		Х	Х	х	Х

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Darlington	CareSouth Carolina, Care Innovations - Society Hill	х	Х	Х	Х	Х	X	Х			Х	Х		
Dillon	Dillon County Health Department	х				х			х		Х	Х		
Dillon	Trinity Behavioral Care												Х	
Dorchester	Fetter Health Care Network- TJ Bell Family Health Center	Х	X		X	Х	Х				Х	X	Х	
Dorchester	Dorchester County Health Department	х				х			х		Х	Х		
Dorchester	Dorchester Alcohol and Drug Commission	х											х	
Dorchester	Lowcountry Infectious Diseases & Infusion Center- Summerville							X						
Dorchester	CVS MinuteClinic										Х	Х		
Dorchester	CVS MinuteClinic										Х	Х		
Edgefield	Edgefield County Health Department	х				х			х		Х	Х		
Edgefield	Cornerstone												Х	
Fairfield	Fairfield County Health Department	х				Х			Х		Х	Х		
Fairfield	Fairfield Behavioral Health Services												Х	
Florence	HopeHealth Medical Plaza	Х	Х	Х	Х	Х	Х	Х			Х	Х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Florence	Florence County Health Department	X				X			x		×	×		
Florence	Florence County Health Department- Lake City Clinic	Х				Х			х		х	x		
Florence	Carolinas Infectious Disease							Х						
Florence	HopeHealth Palmetto							Х						
Florence	Circle Park Behavioral Health Services												Х	
Florence	Starting Point of Florence												Х	Х
Georgetown	Georgetown County Health Department	Х				Х			х		х	Х		
Georgetown	Georgetown County Alcohol and Drug Abuse Commission	Х											Х	
Georgetown	CVS MinuteClinic										Х	Х		
Georgetown	CVS MinuteClinic										Х	Х		
Georgetown	Tidelands Waccamaw Gastroenterology at Georgetown					Х		X	Х					
Greenville	Gastroenterology Associates							Х			х	Х		
Greenville	AID Upstate	Х	Х	Х	Х	Х	Х	Х			Х	Х		
Greenville	The Phoenix Center	Х	Х										Х	Х

County	Agency		esting	l Care	and nent	Testing	Rapid		Testing				Jse	
		HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Greenville	Greenville County Health Department	Х				x		•	x		X	X		
Greenville	Gastroenterology Consultants of IMA							х						
Greenville	Gastroenterology Consultants of IMA							Х						
Greenville	GHS Gastroenterology & Liver Center							Х						
Greenville	Greenville Health System- Infectious Disease							х						
Greenville	Greenville VA Outpatient Clinic							Х						
Greenville	Greenville Free Medical Clinic							Х						
Greenville	New Horizons Family Health Services				Х									
Greenville	Crossroads Treatment Center of Greenville												X	х
Greenville	Greenville Metro Treatment Center												х	х
Greenville	CVS MinuteClinic										Х	Х		
Greenville	CVS MinuteClinic										Х	Х		
Greenville	CVS MinuteClinic										Х	Х		
Greenville	CVS MinuteClinic										Х	Х		
Greenville	CVS MinuteClinic										Х	Х		
Greenville	CVS MinuteClinic										Х	Х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Greenville	CVS MinuteClinic										Х	Х	•	
Greenwood	Upper Savannah Care Services			Х	Х									
Greenwood	Greenwood County Health Department	Х				Х			х		Х	Х		
Greenwood	Digestive Disease Group PA							Х						
Greenwood	Greenwood Treatment Specialists												Х	Х
Greenwood	Cornerstone												Х	
Hampton	New Life Center	Х											Х	
Hampton	Hampton Medical Center	Х	Х	Х										
Hampton	Estill Medical Center	Х	Х	Х										
Hampton	Hampton County Health Department	х				х			Х		Х	Х		
Horry	CARETEAM+ Family Health and Specialty Care	Х	Х	Х	х	Х	Х	Х						Х
Horry	Shoreline Behavioral Health Services	х	Х			Х	Х						Х	Х
Horry	Horry County Health Department- Conway Clinic	х				Х			x		х	Х		
Horry	Horry County Health Department- Stephen's Crossroad Clinic	Х				Х			X					

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Horry	Horry County Health Department- Myrtle Beach Clinic	х				х			x		Х	X		
Horry	Lowcountry Infectious Diseases & Infusion Center			X				х						
Horry	McLeod Digestive Health Center Seacoast							Х						
Horry	Strand GI Associates							Х						
Horry	Tidelands Waccamaw Gastroenterology at Murrells Inlet							х						
Horry	Center of Hope of Myrtle Beach												Х	Х
Horry	CVS MinuteClinic										Х	х		
Horry	CVS MinuteClinic										Х	Х		
Horry	CVS MinuteClinic										Х	Х		
Horry	CVS MinuteClinic										Х	Х		
Horry	Little River Medical Center	Х	Х	Х		Х		Х	Х		Х	Х	Х	Х
Jasper	New Life Center												Х	
Jasper	New Life Center												Х	
Jasper	Donald E. Gatch Medical Center	Х	Х	Х										
Jasper	Ridgeland Family Medical Center	х	х	Х										

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Jasper	Jasper County Health Department	x		_		x			X		x	X		
Jasper	Medical Associates of the Lowcountry Gastroenterology							X						
Jasper	Recovery Concepts, LLC												Х	Х
Kershaw	The ALPHA Behavioral Health Center												Х	
Kershaw	Kershaw County Health Department	Х				Х			х		х	Х		
Kershaw	Sandhills Medical Foundation- Lugoff	Х	Х	Х	Х	Х		Х			Х	Х		
Lancaster	Lancaster County Health Department	х				Х			х		х	Х		
Lancaster	Catawba Gastroenterology							Х						
Lancaster	Counseling Services of Lancaster												х	
Lancaster	CVS MinuteClinic										Х	Х		
Lancaster	CVS MinuteClinic						1				Х	Х		
Laurens	Laurens County Health Department	Х				Х			х		х	Х		
Laurens	GateWay Counseling Center												х	
Laurens	Clear Skye Treatment Centers												х	Х

County	Agency		esting	Care	and ient	C Testing	Rapid		<b>Festing</b>				lse	
		HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services		Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Lee	Lee County Health Department	X				х			х		х	X		
Lee	The Lee Center												Х	
Lexington	Lexington County Health Department	X				х			х		х	X		
Lexington	Lexington Medical Specialists			Х				Х						
Lexington	Consultants in Gastroenterology- Lexington							Х						
Lexington	Consultants in Gastroenterology & the South Carolina Endoscopy Center							х						
Lexington	Midlands Gastroenterology							Х						
Lexington	Columbia Metro Treatment Center												x	Х
Lexington	Lexington Treatment Specialists												х	Х
Lexington	CVS MinuteClinic	1									Х	Х		
Lexington	CVS MinuteClinic						1				Х	Х		
Lexington	CVS MinuteClinic										Х	Х		
Lexington	CVS MinuteClinic				_						Х	Х		
Lexington	CVS MinuteClinic										Х	Х		
Lexington	LRADAC	Х											Х	

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Marion	Marion County Health Department	Х				Х			х		Х	Х		
Marion	Trinity Behavioral Care	Х											Х	
Marlboro	Trinity Behavioral Care												Х	
Marlboro	Marlboro County Health Department	х				х			х		Х	Х		
McCormick	Cornerstone												Х	
McCormick	McCormick County Health Department	х				х			х		Х	Х		
Newberry	Newberry County Health Department	х				х			х		Х	Х		
Newberry	Westview Behavioral Health Services												Х	
Oconee	Anderson/Oconee Behavioral Health Services	х											Х	
Oconee	Anderson/Oconee Behavioral Health Services												Х	
Oconee	Oconee County Health Department	х				Х			х		Х	Х		
Oconee	Crossroads Treatment Center of Seneca												Х	Х
Oconee	Rosa Clark Medical Center												Х	Х
Orangeburg	HopeHealth- Orangeburg	Х	Х	Х	Х	Х	Х	Х			Х	Х		
Orangeburg	Orangeburg County Health Department	х				Х			х		Х	х		

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Orangeburg	Orangeburg County Health Department- Holly Hill	х				Х			Х		х	Х		
Orangeburg	Tri-County Commission on Alcohol and Drug Abuse (TCCADA)	Х	X								Х	X	x	х
Pickens	Pickens County Health Department	Х				Х			Х		Х	Х		
Pickens	Behavioral Health Services of Pickens County												Х	
Pickens	Recovery Concepts of the Carolina Upstate												Х	Х
Pickens	CVS MinuteClinic										Х	Х		
Pickens	CVS MinuteClinic										Х	Х		
Richland	AIDS Healthcare Foundation/ Grace Medical Group	х	Х	Х	X			X		X	х	X		
Richland	Acercamiento Hispano/Hispanic Outreach	Х			Х	Х								
Richland	University of South Carolina, School of Medicine, Immunology Center			х				X						
Richland	The Joseph H. Neal Wellness Center		Х		Х	Х	х							

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Richland	Richland County Health Department	Х				х			Х		х	х		
Richland	Eau Claire Cooperative Health - Waverly Family Practice			Х	x									
Richland	Associates in Gastroenterology, P.A.							Х						
Richland	Carolina Digestive Disease							Х						
Richland	Columbia Gastroenterology Associates							Х						
Richland	Columbia Gastroenterology Associates							Х						
Richland	Consultants in Gastroenterology & the South Carolina Endoscopy Center Northeast							X						
Richland	Consultants in Gastroenterology- St. Andrews							Х						
Richland	Eau Claire Internal Medicine							Х						
Richland	Midlands Gastroenterology							Х						

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Richland	Palmetto Gastroenterology, P.A.							Х						
Richland	Wm. Jennings Bryan Dorn VA Medical Center							Х						
Richland	Crossroads Treatment Center of Columbia												Х	Х
Richland	CVS MinuteClinic										Х	Х		
Richland	CVS MinuteClinic										Х	Х		
Richland	CVS MinuteClinic										Х	Х		
Richland	CVS MinuteClinic										Х	Х		
Richland	Palmetto AIDS Life Support Services (PALSS)	Х	Х	Х	Х	Х	X	Х	Х					
Richland	LRADAC		Х				Х					Х	Х	
Saluda	Westview Behavioral Health Services												Х	
Saluda	Saluda County Health Department	Х				Х			х		Х	Х		
Spartanburg	Piedmont Care	Х			Х									
Spartanburg	Spartanburg County Health Department	Х				х			Х		Х	Х		
Spartanburg	Spartanburg County Health Department- Point Teen Clinic at Tobias	X				Х			х					
Spartanburg	MGC Medical Affiliates- North Grove			х				Х						

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Spartanburg	Mary Black	Ī	Ŧ	Ξ	H % %	Ĭ	ĔĔ	<u>ゴエ</u> ×	Ť	ĬĻ	μŅ	<u> </u>	ч ц л г	ΣΫ́Τ
Spartanburg	Gastroenterology							^						
Spartanburg	Medical Group of the Carolinas Gastroenterology – Spartanburg							x						
Spartanburg	MGC Infectious Disease – Spartanburg							Х						
Spartanburg	The Forrester Center for Behavioral Health												Х	
Spartanburg	Palmetto Carolina Treatment Center												Х	Х
Spartanburg	BHG Spartanburg Treatment Center												Х	Х
Spartanburg	CVS MinuteClinic										Х	Х		
Spartanburg	CVS MinuteClinic										Х	Х		
SPartanburg	CVS MinuteClinic										Х	Х		
Spartanburg	Spartanburg Regional Healthcare System				х									
Sumter	Sandhills Medical Foundation	Х		Х	Х									
Sumter	Tandem Health	Х		Х	Х									
Sumter	Sumter County Health Department	Х				х			х		х	Х		
Sumter	Sumter Behavioral Health Services	Х											х	

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder Treatment	Medication- Assisted Treatment
Sumter	Palmetto Health-USC Infectious Disease-Sumter							Х						
Sumter	Sumter Gastroenterology							Х						
Union	Union County Health Department	х				Х			х		х	Х		
Union	Healthy U Behavioral Health												Х	
Williamsburg	Williamsburg County Health Department	х				х			х		Х	Х		
Williamsburg	Williamsburg County Department on Alcohol and Drug Abuse	Х											x	
Williamsburg	HopeHealth Kingstree							Х						
York	Affinity Health Center	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
York	Keystone Substance Abuse Services	Х	X										Х	Х
York	York County Health Department- Rock Hill Clinic	Х				Х			x		х	X		
York	York County Health Department- York Health Center	Х				Х			Х		х	X		
York	Digestive Disease Associates of York County							Х						
York	Digestive Disease Associates of York County							Х						

County	Agency	HIV Testing	HIV Rapid Testing	HIV Medical Care	HIV Linkage and Re-engagement Services	Hepatitis C Testing	Hepatitis C Rapid Testing	Hepatitis C Treatment	Hepatitis B Testing	Hepatitis B Treatment	Hepatitis B Vaccination	Hepatitis A Vaccination	Substance Use Disorder	Treatment	Medication- Assisted Treatment
York	York County Treatment Center												Х	X	<
York	Rock Hill Treatment Specialists												Х	×	(
York	CVS MinuteClinic										Х	Х			
York	CVS MinuteClinic										Х	Х			
York	CVS MinuteClinic										Х	Х			

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