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Data Action Resource Team

Central Virginia Community Report

DEVELOPED IN PARTNERSHIP BY



Executive Summary

The Framework for Addiction Analysis and Community Transformation (FAACT) is the Commonwealth of Virginia's premier data analytics platform to tackle the Opioid epidemic and is spearheaded and implemented by the Virginia Department of Criminal Justice Services (DCJS). It consolidates on a single platform national, commonwealth, and local data resources to help its users address the rising tide of Substance Use Disorder (SUD) and addiction in Virginia.

The Central Virginia FAACT Annual Report analyzes a variety of data sources to better understand the effect of substance use disorder on communities.

- Horizon Emergency Custody Order (ECO) data which contains the number of individuals with a suspected mental illness who have been evaluated by a mental health professional and may need to be hospitalized or treated.
- Emergency Medical Services (EMS) data display the demographic breakdown of individuals involved in opioid-related incidents and when the incidents were occurring most frequently.
- Blue Ridge Emergency Medical Services (BREMS) data contains reported overdose emergencies in the Central Virginia region.
- Virginia State Police (VSP) Incident Based Reporting (IBR) data showcase trends in substance related arrests.
- Virginia Employment Commission (VEC) provide insight into the trends in unemployment rates and claims.
- Virginia Department of Social Services (VDSS) data contains information related to Child Protective Services as well as a variety of benefits available to residents, specifically SNAP, TANF, Medicaid, and Child Care subsidies.
- Central Virginia Continuum of Care (CVCoc) provided data related to homelessness in the region as well as comparisons to national averages.
- Lynchburg Youth Survey (LYS) is designed to allow for the examination of the status and trends in health behaviors of youth in 8th, 10th and 12th grade.

Trend analysis was performed on EMS data from 2020-2021 to define major shifts in overdose incidents in Virginia before observing trends in EMS emergencies, unemployment rates and VSP arrests at the identified change points to understand noteworthy interactions within Central Virginia. Considering local population metrics, trends, and available resources, The FAACT Team's recommendations are as follows:

1. Meet with the FAACT Analyst dedicated to the region to identify and onboard regional datasets that will provide a comprehensive and accurate view on how the region handles the addiction epidemic.
2. Utilize the data on the platform, as well as any local datasets identified, to develop advanced analyses that will provide pointed solutions to the region's most pressing issues.
3. Focus on creating education initiatives to ensure the younger population fully understand the consequences of substance use and their treatment options.

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The Urgency for a Revolutionary



FAACT, a cross-agency cloud-based data sharing platform, was designed to mitigate the opioid and substance abuse crisis as well as generate valuable insights about the contributing factors to Commonwealth opioid and substance abuse that leads to overdoses.

The platform actively collects data from agencies and organizations across Virginia to provide local governments and community organizations with pertinent and targeted information that helps decision makers in the Public Safety, Public Health and Community Service sectors improve outcomes by decreasing overdoses and combating the addiction epidemic in their neighborhoods.

FAACT Regional Partners

The FAACT team recognizes that to help individuals across the Commonwealth better address the addiction epidemic, they need to understand the unique problems each region is facing. Therefore, the team is committed to working with regional partners to ensure they

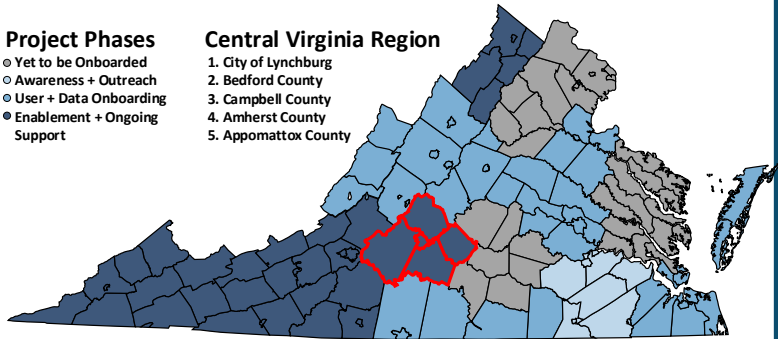
have access to the information they need to make data driven decisions. In the Central Virginia region, those partners include Horizon Behavioral Health and the Data to Action Resource Team (DART). In 2020, it became apparent that there is a tremendous need to better understand how societal factors are impacting substance use, mental illness, and suicide in Central Virginia. As a result, Horizon Behavioral Health in partnership with CIT launched the Data to Action Resource Team (DART) on May 25, 2021. DART is made up of individuals representing multiple sectors including health, law enforcement, Emergency Medical Services (EMS), behavioral health service providers, business community, housing, FAACT, etc. DART is committed to collecting and analyzing data to identify trends, contributing factors, and overall impact of substance use and mental illness in Central Virginia.

Project Phases

- Yet to be Onboarded
- Awareness + Outreach
- User + Data Onboarding
- Enablement + Ongoing Support

Central Virginia Region

1. City of Lynchburg
2. Bedford County
3. Campbell County
4. Amherst County
5. Appomattox County



Centra Hospital's Community Health Needs Assessment

In 2021, Centra Hospital released a Community Health Needs Assessment (CHNA) for the City of Lynchburg region as well as Bedford County. Within the assessment, a 2021 Prioritization of Needs for each region was provided that was created using responses from a Community Health Survey made available to residents in the area as well as Stakeholder Focus Groups. For the City of Lynchburg, Mental Health and Substance Use Disorders & Access to Services ranked number 2 in the list while it ranked number 1 in Bedford County. This further supports the mission of DART and the need for it in the region as the residents themselves are acknowledging the severity of the problem.

Data Onboarded and Developed

Regional datasets are onboarded to provide a more holistic view of the addiction epidemic in a community. Within Central Virginia, student discipline data was shared with the FAACT team by Mac Duis, the Chief Operating Officer for Bedford County Public Schools. Using the information, an application was developed, accessible only to Mac, that allows him to perform his own self-service analytics. In addition to the discipline data, youth survey, homelessness, local EMS and social services data has been onboarded and incorporated into this report at the request of DART members. We are hopeful that the data gathered by DART will help to educate and inform the community, assist with identifying and prioritizing needs; aid in developing action plans to address contributing factors; and help determine and gain the resources needed to address challenges related to substance use, mental illness, and suicide in Central Virginia.

Data to Action Resource Team (DART)

The Data to Action Resource Team (DART) was initiated by Curtis Jones, Prevention Specialist and State Opioid Response Grant Coordinator, at Horizon Behavioral Health. DART meets on the second Tuesday of every month at 9 AM. If you or your organization have any inquiries or are interested in becoming members of DART, please contact Curtis Jones at (434) 477-5042 or Curtis.Jones@HorizonBH.org.

FAACT Central Virginia Performance

Survey Responses	Report Users	Dashboard Users	Datasets Onboarded
13	7	2	6

What's Next for FAACT in Central Virginia

FAACT objectives for FY'22 are as follows:

- Accomplish complete geographic coverage of the region by doubling the number of platform users and onboarding at least 1 dataset from each locality
- Continue to support regional partners by providing customized reports with more pointed solutions answering their specific business questions
- Increase the number of analytics that cross domains to provide more comprehensive understanding of trends by incorporating local data into reports and applications
- Develop a more substantial portfolio of advanced analytics and the capability for end users to engage those models in their regular activities, planning and decision making

How This Report is Organized

This report covers analysis of each individual data source to describe statistics and identify trends within the Central Virginia VDH Health District between 2020 and 2021.

This report serves as the first in a series of annual reports with this year's analyses (FY'21) based on data from 2018-2019.

Three FAACT Applications Analyzed

Utilizing data that the project has onboard as part of its mission, analytical assessment of data provided by VDH, specifically EMS incident data, as well as VSP, VEC and a variety of local datasets was conducted.

Change-point analysis on EMS data and corresponding trends in other datasets:

Change-point analysis is used to identify significant changes in the linear trends within data over a certain period. Using this methodology, an analysis was conducted on EMS incident data to define major shifts for the Commonwealth before observing trends in other data sources at the regional level for the identified change points to understand noteworthy time shifts and trends.

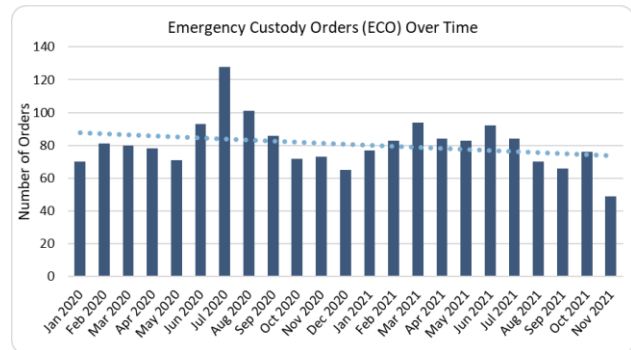
There were two statistically significant changes in **opioid-related emergencies** in Virginia between January 2020 and April 2021. In **July 2020**, there was a downswing in incidents while there was an upswing in **January 2021**. When comparing data for Central Virginia to the statewide trends, it was determined that there were no corresponding trends within overdose or arrest data in the region.

Horizon Emergency Custody Order (ECO)

The Horizon Emergency Custody Order data provides a monthly breakdown of ECOs from January 2020 to November 2021. Emergency custody orders result in a meeting between a professional mental health evaluator and a person with a suspected mental illness in order to determine whether hospitalization or treatment is needed as well as if the situation meets the statutory criteria for issuance of a temporary detention order.¹

What was the trend in emergency custody orders over time?

Between January 2020 and November 2021, there was an overall decreasing trend in emergency custody orders. More specifically, there was a decrease of about 30% during that time period. Of all the months, July 2020 had the highest number of ECOs at 128 which was 58% higher than the monthly average of 81. November 2021, on the other hand, had the lowest number of emergencies at 49 which was 40% lower than the monthly average. In general, the decreasing trend in emergency custody orders between 2020 and 2021 is encouraging as it means less individuals are in need of court interference when it comes to hospitalization or mental health treatment.



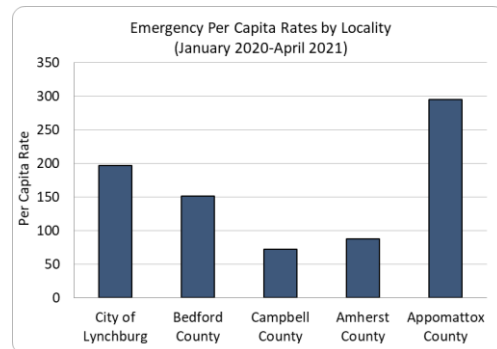
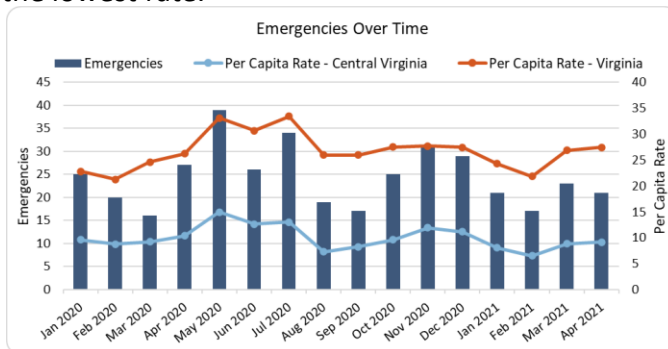
1. Office of the Executive Secretary, Supreme Court of Virginia. (2015). Chapter 6 - Emergency Custody and Temporary Detention Orders. In Magistrate manual (pp. 6–4). essay.

Emergency Medical Services (EMS)

The Emergency Medical Services Application is a self-service dashboard that provides users with statewide data for drilling into emergencies involving opioids, including overdoses and naloxone administration.

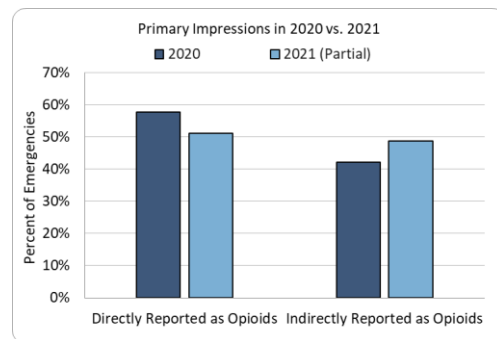
What was the trend in emergency responses for overdose incidents?

Between January 2020 and April 2021, there was an overall decreasing trend in opioid related emergencies in the region, despite the COVID-19 pandemic. The Central Virginia health district also consistently had a significantly lower per capita rate than Virginia during that time period as well as the 4th lowest rate out of the 35 health districts in the state. Additionally, within the region, Appomattox County had the highest emergency rate relative to the county's population size followed by the City of Lynchburg while Campbell County had the lowest rate.



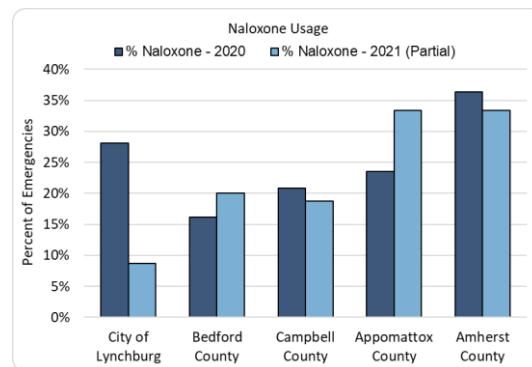
How have the trends in primary impressions recorded by EMS providers changed over time?

In 2020, about 57.8% of primary impressions were directly reported as opioid-related while only 51.2% were in 2021, which is equivalent to a 6.6% decrease. Ideally there'd be an increase in the percent of impressions directly reported as opioid related in the remainder of 2021 as that would indicate the paramedics can more quickly identify an emergency as opioid related resulting in a patient getting the necessary treatment quicker.



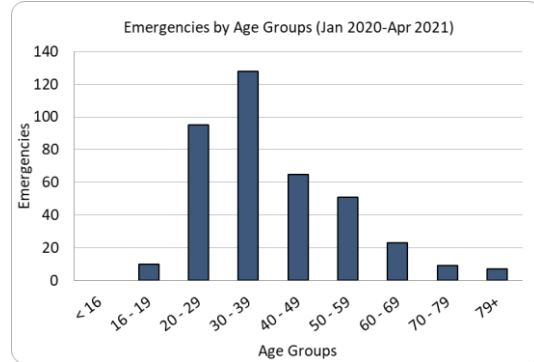
How does naloxone usage compare to the total number of opioid emergencies?

Roughly 23.08% of incidents in the region had naloxone administered. There was a decrease in naloxone administrations from 2020 (24.03%) to 2021 (19.51%). Within the region, Amherst County reported the highest usage of Naloxone (36.36% in 2020, 33.33% in 2021) while Bedford County reported the lowest in 2020 (16.13%) and the City of Lynchburg in 2021 (8.07%).



What was the demographic breakdown of EMS incidents?

In 2020 and 2021, the 30-39-year-old age group accounted for the highest number of emergencies which was equivalent to about 33.0% of the total. However, this is a shift from the prior 2 years when 20-29-year-olds were the most impacted age group as they were involved in the highest number of emergencies. Despite the shift, 20-29-year-olds and 30-39-year-olds have consistently been among the most impacted age groups as they tend to account for a significantly higher percentage of opioid related emergencies than expected based on the general population breakdown in the region.

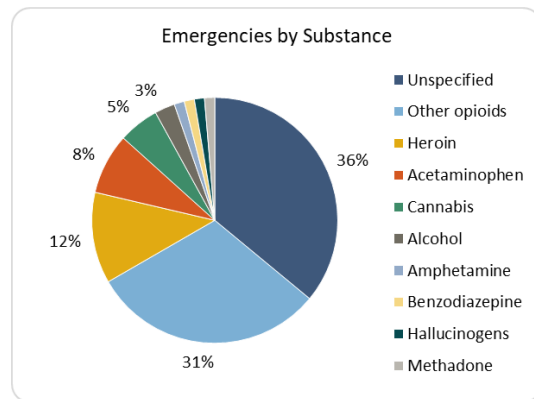


Blue Ridge Emergency Medical Services (BREMS)

The Blue Ridge Emergency Medical Services provided emergency data specific to the Central Virginia region for June-November 2021. This dataset differs from the statewide EMS information since it includes incident data for overdoses involving any substance, rather than only opioids.

What were the most common substances involved in overdoses ?

Between June and November 2021, the most common substance involved in overdoses reported to EMS was unspecified followed by other opioids. However, it's expected that a large percent of overdoses would include unknown substances since it can be difficult for paramedics to identify the cause of an overdose in such a short time period. Of the substances that were identified though, it appears that opioids are the most prevalent substance in the Central Virginia region. They accounted for approximately 42% of



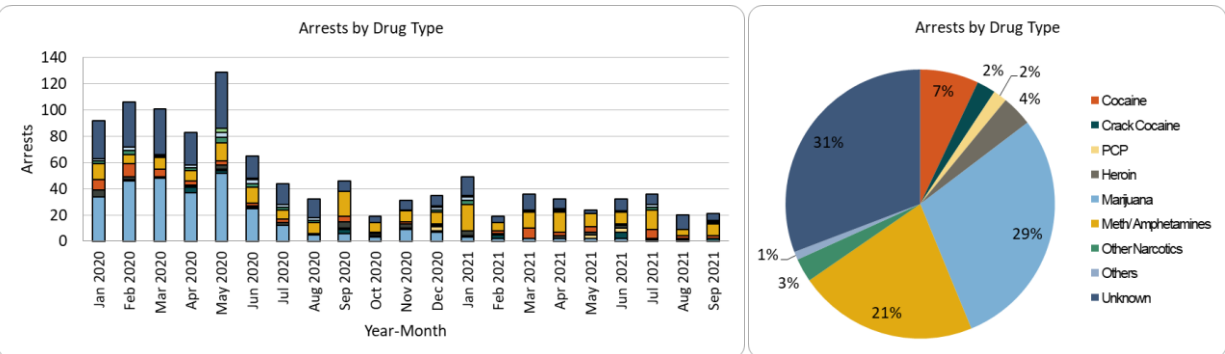
Overdoses during the time period of interest and therefore are the most cause for concern.

Virginia State Police (VSP) Incident-Based Reporting (IBR) System

The Virginia State Police's Incident-Based Reporting (IBR) System is a self-service dashboard that lets users analyze substance related arrests.

What was the trend year over year in drug-related arrests?

During 2020, substance related arrests dropped significantly during the second half of the year. More specifically, there was a 63.7% drop in arrests between the first 6 months and last 6 months of the year. Additionally, arrests dropped another 8.2% between the second half of 2020 and first half of 2021. However, this significant decrease was likely caused by recent policy changes related to marijuana since it accounted for over 40% of arrests in the first half of 2020 but dropped to about 20% in the second half of the year and 6.8% in the first half of 2021. Since marijuana arrests are likely to account for only a small percentage of arrests moving forward, the next most common substances of concern for the region would be unknown (31%), methamphetamines/amphetamines (21%), cocaine (7%), and heroin (4%).

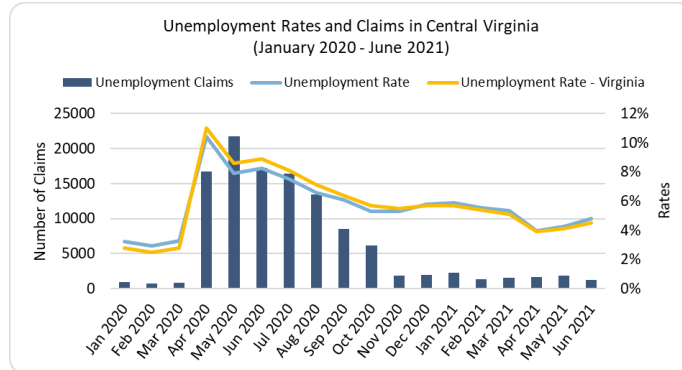


Virginia Employment Commission (VEC)

The Virginia Employment Commission (VEC) is a self-service dashboard that lets users analyze details related to unemployment rates and claims.

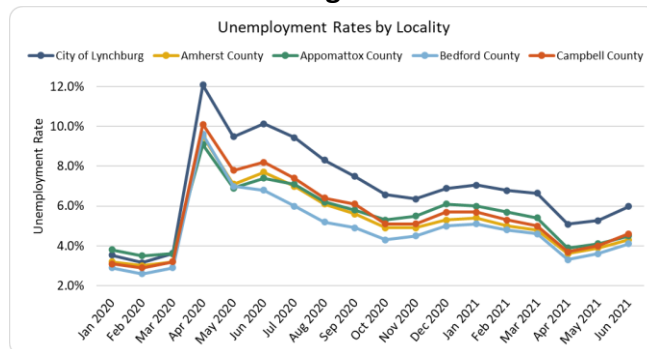
What were the unemployment rates in Central Virginia?

Prior to the COVID-19 pandemic in 2020, the unemployment rates remained fairly consistent in the region. It ranged from 2.9%-3.2% but was always higher than the states rate which ranged from 2.5%-2.8%. However, there was a significant spike in unemployment between March and May 2020 corresponding with the beginning of the pandemic. While the spike in the region mimicked that of the state, between April and November 2020, Central Virginia had a slightly lower rate than Virginia for the first time in over 20 years. Therefore, although rates were hitting an all time high in 2020, the region managed to have a lower unemployment rate than Virginia with rates seemingly returning to normal during the first half of 2021.



How do unemployment rates compare between localities in the region?

Within Central Virginia, the unemployment rates for each locality aligned closely to the trends for the region as a whole as well as the state. The rates remained fairly consistent during the first few months of 2020, there was a considerable spike between March and May with the rates starting to return to normal in early 2021. Prior to COVID-19, Appomattox County had the unemployment rates from January to March. However, in April 2020, the City of Lynchburg experienced one of the largest spike in rates and consistently had the highest rate for the remainder of 2020 and early 2021 indicating the city's workforce was impacted the most by the pandemic.

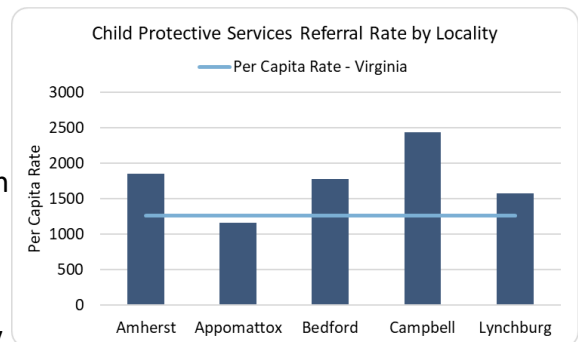


Virginia Department of Social Services (VDSS)

The Virginia Department of Social Services (VDSS) contains data that includes information related to child protective services as well as a variety of different benefits residents could receive. According to a study published on American Psychiatric Association Publishing, Child Protective Services (CPS) contact is eight times more likely for parents who have a serious mental illness, and the risk of a change in living arrangement is 26 times higher.² Also, substance use disorders can share correlation with Child Protective Services contact. Nationally, an increase in overdose deaths and substance use hospitalization rates share a common relationship with increased rates of foster care entries. With research showing a correlation between health disorders and protective services and foster care, it is necessary that this data is displayed in this report.

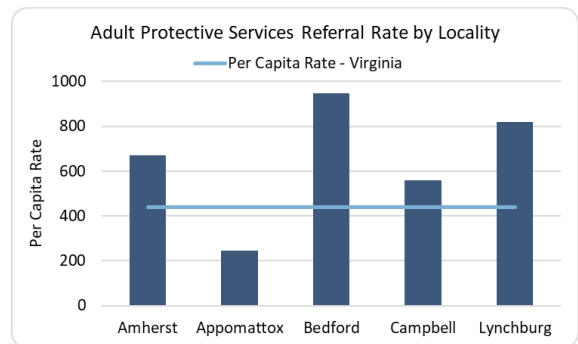
Which locality in Central Virginia had the highest number of CPS referrals?

During state fiscal year (SFY) 2020, there were 4,808 Child Protective Services (CPS) referrals in Central Virginia. Within the region, Bedford County had the highest number of referrals (1,406) followed by Campbell County (1,338) then the City of Lynchburg (1,292). However, once population size was taken into account, Campbell County had the highest referral rate followed by Amherst County then Bedford County. Conversely, Appomattox County had the lowest number of referrals and the lowest per capita rate in the region. Additionally, it is the only locality with a lower rate than the state which had a rate of 1,265 referrals per 100,000 residents during SFY 2020.



Which locality in Central Virginia had the highest number of APS referrals?

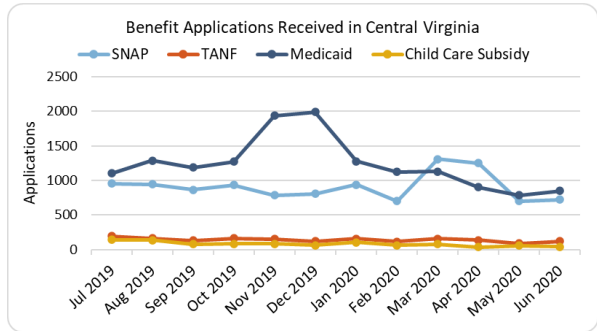
In SFY 2020, there were 1,978 Adult Protective Services (APS) referrals in Central Virginia. Similar to the CPS referrals, Bedford County had the highest number of APS referrals with 749 of them. Following Bedford, the City of Lynchburg had the second highest number of referrals (672) then Campbell County (306). When population size was considered, Bedford County had the highest referral rate followed by the City of Lynchburg, then Amherst County. Additionally, Appomattox County had the lowest number of APS referrals and lowest referral rate. It was also the only locality with a lower rate than the state which is consistent with the trends seen in the previous question focused on CPS referrals.



2. Kaplan, K., Brusilovskiy, E., O'Shea, A. and Salzer, M., 2019. Child Protective Service Disparities and Serious Mental Illnesses: Results From a National Survey. *Psychiatric Services*, 70(3), pp.202-208.

What is the most common benefit program in Central Virginia?

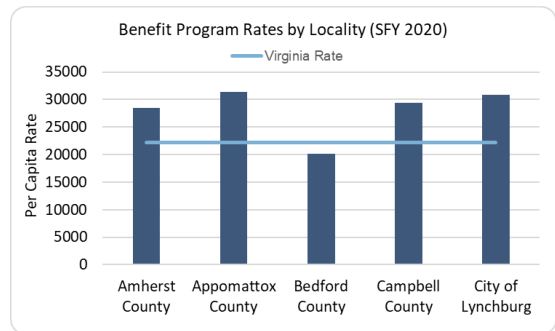
During SFY 2020, Medicaid was the benefit program applied to most frequently by residents in the Central Virginia health district month after month, with the exception of March and April 2020. During those 2 months, there was a spike in SNAP applicants and the program became the most sought-after benefit in the region. This was likely caused by COVID-19 pandemic, which resulted in a



significant rise in unemployment in the region prompting more individuals to seek financial assistance from government programs. With regards to the other programs, there was no significant changes month to month. The number of applicants for TANF and Child Care subsidy benefits remained consistent throughout SFY 2020 and seemed unaffected by the pandemic. Additionally, it looks like there is a spike in Medicaid applications between November and December 2019. However, that aligns with the open enrollment period and is likely a seasonal trend, rather than an anomaly.

Which locality relies on benefit programs the most in the region?

Within the Central Virginia region, Appomattox County had the highest number of benefit program clients relative to the county's population size followed closely by the City of Lynchburg, Campbell County, and Amherst County. Additionally, all those localities had a higher rate of benefit clients than the state. Bedford County, on the other hand, has a significantly lower rate than the other localities as well as the state which aligns with the fact that the county also consistently has the lowest unemployment rate in the region.



Central Virginia Continuum of Care (CVCoC)

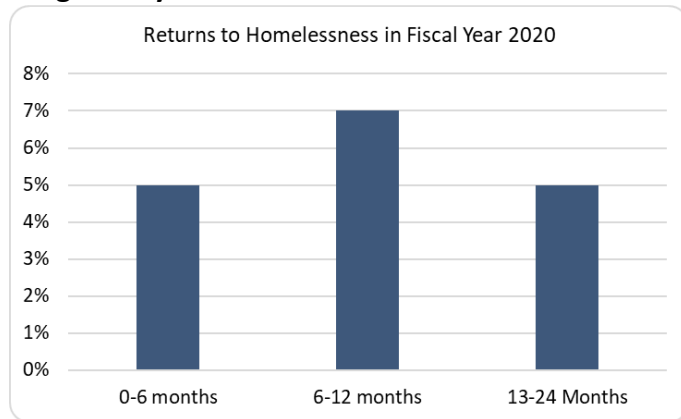
The Central Virginia Continuum of Care (CVCoC) data contains information related to homelessness in the region from October 1, 2019 – September 30, 2020, as well as comparisons to similar metrics for the United States. Lack of housing and homelessness are social determinants of health that contribute to the health disparities and health inequities related to substance use and mental illness. Substance use and mental illnesses are both causes and results of homelessness. Therefore, since homelessness and health disorders are interlinked, data about homelessness and housing is necessary to show within this report.

How many individuals were homeless during fiscal year 2020?

During fiscal year 2020, 462 individuals in Central Virginia were in emergency shelters (ES), transitional housing (TH), or permanent homes (PH). That's equivalent to a decrease of about 30.7% from the previous year.

Additionally, of individuals who leave homelessness approximately 5% are likely to experience additional spells of homelessness within 6 months compared to 7% in 6-12 months, and 5% in 13-24 months.

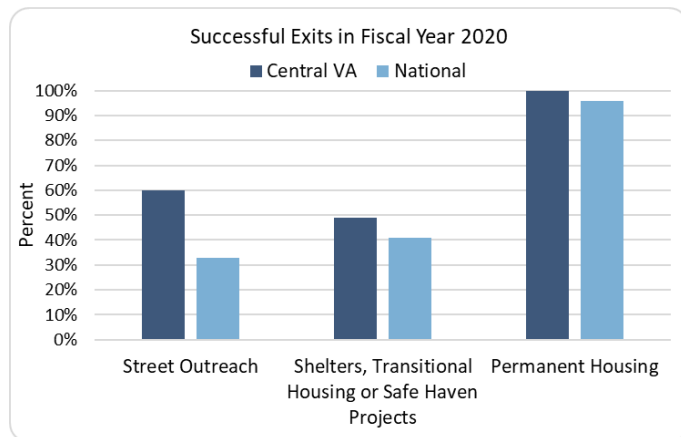
However, in 2020, approximately 17% of individuals returned to homelessness which was about 3% less than the national average.



What percent of individuals experiencing homelessness had successful exits in 2020?

In Central Virginia during fiscal year 2020, 60% of exits from street outreach projects successfully resulted in a shelter, transitional housing, or safe haven project placement. That's almost double the national average of 33%. Additionally, approximately 49% of exits from shelters, transitional housing or safe haven projects resulted in a permanent housing placement which was about 8% higher than the national average.

Lastly, 100% of individuals in permanent housing successfully remained in the placement setting or exited which is approximately 4% higher than the national average in 2020. Therefore, Central Virginia has overall higher exits that are considered successful when compared to the entire United States.

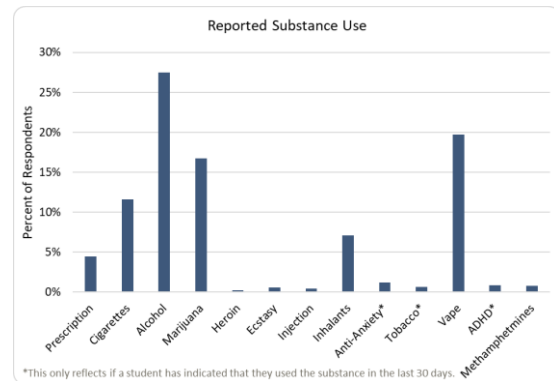


Lynchburg Youth Survey (LYS)

The Lynchburg Youth Survey is based on the Center for Disease Control Prevention's (CDC) Youth Risk Behavior Survey which is designed to allow for the examination of the status and trends in health behaviors of youth in 8th, 10th and 12th grade.

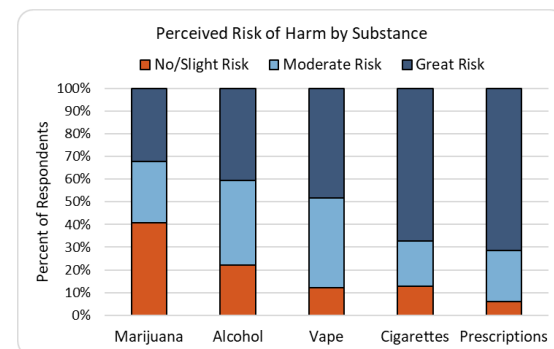
What is the most common substance used among students in the City of Lynchburg?

In 2020, approximately 41% of survey respondents indicated some sort of history of substance use which ranged from trying a substance once to using it on a regular basis. The most common substance used by students was alcohol, followed by electronic vapes, then marijuana. The least common substance used was heroin, which had only been tried by 0.22% of respondents.



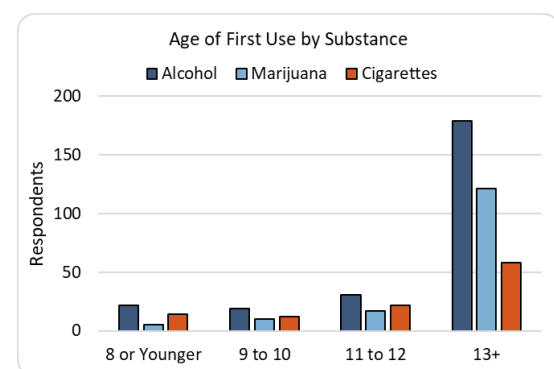
What are the students' perceived risk of harm for those who use substances?

When asked if they think people risk harming themselves when using substances on a regular basis, most respondents indicated they believed there was a risk regardless of the substance. Of the substances, prescription drugs had the highest percent of students, about 72%, identify it as a great risk for harm. Marijuana, on the other hand, is perceived as the one with the least likelihood of causing harm for those using it on a regular basis as indicated by 41% of the respondents. Considering alcohol and vapes have a lower percentage of respondents who perceive them as low risk, but they are the most tried substances as seen in the previous question, it appears students are not risk adverse since they've acknowledged the negative effects but continue to use the substances.



At what age do students typically start using substances?

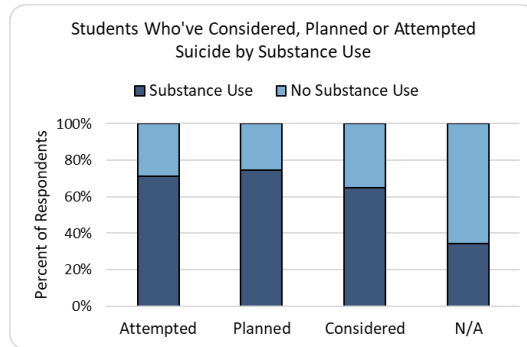
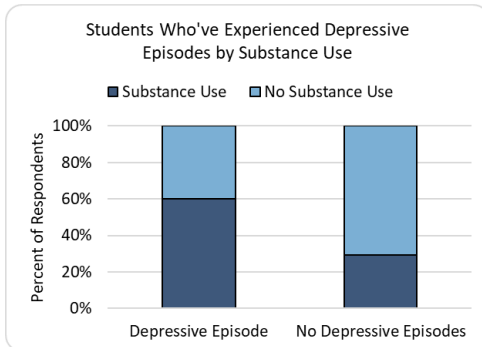
The most common age of first use for survey respondents was 13 or older. More specifically, approximately 20% of respondents indicated an age of first use for alcohol as 13 or older, 13% for marijuana, and 6% for cigarettes. Additionally, of the students who used cigarettes, 45% indicated an age of first use under 13 years old which is significantly higher than the 29% for alcohol and 21% for marijuana and likely cause by the fact that cigarettes are easier for a child to access.



Therefore, it can be concluded that the students who use cigarettes typically start at a younger age than those who use alcohol or marijuana.

Does depression have an impact on substance use among students in Lynchburg?

In 2020, approximately 38% of survey respondents admitted to feeling sad or hopeless almost every day for 2 weeks or more in the past 12 months. Of the students who've experienced a depressive episode, 60% have indicated some sort of substance use which is significantly higher than the 29% of students who haven't experienced a depressive episode. Additionally, approximately 18% of respondents admitted to considering, planning, or attempting suicide. Comparing those students who've at least considered suicide to those who haven't, a much larger percentage of them have some sort of substance use history. Therefore, it's clear that there is a correlation between substance use and depression for students in Lynchburg.



Does parental approval have an impact on substance use among students?

In Lynchburg, about 82% of survey respondents indicated there were clear family rules about alcohol and drugs in their house. However, focusing on only students who've admitted to using substances, it's apparent that whether there are clear rules at home has an impact on the substance use rates for students. There are lower percentages of substance use for students who've stated there are clear rules about substances and alcohol among their families. Additionally, from the Parental Approval vs. Substance Use Rates chart, it can be determined that there is a correlation between the percent of students who believe their parents don't think a substance is bad at all and the percentage of students who've used the substance in the last 30 days. Furthermore, if a parent approves of a substance, there's a higher chance they'll have it in their home, making it more accessible to their child which increases the likelihood of them trying it. Therefore, a parent's approval of a substance and whether they clearly state their views to their child does influence the percent of students who've admitted some sort of substance use.

