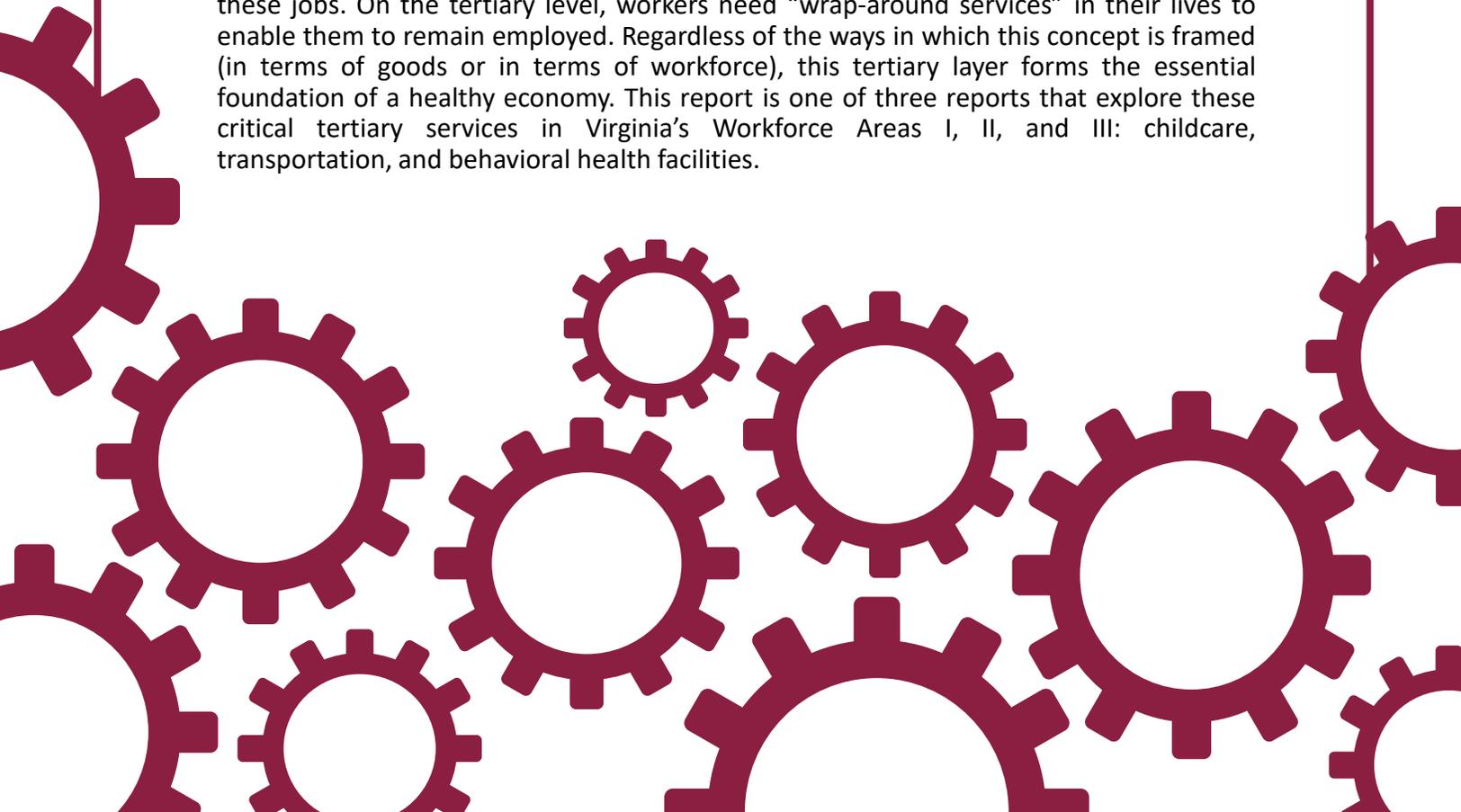
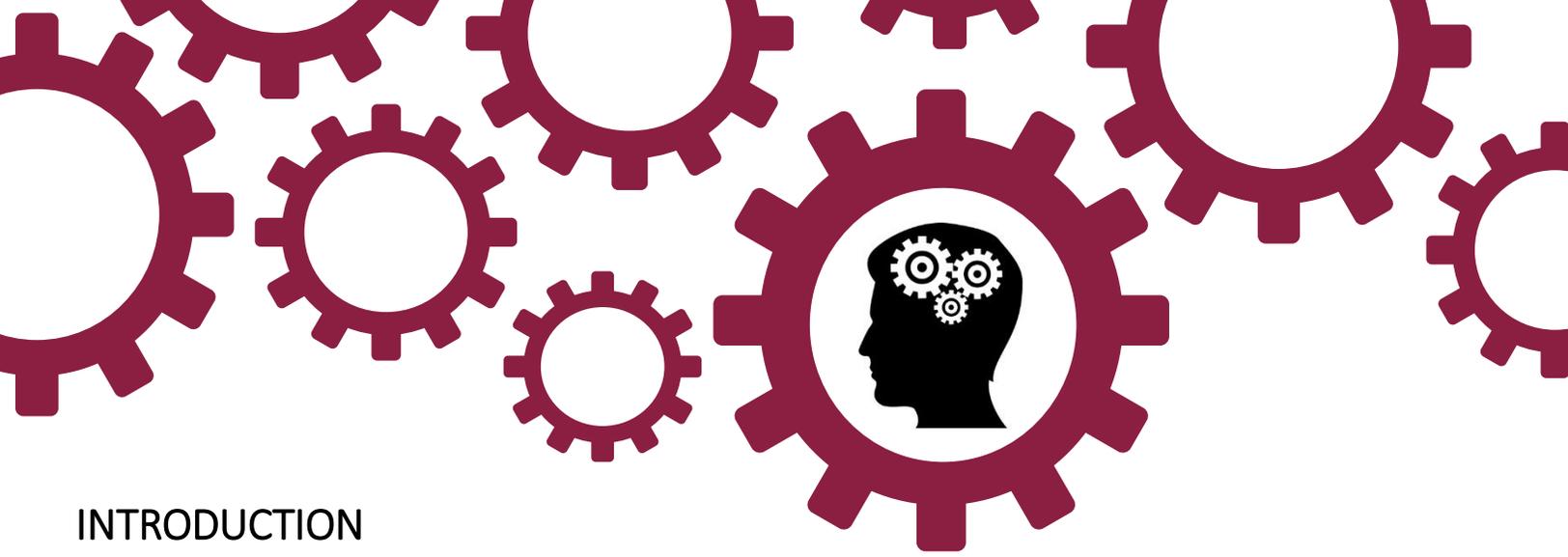


Tertiary Workforce Services Analysis in Southwest Virginia

Behavioral Health

There are many layers to a thriving workforce. According to the three-sector economic theory, there is a need for “primary sector” raw materials, “secondary sector” manufacturing and production of goods, and “tertiary sector” services such as transportation, distribution, and customer service (Fisher, 1939; Clark, 1940; Fourastie, 1954). The concept behind these three layers can be applied not only to the production of goods, but also to the *workforce* itself. On the primary level, workers need the basic raw materials, namely employment opportunities (businesses). On the secondary level, workers need the education, training, and professional development to prepare them for these jobs. On the tertiary level, workers need “wrap-around services” in their lives to enable them to remain employed. Regardless of the ways in which this concept is framed (in terms of goods or in terms of workforce), this tertiary layer forms the essential foundation of a healthy economy. This report is one of three reports that explore these critical tertiary services in Virginia’s Workforce Areas I, II, and III: childcare, transportation, and behavioral health facilities.





INTRODUCTION

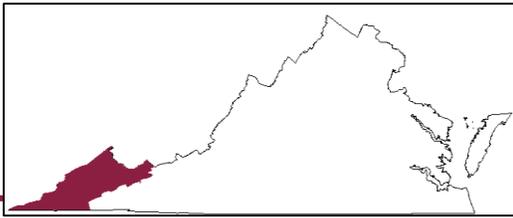
Mental and behavioral health problems are very common in the U.S. Although effective treatments exist, many patients go untreated due to the stigma associated with mental and behavioral health issues, a lack of familial and cultural support, and lack of access to mental and behavioral health care services. Lack of access exists in a few forms, including lack of transportation, a lack of health care providers, an onerous distance necessary to travel to receive treatment, a financial limitations, and a lack of information about what services exist. The Substance Abuse and Mental Health Services Administration found that only 43% of U.S. adults with some type of mental illness (43.4 million in total) received support in the past year. Additionally just 11% of the 20.4 million adults who needed treatment for a problem related to the use of alcohol or illicit drugs received substance abuse treatment. Challenges, such as drug, alcohol and tobacco dependence, mental illness, opioid addiction, and obesity can lead to difficulties for individuals to attend work every day.

To understand the status of mental and behavioral health services in the Southwest Virginia, Virginia Tech Office of Economic Development gathered statistical data from several nonprofit and government sources and interviewed relevant regional stakeholders. Key findings included:

- Employers and resource providers described a significant need for improved health care capacity in the region. According to both employers and resource providers, substance abuse is one of the top employment challenges in the region. Employers struggle to find employees who can pass a drug test, and employees struggle to gain or hold employment if they have historical or present struggles with substance abuse or addiction.
- According to the National Survey on Drug-Use and Health, the region was notably higher than the state and nation in percentages of people reporting alcohol and drug use dependence, needing and not receiving treatment, mental illness in the past year, and depression for more than two weeks of the year (2012-2014).
- Health care providers describe an incessant and growing need for Registered Nurses, mental healthcare professionals and other trained healthcare workers, and have thus far found that training programs are unable to meet the demand for these occupations. The training providers in turn describe financial and capacity challenges, and hurdles stemming from students' lack of math, science, and other basic skills.
- More broadly, the region falls behind the state averages in terms of numbers of mental health care providers and affordable counseling services, dentists, and primary care physicians.

The following pages break down key statistics for each of the three workforce regions.

Sources: Williams, J. S., Walker, R. J., & Egede, L. E. (2016). Achieving equity in an evolving healthcare system: Opportunities and challenges. The American Journal of the Medical Sciences, 351(1); Substance Abuse and Mental Health Services Administration. (2015). Receipt of services for behavioral health problems: results from the 2014 National Survey on Drug Use and Health; Thomas, C. (2006). Understanding rural health care needs and challenges: Why access matters to rural Americans. Harvard Journal on Legislation 43(2), 253-266; and RTI International (2015). National Survey on Drug-Use and Health.



FAR SOUTHWEST VIRGINIA WORKFORCE DEVELOPMENT AREA I (WDA I)

1,200

WDA I has 1,155 **people for every one mental health care provider** despite its small population. Compare this with the state (730:1) and national (550:1) ratios.

2,400

WDA I has 2,387 **people for every one primary care physician**. Most of these offices are located in Tazewell, Wise, Norton and Russell.

26%

26.3% of **adults do not have a regular primary care physician** in WDA I, compared to 28.3% in Virginia.

37%

37.3% of **adults report one or more poor mental health days** monthly in WDA I, compared to 29% in Virginia.

22

WDA I reports 22.1 **suicide deaths for every 100,000 residents**. Virginia's suicide death rate is 29.4 for every 100,000 residents.

County Health Statistics in WDA I (2017)

County	Prescription Opioid Abuse		Mental Health Indicators				
	Overdose Deaths per 100,000 VA residents	ED Visits per 100,000 VA residents	Mentally Unhealthy Days Reported	% Physical Inactivity	% Obese Adults	% Excessive Drinking	% Adult Smokers
Buchanan	13.2	140.5	48	34%	32%	15%	21%
Dickenson	39.7	238.2	46	26%	35%	15%	18%
Lee	8.1	101.0	47	31%	29%	15%	20%
Russell	21.5	139.8	44	23%	26%	16%	19%
Scott	13.6	13.6	46	27%	29%	15%	19%
Tazewell	11.7	76.9	44	33%	31%	16%	18%
Wise	20.1	307.2	42	30%	30%	16%	18%
Norton City	25.4	457.0	47	35%	31%	15%	21%
WDA I	17.1	154.6	46	30%	31%	15%	19%
VA	5.5	103.5	40	21%	27%	17%	16%

Sources: <http://www.countyhealthrankings.org/rankings/data/VA>; <http://www.vdh.virginia.gov/data/opioid-overdose/>

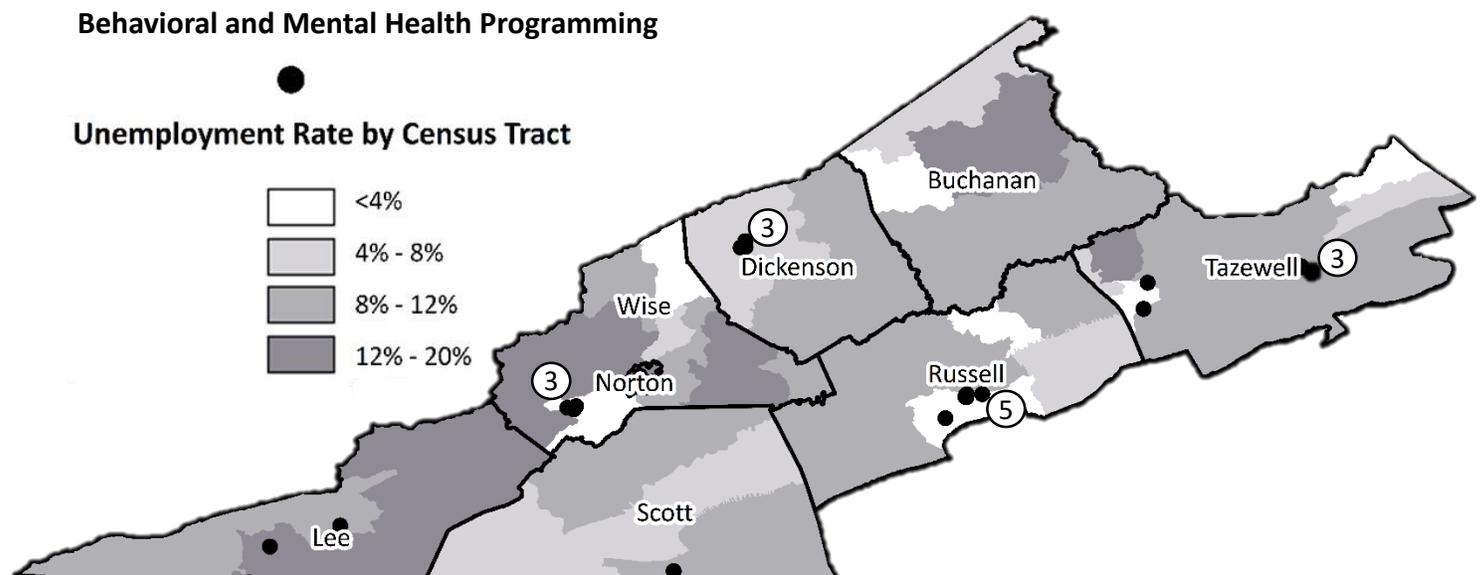
Top Mental and Behavioral Health Occupations (2007-2017)

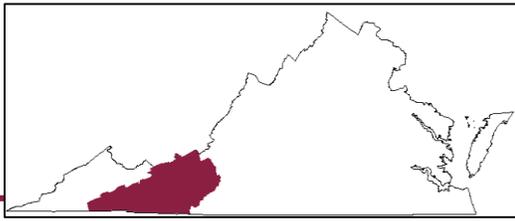
Occupation	2007 Jobs	2017 Jobs	% Change	Median Earnings	Annual Openings
Mental Health Counselors	162	182	12%	\$18.37	29
Mental Health and Substance Abuse Social Workers	162	178	10%	\$17.01	25
Substance Abuse and Behavioral Disorder Counselors	82	86	5%	\$16.51	14
Clinical, Counseling, and School Psychologists	80	71	(11%)	\$29.89	9
Rehabilitation Counselors	64	68	6%	\$15.71	10
Psychiatric Technicians	54	53	(2%)	\$11.06	6
Psychiatric Aides	37	41	11%	\$10.22	6
Psychiatrists	16	14	(13%)	\$101.63	Insf. Data
Psychologists, All Other	11	11	0%	\$34.38	1
Total	585	618	6%		86

Source: EMSI QCEW Class of Worker 2017.4

With 86 average annual openings for top mental and behavioral health care occupations, the region requires a sufficient pipeline of graduates. Currently, WDA III and surrounding counties host ten higher education institutions offering programs in Psychology, Human Services, Mental and Social Health Services and Allied Professions. Between 2012 and 2016, they cumulatively had an average of 23 one and two-year degree completions and 136 psychology bachelor's degree completions.

Analysis of the regional map below shows a sparse number of behavioral and mental health programs, mostly located in areas of low unemployment. Programs OED counted for this analysis were medical organizations offering in and out-patient counselling and psychiatric care and well as support groups. As unemployment can be a factor and characteristic of poor mental and behavioral health, this map illustrates more limited geographic access to these services for more vulnerable populations.





NEW RIVER MOUNT ROGERS WORKFORCE DEVELOPMENT AREA II (WDA II)

940

WDA II has 941 **people for every one mental health care provider** despite its small population. Compare this with the state (730:1) and national (550:1) ratios.

2,900

WDA I has 2,898 **people for every one primary care physician**. Most of these offices are located in Tazewell, Wise, Norton and Russell.

26%

26.3% of **adults do not have a regular primary health care provider** in WDA I, compared to 28.3% in Virginia.

31%

30.5% of **adults report one or more poor mental health days** monthly in WDA I, compared to 29% in Virginia.

16

WDA I reports 16 **suicide deaths for every 100,000 residents**. Virginia's suicide death rate is 29.4 for every 100,000 residents.

County Health Statistics in WDA II (2017)

County	Prescription Opioid Abuse		Mental Health Indicators				
	Overdose Deaths per 100,000	ED Visits per 100,000 VA residents	Mentally Unhealthy Days Reported	% Physical Inactivity	% Obese Adults	% Excessive Drinking	% Adult Smokers
Bland	0	15.2	37	25%	31%	18%	15%
Carroll	0	67.3	43	25%	29%	15%	19%
Floyd	0	76.7	40	25%	27%	17%	15%
Giles	12.0	131.7	40	32%	30%	17%	15%
Grayson	6.2	118.7	44	32%	30%	14%	19%
Montgomery	5.12	57.35	41	20%	24%	19%	18%
Pulaski	23.2	125.2	41	27%	33%	16%	16%
Smyth	3.2	247.9	42	28%	30%	16%	19%
Washington	1.8	67.8	42	27%	30%	16%	18%
Wythe	20.61	10.30	42	27%	31%	16%	17%
Bristol	0	5.8	46	25%	27%	15%	19%
Galax	0	506	48	25%	26%	14%	19%
Radford	11.5	132.2	50	20%	30%	18%	23%
WDA II	7.0	93.8	43	26%	29%	16%	18%
Virginia	5.5	103.5	40	21%	27%	17%	16%

Top Mental and Behavioral Health Occupations (2007-2017)

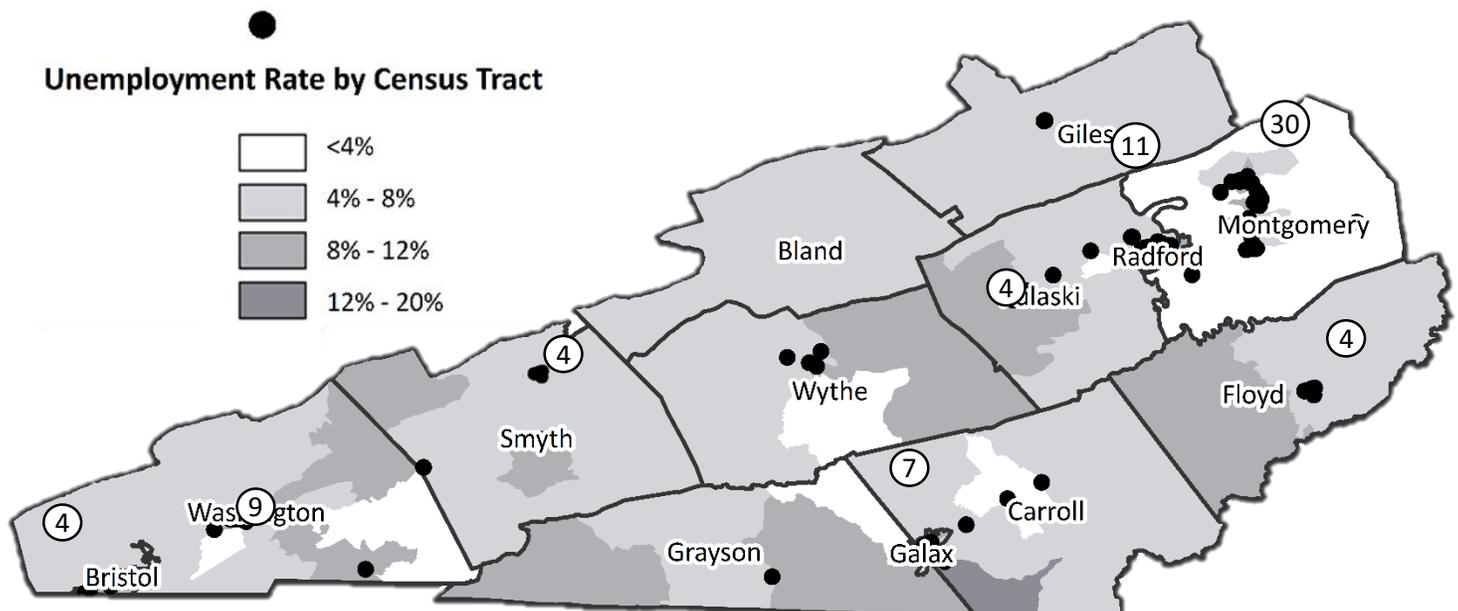
Occupation	2007 Jobs	2017 Jobs	% Change	Median Earnings	Annual Openings
Mental Health Counselors	343	436	27%	\$18.45	55
Substance Abuse and Behavioral Disorder Counselors	224	280	25%	\$17.17	35
Mental Health and Substance Abuse Social Workers	206	252	22%	\$18.00	31
Psychiatric Technicians	200	248	24%	\$11.51	28
Clinical, Counseling, and School Psychologists	255	241	(5%)	\$32.03	26
Psychiatric Aides	102	122	20%	\$11.10	18
Rehabilitation Counselors	89	92	3%	\$17.09	16
Psychiatrists	31	34	10%	\$89.00	2
Psychologists, All Other	30	27	(10%)	\$38.70	3
Total	1,479	1,732	17%		214

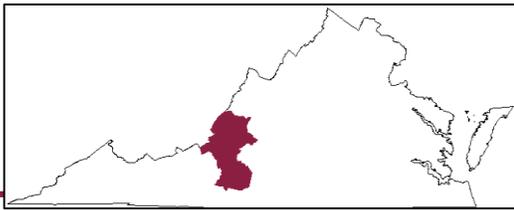
Source: EMSI QCEW Class of Worker 2017.4

With 214 average annual openings for top mental and behavioral health care occupations, the region requires a sufficient pipeline of graduates. Currently, WDA III and surrounding counties host 17 higher education institutions offering programs in Psychology, Mental and Social Health Services and Allied Professions, Human Services, School Psychology, Health/Medical Psychology, and Counselling Psychology. Between 2012 and 2016, they cumulatively had an average of 183 one and two-year degree, 530 bachelor's degree, and 41 master's degree completions.

Analysis of the regional map below shows distinct concentrations of behavioral and mental health programs in more urban areas, mostly areas of lower unemployment. Programs OED counted for this analysis were medical organizations offering in and out-patient counselling and psychiatric care and well as support groups. As unemployment can be a factor and characteristic of poor mental and behavioral health, this map illustrates more limited geographic access to these services for more vulnerable populations.

Behavioral and Mental Health Programming





VIRGINIA'S BLUE RIDGE WORKS WORKFORCE DEVELOPMENT AREA III (WDA III)

540

WDA III has 536 **people for every one mental health care provider** despite its small population. Compare this with the state (730:1) and national (550:1) ratios.

1,200

WDA I has 1,175 **people for every one primary care physician**. Most of these offices are located in Tazewell, Wise, Norton and Russell.

20%

19.7% of **adults do not have a regular primary health care provider** in WDA I, compared to 28.3% in Virginia.

30%

30.4% of **adults report one or more poor mental health days** monthly in WDA I, compared to 29% in Virginia.

20

WDA I reports 20 **suicide deaths for every 100,000 residents**. Virginia's suicide death rate is 29.4 for every 100,000 residents.

County Health Statistics in WDA III (2017)

County	Prescription Opioid Abuse		Mental Health Indicators				
County	Overdose Deaths per 100,000 VA residents	ED Visits per 100,000 VA residents	Mentally Unhealthy Days Reported	% Physical Inactivity	% Obese Adults	% Excessive Drinking	% Adult Smokers
Alleghany	12.8	216.9	42	27%	33%	15%	17%
Botetourt	6.0	102.0	36	22%	26%	18%	14%
Craig	0.0	115.1	41	23%	28%	17%	16%
Franklin	14.2	147.5	42	22%	28%	16%	17%
Roanoke	4.2	102.7	38	26%	27%	17%	16%
Covington	0	0	44	23%	26%	15%	19%
City of Roanoke	4.0	260.3	44	26%	32%	15%	19%
Salem	3.9	196.6	40	21%	25%	17%	16%
WDA III	6.3	167.8	41	24%	28%	16%	16%
Virginia	5.5	103.5	40	21.4%	27.2%	17%	16.5%

Sources: <http://www.countyhealthrankings.org/rankings/data/VA>; <http://www.vdh.virginia.gov/data/opioid-overdose/>

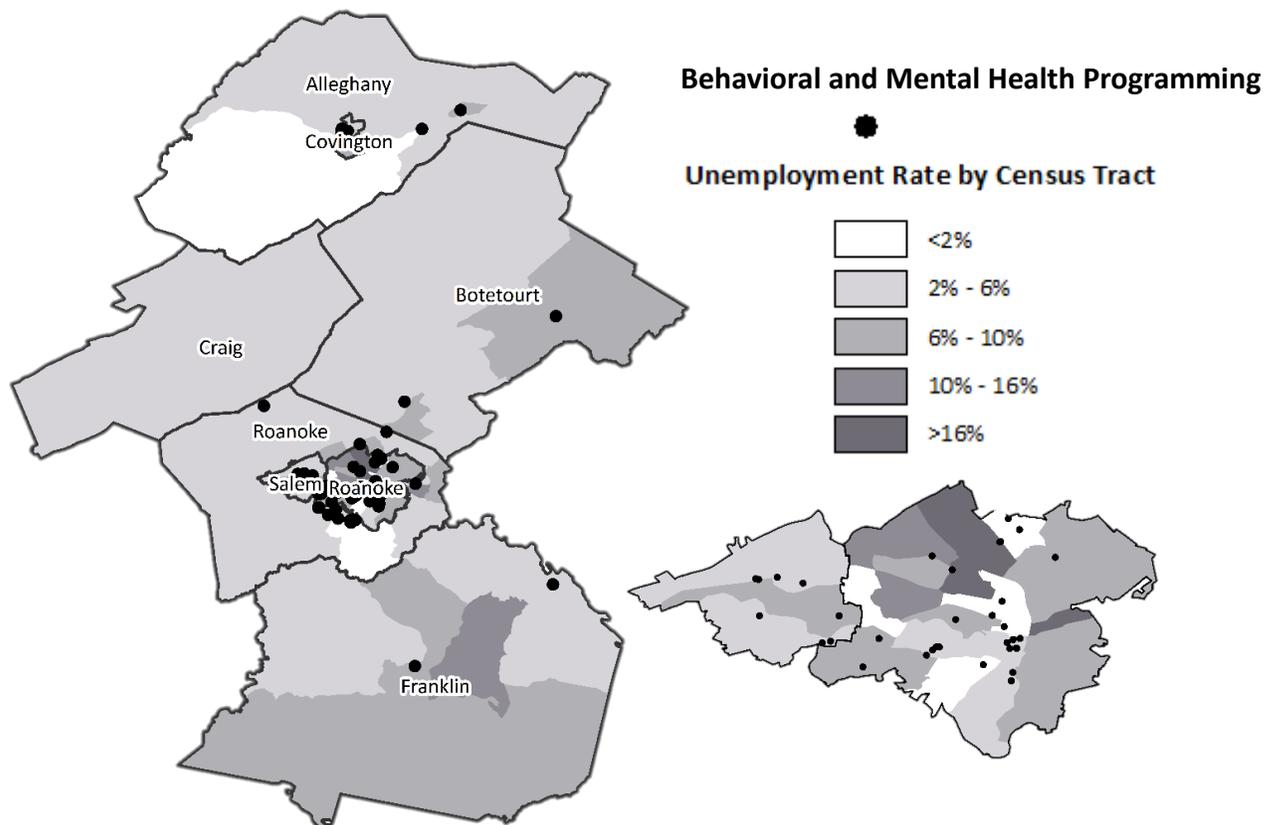
Top Mental and Behavioral Health Occupations (2007-2017)

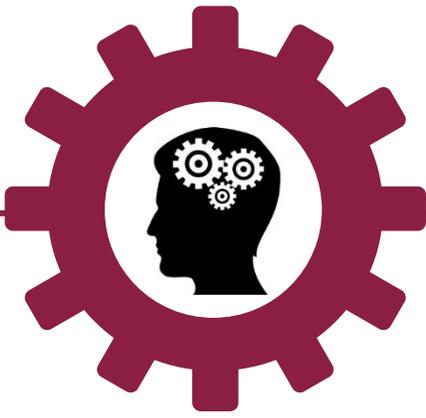
Occupation	2007 Jobs	2017 Jobs	% Change	Median Earnings	Annual Openings
Mental Health Counselors	254	430	69%	\$19.87	59
Mental Health and Substance Abuse Social Workers	234	419	79%	\$18.60	53
Clinical, Counseling, and School Psychologists	313	313	0%	\$30.31	30
Rehabilitation Counselors	212	227	7%	\$19.07	33
Substance Abuse and Behavioral Disorder Counselors	93	162	74%	\$20.54	23
Psychiatric Technicians	79	140	77%	\$14.18	17
Psychiatric Aides	63	109	73%	\$12.28	16
Psychiatrists	72	104	44%	\$86.17	7
Psychologists, All Other	32	33	3%	\$41.11	3
Total	1,352	1,937	43%		241

Source: EMSI QCEW Class of Worker 2017.4

With 241 average annual openings for top mental and behavioral health care occupations, the region requires a sufficient pipeline of graduates. Currently, WDA III and surrounding counties host 9 higher education institutions offering programs in Psychology, Mental and Social Health Services and Allied Professions, Health/Medical Psychology, and Psychiatric/Mental Health Services Technician. Between 2012 and 2016, they cumulatively had an average of 31 associate degree, 384 bachelor's degree, and 11 master's degree completions.

Analysis of the regional map below shows distinct concentrations of behavioral and mental health programs in more urban areas, mostly areas of lower unemployment. Programs OED counted for this analysis were medical organizations offering in and out-patient counselling and psychiatric care and well as support groups. As unemployment can be a factor and characteristic of poor mental and behavioral health, this map shows most programming is not located in the locations where these vulnerable populations are most prevalent.





ACKNOWLEDGEMENTS

This research was made possible by the Virginia Board of Workforce Development in collaboration with the Virginia Community College System. Rapid Response is a Virginia resource operating under funding provided by the federal Workforce Innovation and Opportunity Act, that helps businesses with employee hiring, staff restructuring and training. Rapid Response is most noticeably front and center to Virginia's workers when their place of employment is downsizing and a significant number of workers lose their jobs. As part of the current Rapid Response funding, the Virginia Tech Office of Economic Development was contracted to explore other factors inhibiting employment outside traditional skills gaps.

Virginia Tech Office of Economic Development is part of the Outreach division of Virginia Tech, meant to serve as one arm in advancing the university's land-grant mission. The Office of Economic Development (OED) helps Virginia communities find their paths to prosperity by providing leadership in many areas of economic development, including technology, workforce, entrepreneurship, and community development. Sarah Lyon-Hill, Ross Hammes, Allison Homer, Faruk Hesenjan, Luis Camacho, Ronnie Stephenson, and Maeve Gould played key roles in the development of these reports.

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