

MEMORANDUM

October 18, 2021

TO: Planning, Housing, and Economic Development (PHED) Committee
Education and Culture (E&C) Committee

FROM: Gene Smith, Legislative Analyst
Nicole Rodriguez-Hernandez, Legislative Analyst
Essie McGuire, Senior Legislative Analyst

SUBJECT: Briefing/Discussion – Talent Pipelines in the County: Career Pathways Post COVID-19

PURPOSE: Update and discussion

Those expected for this briefing and discussion:

Montgomery College

- Dr. Sanjay Rai, Senior Vice President for Academic Affairs
- George Payne, Vice President and Provost, Workforce Development and Continuing Education
- Steve Greenfield, Dean of Business, Information Technology, and Safety

Montgomery County Public Schools

- Niki Hazel, Associate Superintendent of Curriculum and Instructional Programs
- Scott Murphy, Director of the Department of College; Career Readiness; Districtwide Programs
- Elaine Chang, Director of the Partnerships Unit
- Genevieve Floyd, Supervisor of Career and Postsecondary Partnerships

Universities at Shady Grove

- Dr. Anne Khademian, Executive Director
- Robyn Dinicola, Chief Student Affairs Officer
- Mary Lang, Chief Strategy Officer
- Steve Simon, Interim Director, Marketing & Communications

WorkSource Montgomery

- Anthony Featherstone, Executive Director
- John Hattery, Director of Strategic Initiatives

Summary for today's worksession

The PHED and E&C Committees will continue its discussion about talent pipelines and development of career pathways due to the negative impact from the COVID-19 pandemic. The committees held the [initial briefing and discussion on March 15, 2021](#). From that discussion, the committees identified the following three items for future discussions:

- Update on the infrastructure needs in the current career pathways.
- Update on the efforts and needs to scale the current programs.
- Update on meeting the workforce system needs for the mental health, P-tech, biotech, and early education/care industries.

Today's discussion is divided into two parts to aid the committees' discussion on the above items.

- 1) Biotech Bootcamp Update. Montgomery College and partners will share a brief presentation about the implementation of the biotech bootcamp. This update will provide a "case study" to frame the second part of today's discussion.
- 2) Open Discussion. Attendees are prepared to go through the questions below as a "lessons learned" from the biotech bootcamp and generally from the County's response to the negative impacts from the pandemic and as it relates to the committees' follow up items. These questions were prepared collaboratively by Council staff and the attendees to aid the committees' discussion.
 - a. What occupations in the County have the highest unemployment rates due to the pandemic? *See Table 1 below from WorkSource Montgomery and ©1 for the Universities at Shady Grove comments on this question.*
 - b. What are lessons learned from the development of skill attainment programs during the pandemic?
 - c. How are existing short-term training programs meeting the needs of the unemployed in mental health, P-tech, biotech, and early education/care industries?
 - d. What additional action steps are being implemented to support the unemployed in these industries?
 - e. Does existing career pathway programs (e.g., bootcamps) include all necessary infrastructure for successful short-term skill attainment?
 - f. How are the education agencies working together to build a strong local pipeline from K to J? *USG's presentation on this topic can be found on ©7-15.*
 - g. How does WorkSource Montgomery identify the unemployed for training and job attainment?
 - h. How are the County's education agencies and workforce partners coordinating with employers to ensure career development is relevant and targeting jobs for the unemployed?
 - i. What are other next steps that should be a focus for successful career pathway development?

The Universities at Shady Grove and WorkSource Montgomery provided written responses in advance of today’s discussion. The Universities at Shady Grove’s responses are on ©1-15, and WorkSource Montgomery’s responses are on ©16-20.

Background on current local unemployment & employment data

WorkSource Montgomery provided current occupation employment and unemployment data as background information for today’s discussion. See ©20 for a list of the major occupations and unemployment rates in the County as of June 2021. Table 1 below highlights the occupations with the greatest unemployment rate. The occupations with the greatest unemployment rates are from the industries that experienced the greatest disruption from the pandemic (e.g., hospitality, restaurants, retail, etc.).

Table 1: County Occupations – High Unemployment Rates June 2021

Occupation	Employment	Unemployment	Unemployment Rate
Food Preparation and Serving Related	26,138	5,517	17.6%
Personal Care and Service	14,137	2,138	16.1%
Transportation and Material Moving	25,450	3,095	11.8%
Building and Grounds Cleaning/Maintenance	21,637	2,382	10.6%
Construction and Extraction	20,114	2,087	10.0%
Sales and Related	38,569	3,826	9.6%

Source: JobsEQ, WorkSource Montgomery

Table 2 below compares the pre-pandemic level to the current level for several employment values in the County. An important highlight from this table is the decrease of the County’s labor force by 20,743 compared to the value pre-pandemic. This value is about 60% of the decrease in total resident employment since the beginning of the pandemic.

Table 2: Change in Employment Statistics in the County

	February 2020	August 2021 (preliminary)	Difference
Labor Force	570,989	550,246	(20,743)
Employed	554,831	519,314	(35,517)
Unemployed	16,158	30,932	14,774

Source: BLS – LAUS series, Council staff

This packet contains:

- Responses from Universities at Shady Grove
- Responses from WorkSource Montgomery

Circle #

- ©1
- ©16

**Answers and Information from USG
October 1, 2021**

Career Pathways Post COVID-19 Thought Questions
October 21, 2021 PHED/E&C Committee Meeting

- March 15, 2021 Overview
- **Bootcamp case studies- Montgomery College & USG (UMBC)**

October 21st Thought Questions

1. In Montgomery County, what fields have the highest unemployment rates and what fields have the lowest unemployment rates (specifically during the pandemic)? What populations are being served?
 - *The Montgomery County unemployment rate in 2020 was 6.3%. The rate dropped to 5.7% in July 2021. The occupations with the highest rates of unemployment in July 2021 included office and administrative support positions (16%), management occupations (14%), sales occupations (9%), and transportation occupations (8%). The jobs in these sectors most likely to be affected were the lower paying service industry jobs. Occupations including farming, fishing, and forestry jobs, jobs related to the biotech industry, and healthcare did not experience a large decline during the COVID-19 pandemic, and are expected to grow as the pandemic eases. Sources: Maryland Department of Labor, EMSI, Harpswell Strategies.*

2. How are existing short-term training programs meeting the needs of the unemployed and in the following specific fields: mental health, P-Tech, biotech, and early education/care? What action steps are being taken to support the unemployed and workforce in the highlighted fields?
 - *USG does not currently offer any short-term training programs on a regular basis. Two biotech bootcamps were conducted at USG this past year with Montgomery College, Worksource Montgomery and UMBC at USG.*

3. How will lessons learned during the pandemic impact the development of skill attainment programs?
 - *USG does not offer any stand-alone skill attainment programs on a regular basis. A lesson learned during the pandemic is that there is a strong county workforce need to develop regular bootcamp programs for skill attainment at USG in partnership with Montgomery College. In addition other skill attainment programs such as baccalaureate and post-baccalaureate certifications at USG are needed in the county to address the workforce needs resulting from the pandemic.*

4. Do existing higher education programs (e.g. bootcamps) include all of the infrastructure needed for short-term skill attainment?

- *With the pandemic displacing many workers with transferable skills (IT, finance, accounting, procurement), this retraining program can help to fill critical roles at pharmaceutical and biotechnology companies, as well as attract new skilled talent. In partnership with USG, Montgomery College and Worksource Montgomery, UMBC offered two four-week biotech boot camp in the Biomedical, Sciences and Engineering Education (BSE) building on the campus. This approximately 80-hour program targeted displaced workers who needed more job-ready, hands-on training in biotechnology. Twenty-four displaced workers completed the bootcamps and many received jobs upon completion.*
- *Please see attached articles about the bootcamp success:*
 - *Bethesda Beat, Opinon by Annica Wayman, July 2021*
 - *Worksource Montgomery Blog, Worksource Success by Jacob Vogelhut, May 2021*
- *These pilot bootcamps demonstrated that the partnership between USG, Montgomery College, and Worksource Montgomery was successful in providing hands on training for skills attainment. The infrastructure needed for scaling these programs to meet the needs of the life sciences industries as well as other high tech jobs is that the bootcamps need to be designed and connect to longer term certifications and degree programs (part of a life sciences pathway for lifelong learning) so that displaced workers can enter at any stage of their experience and education to progress throughout their career. Unattached bootcamps that are not connected to higher education certification and degree programs are short term solutions unless they serve in this pipeline feeder role.*

5. How are our education agencies working together to build a strong local pipeline from K to J?

- *See attached powerpoint presentation on “Transforming Education Ecosystems Paradigms.” Dr. Anne Khademian plans to walk through this presentation as time permits on October 21st.*
- *In the ecosystem work, USG and Montgomery County might want to prioritize a few key areas in each Core Function area where we have traction, or could develop the most capacity from the concentrated effort. A few areas stand out:*
 - *Strong Pathways:*
 - *Making ACES sustainable and then bring it to scale (rest of the MCPS highschools)*
 - *Adopting umbrella approaches to pathways and degrees (life sciences, STEM, public service, behavioral sciences, healthcare, etc.). Start with the life sciences:*
 - *Embed with county funding rather than grant-based (Talent Ready and STEMReady in IT)*

- *Early college and dual admission programs including a “Give Back Montgomery” program proposed by MCPS Dr. Jack Smith)*
- *Career Readiness*
 - *Implementing county wide career competency initiatives into pathways*
 - *Experiential Learning (including collaboration with USM academic partners and IBBR)*
- *Business Engagement*
 - *County Wide Employer Engagement (Joint Institution Business Council)*
 - *Employer Summit*
 - *Website for Internships*
- *Point of Need*
 - *Creation of Certifications and post-baccalaureates certifications with Montgomery County and USM partners*
- *Assessment & Evaluation*
 - *Data Sharing*
 - *County-Wide ACES Data Pilot for Interventions (Predictive Analytics)*

6. How is WorkSource Montgomery identifying the unemployed for training and job attainment?

- *N.A.*

7. What are the next steps in career pathway development, specifically in relation to employers?

- *These steps are described as part of the Educational Ecosystem above. The success of the program rests on the ability to build capacity across all 3 institutions with institutional and county wide support and funding.*

Attachments

- *Bethesda Beat, Opinion by Dr. Annica Wayman, July 2021*
- *Worksource Montgomery Blog, Worksource Success by Jacob Vogelhut, May 2021*
- *“Transforming Educational Ecosystem Paradigms,” Dr. Anne Khademian, October 2021.*

Bethesda BEAT 2021 Opinion

Opinion: Pandemic has underscored how crucial the life science workforce is

Montgomery County has opportunities for a biotech education, career

BY ANNICA WAYMAN – JULY 17, 2021

Doctors, nurses, and other health care workers have demonstrated heroic efforts on the front line of the fight against COVID-19. As a result, many students are even more motivated to pursue these careers.

However, the heroic efforts of health care workers is enabled by another group of superheroes — the scientists, engineers and other professionals working in the life science biotechnology industry to produce diagnostic tools, drug treatments, and vaccines for COVID-19 and other diseases.

Yet, students don't realize the broader impact they can have by pursuing a career working at a biotechnology or biopharma company and the enormous job demand that exists right here in our region.

The D.C./Maryland/Virginia region, commonly known as the BioHealth Capital Region, is number four among biopharma clusters in the United States, according to [the 2020 ranking of Genetic Engineering & Biotechnology News](#).

There are over 500 biotech companies in Maryland and the majority of those are in Montgomery County.

Even before the COVID-19 pandemic, job opportunities in life sciences were growing quickly. [Job growth between 2013 and 2019 in Maryland](#) was over 15%.

News from businesses like the gene therapy company Vigene on [hiring up to 245 jobs in four years](#) had become commonplace.

Moreover, with the rapid development and manufacturing of COVID-19 treatments and vaccines, the demand for talent is quickly rising. The Montgomery County-based company Novavax, whose COVID-19 vaccine recently showed 90.4% efficacy in Phase 3, [plans to hire up to 300 people](#) at its new facility by the end of this year.

Jobs at these companies provide students interested in science and engineering, with a tremendous opportunity to pursue an impactful, health care-related career right in their backyard.

Coupled with that are the educational opportunities here in Montgomery County in biotechnology to prepare students for these jobs.

As an example, Montgomery College has [a biotechnology associate's degree](#), in which students can then obtain an applied biotechnology bachelor's degree at the University of Maryland Baltimore County's location at The Universities at Shady Grove.

This applied biotechnology degree, [a Bachelor of Science degree in Translational Life Science Technology \(TLST\)](#), teaches students in a practical and interdisciplinary nature about the translation of biomedical research to approved medical products to prepare them to work at a biotechnology company.

Students can also pursue [a professional master's degree in biotechnology](#) at UMBC-Shady Grove.

With the recent signing of the [Montgomery/Maryland Life Sciences Education and Innovation Partnership](#) memorandum of understanding, opportunities to pursue life science education and experiential learning will significantly increase.

However, students and their parents may not be fully aware of the many interesting and impactful job opportunities in biotechnology and the life sciences.

Advising and career activities in the high schools and middle schools should include more dialogue on jobs in the life sciences that go beyond being a doctor or dentist and instead include those jobs in biotechnology.

Local media outlets and social media could possibly expand their coverage of biotech and biopharma to describe the interesting projects and people in the industry. And, of course we need the biotechnology companies heavily involved.

Furthermore, more focus needs to be placed on building a more inclusive biotechnology workforce that reflects the diverse demographic of our society.

The disproportionate impact of COVID-19 [on communities like African-Americans](#) because of racial health disparities underscores the importance of ushering in a more diverse biotechnology workforce unafraid to share their perspectives and ideas on the design of drugs, delivery devices, clinical trials, labels, and other components of the product.

We desperately need the next generation of aspiring scientists of all backgrounds to join the superhero group of biotechnologist.

Annica Wayman of Rockville is an associate dean for the University of Maryland Baltimore County at The Universities at Shady Grove



WorkSource Montgomery/Blog **May 5, 2021**
WorkSource Success: Jacob Vogelhut, Biotechnology

With COVID-19 surging through the country and our county in April 2020, the hospitality industry began to crumble. After more than 15 years at Marriott International, Jacob Vogelhut found himself out of a job like so many others. Navigating this new professional challenge was something that he was not looking forward to. Nevertheless, he embraced his circumstances and used them as an opportunity to forge ahead on a different career path. Having been in project management for the majority of his career, Jacob knew that he wanted to stick with it but the hospitality industry was no longer a viable option for the foreseeable future.

His wife had worked in the pharmaceutical field for years so he had some familiarity with the industry and it interested him enough to pursue a new career in biotechnology. With the help of his network, he absorbed as much information as possible about the industry. In late 2020, a friend recommended that he visit WorkSource Montgomery (WSM) for career service assistance. Jacob was assigned to work with American Job Center career coach, George Jefferson, and before Thanksgiving was enrolled in and completed Project Management Professional (PMP) training to renew his license. Shortly after that, WSM connected him with Agile/Scrum training after he expressed interest.

In December, the first Montgomery County Biotech Bootcamp was scheduled to launch early in January 2021. The Bootcamp is a pilot program that provides entry-level biotechnology training to county residents displaced due to COVID-19. The goal of the program was to grow the talent pool for the county's rapidly growing biotech industry which has a large presence here. The Bootcamp was developed in collaboration with Montgomery College, University of Maryland, Baltimore County (UMBC) at The Universities at Shady Grove (USG), Montgomery County Economic Advisory Group (EAG), Montgomery County Economic Development Corporation (MCEDC), and WSM.

Jacob heard about the Bootcamp and inquired about it with George at WSM. Even though the training taught only the basics of biotechnology, he thought it would be a great opportunity to learn the industry lingo and laboratory fundamentals in a hands-on environment—proving his commitment to the industry. Jacob was accepted into the Bootcamp at USG/UMBC in early January. Two tracks were made available to participants. For those with some college experience or college degrees the Biotech Bootcamp program was offered at USG/UMBC and a track for those with a high school diploma or equivalent was offered at Montgomery College.

Jacob completed the Bootcamp in February and immediately landed a great job with Thermo Fisher Scientific—a Massachusetts-based, Fortune 150 company that provides scientific instrumentation, software, and services to the healthcare, life science, and other laboratory industries. With his PMP background, renewed license, and obvious commitment to working within the biotech industry, Thermo Fisher did not hesitate to hire him.

Two months into the new job, Jacob oversees a team of 25 project managers as a Senior Manager of Client Services at Thermo Fisher's biorepository in Rockville. He enthusiastically recommends WSM and the training pathways offered to whoever is in a similar position as he was. "I've encouraged friends and colleagues to contact WSM. It's hard to get motivated to find something different. You have to treat it like a full-time job but there is help out there. WSM offers a lot of value. They have funding and programs that are incredibly helpful and make a real difference during a career search," he said.

Jacob is one of several Bootcamp graduates who have found sustainable employment successfully. The next Biotech Bootcamp is tentatively scheduled to begin Summer 2021 and will again be offered at both schools. The biotechnology career pathway is one of several that WSM offers to county residents that are unemployed, underemployed, or displaced due to COVID-19. For more information about our services and career pathways, contact us. For more coverage on the pilot Biotech Bootcamp visit Montgomery College and [WJLA DC](#).

TRANSFORMING EDUCATION ECOSYSTEM PARADIGMS

WHY A NEW PARADIGM FOR THE ECOSYSTEM?



ECONOMIC RECOVERY
is urgent and the economy
is transforming



DELIVER EQUITY
in education for
all students



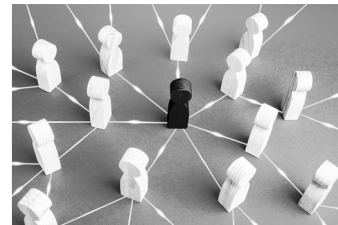
**POLITICAL LEADERSHIP,
VISION AND WILL**
in Montgomery County is
strong to vision and build a
new paradigm



**DEVELOP A HOLISTIC,
DATA-DRIVEN VIEW**
of the educational resources
and opportunities across MC



**GROWTH
AND OPPORTUNITY**
in the life sciences and
quantum is bubbling



**RESOURCES AND
STRONG PARTNERSHIPS**
in place to build the
new paradigm

MONTGOMERY COUNTY EDUCATION ECOSYSTEM PARADIGMS



OLD

- **Focused on students of today**
- Siloed by institutions and gaps in experience
- **Skills to meet current or short term business needs**
- Responding to employers
- **Static**
- Geared toward degree completion
- **Initiatives-based, grant-funded**
- Disconnect between graduates and current/future employer demand for talent
- **Many students left behind**

MONTGOMERY COUNTY EDUCATION ECOSYSTEM PARADIGMS



NEW

- **Focused on the student of tomorrow, leaning into the future**
- Holistic learning experience with feedback loops, Pre-K - J (job!)
- **Clear and identifiable academic educational pathways**
- Career success and inclusive of employers
- **Dynamic and nimble to meet student and employer needs**
- Adaptive life long learning (stackable credentials)
- **Systematic approach across all institutions**
- Sustainable funding
- **Improve inclusivity and student success**
- Community connected/driven

5 CORE FUNCTIONS TO SCALE AND MAKE SUSTAINABLE

STRONG PATHWAYS
that can meet any student where they are regardless of student readiness or substantive area
(ACES, Dual Enrollment programs)



CAREER READINESS
as the common core thread across the ecosystem (develop common vocabulary around these terms)

BUSINESS ENGAGEMENT
coordinated and forward facing

POINT OF NEED
learning tailored to meet the needs of the workforce

BUILD A COMMITMENT AND INFRASTRUCTURE THAT INCORPORATES DATA SHARING
and analysis and builds on collaborative experience among the partners

THE ROADMAP TO THE NEW ECOSYSTEM



Intentionally create a blueprint for inclusive educational and economic growth



Define critical issues and gaps and identify communities that lack educational access to by the creation of a new regional ecosystem



Drive collaboration among organizations to align initiatives and deploy resources at scale toward critical inclusive growth challenge

WHY A HOLISTIC APPROACH? WHY NOW?

- 1 CLEAR AND TRANSPARENT EDUCATIONAL PATHWAYS**
to meet **ALL** students where they are and help them succeed at every educational level - Educational Partner for Life
- 2 IMPROVED EFFECTIVENESS AND EFFICIENCY**
bring collaborations to scale and sustainability
- 3 MORE STUDENTS ENTERING AND COMPLETING DEGREES**
across all educational institutions and obtaining jobs
- 4 COORDINATED AND EFFECTIVE ALIGNMENT WITH WORKFORCE NEEDS**
Build a local talent pool targeted to employer needs

- 5 LEARNING OPPORTUNITIES CONTINUE AFTER GRADUATION**
continuous growth and learning-continuous education and skill development along a career path
- 6 MONTGOMERY COUNTY STANDS OUT IN THE NATION**
for its strong pathways and robust, sustainable talent pipeline that attracts new companies and investment opportunities - Economic Development
- 7 ACCELERATE ECONOMIC RECOVERY**
in the post-pandemic era

NEXT STEPS: BETTER THAN THE SUM OF OUR PARTS

1

DEVELOP KEY PILOTS that build out a holistic approach to any of the 5 core functions



Pathway Building and Career Readiness

- Focus on ACES
- Build one or two additional pathways



Build out Coordinated Business Engagement

- Hold a summit with employers
- Develop a website for internships across all 3 institutions



Establish the Pathway Programs to Workforce at scale through the county/state rather than through grants

2

BUILD THE INFRASTRUCTURE of the Educational Ecosystem in Montgomery County

- **Jointly commit** to build the educational ecosystem
- **Build the case and the system for data sharing** across the educational ecosystem between educators and employers
- **Establish an educational ecosystem task force**
- **Brand the educational ecosystem and marketing campaign**
- **Fund the development and implementation** of the educational ecosystem

QUESTIONS/FOLLOW-UPS/THOUGHTS



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In Montgomery County, what fields have the highest unemployment rates and what fields have the lowest unemployment rates (specifically during the pandemic)? What populations are being served?

See Attachment A for unemployment by occupations (Attachment A). The data reflects the highest unemployment rates exists within the occupations listed in the chart below.

Occupation	Employment	Unemployment	Unemployment Rate
Food Preparation and Serving Related Occupations	26,138	5,517	17.6%
Personal Care and Service Occupations	14,137	2,138	16.1%
Transportation and Material Moving Occupations	25,450	3,095	11.8%
Building and Grounds Cleaning and Maintenance Occupations	21,637	2,382	10.6%
Construction and Extraction Occupations	20,114	2,087	10.0%
Sales and Related Occupations	38,569	3,826	9.6%

In no order, WSM's priority service populations are: Disabled, Veterans, Unemployed, Underemployed, English Learners, Single Parents, UI Claimants, Low Income, Ex-Offender, Homeless, Displaced Homemaker, and TANF/SNAP recipients. All job seeker outreach and marketing endeavors are directed toward increasing awareness and access to WSM's services within the above-mentioned priority service populations.

How are existing short-term training programs meeting the needs of the unemployed and in the following specific fields: mental health, P-Tech, biotech, and early education/care? What action steps are being taken to support the unemployed and workforce in the highlighted fields?

Biotech: To date, four (4) cohorts of the Bio Bootcamp have concluded. Thus far, the placement rate is approximately 50% for the first two (2) cohorts; as the final two (2) groups recently concluded, outcomes are to be determined. The following actions steps are being taken to further develop and scale the Bio Bootcamp: gathering employer feedback to inform curriculum and screening process develop; allocating county workforce development ARPA funding to ensure future cohorts; supporting efforts of Montgomery College to create new short-term bio credentials; exploring options for the Bio Bootcamp to be placed on the state training provider list.

Pharmacy Tech: WSM partners with MedCerts, LLC. who currently has an approved Pharmacy Technician training program on Maryland's Eligible Training Provider List (ETPL)? Job seekers eligible for WIOA can receive financial assistance to enroll in the MedCerts program. However, with a recent ARPA allocation, WSM will be able to fund training programs outside of the ETPL e.g., Montgomery College also has a Pharmacy Tech certificate program.

Early Childhood: WSM has not seen a huge demand from our current customer base for placement into the childcare industry. Additionally, there are currently no approved early childhood training certificate programs listed on the ETPL for WIOA funding. For customers interested, and qualified, to work in the childcare industry, WSM provides opportunities through On-the-Job Training (OJT). OJT provides job seekers with an opportunity to earn-and-learn, while decreasing the costs for training a new employee. WSM will continue to work with our partners e.g., Montgomery College, Montgomery Moving Forward, and Maryland Department of Labor, to explore ways to develop training opportunities for early care and education career pathways.

Mental Health: Currently, WSM provides mental health pathway opportunities to interested job seekers through On-the-Job Training (OJT) opportunities. OJT provides job seekers with an opportunity to earn-and-learn. As there are currently no approved short-term credential programs on the ETPL, WSM will continually explore ways to increase training & employment options leading to careers in the mental health field e.g., creating apprenticeships, funding non WIOA programs with ARPA funds, etc.

How will lessons learned during the pandemic impact the development of skill attainment programs?

The pandemic has affected skill attainment programs in a variety of manners. As virtual/remote work will continue to be a commonality for certain occupations, training programs will need to update ancillary soft skills modules to align with virtual/remote work e.g., Zoom/Teams navigation, virtual meeting etiquette, etc. Secondly, WSM has seen an increase in the effectiveness of hybrid programs. Hybrid programming affords job seekers the opportunity for face-to-face instruction, while reducing the resources necessary to travel to-and-from training on distance learning days.

Do existing higher education programs (e.g. bootcamps) include all of the infrastructure needed for short-term skill attainment?

WSM offers intensive case management services to each customer enrolled in occupational skills training. Effective case management will help ensure each customer has an adequate personal infrastructure (e.g., transportation, childcare, housing, attire, etc) before, during, and after training. These supports allow our job seekers the ability to concentrate on their training and employment endeavors.

How are our education agencies working together to build a strong local pipeline from K to J?

WSM works closely with the MCPS's Office of Partnerships CTE administrators to help build a strong talent pipeline. With the Office of Partnerships, WSM partners to offer career exploratory opportunities for Summer RISE participants. Additionally, there is a continual exchange of information to ensure graduates & non-graduates are aware of the programs and services available through WSM if they are not attending college or have a developed plan for employment.

WSM also works closely with MCPS's CTE programs to assist in providing apprenticeship opportunities for recent graduates. For example, WSM partnered with MCPS and Wanada's Automotive Dealership Education Institution to place thirty (30) young adults into employment and registered apprenticeships in September 2021.

How is WorkSource Montgomery identifying the unemployed for training and job attainment?

WSM identifies unemployed residents for training and job placement programs in a variety of ways. Several of these methods include, but aren't limited to:

- Partner Referrals: WSM continually develops partnerships with Montgomery County's faith and community-based ecosystem. Through these partnerships WSM continually promotes awareness of current events and services available to job seekers as well as establishing reciprocal referral processes.
- Online/Social Media Marketing: WSM programs and services are promoted via Facebook, LinkedIn, WSM Newsletter, Twitter, professional association directories (e.g., chambers of commerce), and other platforms. WSM will also begin promoting services through digital print and radio advertising.
- Community Impact Team: WSM currently employs a full-time Community Impact Manager and Community Impact Coordinator. The mission of the Community Impact department is to engage our community and faith-based partners to promote awareness of WorkSource Montgomery's services. Our Community Impact department also solicits feedback from our partners on community needs to help WSM identify service improvement needs.
- (Upcoming) Unemployment Insurance Data Sharing: WSM is currently engaged with the MD Department of Labor to execute a data sharing agreement to allow WSM access to contact, education, and (prior) employment information for unemployed residents in Montgomery County. Once approved, WSM will be able to conduct targeted outreach for various employment and training programs.
- (Upcoming) Mobile Job Center: The mobile unit will allow WSM the ability to promote programs and offer services directly within our communities most in need of assistance.

What are the next steps in career pathway development, specifically in relation to employers?

The next steps in career pathway development WSM are:

Apprenticeship Expansion: WSM will continue prioritize the expansion of apprenticeship opportunities for Montgomery County residents across multiple industries e.g., Construction, Medical, Automotive, & IT/Cyber. In partnership with the Maryland Department of Labor, utilizing ARPA funding, WSM will work with

intermediaries to expand apprenticeship, provide business incentives for hiring Montgomery County apprentices, and work with non-registered programs to become registered apprenticeships.

Integrated Business Services: Montgomery County is home to a vast array of entities who offer varying levels of business services. As such, duplication of services within the business service network is a common occurrence. Conversely, businesses experience employer fatigue as the complicated network of providers/services often create confusion within the business community. As a first step towards a possible solution, WSM is creating a workforce development asset map to inventory the many employment and training programs throughout the county. Upon completion, it is WSM's intent to create a coalition of business-facing staff from a multitude of partners who will develop and deploy an integrated business services strategy among workforce development partners. Among others, the integrated service strategy may include a business solutions webpage/portal, universal reporting, and leveraged resources.

Attachment A

Montgomery County, Maryland, 2021Q1¹

SOC	Occupation	Empl	Mean Ann Wages ²	LQ	Current		Online Job Ads ³	5-Year History		Total Demand	1-Year Forecast			
					Unempl	Unempl Rate		Empl Change	Ann %		Exits	Transfers	Empl Growth	Ann % Growth
43-0000	Office and Administrative Support Occupations	57,851	\$50,100	0.95	3,783	6.5%	2,888	-7,836	-2.5%	5,874	2,706	3,735	-568	-1.0%
13-0000	Business and Financial Operations Occupations	42,076	\$94,700	1.49	2,213	3.9%	3,943	880	0.4%	3,938	1,148	2,811	-22	-0.1%
41-0000	Sales and Related Occupations	38,569	\$54,000	0.85	3,826	9.6%	3,868	-7,151	-3.3%	4,911	1,996	3,175	-260	-0.7%
11-0000	Management Occupations	38,514	\$146,700	1.19	1,869	3.8%	3,965	1,701	0.9%	3,140	909	2,218	13	0.0%
29-0000	Healthcare Practitioners and Technical Occupations	31,386	\$101,200	1.10	927	3.0%	3,780	1,609	1.1%	1,791	814	905	73	0.2%
15-0000	Computer and Mathematical Occupations	29,731	\$109,500	1.95	1,167	3.1%	6,282	1,196	0.8%	2,489	507	1,737	245	0.8%
35-0000	Food Preparation and Serving Related Occupations	26,138	\$32,000	0.76	5,517	17.6%	2,559	-8,499	-5.5%	4,552	1,836	2,662	53	0.2%
25-0000	Educational Instruction and Library Occupations	25,670	\$69,500	0.97	2,594	7.2%	846	-1,226	-0.9%	2,330	1,070	1,256	4	0.0%
53-0000	Transportation and Material Moving Occupations	25,450	\$41,800	0.62	3,095	11.8%	1,642	523	0.4%	3,223	1,298	1,940	-15	-0.1%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	21,637	\$36,000	1.40	2,382	10.6%	663	-2,867	-2.5%	2,831	1,232	1,594	5	0.0%
31-0000	Healthcare Support Occupations	21,149	\$35,700	0.97	1,156	6.4%	1,579	1,081	1.1%	2,985	1,273	1,420	291	1.4%
47-0000	Construction and Extraction Occupations	20,114	\$54,800	0.90	2,087	10.0%	310	-1,508	-1.4%	2,109	638	1,530	-59	-0.3%
49-0000	Installation, Maintenance, and Repair Occupations	15,779	\$60,500	0.86	862	7.0%	908	-1,869	-2.2%	1,457	486	1,041	-70	-0.4%
39-0000	Personal Care and Service Occupations	14,137	\$36,700	1.20	2,138	16.1%	637	-4,271	-5.1%	2,192	953	1,196	42	0.3%
19-0000	Life, Physical, and Social Science Occupations	12,611	\$102,700	2.85	814	5.1%	1,640	920	1.5%	1,153	243	943	-33	-0.3%
17-0000	Architecture and Engineering Occupations	11,587	\$108,700	1.39	366	3.0%	922	221	0.4%	809	264	605	-60	-0.5%
51-0000	Production Occupations	10,164	\$47,200	0.37	774	8.9%	309	-672	-1.3%	1,056	402	747	-92	-0.9%
33-0000	Protective Service Occupations	10,157	\$63,800	0.98	747	6.2%	416	178	0.4%	1,088	473	641	-26	-0.3%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	9,364	\$75,900	1.11	1,125	8.6%	909	-1,397	-2.7%	978	364	643	-28	-0.3%
21-0000	Community and Social Service Occupations	8,407	\$61,800	0.98	311	2.8%	869	123	0.3%	988	310	612	66	0.8%
23-0000	Legal Occupations	6,342	\$136,600	1.52	261	2.2%	272	199	0.6%	398	160	258	-20	-0.3%
45-0000	Farming, Fishing, and Forestry Occupations	882	\$41,300	0.27	103	9.4%	25	352	10.7%	138	35	106	-2	-0.3%
00-0000	Total - All Occupations	477,716	\$72,500	1.00	38,118	7.1%	39,231	-28,313	-1.1%	50,499	19,116	31,775	-392	-0.1%

Source: [JobsEQ®](#)

Data as of 2021Q1 unless noted otherwise

Note: Figures may not sum due to rounding.

1. Data based on a four-quarter moving average unless noted otherwise.

2. Wage data are as of 2020 and represent the average for all Covered Employment

3. Data represent found online ads active within the last thirty days in the selected region; data represents a sampling rather than the complete universe of postings. Ads lacking zip code information but designating a place (city, town, etc.) may be assigned to the zip code with greatest employment in that place for queries in this analytic. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list).