

Table of Contents

Executive Summary		
Introduction		
Grow Interest in Healthc	are Careers	
Improve Access to Healt	hcare Education	
Increase Experiential Education Capacity		
Explore Recruitment and	l Retention Strategies	
Conclusion		
Resource Guide		
References -		

Authors

Katherine Frieden Research Associate

en Lindsay Brieschke ate Public Affairs Manager Rachel Bunnell Chief Program Officer

Craig Donahue
Chief Executive Officer

Michelle Wein
Director of Research

Aleysha Czartoszewski Career Pathways Coordinator

Executive Summary

Michigan Health Council (MHC) has been engaged in healthcare workforce development for over eight decades, with the mission of ensuring the future of the healthcare workforce. Challenges in this space are by no means new. An aging population and healthcare workforce and looming concerns over global pandemics and population health crises have only increased the pressure on supply and demand, exacerbating healthcare workforce shortages and impacting access to care and health outcomes.

MHC developed the **2025 Michigan Healthcare Workforce Plan** to address long-standing and evolving challenges. Supported by the Michigan Health Endowment Fund, this effort aims to guide the implementation of data-driven solutions to our state's healthcare workforce challenges.

The Workforce Plan is built upon a strategic framework consisting of four key pillars:

- 1. **Grow Interest in Healthcare Careers** Expanding career readiness opportunities for students through enhanced K-12 career development, increased job shadowing and observation experiences, and targeted student engagement programs.
- 2. **Improve Access to Healthcare Education** Removing barriers to healthcare education by expanding collaborative programs, increasing the availability of healthcare apprenticeships, and improving transfer pathways to make healthcare education more accessible and affordable.
- 3. **Increase Experiential Education Capacity** Addressing the shortage of clinical placement sites and educators by expanding the use of alternative training sites, supporting and incentivizing clinical faculty and preceptors, and collecting data to better understand and utilize clinical capacity.
- 4. **Explore Recruitment and Retention Strategies** Encouraging partnerships that build local talent pipelines, improving access to career development opportunities for all healthcare workers, and better understanding turnover using data.

Resources supplementing the Workforce Plan include the Michigan Healthcare Workforce Index, providing a scope of Michigan's healthcare workforce shortage for 36 occupations; an online workforce initiatives database; and occupation briefing webpages to provide key Michigan-specific data and insights on each occupation.

This Workforce Plan has been informed by extensive data analysis and research and intends to serve as a starting point. The next step is for stakeholders to engage in conversations around each of these pillars to review the proposed solutions and improve upon them. MHC aims to foster collaboration between healthcare employers, educational institutions, associations, workforce organizations, and policymakers. These partnerships will strengthen existing relationships and create new opportunities through the shared mission of growing a healthy, resilient, and capable healthcare workforce across Michigan. This Workforce Plan reflects MHC and the Health Fund's commitment to this critical goal.

Resources Created to Supplement the Workforce Plan



Michigan Healthcare Workforce Index

A comprehensive index that assesses the "health" of 36 healthcare occupations in Michigan.

www.mhc.org/index



Initiatives Database

A centralized database where the public can access ongoing healthcare workforce initiatives in Michigan and nationwide.

www.mhc.org/initiatives



Occupation Highlights

Webpages with comprehensive information on healthcare occupations, including current workforce data, legislation, career pathways, and more. www.mhc.org/occupations

Introduction

Healthcare is the largest industry in Michigan. Despite having over 660,000 healthcare providers (Linskey, 2023), our state is experiencing a healthcare workforce shortage. Additionally, the shortage of healthcare providers is exacerbated in some areas of the state, as the distribution of healthcare providers in Michigan closely mirrors the distribution of the population. Most Michiganders live in the lower half of the Lower Peninsula, while Northern Michigan and the Upper Peninsula are significantly less populated (Murembya, 2020; U.S. Census Bureau & Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget [DTMB], 2024). These areas have shortages of mental health providers, primary care providers (Rhyan et al., 2023), dentists, and emergency medical services (EMS) providers, in particular (Michigan Department of Labor & Economic Opportunity [LEO] & Michigan Office of Rural Prosperity [ORP], 2024). There are several factors contributing to the shortage.

Fewer Michiganders are enrolling in postsecondary education and health and healthcare-related programs (Causey et al., 2025). However, many healthcare occupations require at least an associate degree to practice. More graduating high school students are turning to jobs and careers that do not need a degree, and rising tuition costs discourage some of them from pursuing higher education if it comes at the cost of borrowing money to do so (Binkley & The Associated Press, 2023).

Michigan's population is older than the national average (U.S. Census Bureau, 2023). The baby boomer generation is reaching retirement age and becoming senior citizens (Rowe et al., 2016). Just as the general population of Michigan is aging and retiring from the workforce, so are healthcare workers. In the third quarter of 2021, 24 percent of Michigan's healthcare workforce was 55 and older, and 5.9 percent was 65 and older (Linskey, 2023, p. 21). Some occupations are older than others. Of particular note is Michigan's Physician workforce; 13 percent were 65 and older in 2023 (MHC Insight, 2024, p. 38).

We are poised to have a population primarily comprised of the baby boomer generation (i.e., the retirement-age population), and the current and future working-age populations of the healthcare workforce are not large enough to replace those retiring. We will have more individuals who need care but fewer healthcare providers available to treat them. This will result in less access to care and will likely affect certain areas of the state more than others.

Michigan Healthcare Workforce Index

The Index is a first-of-its-kind, comprehensive index that assessed the "health" of 36 healthcare occupations in Michigan. MHC Insight ranked and compared occupations not to conclude that some occupations are better than others, but rather to help decision-makers quickly understand the current state of individual occupations and the collective healthcare workforce across a range of factors. The first step in this process is creating a shared understanding of what current data tells us about our workforce:

- 1. Nearly all occupations analyzed will experience a shortage between now and 2033.
- 2. Population health statistics point to the need for a more robust behavioral health workforce.
- 3. Building more career pathways could help individuals in highgrowth, low-wage occupations stay and advance in the healthcare workforce.
- 4. Growth in the diversity of healthcare practitioners is essential to better healthcare outcomes for the population. While some occupations are relatively more diverse, many of these occupations are lower-wage earning.



The Index helps inform discussions on the best ways to build Michigan's healthcare workforce capacity.

We encourage decision-makers to use the Index as one of many tools to help inform how to invest limited time and resources for maximum impact. The insights and analysis gleaned from the Index are the key initial phase in informing discussions about the best ways to build Michigan's healthcare workforce capacity – the primary goal of the 2025 Michigan Healthcare Workforce Plan.

To create the Index, MHC analyzes labor market information at the occupation level with 65 occupations, using specific Standard Occupational Classification (SOC) codes to provide more contextualized information. MHC collapsed several occupations with similar educational requirements (such as physicians or behavioral healthcare occupations) into groups to produce a clearer picture of the supply of professionals for these occupations. These occupation groups combine data for occupations with similar skill sets, educational attainment, and experience requirements. Once the occupations were condensed, data for each occupation (or group of occupations) was pulled from Lightcast, the Association of American Medical Colleges (AAMC), and the Accreditation Council for Graduate Medical Education (ACGME). The input variables included a measure of current employment (2023 jobs), projected employment (2033 jobs), 2023-2033 openings, 2022 median wage, 2012 median wage, and 2023 turnover. In addition, education supply data was pulled from IPEDS, with additional qualitative confirmation occurring through the review of each educational institution's website for up-to-date program specifics. These input variables were then combined to create four final ranking variables – Growth, Shortage, Wage, and Turnover.

Each occupation was then ranked from 1 to 36 on each ranking variable. These rankings were then summed by occupation (e.g., Dentists – #28 Growth, #2 Shortage, #11 Wage, #1 Turnover = 42), and re-ranked so that occupations with the smallest overall sum were highest (or "healthiest") on the list.

Initiatives Database

Over the past two years, MHC has been building a database of healthcare workforce initiatives both in Michigan and nationwide. With so many initiatives working to better the healthcare system across a wide variety of challenges, occupations, and geographical spaces, the goal of MHC Insight's healthcare workforce initiatives database is to provide a centralized location where users can connect with those addressing similar challenges, learn from existing programs, and help inform policymakers about work in their regions.



To create the database, MHC developed a process for finding and showcasing healthcare workforce initiatives. First, initiatives had to fit the criteria for one of three goals: recruitment (developing more healthcare professionals), improvement (improving the quality of current professionals and their services), or retention (retaining current healthcare workers). Next, a plan to search for initiatives by organization type was developed. Such organizations included health systems, professional associations, educational institutions, etc. The initial search was primarily Internet-based, reviewing organization websites and using statewide health associations to direct us to initiatives. The search collected standard information for all initiatives, including name, healthcare organizations involved, geographic scope, healthcare professions impacted, and others.

The initiatives database, which showcases about 300 Michigan initiatives and just over 100 nationwide initiatives, is available at www.mhc.org/initiatives. By clicking on an initiative, users may view a brief description of the activities, the organizations involved, the healthcare industry category, healthcare occupations impacted, workforce development focus, and workforce issues addressed.

Users can submit their healthcare initiatives if they are not yet included in the database. Additionally, MHC highlights different initiatives across Michigan to share some of the impactful work happening across the state.

Occupation Highlights

MHC created webpages highlighting data and information about healthcare occupations. The pages include recent relevant legislation, wage information, common job titles, employment statistics, career pathways, and specific statewide initiatives. They were designed to inform policymakers, career counselors, and students, while providing the most up-to-date data about the status of healthcare occupations in Michigan, along with vital information for individuals interested in pursuing these occupations as a career.



Starting from the 36 occupations presented in the Index, MHC combined occupations that were of a similar educational background or career pathway (e.g., Physicians or EMTs/Paramedics). Then, an occupational overview was created, describing the skills, knowledge, and abilities required and developed in this career. Recent relevant legislation that might affect the occupation's required skill set or personnel was detailed, followed by several labor market data points. These include a race/ethnicity breakdown, a sex categorization, trends in the number of job postings over time and job posting locations, typical advertised job titles, and recent hourly wage rates. The occupation's Index ranking was included, as well as a few of the statewide workforce development initiatives from the MHC initiatives database. Finally, a career pathway illustrating the educational and training requirements was included to provide an overview of the steps needed to become credentialed in this occupation.

Pillar 1: Grow Interest in Healthcare Careers



This pillar will discuss the Michigan Department of Education requirements around a career development model and some current aspects of K-12 education that support healthcare career development.

Career planning and exploration have become essential components of our education systems today. Despite the lack of resources and support for school counseling, the demand for early assessments, aptitude testing, planning conversations, and guidance has only intensified. Employers are eager to develop a consistent and qualified stream of workers to meet the increasing demand for healthcare and health-related services. Early access points in the education system for career navigation can assist in preparing students for future healthcare careers.

This pillar will discuss the Michigan Department of Education (MDE) requirements around a career development model and some current aspects of K-12 education that support healthcare career development. These aspects include exploring career pathways and experiential and extracurricular activities for students traveling down these career pathways.

Employers are eager to develop a consistent and qualified stream of workers to meet the increasing demand.

Recommendation 1: Support consistent implementation of the Michigan Career Development Model

Traditionally, School Counselors have been the primary resource for student career planning and navigation. However, Michigan's School Counselor shortage is one of the worst in the country (French, 2023), which impacts districts' reach and ability to provide adequate career resources. As a result, school districts are relying more heavily on tools and resources to supplement the essential yet limited role of the Counselor. While there are several tools and resources available today geared to supporting career exploration, gaps remain.

Fully implement the Michigan Career Development Model through public-private partnerships

Michigan schools should provide robust opportunities for career education to prepare students for their futures. These opportunities must include preparing for postsecondary education or work, developing professional or soft skills, and developing a plan to achieve personal and career goals. Although the Michigan Department of Education (MDE) created a statewide framework for student career education, there are gaps in reach and scope. Not all school districts implement this framework universally, leaving some students falling through the cracks. A more coordinated and comprehensive approach to preparing students for their careers is necessary to bridge the gap from education to career.

The Michigan Career Development Model (MCDM) framework, created in 2018 by Public Acts 229 and 230, prioritizes career awareness (elementary), career exploration (middle school), and career preparation (high school) activities for all K-12 students in Michigan public schools (MDE, 2018). The MCDM is designed for students to be able to answer: "Who am I? "Where am I going?" "How will I get there?" and "Who can help?" (MDE, 2024, p. 1) To achieve this, the MCDM provides a series of targets to guide the types of career activities that must take place during a student's academic career.

MDE advised districts to "use their school improvement team to implement this model" (MDE, 2018, p. 5) but intended for "the content and form of the career development education" to be entirely up to districts (MDE, 2018, p. 36). As a result, there is variation in how each district has integrated the MCDM. Some Intermediate School Districts (ISDs) have the capacity to connect with local employers and community resources to provide robust career activities and experiences. Other ISDs mainly rely on digital career navigation platforms (such as Xello), where students work through self-assessments and explore career information independently. Due to the variation in MCDM instruction and the amount of funding available at the school district level, students have differing levels of career education and support from district to district.

In December 2024, the MCDM relaunched with revised targets and an expanded Reference Guide. While the new Reference Guide provides examples of career activities that will meet the outlined targets (MDE, 2024), inconsistencies remain in the ability of districts across the state to fund the activities and connect with community partners. A clear plan for funding the MCDM is necessary for the broad statewide success of this program. Through public-private partnerships such as state appropriations and investments from healthcare employers, implementing the MCDM could be a useful strategy for providing Michigan students with more career awareness, exploration, and preparation opportunities. We recommend that MCDM be fully and consistently implemented in all public K-12 schools to improve the career education that students receive, ultimately preparing them for work in healthcare and health-related professions after graduation.

Expand existing opportunities to meet MCDM targets for career awareness, exploration, and preparation

As part of a full implementation of the MCDM, existing opportunities and resources that build career readiness could be expanded throughout the state as a way for districts to fulfill MCDM targets for career awareness, exploration, and preparation. Michigan HOSA, Career and Technical Education (CTE), job shadowing, and career pathways content are avenues worth considering to expand students' healthcare career readiness.



Michigan HOSA

Many students are preparing for the future by participating in extracurricular activities, groups, and clubs. One of the longest-standing activities in Michigan is HOSA-Future Health Professionals. Michigan HOSA (MI HOSA) has been working with schools for over 25 years and has grown to serve just over 7,950 students in the 2024-2025 school year. HOSA is a "viable solution to health industry shortages" (HOSA-Future Health Professionals, n.d.) because it equips future healthcare workers with tools necessary for the workplace, like leadership, technical, and communication skills through competitive events, according to Samantha Pohl, Associate Director of MI HOSA.

Expand Middle School Chapters

Only three percent of Michigan participants were middle schoolers during the 2024–2025 school year, according to Pohl. Many educators believe middle school is the best time for individuals to start exploring careers (Association for Career and Technical Education & Career Cruising, 2018; Field, 2022). Expanding MI HOSA to middle schools is an opportunity to increase exposure to healthcare careers for students during their formative years. Adding middle school chapters in areas with an existing high school chapter could be the first step, increasing the longevity of students' participation in the program.

Figure 1: Michigan HOSA Chapter Map



Each blue square represents one Michigan HOSA chapter (MI HOSA, n.d.)

Expand to Unrepresented High Schools

HOSA participation in high school focuses on teaching students skills and knowledge they may use in a future healthcare career. HOSA alumni who choose to work in healthcare in their hometowns will ultimately increase their regions' healthcare workforce capacity. However, few HOSA chapters exist in areas with the greatest workforce needs (LEO & ORP, 2024; Poverty Solutions at the University of Michigan, 2022; Rhyan et al., 2022; Rhyan et al., 2023). Most schools affiliated with MI HOSA are in and around southeastern Michigan (see map above) (MI HOSA, n.d.). The priority for high school chapter expansion will be in areas of the state that are currently underrepresented and often rural.

Employer Engagement

Engaging employer partners will be critical to grow MI HOSA. The costs associated with membership and travel for competitions are common barriers to entry for new chapters. Local employers should be engaged and encouraged to sponsor the new chapters, thereby reducing costs. Employers can benefit from this partnership by gaining access to students who are interested in health science careers and who live in their area. By investing in students' healthcare career exploration and achievement, employers can assist in the early career development of potential future employees.

Expanding MI HOSA by opening additional chapters will allow more middle and high school students statewide to participate. Districts can use MI HOSA participation as an MCDM middle school career exploration activity and as a high school career preparation activity (MDE, 2024).

Career and Technical Education

One avenue for students to explore healthcare careers is through participation in <u>Career and Technical Education</u> (<u>CTE</u>). CTE prepares students for the workforce through four components: classroom instruction, technical skills training, work-based learning, and leadership opportunities (MDE, n.d.-a). High school CTE participants can earn industry-recognized certifications or credentials, receive college credit, connect with local employers, and develop workplace readiness skills (MDE, n.d.-b). Participation in CTE meets MCDM high school targets, like career preparation and building a talent portfolio (MDE, 2024).



What is a "CTE entity"?

A CTE entity is an overarching term for a system that offers CTE programs, such as a local school district, an ISD consortium, or an area career center (MDE, OCTE, n.d.).

Students' access to CTE opportunities is not equal across the state. Not every ISD offers health-related CTE programming (MDE, Office of Career and Technical Education [OCTE], 2024). There are also inequalities in the types and variety of Health Sciences CTE opportunities offered to students. Decisions on what courses to offer and how many, especially regarding any courses that lead to a credential, are often determined by the number and educational/experiential backgrounds of each CTE program's instructors.



Employer-led collaboratives (ELCs) may support the success of CTE. ELCs are regional partnerships among industry-specific employers that identify talent demand and challenges. Regional healthcare employers may consider convening to provide input on CTE credential offerings that meet their workforce needs.

ELCs can guide the healthcare career development of local students by identifying the CTE credentials that are most important to growing their local workforce. As a result, employers and their surrounding CTE entities can work toward creating more courses that lead to particular credentials. The employer partners can also consider contributing funding toward hiring more CTE instructors. Ultimately, employer-led initiatives may be critical to changing the landscape of CTE instruction and developing the healthcare workforce.



The Health Sciences CTE program at Ontonagon Area School in the Upper Peninsula only offered **one** CNA credentialing course in 2023–2024. In comparison, a Health Sciences CTE program serving more students, Kent Career Center in Grand Rapids, offered **seven** diverse credentialing courses that same school year (MDE, OCTE, 2024).

Best Practice Spotlight: ReadyCT

ReadyCT is a collaborative whose mission is to "advance academic excellence and career-connected learning for all public school students in Connecticut through collaboration with business, civic, and education leaders" (ReadyCT, n.d.-c). ReadyCT offers several programs that focus on connecting classroom instruction to careers. One such program is their Career Pathways program, in which an advisory board comprising business and school leaders, teachers, education organizations, and students informs classroom lesson instruction. Students gain employability skills and have the opportunity to earn industry-recognized certifications. Industry employers benefit by developing a homegrown workforce with specific skills and talent that meets their needs (Hartford Foundation for Public Giving, 2024; ReadyCT, n.d.-b; ReadyCT, n.d.-a). During the 2023-2024 school year, over 2,700 students participated in one or more work-based learning experiences through the 230+ businesses partnered with ReadyCT. Of special note, 600+ students participated in paid work experience (ReadyCT, 2025).

Job Shadowing

Some employers are recognizing the importance of job shadowing and are prioritizing engagement with high school students. Job shadowing allows students to understand the realities of a healthcare professional's work and is a common activity for those involved in CTE (MDE, n.d.-c). Since individuals can learn a lot about a potential career by shadowing a professional (Kent ISD, n.d.), encouraging students to participate in job shadowing or observational experiences should be a priority for high schools. Job shadowing is an activity that can fulfill the career clusters and pathways target in the MCDM for middle and high school students (MDE, 2024). However, opportunities are not equally accessible for all individuals, as a statewide system for job shadowing and observation experiences does not yet exist.

Best Practice Spotlight: Discover Covenant

Covenant HealthCare launched a program in summer 2024 for recent high school graduates living in the Saginaw area to get exposure to the different healthcare careers offered at the health system. According to Christin Tenbusch, Director of Care Experience and Organizational Development, and Jill Jarvis, Manager of Clinical Development and Education, Discover Covenant employed 15 high school grads from June to August to shadow a preceptor in a different department each week. Participants were assigned departments based on their interests. At the end of the program, participants learned about the available gateway positions at Covenant. Several of the participants were hired in entry-level roles in their favorite departments. The program will return this summer and hopes to accept more participants (Michigan Health & Hospital Association [MHA], 2025).

A School Counselor, teacher, parent, or individual may organize the job shadowing experience. However, with the current lack of statewide organization in this process, finding and organizing an experience can be complicated and time-consuming. The organizer needs expertise in this area to do it successfully, or they need to have a personal connection to the employer who can help them coordinate the placement.

Healthcare employers, regardless of size, can offer equally beneficial job shadowing opportunities. Shadowing in various healthcare settings will allow individuals to experience the variety of jobs and lifestyles a healthcare career can offer. However, smaller sites may not have the staff time to market and organize these experiences.

Expanding Job Shadowing and Observation

A statewide database could improve students' access to healthcare job shadowing and observation opportunities across the state. Such a database could allow all types of employers to post their offerings so students can find and sign up for relevant opportunities in their area.



"ACEMAPP"?

ACEMAPP is an online platform for healthcare education, compliance, and recruitment.

Best Practice Spotlight: ACEMAPP in Georgia

ACEMAPP is one product currently being used to organize and facilitate job shadowing and observation experiences. Using ACEMAPP to arrange these experiences for high school students and others looking to explore healthcare has gained traction in Georgia. In 2024, 2,650 individuals arranged and participated in an experience across 39 organizations. However, in Michigan, the numbers are significantly smaller: 210 individuals across 12 organizations.

More than 80 hospitals and healthcare employers in Michigan already use ACEMAPP to arrange student clinical education placements. Expanding the offerings available to those looking for job shadowing opportunities should become a priority. Many of these employers are affiliated with doctors' offices and non-acute care facilities, where they can also begin offering experiences from these locations.

By utilizing a central system, schools will have a tool to aid students in finding and coordinating opportunities. It will also benefit healthcare employers by providing an efficient process to introduce their organizations to potential employees.

Pathways Content

Developing career pathways is growing in popularity as a solution to grow and retain the healthcare workforce. Career pathways reference the steps and actions needed for individuals to prepare for a specific healthcare career. They can be implemented to target and grow specific demographic representation in professions with low diversity or those that do not reflect the populations or communities they serve (Taylor et al., 2019).

Types of Career Pathway Programs



Navigation pathway program: Provides resources and information about entering a career pathway and opportunities to exit and reenter the pathway.



Intervention pathway program: Aims to facilitate an individual's start, continuation, or reentry into a career pathway.



Education-based pathway program: Facilitates career advancement by shortening required education or training programs.



Employer-led pathway program: Illustrates and guides new or current employee career advancement within an organization.

Pathways are a powerful tool in career navigation, and exploring career pathways is a building block of the MCDM (MDE, 2024). Existing healthcare career pathways and content are disjointed, and available information is often conflicting. Each program has different activities, scopes of support, and definitions of occupation trajectories. This lack of cohesion leads to duplication of efforts, inefficiencies in growing the healthcare workforce, and missed collaboration opportunities. A new healthcare career pathway resource could be developed that is accessible statewide and includes all of the parts of a pathway for every healthcare career. An online tool like this could expand available information and resources to students, their parents, and School Counselors.

Healthcare stakeholders provide resources on healthcare careers through navigation pathway programs; however, there is no universal pathway structure. Industry and education stakeholders may consider collaborating to create a shared definition of pathways. Their decisions will guide the development of future tools and resources for exploring healthcare careers.



Recommendation #2: Launch a communications campaign

When students consider careers in healthcare, some picture nursing, pharmacy, or medicine and work in a hospital as their limited options. Stakeholders may consider investing in a campaign targeted toward students, parents, educators, and School Counselors. The campaign will highlight the value of healthcare careers and the opportunities they provide. Sparking interest in the full breadth of healthcare careers will be critical to growing the workforce. A large collaborative and financial investment will be needed to fully implement this kind of campaign.

Best Practice Spotlight: MI Hospital Careers

One successful communications campaign is MHA's "MI Hospital Careers." The campaign promotes the necessity and availability of healthcare jobs in hospitals, both clinical and non-clinical. It targets high school and college students while also sharing education and financial resources that can assist those interested in gaining the requisite education and experience to become healthcare professionals (MHA, 2023; MHA, n.d.).

Pillar 2: Improve Access to Healthcare Education



The following pillar will take a deeper dive into healthcare education, including funding and support for learners, gaps in the process, and recommendations to support and expand existing work.

Encouraging students to explore healthcare occupations is an essential first step in growing the healthcare workforce. The next is providing accessible and attainable educational opportunities for students to receive the necessary credentials and degrees. These range from certificates and credentials offered through CTE programs and apprenticeships to advanced degree programs in health professions at postsecondary institutions.

Challenges exist in access and affordability, evidenced by declining enrollment across all educational settings (Marcus, 2022; Meyer, 2023). More Michiganders are choosing to forgo postsecondary education in general and in healthcare specifically (Causey et al., 2025). Despite these challenges, solutions have emerged that overcome educational barriers. In some cases, employers are becoming more active and intentional about developing their own talent. Other efforts aim to break down geographic barriers to healthcare education by creating innovative partnerships between institutions. The following pillar will take a deeper dive into healthcare education, including funding and support for learners, gaps in the process, and recommendations to support and expand existing work.

Recommendation 1: Remove geographic barriers to accessing healthcare education so Michiganders can earn and learn where they live

EPiC Consortium

One challenge of traditional postsecondary education for students is that their options are limited to what is offered nearby unless they relocate. For instance, there are no dental hygiene programs in Michigan north of Ferris State's in Big Rapids (Slootmaker, 2024). The Educational Programs in Collaboration (EPiC) Consortium is an innovative education model targeted to improve accessibility (Michigan Workforce Training and Education Collaborative [MWTEC], n.d.-a; MWTEC, n.d.-d). EPiC solves the issue of geographic program availability by allowing students to complete their program-specific classroom learning online while receiving local, in-person training to develop clinical competencies. Students pay an in-district tuition rate for their courses, regardless of whether the college offering them is in their district (Michigan Colleges Online & MWTEC, n.d.). In turn, the EPiC Consortium benefits participating educational institutions because the high costs of running their programs, especially those requiring expensive equipment, are shared equally among the colleges (MWTEC, n.d.-a).

The EPiC Consortium currently offers ten healthcare education and training programs. There is an opportunity to expand this education model to include more healthcare occupations, which would eliminate geographic barriers to education for many more students.

EPiC Consortium healthcare programs include:

- Anesthesia Technology
- Community Integrated
 Paramedicine
- Computed Tomography (CT)
 Technology
- Invasive Cardiovascular Technology
- LPN Apprenticeship

- Medical Assisting
- MRI Technology
- Neurodiagnostic (EEG)
 Technology
- Radiography
- Surgical Technology

(MWTEC, n.d.-c).

Employer and Educator Partnerships

While the entire state has a healthcare workforce shortage, the effects vary by region and geography. Both urban and rural communities face their own set of unique challenges that can make attracting and training talent difficult. Rural communities may lack access to nearby postsecondary programs. Further, they may be limited in attracting outside talent to move to their communities. Urban areas may face recruitment challenges due to a higher cost of living and greater competition between health systems and other employment opportunities. Urban and rural communities have realized that a one-size-fits-all approach is often ineffective when it comes to their unique workforce needs. An emerging trend in local solutions is "grow your own" programs.

"Grow your own" programs originally started as a workforce solution to address educator shortages (Gist, 2022) and have been adopted by other industry sectors. Employers leverage partnerships with local higher education institutions to access, train, and upskill talent from their communities to fill vacancies.

Best Practice Spotlight: Henry Ford College and Corewell Health

Henry Ford College (HFC) and Corewell Health created the <u>Nurse Immersive Clinical</u> <u>and Employment program</u> in late 2023 to ensure HFC nursing graduates are practice-ready and stay in southeast Michigan. HFC nursing students in the program receive tuition scholarships and temporary part-time paid positions during school, participate in clinical placements at Corewell facilities and an "Immersive Onsite Practicum" in their final semesters, and are guaranteed full-time employment for at least two years after graduation. In turn, Corewell Health receives a "consistent pipeline of highly skilled nurses who will enter their profession with customized training, a broad knowledge base, and direct experience in the Corewell Health model of patient care" (Henry Ford College, 2023).

Best Practice Spotlight: Healthcare Pathways Consortium in the Eastern Upper Peninsula

The Healthcare Pathways Consortium in the Upper Peninsula ensures students' prior healthcare experience counts and transfers between each educational institution. Sault Area High School and Career Center (SAHCC), Bay Mills Community College (BMCC), Lake Superior State University (LSSU), and MyMichigan Medical Center Sault created the Healthcare Pathways Consortium program in the fall of 2024 (Perez, 2024). Students completing the Health Sciences CTE program at SAHCC can receive credits that transfer to BMCC and LSSU. Students who complete their Associate of Science in Health Science degrees at BMCC can transfer their credits to LSSU and apply to the nursing program with preferential status in the application review process.

Students utilizing the transfer pathways through the Consortium receive training opportunities like internships, clinical rotations, apprenticeships, and simulation experiences at MyMichigan Sault. Even CTE students at SAHCC participate in a daylong job shadowing opportunity at MyMichigan Sault in two different departments to learn about the types of healthcare professionals who work in hospitals and the job duties they perform.

Educational partners in the Consortium say that they are no longer trying to compete but are now supporting and promoting one another to reach a shared goal for their organizations and community. They are in the process of trying to replicate this solution with other programs. The consortium model is an example of an education-employer partnership that can be replicated in other areas of the state.

Based on the case studies, there are opportunities to create and continue the expansion of regional employer-postsecondary partnerships to increase the healthcare workforce in each community.

Although the creation of these partnerships can seem daunting, promoting statewide guidance, standards, and lessons learned could accelerate the growth of these promising programs. Best practices from current programs can be gathered to create a "playbook" that may assist in implementing regional solutions. Resources in this playbook can include examples of articulation agreements, marketing strategies, affiliation agreements, etc.

MHC has developed a searchable database of healthcare workforce initiatives to highlight what exists in Michigan and beyond. To learn more or add your own initiative, please visit mhc.org/initiatives.

Healthcare Apprenticeships

Apprenticeships provide an opportunity for individuals who might not otherwise be able to afford tuition or relocate near a postsecondary institution to earn a healthcare credential or degree. The main components of a registered apprenticeship include on-the-job training from an employer, a wage during their training that increases as their skills develop, and supplemental education. Apprenticeships are a great asset to employers because they can tailor their employees' training and fill gaps in the workforce more quickly. Acquiring an apprenticeship can be an appealing choice because an apprentice does not need to pay for their education and they earn a "portable, nationally-recognized credential within their industry." (United States Department of Labor, Office of Apprenticeship, n.d.) at graduation.

Best Practice Spotlight: LPN Apprenticeship Program Collaboration

Several healthcare employers are offering Licensed Practical Nurse (LPN) apprenticeship programs as part of a statewide collaboration with the Michigan Workforce Training and Education Collaborative (MWTEC), local Michigan Works! agencies, and West Shore Community College. The collaboration was designed to help employers advance their incumbent workforce, such as Nursing Assistants, Medical Assistants, and other patient care professionals, more easily. Apprentices complete required on-the-job training with their employers and complete the related technical instruction online through West Shore Community College. At the end of the apprenticeship program, students are eligible to take the national LPN licensing exam (MWTEC, n.d.-b). According to Jan Karazim, WIN Workforce Program manager, the first cohort launched in August 2024 with nine apprentices from long-term care, rehab, and county medical facilities across the state. The program is prepared to accept up to 32 apprentices for the second cohort, which starts in August 2025.

Apprenticeships provide opportunities to grow the workforce; however, active healthcare apprenticeship programs are not evenly distributed across the state (LEO & Michigan Center for Data and Analytics, 2025). Starting new government-approved apprenticeship programs requires significant effort and can be challenging for employers (MI Apprenticeship, n.d.-b). According to a study of employers with apprenticeship programs, 42 percent reported challenges with the registration process and finding appropriate resources to guide them (Skills for America's Future, 2015, p. 5). Expanding the number of apprenticeship intermediaries and developing a communication campaign to encourage more employers to develop apprenticeship programs can be considered to address barriers.

Intermediaries

Many employers could benefit from working with an apprenticeship intermediary, a third-party organization that sponsors an apprenticeship program. An apprenticeship intermediary handles the development, administrative tasks, and marketing of an employer's registered apprenticeship program (MI Apprenticeship, n.d.-b). Several organizations are apprenticeship intermediaries, including the Michigan Primary Care Association (MPCA) (MPCA, 2023), the Workforce Intelligence Network (WIN) (MI Apprenticeship, n.d.-a), and nearly every Michigan Works! agency (LEO, n.d.-b).

More organizations could become apprenticeship intermediaries to expand the number of organizations with healthcare apprenticeship programs in the state. These healthcare-focused apprenticeship intermediaries would be knowledgeable in navigating the added challenges with licensure for healthcare occupations (Lerman, 2022) when developing and maintaining the apprenticeship standards.

Communications

To broaden awareness of registered apprenticeship programs, stakeholders may consider a communication campaign to educate healthcare employers about the benefits of registered apprenticeships. Michigan agencies like LEO (LEO, n.d.-c) and Michigan Works! (Michigan Works! Association, n.d.) already have registered apprenticeship information and resources available on their websites, but targeted communication efforts specific to healthcare apprenticeships and sharing resources about how they can start their own programs could increase buy-in from more employers.

Recommendation 2: Prioritize transparency and efficiency in healthcare education pathways

MiTransfer Network

When students transfer between colleges, not all credits earned transfer with them. Despite this, transferring between schools on the way to a degree is the norm in Michigan. 52 percent of students who earn a bachelor's degree (Shapiro et al., 2017) and 40 percent of graduates with bachelor's degrees in healthcare-related programs (Taylor, 2019) attended a community college. The Michigan Transfer Network (MTN) is an initiative that facilitates students' credit transfer from one postsecondary institution to another, primarily from a community college to a baccalaureate program. Representatives from two and four-year institutions collaboratively lead the MTN (MTN, n.d.-a).

One of MTN's initiatives was the development of MiTransfer Pathways, which are "multi-institutional articulation agreements" (MTN, n.d.-b) between several community colleges and four-year institutions. Each MiTransfer Pathway identifies a set of agreed-upon major-specific courses at community colleges that will transfer and count toward the bachelor's degree requirements at participating four-year institutions. There are five healthcare and health-related MiTransfer Pathways: Biology, Exercise Science, Psychology, Public Health, and Social Work (MTN, n.d.-b).

Despite the progress made, gaps remain in supporting transfer students. Faculty and administrators from Michigan's postsecondary institutions should consider expanding the MiTransfer Pathway to include more healthcare majors. Within the established MiTransfer Pathways and any newly created pathways, MTN leaders may also consider increasing the number of universally accepted major-specific courses that earn credit toward a bachelor's degree. The number of major-specific courses recognized by each Pathway varies: the psychology MiTransfer Pathway recognizes the fewest (MTN, 2022a), and the public health MiTransfer Pathway recognizes the most (MTN, 2022b). Overall, the expansion of MiTransfer Pathways may be helpful in reducing the number of courses transfer students have to retake to earn a four-year healthcare degree.

Bridge Programs

Healthcare professionals who want to advance or change careers to another occupation usually must return to school. When returning to school, they often need to take the same number of courses as individuals in the same program with no healthcare experience. This creates a barrier for current healthcare workers who must invest more time and money into their education to earn a certificate or degree.

In response to this barrier, some postsecondary institutions offer bridge programs for healthcare workers with prior credentials and experience to take an accelerated educational path to another career. This also applies to students who received a degree or credential in the same field. For example, many universities offer advanced standing Master of Social Work (MSW) programs to students who earned a baccalaureate degree in social work from a program accredited by the Council of Social Work Education (Council on Social Work Education, n.d.). These programs reduce the length of the program from two years to one year. Other common educational bridge programs include LPN-to-RN (Monroe County Community College, n.d.) and RN-to-BSN (Oakland University, n.d.). There are also second-degree BSN programs for students who previously earned a bachelor's degree in another major (University of Detroit Mercy, College of Health Professions & McAuley School of Nursing, n.d.). Postsecondary institutions may consider prioritizing bridge programs to facilitate the advancement of current healthcare professionals, which will help the workforce meet our state's healthcare needs.

Best Practice Spotlight: Delta College

Delta College has a <u>Licensed LPN/Paramedic to RN track</u> where LPNs or Paramedics with at least one year of full-time equivalent work experience can complete their associate degree in nursing (ADN) in 16 months (Delta College, n.d.). Delta's bridge program, operating for 25 years, attracts participants from all over the state of Michigan because of the lack of similar programs. Each year, between 20 to 30 new students are accepted into the program.

According to Daisy McQuiston, Professor of Nursing at Delta, many of the participants did not have initial plans to become an RN or weren't initially able to be successful in an RN program due to life circumstances. However, McQuiston notes that the lived experience of the LPN and Paramedic students in the program helps them gain valuable real-world knowledge from one another because their experiences are so rich. Furthermore, once participants are licensed RNs, their prior healthcare experience improves the quality of nursing care they provide.

Other healthcare professions could bridge to a nursing degree, but programs bridging these occupations do not exist in Michigan. Nursing schools may consider creating new programs for professionals with direct patient care experience. Such bridge programs may include occupations that fall under the direct care workforce (Public Sector Consultants, 2021), like Home Health Aide to LPN or <u>CNA-to-LPN</u> (Mount Wachusett Community College, 2024), or other related occupations involving patient support, like <u>MA-to-LPN</u> (Northeast Wisconsin Technical College, n.d.).

Although there are many bridge programs in the nursing field, there are significantly fewer for other healthcare occupations. Degree programs in similar professions may consider collaborating to see if they can create these bridge programs.

Best Practice Spotlight: Santa Fe College in Florida

A potential bridge program that could be replicated in Michigan is <u>Dental Assisting</u> to <u>Dental Hygiene</u>. Santa Fe College's Dental Hygiene Bridge program, accredited by the American Dental Association, reduces the time to become a Dental Hygienist from two years to 15 months. The program builds on the knowledge and skills of Certified Dental Assistants with a minimum one year of chairside experience to prepare them to perform additional dental services, like sealants, fluoride treatment, and X-rays.

The program also prioritizes applicants who are on active duty in the U.S. Armed Forces or are veterans. Program graduates are eligible to sit for the Dental Hygiene National Board and state licensure examinations (Santa Fe College, n.d.).

Pillar 3: Increase Experiential Education Capacity



This pillar will elaborate on opportunities and examples of increasing training site options, supporting and incentivizing facilitators, and data analysis that will help drive expanded experiential education capacity in Michigan.

The required experiential learning for students pursuing healthcare education is fundamentally necessary to produce skilled, competent, and confident practitioners. While critical to healthcare education, finding, arranging, and staffing these experiences is a barrier to the growth of the healthcare workforce. The shortages of clinical education facilitators and traditional training sites have contributed to a restricted pipeline of future healthcare professionals. Continued collaboration between healthcare organizations and educational institutions is necessary to support and expand the flow of students through requisite experiential learning, especially in clinical placements and residencies. This pillar will elaborate on opportunities and examples of increasing training site options, supporting and incentivizing facilitators, and suggested data analysis that will help drive expanded experiential education capacity in Michigan.

The shortages of clinical education facilitators and traditional training sites have contributed to a restricted pipeline.

Recommendation 1: Expand access to local opportunities for all professions

Placing students at alternative, community-based, and medically underserved sites can decrease reliance on acute care sites for experiential and clinical training. Schools and programs may consider partnering with local organizations and entities to identify untapped locations where students can complete requisite experiential learning. Each community has different characteristics, including culture, strengths, and health needs. Educational institutions may find new, engaging, and valuable experiences that can enhance educational outcomes and address community needs. Programs, students, and communities can all benefit from creative experiential learning partnerships with new sites.

Best Practice Spotlight: Signature Partnership Initiative at the University of Louisville

The University of Louisville entered into a university-wide partnership with the West Louisville community to "improve the quality of life for residents" (Cunningham et al., 2015, p. 20). The Signature Partnership Initiative prioritized the best practice of "community-based teaching, research, and service" (Cunningham et al., 2015, p. 20). As a result, students in health professions and social and human services programs completed clinical placements and service-learning at K-12 schools, community health organizations, homeless residences, and churches, among others. The partnership improved the relationship among the university, its students, and the greater community (Cunningham et al., 2015; University of Louisville, Community Engagement, n.d.).

Educational institutions have already been creative in finding some of these opportunities. These can include nursing placements at overnight or day summer camps (Williams et al., 2024), dietetic placements at state agencies administering child nutrition programs (United States Department of Agriculture, Food and Nutrition Service, 2024), and rotations at adult daycare centers and prisons (Advisory Committee on Interdisciplinary, Community-Based Linkages, 2018, p. 14). Another type of placement that has been underutilized is long-term care (LTC), including nursing homes, retirement communities, hospice care, etc. Institutions might prioritize placement in LTC settings, as the demand for healthcare is growing proportionally to the percentage of Michigan's population that is aged 65+ (Rhyan et al., 2023).

Healthcare delivery sites that do not host experiential or clinical education opportunities should be empowered to begin to accept students and trainees. Sites not already in partnership with educational programs may need help starting the process of accepting students, particularly if they have a small staff. Institutions and organizations that have successfully partnered or provided creative experiential learning opportunities could share best practices and resources, such as affiliation agreement templates, for others to replicate.

Recommendation 2: Address limited nursing clinical education facilitators

Facilitators are required to lead nursing students through experiences at clinical sites. Staffing enough facilitators is a consistent bottleneck, especially in nursing, as Registered Nurses are the state's third-largest occupation group by size (Linskey, 2023, p. 10). The solution to the shortage will require creating better incentives and recognition methods that consider clinical educators' needs.

The two main types of nursing clinical education facilitators are preceptors and clinical faculty. Preceptors are usually employed by a healthcare facility and supervise students one-on-one (University of Tulsa, 2024). Clinical faculty are employed by a postsecondary institution (Ownby et al., 2012) and teach groups of up to eight students part-time or full-time (Mich. Admin. Code R. 338.10305a, 2024). Michigan is experiencing a shortage of both preceptors and faculty. This has led nursing programs at all degree levels to turn away students. One of the most reported reasons is the faculty vacancy rate; in 2023, the national rate was 7.8 percent (Byrne et al., n.d.). Additionally, the existing nursing faculty workforce is nearing retirement age (American Association of Colleges of Nursing, 2024). We must prepare not only to grow but also to replace the clinical nursing faculty workforce. Similarly, the limited supply of preceptors creates restrictions for education and training programs on the front end, as "the insufficient number of well-prepared clinical preceptors contributes to the inability of schools of nursing to accept, educate, and train more students" (National Advisory Council on Nurse Education and Practice [NACNEP], 2024, p. 11).



The national vacancy rate for faculty was 7.8 percent in 2023 according to the American Association of Colleges of Nursing (AACN).



Facilitator Incentives

Preceptors

Incentives for preceptors are essential because they are typically expected to maintain the same caregiving responsibilities and workloads even when taking on the extra work of training a nursing student (Livingstone, 2024; NACNEP, 2024). Many postsecondary institutions offer incentives to preceptors, including free continuing education opportunities, university library access, and institutional recognition or awards (AACN & American Organization for Nursing Leadership [AONL], 2020; Grand Valley State University, 2024; U-M School of Nursing, 2023). Some preceptors are compensated by their employers for training students (Block et al., 2022); however, this is not a common practice.

While these existing incentives are important, they are not significant enough to attract a sufficient supply of preceptors. Preceptors are vital in educating and training the future healthcare workforce but are often under-recognized. Increasing opportunities to recognize preceptors for their work may encourage them to continue serving as preceptors in the future (Benny et al., 2022; Livingstone, 2024).

Faculty

Experienced nurses are in high demand, and working as clinical faculty does not usually offer competitive wages compared to other opportunities (Falkenstern & Ridenour, 2023). Educational institutions offer clinical faculty many of the same benefits preceptors receive (AACN & AONL, 2020) in addition to reduced tuition for themselves and family members (Grand Valley State University, 2024) and discounts for athletic events (Michigan State University College of Nursing, n.d.). Providing a competitive wage and better recognizing the critical role of clinical faculty in developing the nursing pipeline are essential incentives.

Best Practice Spotlight: Collaboration at Cleveland Clinic

The Cleveland Clinic is incentivizing and prioritizing nursing education facilitators through innovative initiatives.

Preceptor Council

The Cleveland Clinic established an <u>APRN Preceptor Council</u> so preceptors could be empowered to improve the quality and quantity of their services. Members of the Council are encouraged to recruit nurses who they believe have the right skills to become preceptors. Internally, preceptors provide ongoing updates and feedback about their students. They can indicate their capacity on the internal precepting software to choose whether to take on additional students. Preceptors are also recognized for their efforts during performance reviews (Cleveland Clinic, 2022).

Deans' Roundtable

The Cleveland Clinic and several northeast Ohio nursing schools created the <u>Deans'</u> Roundtable Faculty Initiative to reduce the nursing faculty shortage in their region. The Initiative encourages nurses in the area to serve as faculty and runs a comprehensive database that matches potential faculty with teaching opportunities at participating nursing schools (Cleveland Clinic, n.d.-c). Nurses can specify their preferences for the types of nursing education they wish to teach, such as clinical, classroom instruction, skills lab, etc. (Cleveland Clinic, n.d.-a). Educational administrators post faculty positions to the database and can track applications through the database as well (Cleveland Clinic, n.d.-b). The Initiative also offers supplementary faculty development education, such as Continuing Nursing Education and a faculty development program (Cleveland Clinic, n.d.-d).

Healthcare organizations in Michigan should identify what their nursing community values and build incentives that will attract nursing education facilitators. Building a team of prepared and skilled nurses dedicated to teaching the next generation is vital to meeting Michiganders' healthcare needs.

Access to Training

Providing access to training is necessary to develop the pool of existing nursing education facilitators. MHC offers a Nurse Preceptor Toolkit, a Clinical Faculty Academy Toolkit, and a Nurse Mentoring Toolkit (MHC, n.d.) to nursing organizations at no cost. The Nurse Preceptor Toolkit includes topics on emotional intelligence, compassion fatigue, and preventing burnout, which are related to some of the reasons why nurses indicate they want to leave the profession altogether (American Nurses Enterprise, 2024). These topics are often absent from preceptor curricula (Michigan Center for Nursing, 2024). We recommend that MCN work with other Michigan nursing organizations to promote the utilization of the toolkits across the state and continue to add to their offerings. Currently, the toolkits are downloadable resources but do not offer orientation or instructional guidance on presenting them. These and other resources could be developed into lesson plans and courses that organizations can more easily implement.

Recommendation 3: Invest in a project to understand our state's clinical capacity

We currently do not have a way to calculate Michigan's clinical education capacity. This limits our understanding of which occupations, regions, sites, specialties, etc. need more support in growing their capacity to meet the experiential learning requirements of students studying to become healthcare professionals. Additionally, stakeholders do not know if their capacity-building initiatives are making an impact.

Stakeholders may consider allocating the necessary resources to design, develop, and implement a research project to calculate our state's clinical education capacity. The project would require a significant investment and effort to be executed. However, it will inform partners with a stake in the healthcare workforce where to prioritize their efforts.



Research is needed to inform partners where to prioritize their efforts.

Pillar 4: Explore Recruitment and Retention Strategies



In this pillar, we discuss employee career development opportunities, recruitment and retention strategies for rural communities, and the importance of data to inform retention initiatives.

Improving recruitment and retention are key strategies for healthcare employers and organizations. The workforce capacity of Michigan's healthcare ecosystem is not currently equipped to meet the needs of, what Rowe et al.'s claim is, "previously unimagined numbers of sick older persons" (2016, p. 1). Simply put, we are not producing enough new healthcare professionals to replace those leaving.

In this pillar, we discuss employee career development opportunities, recruitment and retention strategies for rural communities, and the importance of data to inform retention initiatives.

Simply put, we are not producing enough new healthcare professionals to replace those leaving.

Recommendation 1: Prioritize access to career development for all workers at all stages

Retaining healthcare workers is a challenge. A perceived lack of career growth and advancement opportunities is a top reason for dissatisfaction at work and turnover (DeCarbo, 2024). Career development can result in increased job satisfaction and prepare an organization for its future needs (Wilkes & Bartley, 2007). While some healthcare organizations provide career development support and opportunities to their employees in an effort to retain staff, offerings vary depending on the organization's size and financial resources. We highlight three different career development strategies: employer-led career pathways, mentoring, and alternative work opportunities.

Employer-Led Career Pathways

One career development strategy is the promotion of employer-led career pathways, such as career ladders and lattices, which illustrate and guide employee career advancement within an organization. Career ladders are specialized pathways of progressively higher or more advanced positions that individuals can work towards, hold more responsibility, and earn higher wages.

Clinical ladder programs (CLPs) develop bedside nurses' clinical and professional expertise (Moore et al., 2019). Nurses move up the clinical ladder by demonstrating their skills, competencies, and independence, and attaining higher levels of education. Typically, CLPs are used to retain nurses by recognizing their development and encouraging them to continue growing in their careers (Bitanga & Austria, 2013). Some CLPs compensate nurse participants for advancing up the ladder (Moore et al., 2019), like MyMichigan Health (MyMichigan Health, n.d.) and Corewell Health, n.d.). Ultimately, nurses participating in CLPs benefit from greater recognition from their organizations and increased opportunities for growth and development (Bitanga & Austria, 2013; Reich et al., 2020).

Apprenticeships can be part of a career ladder when they are developed by organizations to upskill their staff into higher positions. See Pillar 2 for a discussion of apprenticeships.

Similarly, career lattices move employees through various jobs within an organization; however, some jobs within the lattice may be lateral or less advanced but provide diversity in types of roles and responsibilities (EDSI, n.d.). Employer-led career pathways offer prospective and incumbent workers the opportunity for recognition and upskilling, improving workforce growth and retention (Prince & Mills, 2003).

Historically, healthcare employers have offered career pathways to entry-level employees (Frogner & Skillman, 2016) and nurses (Van Camp & Chappy, 2017), as they have an especially difficult time retaining these professionals. However, there is an opportunity for employers to develop career pathways for all healthcare workers, regardless of their current occupation. Healthcare employers can consider building defined pathways for advancement across all stages of careers.

Best Practice Spotlight: Select Medical - Go Anywhere With Us

One healthcare organization dedicated to career development opportunities is Select Medical. Select Medical runs critical illness recovery hospitals, inpatient rehabilitation hospitals, and outpatient rehabilitation centers in many states, including Michigan (Select Medical Corporation, n.d.-b). The company created an internal platform called "Go Anywhere With Us" to promote employee career development (Select Medical Corporation, n.d.-a). The platform allows employees to explore potential career paths and options, access training and educational resources, and more. It also contains a feature for employees to build a profile listing their career goals, skills, special interests, and accomplishments. The profile is then shared with an HR representative and the employee's supervisor so they can outline a professional development plan, provide support, and define a path toward achieving an employee's career goals (SelectMedicalTV, 2022).

Mentoring

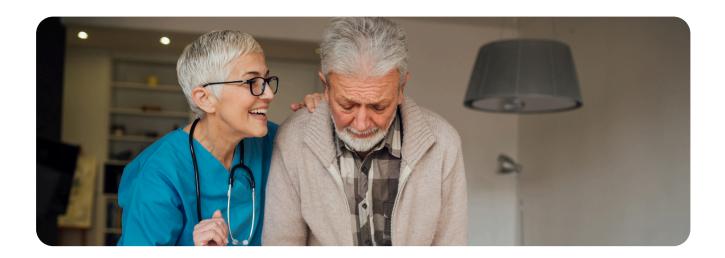
Mentoring is a career development strategy where a more experienced employee is paired with a newer, less experienced employee. The mentor is a familiar face that the mentee can go to for professional advice and help adapting to the workplace. Research indicates that mentoring builds a mentee's bond to their organization. It can help them feel more supported and valued and reduce their stress. These feelings can increase their commitment to an organization and lower their levels of burnout (Cavanaugh et al., 2022; Fleig-Palmer & Rathert, 2015). Mentorship participation can also increase job satisfaction and organizational commitment for mentors (Ghosh & Reio, 2013).

Mentorship is a significant part of nurse residency programs (NRPs). NRPs are paid programs for newly licensed nurses that guide them through the transition from graduation to the workforce. Healthcare organizations implement NRPs to improve newly licensed nurses' retention and increase their clinical and professional readiness (Sutor & Painter, 2020; Van Camp & Chappy, 2017). Defined mentorship relationships between residents and experienced nurses are critical to an NRP's success. Nurse mentors "model professionalism and instill confidence in the new nurse" (Chant & Westendorf, 2019, p. 5) throughout the program.

Alternative Work Opportunities

Effective career development models offer creative solutions to match workers with jobs that fit their current needs and lifestyles. Prioritizing the retention of experienced workers, even in a new or different capacity, is more important than ever. Within the next ten to 15 years, over one-third of the active physician and nursing workforce is likely to retire (GlobalData Plc, 2024; Haddad et al., 2023). This will not only contribute to the shortage of healthcare professionals but will deplete valuable institutional knowledge.

There may be an opportunity to encourage older healthcare professionals to stay in the workforce for a few more years if employers intentionally and carefully accommodate the unique needs of this age group. It is time for employers to explore offering non-traditional retirement plans such as part-time work and phased retirement and promote different healthcare career paths for employees approaching retirement. Potential opportunities include dedicated faculty positions, mentoring support, and precepting.



Flexible Work Arrangements

Flexible work arrangements (FWAs) are a creative solution to organizational turnover. An FWA varies from the typical nine-to-five schedule in that there is often a set of core hours with built-in flexibility (flex hours) in parts of the day, such as at arrival or departure times. Other FWAs include part-time schedules, PRN (on-call) schedules, and job sharing (where two or more employees make up one full-time role) (U.S. Office of Personnel Management, n.d.). FWAs may be desirable for employees seeking work-life balance, such as parents with young children and individuals caring for an older family member (Workplace Flexibility 2010, Georgetown University Law Center, 2006). In many circumstances, FWAs appeal to older workers who may seek a less strenuous schedule as they prepare for retirement, manage age-related health issues, or care for a loved one. This schedule would allow for direct patient care during core hours and the option to supervise younger employees during flex hours. Healthcare employers open to FWAs are desired workplaces (Kossek et al., 2014, p. 5).

Encore Careers

The aging healthcare workforce means more older workers are pursuing "encore careers," which refer to a jobs or career interests pursued during the later working years (Freedman, 2008). Often, it means an employee chooses to change their career pathway instead of retiring or continuing in their current work.

One potential encore career pathway for experienced healthcare professionals is transitioning from providing patient-centered care to teaching. There is a shortage of clinical nursing facilitators in Michigan and nationwide. See Pillar 3 for more information. Employers may consider encouraging some of their nurses nearing retirement to take a clinical educator position at their organization to support the nursing programs at their partner schools.

Recommendation 2: Encourage practice in rural communities

Rural communities face unique challenges in hiring and retaining healthcare professionals. There are shortages of providers, particularly in behavioral health (Rhyan et al., 2022), primary care (Rhyan et al., 2023), and emergency medical services (EMS) (LEO & ORP, 2024). Additionally, Michiganders have lowered access to certain types of medical care in these areas as entire hospitals and specialty units are closing (Mack, 2019; Orgera et al., 2023; Sager, 2024).

"Grow Your Own" Programs

One strategy to bolster the healthcare workforce in rural areas is to develop "grow your own" programs. These programs are partnerships between local postsecondary institutions and employers. In such partnerships, the local institution provides the required healthcare education, and the employer provides the clinical training, often also contributing to the cost of an individual's education. See Pillar 2 for more information and examples. "Grow your own" programs allow organizations to develop and hire a workforce from their surrounding communities so they can rely less heavily on attracting candidates to relocate. Hiring individuals who complete "grow your own" programs may also eliminate the barrier to finding housing that outside candidates may face, as they likely already live in the area.

Best Practice Spotlight: MiREACH

One opportunity similar in scope to "grow your own" programming was Michigan Rural Enhanced Access to Careers in Healthcare, or MiREACH. MiREACH was a grant-funded program led by the Michigan Department of Labor and Economic Opportunity. It "[supported] employment and training programs in healthcare occupations serving rural populations" (LEO, n.d.-a). The MiREACH program funded training and education expenses for individuals wanting to become rural healthcare professionals in in-demand occupations, such as Medical Assistants, LPNs, and Substance Abuse and Behavioral Disorder Counselors. MiREACH ended in January 2025. By the end of the grant, over 500 new healthcare workers and incumbent workers advanced into new positions in rural areas, exceeding the initial goal of 400 (Jemerson, 2025). Stakeholders may consider replicating or reintroducing this as a program due to its success.

Rural healthcare employers in Michigan may be encouraged to formalize partnerships with local postsecondary institutions to develop "grow your own" programs. "Grow your own" programs can attract new individuals from surrounding communities to become healthcare professionals. Additionally, individuals who participate are likely motivated to stay working in their communities after they complete their programs.

MIDOCs and Rural Track Residency Programs

One strategy to improve advanced practitioner recruitment and retention in rural communities is developing and expanding residency opportunities.

Rural Track Programs

In 2022, the Accreditation Council for Graduate Medical Education (ACGME) created the Rural Track Program (RTP) designation. Teaching hospitals can receive increased funding from Medicare for participating in new RTPs or adding more rural clinical training sites to their residency programs. Thus, RTP residency programs accredited by the ACGME currently have a unique opportunity to fund and train more residents (American Medical Association, 2022; Hardy, 2023). Rural track programs (RTPs) are residency programs in which residents spend more than 50 percent of their training at rural sites but also train in urban settings (ACGME, n.d.; Association of American Medical Colleges Center for Health Justice, 2023). Some Michigan medical schools and healthcare organizations have already established RTPs and similar programs.

Best Practice Spotlight: Pine Rest Rural Track Residency

Pine Rest Christian Mental Health Services offers a <u>Rural Track Psychiatry Residency</u> in partnership with Michigan State University's College of Human Medicine. Residents spend most of their first two years completing rotations at Pine Rest in Grand Rapids. They relocate to Traverse City for their last two years, providing outpatient psychiatric care at clinics in the surrounding area in year three and inpatient care at Munson Healthcare in year four (Pine Rest Christian Mental Health Services, n.d.).

MIDOCs

The MIDOCs program is a strategic partnership of four medical schools – Central Michigan University College of Medicine, Michigan State University College of Human Medicine, Wayne State University School of Medicine, and Western Michigan University Homer Stryker M.D. School of Medicine – that aims to improve access to primary care in rural and urban underserved areas of Michigan (MIDOCs, n.d.-a). MIDOCS has added 160 medical residency slots in primary care and other high-need specialties (Emergency Medicine, Internal Medicine, Pediatrics, General Surgery, Family Medicine, and Psychiatry) (MIDOCs, n.d.-b) since 2019, according to Amy Hoge, MIDOCs Executive Director. The MIDOCs residencies include rotations at hospitals and community-based sites such as federally qualified health centers (FQHCs) and community mental health agencies (MIDOCs, n.d.-b). Some of the residency programs qualify as RTPs. MIDOCs residents commit to practice in a rural or urban underserved area in Michigan post-residency and can receive loan repayment of up to \$150,000 (MIDOCs, n.d.-c).

The MIDOCs program is an innovative approach that creates and expands existing residency training programs in traditionally underserved communities across Michigan. This model could be replicated for other occupations that utilize residency training, such as pharmacy. Additionally, resources, tools, and expertise could be shared to expand into new sites or schools and possibly new programs over time. Stakeholders looking to expand or replicate this model should note that it requires an investment from and collaboration between federal, state, and local partners.

Employer and Community Partnerships

Many challenges affecting the recruitment and retention of healthcare professionals are intensified in rural communities. One of the main challenges is the shortage of housing (LEO & ORP, 2024). Healthcare workers interested in taking a position in a rural area can experience difficulty finding affordable and available housing near their jobs. Some organizations even report losing job candidates due to the lack of housing (Beggin, 2018). Furthermore, it sometimes takes clinicians who relocate to rural areas months or years to find housing suitable for them and their families (Stermer, 2023). Other significant challenges include the cost of and access to reliable childcare (Ryznar et al., 2021) and transportation (Taub, 2024).

Although these challenges do not have easy fixes, they should not be ignored. Rural healthcare employers looking to improve recruitment and retention may consider partnering with their surrounding communities to identify any and all community support services for their employees to utilize.

Recommendation 3: Understand turnover

Understanding turnover is critical to improving employee retention and reducing the high costs associated with it to both patients and organizations. One study estimated that "the average hospital turned over 106.6 percent of its workforce" over the past five years (NSI Nursing Solutions, Inc., 2024, p. 5). Research also suggests that staff turnover can reduce the quality of patient care in long-term care (Shen et al., 2023) and hospitals (Peng et al., 2023), among other settings.

Conducting Michigan-specific research about turnover is a key next step. The average turnover rate across all Michigan healthcare occupations in 2023 was 50 percent. However, some occupations' turnover rates are even higher, such as Nursing Assistants (92 percent), Home Health and Personal Care Aides (87 percent), and Dental Assistants (68 percent) (MHC Insight, 2024, p. 12). Such research could discover potential barriers to retention and how they differ across healthcare settings.

It is important to identify the nuances of the issues from workers' perspectives. Concentrating on what current workplace initiatives are impactful and what are not from the employee perspective could be helpful. Findings will allow employers to invest in effective retention solutions for their workforce moving forward.

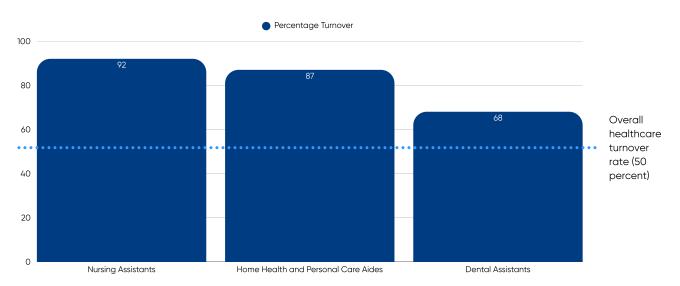


Figure 3: Michigan Healthcare Turnover

Nurse Turnover

Although the turnover rate for Michigan Registered Nurses (RNs) was 28 percent, RN turnover comes at a large cost to Michigan's healthcare ecosystem. RNs were the largest healthcare occupation by size in 2023 (MHC Insight, 2024, p. 24), the financial investment to become a nurse is significant, and the average cost of each RN turnover at a hospital was estimated to be over \$56,000 in 2023 (NSI Nursing Solutions, Inc., 2024, p. a). One study often cited when referring to the national rate of newly licensed RN turnover at hospitals is by Brewer et al. (2012), which estimated that 43.4 percent leave their position within the first three years of hire (p. 12). However, this estimate was made over a decade ago and did not track whether the RNs left the profession altogether or simply took a nursing job at another organization. This study is worth replicating to provide Michigan-specific and time-relevant updates to this data.



In 2023, the average cost of each RN turnover at a hospital was estimated to be over \$56,000.

Best Practice Spotlight: Workplace Violence Study

The Michigan Nurses' Study, led by a research team at the University of Michigan, aimed to better understand the current landscape of RNs and the challenges they have faced in their workplaces (Medvec et al., 2023). The study, conducted in 2022 and replicated in 2023, illuminated the issues of workplace violence in healthcare (Bailey, 2024). Although fewer sampled nurses in 2023 reported experiencing workplace abuse or violence, the amount of nurses affected by these events (43.4 percent) is exceptionally high. Nurses who experience workplace violence have an increased likelihood of leaving their positions (Friese et al., 2024). This study could be replicated to understand the implications of workplace violence related to job retention further. With additional data, policymakers and leaders in healthcare can initiate policy change to improve employee retention and job satisfaction.

Conclusion

Michigan is quickly approaching a tipping point where healthcare services will be even more in demand due to an aging population. Simultaneously, the number of necessary healthcare providers will be limited in future years due to a declining interest in healthcare careers and a disjointed system for entering and staying in healthcare jobs. While these statistics are alarming, there are countless opportunities to overcome barriers and build a stronger healthcare workforce.

Answers lie in the targeted recommendations in the four pillars of the Workforce Plan: growing interest in healthcare careers, improving access to healthcare education, expanding experiential education capacity, and exploring recruitment and retention strategies. With these pillars as a roadmap, stakeholders can establish collaborations, implement creative ideas, and work toward solutions. Focusing on investments from multiple stakeholders will continue to be critically important. Additionally, the unique geography of Michigan must remain at the forefront of discussions.

The barriers to developing Michigan's healthcare workforce are complex, and swift action is needed. Both regional approaches involving every sector and statewide solutions should be prioritized. As Michigan ages and workforce shortages continue to grow, there is an urgency to collaborate and invest funding in creative solutions.

Resource Guide

Resource Name	URL	Page(s) Referenced
2024 Michigan Healthcare Labor Market Analysis	https://www.mhc.org/files/ugd/24abcc 3304558f 205943a58d83024b72a178fe.pdf	5, 44, 45
2024 National Health Care Retention and RN Staffing Report	https://www.nsinursingsolutions.com/documents/lib rary/nsi national health care retention report.pdf	44, 45
CNA-to-LPN bridge program example	https://mwcc.edu/blog/benefits-of-cna-to-lpn/	29
CTE credential list	https://reports.cteis.com/home/AvailableCredentia	Pillar 1
List of Michigan Works! Apprenticeship Coordinators	https://www.michigan.gov/leo/bureaus- agencies/wd/apprenticeships/michigan-works- apprenticeship-success-coordinators	26
MA-to-LPN bridge program example	https://www.nwtc.edu/academics-and- training/medical-assistant-to-practical-nursing- bridge	29
MCDM Career Development Reference Guide	https://www.michigan.gov/mde/-/media/Project/ Websites/mde/CTE/MCDM/MCDM-Reference- Guide.pdf	11, 12, 14, 16, 19
MI Hospital Careers campaign	https://mihospitalcareers.com	20
Michigan Healthcare Industry Cluster Workforce Analysis	https://milmi.org/_docs/publications/Cluster_repor ts_2023/Michigan-Healthcare-Industry-Cluster- Workforce-Analysis-Report.pdf	5, 32

Resource Name	URL	Page(s) Referenced
Michigan's Path to a Prosperous Future: Health Challenges and Opportunities report	https://crcmich.org/PUBLICAT/2020s/2023/prosper ous-future-health.pdf	5, 13, 31, 41
Michigan Registered Apprenticeship Dashboard	https://app.powerbigov.us/view? r=eyJrljoiY2Y5YWU2NzYtMWZiNy00MDM4LTk3OTAt MmFiN2I1NWNiOGM5liwidCl6lmQ1ZmI3MDg3LTM3Nz ctNDJhZC05NjZhLTg5MmVmNDcyMjVkMSJ9&autoAu th=true	26
Michigan's Roadmap to Rural Prosperity report	https://www.michigan.gov/leo/-/media/Project/Websites/leo/Documents/ord/Michigan-Roadmap-to-Rural-Prosperity Report-FINAL.pdf	5, 13, 41
Michigan Works! registered apprenticeship information	https://www.michiganworks.org/apprenticeships	26
Nursing faculty shortage fact sheet	https://www.aacnnursing.org/news-data/fact- sheets/nursing-faculty-shortage	Pillar 3
Registered apprenticeships in Michigan	https://www.michigan.gov/leo/bureaus- agencies/wd/apprenticeships	26
Registered apprenticeship program fact sheet	https://www.apprenticeship.gov/employers/registe red-apprenticeship-program	25
WIN Registered Apprenticeship Process Guide	https://miapprenticeship.org/resources/process_gu ide.php	26

References

- ACGME. (n.d.). Rural track program designation. Retrieved March 6, 2025, from https://www.acgme.org/initiatives/medically-underserved-areas-and-populations/rural-tracks/
- Advisory Committee on Interdisciplinary, Community-Based Linkages. (2018). Enhancing community-based clinical training sites: Challenges and opportunities (16; Annual Report to the Secretary of the U.S. Department of Health and Human Services and the U.S. Congress). https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/community-based-linkages/reports/sixteenth-2018.pdf
- American Association of Colleges of Nursing. (2024, May). Fact sheet: Nursing faculty shortage [Fact sheet]. https://www.aacnnursing.org/Portals/0/PDFs/Fact-Sheets/Faculty-shortage-Factsheet.pdf
- American Association of Colleges of Nursing & American Organization for Nursing Leadership (2020). AACN-AONL clinical preceptor survey: Summary report.

 https://www.aacnnursing.org/Portals/0/PDFs/Data/AACN-AONL-Clinical-Preceptor-Survey-May-2020.pdf
- American Medical Association. (2022). Section 127 of the Consolidated Appropriations Act:
 Graduate medical education (GME) payment for rural track programs (RTPs) (MM12709;
 MLN Matters, p. 4/28/2022). Centers for Medicare & Medicaid Services.

 https://www.cms.gov/files/document/mm12709-section-127-consolidated-appropriations-act-graduate-medical-education-gme-payment-rural.pdf
- American Nurses Enterprise. (2024, February 13). Why nurses quit and leave the profession. ANA Nursing Resources Hub. https://www.nursingworld.org/content-hub/resources/nursing-leadership/why-nurses-quit/
- Association for Career and Technical Education & Career Cruising. (2018). Career exploration in middle school: Setting students on the path to success [Policy brief].

 https://www.acteonline.org/wp-content/uploads/2018/02/ACTE CC Paper FINAL.pdf

- Association of American Medical Colleges Center for Health Justice. (2023, September). How academic medicine serves rural communities across the country [Issue brief]. https://www.aamc.org/media/69371/download
- Bailey, L. (2024, July 18). Michigan Nurses' Study: Modest improvements in working conditions, but big problems persist. University of Michigan News. https://news.umich.edu/michigan-nurses-study-modest-improvements-in-working-conditions-but-big-problems-persist/
- Beggin, R. (2018, August 28). In Charlevoix and Petoskey, pricey housing leaves businesses without workers. Bridge Michigan. https://www.bridgemi.com/quality-life/charlevoix-and-petoskey-pricey-housing-leaves-businesses-without-workers
- Benny, J., Porter, J. E., & Joseph, B. (2022). A systematic review of preceptor's experience in supervising undergraduate nursing students: Lessons learned for mental health nursing. Nursing Open, 10(4), 2003–2014. https://doi.org/10.1002/nop2.1470
- Binkley, C. & The Associated Press. (2023, March 9). The labor shortage is pushing American colleges into crisis, with the plunge in enrollment the worst ever recorded. Fortune. https://fortune.com/2023/03/09/american-skipping-college-huge-numbers-pandemic-turned-them-off-education/
- Bitanga, M. E., & Austria, M. (2013). Climbing the clinical ladder—one rung at a time. Nursing Management, 44(5), 23. https://doi.org/10.1097/01.NUMA.0000429008.93011.a3
- Block, L., Tocher, S., Chhean, E., & Cardwell, A. (2022). State strategies to support the future of the primary care physician and nursing workforce. The National Academy for State Health Policy. https://nashp.org/state-strategies-to-support-the-future-of-the-primary-care-physician-and-nursing-workforce/
- Brewer, C. S., Kovner, C. T., Greene, W., Tukov-Shuser, M., & Djukic, M. (2012). Predictors of actual turnover in a national sample of newly licensed registered nurses employed in hospitals. Journal of Advanced Nursing, 68(3), 521–538. https://doi.org/10.1111/j.1365-2648.2011.05753.x
- Byrne, C., Keyt, J., & Fang, D. (n.d.). Special survey on vacant faculty positions for academic year 2023–2024 [PowerPoint slides]. https://www.aacnnursing.org/Portals/0/PDFs/Data/Vacancy23.pdf

- Causey, J., Kim, H., Randolph, B., Holsapple, M., & Shapiro, D. (2025). Current term enrollment estimates expanded edition: Fall 2024 (Current Term Enrollment Estimates) [Tableau dashboard]. National Student Clearinghouse Research Center.

 https://nscresearchcenter.org/current-term-enrollment-estimates/
- Cavanaugh, K., Cline, D., Belfer, B., Chang, S., Thoman, E., Pickard, T., & Holladay, C. L. (2022). The positive impact of mentoring on burnout: Organizational research and best practices.

 Journal of Interprofessional Education & Practice, 28, 100521.

 https://doi.org/10.1016/j.xjep.2022.100521
- Chant, K. J., & Westendorf, D. S. (2019). Nurse residency programs: key components for sustainability. Journal for Nurses in Professional Development, 35(4), 185–192. https://doi.org/10.1097/NND.0000000000000560
- Cleveland Clinic. (n.d.-a). Frequently asked questions. Retrieved March 5, 2025, from https://www.clevelandclinic.org/facultyinitiative/Faqs.aspx
- Cleveland Clinic. (n.d.-b). Participating schools. Retrieved March 5, 2025, from https://www.clevelandclinic.org/facultyinitiative/ParticipatingSchool.aspx
- Cleveland Clinic. (n.d.-c). Welcome to the faculty initiative. Retrieved March 5, 2025, from https://www.clevelandclinic.org/facultyinitiative/Default.aspx
- Cleveland Clinic. (n.d.-d). Where we are now. Retrieved March 5, 2025, from https://www.clevelandclinic.org/facultyinitiative/WeAreNow.aspx
- Cleveland Clinic. (2022, May 18). Innovative program helps more APRN students earn clinical experience. ConsultQD. https://consultqd.clevelandclinic.org/innovative-program-helps-more-aprn-students-earn-clinical-experience
- Corewell Health. (n.d.). Magnet recognition program. Retrieved March 6, 2025, from https://www.beaumont.org/about-us/nursing-excellence
- Council on Social Work Education. (n.d.). Social work at a glance. Retrieved March 5, 2025, from https://www.cswe.org/students/prepare-for-your-education/social-work-at-a-glance/
- Cunningham, H. R., Hines-Martin, V., & Hall, D. (2015). The Signature Partnership Initiative: A university-community collaboration. The International Journal of Community Diversity, 15(4), 17–30. https://doi.org/10.18848/2327-0004/CGP/v15i04/39978

- DeCarbo, B. (2024, July 2). Lack of growth opportunities is a big reason why employees leave jobs. Here's how to change that. Psychology Topics: Healthy Workplaces. https://www.apa.org/topics/healthy-workplaces/growth-opportunities
- Delta College. (n.d.). Licensed Paramedic to RN Associate in Applied Science. Retrieved March 5, 2025, from https://www.delta.edu/programs/current/healthcare/nursing/licensed-paramedic-to-rn/associate/index.html
- EDSI. (n.d.). Career ladders and lattices. Retrieved October 9, 2024, from https://www.edsi.com/solutions/career-ladders-lattices
- Falkenstern, C., & Ridenour, N. (2023). Nursing faculty shortages in the West: Examining faculty pay (13BSIO5280; Nursing Faculty Shortages in the West). Western Interstate Commission for Higher Education. https://www.wiche.edu/wp-content/uploads/2023/04/WICHE NursingBrief FacultyPay.pdf
- Field, K. (2022, November 22). Why starting career education in middle school pays off. The Hechinger Report. http://hechingerreport.org/the-path-to-a-career-could-start-in-middle-school/
- Fleig-Palmer, M. M., & Rathert, C. (2015). Interpersonal mentoring and its influence on retention of valued health care workers: The moderating role of affective commitment. Health Care Management Review, 40(1), 56–64. https://doi.org/10.1097/HMR.0000000000000011
- Freedman, M. (2008). Encore: Finding work that matters in the second half of life. PublicAffairs.
- French, R. (2023, September 29). Lack of school counselors hobbles Michigan college enrollment efforts. Bridge Michigan. https://www.bridgemi.com/talent-education/lack-school-counselors-hobbles-michigan-college-enrollment-efforts
- Friese, C. R., Medvec, B. R., Marriott, D. J., Khadr, L., Rurka Wade, M., Riba, M., & Titler, M. G. (2024). Changes in registered nurse employment plans and workplace assessments. JAMA Network Open, 7(7), e2421680. https://doi.org/10.1001/jamanetworkopen.2024.21680
- Frogner, B. K., & Skillman, S. M. (2016). Pathways to middle-skill allied health care occupations. Issues in Science and Technology, 33(1). https://issues.org/pathways-to-middle-skill-allied-health-care-occupations/

- Ghosh, R., & Reio, T. G. (2013). Career benefits associated with mentoring for mentors: A meta-analysis. Journal of Vocational Behavior, 83(1), 106–116. https://doi.org/10.1016/j.jvb.2013.03.011
- Gist, C. D. (2022). "Grow your own" programs: Examining potential and pitfalls for a new generation of Black, Indigenous, and People of Color community teachers [Policy brief]. National Education Policy Center.

 https://nepc.colorado.edu/sites/default/files/publications/PB%20Gist 1.pdf
- GlobalData Plc. (2024). The complexities of physician supply and demand: Projections from 2021 to 2036 [Summary report]. Association of American Medical Colleges. https://www.aamc.org/media/75231/download?attachment
- Grand Valley State University. (2024a, August 6). Preceptor perks. https://www.gvsu.edu/preceptorperks/
- Grand Valley State University. (2024b, October 18). University policies—non-tenure track faculty benefits. https://www.gvsu.edu/policies/policy.htm?policyld=B040ECA4-C558-9F66-F52DE2AB07C7312B
- Haddad, L. M., Annamaraju, P., & Toney-Butler, T. J. (2023). Nursing shortage. In StatPearls. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK493175/
- Hardy, T. (2023, March 9). New ACGME rural track provides opportunity for hospitals to expand training in underserved areas. Insights. https://www.ecgmc.com/insights/blog/1563/new-acgme-rural-track-provides-opportunity-for-hospitals-to-expand-training-in-un
- Hartford Foundation for Public Giving. (2024, December 19). ReadyCT receives \$530,000 Hartford Foundation grant to support integrated career pathways and work-based learning opportunities. New & Noteworthy. https://www.hfpg.org/what-we-do/new-and-noteworthy/readyct-receives-530000-hartford-foundation-grant-to-support-integrated-career-pathways-and-work-based-learning-opportunities
- Henry Ford College. (2023). Henry Ford College and Corewell Health announce first-of-its-kind Nurse Immersive Clinical and Employment program. News and Events.

 https://www.hfcc.edu/news/2023/henry-ford-college-and-corewell-health-announce-first-its-kind-nurse-immersive-clinical

- HOSA-Future Health Professionals. (n.d.). What is HOSA? Retrieved October 7, 2024, from https://hosa.org/what-is-hosa/
- Jemerson, V. (2025, February 12). Comments from the State of Michigan [Microsoft Teams presentation]. Health Careers Alliance Full Collaborative February 2025. https://www.youtube.com/watch?v=ET4gRTt82ck
- Kent ISD. (n.d.). Job shadows. Retrieved March 3, 2025, from https://www.kentisd.org/educators/career-readiness/framework/9-12/job-shadows/
- Kossek, E. E., Hammer, L. B., Thompson, R. J., & Burke, L. B. (2014). Leveraging workplace flexibility for engagement and productivity. SHRM Foundation.

 <a href="https://www.shrm.org/content/dam/en/shrm/topics-tools/tools
- Lerman, R. I. (2022, June 15). Licensure and apprenticeships: Commonalities and differences [PowerPoint slides]. NCSL Conference on Licensure.

 https://documents.ncsl.org/wwwncsl/Labor/Licensure-and-Apprenticeship.pdf
- Linskey, E. (2023). Michigan healthcare industry cluster workforce analysis. Michigan Center for Data and Analytics, Department of Technology, Management & Budget.

 https://milmi.org/docs/publications/Cluster-reports-2023/Michigan-Healthcare-lindustry-Cluster-Workforce-Analysis-Report.pdf
- Livingstone, K. (2024). How lack of support and recognition for RN preceptors is affecting nursing students' learning on placement. Nurse Education Today, 138, 106192. https://doi.org/10.1016/j.nedt.2024.106192
- Mack, J. (2019, September 24). Nowhere to turn—families struggle as psych beds disappear from hospitals. MLive.com. https://www.mlive.com/mental-health/
- Marcus, J. (2022, August 10). How higher education lost its shine. The Hechinger Report. https://hechingerreport.org/how-higher-education-lost-its-shine/
- Medvec, B. A., Marriott, D. J., Khadr, L., Ridge, L. J., Lee, K. A., Friese, C. R., & Titler, M. G. (2023).

 Patterns and correlates of nurse departures from the health care workforce: Results from a statewide survey. Medical Care, 61(5), 321–327.

 https://doi.org/10.1097/MLR.000000000000001837

- Meyer, K. (2023, June 5). The case for college: Promising solutions to reverse college enrollment declines. Brookings. https://www.brookings.edu/articles/the-case-for-college-promising-solutions-to-reverse-college-enrollment-declines/
- MHC Insight. (2024). 2024 Michigan healthcare labor market analysis. Michigan Health Council. https://www.mhc.org/files/ugd/24abcc3304558f205943a58d83024b72a178fe.pdf
- MI Apprenticeship. (n.d.-a). MI Apprenticeship. Retrieved March 5, 2025, from https://miapprenticeship.org/index.php
- MI Apprenticeship. (n.d.-b). WIN registered apprenticeship process guide. Retrieved March 5, 2025, from https://miapprenticeship.org/resources/process_guide.php
- Mich. Admin. Code R. 338.10305a (2024). <u>https://www.law.cornell.edu/regulations/michigan/Mich-Admin-Code-R-338-10305a</u>
- Michigan Health Council. (n.d.). Preceptor, faculty, & mentoring toolkits. MHC. Retrieved March 5, 2025, from https://www.mhc.org/education
- Michigan Center for Nursing. (2024). 2024 Nurse preceptor survey. Michigan Health Council.
- Michigan Colleges Online & Michigan Workforce Training and Education Collaborative. (n.d.). Help center—financial aid. Retrieved March 3, 2025, from https://www.micollegesonline.org/help.html#/home
- Michigan CTE Reports. (n.d.). List of all state-approved CTE credentials. Retrieved October 11, 2024, from https://reports.cteis.com/home/AvailableCredentials
- Michigan Department of Education. (n.d.-a). Four components of a CTE program [Fact sheet]. Retrieved October 11, 2024, from https://www.michigan.gov/mde/-
 /media/Project/Websites/mde/CTE/cte at a glance/2-OCTE 4-Component-of-CTE AtAGlance.pdf?rev=60dafb488bdc4f889a278a5cf2c55949">https://www.michigan.gov/mde/-
- Michigan Department of Education. (n.d.-b). Michigan's career and technical education vision [Fact sheet]. Retrieved October 11, 2024, from https://www.michigan.gov/mde/-/media/Project/Websites/mde/CTE/cte_at_a_glance/16-OCTE-Vision-AAG.pdf?rev=07f2c194188e44188cc57a712ce0602b&hash=c82916AEE60B216FFBB5308BA9119F8F#

- Michigan Department of Education. (n.d.-c). Work-based learning (WBL) manual: 2024-2025 Edition. Retrieved October 10, 2024, from https://www.michigan.gov/mde/-/media/Project/Websites/mde/CTE/cte_wbl/WBL-Manual.pdfrev=e3acc8cd6d6441379acb-16bc32fbb781&hash=5363E203952E94D7C40D6F2348863140
- Michigan Department of Education. (2018, December). Michigan Career Development Model.
- Michigan Department of Education. (2024, December). Career development reference guide. https://www.michigan.gov/mde/-/media/Project/Websites/mde/CTE/MCDM/MCDM-Reference-Guide.pdf?rev=14a543c866464417a4ef1d8b6ab261f0_&hash=48C_D5FE_6406D0FF374173C56B1077988
- Michigan Department of Education, Office of Career and Technical Education. (n.d.). CTE delivery systems [Fact sheet]. Retrieved March 17, 2025, from <a href="https://www.michigan.gov/mde/-/media/Project/Websites/mde/CTE/cte_at_a_glance/6-CTE-Delivery-Systems_At_AGlance_pdf?rev=3cd458931b35474290dd529a76fefbec&hash=CB38_276EB831F49DF96042DD34E6ED66"
- Michigan Department of Education, Office of Career and Technical Education. (2024). Michigan school CTE program credentials for 2023-2024 [CTEIS Report].
- Michigan Department of Labor & Economic Opportunity & Michigan Office of Rural Prosperity. (2024). Michigan's roadmap to rural prosperity. https://www.michigan.gov/leo/-/media/Project/Websites/leo/Documents/ord/Michigan-Roadmap-to-Rural-Prosperity Report-FINAL.pdf?utm_medium=email&utm_source=govdelivery
- Michigan Department of Labor and Economic Opportunity. (n.d.-a). Michigan Rural Enhanced Access to Careers in Healthcare. Retrieved March 6, 2025, from https://www.michigan.gov/leo/bureaus-agencies/wd/education-training/mireach
- Michigan Department of Labor and Economic Opportunity. (n.d.-b). Michigan Works!

 Apprenticeship Success Coordinators. Retrieved March 5, 2025, from

 https://www.michigan.gov/leo/bureaus-agencies/wd/apprenticeships/michigan-works-apprenticeship-success-coordinators
- Michigan Department of Labor and Economic Opportunity. (n.d.-c). Registered apprenticeships. Retrieved March 5, 2025, from https://www.michigan.gov/leo/bureaus-agencies/wd/apprenticeships

- Michigan Health & Hospital Association. (n.d.). MI Hospital Careers. Retrieved March 3, 2025, from https://mihospitalcareers.com/
- Michigan Health & Hospital Association. (2023, June 16). MHA launches MI Hospital Careers healthcare career campaign. Newsroom. https://www.mha.org/newsroom/mha-launches-mi-hospital-careers-healthcare-career-campaign/
- Michigan Health & Hospital Association. (2025). Hospitals help: 2024 Community impact report. https://www.mha.org/wp-content/uploads/2025/01/2024-Community-ImpactReport.pdf
- Michigan HOSA. (n.d.). Michigan HOSA 2023-2024 Participating schools. Retrieved October 7, 2024, from https://www.michiganhosa.org/participating-schools
- Michigan Primary Care Association. (2023, January). On-the-job training and apprenticeship toolkit for health centers: Medical and dental assistants.
- Michigan State University College of Nursing. (n.d.). Preceptor information. Retrieved March 5, 2025, from https://nursing.msu.edu/alumni/get-involved/volunteer-opportunities/preceptors
- Michigan Transfer Network. (n.d.-a). About MiTransfer. Retrieved March 5, 2025, from https://www.mitransfer.org/about
- Michigan Transfer Network. (n.d.-b). MiTransfer & MiWorkforce Pathways. Retrieved March 5, 2025, from https://www.mitransfer.org/mitransfer-miworkforce-pathways
- Michigan Transfer Network. (2022a). MiTransfer Pathways articulation agreement: Psychology. https://www.mitransfer.org/uploads/ckeditor/files/PSYCH_COMPLETE_FA_22.pdf

- Michigan Transfer Network. (2022b). MiTransfer Pathways articulation agreement: Public health. https://www.mitransfer.org/uploads/ckeditor/files/PH COMPLETE FA 22.pdf
- Michigan Workforce Training and Education Collaborative. (n.d.-a). Educational Programs in Collaboration (EPiC). Retrieved March 3, 2025, from https://www.mwtec.org/epic
- Michigan Workforce Training and Education Collaborative. (n.d.-b). LPN training program.

 Michigan Workforce Training and Education Collaborative. Retrieved March 11, 2025, from https://www.mwtec.org/lpn-program
- Michigan Workforce Training and Education Collaborative. (n.d.-c). Michigan Workforce Training and Education Collaborative. Retrieved March 5, 2025, from https://www.mwtec.org
- Michigan Workforce Training and Education Collaborative. (n.d.-d). Mission and vision. Retrieved March 3, 2025, from https://www.mwtec.org/mission-and-vision
- Michigan Works! Association. (n.d.). Apprenticeship works! Retrieved March 5, 2025, from https://www.michiganworks.org/apprenticeships
- MIDOCs. (n.d.-a). About us. MIDOCs. Retrieved March 6, 2025, from https://www.michigandocs.org/about
- MIDOCs. (n.d.-b). Loan repayment. MIDOCs. Retrieved March 6, 2025, from https://www.michigandocs.org/loan-repayment
- MIDOCs. (n.d.-c). Residencies. MIDOCs. Retrieved March 6, 2025, from https://www.michigandocs.org/residencies
- Monroe County Community College. (n.d.). Nursing, PN to RN option. Retrieved March 5, 2025, from https://www.monroeccc.edu/programs/nursing-pn-to-rn-option
- Moore, A., Meucci, J., & McGrath, J. (2019). Attributes of a successful clinical ladder program for nurses: An integrative review. Worldviews on Evidence-Based Nursing, 16(4), 263–270. https://doi.org/10.1111/wvn.12371
- Mount Wachusett Community College. (2024, June 13). What are the benefits of a CNA to LPN program? The Mount Blog. https://mwcc.edu/blog/benefits-of-cna-to-lpn/

- Murembya, L. (2020). Seven things to know about the Michigan Upper Peninsula labor market [PowerPoint slides]. 2020 Regional Economic Conditions Conference, Minneapolis, MN. https://www.minneapolisfed.org/-/media/assets/events/2020/2020-regional-economic-conditions-conference/06-murembya.pdf
- MyMichigan Health. (n.d.). MyMichigan Health clinical ladder. Retrieved March 6, 2025, from https://www.mymichigan.org/Microsites/nursing-magnet/professional-development/reach/
- National Advisory Council on Nurse Education and Practice. (2024). Mitigating nursing workforce challenges by optimizing learning environments (19; Report to the Secretary of Health and Human Services and the United States Congress).
- Northeast Wisconsin Technical College. (n.d.). Medical assistant to practical nursing bridge.

 Retrieved March 5, 2025, from https://www.nwtc.edu/academics-and-training/medical-assistant-to-practical-nursing-bridge
- NSI Nursing Solutions, Inc. (2024). 2024 NSI national health care retention & RN staffing report.

 https://www.nsinursingsolutions.com/Documents/Library/NSI National

 <a href="https://www.nsinursingsolutions.com/Documents/Library/NSI National

 <a href="https://wwww.nsi
- Oakland University. (n.d.). RN to BSN degree. Retrieved March 5, 2025, from https://www.oakland.edu/careers/rn-to-bsn/
- Orgera, K., Senn, S., & Grover, A. (2023). Rethinking rural health [Issue brief]. AAMC Research and Action institute. https://doi.org/10.15766/rai_xmxk6320
- Ownby, K., Schumann, R., Dune, L., & Kohne, D. (2012). A comparison of a traditional clinical experience to a precepted clinical experience for baccalaureate-seeking nursing students in their second semester. Nursing Research and Practice, 2012, 276506. https://doi.org/10.1155/2012/276506
- Peng, X. (David), Ye, Y., Ding, X. (David), & Chandrasekaran, A. (2023). The impact of nurse staffing on turnover and quality: An empirical examination of nursing care within hospital units.

 Journal of Operations Management, 69(7), 1124–1152. https://doi.org/10.1002/joom.1245
- Perez, C. (2024, October 2). 'Healthcare Pathways' a new partnership between BMCC and local schools. News. https://bmcc.edu/news/2024/healthcare%20pathways.html

- Pine Rest Christian Mental Health Services. (n.d.). Residency rural track. Retrieved March 6, 2025, from https://www.pinerest.org/residency-fellowships/residency-rural-track/
- Poverty Solutions at the University of Michigan. (2022). Michigan poverty & well-being map: Upper Peninsula [Fact sheet]. University of Michigan.

 https://poverty.umich.edu/poverty2021/files/2022/04/MI-map-regional-factsheet-Upper-Peninsula.pdf
- Prince, H., & Mills, J. (2003, December). Career ladders: A guidebook for workforce intermediaries.

 Jobs for the Future.

 https://careerladdersproject.org/docs/Career%20Ladders%20A%20Guidebook.pdf
- Public Sector Consultants. (2021). Michigan's direct care workforce: Living wage and turnover cost analysis. Center for Health Care Strategies. https://cmham.org/wp-content/uploads/2022/04/PSCMichigans-Direct-Care-Workforce-Living-Wage-and-Turnover-Cost-Analysis-2-1-2022.pdf
- ReadyCT. (n.d.-a). For employers. Retrieved March 7, 2025, from https://readyct.org/for-employers/
- ReadyCT. (n.d.-b). For students. Retrieved March 7, 2025, from https://readyct.org/for-students/
- ReadyCT. (n.d.-c). ReadyCT home page. Retrieved March 3, 2025, from https://readyct.org/
- ReadyCT. (2025). ReadyCT 2023-2024 Impact. https://readyct.org/impact-reports/
- Reich, W., Hilliard, D., & Gartland, M. (2020, May 5). Revising a clinical ladder program to increase nurse participation. Advisor Series. https://www.myamericannurse.com/revising-a-clinical-ladder-program-to-increase-nurse-participation/
- Rhyan, C., Turner, A., Beaudin-Seiler, B., Obbin, S., Lupher, E., Schneider, R., & Dennis, E. P. (2023). Michigan's path to a prosperous future: Health challenges and opportunities. Altarum and Citizens Research Council of Michigan. https://crcmich.org/PUBLICAT/2020s/2023/prosperous-future-health.pdf
- Rhyan, C., Turner, A., Daly, M., & Hurdle-Rabb, D. (2022). Access to behavioral health care in Michigan, 2019 data update. Altarum. https://altarum.org/sites/default/files/Altarum %20BH%20Access%202019%20Update%20Final.pdf

- Rowe, J. W., Berkman, L. F., Fried, L. P., Fulmer, T. T., Jackson, J. S., Naylor, M. D., Novelli, W. D., Olshansky, S. J., & Stone, R. (2016). Preparing for better health and health care for an aging population: A vital direction for health and health care. NAM Perspectives.

 https://nam.edu/wp-content/uploads/2016/09/Preparing-for-Better-Health-and-Health-Care-for-an-Aging-Population.pdf
- Ryznar, T., Tucker-Bradway, N., Hodgman, S., Dang, A., & Faria, A.-M. (2021). Limited choices and long drives: Living in rural Michigan with young children [Brief]. American Institutes for Research.

 https://www.michigan.gov/-/media/Project/Websites/mileap/Documents/Early-Childhood-Education/pdgb5/michiganneedassessbrief-rural_families.pdf?

 rev=9fc3dac1984e4ef9bc4744a9e2e2a57d
- Sager, R. (2024, January 12). Hospital maternity units are closing across Michigan. The Michigan Independent. https://michiganindependent.com/health-care/hospital-maternity-units-are-closing-across-michigan/
- Santa Fe College. (n.d.). Dental Hygiene Bridge, A.S. Retrieved March 5, 2025, from https://www.sfcollege.edu/academics/programs/3321.html
- Select Medical Corporation. (n.d.-a). Go Anywhere With Us. Retrieved March 6, 2025, from https://careers.selectmedical.com/about-us/go-anywhere-with-us/
- Select Medical Corporation. (n.d.-b). Select Medical homepage. Retrieved March 6, 2025, from https://www.selectmedical.com/
- SelectMedicalTV (Director). (2022, August 17). Go Anywhere With Us at Select Medical [Video recording]. https://www.youtube.com/watch?v=du7M6jNx5oQ
- Shapiro, D., Dundar, A., Huie, F., Wakhungu, P. K., Yuan, X., Nathan, A., & Hwang, Y. (2017).

 Tracking transfer: Measures of effectiveness in helping community college students to complete bachelor's degrees (13; Signature Report). National Student Clearinghouse Research Center. https://nscresearchcenter.org/wp-content/uploads/SignatureReport13 corrected.pdf
- Shen, K., McGarry, B. E., & Gandhi, A. D. (2023). Health care staff turnover and quality of care at nursing homes. JAMA Internal Medicine, 183(11), 1247–1254. https://doi.org/10.1001/jamainternmed.2023.5225

- Skills for America's Future. (2015). Recasting American apprenticeship: A summary of the Barriers to Apprenticeship Expansion research project. The Aspen Institute.

 https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/pubs/RecastingApprenticeshipV2.pdf
- Slootmaker, E. (2024, April 4). Oral health care is inaccessible to many Michiganders. This coalition is working to change that. Model D Media.

 https://www.modeldmedia.com/features/oralhealthcoalition04042024 1.aspx
- Stermer, B. (2023, December 13). Housing shortages are making recruitment and retention even more challenging for some rural healthcare providers. The Rural Monitor. https://www.ruralhealthinfo.org/rural-monitor/healthcare-workforce-housing
- Sutor, A., & Painter, J. (2020). Nurse residency programs: Providing organizational value.

 Delaware Journal of Public Health, 6(1), 58–61. https://doi.org/10.32481/djph.2020.04.013
- Taub, E. (2024, February 6). Limited public transit options hinder employment opportunities. Great Lakes Echo. https://greatlakesecho.org/2024/02/06/limited-public-transit-options-hinder-employment-opportunities/
- Taylor, J. L. (2019). Postsecondary transfer and mobility in Michigan: Exploring transfer patterns, programs, places, and people. Michigan Center for Student Success, Michigan Community College Association.

 https://www.mcca.org/uploads/ckeditor/files/Michigan_report_final2.pdf
- Taylor, S., Iacobelli, F., Luedke, T., Matthews, P. A., Monge, M., Cooper, J., Moreira, J., Grippo, P., Girotti, J., Molina, Y., Yanez, B., & Simon, M. A. (2019). Improving health care career pipeline programs for underrepresented students: Program design that makes a difference.

 Progress in Community Health Partnerships: Research, Education, and Action, 13(5), 113–122. https://doi.org/10.1353/cpr.2019.0044
- U-M School of Nursing. (2023, July 21). 2023 Preceptors of the year. News and Publications. https://nursing.umich.edu/about/news-portal/202307-2023-preceptors-year
- United States Department of Agriculture, Food and Nutrition Service. (2024, June 26). Dietetic internship opportunities in child nutrition. https://www.fns.usda.gov/cn/dietetic-internship-opportunities-child-nutrition

- United States Department of Labor, Office of Apprenticeship. (n.d.). Registered apprenticeship program. Retrieved March 5, 2025, from https://www.apprenticeship.gov/employers/registered-apprenticeship-program
- University of Detroit Mercy, College of Health Professions & McAuley School of Nursing. (n.d.). SDO for Bachelor of Science in Nursing degree. Retrieved March 5, 2025, from https://healthprofessions.udmercy.edu/academics/nursing/undergrad/sdo.php
- University of Louisville, Community Engagement. (n.d.). Signature Partnership Initiative. Retrieved March 5, 2025, from https://louisville.edu/communityengagement/signature-partnership-1
- University of Tulsa. (2024, March 1). What is a preceptor in nursing? The University of Tulsa Online Blog. https://online.utulsa.edu/blog/what-is-a-preceptor-in-nursing/
- U.S. Census Bureau & Michigan Center for Data and Analytics, Michigan Department of Technology, Management & Budget. (2024, August 29). Michigan population, by county: Selected years 1990-2023. https://sfa.senate.michigan.gov/Economics/MichiganPopulationByCounty.PDF
- U.S. Census Bureau, U.S. Department of Commerce. (2023). Age and sex. American Community Survey, ACS 1-year estimates subject tables, table S0101. https://data.census.gov/table/ACSST1Y2023.S0101?g=040XX00US26
- U.S. Office of Personnel Management. (n.d.). Flexible work schedules [Fact sheet]. Retrieved March 6, 2025, from https://www.opm.gov/policy-data-oversight/pay-leave/work-schedules/
- Van Camp, J., & Chappy, S. (2017). The effectiveness of nurse residency programs on retention: A systematic review. AORN Journal, 106(2), 128–144. https://doi.org/10.1016/j.aorn.2017.06.003
- Wilkes, R. C., & Bartley, S. J. (2007). A model for career planning in healthcare: Investing in a career development program will retain workers for growth. Online Journal for Workforce Education and Development, 2(3). <a href="https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?grticle=1048&context=ojwed&https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi/pii/ciewc

- Williams, C., Gordon, R., & Richard, E. (2024). Summer camp clinical placements in young families nursing: An interpretive description study. Canadian Journal of Nursing Research, 08445621241288489. https://doi.org/10.1177/08445621241288489
- Workplace Flexibility 2010, Georgetown University Law Center. (2006). Flexible work arrangements: A definition and examples [Fact sheet]. Georgetown University Law Center. https://scholarship.law.georgetown.edu/legal/10





Michigan Health Council is a 501(c)(3) on a mission to ensure the future of the healthcare workforce.

Office:

2121 University Park Dr. STE 150 Okemos, MI 48864

Website:

mhc.org