

2024 Report to the Legislative Research Commission

Kentucky Community & Technical College System

In response to: 22 RS 751/GA

Submitted November 1, 2024

HealthForce Kentucky 2024-2025

Board of Directors

Dr. Scott Williams Kentucky Community & Technical College System, Chair

> Mark Marsh Owensboro Health

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Dr. James Cousins Kentucky Wesleyan College

Bart Flener

Green River Regional Educational Cooperative

Dr. Amy Higdon University of Louisville

Dr. Tania Basta Western Kentucky University





















HealthForce Kentucky Team

Barton D. Darrell

Chancellor

Rebecca Cain

Executive Assistant

Jaclyn Graves

Director, External

Bruce Williams

Director, Internal/Simulation

Leigh Ann Tipton

Pathways Specialist, External

Preston Law

Pathways Specialist, External

Hannah Stephen

P-12 Simulation Education

Amy Brasher

Post-Secondary Simulation Education

Nathan Fulkerson

Simulation Operations

Morgan Ballard

Simulation Operations

Jayne Stone

Curriculum Development

Sarah Price

OCTC Principal Investigator

Timothy Stevenson

Grant Accountant



HEALTHCARE WORK FORCE SHORTAGE CRISIS

Kentucky, like the rest of the United States, is experiencing shortages in healthcare professionals that have reached "crisis" levels. The Kentucky legislature wisely chose to begin a "homegrown" initiative for Midwest Kentucky to confront this issue which, while so important to healthcare, is also critically important to so many areas of Kentucky life and overall well-being.

Recently, the Kentucky Hospital Association conducted a survey of over one hundred hospitals related to healthcare workforce shortages. A portion of the survey revealed the following critical shortages facing our Commonwealth:

- -Kentucky hospitals had nearly thirteen thousand job vacancies at the end of 2022. This number equated to a fifteen percent (15%) employment vacancy rate for the state.
- -Nearly five thousand of those job openings were in registered nursing.
- -Licensed practical nurses accounted for over three hundred of the vacancies, which equated to a twenty one percent (21%) shortage statewide.
- -Vacancy rates were particularly high in critical care, psychiatric, and medical-surgical nursing.
- -Shortages were high in other healthcare professional areas as well. Emergency medical service workers, including emergency medical technicians, had the highest job vacancy rate at nineteen percent (19%).
- -Respiratory therapist vacancy rates were also extremely high at fifteen percent (15%).

(Western Kentucky University - National Public Radio {2022})

While the preceding data is not intended to address all of the areas of Kentucky's healthcare professional workforce shortages, it certainly is demonstrative of the level of crisis Kentucky is experiencing. These percentages of vacancies will certainly increase over time if Kentucky does not take aggressive investment measures and educational action to address this problem now. The issue has hit critical mass, also, with a currently very large aging population, coupled with what many refer to as "The Great Resignation" within the healthcare professional workforce, accelerated by the Covid-19 pandemic. The physical health of our population is at high risk, along with great risk to our residents' mental health and our great Commonwealth's overall economic and cultural health and growth.

Fortunately, Kentucky's Midwest education, health care, and legislative leaders seized the challenge and responded to the need for an innovative way to address this changing landscape and began investing in an innovative manner in healthcare workforce development.

The talent is here. The will is here. The demonstrated long term commitment is here. Through HealthForce Kentucky our Commonwealth will not only begin the long and important path toward the goal of a full healthcare workforce but will also take the national lead by demonstrating what a true commitment to investing in the health of a population can produce - a healthier and more productive citizenry.

Legislative Report in response to 22 RS HB 751/GA

1. Origin

In 2022, a true public-private partnership collaborated to present the Kentucky legislature with a unique initiative to help the Midwest region of Kentucky to meet its challenges (faced by communities nationwide) of significant shortages in healthcare professions. Owensboro Health, public and private postsecondary institutions and systems, P-12 education systems, and state legislators banded together to propose an innovative and wide-reaching healthcare education and training concept.

After a presentation in Frankfort, the General Assembly unanimously approved the initiative, with an initial "start-up" funding of thirty-eight million dollars. This initial funding, in the form of State Fiscal Recovery Fund of the American Rescue Plan Act of 2021, appropriated by both statute and budget item for an entity to be created for the purpose of increasing the number of healthcare professionals and named "Commonwealth West Healthcare Workforce Innovation Center." The funds are required to be committed to the establishment of this healthcare workforce entity by the end of 2024, and the funds must be spent by the end of 2026. Those two mandates will be satisfied.

2. Creation of "HealthForce Kentucky"

Starting from "scratch," Owensboro Health and KCTCS worked together with both human capital and "up front" reimbursable funding to begin the work that would become "HealthForce Kentucky" (the DBA of "Commonwealth West Healthcare Workforce Innovation Center"). On December 9th, 2022, the entity was recognized by the Commonwealth of Kentucky as a 501(c)(3) corporation, with KCTCS then designated as the custodian of the state appropriated State Fiscal Recovery Fund of the American Rescue Plan Act of 2021 funds. A Chancellor position was created and the process of creating a state-of-the-art health care innovation center and system within the region began.

HealthForce Kentucky was established to work with communities within a sixteen-county region. The counties involved are Daviess, Henderson, McLean, Hancock, Muhlenberg, Webster, Hopkins, Ohio,

Hardin, Hart, Butler, Edmonson, Logan, Union, Grayson, and Breckenridge. This includes the P-12 schools within each of those counties. Also included are the postsecondary education institutions which offer healthcare professional education within those counties. The postsecondary education institutions are University of Louisville, Kentucky Wesleyan College, Brescia University, Western Kentucky University, Owensboro Community and Technical College, Henderson Community College, Madisonville Community College, Hopkinsville Community College, and Elizabethtown Community and Technical College.

3. Board of Directors

The HealthForce Kentucky Board of Directors was established to include representation of our partner educational institutions as well as healthcare entities. The Board consists of the Presidents (or designees) of the four-year postsecondary institutions, a President representing the five participating KCTCS colleges, the CEO of Owensboro Health, a representative of the Kentucky Nursing Home Association, and the Executive Director of the Green River Regional Educational Cooperative (the P-12 cooperative of which each of the sixteen county public school districts are members.

4. Mission

The mission of HealthForce Kentucky is to expand the pathways to healthcare professional jobs and create new pathways, as the market demands, to produce, within the region, a greater number and an even more highly trained healthcare professional workforce. The purpose is to "grow our own" healthcare talent within the sixteen counties to create more healthcare professionals of various specialty types to provide even better healthcare for the region. Sparking interest in healthcare and healthcare professional careers among all age groups is a crucial part of the overall mission. The need for more registered nurses, licensed practical nurses, respiratory therapists, X-ray technicians, medical laboratory technicians, physician assistants, emergency medical professionals, virtually all areas of physician practices, and more, exist throughout the region, state, and country. HealthForce Kentucky

will expose young and seasoned Kentuckians alike to the range of possibilities for rewarding careers in healthcare.

5. HealthForce Kentucky Team Development

HealthForce Kentucky includes personnel from both Owensboro Health and Owensboro Community & Technical College (OCTC). The Chancellor and External Operations team are Owensboro Health personnel while the remaining personnel are employed by OCTC. HealthForce Kentucky External Operations team is composed of the Director, two (2) Pathways Specialists, and includes the Chancellor. The Internal Operations team is composed of the Director of Simulations, Simulation Education Specialist (SES) K-12, SES Higher Ed., SES Center, Instructional Designer, three (3) Simulation Operations Specialist (SOS), IT Specialist, and part-time staff as needed. The administrative, executive, and maintenance is composed of the Director of Internal Operations, Executive Assistant, Grant Accountant, and Maintenance Technician. The remaining positions to be hired are the Assistant Director of Simulations, Instructional Designer, SES (at the Center), SOS (at the Center), IT Specialist, and Maintenance Technician (at the Center).

The salaries are currently reimbursed by the HealthForce Kentucky appropriated funds, held by the funds custodian, Kentucky Community and Technical College System ("KCTCS").

6. HealthForce 1 and HealthForce 2

Kentucky is, predominantly, a rural state. HealthForce Kentucky's region is almost totally, by definition, rural with Daviess and Hardin Counties being the only counties within the region having populations exceeding one hundred thousand (100,000) people. Rural Kentuckians are typically very loyal to their hometowns and counties, and HealthForce Kentucky considers this an advantage to its goal of "growing our own" talent. Many people in rural Kentucky will choose to stay and work in their home communities, if the jobs exist to support their lives and families. Many of the better paying jobs are in healthcare and exist in all counties within the region to varying degrees.

Consequently, the first major initiative of HealthForce Kentucky was to create two high technology mobile simulation laboratories which (particularly while a healthcare innovation center in Owensboro is being constructed) could begin offering our partner institutions new technology and educational tools to start expanding their offerings and widening their existing healthcare pathways. (See "Exhibit A" and "Exhibit B"). The first mobile simulation laboratory, named "HealthForce 1," was designed, constructed, and placed into service in October 2023. In its first twelve months of operation, HealthForce 1 was able to provide over eight thousand (8,000) individual educational and training experience throughout the region. HealthForce 1 has traveled over nine thousand miles (9,000) in its first year of service within the sixteen-county region. Because of high demand, a second mobile simulation laboratory, "HealthForce 2" was then designed, constructed, and placed into service in August 2024.

These mobile simulation laboratories are expandable to fifty-three feet long by twenty-five feet wide and offer everything from three-dimensional anatomy study capability; interactive immersion room experiences; to high technology mannequins which breathe and respond to stimuli. These are just a few of the many high technology health care instructional tools available for all ages for use within the mobile simulation laboratories. These are experiences and training tools never before offered in this combination within HealthForce Kentucky's service region.

7. HealthForce Kentucky Innovation Center

The HealthForce Kentucky Innovation Center is currently under construction in Owensboro, Kentucky.

The facility was made possible by Owensboro Health, which offered its existing Business Center, for

HealthForce Kentucky to design and construct thirty-six thousand square feet of high technology stateof-the-art healthcare innovation space. The Innovation Center is expected to be completed in Fall 2025.

The Center will allow our partner education institutions and healthcare providers access to facilities and
equipment never available before to better prepare students for successful and impactful careers in
healthcare throughout the region, as well as allow current healthcare professionals unique

opportunities to further develop their skills to better serve the public and promote greater retention of current healthcare professionals. (See "Exhibit C"). Resources to particularly note in Exhibit C because of their unique, specialized, and high function levels include a working radiology training suite, a medical laboratory training room, doctors' office style examination rooms, a large anatomy training room, full operating room, simulated hospital rooms, nursing skills lab, large collaborative classroom, simulation style debriefing rooms, a serenity room for mental health training, and immersive technology rooms with touch screen walls. Each space has been designed with multi-functional capabilities to ensure flexibility as technology advances and workforce needs to adapt while also increasing the opportunities for healthcare learning environments.

8. Educational tools available to partners

HealthForce Kentucky has, as mentioned above, invested in high-fidelity equipment including innovative education and training tools for our partners to employ. These advanced tools will give students, within HealthForce Kentucky's service region, a significant advantage in achieving their career, education, and training goals, and allow them to be best prepared when they enter the healthcare workforce. (See "Exhibit D")

The following is a list of items specifically developed to help HealthForce Kentucky efficiently track resources and collect data.

- a. A detailed inventory resource catalog available at this link: <u>Inventory Catolog</u> The catalog demonstrates the quality of investments that have been made to promote HealthForce Kentucky. Training and informative direction are incorporated into the catalog.
- b. A Customer Resource Management (CRM) system, called TripleSeat, has been implemented to manage customer relations and all details regarding event logistics. To request events or equipment an online resource has been developed for these requests: <u>Request a Resource –</u> <u>HealthForce Kentucky – Owensboro, Kentucky</u>. Once a request is received the simulation team

- processes the request and communicates with the requestor to design a custom learning and training experience to meet the desired objectives and outcomes.
- c. An Inventory Management System, called WASP, has been implemented to manage asset/inventory control and equipment flow for loans, maintenance, and reporting purposes.
- d. The education team has held Train-the-Trainer sessions for individuals to become instructors for SafeSitter and Cardiopulmonary Resuscitation (CPR). (click the links to learn more about these.)

 The curricular team has been working on developing formal simulation scenarios along with identifying and developing resources for all age groups. Below is a list of items developed, or that are currently in development.
 - a. Level 1 Healthcare Simulation Professional Development and Debriefing Essentials course.
 - "In-A-Box" curriculum for school aged levels to check out and check in. These can be used for family night engagement opportunities. These items are designed to follow the guidelines from the state curriculum plan. (Topics include the brain, gastrointestinal, healthy eating, and eye with more to come).
 - 2) Career exploration guides and introductions to health professions.

9. Education and Training Program Investments

One of the most important goals of HealthForce Kentucky is to collaborate with our partner institutions to create and/or expand healthcare education and training programs throughout the region. These partners are collaborating like never before to make healthcare opportunities more available and efficient. HealthForce Kentucky can use a portion of its initial funding to provide "seed monies" and other assets to expand healthcare professional pathways and create new pathways. To date, the following programs have been funded by HealthForce Kentucky:

a. The **Physician's Assistant Program at Brescia University** has a total allocation of \$1,512,038.00, including both expended and obligated funds. Brescia University, in collaboration

with institutions involved with HealthForce Kentucky, with emphasis on local institutions, is beginning a Physician Assistant Studies Program. Physician Assistants (PAs) are health care providers who are nationally certified, and state licensed to practice medicine. As a part of their responsibilities, PAs perform physical exams, diagnose illnesses, develop, and carry out treatment plans, order and interpret lab tests, assist in surgery, provide patient education, and prescribe medications.

- b. The Diagnostic Medical Sonography program at ECTC is allocated \$454,225.00. The purpose of this proposal is to increase the number of Diagnostic Medical Sonography (DMS) graduates in the Green River Workforce Development District. This proposal will increase graduates by expanding the existing Elizabethtown Community and Technical College (ECTC) DMS program in partnership with Owensboro Community and Technical College (OCTC). This proposal adds a DMS laboratory in Owensboro, hires a faculty member, and redesigns how the DMS program is delivered.
- c. The Certified Registered Nurse Anesthetist program at WKU has a pending obligation of \$487,716.00. Nurse anesthetists are advanced practice registered nurses (APRN) trained to administer anesthesia used for pain management, who work primarily with surgeons, anesthesiologists, and registered nurses. They provide services in various healthcare settings such as outpatient care centers, hospitals, emergency rooms, and physicians' offices. Health care reform and the aging baby boomers are resulting in an increasing demand for nurse anesthetists. The Bureau of Labor Statistics projects employment growth of nearly 12% between 2021 to 2031. In Kentucky, Certified Registered Nurse Anesthetists (CNRA) provide anesthesia services in every county that has facilities offering surgical services. Furthermore, CRNAs are the sole providers of these services in approximately half of these facilities, including 17 Critical Access Hospitals.

- d. The Medical Laboratory program at HCC is allocated \$676,752.03. A fully functional simulation laboratory with a dedicated didactic space and clinical coordinator will provide a solution to both the declining availability of student clinical spots and inadequate space for instructors to lecture and conduct lab exercises. Removing these barriers to growth for the HCC/OCTC Medical Laboratory Technician (MLT) and Owensboro Health Regional Hospital Medical Laboratory Specialist (MLS) programs allow for the opportunity to accommodate more students and increase the number of graduates who will enter the laboratory workforce in Kentucky. The lab at HealthForce Kentucky can provide simulated clinical experience and increase the number of clinical sites for our students, accommodating an entire cohort in contrast to only one or two students as is customary at most clinical sites. This dedicated laboratory, able to provide much needed lab simulations, would ensure the program could accept more students with the assurance of placement in a clinical experience, independent of the current environment with affiliated clinical sites. This effort of collaboration using a single coordinator position could realize cost savings such as purchasing supplies with economy of scale since both programs will utilize them as well as reducing duplication of lab exercises.
- e. The Licensed Practical Nurse program at ECTC is allocated \$543,600.00. The purpose of this proposal is to increase the number of Licensed Practical Nursing (LPN) graduates in the Green River Workforce Development and the Lincoln Trail Development Districts. This proposal will increase graduates by adding an LPN Program in Leitchfield, Kentucky, at the Leitchfield Campus of Elizabethtown Community and Technical College (ECTC). This proposal requests two faculty members, start-up equipment/supplies, and establish an operating budget at the Leitchfield Campus in fall 2024. The LPN Program is scheduled to begin in Spring 2025. This LPN Program is a new academic program for ECTC. ECTC currently offers an Associate Degree in Nursing but does not

offer LPN. This new LPN program in Leitchfield is a need expressed by local healthcare providers to fill much needed positions within their healthcare workforce.

- f. The Licensed Practical Nurse program at MCC is allocated \$1,054,073.70. The expectation of this program is to provide individuals in the OCTC service region with a shorter pathway to employment. This partnership would allow MCC to provide a quality program to the OCTC service area in an effective and expedited manner to meet the needs of the community. MCC has a successful LPN program that could be expanded to OCTC's service area. The MCC Practical Nursing program is contributing to Kentucky's 60x30 goal by increasing high-quality credential production and completion rates. Over the last four years, MCC has conferred 66 Practical Nursing diplomas. Establishing a program at OCTC enables students in their service area the option to enter the workforce immediately upon completion of the LPN credential within a reasonable amount of time. This partnership also allows MCC to assist one of its sister institutions to fill workforce shortages within its service area. MCC has a history of successful program collaborations with other institutions, including a surgical technology consortium with Hopkinsville Community College and a respiratory care collaboration and consortium with West Kentucky Community and Technical College and Murray State University.
- g. The Radiography Certifications program at OCTC is allocated \$40,623.88. The

 Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) certificates are additional

 credentials that students/graduates from an accredited Radiography Program, accredited Nuclear

 Medicine Program, or who are American Registry of Radiologic Technologists (ARRT) or Nuclear

 Medicine Technology Certification Board (NMTCB) registered, can obtain. These certificates will be

 an option for graduates with the Associate of Applied Science in Radiography to build on their

 current degree into an advanced modality. As such, these certificates will strengthen to OCTC's

Radiography Program which is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT).

- h. The Clinical Mental Health Counseling program at Brescia University is pending allocation of \$587,093. The MS in Clinical Mental Health Counseling program enables students to pursue a profession that seeks to help others in need in the context of the Ursuline tradition and without leaving their local community. This relates to the university's mission of preparing students to attend graduate schools, and it relates to the mission of service by filling the community's need for mental health professionals.
- i. The Healthcare Administration program at Kentucky Wesleyan College is pending allocation of \$200,000. This will be a concentration imbedded within the college's Business Administration undergraduate program to provide the region with fertile ground for producing more healthcare professional administrative personnel with business backgrounds.

10. Sustainability

HealthForce Kentucky has seen commitment from the education collaborators in programming to jointly expand existing programs, while also being innovative in creating new healthcare career paths. One of the keys to a successful initiative is the continued support of Kentucky's General Assembly and Executive Branch, along with the integration of HealthForce Kentucky into the region's postsecondary institutions finance and curricula, and the region's healthcare providers, who will be the workforce beneficiary of HealthForce Kentucky. The initial funding from a strategic thinking General Assembly was required to be committed to construction, developing the HealthForce Kentucky team, and to healthcare education and training initiatives by the end of the calendar year 2024, and the monies fully expended by the end of calendar year 2026. HealthForce Kentucky is well on track to satisfy those time parameters. Once the structure, framework, innovation center, and the first programs are created, built, and/approved, HealthForce Kentucky will then need continued financial support, along with embedding of new

programs within the fiscal budgets of its education partners, so that it can continue its mission for decades to come and be a part of the region's (and quite possibly the state's) healthcare professional workforce supply chain.

Again, HealthForce Kentucky believes that there is a significant return to Kentucky with this type of shared resource investment in Kentucky's workforce, education, and healthcare.

11. Partnerships With Other State Healthcare Workforce initiatives

From its inception, HealthForce Kentucky has searched for and recognized partnership opportunities with other healthcare workforce initiatives existing within the Commonwealth. The mobile simulation resources of HealthForce Kentucky provide stable platforms for partnering with other state funded initiatives such as the Kentucky Prenatal Collaborative (KyPQC), Kentucky Mental Health Collaborative, Kentucky Ambulance Provider Association, Kentucky Fire Commission, and others. Using HealthForce Kentucky's existing equipment, its mobile simulation facilities (HealthForce 1 and HealthForce 2), new classrooms, skills training laboratories, and simulation spaces can be added to our more rural areas of the region, where great talent exists but geographic and resource barriers were limiting factors. Given the ever evolving and advancing technologies and communication tools, there is no reason why a young child living in a small town in rural Kentucky should not have the same opportunities for a healthcare career as a child living in one of our larger communities, or in communities anywhere in the United States. The General Assembly should be applauded for recognizing the talent in all of Kentucky's communities, large and small, and then investing in this long-term opportunity to change Kentucky in so many positive areas.

HealthForce Kentucky is committed to sharing its mission and work to collaborate with so many others.

HealthForce Kentucky has presented and been involved in healthcare workforce activities with associations and groups including, but not limited to, the Kentucky Hospital Association, Kentucky's

Council on Postsecondary Education, Pritchard Committee for Academic Excellence, National

Conference of State Legislators, Governor's Safety and Health Network, Area Health Education Center,

Kentucky Medical Association, and more.

12. The Potential for Expansion in Kentucky

The service area of sixteen counties in Midwest Kentucky has been warmly received. Now that the roots for HealthForce Kentucky have been established and should other areas of the Commonwealth desire to implement this expansive healthcare education model, the personnel are now in place to help expand the collaborative. Other regions will not have to "reinvent the wheel" as the structure has now been created. The mobile model for education and training works best in rural areas that may lack access to stand alone simulation facilities. The design for the HealthForce Kentucky simulation center in Owensboro, Kentucky can be transplanted to other areas of the state as well.

13. Model for the Rest of the Nation

The HealthForce Kentucky model created, with the support of the Kentucky General Assembly and visionary educators and healthcare providers in Midwest Kentucky, will very likely be emulated across the country. These attempts have the potential to attract positive attention and focus on Kentucky's forward thinking in solving the shortage of critical qualified healthcare workers. There have been previous attempts to provide high tech simulation healthcare education and training within hospitals and higher education institutions, but this collaboration in scope is truly unique and innovative. Curious people solve the world's large problems, and HealthForce Kentucky has, as one of its goals, to expose as many people as possible to technology, science, and healthcare career opportunities. HealthForce Kentucky's goal is to provide exposure to elementary school children to middle and high school students, to traditional postsecondary students and non-traditional adult learners. HealthForce Kentucky believes this is the best way to ensure the creation of a long-term healthcare professional pipeline that produces the maximum number of quality healthcare professionals.

HealthForce Kentucky has been contacted by groups from Washington State to Maine, inquiring about Kentucky's vision for addressing its healthcare professional shortages, as all states across the nation are experiencing the same or similar challenges. In September 2024, HealthForce Kentucky was invited to present to the Senior Advisor to the President of the United States, Stephen Benjamin, and his staff in the Eisenhower Executive Office Building in Washington D.C. on Kentucky's vision for attacking the healthcare workforce crisis through this innovative model, now known as HealthForce Kentucky. Mr. Benjamin and his staff expressed their appreciation for, and keen interest in, this Kentucky plan of action and vowed to stay in contact with HealthForce Kentucky as it grows and matures. They were particularly intrigued by Kentucky's healthcare workforce partners truly collaborating in such a large number and scale.

14. Other Benefits

While HealthForce Kentucky is a healthcare professional education initiative designed to improve healthcare within the region, it has many other extremely important benefits for the region and the Commonwealth of Kentucky.

Yes, healthcare offerings within our region will become even higher in quality as the numbers of highly trained healthcare professionals are produced. The physical and emotional toll on our current highly trained healthcare professionals caused by the existing shortages must be addressed. The result of not attacking this issue is decreased retention of existing professionals but is also a decrease in their effectiveness as they are stretched too thin. But, as previously stated herein, many good paying careers in our rural counties are in healthcare and many are currently unfilled. HealthForce Kentucky believes that rural Kentucky will not reach its full potential while lacking access to high-quality healthcare and high-quality education. The most talented economic developers would fail without those two components, as health care and education constitute the foundation for business, industry, recruitment,

and expansion. HealthForce Kentucky is working to ensure both healthcare and education are available within HealthForce Kentucky's service region.

We want young people who love their home communities and prefer to live, learn, work, and raise families there to be able to do so. This will create the strongest communities and our strongest Commonwealth possible. There could be nothing more worthy of investment than the health and education of our citizens so that all our communities may thrive. Through HealthForce Kentucky and its partners, the average income of our communities' citizenry will rise. The average educational attainment levels will rise. The overall health and well-being within our communities will rise.

Kentucky chose not to wait for another state to innovate and then offer potential solutions to our healthcare professional shortages, which are common across the nation. Kentucky has the talent, the innovative spirit, and, most important, the will to address the issue here at home....in Kentucky.

SUMMARY

In less than a year of operation, HealthForce Kentucky has had a significant impact on healthcare education and workforce development in the region. Here are key outcomes:

Enhanced Educational Resources: The creation of high-tech mobile simulation labs, HealthForce 1 and HealthForce 2, has provided students with access to advanced educational tools and experiences. These mobile labs have delivered over 8,000 individual training sessions, significantly enhancing the practical skills of healthcare students.

State-of-the-Art Facilities: The ongoing construction of the HealthForce Kentucky Innovation Center in Owensboro will offer state-of-the-art facilities and equipment, further improving the quality of healthcare education. This Center will provide partner institutions with resources that were previously unavailable, better preparing students for successful careers in healthcare.

Collaborative Efforts: The collaboration between Owensboro Health, KCTCS, and various educational institutions has fostered a unified approach to addressing healthcare workforce shortages. This partnership has enabled the efficient use of resources and the creation of new educational pathways.

Community Impact: By focusing on "growing our own" talent, HealthForce Kentucky has ensured that many healthcare professionals choose to stay and work in their home communities. This has improved healthcare access and quality in rural areas, benefiting the overall health and well-being of the region's population.

Innovative Educational Tools: Investments in high-tech instructional equipment and innovative educational tools have given students a competitive edge in their training. These tools have enhanced learning experiences, making students better prepared for real-world healthcare environments.

Program Expansion: HealthForce Kentucky has funded the expansion of several healthcare education programs, including Diagnostic Medical Sonography, Medical Laboratory Technician, and Licensed Practical Nurse programs. These expansions have increased the availability of healthcare training opportunities, addressing critical workforce needs.

New Program Creation: HealthForce Kentucky has provided the foundational seed monies for new programs within the region in the form of Brescia Universities Physician Assistant Program, Western Kentucky University's Certified Registered Nurse Anesthetist program, Kentucky Wesleyan College's undergraduate Healthcare Administration program, and Brescia University's undergraduate clinical psychology program.

HealthForce Kentucky has made significant strides in addressing the healthcare workforce shortages in the Midwest region of Kentucky. Through strategic investments in personnel, operational resources, educational programs, and state-of-the-art facilities, HealthForce Kentucky has enhanced the quality and accessibility of healthcare education. The collaborative efforts between Owensboro Health, KCTCS, and various educational institutions and healthcare organizations have created a robust framework for training the next generation of healthcare professionals.

The establishment of high-tech mobile simulation labs and the ongoing construction of the Innovation Center in Owensboro are testament to HealthForce Kentucky's commitment to providing cutting-edge educational tools and experiences. These initiatives will not only improve educational outcomes but also ensure that many healthcare professionals remain in their home communities, thereby strengthening local healthcare systems.

The impact of HealthForce Kentucky's programs will be evident in the increased number of skilled healthcare professionals, the enhanced learning experiences for students, and the improved healthcare services in rural areas. By continuing to invest in innovative educational tools and expanding healthcare

training programs, HealthForce Kentucky is well-positioned to help our partners meet the evolving needs of the healthcare industry and assist them in being even better prepared to contribute to the overall well-being of the region's population.

HealthForce Kentucky has already made significant strides in addressing the healthcare workforce shortages in the Midwest region of Kentucky. Through strategic investments in personnel, operational resources, educational programs, and state-of-the-art facilities, HealthForce Kentucky has enhanced the quality and accessibility of healthcare education. The collaborative efforts of Owensboro Health, the Kentucky Community and Technical College System, the primary, secondary and postsecondary education partners and healthcare organizations within the sixteen-county region, and the General Assembly, have created a robust framework for training the next generation of healthcare professionals.

The establishment of high-tech mobile simulation labs and the ongoing construction of the Innovation Center in Owensboro are testament to HealthForce Kentucky's commitment to providing cutting-edge educational tools and experiences. These initiatives will not only improve educational outcomes, but will also ensure that many healthcare professionals can remain in their home communities, thereby strengthening local healthcare systems and the communities as a whole.

The impact of HealthForce Kentucky's programs will be evident in the increased number of skilled healthcare professionals, the enhanced learning experiences for students, and the improved healthcare services in rural areas. By continuing to invest in innovative educational tools and expanding healthcare training programs, HealthForce Kentucky is well-positioned to meet the evolving needs of the healthcare industry and contribute to the overall well-being of the region's population.

Financial Appendix

Expenditures and Budget

Introduction:

HealthForce Kentucky is composed of Owensboro Health Regional Hospital and Kentucky Community & Technical College System personnel. The Director of External Operations and the Director of Internal Operations report to the Chancellor. External Operations is composed of a team of Pathways Specialists which serves as the communication and marketing connection among the postsecondary institutions, the P12 schools, the healthcare providers, and the public. Internal Operations is composed of a team of Simulation Education Specialists tasked with curricula development and a team of Simulation Operations Specialists who integrate simulations equipment into curricula in coordination with organizations and educational institutions.

Budget Summary:

HealthForce Kentucky's budget is strategically allocated across personnel, operations, educational programs, and capital projects, totaling \$38,000,000.00. The personnel budget of \$5,789,744.46 supports staff from Owensboro Health and OCTC, with \$441,049.32 expended. The operational budget of \$6,483,337.21 includes reimbursements, equipment, and mobile lab management, with \$3,327,054.24 expended. Educational programs have a budget of \$4,769,028.61, supporting various healthcare training initiatives, with \$106,620.98 expended. The capital budget of \$20,957,889.72 funds high-fidelity instructional equipment, Innovation Center renovations, and mobile labs, with \$3,894,604.79 expended. This comprehensive budget ensures the development of skilled healthcare professionals, providing high-fidelity simulations equipment, and the establishment of the Innovation Center to provide a state-of-the-art facility to increase the pipeline of qualified healthcare workers and reduce the shortage of qualified medical staff across the Commonwealth.

Detailed Budget Breakdown:

a. Personnel: HealthForce Kentucky's personnel budget includes staff from both Owensboro Health and Owensboro Community & Technical College (OCTC). The External Operations team, consisting of the Director, two Pathways Specialists, and the Chancellor, are Owensboro Health employees. Owensboro Health is in the process of being reimbursed for their services. The Internal Operations team, including roles such as the Assistant Director of Simulations, Simulation Education Specialists (SES) for K-12, Higher Ed., and the Center, Instructional Designer, three Simulation Operations Specialists (SOS), IT Specialist, and part-time staff, are employed by OCTC. Administrative, executive, and maintenance staff include the Director of Internal Operations, Executive Assistant, Grant Accountant, and Maintenance Technician. Positions yet to be filled include the Assistant Director of Simulations, Instructional Designer, SES at the Center, SOS at the Center, IT Specialist, and Maintenance Technician at the Center. The total personnel budget is \$5,789,744.46, with \$441,049.32 expended, \$2,648,174.14 obligated, and \$2,700,046.08 pending obligation.

Purpose	Expended	Obligated	Pending	Total	Note
	(9/30/2024)		Obligation		
			(12/31/2024)		
External			\$2,603,893.45	\$2,603,893.45	1,3
Operations					
Personnel Salary					
& Benefits (S&B)					
Internal	\$154,450.98	\$1,811,134.01	\$93,627.55	\$2,059,212.54	2,4
Operations					
Personnel S&B					
Administrative,	\$286,598.34	\$837,040.13		\$1,123,638.47	2,4
Executive, and					
Maintenance					
S&B				_	
Total	\$441,049.32	\$2,648,174.14	\$2,700,046.08	\$5,789,744.46	

- 1. Consists of Owensboro Health personnel, including Chancellor
- 2. Consists of KCTCS personnel
- 3. Processing reimbursements
- 4. Additional positions once Innovation Center is completed
- b. **Operational**: HealthForce Kentucky, closely integrated with Owensboro Health, includes \$295,449.91 for Owensboro Health reimbursements, \$2,742,190.06 for equipment, \$2,366,300.00 for managing HealthForce 1 & 2 (mobile laboratories), \$380,063.13 for external operating expenses, \$623,962.30 for internal operating expenses, and \$75,371.81 for administrative expenses. The total operational budget is \$6,483,337.21, with \$3,327,054.24 expended, \$214,689.67 obligated, and \$2,941,593.30 pending obligation.

Purpose	Expended	Obligated	Pending	Total	Note
	(9/30/2024)		Obligation		
			(12/31/2024)		

Owensboro			\$295,449.91	\$295,449.91	1,
Health					
Reimbursements					
Equipment	\$2,551,537.04	\$190,653.02		\$2,742,190.06	
HealthForce 1 &	\$483,465.00		\$1,882,835.00	\$2,366,300.00	2,
2 (Mobile Lab)					
Management					
External	\$196,419.06		\$183,644.07	\$380,063.13	2,3
Operating					
Expenses					
Internal	\$76,272.50	\$24,036.65	\$523,653.15	\$623,962.30	3
Operating					
Expenses					
Administrative	\$19,360.64	_	\$56,011.17	\$75,371.81	
Expenses					
Total	\$3,327,054.24	\$214,689.67	\$2,941,593.30	\$6,483,337.21	

- 1. Processing reimbursements
- 2. Personal Services Contracts included
- 3. Includes consumables
- c. **Programs**: The budget for healthcare education programs across multiple institutions totals \$4,769,028.61. This includes \$106,620.98 expended and \$1,405,417.02 obligated for the Physician's Assistant Program at Brescia University, \$454,225.00 obligated for the Diagnostic Medical Sonography program at ECTC, \$487,716.00 pending obligation for the Certified Registered Nurse Anesthetist program at WKU, \$676,752.03 pending obligation for the Medical Laboratory program at HCC, \$543,600.00 pending obligation for the Licensed Practical Nurse program at ECTC, \$1,054,073.70 pending obligation for the Licensed Practical Nurse program at MCC, and \$40,623.88 pending obligation for the Radiography Certifications program at OCTC. Other programs are currently being reviewed by the HealthForce Kentucky Board of Directors to facilitate the development of programs that will have a lasting impact on the development of healthcare professionals in HealthForce Kentucky's service region.

Purpose	Expended (9/30/2024)	Obligated	Pending Obligation (12/31/2024)	Total	Note
Physician's Assistant Program	\$106,620.98	\$1,405,417.02		\$1,512,038.00	
(Brescia					
University)					
Diagnostic		\$454,225.00		\$454,225.00	
Medical					
Sonography					
(ECTC)					
Certified			\$487,716.00	\$487,716.00	
Registered Nurse					
Anesthetist (WKU)					

Medical			\$676,752.03	\$676,752.03	
Laboratory (HCC)					
Licensed Practical			\$543,600.00	\$543,600.00	
Nurse (ECTC)					
Licensed Practical			\$1,054,073.70	\$1,054,073.70	
Nurse (MCC)					
Radiography			\$40,623.88	\$40,623.88	
Certifications					
(OCTC)					
Total	\$106,620.98	\$1,859,642.02	\$2,802,765.61	\$4,769,028.61	

d. Capital: This budget outlines the financial allocations for capital projects, totaling \$20,957,889.72, which includes expenditures, obligations, and pending obligations no later than December 31, 2024. The allocation for High-Fidelity Instructional Equipment amounts to \$1,738,227.31, supporting the acquisition of advanced training tools. The Innovation Center Renovations have expended \$263,397.48, with an additional \$479,587.82 obligated and \$10,974,003.82 pending obligation, totaling \$11,237,401.30. This funding is designated for extensive renovations to enhance the center's capabilities. The Innovation Center Equipment has a pending obligation of \$7,263,330.60, aimed at equipping the center with state-of-the-art technology. HealthForce 1 (Mobile Lab #1) has expended \$945,101.00, facilitating mobile healthcare training. HealthForce 2 (Mobile Lab #2) has expended \$902,600.00, with \$84,590.00 obligated, totaling \$987,190.00, to support additional mobile training facilities. HealthForce 10 (Logistics Van) has expended \$45,279.00, ensuring logistical support for mobile labs. Overall, this budget is strategically allocated to enhance educational and training facilities, ensuring the development of skilled professionals to meet industry demands.

Purpose	Expended	Obligated	Pending	Total	Note
	(9/30/2024)		Obligation		
			(12/31/2024)		
High-Fidelity	\$1,738,227.31				
Instructional					
Equipment					
Innovation Center	\$263,397.48	\$479,587.82	\$10,974,003.82	\$11,237,401.30	
Renovations					
Innovation Center			\$7,263,330.60	\$7,263,330.60	
Equipment					
HealthForce 1	\$945,101.00			\$945,101.00	
(Mobile Lab #1)					
HealthForce 2	\$902,600.00	\$84,590.00		\$987,190.00	
(Mobile Lab #2)					
HealthForce 10	\$45,279.00			\$45,279.00	
(Logistics Van)					
Total	\$3,894,604.79	\$564,177.82	\$18,237,334.42	\$20,957,889.72	

Justification of Expenses: These expenses are essential for maintaining and enhancing the quality of healthcare education and services provided by HealthForce Kentucky. Each allocation supports specific aspects of the organization's operations, ensuring that it can continue to fulfill its mission of improving healthcare education and access across HealthForce Kentucky's service region.

Enrollments Appendix

Enrollments

The Kentucky General Assembly, through 22 RS HB 751, established the Commonwealth West Healthcare Workforce Innovation Center to provide accessible, healthcare-specific educational pathways in the western region of the state. This initiative aims to address decreased student enrollment in healthcare-related fields, thereby expanding the pipeline of qualified healthcare workers and reducing the shortage of medical staff across the Commonwealth. The center, established as a 501(c)(3) on December 9, 2022, assumed the DBA name HealthForce Kentucky on September 13, 2023. HealthForce Kentucky was publicly introduced at the Owensboro Chamber of Commerce Rooster Booster on October 5, where the HealthForce One mobile laboratory was unveiled, and the first Annual HealthForce Kentucky Board of Directors met to determine HealthForce Kentucky's goals and operations. Enrollment numbers are crucial for assessing HealthForce Kentucky's effectiveness, serving as a baseline for future evaluations as directed by the Kentucky General Assembly.

HealthForce Kentucky became a legal entity, a 501 (c)(3) corporation in December 2022. The baseline of healthcare pathway participants will be enrollment and retention figures from 2023-2024 academic years at our partner institutions. Those enrollment figures for HealthForce Kentucky's partner community colleges for 2023-2024 are as follows:

Program (CIP Code)	Fall 2023
KCTCS Allied Health and Medical Assisting Services, Other (510899)	
MADISONVILLE	2
OWENSBORO	15
KCTCS Biomedical Technology/Technician (150401)	
MADISONVILLE	20
KCTCS Building/Property Maintenance (460401)	
OWENSBORO	38
KCTCS Clinical/Medical Laboratory Technician (511004)	
HENDERSON	19
HOPKINSVILLE	3
MADISONVILLE	10
OWENSBORO	1
KCTCS Diagnostic Medical Sonography/Sonographer and Ultrasound Technician (510910)	
ELIZABETHTOWN	9
KCTCS Emergency Medical Technology/Technician (EMT Paramedic) (510904)	
ELIZABETHTOWN	9
HOPKINSVILLE	6
MADISONVILLE	11
OWENSBORO	88

KCTCS Fire Science/Fire-fighting (430203)	
OWENSBORO	2
KCTCS Health Services/Allied Health/Health Sciences, General (510000)	
ELIZABETHTOWN	94
HENDERSON	155
HOPKINSVILLE	90
MADISONVILLE	124
KCTCS Human Services, General (440000)	
ELIZABETHTOWN	92
HENDERSON	3
HOPKINSVILLE	1
MADISONVILLE	48
KCTCS Licensed Practical/Vocational Nurse Training (513901)	
ELIZABETHTOWN	22
HENDERSON	9
HOPKINSVILLE	25
MADISONVILLE	11
OWENSBORO	29
KCTCS Massage Therapy/Therapeutic Massage (513501)	
HOPKINSVILLE	8
KCTCS Medical Administrative/Executive Assistant and Medical Secretary (510716)	
ELIZABETHTOWN	110
HOPKINSVILLE	38
MADISONVILLE	36
OWENSBORO	45
KCTCS Medical/Clinical Assistant (510801)	
HENDERSON	40
HOPKINSVILLE	13
OWENSBORO	24
KCTCS Nursing Assistant/Aide and Patient Care Assistant/Aide (513902)	
HOPKINSVILLE	4
OWENSBORO	19
KCTCS Occupational Therapist Assistant (510803)	
MADISONVILLE	17
KCTCS Pharmacy Technician/Assistant (510805)	
HOPKINSVILLE	
KCTCS Physical Therapy Assistant (510806)	
MADISONVILLE	8
KCTCS Radiologic Technology/Science - Radiographer (510911)	

ELIZABETHTOWN	12
MADISONVILLE	23
OWENSBORO	42
KCTCS Registered Nursing/Registered Nurse (513801)	
ELIZABETHTOWN	139
HENDERSON	112
HOPKINSVILLE	95
MADISONVILLE	144
OWENSBORO	145
KCTCS Respiratory Care Therapy/Therapist (510908)	
ELIZABETHTOWN	14
MADISONVILLE	17
KCTCS Surgical Technology/Technologist (510909)	
HOPKINSVILLE	21
MADISONVILLE	147
OWENSBORO	12
University of Louisville School of Nursing	
Upper Division Bachelor of Science in Nursing	87
Lower Division Bachelor of Science in Nursing	33
Second Degree Accelerated Bachelor of Science in Nursing	5
Brescia University Healthcare & Related Undergraduate	
Communication Sciences and Disorders	20
Health Sciences	6
Human Services	9
Medical Laboratory Science	2
Psychology	96
Social Work	82
Brescia University Healthcare & Related Graduate	
Clinical Psychology (MS)	18
Speech Language Pathology (MS)	44
Social Work (MSW)	43
Western Kentucky University Healthcare & Related	
All Programs	2682
Total Enrollments	5348

^{*}Information currently unavailable.

Between the academic years 2022-23 and 2023-24, certain programs experienced a notable surge in applications, with a 17% increase. This uptick in interest translated into a corresponding rise in enrollment figures for these programs, which saw a 5.8% increase between Fall of 2023 and Fall of 2024.

This trend suggests that not only are more students applying to these programs, but a significant portion of students are also committing to enrollment, indicating a growing appeal and perceived value in these educational offerings.

KCTCS Healthcare Programs that had a 17% Increase in Applications				
Program (CIP Code)	Fall 2023	Fall 2024		
Clinical/Medical Laboratory Technician (511004)	33	33		
HENDERSON	19	23		
HOPKINSVILLE	3	3		
MADISONVILLE	10	7		
OWENSBORO	1			
Licensed Practical/Vocational Nurse Training (513901)	96	106		
ELIZABETHTOWN	22	28		
HENDERSON	9	9		
HOPKINSVILLE	25	20		
MADISONVILLE	11	9		
OWENSBORO	29	40		
Radiologic Technology/Science - Radiographer (510911)	77	81		
ELIZABETHTOWN	12	17		
MADISONVILLE	23	23		
OWENSBORO	42	41		
Registered Nursing/Registered Nurse (513801)	635	664		
ELIZABETHTOWN	139	120		
HENDERSON	112	125		
HOPKINSVILLE	95	106		
MADISONVILLE	144	159		
OWENSBORO	145	154		
Respiratory Care Therapy/Therapist (510908)	31	39		
ELIZABETHTOWN	14	14		
MADISONVILLE	17	25		
Total	872	923		

The establishment of the Commonwealth West Healthcare Workforce Innovation Center, now known as HealthForce Kentucky, marks a significant step towards addressing the shortage of healthcare professionals in the western region of Kentucky. The enrollment data for Fall 2023 and 2024 across various healthcare programs provides a crucial baseline for evaluating HealthForce Kentucky's

effectiveness. Notably, programs that saw a 17% increase in applications between 2022-23 and 2023-24 also experienced a 5.8% rise in enrollments, indicating a growing interest and commitment among students. This positive trend underscores the potential impact of HealthForce Kentucky in expanding the pipeline of qualified healthcare workers and meeting the Commonwealth's healthcare needs. Continued monitoring and support for these programs will be essential in sustaining and building upon this progress.

Exhibit A Strategic Initiatives



2024 Report to the Legislative Research Commission

Kentucky Community & Technical College System



Strategic Initiatives - HealthForce KY

Purpose

- Provide accessible healthcare-specific educational pathways for traditional college students and non-traditional student learners
 - Nursing (surgical tech, SRNA, phlebotomist, etc.), radiology tech, respiratory therapy, medical lab tech
- o Health education, innovation, and simulation center
 - In-person and virtual didactic instruction
 - Hands-on, experiential learning
 - Mobile learning unit

Goals

- Fill vacancies
- o Reduce the number/need for travelers
- Strengthen partnerships with schools
- o Improve overall community health in areas served



Strategic Initiatives - HealthForce KY

- Collaborative partnership between public and private organizations and individuals, including colleges and universities
- Representatives from 10 regional colleges and universities
 - o Brescia University
 - o Elizabethtown Community College
 - o Henderson Community College
 - o Hopkinsville Community College
 - o Kentucky Wesleyan College
 - o Madisonville Community College
 - o Owensboro Community Technical College
 - o University of Louisville School of Nursing Owensboro
 - o Western Kentucky University Owensboro and Bowling Green
 - Green River Regional Educational Cooperative
- · 16 counties in rural Kentucky served







Strategic Initiatives – HealthForce KY

- Healthcare education programs expanded or created to serve the HealthForce KY 16-County Region
 - LPN program expansion by Madisonville Community and Technical College to Owensboro, KY
 - LPN program expansion by Elizabethtown Community and Technical College to OHTLMC in Leitchfield, KY
 - o Sonography program expansion by Elizabethtown Community and Technical College to Owensboro, KY
 - o Medical Laboratory program expansion by Henderson Community and Technical College to Owensboro, KY
 - o Creation of Physician's Assistant program at Brescia University in Owensboro, KY
 - o Creation of a Certified Registered Nurse Anesthetist program at Western Kentucky University
 - o Creation of a Healthcare Administration program at Kentucky Wesleyan College
 - o Creation of a Clinical Psychology program at Brescia University

Exhibit B HealthForce 1 & 2

Mobile Laboratories



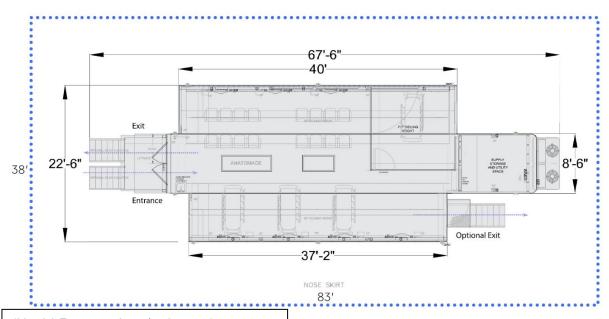
2024 Report to the Legislative Research Commission

Kentucky Community & Technical College System

HealthForce 1



(HealthForce 1 – Exterior)



(HealthForce 1 – Interior Layout)



(HealthForce 2 – SimMan 3G Display)



(HealthForce 2 – Gwen Display)

HealthForce 2



(HealthForce 2 – Exterior)



(HealthForce 2 – Interior Layout)

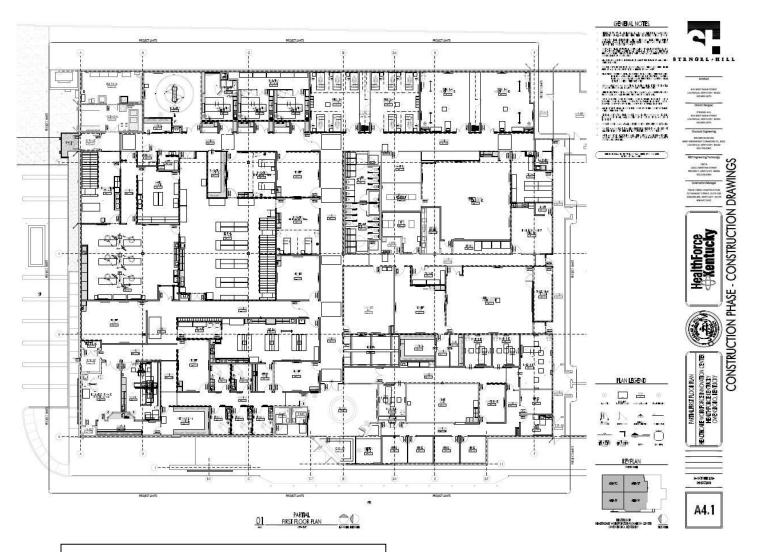
Exhibit C
Innovation Center



2024 Report to the Legislative Research Commission

Kentucky Community & Technical College System

Innovation Center



(Innovation Center - Preliminary Drawing)

Exhibit D Catalog Examples



2024 Report to the Legislative Research Commission

Kentucky Community & Technical College System

AMBU Airway Management Trainer



- The left side of the head is open, permitting supervision of the student's performance.
- The walls of the pharynx and trachea are transparent, enabling the student to follow the tube down the throat.
- Acoustic signals triggered by excess pressure on the teeth help the student to correct mistakes.
- Signal sensitivity can be adjusted if desired.
- Intubation difficulty can be adjusted to simulate different patient types.
- Realistic lifting and tilting of the head give the right feel.
- It has realistic
 movement of the head,
 cervical spine, and jaw to
 simulate relevant
 anatomical changes
 during intubation.
- The Ambu Airway
 Management Trainer
 includes an electronic
 tooth sensor that
 indicates when too much
 force is applied to the
 upper teeth.



ANATOMAGE

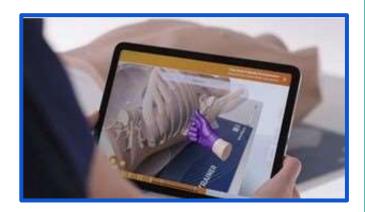


The <u>Anatomage Table</u> is a state-of-the-art virtual dissection tool used in medical education and healthcare. It features a large touch-screen display where users can explore detailed 3D anatomical models of the human body. The Table allows for interactive dissection, visualization of organs and structures from various angles, and simulation of medical procedures. It enhances learning by providing a hands-on experience without the need for physical cadavers, making it a valuable resource in medical training and research.

Chest Drain & Needle Decompression Trainer

- Needle decompression air reservoirs
- Standard Pads have a Pleural Layer which has realistic give and "pop" when puncturing with forceps or finger
- Combined use of the Advanced Pads and the chestreservoirs allows for the simulation of pleural effusion
- 3D simulation using Ipad.

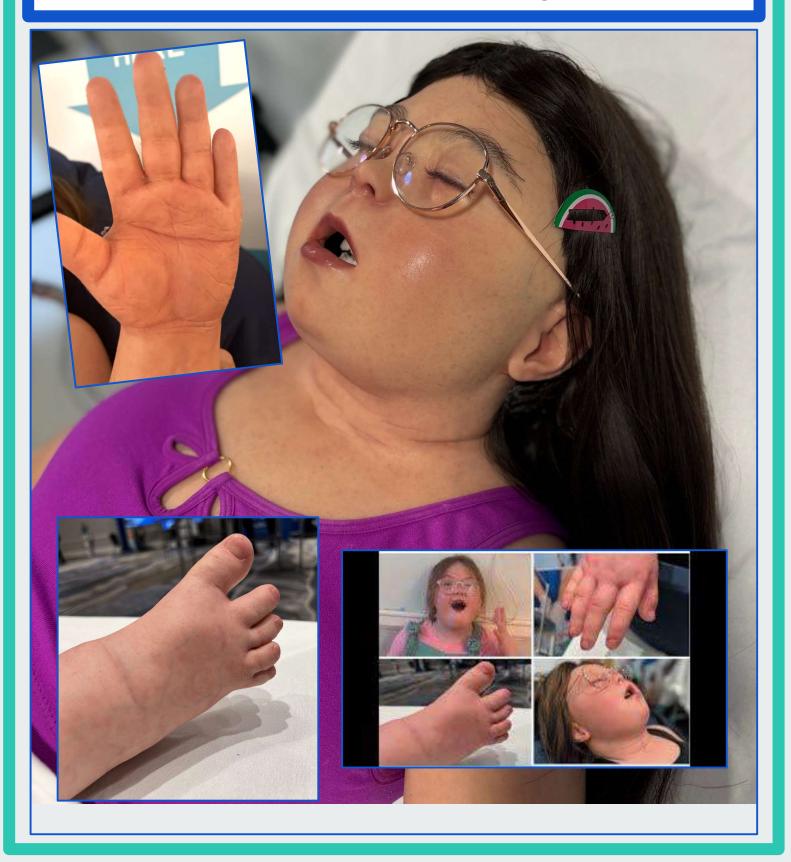






LIFECAST-GWEN

Female Child with Down's Syndrome



SAM4 Heart and Lung Auscultator

High Fidelity

Comprehensive auscultation library consisting of 37 heart sounds, 11 heartlung combinations, 26 lung sounds, 9 bowel sounds and 6 bruit sounds

Bluetooth connection for external sound

speakers



