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| **PROGRAM NAME:** Healthcare Simulation | **AUTHORING TEAM CONTACT:** Kristen Sinnes |
| **PHONE:** Click or tap here to enter text. | **EMAIL:** ksinnes@collin.edu |

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| GUIDELINES  Time Frames   1. Scope:   The time frame of program review is five years, including the year of the review.  Data being reviewed for any item should go back the previous four years, unless not available.   1. Deadline Dates:   January 15th – Program Review Document due to Department Dean for review (Deans may require submissions at their own, earlier due date)  February 1st – Program Review Document due to Program Review Steering Committee   1. Years:   Years 1 & 3 – Implement Action Plan of (CIP) and collect data  Years 2 & 4 – Analyze data and findings, Update Action Plan  Year 5 – Write Program Review of past 5 years; Write Continuous Improvement Plan (CIP) and create new Action Plan  LENGTH OF RESPONSES: Information provided to each question may vary but should be generally kept in the range  of 1-2 pages or 500-1,000 words.  **EVIDENCE GUIDELINES**: In the following sections, you will be asked to provide evidence for assertions made.   1. Sources: This evidence may come from various sources including professional accreditation reviews, THECB, Texas Workforce Commission’s CREWS, Institutional Research Office (IRO), National Student Clearinghouse, IPEDS, JobsEQ, EMSI Career Coach, and may be quantitative and/or qualitative. If you are unfamiliar with any of these information sources, contact the Institutional Research Office at: [effectiveness@collin.edu](mailto:effectiveness@collin.edu). Use of additional reliable and valid data sources of which you are aware is encouraged. 2. Examples of Evidence Statements: 3. Poor example: Core values are integrated into coursework. (Not verifiable) 4. Good example: Core values are integrated into coursework through written reflections. (Verifiable, but general) 5. Better example: Core values are integrating into coursework through written reflections asking the student to describe how s/he will demonstrate each of the core values in his or her professional life and demonstrated through service learning opportunities. (Replicable, Verifiable)   **FOR MORE INFORMATION**: The Program Review Portal can be found at<http://inside.collin.edu/institutionaleffect/Program_Review_Process.html>*.* Any further questions regarding Program Review should be addressed to the Institutional Research Office ([effectiveness@collin.edu](mailto:effectiveness@collin.edu), 972.599.3102). |

**Introduction/Preface**

EXECUTIVE SUMMARY:

**Briefly summarize the topics that are addressed in this self-study, including areas of strengths and areas of concern. (Information to address this Executive Summary may come from later sections of this document; therefore, this summary may be written after these sections have been completed.)** Please do not include information in this section that is not already provided elsewhere in this submission. Using the questions in the template as headings in the Executive Summary can provide structure to the overview document (see below for suggested format).

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| **Executive Summary (suggested sections/format-not required format)**  What does our unit do?  Why do we do the things we do: Unit relationship to the College Mission & Strategic Plan.  Why do we do the things we do?  How do we impact student outcomes?  How effectively do we communicate, and how do we know?  How well are we leveraging partnership resources and building relationships, and how do we know?  How have past Continuous Improvement Plans contributed to success?  How will we evaluate our success? |

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| **Complete the Executive Summary below after you have completed your review.**   Simulation Program – Mission Statement  Collin College’s Heal` thcare Simulation Program is committed to provide career-impacting, true-to-life experiences where our students or participants are afforded opportunities to develop their critical thinking and team-building skills through the application of their acquired knowledge and skills, utilizing state-of-the-art equipment and validated scenarios in a safe, controlled, realistic environment.  Simulation Program - Vision Statement  Collin College’s Healthcare Simulation Program is dedicated to impact the future of healthcare by developing knowledgeable, experienced providers today, through optimal performance in challenging environments.  The Collin College Healthcare Simulation department is dedicated in providing a roadmap for organizational and professional development through 2023 and beyond by providing influential components of the activities within the simulation center. This strategic planning identifies the center’s current environment against the vision and mission of Collin College while maintaining sustainability within the industry through the development and integration of simulation scenarios with required curriculum, management of costs to meet an approved budget, maintenance of relevancy to the healthcare field best practices while continuing to enrich student multi-disciplinary learning and competency. Organizational needs of the program will align with the college’s mission statement as well as state and nationally mandated core competencies.  Simulation-based education has been at the forefront of healthcare training for the past couple of decades. While class lectures and books do provide a foundation for knowledge, experiential training adds a secondary level of study that can be adjusted for various levels of student ability. The simulation department pursues accountability to its students for diversity, is ethical and dependable in its actions, all while remaining innovative to new advancements within healthcare education. To accomplish these goals, department targets include maintaining a qualified teaching staff, contingencies for a psychologically and environmentally safe-haven for students during the learning process, and application of a curriculum that reflects industry best standards.  By using a variety of simulation modalities that provide students with realistic patient experiences that mimic pre-hospital and clinical settings, each student is able to engage in and develop mastery of healthcare skills as well as gain confidence in knowledge of their chosen fields of study. This is accomplished through validated scenarios that employ advanced techniques including high-fidelity human-patient simulators, mid-to-low human patient simulators, wearable technology, and standardized patients.  High-fidelity human patient simulators are computerized full-body manikins programmed to provide realistic physiological responses including breath sounds, blood pressure, pulse oximetry and the display of EKGs. Intubation, defibrillation and chest tube placement can all be practiced on the manikin. Mid-to-low-fidelity manikins are head to toe replicas of the human body that are used for specific modes of learning. Standardized patients are staff who portray realistic patients. They often use wearables that consist of IV arms, chest plates for breath sounds, chest plates with tracheostomies, and chest plates for central line assessment.  Within the last five years, eleven state-of-the-art high-fidelity manikins, two synthetic cadaver manikins, seven simulated monitors, fifteen high-fidelity wearable simulators for standardized patients as well as a 3-D software program that uses tutorials for anatomy and physiology have been purchased. Scenarios are designed based on student characteristics and levels of competency and apply pedagogical approaches of meaningful learning to ensure the frameworks are within course content sanctioned by the college, state and national licensing agencies. Included in these designs are large-scale simulations (trauma days) that prepare students for national certification testing. These high acuity events may include mass shootings, building collapses, multiple car accidents and plane crashes. They include use of guns (blanks), ambulances and care-flight helicopters as well as people masquerating as patients exhibiting life-threatening injuries. Through the implementation of these learning strategies, students will comprehend, evaluate, reflect and critically analyze the information in order to apply it to future interactions within the healthcare community. The depth of these training experiences are well known in the Dallas community through the use of media as well as participation from local hospital medical students and faculty. These simulations elevate the efficacy of the Collin College Healthcare Simulation Program which promotes growth of the program. Requests by local high school districts for facility tours, staff presence at healthcare fairs and informational presentations to up and coming high school students emphasizing patient communications as well as introductory patient assessments, is a further indication of the prestige associated with the program. Program involvement also spans specialized tactical training for local police departments including Collin College’s campus police. Simulation learning is also available to students enrolled in dual credit health science classes.  The success of the Simulation program is based on the collaboration of program leadership and staffing with the faculty of healthscience disciplines including Nursing, Emergency Medical Services, Respiratory Care, Surgical Tech, Surgical First Assist, Dental Hygiene, Sonography, Polysomnography and Medical Assisting Advanced Practice.  Leadership of the Simulation program is responsible for the hiring of qualified workers who possess professional experience within their chosen fields. These workers are passionate about healthcare, flexible, team-oriented, motivated, possess ethical values and are critical thinkers. They convey the priorities of the organization and team by supporting the college’s value system of commitment in developing skills, strengthening student and employee character and challenging the development of the intellect.  Weaknesses come with every program and simulation is not exempt. The majority of our weaknesses come from staffing constraints as well as technological issues and program challenges. In regards to staffing, due to the fact that the majority are part-time employees, struggle exists with the number of instructors required to meet the needs of multiple programs on any given day especially for evening and weekend classes. Due to the fact that most employees use this job to supplement regular employment, there often are too few sign-ups for necessary scenarios. Some work regularly while others appear infrequently. Because Human Resources restricts the number of employees on the books we cannot hire beyond the limit.  Additional limitations include the ability for our staff to troubleshoot technological issues that may arise. Maintenance procedures are difficult to carry out due to lack of staff and time to complete the needed procedures. With this inability to maintain the manikins as needed, many of the specific technological features such as bleeding capabilities and advanced use of the software cannot be utilized. Daily breakdowns occur along with technological glitches that interrupt the scenario and, therefore, student participation. As simulation demands grow for each program, it will be difficult to offer adequate training for our staff on specific features of our manikins. One solution is to remove employees from the work list who fail to sign up regularly.  The surge for healthcare needs nationally as well as within the confines of Collin College with the Bachelor’s Degree in Nursing now being offered, and the increase in EMS cohorts, the importance of the physical environment is as necessary as the training. The floor plan layout needs to consider logistics and operations, specialty training rooms, safe range of motion for students and instructors, private areas for the debriefing process, storage accommodations as well as a simulation control room. While our facilities are relatively new, the building opening in 2016, the explosive growth of the program has forced us to conduct classes in the lobby.  Preparation of a strategic plan that prepares us for challenges is paramount to our continued success. The Covid-19 pandemic was a prime example of such a threat. No one ever expected that the need for safety precautions over and above normal procedures could debilitate operations. Overworked nurses, respiratory therapists, and EMS personnel had to relinquish P/T jobs in the simulation lab due to exhaustion. Students were unable to meet licensure requirements due to the shut down of clinical sites. Our program survived this one but preparations for another catastrophe, and there will be one, is mandatory. The success of the program is therefore not just within the walls of the college but requires local promotion through social media platforms, relationships with professional associations and through word of mouth. Next year a new website is planned promoting links to policies, scheduling and program promotion.  Another aspect of the strategic plan is to collect data evidence on student outcomes which is currently unavailable. A new student survey consisting of pre- and post- questions on confidence levels of skill and patient interaction will aid in the capture of data on the effectiveness of scenarios and whether they provided in-depth learning and preparedness. Included is a debriefing component that surveys knowledge, quality and helpfulness of the debrief facilitator as well as whether the debrief provided time for self-reflection and open discussion of critical thinking.  Simulation acts as a bridge between classroom instruction and real-life clinical experience by allowing students to make mistakes and learn from them within a safe environment. The stakes are high in healthcare but the more preparation given students the greater their chances for success. |

## Section I. Are We Doing the Right Things?

**1. WHAT DOES OUR UNIT DO?**

**What is the service unit and its context?**This section is used to provide an overview description of the service unit, its relationship to the college and the community it serves. Keep in mind the reviewer may not be familiar with your area. Therefore, provide adequate explanation as needed to ensure understanding.

*Suggested/possible points to consider:*

* *Unit’s purpose (Include the unit’s purpose/mission statement if one exists.)*
* *Services and products (i.e. event coordination, reports, promotional materials, handouts, etc.)*
* *Service across campus/departments/district/community*
* *Regulatory standards the unit must meet*

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| Collin College’s Healthcare Simulation Program provides an enhanced layer of learning to students providing new parameters that extend what is learned in the classroom. Taught by instructors with years of experience as nurses, paramedics and respiratory therapists, these simulations afford opportunities to develop critical thinking and team-building skills in a safe, controlled, hands-on realistic environment.  Simulation Mission Statement: Collin College’s Healthcare Simulation Program is committed to provide career-impacting, true-to-life experiences where students are afforded opportunities to develop their critical thinking and team building skills through the application of their acquired knowledge and skills, utilizing state-of-the-art equipment and validated scenarios in a safe, controlled, realistic environment.  Simulation Vision Statement: The Collin College Healthcare Simulation Program is dedicated to impact the future of healthcare by developing knowledgeable, experienced providers today, through optimal performance in challenging environments.  Through collaboration with many Collin College health science disciplines including Nursing, Emergency Medical Services, Respiratory Care, Surgical Tech, Surgical First Assitant, Dental Hygiene, Sonography, and Medical Assisting Advanced Practice, students are exposed to active hands-on practices that replace real experience with guided experience. The Simulation program follows simulation best practices as well as the designated healthcare program best practices to instill continuity and consistency.  Scenarios are designed based on student characteristics and levels of competency and apply pedagogical approaches of meaningful learning to ensure the frameworks are within course content sanctioned by the college, state and national licensing agencies. Included in these designs are large-scale simulations (trauma days) that prepare students for national certification testing. These high acuity events may include mass shootings, building collapses, multiple car accidents and plane crashes. They include use of guns (blanks), ambulances and care-flight helicopters as well as people acting as patients exhibiting life-threatening injuries. Through the implementation of these learning strategies, students will comprehend, evaluate, reflect and critically analyze the information in order to apply it to future interactions within the healthcare community. The depth of these training experiences are well known in the Collin County community and elevate the efficacy of the Collin College Healthcare Simulation Program which promotes growth of the program. This also improves the placement of Collin College’s students upon graduation. TIn 2022, the following health science programs had 100% job placement rates; Dental Hygiene, Medical Assisting Advanced Practice and Diagnostic Medical Sonography.  The Simulation Department facilitates tours of the various school districts in Collin County each semester as well as staff participation at healthcare fairs and informational presentations to up and coming high school students. This is a further indication of the prestige associated with the program. Department involvement also spans specialized tactical training for local police departments including Collin College’s campus police. Simulation learning is also available to students enrolled in dual credit health science classes. We participate in ALERRT (Adavnced Law Enforcement Rapid Response Training) as well as TECC (Tactical Emergency Casualty Care multiple times a year.  The Healthcare Simulation Department includes a number of simulation modalities. High-fidelity human patient simulators are computerized full-body manikins programmed to provide realistic physiological responses such as breathsounds, pulses, pupil reaction, heart tones, chest rise, vocal components, education interactions, hemorrhaging and birthing capabilities. Mid-to-low fidelity human patients simulators are full body manikins that are used for particular modes of learning. These procedural simulators assist learning of specific skills.  The program also employs standardized patients who are staff portraying realistic patients. Wearble technology is used consisting of IV arms, chest plates for breath sounds, chest plates with a tracheostomy, chest plates for central line assessment and accurate treatment modalities. In addition to basic patient interaction, external stressors in the form of frantic family members, over-zealous bystander “helpers” and interfering neighbors allow students to learn how to deal with real life distractions.  Within the last five years, the simulation department acquired eleven state-of-the-art high fidelity manikins, two synthetic cadaver manikins, seven simulated monitors, fifteen high-fidelity wearable simulators for standardized patients as well as a 3-D software program that uses tutorials for anatomy and physiology. Currently a pool of twenty-five part-time instructors provide quality experiential training for students in addition to three full time staff including the Simulation Director, Simulation Coordinator and fuul-time instructor. Staff maintain credential in credentials in their respective fields and represent expertise in Nursing, Respiratory Therapy and Emergncy Medical Services.  The department maintains standardized scripts who are portrayed by simulation staff for a more realistic experience. Wearbale technology is used in these scenarios which can include intravenous arms, chest plates for breath sounds, chest plates with tracheostomy and chest plates for central line assessment and accurate treatment modalities. In addition to basic patient interaction, external stressors in the form of frantic family members, overzealous bystander “helpers” and interfering neighbors allow students to learn how to deal with real life distractions.  Healthcare facilities have expressed interest in using the Simulation space for training. This could lead to collaborative projects with Health Sciences. The simulation program assists in BEST EMS critical care training for advanced paramedics yearly. With growth in the Health Science Services area, the need for additional equipment, space, and staff may be necessary to accommodate students and the healthcare community. |

2. WHY DO WE DO THE THINGS WE DO? UNIT RELATIONSHIP TO THE COLLEGE MISSION & STRATEGIC PLAN.

* **Provide unit-specific evidence of actions that the unit supports the** [**mission statement:**](http://www.collin.edu/aboutus/missioncorevalues.html)“*Collin County Community College District is a student and community-centered institution committed to developing skills, strengthening character, and challenging the intellect.”*
* **Provide unit-specific evidence that supports how the unit supports the college strategic plan (2020-2025 Strategic Plan)**: <http://www.collin.edu/aboutus/strategic_goals.html>

*Suggested/possible points to consider:*

* *What evidence is there to support assertions made regarding how the unit relates to the Mission and Strategic Plan?*
* *Analyze the evidence you provide. What does it show about the unit?*

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| **Collin College’ Mission Statement**  “Collin County Community College District is a student and community-centered institution committed to developing skills, strengthening character and challenging the intellect.”  The Simulation Department supports Collin’s mission through its ability to support studentsin the various health science programs by offering them a safe and controlled environment where they can develop, practice and master skills. Additionally, students are challenged in performing skills through reality-based training. Simulation allows students to gain confidence , so they are prepared to enter the workforce upon graduation.  The simulation program uses a variety of technological advancements that provide students a realistic patient interaction experience that mimics a pre-hospital and clinical setting. Scenarios have been created to maximize lecture and skills curriculum in a comprehensive simulation that focuses on a cumulative approach to patient care. Each scenario is followed by a debriefing session allowing for student self-reflection, video feedback and critical thinking discussion. In addition to basic patient interaction, through the experiences of our staff, external stressors are implemented that are equivalent to real life experiences. The addition of these stressors directly correlates to actual patients and work environment experiences the staff have witnessed or participated in during employment within the community. This is demonstrated by staff who act as frantic family members, community bystanders and interfering neighbors. These added stressors allow the student to not only focus on the patient’s needs but also provide real life distractions they will encounter as working professionals. Developing healthcare professionalism through the use of simulation establishes a healthy employment pipeline for employees and competent healthcare providers.  The simulation department has initiated a Simulation Advisory Council. This council is comprised of members from our largest stakeholders within the college. This focus group has been created to explore future collaborations, equipment needs, technology innovations as well as exposure to other college programs and community outreach. |

**3. WHY DO WE DO THE THINGS WE DO?**

**A. Make a case with evidence to show that the primary functions/services of the unit are necessary as they are, or they should be modified, or eliminated.**

*Suggested/possible points to consider:*

* *What is the purpose and reason for the service?*
* *How has the function evolved during the 5-year cycle? How have the reasons for the service changed over time?*
* *What would happen if the unit no longer provided these services and/or the services were outsourced?*
* *What unit services require the most resources including staff time? Which services add the biggest value to the college? Discuss any discrepancies between the services named in these two questions.*
* *Is there a clear line of communication with other units involved in or supporting each of these services?*
* *Does the unit or the college have alternate ways of providing any of these services?*
* *Are the services offered/conducted as efficiently as possible?*

**B. Benchmarking: Review two or three comparable colleges for the way they accomplish these services. Discuss what was learned and what new ideas for service improvement were gained.**

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| A.  The Healthcare Simulation Program supports Collin College’s mission statement by offering students a safe and controlled environment to develop master skills, and challenges them intellectually and emotionally in order to gain confidence in knowledge and ability. The student, by emulating the program’s experienced staff, can engage in proper patient communication, patient assessment and accurate treatment modalities.  The development of staff and program viability is time-consuming. The unit service requires the greatest amount of time and costly aspects of the program. On average, actual time for completion of each service requires sixty hours per week with employment of 15-20 part time staffers daily. Daily preparation is five hours per week. Moulage, the art of special effects makeup, is used to graphically depict illness or injury (burns, wounds,lacerations, etc.) and requires an additional two hours per week.  Simulation efficiency, however, is an area needing improvement. Frequently, simulation staff has a large amount of downtime due to individual program scheduling. For example, a simulation may be scheduled for five hours from 8am to 1pm. Actual simulation time, however, is often only 1.5 hours. Reasons for this include late program arrival, split participation with scenarios lasting 45 minutes but followed by a break and independent debrief of an hour or more. Students then return for an additional 20 minute scenario followed by release. Although quality content is provided, vetted and approved by program faculty, a considerable amount of chargeable time was used unnecessarily. Facilities must remain available to the booking group for the entire time. Open communication is necessary between program faculty and simulation coordination. Other ways to minimize this deficit are currently being evaluated. The simuation department is also researching policy and procedures from other simulation centers nationwide to develop more specific guidelines that utilize a more accurately timed scheduling process.  The simulation department is an essential resource for Collin College. Its absence would be detrimental. Health science programs would be forced to absorb space, scheduling, staffing coordination and operations within their disciplines while already stretched to capacity. Individual staff training and technological maintenance of manikins and equipment would become the responsibility of each department program.  However, outsourcing, often placing profitability over patient care, is not a viable choice. When services are outsourced, the organization, Collin College, compromises control over its culture and reputation. Student morale can suffer with student retention rates dropping.  B.  Simulation provides an essential piece to accredidation mandates in healthcare. Simulation needs valid and reliable instruments to evaluate student learning progress. But qualitative measurement, in the form of student participation, grading, and content retention, is difficult and has not been previously collected. Currently, the program does conduct a student survey upon scenario completion. Within the last month, a new survey has been provided to students that emphasizes confidence levels, perceptions, attitudes and opinions on skill mastery pre- and post- scenario as well as self-reflective debriefing.  To maximize student learning retention and skill set, the simulation department and Emergency Medical Service program have developed a new approach to EMS scenarios. Simulation will be presented in a three-tier system following specific areas of content and student mastery of the subject. Tier-one scenarios will introduce basic patient communication, assessment and treatment modalities with an EMS and simulation instructor present. This will allow for instructor prompts as well as less advanced level scenarios. Tier two scenarios will build upon a student’s foundation including more advance diagnoses. Instructor verbal prompts will be avoided allowing critical thinking by the student as well as joint cooperation within the group. Outside stressors will increase intensity, teaching the students to maintain professionalism while treating the patient and work as a cohesive unit. The EMS instructor will watch from the control room. Tier three will consist of practice specifically for the EMS National Registry exam. Two students will complete a 20 minute scenario with only the patient in the room. They will be provided a pre-brief of the call and will be required to perform all components of patient assessment and treatment as well as transport to a simulated emergency room. |

**4. HOW DO WE IMPACT STUDENT OUTCOMES?**

Make a case with evidence to show effects of the unit on student outcomes.

*Suggested/possible points to consider:*

* *How does the unit influence the student experience?*
* *How does the unit influence the student environment and/or safety?*
* *In what way does the unit influence student enrollment, retention, persistence, and/or completion?*
* *What services are provided for a diverse student population?*
* *Analyze the evidence you provide. What does it show about the unit?*

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| We currently do not have data evidence to provide necessary student outcomes. A new student survey to capture this data moving forward has been created. The survey, broken into pre-scenario and post-scenario questions and focusing on confidence levels of skills and patient interaction, is individually completed following a scheduled scenario. Access is through a QR code with submission immediate. There is a debriefing component that surveys the knowledge, quality and helpfulness of the debrief facilitator as well as whether the debrief provided time for self- reflection and open discussion of critical thinking. The data will be analyzed weekly helping staff populate data on whether scenarios were effective and provided in depth learning and preparedness. |

Section II. *Are We Doing Things Right?*

**5. How effectively do we communicate, and how do we know?**

**A. Make a case that the printed literature and electronic communication are current, provide an accurate representation, and support the college’s recruitment, retention and completion plans.**

*Suggested/possible points to consider:*

* *Demonstrate how the unit solicits student feedback regarding its website and literature and how it incorporates that feedback to make improvements.*
* *How does the program ensure that students are informed/aware of unit literature? Is unit literature made accessible to all students (i.e. can they obtain the information they need)?*
* *Designate who is responsible for monitoring and maintaining the unit’s website, and describe processes in place to ensure that information is current, accurate, relevant, and available.*

**B. Provide unit website URLs. If no website is available, describe plans for creation of website or explain the absence.**

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| Currently the only literature available is the website located at <https://www.collin.edu/department/simulation/>. Within the next year plans are to develop an active and informative website highlighting the program mission and vision as well as promoting state-of-the-art equipment and technology. A variety of tabs will provide links to simulation policy and procedures, tour scheduling, simulation scheduling and information. Department highlights will be showcased as well as educational simulation links. |

**C. In the Unit Literature Review Table, below, document that the elements of information listed on the website or other formats (services available, points of contact, current calendars, handouts, costs and additional fees, hours of availability) were verified for currency, accuracy, relevance, and are readily available to target audiences. Please fill out the table only for this prompt (C.), no analysis is necessary here.**

**Unit Literature Review Table**

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| Title | Type (i.e. URL, brochure, handout, etc.) | Date of Last Review/Update |  | Responsible Party |
| Mission Statement | Website | Click or tap to enter a date. | Current Accurate Relevant Available | Program Director |
| Manikins | Website | Click or tap to enter a date. | Current Accurate Relevant Available | Program Director |
| Photos | Website | Click or tap to enter a date. | Current Accurate Relevant Available | Program Director |
| Simulation Team | Website | Click or tap to enter a date. | Current Accurate Relevant Available | Program Director |

**6. What partnerships and partner resources are established by the unit, and how are they valuable?**

**Partnership Resources: On the table below, list any business, industry, government, college, university, community, and/or consultant partnerships, including internal Collin departments, to advance the service unit outcomes. If a formal agreement is involved, indicate its duration.**

**Partnership Resources Table**

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| Partner/Organization | Description | Formal Agreement Duration,  if any | Briefly explain the Partnership’s Value to Service Unit |
| Best EMS – Lee Richardson | Simulated scenarios for Fire Department | Yes, one time | Allowed for simulation to expand and provide services to community professionals |
| Medical Air Rescue Company, MARC – Burton Hayden, NRP, FP-C | Simulated scenarios for community personnel | Yes, one time | Allowed for simulation to expand and provide services to community professionals |
| TECC | Tactical training for Collin College PD, McKinney PD and Police Academy | Multiple times per semester | Highlights ability to provide trauma and tactical scenarios to community professionals |
| Nursing Program | RN, BSN, LVN to RN | Fall and Spring Semester | Partner with Nursing program to provide students a comprehensive patient scenario and master benchmark skills |
| Emergency Medical Services Program | EMSP, EMT, Dual Credit | Year round | Partner with Emergency Medical Services Program to provide students a comprehensive patient scenario and master benchmark skills |
| Respiratory Program | Respiratory Students – 1st and 2nd Year | Fall, Spring, Sunmmer Semesters | Partner with Respirtaory Care program to provide students a comprehensive patient scenario and master benchmark skills |
| Medical Assisting Advanced Practice Program | Medical Assistant Students | Fall, Spring Summer Semesters | Partner with Medical Assisting Advanced Practice Program to provide students a comprehensive patient scenario and master benchmark skills |
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**7. What professional development opportunities add value to our service unit?**

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| Full time staff are members in a variety of professional organizations that include simulation as well as specialized disciplines. In addition, part-time staff are also members of various professional organizations. All are required to maintain credentials in specialized fields of practice. |

**Provide a List of professional development activities employees have participated in since your last program review.**

**Employee Resources\*\***

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| Employee Name | Role in Unit | Professional Development Summary | How is it Valuable to the Unit? |
| Darby Carver | Simulation Coordinator | Sim Ghost 2022 Conference  Registered Respiratory Therapist-Neonatal Pediatric Specialty  National Board of Respiratory Care (NBRC)  Basic Life Support Instructor  BS in Health  Texas Medical Board License  24 CE’s per year for NBRC | Attended multiple classes that provided new technology, best practice standards as well as effective methods of creating training and new scenarios. |
| Kristen Sinnes | Simulation Director | Registered Respiratory Therapist  National Board of Respiratory Care (NBRC)  MS Leadership  MA Communication with Emphasis in Education  Texas Medical Board License  Sim Ghost Conference 2022  Association of Standardized Patients member (ASPE)  24 CE’s per year for NBRC | Respiratory Therapist. Advanced education degrees in leadership and educationcal communication. Integrate education and experience in management of day to day operations as well as development of relationships within the health science division. |
| Angela Vandersmitte | Full-time Instrcutor | Bachelor of Science in Nursing (BSN)  Registered Nurse (RN)  Basic Life Support (BLS)  Advanced Life Support (ACLS)  Texas Board of Nursing 20 CE’s per 2 years for Nursing lisence  National Institute of Health Stroke Scale Certification ( NIHSS)  Master of Nuring (in progress)  Certification of Neuroscience (CNRN) | Registered Nurse. Advanced education degrees. Integrate education and experience in mamagement of day to day operations student outcomes. |
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\*\*If Employee Resource Table contains more than 18 rows it may be included at the end of this document as an appendix.

**8. Are facilities, equipment, and funding sufficient to support your service unit? If not, please explain.**

**[Only respond to this prompt if you are requesting additional resources, otherwise proceed to prompt 9.]**

**Make a case with evidence that current deficiencies or potential deficiencies related to unit facilities, equipment, maintenance, replacement, plans, or budgets pose important barriers to the unit or student success.** As part of your response, complete the resource tables, below, to supportyour narrative.

*Suggested/possible points to consider:*

* *The useful life of structures and equipment,*
* *Special structural requirements, and*
* *Anticipated technology changes impacting equipment sooner than usual.*
* *If you plan to include new or renovated facilities or replacement of equipment in your unit improvement plan, be sure to justify the need in this section with qualitative and/or quantitative data evidence of the need.*

|  |
| --- |
| The Simulation budget process allows for adequate updates and replacements for equipment and supplies throughout the year.  The supplemental budget process allows the simulation department the ability to ascertain additional supply needs during the year to meet the needs of the programs we serve. |

**Facilities Resources Table\*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Room/Office Location and Designation | Description  (i.e. Special Characteristics) | Meets Needs (Y or N):  Current For Next 5 Years | | Describe additional needs for any “N” answer |
| H100 Simulation Lab | Lab space that holds 11 beds, 2 individual treatment rooms, control room and storage supply closet. | No | No | The current lab does not provide adequate space for the number of students we serve due to program growths. |
| H100 | Audio/Visual camera system | No | No | Multiple cameras and audio are no longer functioning. They are not warrantied and can longer be fixed. |
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### **Equipment/Technology Table ($5,000 or more) \*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Current Equipment Item or Budget Amount | Description | Meets Needs (Y or N):  Current For Next 5 Years | | For any “N”, justify needed equipment or budget change |
| CAE manikin warranty | This warranty covers eight high fidelity manikins annually | No | No | 2023-2024 warranty budget was $64,000 and total cost is $84,000 |
| Avkin warranty | Wearable technology | No | No | 2023-2024 warranty budget was $64,000 and total cost is $3600 |
| Syndaver | Synthetic cadavers | No | No | 2023-2024 warrany budget was $64,000 and total cost is $18,000 |
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### **Financial Resources Table\*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source of Funds (i.e. college budget, grant, etc.) | Meets Needs (Y or N):  Current For Next 5 Years | | For any “N”, explain why | For any “N”, identify expected source of additional funds if needed |
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\*\*If tables do not contain enough rows the information may be included at the end of this document as an appendix.

Section III. Continuous Improvement Plan (CIP)

**9. How have past Continuous Improvement Plans contributed to success?**

Program Review at Collin College takes place for each unit or program every five years. During the last (fifth) year, the unit evaluates the data collected during the CIP process.

**Please describe how you have used your Continuous Improvement Plan (CIP) to make the following improvements to your unit over the past 4 years (your last review can be found on the Program Review Portal):**

1. **Student Outcomes**
2. **Overall improvements to your unit**

|  |
| --- |
| A previous CIP has not been created. This is the first attempt at evaluating the program’s processes to determine strengths and weaknesses. |

**\*Please attach previous CIP Tables in the appendix**

**10. How will we evaluate our success?**

**NOTE: Please contact the institutional effectiveness office if you need assistance filling out the CIP tables.**

As part of the fifth year of Program Review, the unit should use the observations and data generated by this process along with data from other relevant assessment activities to develop the unit’s CIP and an action plan for the next two years. At the conclusion of the first two years, data collected from the first year, plus any other relevant data that was collected in the interim, should be used to build on the accomplishments of those first two years by developing another two-year action plan for the CIP to help the unit accomplish the expected outcomes established in its CIP or by implementing one of your other plans.

**Based on the information, analysis, and discussion that have been presented up to this point, summarize the strengths and weaknesses of this program. There should be no surprise issues here! This response should be based on information from prior sections of this document. Describe specific actions the personnel intend to take to capitalize on the strengths, mitigate the weaknesses, and improve student success. Provide the rationale for the expected outcomes chosen for the CIP.**

|  |
| --- |
| The Simulation program has multiple strengths allowing for effective and innovative scenarios pertinent to various healthcare programs. Collin College’s leadership has been instrumental in supporting the simulation program and assisting in meeting our needs for continued growth. The strengths of the Simulation program continue to expand through the offer of simulation within state-of-the-art facilities using equipment with high fidelity technology. This is imperative in providing students the most realistic experiences outside of a clinical environment. Employees of the program have been fortunate in the development of strong relationships with Collin College health science disciplines. These collaborations have forged into multiple opportunites for our students including multi-disciplinary trauma days. The majority of Collin’s health science programs have also promoted collaboration by incorporating simulation into their curriculum enabling it to become an integral part of the students’ educational experiences. The simulation program prides itself on its flexibility and thinking outside of the box to ensure that students are introduced to best practice standards. During the pandemic, with collaboration of our healthcare programs, the simulation program was able to be redeveloped and execute replacement clinical opportunities to ensure that student learning opportunities were not diminished due to clinical rotation closures.  More strengths include clearly defined goals that match the mission of the college. The program has identified the core competencies necessary for a proactive learning approach. The staff is composed of well-trained, experienced healthcare professionals that bring expertise within specified fields that reinforce solutions to challenges that students will face. They are strong and united in the path that the simulation program maintains. Staff currently consists of three full-time employees and twenty-five part-time staff.  Weaknesses come with every program and simulation is not exempt. The majority of our weaknesses come from staffing constraints as well as technological issues and program challenges. In regards to staffing, due to the fact that the majority are part-time employees, struggle exists with the number of instructors required to meet the needs of multiple programs on any given day especially for evening and weekend classes. Due to the fact that most employees use this job to supplement regular employment, there often are too few sign-ups for necessary scenarios. Some work regularly while others appear infrequently. Because Human Resources restricts the number of employees on the books we cannot hire beyond the limit. Additional limitations include the ability for our staff to troubleshoot technological issues that may arise. Maintenance procedures are difficult to carry out due to lack of staff and time to complete the needed procedures. With this inability to maintain the manikins as needed, many of the specific technological features such as bleeding capabilities and advanced use of the software cannot be utilized. Daily breakdowns occur along with technological glitches that interrupt the scenario and, therefore, student participation. As simulation demands grow for each program, it will be difficult to offer adequate training for our staff on specific features of our manikins. One solution is to remove employees from the work list who fail to sign up regularly.  During the pandemic, the health science programs faced setbacks when community clinical sites disallowed student involvement for safety reasons. In order to allow students the ability to remain on their graduation path and abide by accredidation requirements, the simulation program readjusted traditional scenario formats to maximize as many “patient calls” as possible in a 12 hour day. Although this was effective during that time, the return to traditional simulation procedures which include a pre-brief, scenario and debrief, has been more difficult than expected. The focus during the pandemic was quantity and the number of scenarios provided. The Simulation program currently emphasizies the need for high quality scenarios versus quantity.  A unique challenge for our program is the ability to provide simulations as they are meant to be designed because other program faculty do not always see the benefit of simulation for experiential training purposes and prefer to utilize the scenarios as test preparation. Research, however, has proven that the introduction of simulation as an innovative teaching form boosts knowledge-based learning, provides the freedom of safely learning from mistakes, hones communication and team-building rapport, and provides the ability to perform “what-if” investigation without fear of major errors.  With the number of healthcare students expected to increase in the future, the actual physical environment of the simulation lab becomes especially important. Each room must retain unique factors for success. Up-to-date wiring is necessary for more advanced technology. Poor audio quality can ruin a simulation by reducing hearing ability. Storage is a necessity for protecting quality equipment as well as keeping the room free of clutter for safety reasons. The space plan layout must consider the logistics of various scenarios, provide freedom of movement for both instructors and students, provide private debriefing rooms, and accommodate medical equipment including a control center. By serving multiple programs within the same time frame daily, there is often a lack of space to fulfill all requests. While our building is relatively new, the need for more adequate space is looming.  Lastly, budget constraints provide difficulty for the purchase of the newest technological equipment as well as providing for more full time positions to optimize program requests. High-fidelity patient simulators can cost as little as $30,000 all the way up to $100,00. The life span of a manikin is approximately 7 years with usage becoming obsolete either through normal wear and tear or by being replaced by more advanced technology. In the need to remain competitive within the healthcare industry and to promote exceptional training to students, while it is feasible to reduce costs for equipment, it is not really prudent. |

**11. Complete the Continuous Improvement Plan (CIP) tables that follow.**

Within the context of the information gleaned in this review process and any other relevant data, identify unit priorities for the next two years, and focus on these priorities to formulate your CIP. This may include short-term administrative, technological, assessment, resource or professional development outcomes as needed.

|  |
| --- |
| There are several program priorities to achieve in the next two years. These priorities are to meet the continually growing need for well trained, exceptional healthcare providers.   * 1. The Simulaltion program will be transitioning full-time staff as we find a replacement for our current Director upon his retirement.   2. The program will be developing more in-depth training modules for equipment to ensure staff become experts in all aspects of simulation.   3. The program will continue to evolve to meet the needs of our programs and will incorporate the use of standardized patients as well as focus on advanced training so every student is able to experience the exact situation regardless of the SP they are assessing.   4. Creation of meaningful and effective pre- and post- debriefs for simulated scenarios.   Focusing on data collection to ensure retrieval of the appropriate measurements to determine the effectiveness of Simulation. |

**Table 1. CIP Outcomes, Measures & Targets Table (focus on at least one for the next two years)**

|  |  |  |
| --- | --- | --- |
| **A. Expected Outcomes**  Results expected in this unit  (e.g. Authorization requests will be completed more quickly; Increase client satisfaction with our services) | **B. Measures**  Instrument(s)/process(es) used to measure results  (e.g. sign-in sheets, surveys, focus groups, etc.) | **C. Targets**  Level of success expected  (e.g. 80% approval rating, 10 day faster request turn-around time, etc.) |
| Assess instructors on equipment usage and maintenance | Annual competency checkoffs to determine resource competency | 80% of full-time and part-time staff will achieve a passing grade on all equipment |
| Develop a plan to achieve accreditation | Create a document that identifies the steps toward accreditation | 80% of steps completed in year 1 |
| Analysis of data that demonstrates value of simulation in the student learning experience | Create and facilitate surveys and focus groups | 80% approval rating from faculty and students that simulation was effective and benefited learning outcomes |
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**Continuous Improvement Plan**

**Outcomes might not change from year to year. For example, if you have not met previous targets, you may wish to retain the same outcomes. You may add short-term administrative, technological, assessment, resource or professional development goals, as needed. Choose up to 2 outcomes from Table 1 above to focus on over the next two years.**

**A. Outcome** -Result expected in this unit (from column A on Table 1 above--e.g. Authorization requests will be completed more quickly; Increase client satisfaction with our services).

**B. Measure** -Instrument(s)/process(es) used to measure results (e.g. surveys, test results, focus groups, etc.).

**C. Target** -Degree of success expected (e.g. 80% approval rating, 10-day faster request turn-around time, etc.).

**D. Action Plan** -Implementation of the action plan will begin during the next academic year. Based on analysis, identify actions to be taken to accomplish outcome. What will you do?

**E. Results Summary** - Summarize the information and data collected in year 1.

**F. Findings** - Explain how the information and data has impacted the expected outcome and unit success.

**G. Implementation of Findings** – Describe how you have used or will use your findings and analysis of the data to make unit improvements.

**Table 2. CIP Outcomes 1 & 2**

|  |  |
| --- | --- |
| 1. **Outcome #1** Assess instructors on equipment usage and maintenance | |
| 1. **Measure (Outcome #1)**   Annual competency check offs to determine resource competency | 1. **Target (Outcome #1)**   80% full- time and part-time staff will achieve a passing grade |
| 1. **Action Plan (Outcome #1)**   Implement specified hands on training days for staff as well as online tutorials for additional training | |
| 1. **Results Summary (Outcome #1) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Findings (Outcome #1) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Implementation of Findings (Outcome #1) TO BE FILLED OUT IN YEAR 2** | |

**Table 2. CIP Outcomes 1 & 2 (continued)**

|  |  |
| --- | --- |
| 1. **Outcome #2** Analysis of data that demonstrates value of simulation in the student learning experience | |
| 1. **Measure (Outcome #2)**   Create and facilitate surveys and focus groups | 1. **Target (Outcome #2)**   80% approval rating from faculty and students that simulation was effective and benefited learning outcomes |
| 1. **Action Plan (Outcome #2)**   Create a Simulation advisory board council to discuss current trends and needs in simulation. Create and analyze surveys for each program served. | |
| 1. **Results Summary (Outcome #2) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Findings (Outcome #2) TO BE FILLED OUT IN YEAR 2** | |
| 1. **Implementation of Findings (Outcome #2) TO BE FILLED OUT IN YEAR 2** | |

**What happens next? The Program Review Report Pathway**

1. **Following approval by the Steering Committee,**

* Program Review Reports will be evaluated by the Leadership Team;
* After Leadership Team review, the reports will be posted on the Intranet prior to fall semester;
* At any point prior to Intranet posting, reports may be sent back for additional development by the unit.

1. **Unit responses to the Program Review Steering Committee recommendations received before July 31st will be posted with the Program Review Report.**
2. **Leadership Team members will work with program supervisors to incorporate Program Review findings into planning and activity changes during the next five years.**

**Please make sure to go back and complete your Executive Summary at the start of the Review.**