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Competency-Based e-Learning Module for Nurses in a Multi-Service-Line Surgical Unit

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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by

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MAN, University of the East-Ramon Magsaysay Medical Memorial Center, 2009

BSN, University of the Philippines, 2004

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Negative patient outcomes have been attributed to surgery-related complications. A gap was identified in an acute care unit in southern Texas because postoperative surgical complications were above acceptable rates. The purpose of this Doctor of Nursing Practice project was to educate staff nurses on the provision of evidence-based postsurgical care. This doctoral project was conducted to determine whether completion of a learning module would increase nurses' level of knowledge in acute postoperative care. The project was grounded on Knowles's adult learning theory and the Dreyfus model of skill acquisition. Learning material using competency-based education was developed using the analyze, design, develop, implement, and evaluate (ADDIE) model. Learning material composed of two modules (care of the colorectal patient and total joint arthroplasty) was administered to 24 nurses (n = 24) within a 2-week period. A one group pretest–posttest design was used to screen the effectiveness of the learning material in increasing the level of knowledge of the participants. The average score of the participants was 77.5% (SD = 13.07) before the intervention; the average posttest score, 87.29%, showed an increase in knowledge acquisition (SD = 5.77). On average, the participants had a 11.46% difference between their pretest and posttest scores, with a standard deviation of 12.47 (SD = 12.47). Paired t test indicated a significant difference between the pretest and posttest scores of the participants with the computed p-value (0.0002) < α. This project has the potential to impact social change, as the learning modules can be used as a medium to increase the level of knowledge among nurses in an acute surgical inpatient care unit.

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Dedication

This project is highly dedicated to my parents, especially to my late father, Exequiel Naculangan, Sr. Instilling in me the value of education at a very young age gave me the push to pursue my master's and doctoral education, both of which my father missed witnessing.

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I would like to extend my sincerest gratitude to the following people, who in one way or another contributed to fulfilling the goals and intentions of this Doctor of Nursing Practice (DNP) capstone project.

This work would not have been possible without the guidance of Dr. Anna Hubbard and the rest of the committee members, who provided a great deal of technical support and professional guidance from the planning to the implementation of this project.

I am highly in debt as well to Dr. Nelson Tuazon, who unselfishly provided me extensive personal and professional guidance as my mentor. Dr. Tuazon was instrumental in drawing out my interest in nursing leadership. The related learning experience he provided me during my practicum courses provided me an opportunity to identify the focus of my project.

Above all, nobody has been more important to me in this journey than my family. I want to thank my ever-supportive wife, Johneth. Thank you for understanding my remiss on some responsibilities as a father and husband while finishing this project. My two beautiful children, Ciel and Trey, thank you for providing me unending inspiration.

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Section 1: Nature of the Project

Introduction

The continuous transformation of the healthcare landscape and changing needs of patients and families create a need to advance knowledge and competencies among nurses. Regardless of the setting, there is a growing expectation for nurses to be knowledgeable and competent in the provision of care to meet the complex and diverse needs of patients. Nurses are always challenged to provide efficient, high-quality, expert care to their patients.

A competency-based staff development program on postoperative complications is expected to improve patient and hospital outcomes by increasing the knowledge of nurses in a multi-service-line surgical unit. The literature is explicit concerning the relationship of staff knowledge and positive patient outcomes. Education and staff development not only improve clinical outcomes; both serve as well as vehicles to achieve the goals of the organization. Staff development programs play an essential role in ensuring that processes of an organization are safe and efficient (Chagari et al., 2017). This is parallel to Walden University's mission of promoting social change by improving human experience and promoting an organizational culture of safety and quality. Investing in staff training has been identified as improving productivity and employee satisfaction (Khan et al., 2011).

Problem Statement

Surgery-related complications remain a major challenge among healthcare organizations. Surgical complications vary from minor events to very serious complications that are potentially life-threatening, requiring more complicated

interventions and longer stays in the hospital. The most common postsurgical complications include surgical site infections, pulmonary complications, deep vein thrombosis, and bleeding (Goldfarb et al., 2017; Minotolo et al., 2010). The average length of stay in the hospital for patients who have undergone a surgical procedure is 1 to 3 days but can be prolonged up to 24 days for patients with severe complications (American College of Surgeons, 2012). Postsurgical complications have led to more readmissions among hospitals. From a total of 1,442 patients with operations within the period of 2009–2011, 11.3% were readmitted within 30 days secondary to postoperative complications. Moreover, there is a dramatic impact of postoperative complications in terms of in-hospital cost per case increasing up to 5 times compared to the cost of a surgical procedure without complications (Volanthen et al., 2011).

The project site, a surgical unit of a multi-service-line hospital, requires nurses to have technical nursing competencies in the provision of care among its patients. A patient who has had a joint arthroplasty of the knee or hip requires special positioning and exercises for rehabilitation. Bariatric surgery patients require rigorous care that includes early mobility, diet advancement, and other special nursing considerations. Quality and safety issues have been reported concerning the care of postsurgical patients, especially with the majority of the staff being new nurses. The hospital was recently penalized by the Centers for Medicare and Medicaid Services (CMS) for patient complications such as surgical site infections and postsurgical blood clots and related readmissions.

Nursing plays a big role in preventing postsurgical complications. This project holds significance for nursing practice because nurses spend the most time with patients postop in the entire care continuum of a patient stay in the hospital. The time spent with

the patient contributes a critical role in improving patient safety. Moreover, nursing characteristics such as level of education, level of knowledge and competency, and experience are positively associated with improved patient outcomes (Kane et al., 2007; Shekelle, 2013). Investing in nurses' knowledge and competencies through staff development initiatives is thus prudent for healthcare organizations. The gap in nursing practice lies in the fact that there are limited published programs on surgical unit staff development initiatives, specifically in relation to module-based electronic learning.

Purpose Statement

The intended purpose of this evidence-based practice (EBP) project was to develop a competency-based electronic training (e-learning) module for a multi-service-line surgical unit of a magnet Level 1 trauma hospital. The competency-based module focused on improving knowledge among nurses in taking care of surgical patients in an acute care setting. A module is an established medium for achieving desired instructional outcomes such as improving knowledge among learners in any setting (Henry, 2019; Langlord et al., 2020; Ruehler et al., 2012).

The hospital had below-average performance on surgery-related complications such as surgical site infection and deep blood clot formation, leading to a high incidence of readmissions. Little has been published on surgical-unit-specific staff development programs focused on increasing the level of knowledge of nurses to improve the quality, efficiency, and safety of care for surgical patients. Therefore, this doctoral project was intended to answer the following question: Among nurses of a multi-service-line surgical floor, what is an appropriate learning module in increasing their level of knowledge in acute postoperative care?

Nature of the Doctoral Project

Clinical knowledge and competency are indispensable tools in the nursing profession, the lack of which can lead to quality and patient safety issues. The e-learning module for nurses was intended to increase the level of knowledge of nurses in taking care of patients in a surgical unit. It is established in literature that knowledge is related to positive outcomes (Karvinen et al., 2017; Morita et al., 2017; Yassin et al., 2013).

An extensive review of literature was conducted not only to determine the current knowledge on the topic, but also to identify current evidence in staff development initiatives. Training of nurses comes in different forms and platforms, depending on the workforce, resources available to the organization, and availability of the learners (Lawn, et al., 2017). Internet-based module staff development was intended to be the primary medium of training for this staff development initiative because of its flexibility and easy accessibility to the learners.

The training program was broken down into individual courses and encompassed the competencies required for the two service lines included. Each of the modules focused on knowledge and skills development that took the learner through surgical service-related courses. The unit provides postsurgical care of patients under surgical services such as podiatry; urology; orthopedics (trauma and ortho-joint); ear, nose, and throat (ENT); obstetrics and gynecology; vascular; colorectal; and bariatric surgery. Iterative coordination with experts and review of the material content was conducted. End users and stakeholders were involved to validate the content of the module and to ascertain its usability. The staff development program was implemented and adopted as

material for clinical training among staff nurses. A study was conducted to evaluate its impact in terms of increasing the level of knowledge among nurses.

Significance

This staff development initiative on postoperative complications will benefit a number of stakeholders. Primarily, it is expected to improve patient and hospital outcomes by increasing the level of knowledge of nurses of a multi-service-line surgical unit. The literature is explicit concerning the relationship of staff knowledge and positive patient and hospital outcomes (Karvinen et al., 2017; Morita et al., 2017; Yassin et al., 2013).

The potential contributions of educating nurses on postoperative complications are significant. Postoperative complications take a major toll on patients, hospitals, and the government. Longer hospital stays and 30-day postoperative complication rates ranging from 5.8% to 43.5% impact patient-centered outcomes such as quality of life, hospital length of stay, morbidity and mortality, and readmissions (Kennedy, 2013). Hospitals are losing significant money from withheld payment from CMS and many health maintenance organizations (HMOs) for postoperative complications deemed preventable. Bundled payments of CMS for patients who underwent elective colectomy posted a higher median risk-adjusted cost among patients who developed postoperative complications ($42,537 vs. $22,829; Gani et al., 2016). The financial implications and impact on patient outcomes are concrete reasons to push quality improvement initiatives among hospitals.

The design, approach, and content of the training module can be adopted in other healthcare organizations. The concept of transferability of this project is evident. The

burden of surgery-related morbidity and mortality is a common problem among healthcare organizations (Debas et al., 2015). Because nursing staff characteristics are positively associated with improved clinical outcomes, there is a need for staff development programs to improve nurses' level of knowledge.

Summary

In this section, I discussed the background of and rationale for developing a staff development program through a competency-based e-learning module for a multi-service-line surgical unit. In this section, I also detailed the impact of the capstone project in increasing the level of knowledge of the nurses and consequently improving clinical outcomes. Theoretical underpinnings of the project, its relevance to nursing practice, and my role as a Doctor of Nursing Practice (DNP) student will be tackled in the next section.

Section 2: Background and Context

Introduction

Surgical healthcare facilities are faced with the challenge of curtailing surgery-related complications. The surgical unit where the EBP project was implemented is no different, with below-average performance on surgery-related complications such as surgical site infection and deep vein clot formation contributing to a high readmission rate. Both negative patient clinical outcomes pose a financial burden for the patient and the healthcare system.

The role of the nurse is paramount in preventing surgery-related complications. As advocates, nurses are in a vantage position to ensure that patients receive care that is of quality, efficient, and cost effective. DNP-prepared nurses as practice experts and leaders have the responsibility to ascertain that all aspects of care provided to patients are evidence based. Consequently, staff must be given the necessary tools, knowledge, and competencies to create a safe environment for patients. Staff development training is a cornerstone in optimizing staff's individual knowledge and skills (Brindon, 2017). The staff development training of developing a learning module for nurses in a surgical unit is set to increase their knowledge. Little has been published on surgical-unit-specific staff development programs focused on increasing the knowledge of nurses. Through this EBP project, I sought to answer the following question: Among nurses of a multi-service-line surgical floor, what is an appropriate learning module for increasing their level of knowledge in acute postoperative care?

Concepts, Models, and Theories

This EBP project was grounded on Knowles's adult learning theory; the Dreyfus model of skill acquisition; and the analyze, design, develop, implement, and evaluate (ADDIE) framework. The theory and model were expected to demonstrate an understanding of the relevant concepts pertinent to the implementation of this project. Further, both have underpinnings in educational philosophy describing how individuals acquire knowledge necessary to effect change in behavior and performance along the surgical patient care continuum.

The adult learning theory developed by Malcolm Knowles addresses key assumptions concerning self-concept, adult learner experience, readiness to learn, orientation of learning, and motivation to learn (Mukhalalati & Taylor, 2019). For adult learners, learning shifts from dependent to independent learning, wherein the preference for methodology changes from instructor-led to a more self-directed approach. The humanistic perspective of the theory indicates that adult learners have the ability to plan, manage, and evaluate self-learning in a way that satisfies self-fulfillment and self-motivation. This brings the learner to center stage, with the educator serving as facilitator (Mukhalalati & Taylor, 2019). The adult learning experience capitalizes on the idea that adult learners possess a wide array of life experiences that they can reference during the learning process. Readiness to learn is based on the intrinsic motivation that learning can be integrated in various roles relevant to the current and future undertakings of an individual (Bye, et al., 2007). The orientation to learning, according to the theory, is solution-based in nature, that is interest on knowledge to improve the delivery work pertinent to what they are doing.

Adult learning theory has proven to be an important framework in educational programs. The principles of adult learning have been applied in imparting knowledge and skills among medical professionals such as residents, fellows, faculty, and practitioners. Adult learning principles have been used as well in teaching competencies and values related to professionalism such as effective communication skills, patient-centered care, interdisciplinary collaboration, and culturally sensitive care (Reed et al., 2014). Self-directed leaning and experiential learning have been identified as important adult learning principles in developing effective paradigms in surgical training programs (Rashid, 2017).

The Dreyfus model for skill acquisition developed by Stuart Dreyfus and Hubert Dreyfus in 1980 indicates how a learner acquires skills with the aid of formal instruction. The model, which has been used in education and operations research, describes five distinct stages that a student passes through in learning a new skill: novice, advanced beginner, competence, proficiency, and expertise (Dreyfus & Dreyfus, 2004). A novice learner possesses little or no experience with a situation. The feature of the instruction process at this stage is creation of task environment that is nonsituational. To maximize learning at this stage, the instructor is expected to monitor and provide regular feedback (Dreyfus & Dreyfus, 1980). At the second stage, it is an expectation that an advanced beginner has acquired the basic rules. The instructional maxim should be focused on situational aspects to maximize learning. At the competence stage, the learner is bombarded with potentially relevant elements and procedures that they have acquired through more experiences and at times becomes overwhelmed because of the absence of a sense of what is important (Dreyfus & Dreyfus, 2004). The proficient learner has

gained experience from multiple tasks and real-world applications that have given the learner more knowledge and confidence. At this point, the rule-based teaching approach in the competence stage is replaced with situational discriminations. In the last stage, expertise, the learner has gained a vast repertoire of experience and situational discriminations, rendering the learner capable of immediate intuitive situational response.

Understanding the Dreyfus model for skill acquisition is imperative in designing training methodologies and materials. Dreyfus and Dreyfus (1980) stated that trainers and instructors must be conscious of the developmental stage of the learner. This is particularly important for efficient guidance of the learner's advancement to the next stage and to avoid intricate teaching methodologies and materials that might impede advancement and prevent regression.

ADDIE is one of the most prominent models of instructional design, especially for designing training programs. It was first developed by the Center for Educational Technology at Florida State University in 1978 and was adopted by the U.S. military in designing advanced tactical instructions (Resiser & Dempsey, 2002). Currently, ADDIE is widely used in healthcare training and development programs for producing specific learning outcomes and behaviors. The five distinct phases of the model offer a systematic approach in developing an instructional program, from analysis of learning needs to development of a curricular program, implementation, and evaluation (Allen, 2006).

Relevance to Nursing Practice

Nurses spend the most time in the entire care experience of the patient; thus, investing in nursing staff development is prudent for healthcare organizations. Supportive practice environments have positive effects on nursing and patient clinical outcomes

(Cheung et al., 2010; Church, 2016). The most basic and traditional example is Nightingale's implementation of basic measures to manipulate the environment by promoting sanitation and hygiene that, in effect, brought down dramatically the mortality rate among patients. Magnet hospitals, reflecting the strength and quality of nursing care, are linked to positive patient outcomes (Cheung et al., 2010; Church, 2016). Nursing-sensitive indicators that nurses have control over, such as pressure ulcer, fall, and hospital-acquired infections, are highly correlated to the quality dimensions of nursing care performance (Heslop & Lu, 2014). The competency-based learning module for nurses in a surgical unit was presumed to increase the knowledge level among nurses. Little has been published on training initiatives and learning materials on acute surgery-related competencies.

Implementation and adoption of the competency-based learning module are set to promote optimal utilization of EBP in nursing. Although EBP is gaining momentum in nursing, the profession has not fully realized its benefits. The inclusion of EBP in nursing processes strengthens the scientific underpinnings of the profession. The learning module, as an EBP initiative, will provide opportunities for nursing care to be streamlined, dynamic, responsive, and more efficient.

Local Background and Context

The staff development initiative of developing a competency-based e-learning module was implemented in a surgical unit of a magnet Level 1 trauma and teaching hospital in South Texas. The 60-bed surgical unit provides services from multiple service lines such as podiatry, urology, orthopedics (trauma and ortho-joint), ENT, obstetrics and gynecology, vascular, colorectal, and bariatric surgery. Although it is a leader in the

community in offering the most technically advanced surgical care, the surgical unit is beset with safety and quality issues such as a high incidence of postsurgical complications, deaths among patients with serious treatable complications after surgery, and a high 30-day readmission rate. The hospital has been consistently penalized by CMS in past years under the Hospital-Acquired Condition Reduction Program for exceeding the threshold for patient safety.

Nurses play a crucial role in the safety and quality of patient care. Nurse characteristics such as level of education, competency, and self-efficacy are positively related to improved clinical outcomes (Karvinen et al., 2017; Morita et al., 2017; Yassin et al., 2013). The surgical unit where the staff development program was implemented has a nursing staff composed mostly of nurses who have less than a year of clinical experience. The level of competency among nursing staff is seen as a practice gap necessitating a corresponding intervention to improve the efficiency and quality of care. The quality improvement initiative is geared toward improving the level of knowledge among nurses of the surgical unit.

Role of the Doctor of Nursing Practice Student

This capstone project was deemed as a summative evaluation of the DNP competencies specified in the DNP essentials, such as clinical, organizational, scholarship, quality improvement, and leadership (Vanderkooi et al., 2018). The development of the competency-based e-learning training module was a product of the critical appraisal of available research evidence in the literature. Managing the implementation and adoption of the staff development project entails leadership and collaboration among potential stakeholders of the project, such as providers from

different surgical service lines of the unit, unit and hospital nurse educators, nursing leadership, and nursing staff as end-users. Monitoring and evaluating the program were conducted to screen its effect in improving the level of knowledge among nurses.

I am affiliated with the surgical unit where the staff development project will be implemented as a unit manager. As part of the leadership and management team, I have been actively involved in screening the education needs of the staff. My experience in medical-surgical nursing and nursing education have made me a practice expert who is knowledgeable about curriculum development.

Role of the Project Team

I recognize the importance of using a team approach in developing the learning module. Bringing in different individuals ensured the presence of multiple perspectives necessary to coming up with a more holistic learning module that is responsive to the learning needs of the target population. There is growing evidence that a team-based approach provides better decisions, improved service provision, improved satisfaction, and better outcomes (Ghebrehiwet. 2013). The DNP capstone project team was composed of the unit health educator, unit-based management, and identified senior core staff. The initiative was coordinated with the providers of the different surgical service lines to help with content provision, the Center for Learning Excellence of the health system, and the partner university for the learning pedagogy and platform. The development of the learning module allowed me to hone my competencies in intra- and interprofessional collaboration, an expectation for a DNP-prepared nurse graduate (American Association of College of Nursing, 2006). Not only did it improve my communication skills; it also projected me as a potential leader of the health organization.

Summary

In this section, Knowles's adult learning theory and the Dreyfus model of skill acquisition were discussed as frameworks. Related concepts of each theory and model were threaded through the discussion in relation to the development and planning of the DNP capstone project. The relevance of the project to nursing practice was discussed, as well as the project's potential to improve the capacity of nursing in delivering safe and quality care to surgical patients and the promotion of the utilization of EBP in the profession. My role as the DNP student in the development, implementation, and eventual adoption of the project was explained.

In the next section, I will discuss the different concepts and underpinnings of the capstone project. Methods will be described for developing the learning module, its implementation, and the evaluation plan. Strategies used to protect the study participants will be articulated.

Section 3: Collection and Analysis of Evidence

Introduction

Surgery-related complications are still a major challenge among healthcare organizations. Such complications vary from minor events to serious cases that are life-threatening in nature, necessitating multiple interventions. These surgery-related events have been identified as contributing to other negative clinical outcomes such as longer length of stay, adverse impact on the quality of life of the patient, and even death (Pinto et al., 2016). Whatever the nature of a surgery-related complication may be, it poses a financial burden to both the patient and the healthcare system.

Surgery-related complications constitute a concrete indicator of safety and quality of care (Shetty et al., 2012), and nursing plays an important role in this aspect. A large part of patient care relies on nursing, given the quality of time that nurses spend with the patient. It is therefore prudent for healthcare organizations to invest in their nursing workforce to improve their efficacy in patient care. The development of a competency-based training module for nurses as a staff development initiative was staged to increase nurses' level of knowledge in the provision of care to surgical patients.

In this section of the paper, I discuss related literature as underpinnings of the staff development initiative. Additionally, I describe procedures related to the development of the project. Data collection and corresponding analysis related to achievement of the project goal are outlined.

Practice-Focused Questions

Creating a staff development program is an important strategy for improving the efficiency of nurses and consequently the organization they are affiliated with. Staff

knowledge and competency have been identified as contributing to positive clinical outcomes such as reduction of healthcare-associated infections, morbidity, and mortality (Coster et al., 2018). The healthcare organization where this project was implemented is beset with safety and quality issues in the care of surgical patients, such as a high incidence of postsurgical complications leading to increased length of stay and readmissions. Moreover, given the mix of surgical patients the unit is providing service to, there is a need for case-specific knowledge and competencies such as care for ortho-joint, bariatric, colorectal, and podiatry patients; thus, there is a need for a training methodology to provide the nurses with necessary knowledge and competencies. Nurses entering the health system go through a period of clinical training, but there is no module specifically for acute care of surgical patients available to augment learning. With this, this DNP project was intended to answer this practice-focused question: What is an appropriate learning module for increasing the level of knowledge among nurses in a multi-service-line surgical unit in acute post-operative care?

Sources of Evidence

Sources of evidence for this capstone project came from published research. Empirical data from scholarly, peer-reviewed journals were primarily considered as sources because of their quality and the higher value of evidence that they offered. Other reference materials such as books and dissertations were included as well to help widen the scope of the literature review. As staff training and education are not concepts limited to nursing, literature from other fields and disciplines such as education and psychology were explored as well.

A thorough and exhaustive literature review was conducted to identify relevant publications on salient concepts for the project, such as competency-based learning as pedagogy, the module as a method of instruction, and the internet as a medium of content delivery, nursing staff training, and staff knowledge development. Databases such as the Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed, MEDLINE, Academic Search Complete, and SAGE Journals were taken into consideration. Boolean operators such as AND, OR, and NOT were used as conjunctions to combine or exclude key search words/phrases. Only studies from the last 10 years were included in the analysis to generate the newest school of thought on the phenomenon. The following keywords were used in searching relevant literature: *module-based education*, *staff training*, *competency-based training*, *e-learning*, *level of knowledge*, and *staff knowledge development*.

Evidence Generated for the Doctoral Project

Participants

The target participants of the study were nursing staff of the surgical unit of a tertiary hospital. The 60-bed surgical unit has a total of 119 staff, 67 of whom are nurses. The nursing staff has a mix of new and experienced individuals with an average of 4.06 years of experience. In terms of educational level, the majority have a bachelor's degree in nursing science, with this group accounting for 69%, while those with an associate's degree account for 25% of the total nursing staff and those with a master's degree in nursing represent 4%, with all in the latter group handling leadership positions. The surgical unit also uses nurses from the resource pool of the hospital to meet its staffing needs. Recently, the unit adopted the team nursing model, wherein licensed vocational

nurses (LVNs) were recruited and added to the nursing slate to address a nursing shortage.

The study only included nurses with less than 5 years of clinical experience. The decision to include nurses with less than 5 years of clinical experience was based on the observation that the clinical competency curve tends to flatten out thereafter. Tsuji et al. (2007) conducted a study among midlevel career nurses and noted almost no correlation between 5 to 10 years of clinical experience to nursing competency. Nursing competency encompasses the core ability to carry out expected responsibilities in an efficient and effective manner. It is the integration of knowledge, skills, professional attitude, and values (Fukada, 2018). Through this DNP capstone project, I endeavored to increase the level of knowledge of staff nurses in a surgical unit through a training module.

Voluntary sampling was used to draw the prospective participants of the study. Voluntary sampling is a nonprobability sampling design. Identification of participants is based on volunteers who self-select themselves based on interest to be included in a study (Gray et al., 2017). Excluded from the study were nurses from the float pool, LVNs, and those in leadership positions such as nursing managers and the unit executive director.

Procedures

The learning module's development was coordinated with different practice experts for its content. The surgical unit has 16 service lines: podiatry, orthopedic-joints, orthopedic-trauma, orthopedic oncology, colorectal, bariatrics, emergency surgery, surgery oncology, Surgery A, surgery plastics, vascular, urology, gynecology-oncology, benign gynecology, ENT, and oral maxillofacial surgery. Communication and informal meetings were conducted with provider representatives to identify necessary care

competencies given a surgical procedure that a patient had undergone. Assistance from the unit health educator, unit nurse managers, and unit executive director was elicited as well. I coordinated with the university partner of the health system and the continuing education center in framing the structure of the competency-based training module.

Competency-based education was identified as the necessary framework for this program because of its holistic integration of knowledge, skills, and attitude in a training program (van der Vleuten, 2015). A number of countries have adopted a competency-based framework, especially in medical training programs, because of its positive healthcare consequences (Frenk et al., 2011). Competency-based education as a training framework has also been used in pharmacy and has proven effective in improving clinical performance, consequently influencing patient safety and health care quality (Udoh et al., 2021). Competency-based education as a framework is widely used not only in undergraduate nursing education, but also in continuing nursing staff education programs (Fan et al., 2015; Puntil et al., 2013).

Iterative review of content was conducted with the stakeholders. Continued active participation of the stakeholders secured their support of the project as well. The learning module was presented to a group of nurses as end-users to validate its content, usability, understanding, appearance, and relevance using a descriptive questionnaire. After finalizing the learning module, I coordinated with the continuing education center of the health system to upload the learning module to the online learning management system of the healthcare organization. The uploaded learning material is shown in Appendix A.

The learning program was administered to a sample of nursing staff of the surgical unit who met the inclusion criteria. A questionnaire was developed to assess the

level of knowledge of the study participants before and after exposure to the training module.

Protections

The DNP project was conducted with utmost consideration of ethical principles. Approval was sought from the health care system's Institutional Review Board (IRB) and Walden University's IRB to ascertain that appropriate measures were in place to protect the rights and welfare of the study participants. Informed consent was obtained from the staff nurses before enrolling them into the study. It was clearly stated in the consent that inclusion and withdrawal from the study would neither result in demotion nor affect performance evaluations because I was the direct supervisor of the study participants. Given the nature of the DNP project, no direct intervention was conducted on patients. Last, because the setting of the study was a surgical unit, no identifying data were presented that would identify the healthcare organization.

Analysis and Synthesis

The investigation was grounded on quantitative design. The collated data were analyzed using descriptive and inferential statistics. Demographic characteristics such as gender, working hour characteristics by shift, and number of years of clinical experience were described using descriptive statistics. Pretest and posttest scores were presented as well using descriptive statistics. *T* statistics were used to note the significant difference between the pretest and posttest scores of the participants.

Summary

In this section, I discussed concepts and related literature as underpinnings of the DNP project. Additionally, I described the participants of the project and how they were

selected. I described the procedure for how the project proceeded, detailing how the training modules were developed and how the data were collected and synthesized to screen the effectiveness of the training material as an intervention to increase the level of knowledge of the staff nurses in a surgical unit. It was noted that due diligence was undertaken to protect the rights and welfare of the study participants.

In the next section, I will present the findings and related recommendations. Implications of the study results for the delivery of care to the different levels of clientele, practice, and social change will be described. My plan for sharing the project as a new body of knowledge to the broader nursing profession will be presented as well.

Section 4: Findings and Recommendations

Introduction

The problem of surgery-related complications at the project site was the primary driver of this capstone project. While surgery-related complications are common among hospitals, the incidence of these adverse events at the project site is higher compared to the national threshold. Although surgery-related complications such as SSIs are treatable, they remain a challenge that significantly contributes to negative patient outcomes such as increases in morbidity, mortality, longer hospital stays, and unplanned readmissions to the hospital. Further, the literature supports that surgical complications appear to be a concrete predictor of postoperative psychosocial outcomes such as anxiety, depression, and decrease in quality of life (Pinto et al., 2016).

Nursing characteristics such as level of knowledge and competency have been attributed to positive clinical outcomes (Coster et al., 2018). Improving the level of knowledge of the nurses in the acute surgical inpatient care unit may increase their capacity to provide safe, high-quality care to patients. This is especially relevant as the unit has 16 different service lines in which care of patients requires group-specific knowledge and competencies for which no learning material is currently available. Thus, I sought through this DNP project to answer the following practice-focused question: What is an appropriate learning module for increasing the level of knowledge among nurses in a multi-service-line surgical unit in acute postoperative care?

Findings and Implications

The learning module was presented initially to a group of content experts composed of the executive director of the inpatient care unit, four nurse managers, a

nurse educator, and two nurses as end users. The learning material was screened in terms of content, usability, understanding, appearance, and relevance using a descriptive questionnaire. Iterative review of the learning material was done based on the recommendations and suggestions elicited from the panel of experts.

The e-learning module was implemented among nurses of the acute surgical inpatient unit. Excluded from the module-based training were those in leadership positions such as unit managers, the unit educator, and the executive director. Although nurses with more than 5 years of clinical experience were included based on the exclusion criteria set, the training modules were assigned to them but their pretest and posttest scores were not included in the analysis. The DNP capstone project was implemented concurrent with implementation of the team nursing program in the unit, in which LVNs started to be included in the roster of the nursing staff. The LVNs were not assigned the learning module because of unclear delineation of tasks and responsibilities with the registered nurse during the implementation of the project. Excluded as well from intervention exposure were travel nurses and nurses from the float pool department of the hospital.

The nurses were given a 2-week period to finish the learning module, working on the material at times convenient to them. A 2-week frame is the standard assignment period set by the healthcare institution given the length of the learning material. The e-learning material was composed of two modules, a module on the care of the colorectal patient and a module on the care of the patient undergoing knee/hip joint arthroplasty. Each of the modules was presented with set of learning objectives, surgery-related care goals and interventions, information on recognition and prevention of surgery-related

complications, and related competencies and tasks. The pretest was given prior to the start of the learning activities, and the posttest was given after. The pretest–posttest questionnaire is in Appendix B. The e-learning material was mapped chronologically in such a manner that the learner could not proceed with other learning activities without completing a prior learning task. Optional interactive reviews and videos were used to make the learning journey interactive and enjoyable for the learners.

The demographic data characteristics included gender, working hour characteristics by shift, and number of years of clinical experience. The data presented in Table 1 are described in terms of numbers and their corresponding percentages. The results were drawn from the 24 nurses (n = 24) who met the inclusion criteria. Only nurses who finished the module within the prescribed 2-week time frame were included in the study. In terms of gender, the majority of the participants were females, accounting to 83.33%. Of the 24 participants, there were only four males (16.67%). Half of the participants were working the day shift, while the other half were working night shift. The bulk of the participants (14) were at the advanced beginner and competent stages, making up 58.34%. Four nurses had less than 1 year of experience (16.67%), while the remaining six were at the proficient stage (25%).

Table 1

Demographic Characteristics of the Participants

Demographic characteristics	Number of participants	Percentage (%)
Gender		
Male	4	16.67
Female	20	83.33
Work shift		
Day	12	50
Night	12	50
Length of clinical experience		
< 1 year	4	16.67
1–2 years	7	29.17
2–3 years	7	29.17
3–5 years	6	25

Pretest and posttest scores along with the demographic data were collated using an Excel spreadsheet. Excel was used to organize the data and employ statistical functions such as computation of the average pretest and posttest scores. The average pretest score of the participants was 77.5% (*SD* = 13.07). The average posttest score showed an increase in knowledge acquisition, at 87.29% (*SD* = 5.77). An item analysis was drawn from the web-based learning management platform of the hospital on the 20 questions as well. Table 2 shows the individual test items with corresponding pretest and posttest percentages of correct responses. The participants posted above 80% correct responses on Test Items 3, 4, 7, 8, 9, 10, 12, 15, and 16 during the pretest, which reflected prior knowledge of the subject matter (Khuen, 2022). It should be noted that the majority of the participants have experience in taking care of these group of patients, having been with the unit for a particular period of time. There was a significant increase

in the percentage of correct responses before exposure to the learning material and the posttest score of the participants on Items 5, 7, 10, 13, 14, 16, 17, 18, and 19, given a 7-point difference. A 7-point increase signifies that the learning material posted positive effects in changing the knowledge of the participants (O'Leary & Israel, 2013). There were items as well that did not pose any significant increase, which may be attributed to inadequate discussion of the concepts in the learning material or the questions having a higher level of difficulty (Khuen, 2022). This is particularly important to consider in the development of other modules for the rest the surgical service lines and framing evaluation tests in the future.

Table 2

Test Question Analysis Report

Test question	Percentage of correct responses (%)	
	Pretest	Posttest
1. Which of the following best describes Enhanced Recovery After Surgery (ERAS)?	65	66.67
2. Early mobility is an important milestone for ERAS patients. What is the expectation of the patient's mobility on postop day 1?	50	45.83
3. The following are care goals of a patient who had undergone large bowel colectomy, except:	85.42	90
4. A nurse caring for a patient after a large bowel resection should be familiar with the assessment focus and care interventions to prevent the following complications:	75	77.50
5. Dehydration and electrolyte imbalance are one of the complications of colectomy patients. Which of the following is a manifestation of dehydration and electrolyte imbalance?	60	79.17
6. Which of the following interventions should you be implementing to prevent or minimize disturbed body image and impaired coping?	85	85.42
7. When providing ostomy care, the peristomal skin should be cleaned using	87.50	97.92
8. A nurse is fitting a pouching system to a patient with a new ileostomy. To do so, the nurse measures the stoma using an ostomy measuring guide, selects the circular size that fits around the stoma with 1/8 inch (0.3 cm) larger margin, traces the pattern on the pouch/skin barrier, and uses scissors to cut the appropriately-sized opening in the skin barrier to just fit around the stoma. What, if anything, did the nurse do incorrectly?	75	77.08
9. Surgical drain care is performed to	91.67	97.50
10. The patient and the nurse have set a goal to ambulate to distance of 50 feet. Before reaching the goal, the patient states "I feel tired and need to take a break." The appropriate action taken by the nurse is to	90	100

Test question	Percentage of correct responses (%)	
	Pretest	Posttest
11. Which of the following milestones needed to be met at post-op day 0 after a total hip joint arthroplasty?	55	56.25
12. Complications from joint arthroplasty surgery are common causes of patients' longer length of stay and readmission to the hospital. The following interventions are recommended to be implemented in the acute inpatient care unit to prevent complications, except:	83.33	87.50
13. Goal setting is important to engage the patient achieve desired outcomes. Immediate post-total knee arthroplasty goals are to, except:	57.50	87.50
14. Application of SCDs immediately upon arrival to the acute inpatient care unit to prevent which complication following a knee/hip joint arthroplasty?	75	97.92
15. Bleeding is one of the most common complications following a hip/knee joint arthroplasty surgery. Which of the following set of signs and symptoms manifest bleeding?	85	87.50
16. Hip dislocation is one of the complications after a total hip arthroplasty. A colleague is providing education to the patient. Which of the following education points should alarm you?	82.50	89.58
17. Which of the following are education focus for patients and their family following a hip/knee joint arthroplasty?	55	79.17
18. The charge nurse correctly educates the new nurse that when a walker is properly adjusted and the patient is holding the hand grips, the patient's elbows will be	47.50	95.83
19. When standing upright with arms dangling, the top of the walker should be at the level of the patient's	55	95.83
20. Which of the following is an example of proper body mechanics during manual transfer of a patient from a bed to a chair/commode?	65	60.42

I utilized paired *t* test, a parametric test, as the pretest, posttest, and difference data were all normal. Test for normality was done prior. On average, the participants had a 11.46% difference between their pretest and posttest scores with a standard deviation of 12.47 (*SD* = 12.47). The highest difference score observed in the sample was 50, with a participant scoring 50% higher in the posttest compared to his pretest score. Because the *p*-value (0.0002) < α, there is evidence to say that there is a significant difference between the pretest and posttest scores of the participants.

The results of the statistical test support the literature indicating that competency-based training is effective in increasing knowledge among learners in healthcare (Imanipour et al., 2021). The utilization of the web as a platform in the delivery of the competency-based learning material promotes the self-directedness of the learners, as self-paced mastery of the knowledge and competency is promoted (Sisternas, 2020). This is relevant in that nurses are adult learners who do not have time to sit down in a classroom for continuing education. This is relevant as well for application not just among surgical units providing acute nursing care to patients in which the project was implemented, but also to any other nursing unit in which knowledge and competency among nurses are necessary to maintain a safe, high-quality environment for patients. Effective training initiatives result in increases in knowledge and skills, improve staff satisfaction, and promote positive patient outcomes such as reduced morbidity and mortality (Manasyan et al., 2011).

Recommendations

The utilization of the competency-based e-learning module is recommended for implementation to increase the knowledge of the nurses in an inpatient care unit

specifically in the care of colorectal and hip/knee joint arthroplasty patients. The competency-based module can give the impetus to develop more comprehensive learning material in the provision of necessary knowledge and skills in caring for patients in an acute surgical care unit, especially for new-hire nurses. A more comprehensive learning module should cover the rest of the surgical service lines of the unit, such as care for bariatric, urology, podiatry, vascular, plastics, trauma, and ENT patients. The e-learning competency-based learning module will be readily available learning material to augment the clinical orientation of the new hire. The self-directed nature of the learning will be best suited for nurses to be able to meet the objectives of the learning material at their own pace and time.

Strengths and Limitations of the Project

The competency-based learning module's content went through iterative review from providers, the unit educator, unit nursing management, and nurses as end users. The material was screened not only for content, but also for usability, understanding, appearance, and relevance. The content of the learning material was based on the need of the unit to develop learning material that would provide structure in delivering the necessary knowledge and competencies among its nurses. Knowledge and competencies as nursing characteristics contribute to positive patient outcomes that the inpatient care unit is currently challenged with. Further, the material integrates standards of care from Dynamic Health, an evidence-based provider of nursing skills and competencies.

Competency-based learning as a framework for the learning material provides a pedagogic structure that suits the flexibility of the learner. The learners were able to control their learning at their own pace. The flow of the content was designed as well in

an engaging manner. The content analyst who finalized the learning material used different multimedia elements and interactive features so as not to make the learning journey boring and dragging.

The learning material only covered modules on two surgical service lines, namely care of the colorectal patient and care of the hip/knee joint arthroplasty patient, because of time constraints. Further, the analysis of data only covered evaluating the effect of the learning material in increasing the level of knowledge of the participants. No measures were undertaken to qualify and quantify the effect of the intervention on the level of competency of the participants. Additionally, no measure was used to quantify its effect on patient outcomes such as surgical infection rates and rate of readmission.

Summary

The capstone project was developed and implemented to increase the level of knowledge of the nurses in an acute surgical unit. The learning material was made to provide a readily available resource in providing the necessary knowledge and competencies to nurses. Knowledge level as a nursing characteristic has been correlated to positive patient outcomes. In this section, I discussed how the data were collected and treated using some statistical measures. It was noted that there was an equal distribution among participants in terms of work shift; the majority were females, as expected in the profession; and the majority had 1–3 years of clinical experience. Strengths, limitations, and recommendations were discussed as well in this section. In the next section, I will present the dissemination plan for the capstone project. Corresponding takeaways and insights on my journey of completing the project will be discussed as well.

Section 5: Dissemination Plan

The dissemination of the capstone project will be done widen its scope and impact on the practice and nursing profession as a whole. The dissemination of the staff development project is intended for greater application to improve safety, quality of care, and patient outcomes. I will be utilizing a number of platforms and fora for this purpose.

After the completion of the project, results will be presented to the stakeholders of the unit, including provider representatives, nursing leadership, and the unit educator, in one the clinical management meetings (CMTs). CMTs are conducted on a quarterly basis. A separate presentation of the results of the project will be shared with the staff in one of the monthly staff meetings.

Another means of disseminating the project to widen its impact will be through refereed journals. The utilization of this platform for dissemination conveys a message of the rigor and quality of the capstone project. The target consumers of the capstone project are nurse educators and nurse leaders; thus, publication of the project may prove advantageous, as refereed journals target certain group of professionals (Oerman & Hays, 2019). Thorough this platform, I would like to effect improvement in practice in how continuing education and trainings are done. The only disadvantage of this dissemination platform is the tedious and lengthy process of having the project published (Schipper et al., 2016). I have shortlisted a few journals where I may be able to publish the manuscript, including *The Journal of Continuing Education, Journal of Adult and Continuing Education*, and *Journal of Continuing Education for Health Professions*.

I am considering as well disseminating the EBP project at conferences, either through poster or podium presentation. Compared to refereed journals, conferences

provide a faster avenue of dissemination. Conferences are usually attended by early adopters such as content enthusiasts, educators, and nurse leaders (Edwards, 2015). I will be submitting the abstract of the capstone project through conference websites of professional nursing organizations such as the Association of Medical-Surgical Nurses (AMSN), Association of Perioperative Registered Nurses (AORN), and the Philippine Nurses Association of America (PNAA), in which I am an active member.

Analysis of Self

The journey of finishing this capstone project brought a number of benefits and takeaways for me as a practitioner, scholar, and project manager. The process of completing this project gave me an understanding that being a clinician goes beyond direct provision of care to patients. I have been in practice for a long time, but never have I had a holistic understanding of the concept of care. Care of patients includes understanding the rudiments behind caring practices, processes, and behaviors as they affect the quality of service delivered to patients. A good grasp of caring is fundamental in the identification of practice problems; this is where I, as a doctorate-prepared nurse, come in. Engaging a comprehensive needs analysis with the judicious utilization of the literature provided a clearer view of the needs of not only my patients, but also the nursing staff and healthcare organization as a whole. This was a way toward re-envisioning myself as a change agent bringing evidence-based and cost-effective solutions to improve processes and patient outcomes.

My experience in nursing education was salient in anchoring my DNP capstone project in staff education. I have always been a firm believer of the role of education in changing the caring behaviors of nurses, which are linked to better patient outcomes. My

experience in curriculum development helped me in developing the learning material. As with other EBP initiatives, collaboration and communication were important competencies that I enhanced. Coordination with other disciplines and departments outside nursing was a staple in most of the phases of the DNP project journey. The collaboration and communication made me visible in the healthcare organization and boosted my credibility as a leader. Further, collaboration and communication are competencies that are usually called upon in an executive leadership position, which I hope to pursue in the near future.

Finishing the project was yet fulfilling because of the challenges that I stumbled upon along the way. The progress of the project was affected significantly by the COVID-19 pandemic. The inpatient care unit where the project was implemented opened thrice to accommodate rising cases of COVID. This stirred the focus of priority of the nursing leadership of the unit in a way that affected the enthusiasm of those indirectly involved with the project. The COVID-19 pandemic pushed me to work beyond 40 hours per week, such that finding time for my DNP practicum and working with the project was a challenge. Looking forward to attaining my DNP degree pivoted me back to the right direction and focus.

Summary

Nursing knowledge is a salient characteristic that is correlated to positive patient and hospital outcomes (Karvinen et al., 2017; Morita et al., 2017; Yassin et al., 2013). Nurses spend the most time with the patient and thus have a significant impact on patient safety and the overall quality of care that the patient receives (Butler et al., 2018). Investing in nurses' knowledge and development of skills is of paramount importance,

especially for nurses in a multi-service-line surgical unit wherein specific knowledge and skills are required to effectively care for patients. Staff education has proven to be an effective intervention in improving knowledge among nurses, hence the focus of this DNP capstone project. The competency-based framework of the learning material provided structure for how the modules are navigated.

In conclusion, the DNP capstone project was created to answer the following practice-focused question: What is an appropriate learning module for increasing the level of knowledge among nurses in a multi-service-line surgical unit in acute postoperative care? The results of the competency-based e-learning module showed an increase in the knowledge of the nurses, making the intervention effective. The learning module can therefore be used as a readily available resource for nurses to augment their clinical orientation to the inpatient care unit.

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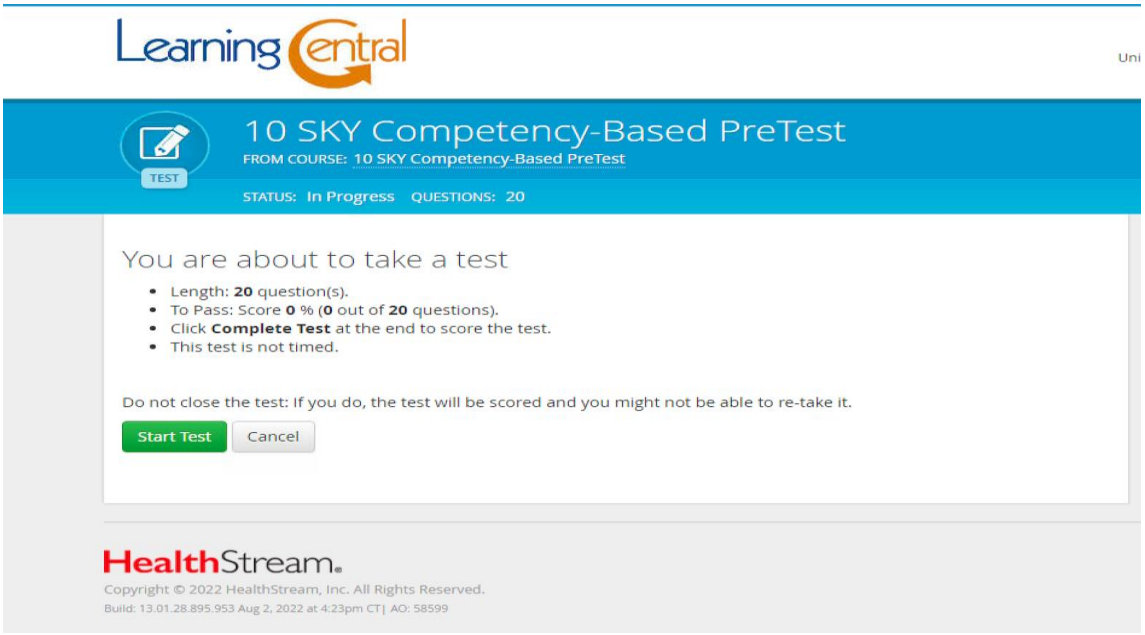
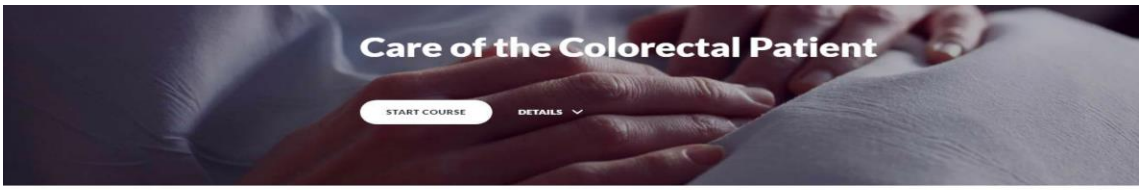
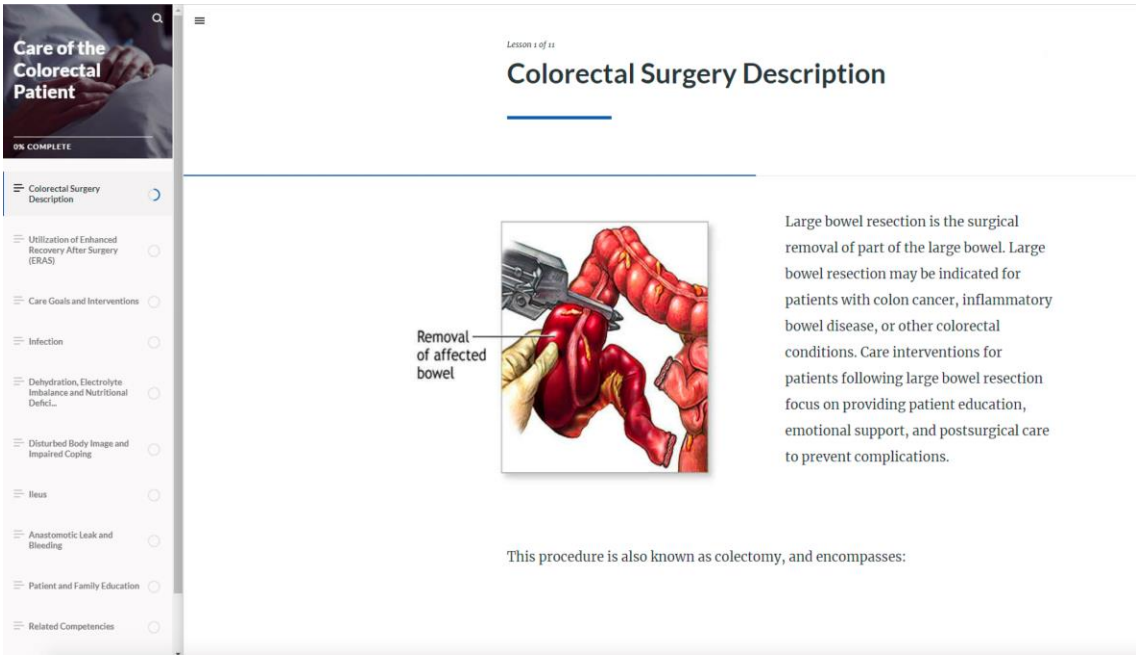
Appendix A: 10 SKY Competency-Based Learning Modules

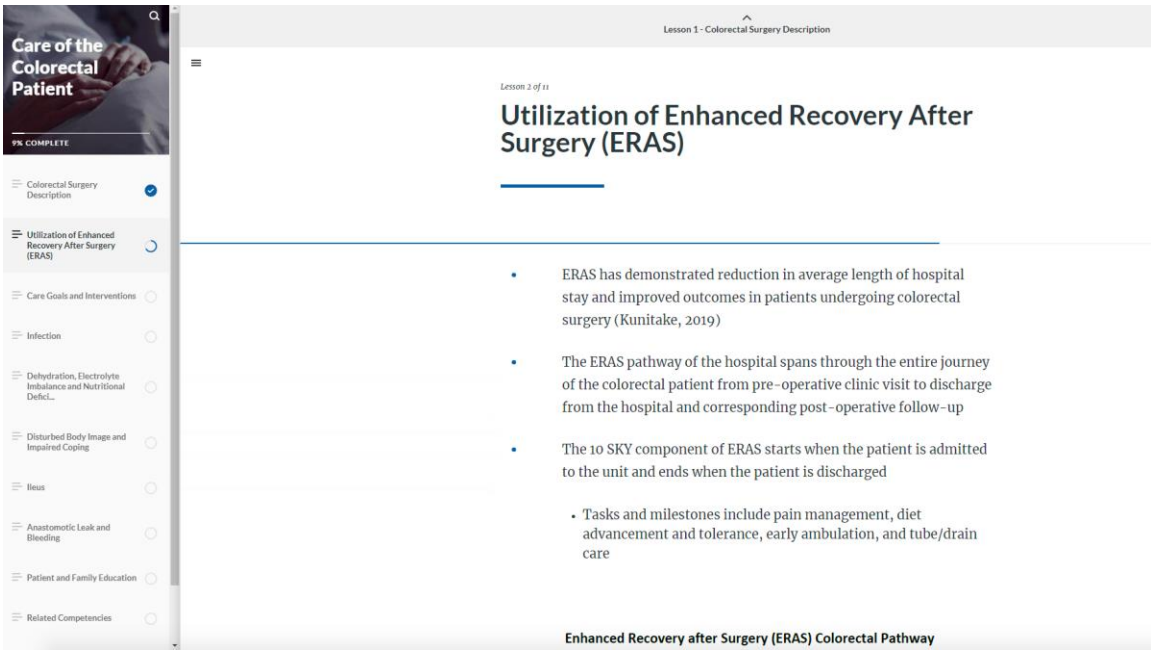


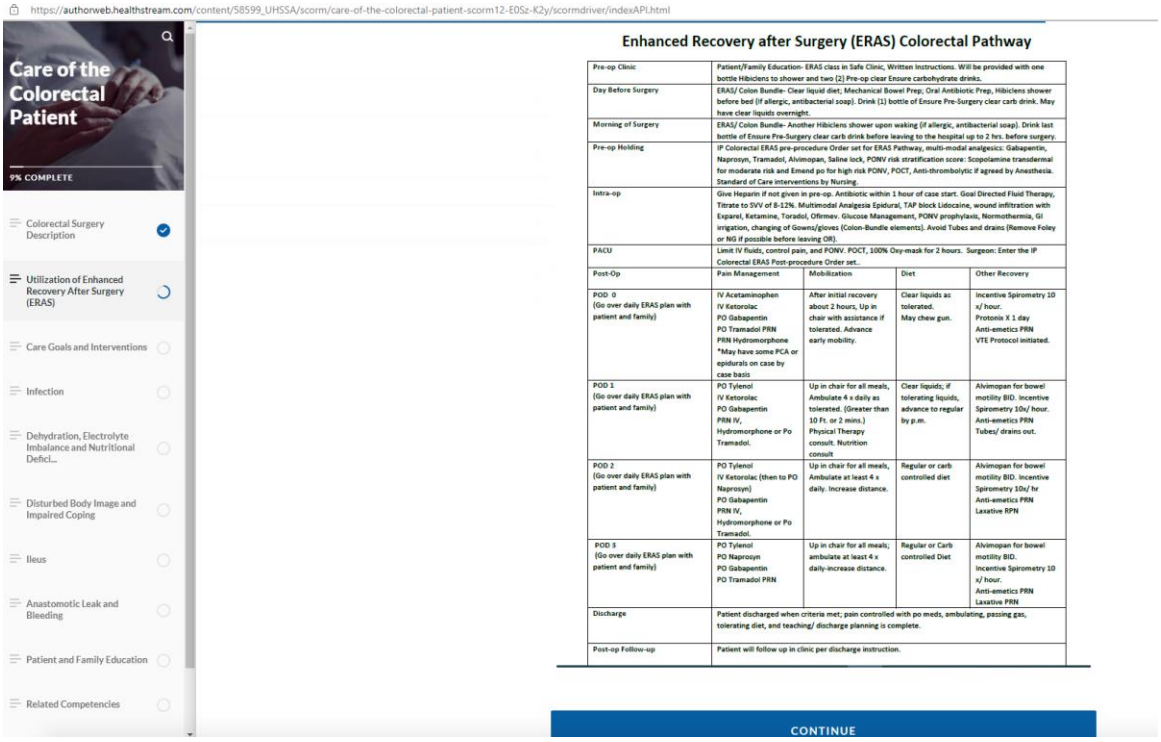


Learning Objectives:

- Identify care interventions of an Enhanced Recovery After Surgery (ERAS) patient.
- Identify the post-surgical care goals of a colorectal patient.
- Recognize specific care interventions in the prevention of surgical-related complications.
- Demonstrate the competency of ostomy care.
- Demonstrate the competency of surgical drain care. Demonstrate the competency of assisting with patient progressive ambulation.
- Appreciate the patient as a holistic being.




Care of the Colorectal Patient
9% COMPLETE
Colorectal Surgery Description
Utilization of Enhanced Recovery After Surgery (ERAS)
Care Goals and Interventions
Infection
Dehydration, Electrolyte Imbalance and Nutritional Defici...
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Lesson 1 - Colorectal Surgery Description
Lesson 2 of 11
Utilization of Enhanced Recovery After Surgery (ERAS)
ERAS has demonstrated reduction in average length of hospital stay and improved outcomes in patients undergoing colorectal surgery (Kunitake, 2019)
The ERAS pathway of the hospital spans through the entire journey of the colorectal patient from pre-operative clinic visit to discharge from the hospital and corresponding post-operative follow-up
The 10 SKY component of ERAS starts when the patient is admitted to the unit and ends when the patient is discharged
Tasks and milestones include pain management, diet advancement and tolerance, early ambulation, and tube/drain care
Enhanced Recovery after Surgery (ERAS) Colorectal Pathway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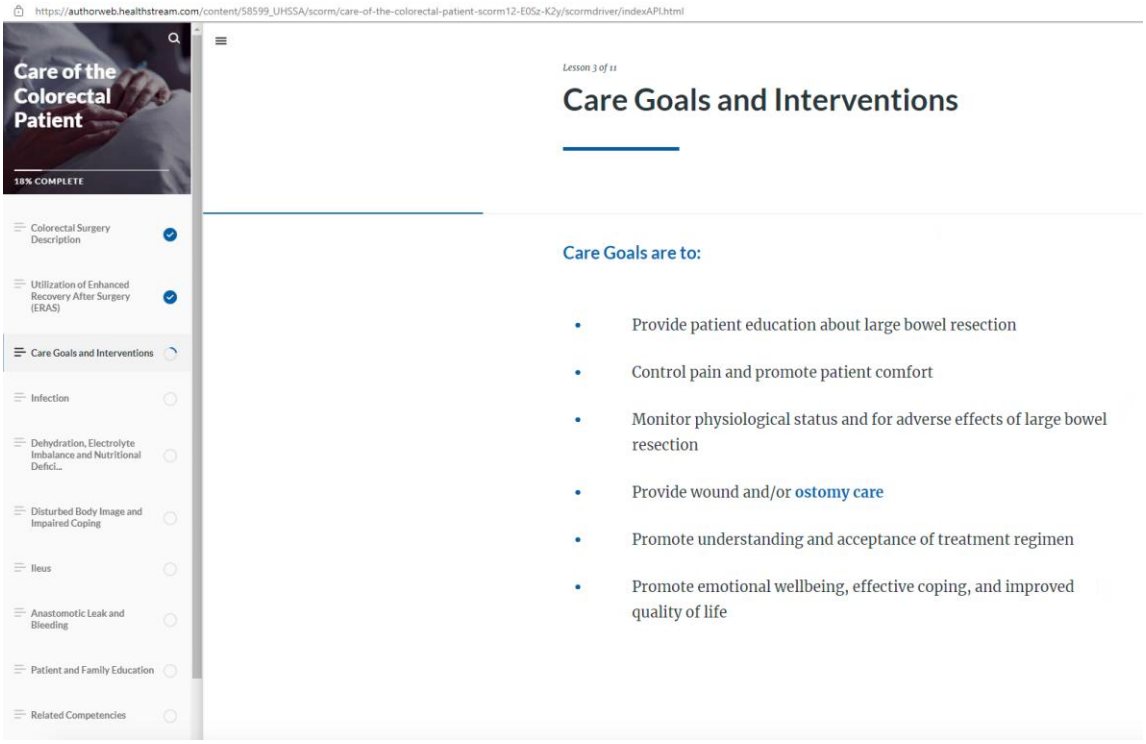
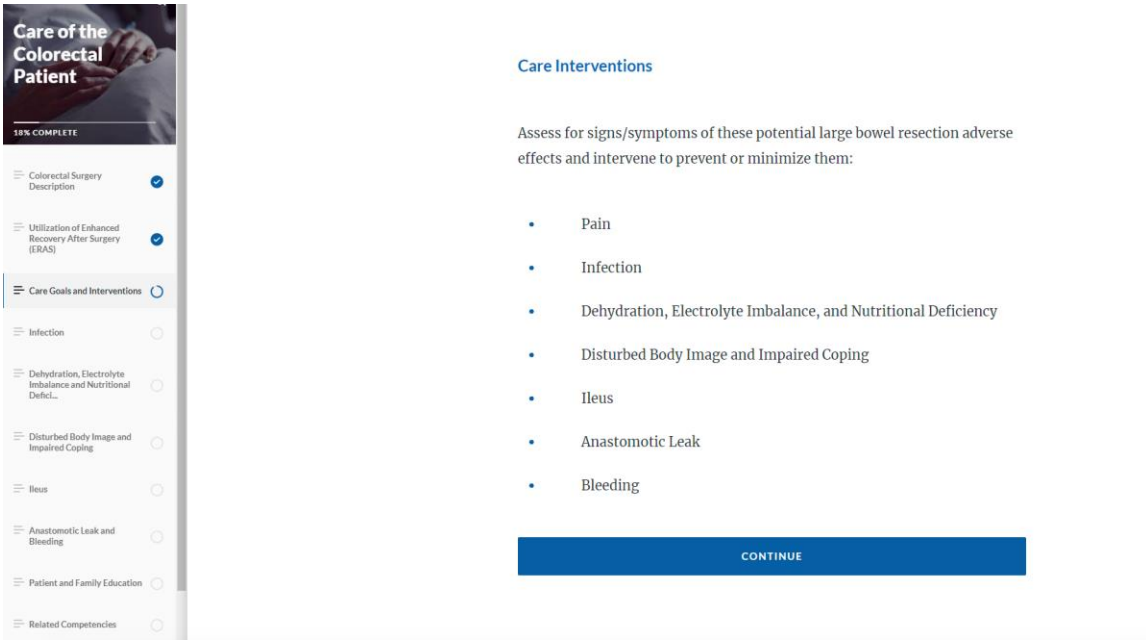
Patient and Family Education
Related Competencies
Enhanced Recovery after Surgery (ERAS) Colorectal Pathway
Pre-op Clinic
Patient/Family Education- ERAS class in Safe Clinic, Written Instructions. Will be provided with one bottle Hibiclens to shower and two (2) Pre-op clear Ensure carbohydrate drinks.
Day Before Surgery
ERAS/ Colon Bundle- Clear liquid diet; Mechanical Bowel Prep; Oral Antibiotic Prep, Hibiclens shower before bed (if allergic, antibacterial soap). Drink (1) bottle of Ensure Pre-Surgery clear carb drink. May have clear liquids overnight.
Morning of Surgery
ERAS/ Colon Bundle- Another Hibiclens shower upon waking (if allergic, antibacterial soap). Drink last bottle of Ensure Pre-Surgery clear carb drink before leaving to the hospital up to 2 hrs. before surgery.
Pre-op Holding
IP Colorectal ERAS pre-procedure Order set for ERAS Pathway, multi-modal analgesics: Gabapentin, Naprosyn, Tramadol, Alvimopan, Saline lock, PONV risk stratification score: Scopolamine transdermal for moderate risk and Emend po for high risk PONV, POCT, Anti-thrombolytic if agreed by Anesthesia. Standard of Care interventions by Nursing.
Intra-op
Give Heparin if not given in pre-op. Antibiotic within 1 hour of case start. Goal Directed Fluid Therapy, Titrate to SVV of 8-12%. Multimodal Analgesia Epidural, TAP block Lidocaine, wound infiltration with Exparel, Ketamine, Toradol, Ofirmev. Glucose Management, PONV prophylaxis, Normothermia, GI irrigation, changing of Gowns/gloves (Colon-Bundle elements). Avoid Tubes and drains (Remove Foley or NG if possible before leaving OR).
PACU
Limit IV fluids, control pain, and PONV. POCT, 100% Oxy-mask for 2 hours. Surgeon: Enter the IP Colorectal ERAS Post-procedure Order set.
Post-Op
Pain Management
Mobilization
Diet
Other Recovery
POD 0 (Go over daily ERAS plan with patient and family)
IV Acetaminophen IV Ketorolac PO Gabapentin PO Tramadol PRN PRN Hydromorphone *May have some PCA or epidurals on case by case basis
After initial recovery about 2 hours, Up in chair with assistance if tolerated. Advance early mobility.
Clear liquids as tolerated. May chew gun.
Incentive Spirometry 10 x/ hour. Protonix X 1 day Anti-emetics PRN VTE Protocol initiated.
POD 1 (Go over daily ERAS plan with patient and family)
PO Tylenol IV Ketorolac PO Gabapentin PRN IV, Hydromorphone or Po Tramadol.
Up in chair for all meals, Ambulate 4 x daily as tolerated. (Greater than 10 Ft. or 2 mins.) Physical Therapy consult. Nutrition consult
Clear liquids; if tolerating liquids, advance to regular by p.m.
Alvimopan for bowel motility BID. Incentive Spirometry 10x/ hour. Anti-emetics PRN Tubes/ drains out.
POD 2 (Go over daily ERAS plan with patient and family)
PO Tylenol IV Ketorolac (then to PO Naprosyn) PO Gabapentin PRN IV, Hydromorphone or Po Tramadol.
Up in chair for all meals, Ambulate at least 4 x daily. Increase distance.
Regular or carb controlled diet
Alvimopan for bowel motility BID. Incentive Spirometry 10x/ hr Anti-emetics PRN Laxative RPN
POD 3 (Go over daily ERAS plan with patient and family)
PO Tylenol PO Naprosyn PO Gabapentin PO Tramadol PRN
Up in chair for all meals; ambulate at least 4 x daily-increase distance.
Regular or Carb controlled Diet
Alvimopan for bowel motility BID. Incentive Spirometry 10 x/ hour. Anti-emetics PRN Laxative PRN
Discharge
Patient discharged when criteria met; pain controlled with po meds, ambulating, passing gas, tolerating diet, and teaching/ discharge planning is complete.
Post-op Follow-up
Patient will follow up in clinic per discharge instruction.
CONTINUE


https://authorweb.healthstream.com/content/58599_UHSSA/scorm/care-of-the-colorectal-patient-scorm12-E0Sz-K2y/scormdriver/indexAPI.html
Care of the Colorectal Patient
18% COMPLETE
Colorectal Surgery Description
Utilization of Enhanced Recovery After Surgery (ERAS)
Care Goals and Interventions
Infection
Dehydration, Electrolyte Imbalance and Nutritional Defici...
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Lesson 3 of 11
Care Goals and Interventions
Care Goals are to:
Provide patient education about large bowel resection
Control pain and promote patient comfort
Monitor physiological status and for adverse effects of large bowel resection
Provide wound and/or ostomy care
Promote understanding and acceptance of treatment regimen
Promote emotional wellbeing, effective coping, and improved quality of life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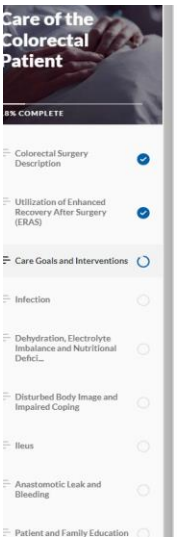
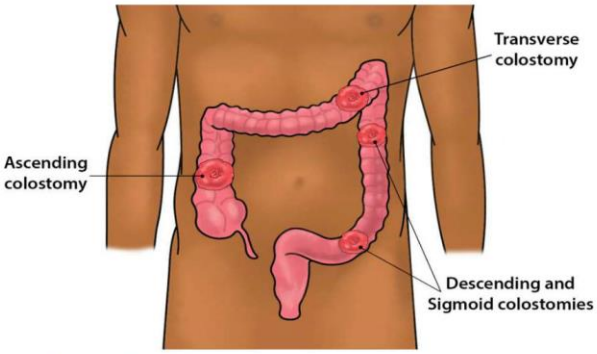
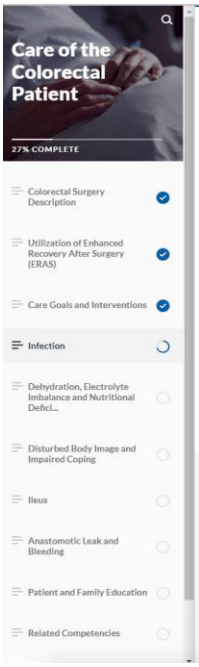
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Care Interventions
Assess for signs/symptoms of these potential large bowel resection adverse effects and intervene to prevent or minimize them:
Pain
Infection
Dehydration, Electrolyte Imbalance, and Nutritional Deficiency
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak
Bleeding
CONTINUE





Colostomy Types

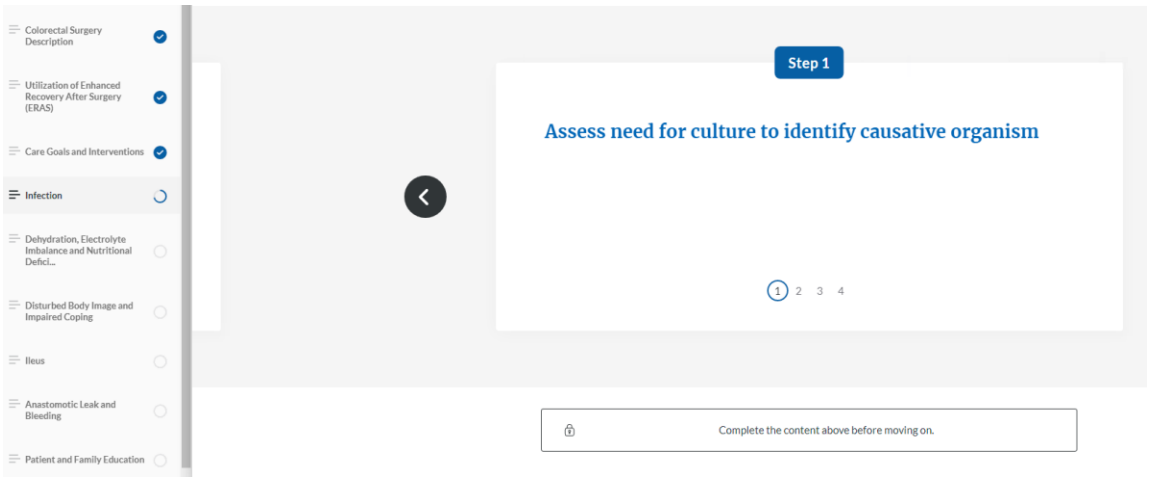


Assess for Signs/Symptoms of Infection, Including:

- Fever, chills
- Tachycardia, tachypnea, diaphoresis
- Increasing abdominal pain
- Nausea/vomiting
- Wound drainage
- Incisional dehiscence
- Altered mental status, hypotension (late stage)

Prevent or minimize infection by doing the following...

START >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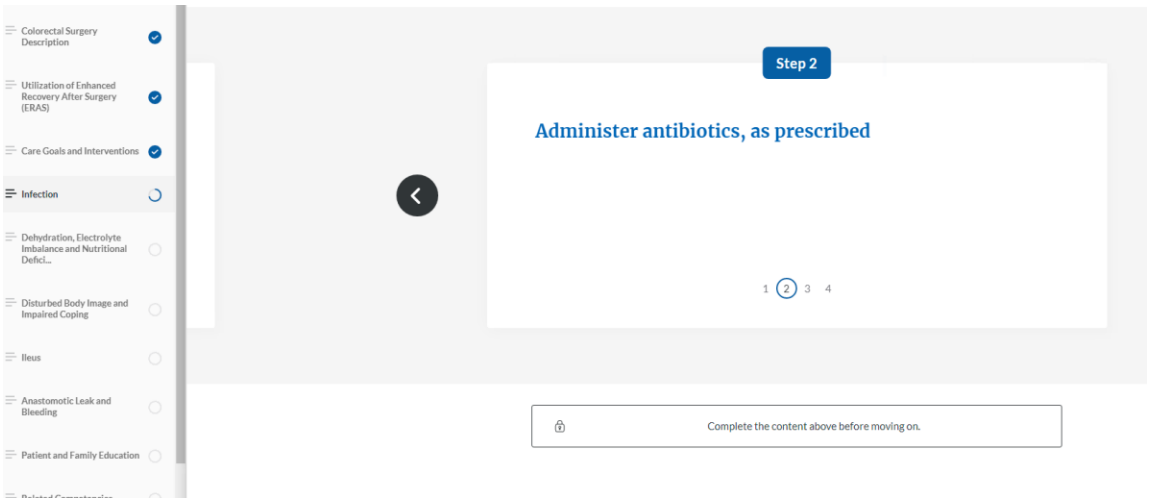
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Step 1
Assess need for culture to identify causative organism
1 2 3 4
Complete the content above before moving on.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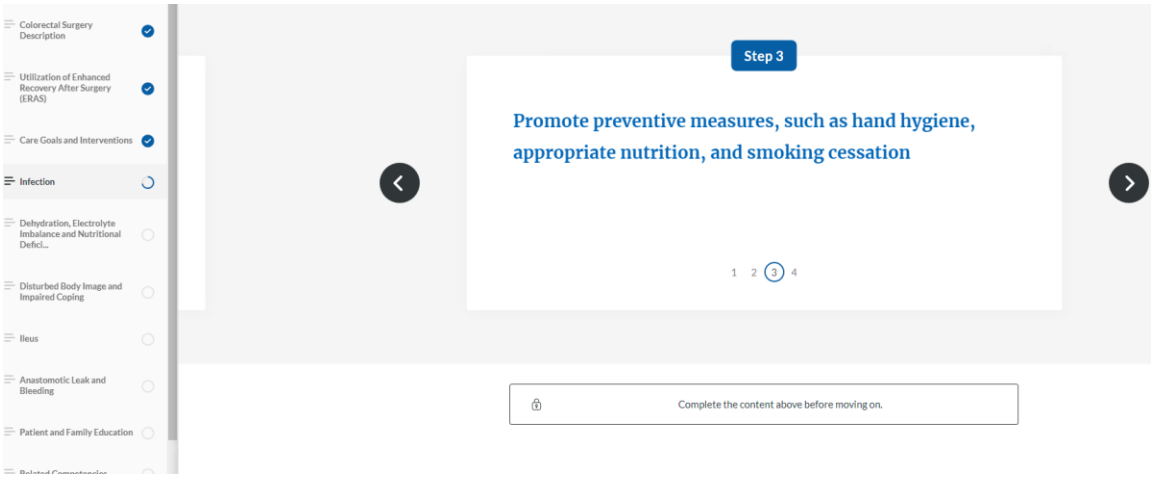
Anastomotic Leak and Bleeding
Patient and Family Education
Step 2
Administer antibiotics, as prescribed
1 2 3 4
Complete the content above before moving on.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Patient and Family Education
Step 3
Promote preventive measures, such as hand hygiene, appropriate nutrition, and smoking cessation
1 2 3 4
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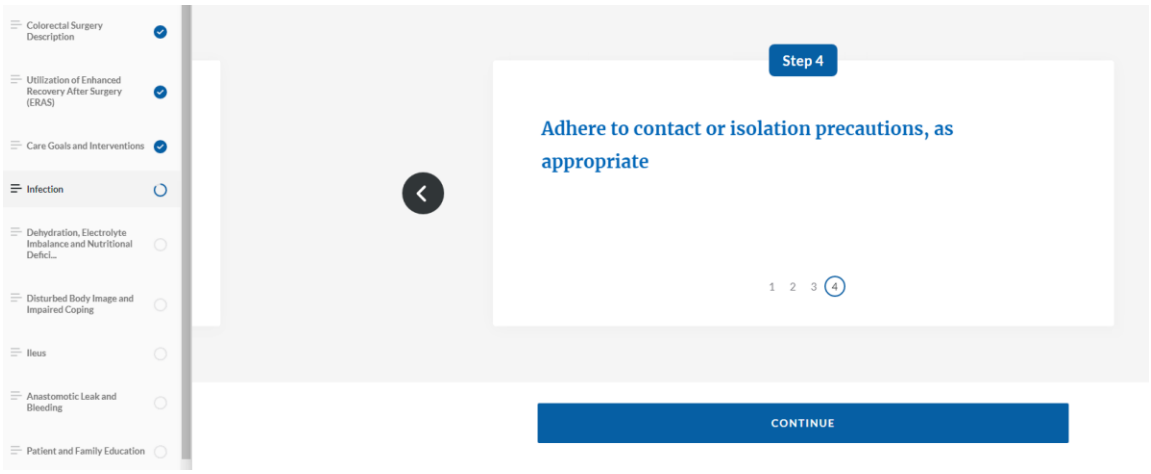
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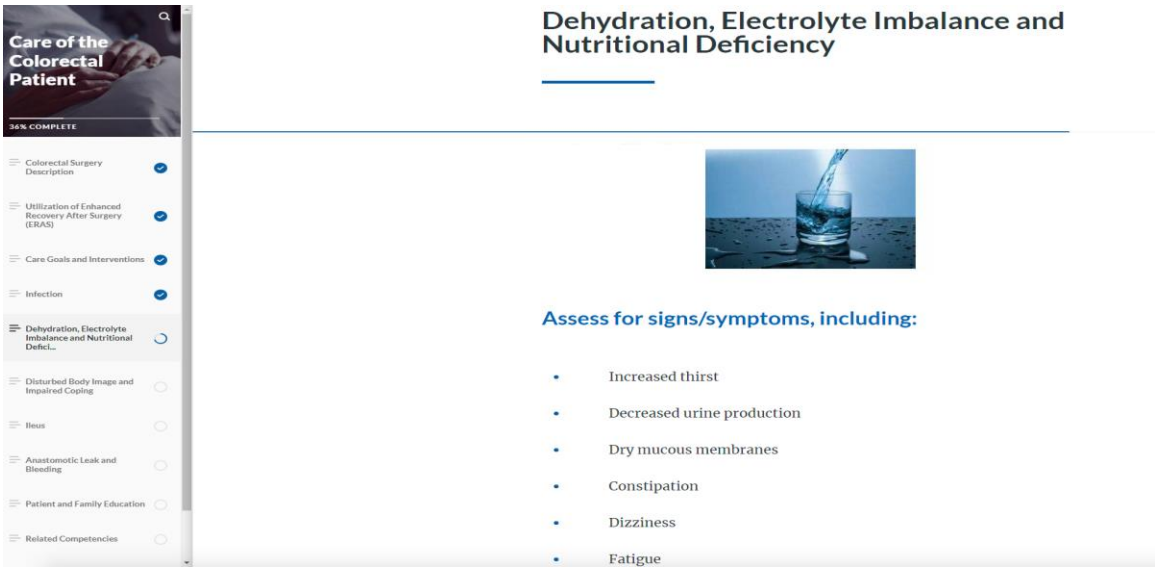
Patient and Family Education
Step 4
Adhere to contact or isolation precautions, as appropriate
1 2 3 4
CONTINUE


Care of the Colorectal Patient
36% COMPLETE
Colorectal Surgery Description
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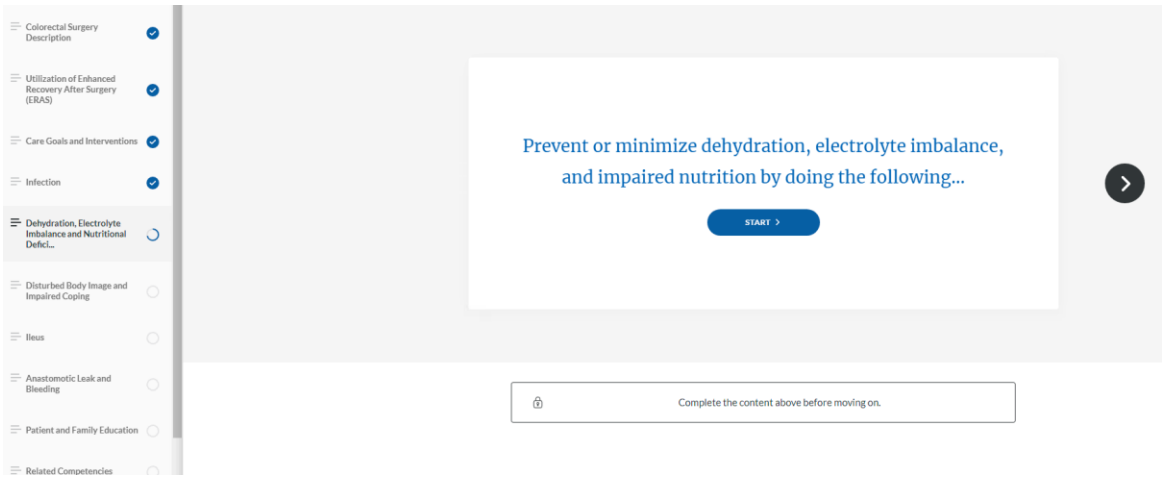
Care Goals and Interventions
Infection
Dehydration, Electrolyte Imbalance and Nutritional Defici...
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Dehydration, Electrolyte Imbalance and Nutritional Deficiency
Assess for signs/symptoms, including:
Increased thirst
Decreased urine production
Dry mucous membranes
Constipation
Dizziness
Fatigue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Care Goals and Interventions
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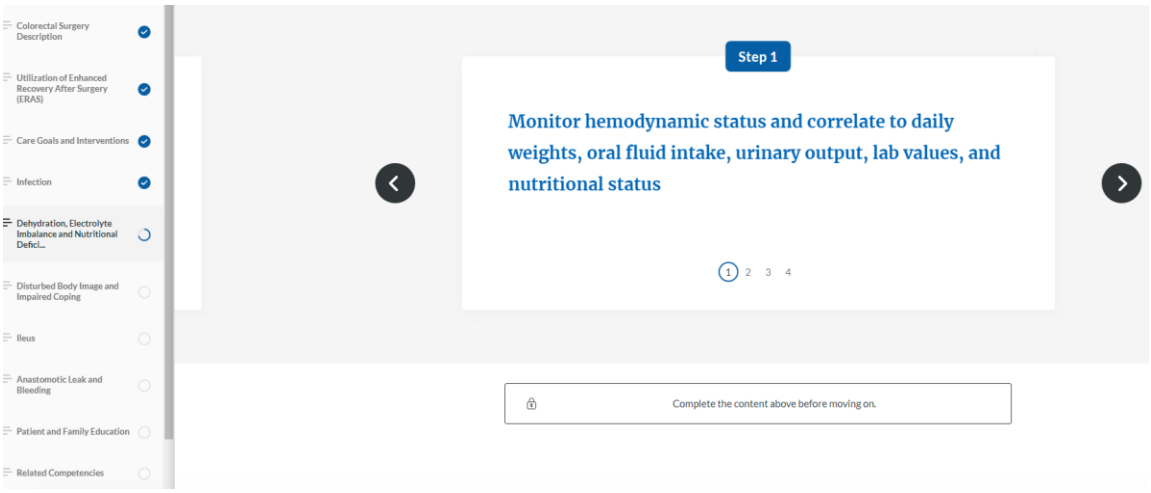
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Prevent or minimize dehydration, electrolyte imbalance, and impaired nutrition by doing the following...
START
Complete the content above before moving on.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Disturbed Body Image and Impaired Coping
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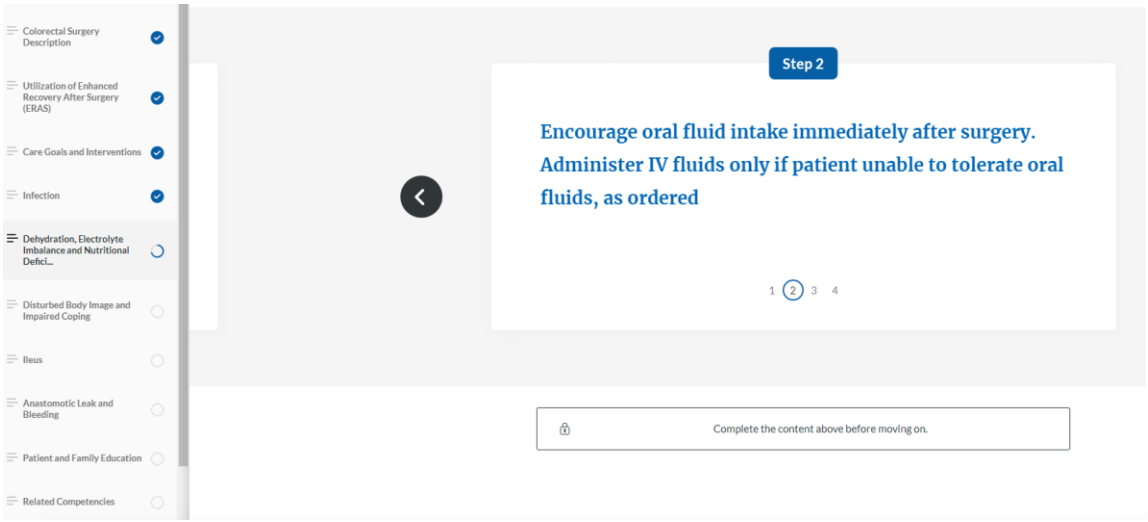
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Step 1
Monitor hemodynamic status and correlate to daily weights, oral fluid intake, urinary output, lab values, and nutritional status
1 2 3 4
Complete the content above before moving on.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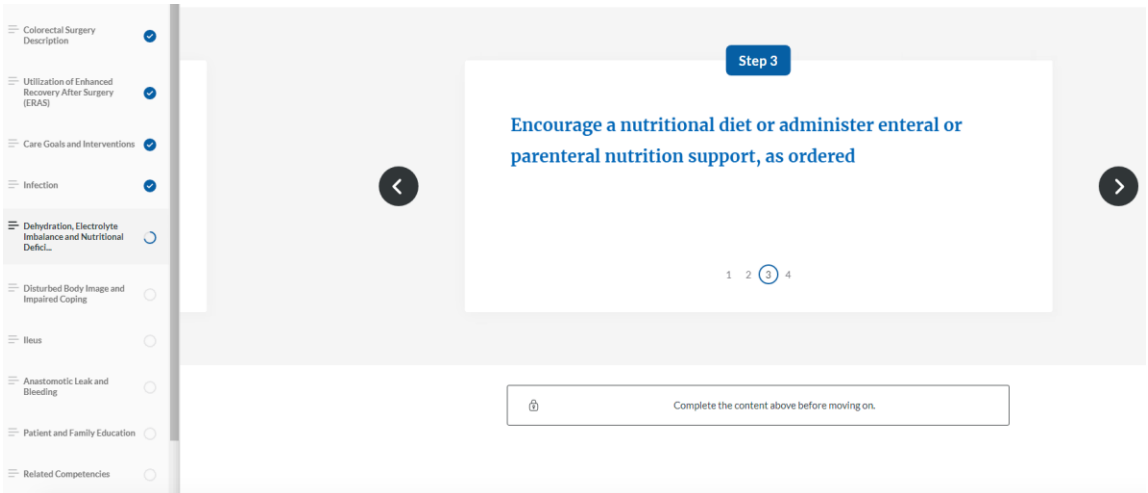
Patient and Family Education
Related Competencies
Step 2
Encourage oral fluid intake immediately after surgery. Administer IV fluids only if patient unable to tolerate oral fluids, as ordered
1 2 3 4
Complete the content above before moving on.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Patient and Family Education
Related Competencies
Step 3
Encourage a nutritional diet or administer enteral or parenteral nutrition support, as ordered
1 2 3 4
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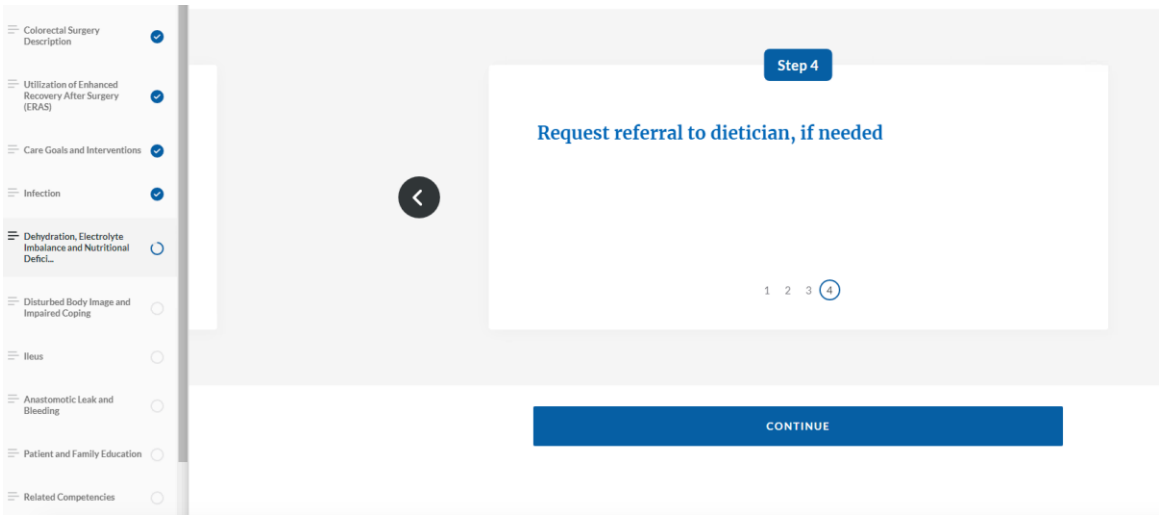
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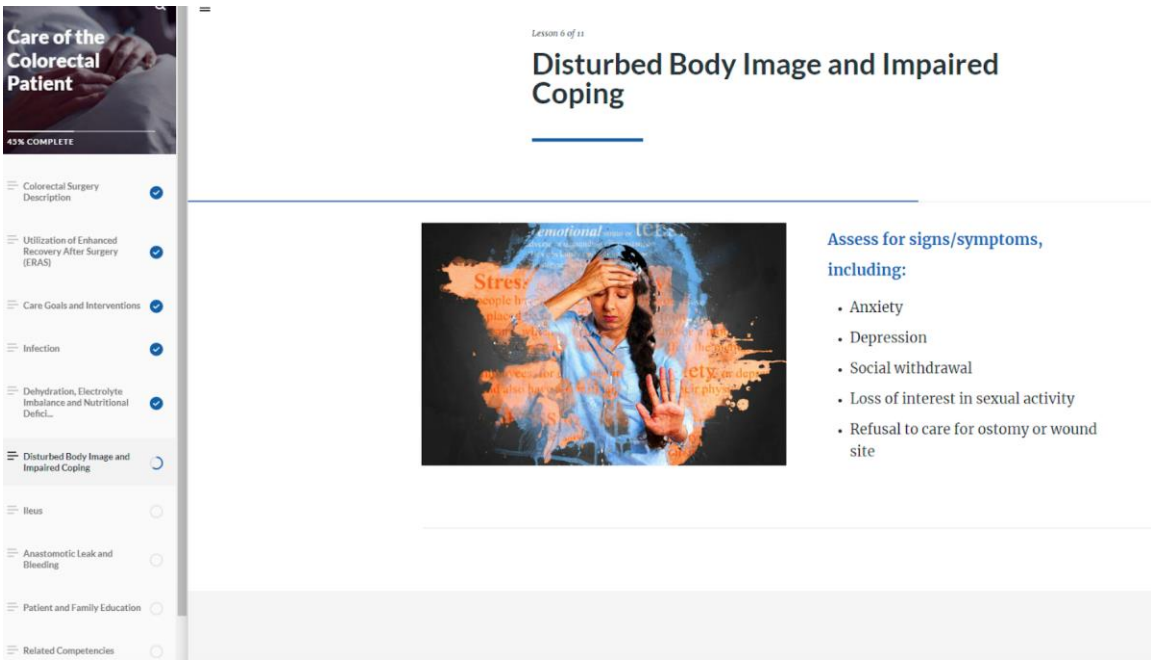
Patient and Family Education
Related Competencies
Step 4
Request referral to dietician, if needed
1 2 3 4
CONTINUE


Care of the Colorectal Patient
45% COMPLETE
Colorectal Surgery Description
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Infection
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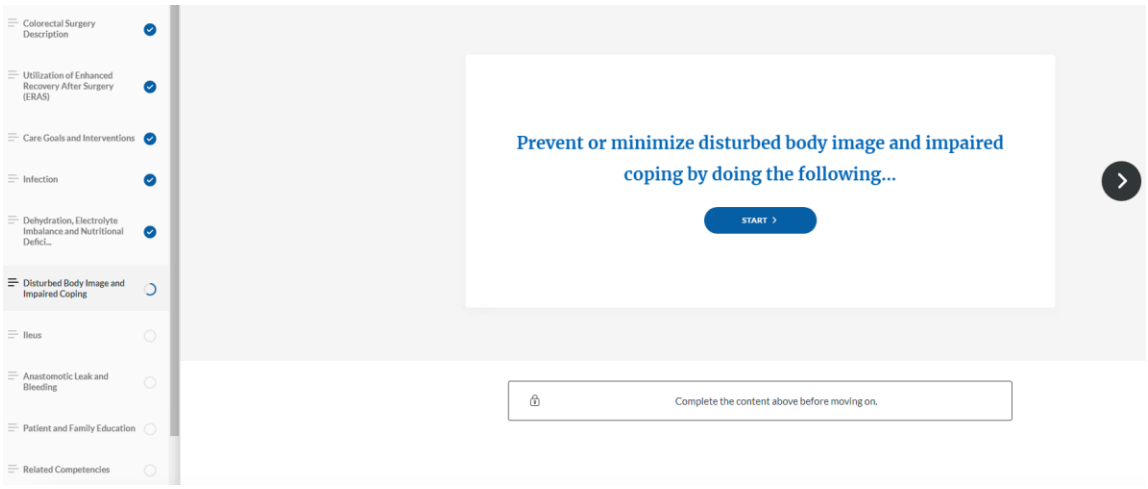
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Lesson 6 of 11
Disturbed Body Image and Impaired Coping
Assess for signs/symptoms, including:
Anxiety
Depression
Social withdrawal
Loss of interest in sexual activity
Refusal to care for ostomy or wound site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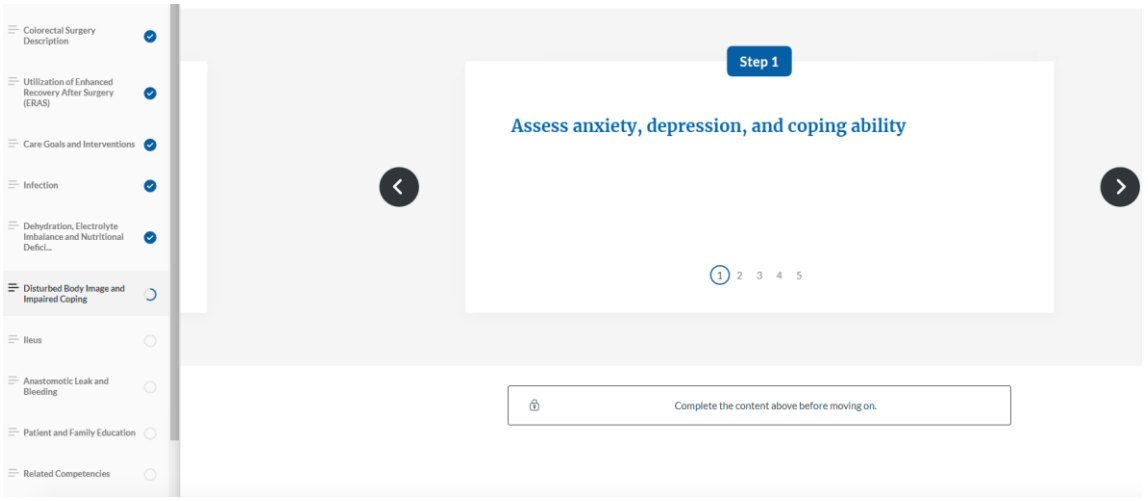
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Prevent or minimize disturbed body image and impaired coping by doing the following...
START
Complete the content above before moving on.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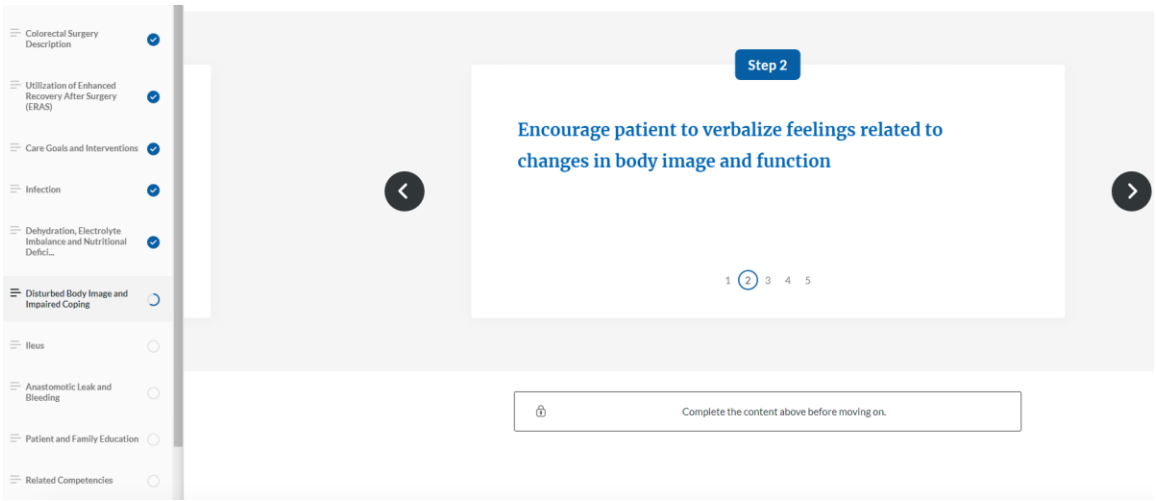
Patient and Family Education
Related Competencies
Step 1
Assess anxiety, depression, and coping ability
1 2 3 4 5
Complete the content above before moving on.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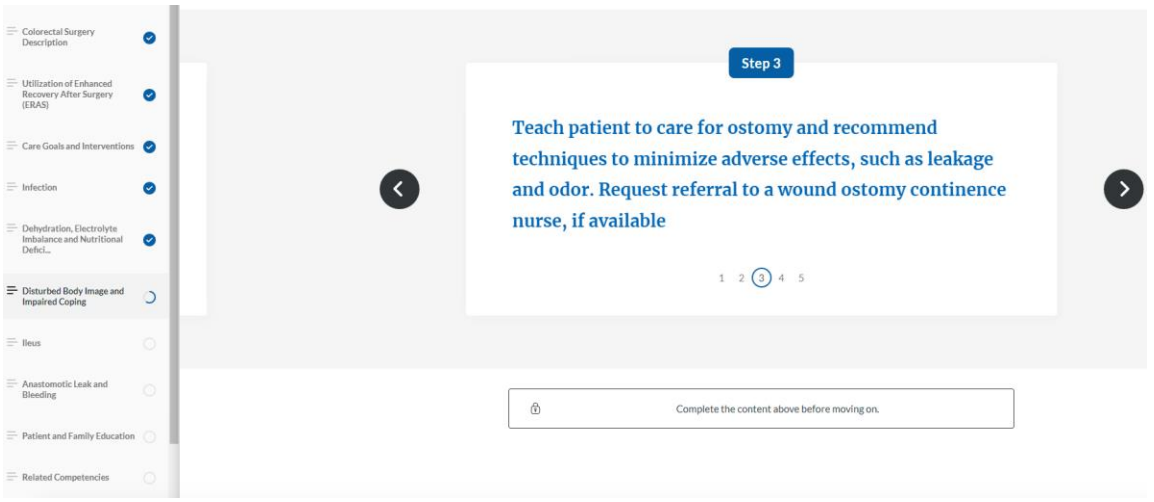
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Step 2
Encourage patient to verbalize feelings related to changes in body image and function
1 2 3 4 5
Complete the content above before moving on.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Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Step 3
Teach patient to care for ostomy and recommend techniques to minimize adverse effects, such as leakage and odor. Request referral to a wound ostomy continence nurse, if available
1 2 3 4 5
Complete the content above before moving on.


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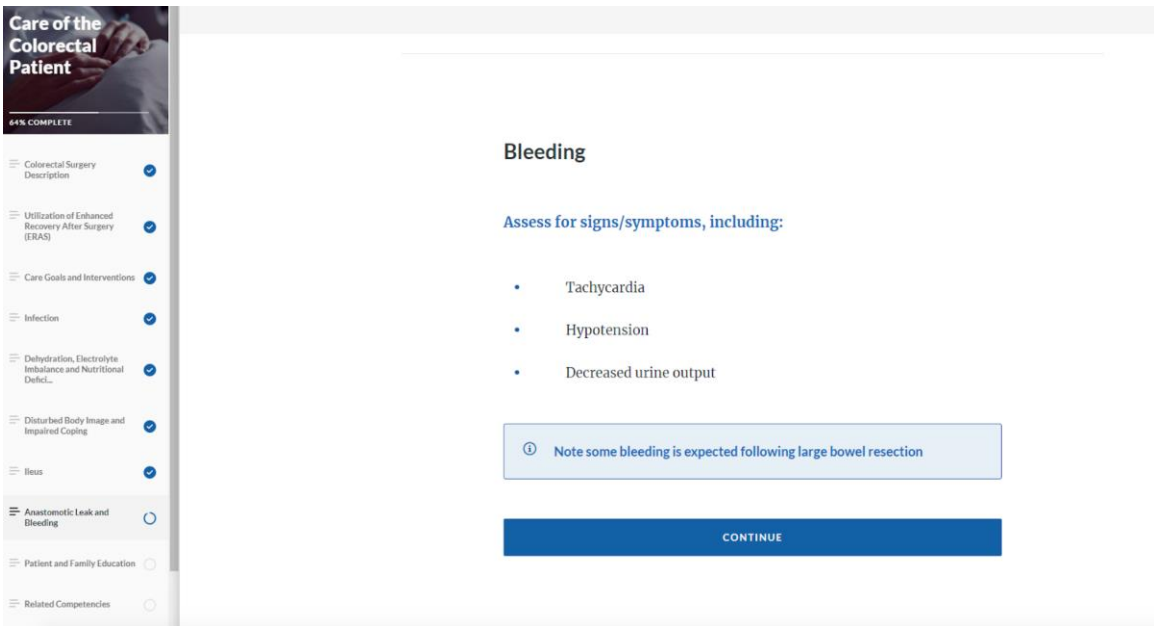
Anastomotic Leak and Bleeding
Patient and Family Education
Step 4
Encourage patient to participate in support groups
1 2 3 4 5
Complete the content above before moving on.


Care of the Colorectal Patient
64% COMPLETE
Colorectal Surgery Description
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Care Goals and Interventions
Infection
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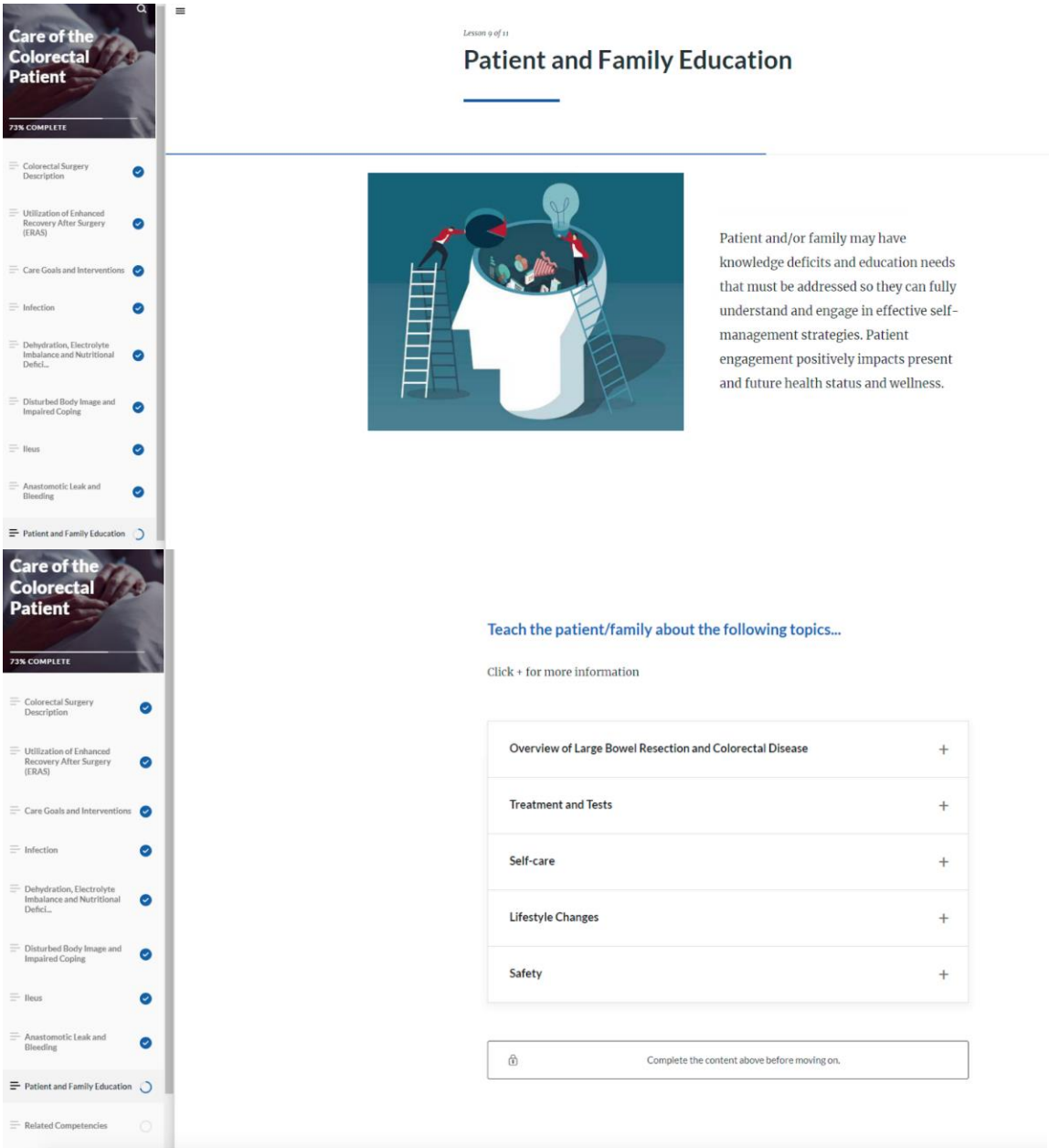
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Bleeding
Assess for signs/symptoms, including:
Tachycardia
Hypotension
Decreased urine output
Note some bleeding is expected following large bowel resection
CONTINUE


Care of the Colorectal Patient
73% COMPLETE
Colorectal Surgery Description
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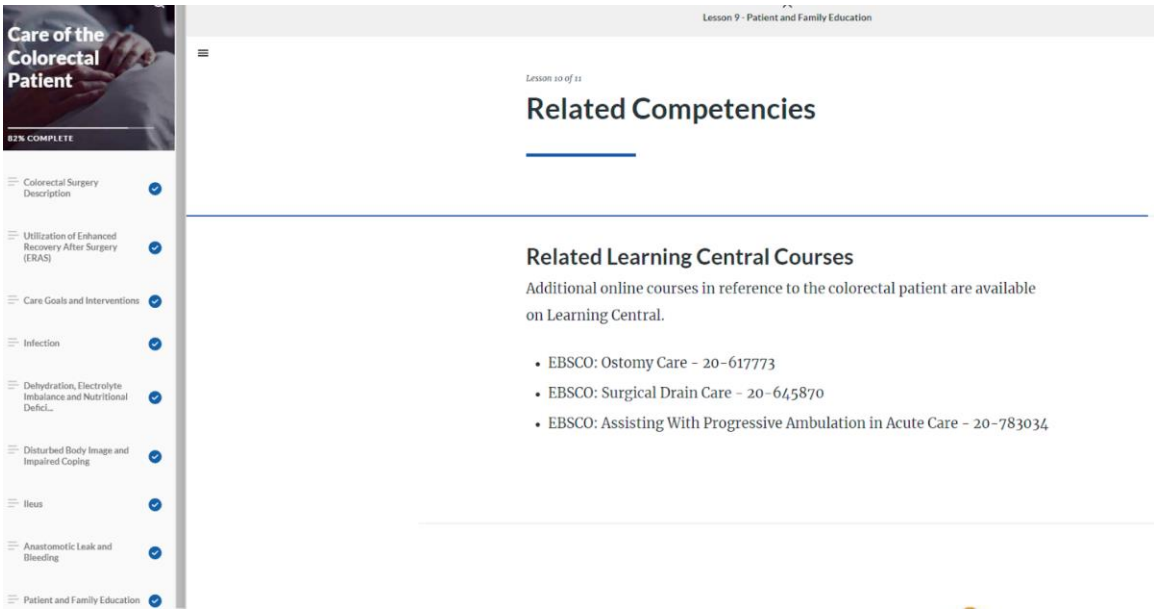
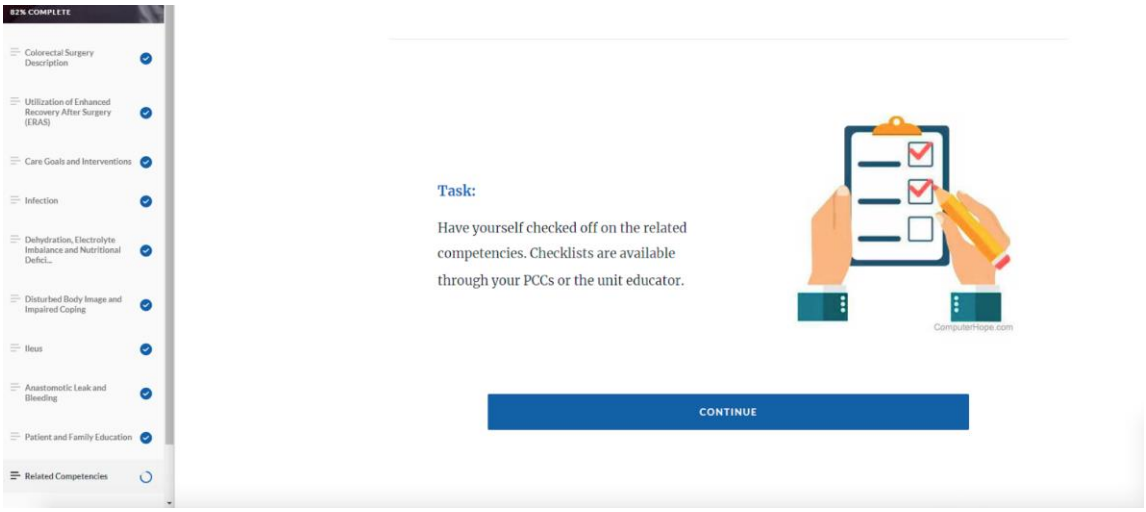
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Lesson 9 of 11
Patient and Family Education
Patient and/or family may have knowledge deficits and education needs that must be addressed so they can fully understand and engage in effective self-management strategies. Patient engagement positively impacts present and future health status and wellness.
Teach the patient/family about the following topics...
Click + for more information
Overview of Large Bowel Resection and Colorectal Disease
Treatment and Tests
Self-care
Lifestyle Changes
Safety
Complete the content above before moving on.


Care of the Colorectal Patient
82% COMPLETE
Colorectal Surgery Description
Utilization of Enhanced Recovery After Surgery (ERAS)
Care Goals and Interventions
Infection
Dehydration, Electrolyte Imbalance and Nutritional Defici...
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Lesson 9 - Patient and Family Education
Lesson 10 of 11
Related Competencies
Related Learning Central Courses
Additional online courses in reference to the colorectal patient are available on Learning Central.
EBSCO: Ostomy Care - 20-617773
EBSCO: Surgical Drain Care - 20-645870
EBSCO: Assisting With Progressive Ambulation in Acute Care - 20-783034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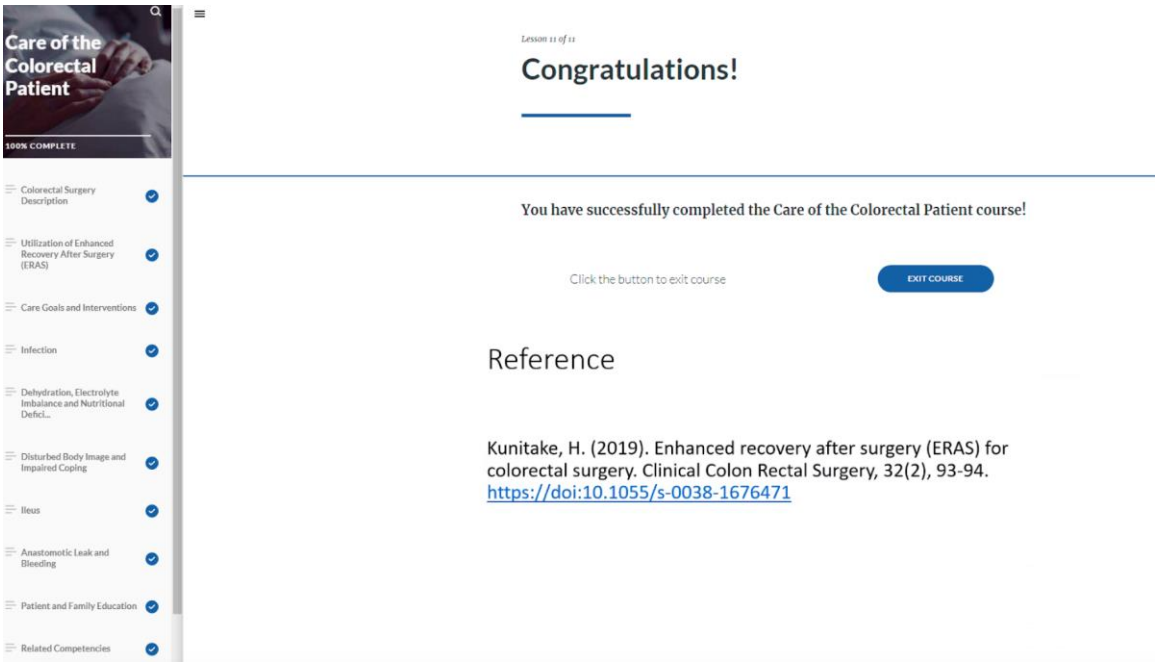
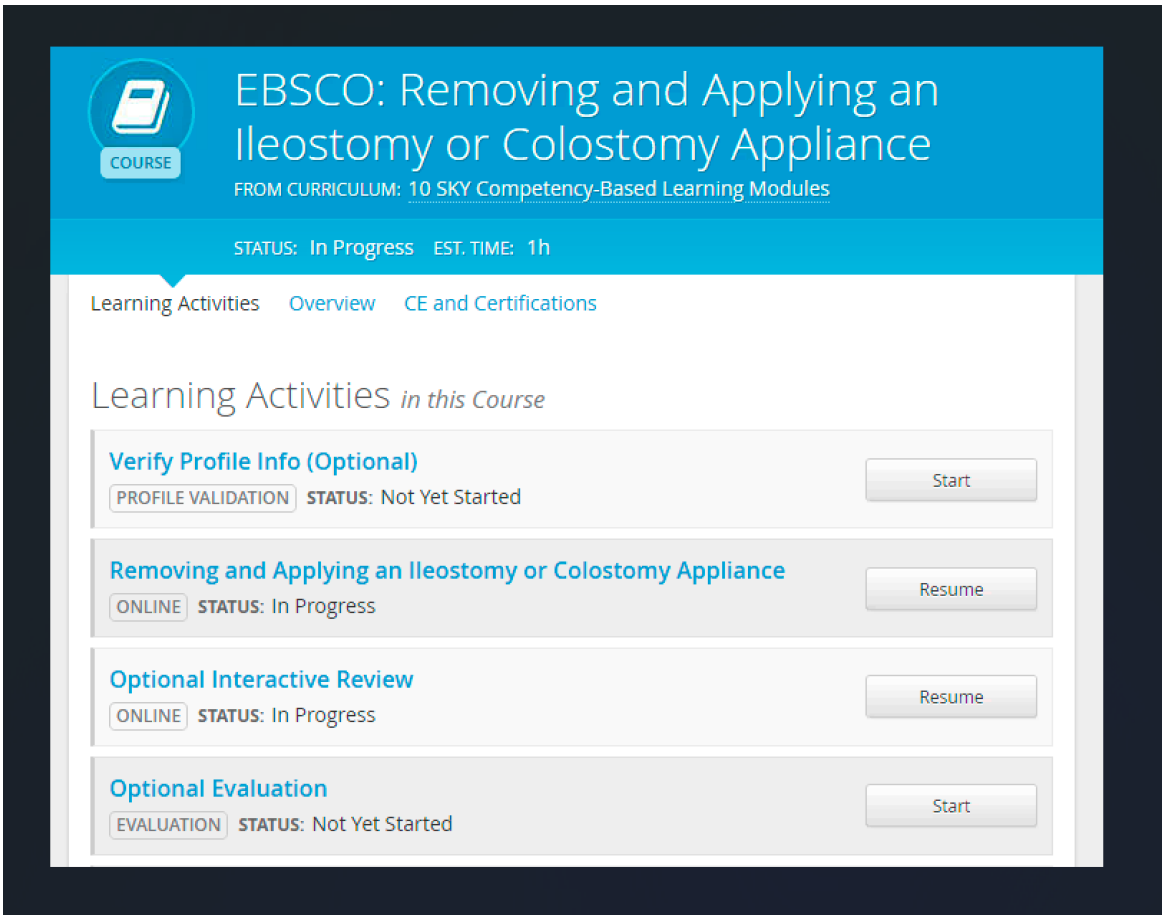
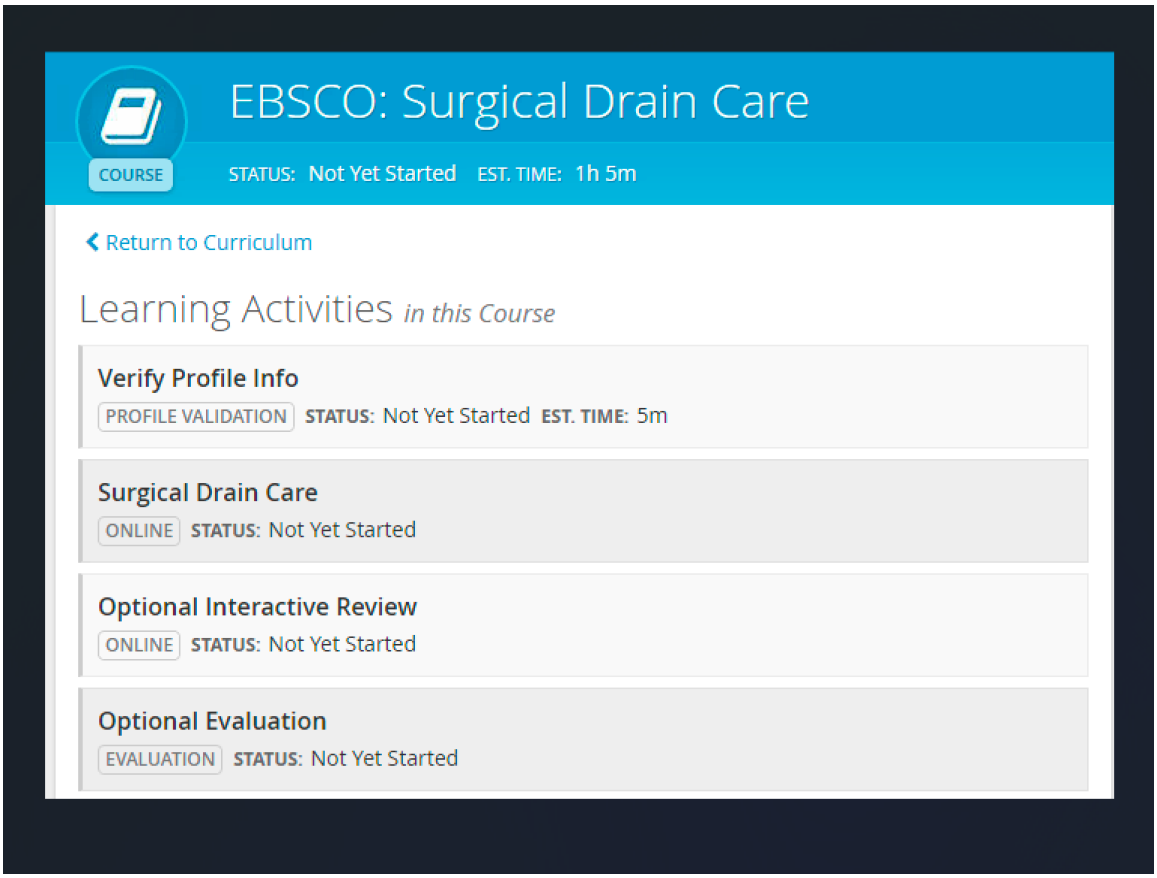
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Task:
Have yourself checked off on the related competencies. Checklists are available through your PCCs or the unit educator.
ComputerHope.com
CONTINUE


Care of the Colorectal Patient
100% COMPLETE
Colorectal Surgery Description
Utilization of Enhanced Recovery After Surgery (ERAS)
Care Goals and Interventions
Infection
Dehydration, Electrolyte Imbalance and Nutritional Defici...
Disturbed Body Image and Impaired Coping
Ileus
Anastomotic Leak and Bleeding
Patient and Family Education
Related Competencies
Lesson 11 of 11
Congratulations!
You have successfully completed the Care of the Colorectal Patient course!
Click the button to exit course
EXIT COURSE
Reference
Kunitake, H. (2019). Enhanced recovery after surgery (ERAS) for colorectal surgery. Clinical Colon Rectal Surgery, 32(2), 93-94. https://doi:10.1055/s-0038-1676471


COURSE
EBSCO: Removing and Applying an Ileostomy or Colostomy Appliance
FROM CURRICULUM: 10 SKY Competency-Based Learning Modules
STATUS: In Progress EST. TIME: 1h
Learning Activities
Overview
CE and Certifications
Learning Activities in this Course
Verify Profile Info (Optional)
PROFILE VALIDATION STATUS: Not Yet Started
Start
Removing and Applying an Ileostomy or Colostomy Appliance
ONLINE STATUS: In Progress
Resume
Optional Interactive Review
ONLINE STATUS: In Progress
Resume
Optional Evaluation
EVALUATION STATUS: Not Yet Started
Start


EBSCO: Surgical Drain Care
COURSE
STATUS: Not Yet Started EST. TIME: 1h 5m
Return to Curriculum
Learning Activities in this Course
Verify Profile Info
PROFILE VALIDATION STATUS: Not Yet Started EST. TIME: 5m
Surgical Drain Care
ONLINE STATUS: Not Yet Started
Optional Interactive Review
ONLINE STATUS: Not Yet Started
Optional Evaluation
EVALUATION STATUS: Not Yet Started


EBSCO Health
Providing Surgical Drain Care
Guide
Videos
Images
-1:15
VIDEO 1
Caring for Hemovac Drainage System
Copyright ©2018, EBSCO Information Services
View in Guide
-0:37
VIDEO 2
Caring for Jackson-Pratt Drain
Steps 9-15.
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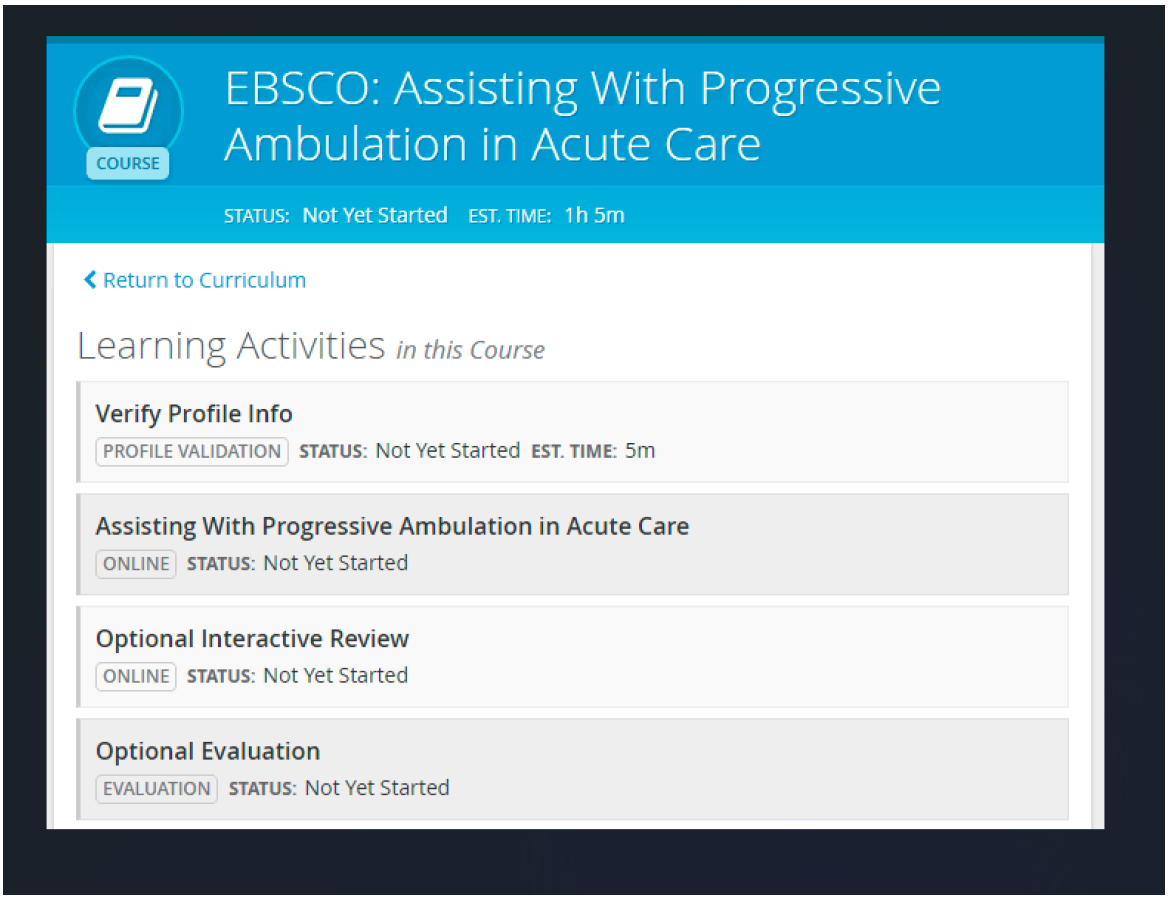
View in Guide


COURSE
EBSCO: Assisting With Progressive Ambulation in Acute Care
STATUS: Not Yet Started EST. TIME: 1h 5m
Return to Curriculum
Learning Activities in this Course
Verify Profile Info
PROFILE VALIDATION STATUS: Not Yet Started EST. TIME: 5m
Assisting With Progressive Ambulation in Acute Care
ONLINE STATUS: Not Yet Started
Optional Interactive Review
ONLINE STATUS: Not Yet Started
Optional Evaluation
EVALUATION STATUS: Not Yet Started


COURSE
10 SKY - Care of the Joint Arthroplasty Patient
FROM CURRICULUM: 10 SKY Competency-Based Learning Modules
STATUS: Not Yet Started EST. TIME: 30m
Learning Activities
Overview
Learning Activities in this Course
10 SKY - Care of the Joint Arthroplasty Patient
ONLINE STATUS: Not Yet Started
Start
Description
Primarily, the goal of the learning material is to increase the level of knowledge, competency and attitude among 10 SKY nurses in the care of this group of patients.

Learning Objectives:

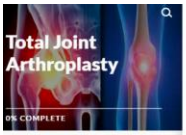
·Identify the tasks and milestones in the Primary Hip/Knee Joint Arthroplasty Clinical Pathway.

·Recognize specific care interventions in the prevention of surgical-related complications.

·Describe the care goals of caring a joint hip/knee post-operative patient.

·Demonstrate the competency of teaching patients in the use of a walker. ·Demonstrate transferring a patient from a bed to a chair.

·Appreciate the patient as a holistic being.



- Total Knee/Hip Arthroplasty Description
- Clinical Pathway
- Post Operative Care - Goals and Interventions
- Surgical Site Infections, Bleeding and Thromboembolisms
- Pain, Nerve Damage and Functional Mobility
- Patient and Family Education
- Related Competencies
- Congratulations!

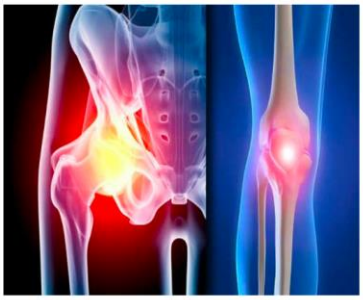
Total Knee/Hip Arthroplasty Description

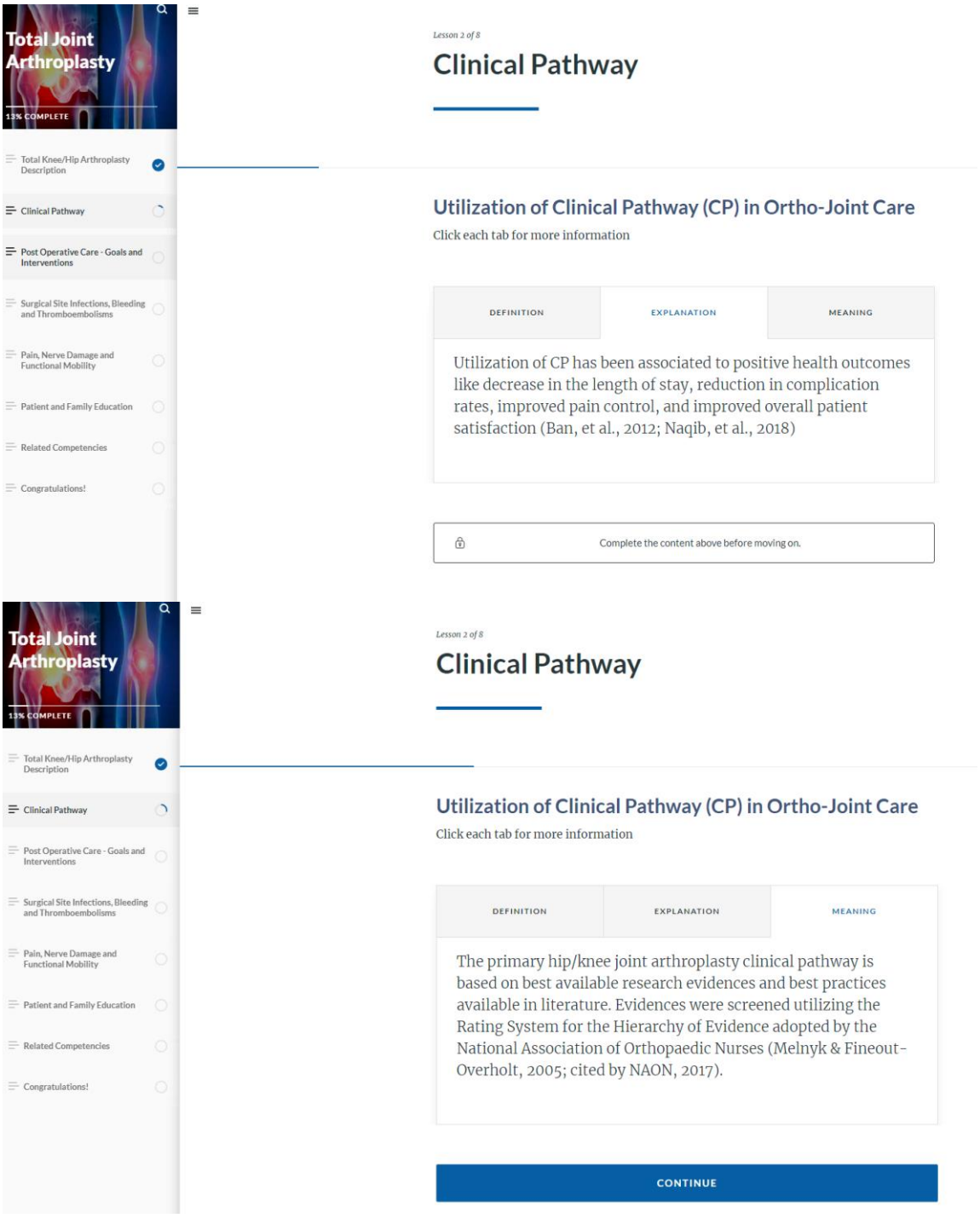
Description:

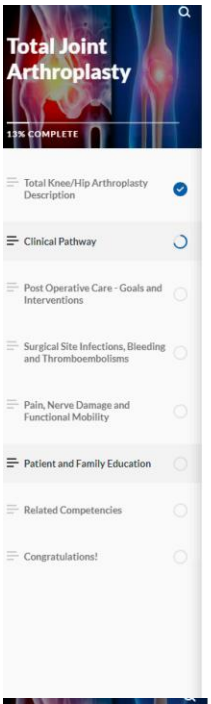
·Total joint arthroplasty (TJA) is the most commonly performed elective surgery that can effectively manage disability brought about by osteoarthritis (IHI, 2013)

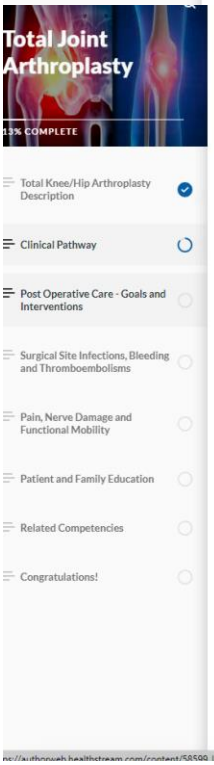
·TJA has been correlated to positive patient outcomes such as improvement in pain, function, and quality of life (Trieu, et. al., 2020)

·It is predicted that TJA specifically total hip and knee joint arthroplasty (THA, TKA) will have significant increase in use by 75% and 110% for THA and TKA respectively come 2025 (Singh, et. al, 2019).



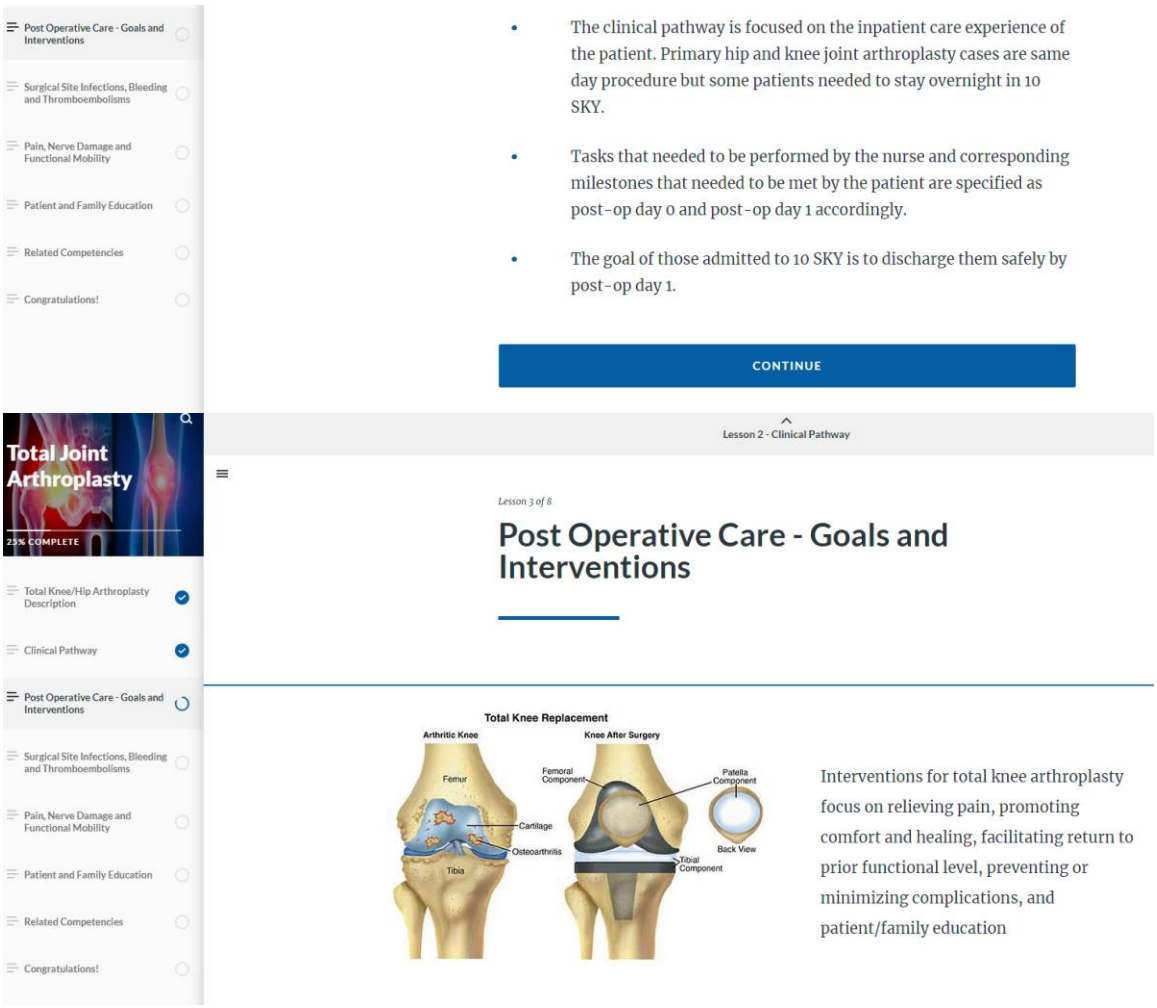

Total Joint Arthroplasty
13% COMPLETE
Total Knee/Hip Arthroplasty Description
Clinical Pathway
Post Operative Care - Goals and Interventions
Surgical Site Infections, Bleeding and Thromboembolisms
Pain, Nerve Damage and Functional Mobility
Patient and Family Education
Related Competencies
Congratulations!
Lesson 2 of 8
Clinical Pathway
Utilization of Clinical Pathway (CP) in Ortho-Joint Care
Click each tab for more information
DEFINITION
EXPLANATION
MEANING
Utilization of CP has been associated to positive health outcomes like decrease in the length of stay, reduction in complication rates, improved pain control, and improved overall patient satisfaction (Ban, et al., 2012; Naqib, et al., 2018)
Complete the content above before moving on.
Total Joint Arthroplasty
13% COMPLETE
Total Knee/Hip Arthroplasty Description
Clinical Pathway
Post Operative Care - Goals and Interventions
Surgical Site Infections, Bleeding and Thromboembolisms
Pain, Nerve Damage and Functional Mobility
Patient and Family Education
Related Competencies
Congratulations!
Lesson 2 of 8
Clinical Pathway
Utilization of Clinical Pathway (CP) in Ortho-Joint Care
Click each tab for more information
DEFINITION
EXPLANATION
MEANING
The primary hip/knee joint arthroplasty clinical pathway is based on best available research evidences and best practices available in literature. Evidences were screened utilizing the Rating System for the Hierarchy of Evidence adopted by the National Association of Orthopaedic Nurses (Melnyk & Fineout-Overholt, 2005; cited by NAON, 2017).
CONTINUE





Patient Sticker	10 SKY Arrival Time: _____

Post-op Day #0 Tasks and Milestones	***Done***	***Comments***
Received PACU hand-off report		
Release signed and held orders from PACU		
Review pertinent notes (surgery and anesthesia notes)		
Receive and welcome patient/family to unit • Environmental orientation • GWN admission education		
Admission and discharge planning: • Account belongings • Enter and review home medication list • Call MD for medication reconciliation • Walker at bedside • Discharge clothes available • Discharge transportation set-up		***If none***: follow up with family or case management appropriately
Post-op observations and assessment • Patient alert and oriented • Surgical site dressing – intact, clean and dry • Braden Score: _____ • Morse Score: _____		***Braden <18***: initiate intervention bundle ***Morse >35***: initiate intervention bundle
Post-op day 0 milestones • Physical Therapy initial assessment • SCDs on upon arrival to unit • Incentive spirometer 10x/hour while awake • Sit at the side of the bed • Pain well-controlled (utilization of multi-modal pain regiment) o Pain goal discussed o Regular pain assessment per unit protocol • Eating and drinking normally (no nausea and vomiting) • Hemodynamically stable • Rounded by leadership • Case management initial assessment (notify case management of arrival to unit)		Physical therapy to patient time: _____ SCDs initiation time: _____ *Include family or support person and utilize teach back method for all education.*
pain regiment) o Pain goal discussed o Regular pain assessment per unit protocol • Eating and drinking normally (no nausea and vomiting) • Hemodynamically stable • Rounded by leadership • Case management initial assessment (notify case management of arrival to unit) • Received knee/hip arthroplasty education (refer to education material in Epic).		*Include family or support person and utilize teach back method for all education.*
Post-op Day #1 Tasks and Milestones	***Done***	***Comments***
Ensure all Post-op Day #0 milestones are completed		
Post-op day 1 milestones • Worked with physical therapy • Eating at the side of the bed • Incentive spirometer 10x/hour while awake • Met with case management • Pain well-controlled (utilization of multi-modal pain regiment) • Rounded by leadership		*Ensure patient to have eaten breakfast before PT session, **night RN** to order breakfast for the patient.*
Discharge Milestones • DC order placed • DC medication reconciliation completed • Case management discharge readiness o Home health set-up • Arrange transport		Time of DC order: _____
Discharge Education • Medication list • Pain management • Activity • Dressing/incision care • Provider follow-up • VTE prevention • When to seek medical attention		*Include family or support person and utilize teach back method for all education.*



Red Flags

- Assess for history or **risk of bleeding**, such as hypertension.
- Implement fall prevention strategies. Total knee/hip arthroplasty increases risk of falls.

Do Not put a pillow under affected knee. The position encourages a knee-flexion contracture.

Care Goals and Interventions

Click each tab for more information

IMMEDIATE CARE GOALS | SUBSEQUENT CARE GOALS | INTERVENTIONS

Immediate post-total knee arthroplasty goals are to:

- Protect surgical wound.
- Promote healing.
- Maintain hemodynamic stability.
- Control pain and swelling.

Complete the content above before moving on.

Care Goals and Interventions

Click each tab for more information

IMMEDIATE CARE GOALS | SUBSEQUENT CARE GOALS | INTERVENTIONS

Subsequent care goals are to:

- Prevent and/or minimize complications, such as nerve damage and **venous thromboembolism**
- Reduce risk of secondary complications, such as infection and falls.
- Promote emotional well-being, effective coping, and improved quality of life.
- Promote understanding and acceptance of immediate treatment regimen and short- and long-term rehabilitation strategies.
- Encourage independence in functional mobility and knee ROM.

Complete the content above before moving on.

Care Goals and Interventions

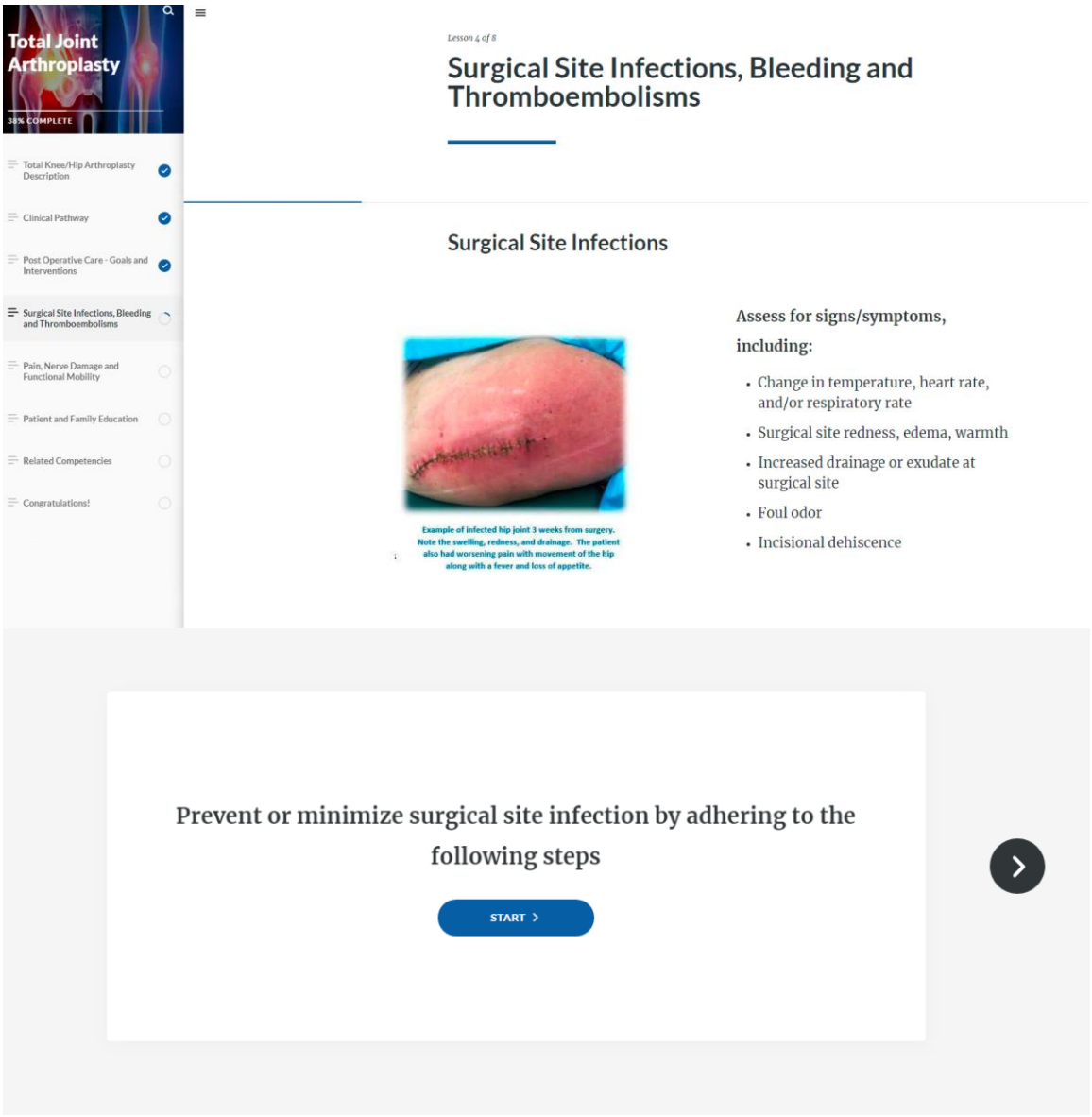
Click each tab for more information

IMMEDIATE CARE GOALS | SUBSEQUENT CARE GOALS | INTERVENTIONS

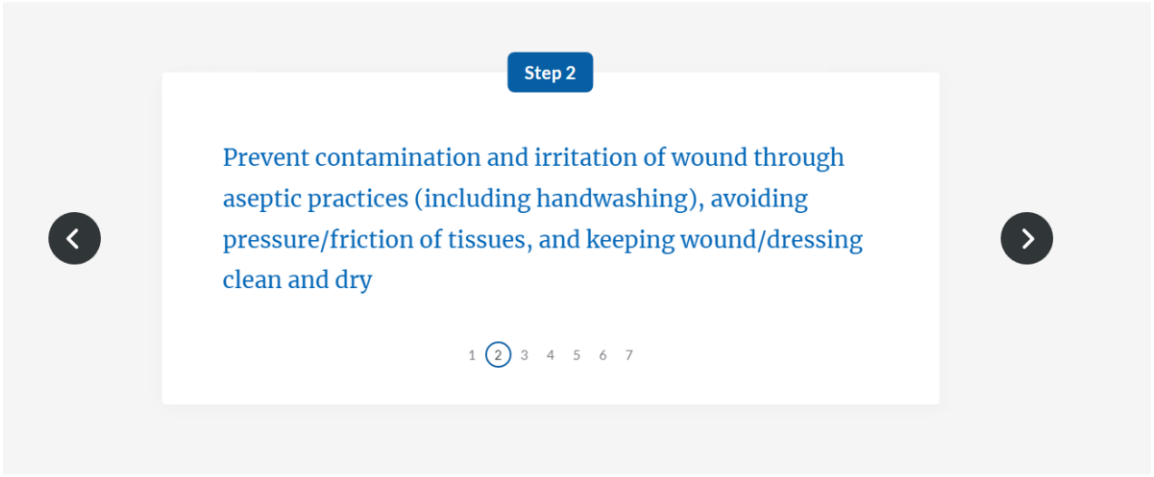
Assess for signs/symptoms of these potential total knee/hip arthroplasty complications and **intervene** to prevent or minimize them.

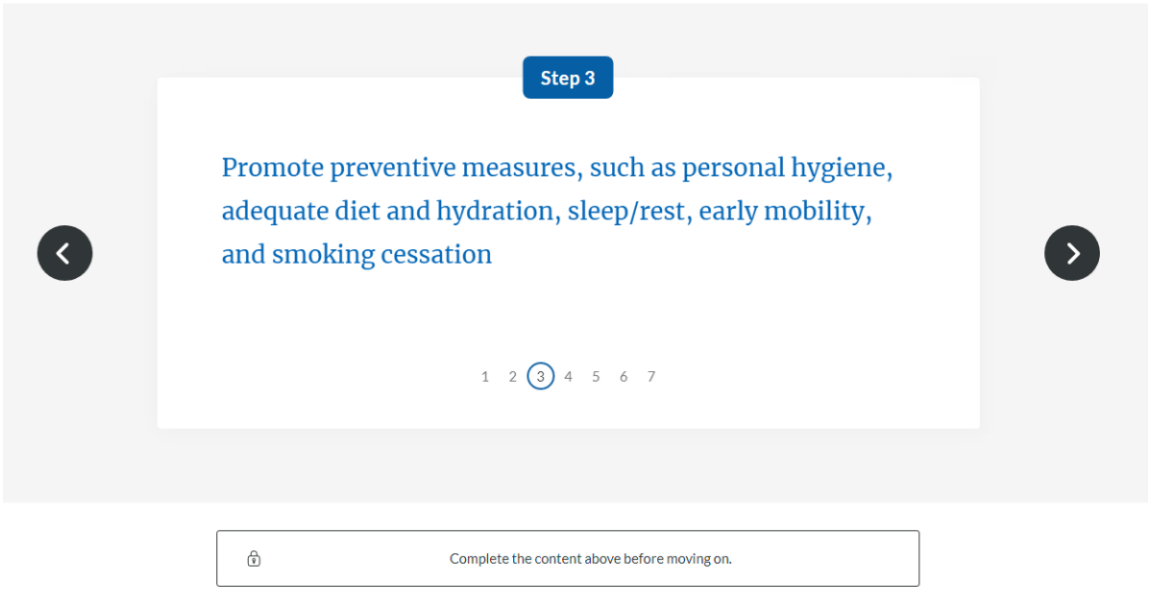
The next lessons will provide more detailed assessments and interventions.

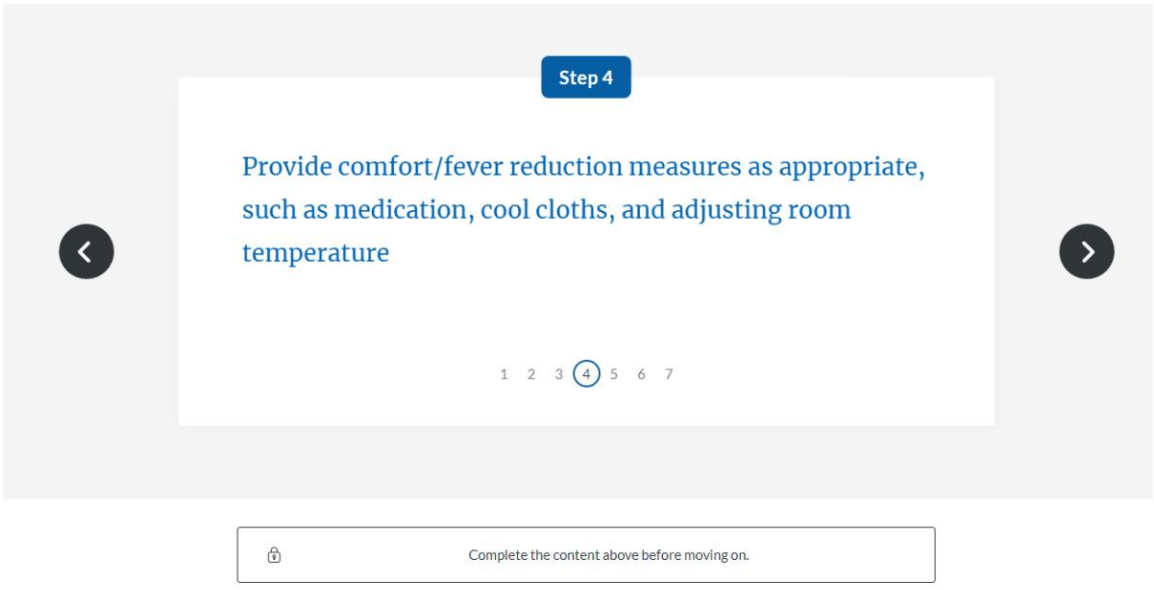
CONTINUE

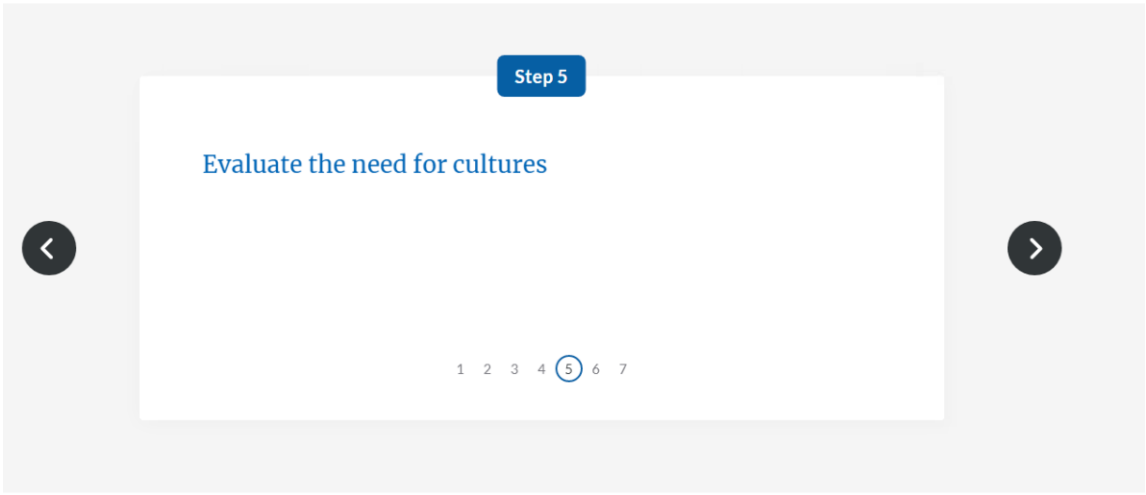

Total Joint Arthroplasty
38% COMPLETE
Total Knee/Hip Arthroplasty Description
Clinical Pathway
Post Operative Care - Goals and Interventions
Surgical Site Infections, Bleeding and Thromboembolisms
Pain, Nerve Damage and Functional Mobility
Patient and Family Education
Related Competencies
Congratulations!
Lesson 4 of 8
Surgical Site Infections, Bleeding and Thromboembolisms
Surgical Site Infections
Example of infected hip joint 3 weeks from surgery. Note the swelling, redness, and drainage. The patient also had worsening pain with movement of the hip along with a fever and loss of appetite.
Assess for signs/symptoms, including:
Change in temperature, heart rate, and/or respiratory rate
Surgical site redness, edema, warmth
Increased drainage or exudate at surgical site
Foul odor
Incisional dehiscence
Prevent or minimize surgical site infection by adhering to the following steps
START
Complete the content above before moving on.


Step 1
Inspect surgical incision appearance (redness, drainage) and correlate to vital signs
1 2 3 4 5 6 7
Complete the content above before moving on.


Step 2
Prevent contamination and irritation of wound through aseptic practices (including handwashing), avoiding pressure/friction of tissues, and keeping wound/dressing clean and dry
1 2 3 4 5 6 7
Complete the content above before moving on.


Step 3
Promote preventive measures, such as personal hygiene, adequate diet and hydration, sleep/rest, early mobility, and smoking cessation
1 2 3 4 5 6 7
Complete the content above before moving on.


Step 4
Provide comfort/fever reduction measures as appropriate, such as medication, cool cloths, and adjusting room temperature
1 2 3 4 5 6 7
Complete the content above before moving on.



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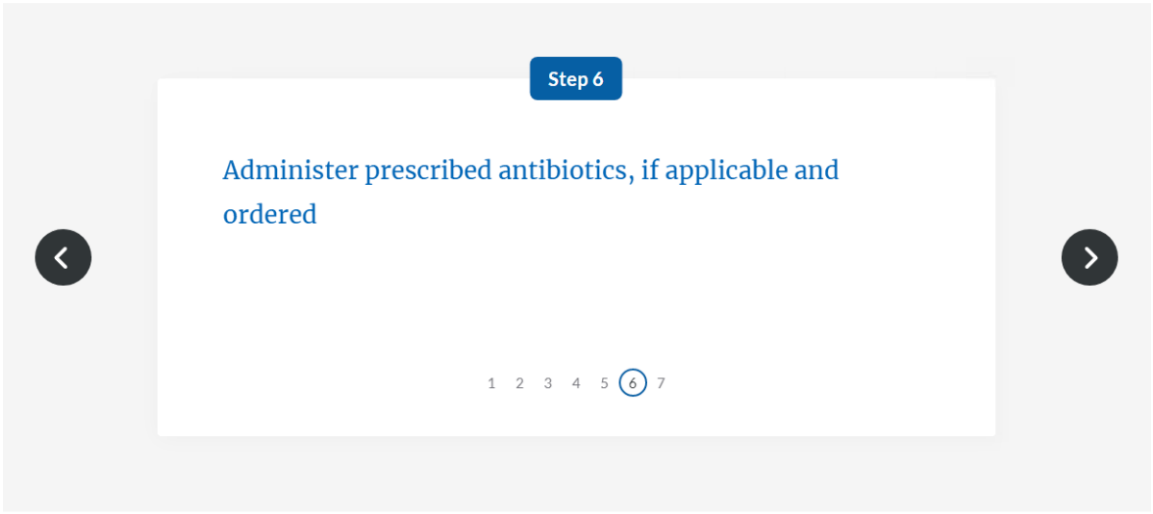


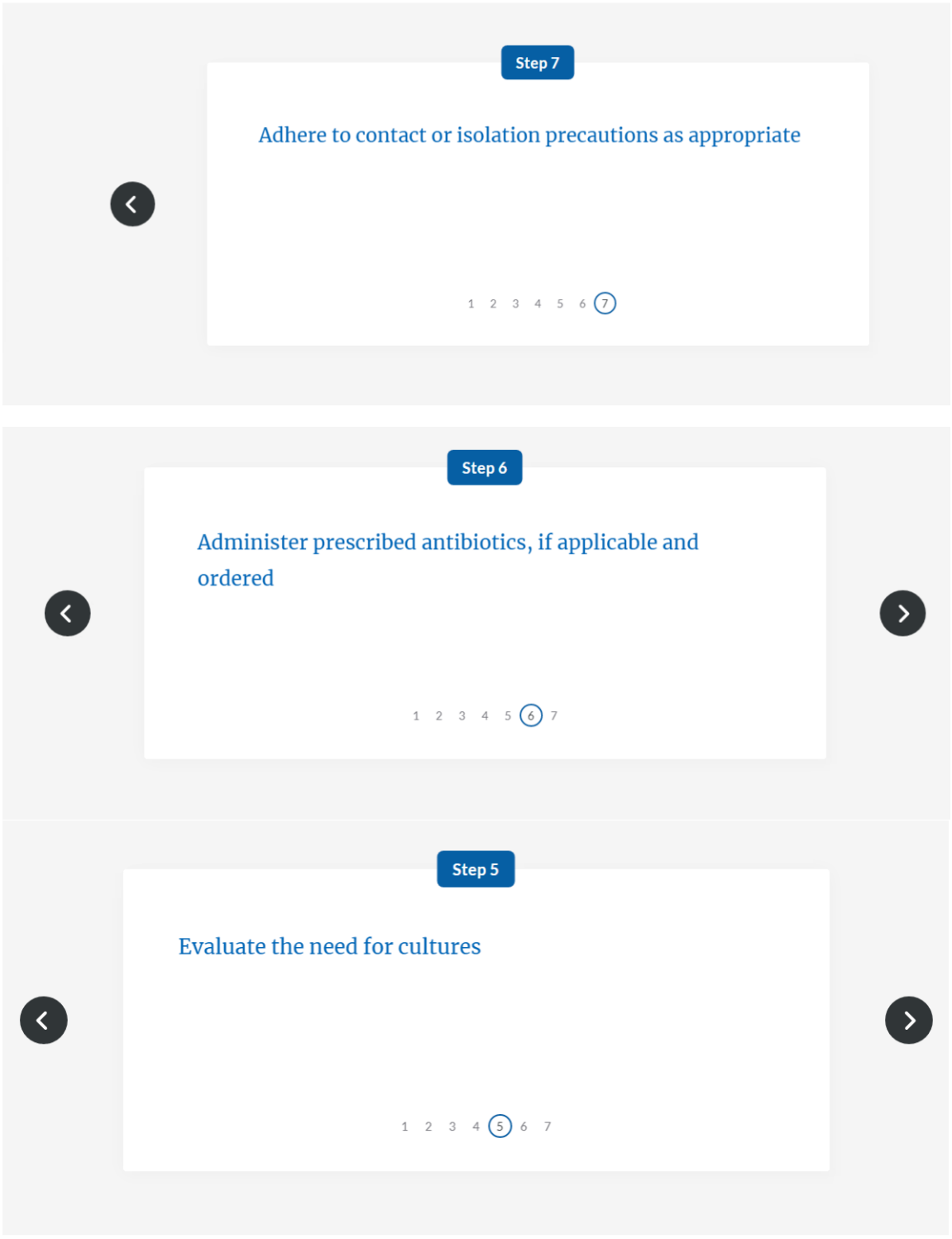
Complete the content above before moving on.

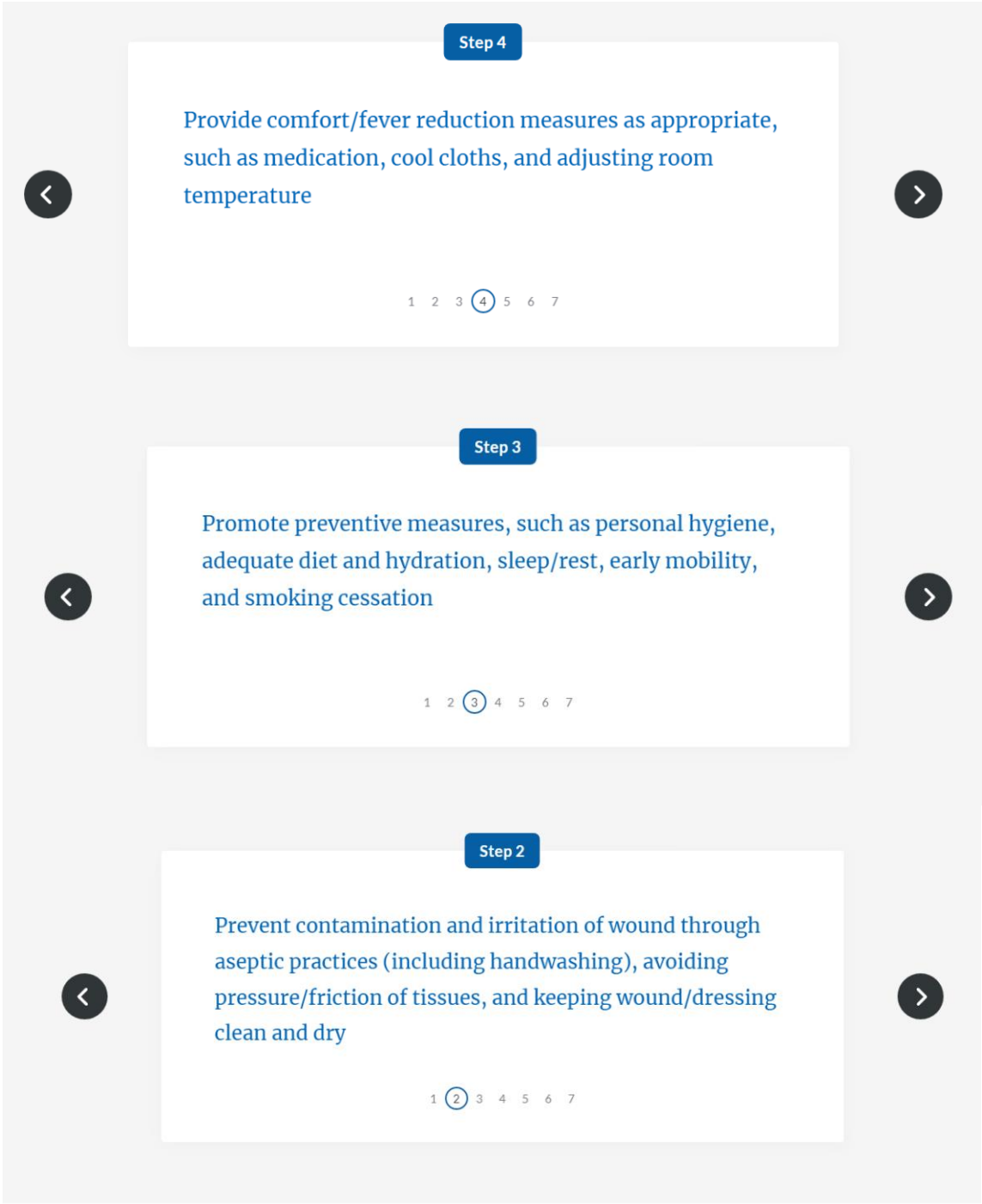
Step 7

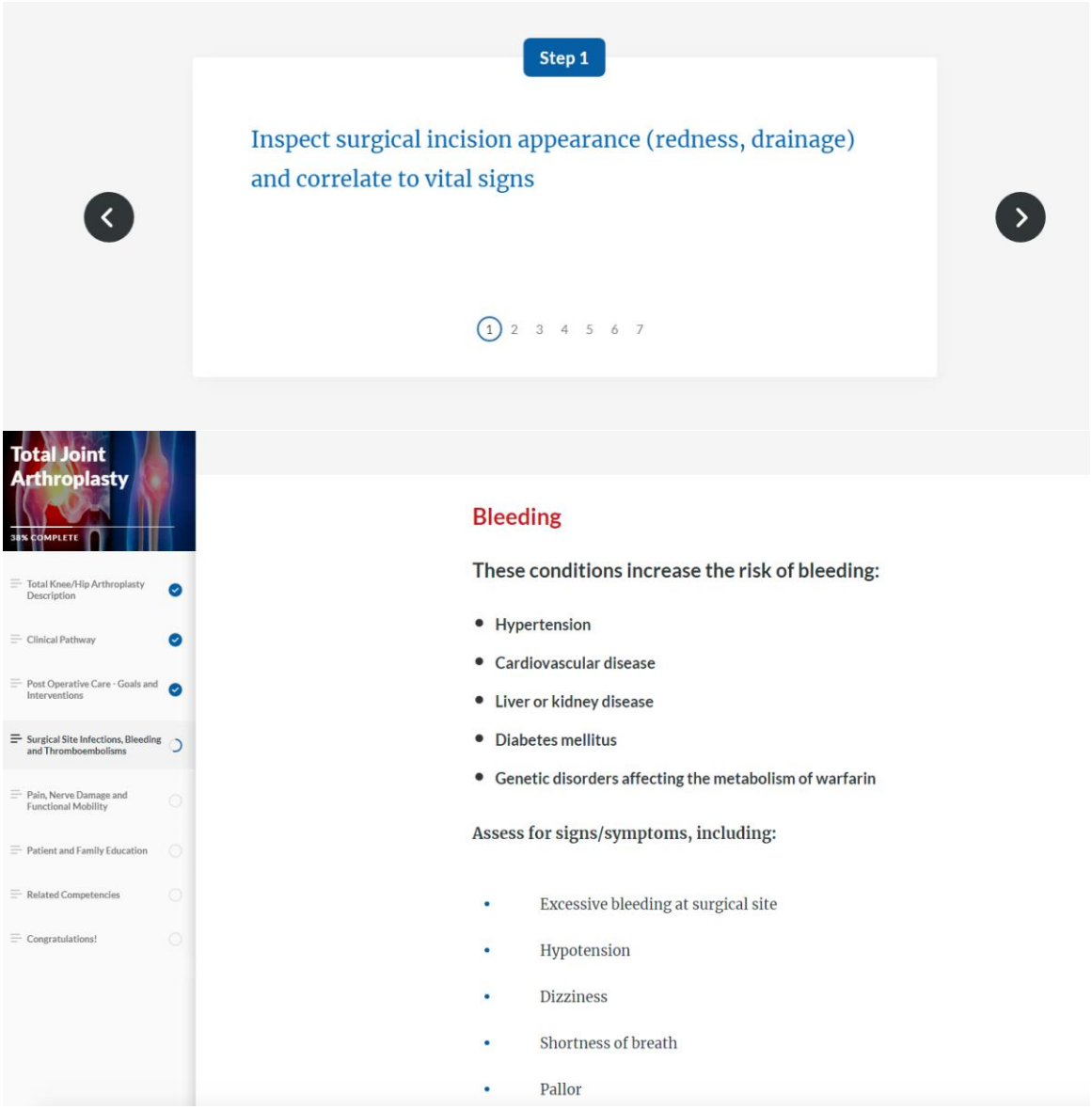
Adhere to contact or isolation precautions as appropriate

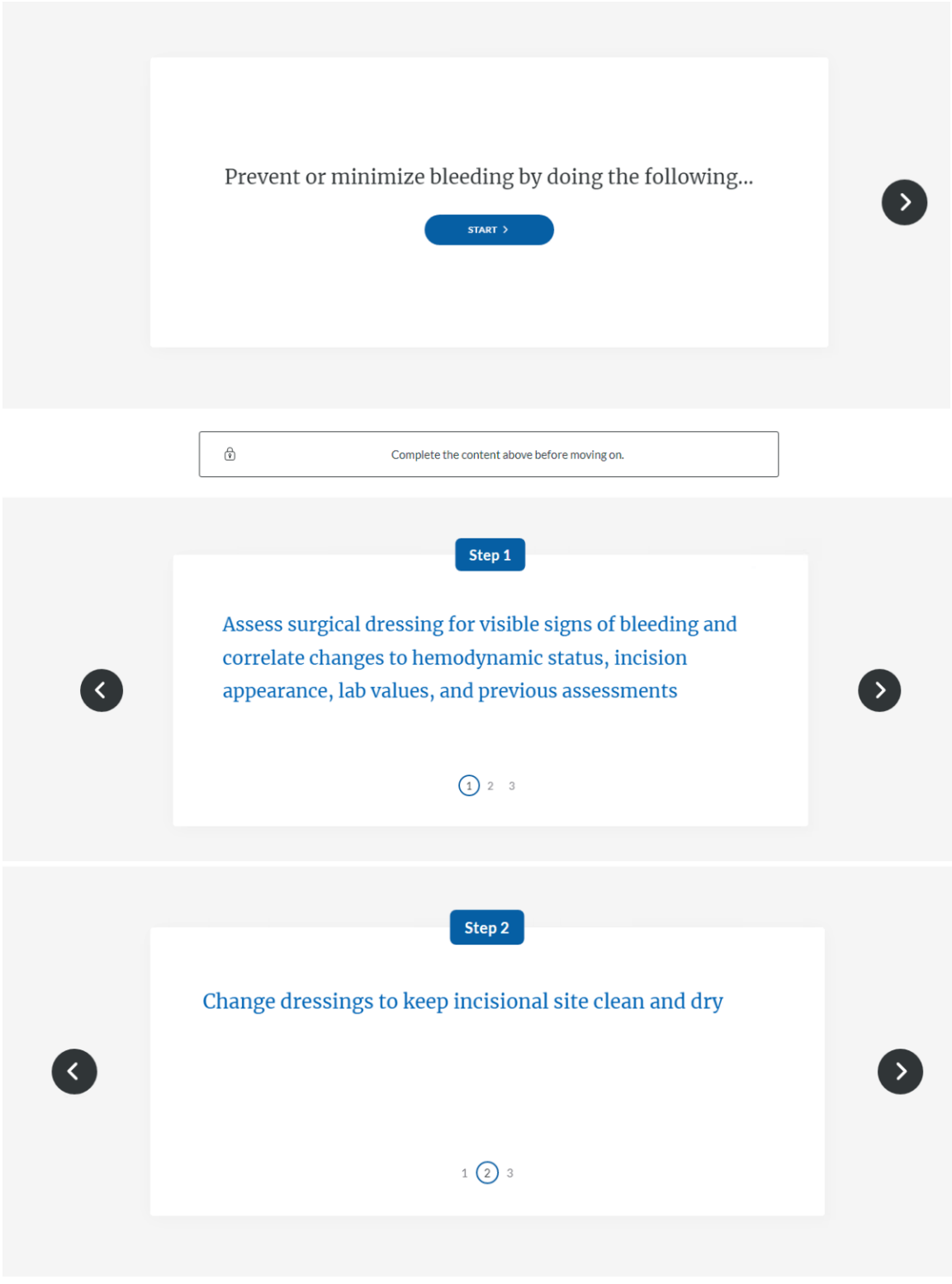
1 2 3 4 5 6 7

CONTINUE


Step 7
Adhere to contact or isolation precautions as appropriate
1 2 3 4 5 6 7
Step 6
Administer prescribed antibiotics, if applicable and ordered
1 2 3 4 5 6 7
Step 5
Evaluate the need for cultures
1 2 3 4 5 6 7


Step 4
Provide comfort/fever reduction measures as appropriate, such as medication, cool cloths, and adjusting room temperature
1 2 3 4 5 6 7
Step 3
Promote preventive measures, such as personal hygiene, adequate diet and hydration, sleep/rest, early mobility, and smoking cessation
1 2 3 4 5 6 7
Step 2
Prevent contamination and irritation of wound through aseptic practices (including handwashing), avoiding pressure/friction of tissues, and keeping wound/dressing clean and dry
1 2 3 4 5 6 7

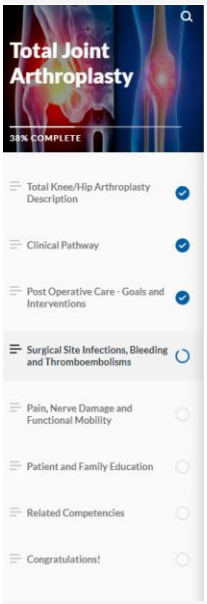

Step 1
Inspect surgical incision appearance (redness, drainage) and correlate to vital signs
1 2 3 4 5 6 7
Total Joint Arthroplasty
38% COMPLETE
Total Knee/Hip Arthroplasty Description
Clinical Pathway
Post Operative Care - Goals and Interventions
Surgical Site Infections, Bleeding and Thromboembolisms
Pain, Nerve Damage and Functional Mobility
Patient and Family Education
Related Competencies
Congratulations!
Bleeding
These conditions increase the risk of bleeding:
Hypertension
Cardiovascular disease
Liver or kidney disease
Diabetes mellitus
Genetic disorders affecting the metabolism of warfarin
Assess for signs/symptoms, including:
Excessive bleeding at surgical site
Hypotension
Dizziness
Shortness of breath
Pallor


Prevent or minimize bleeding by doing the following...
START >
Complete the content above before moving on.
Step 1
Assess surgical dressing for visible signs of bleeding and correlate changes to hemodynamic status, incision appearance, lab values, and previous assessments
1 2 3
Step 2
Change dressings to keep incisional site clean and dry
1 2 3

Step 3

Administer antifibrinolytic medicines, if applicable and ordered

1 2 3



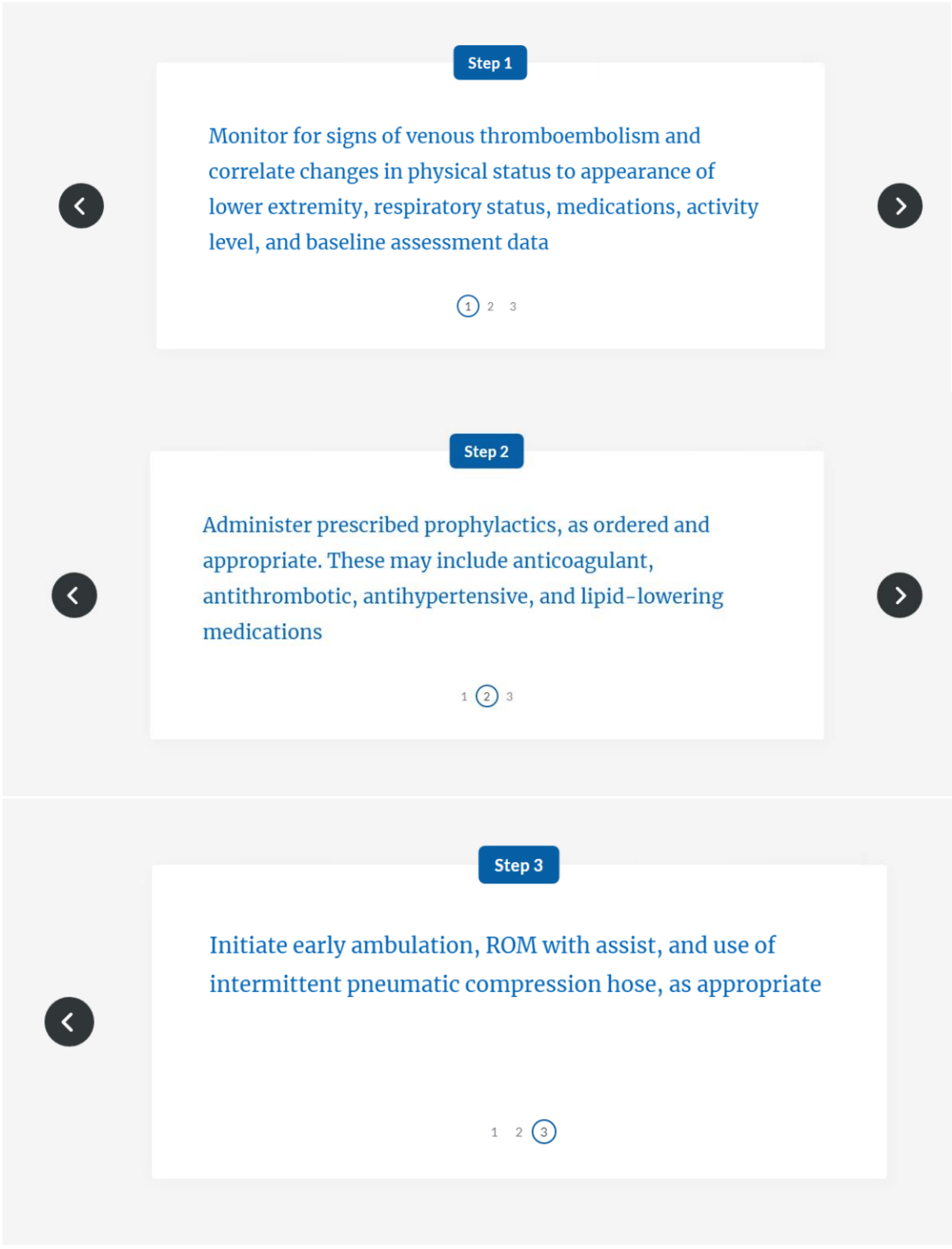
Venous Thromboembolism

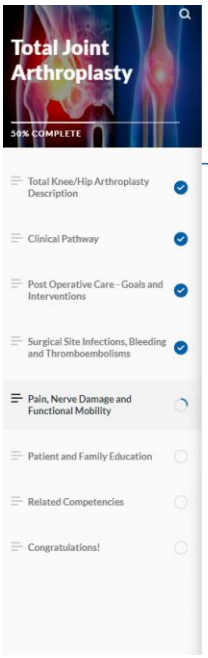
Assess for signs/symptoms, which include deep vein thrombosis (DVT) and pulmonary embolism (PE)

Signs of DVT	Signs of PE
In the lower extremities: • Redness • Swelling, size asymmetry • Pain • Warmth • Palpable cord along vein	• Unexplained shortness of breath • Hypoxia, cyanosis • Pleuritic chest pain • Cough • Hemoptysis • Tachycardia, tachypnea • Restlessness, anxiety • Fever

Prevent or minimize venous thromboembolism by doing the following...

START >


Step 1
Monitor for signs of venous thromboembolism and correlate changes in physical status to appearance of lower extremity, respiratory status, medications, activity level, and baseline assessment data
1 2 3
Step 2
Administer prescribed prophylactics, as ordered and appropriate. These may include anticoagulant, antithrombotic, antihypertensive, and lipid-lowering medications
1 2 3
Step 3
Initiate early ambulation, ROM with assist, and use of intermittent pneumatic compression hose, as appropriate
1 2 3



Pain, Nerve Damage and Functional Mobility

Increased Pain

Assess for signs/symptoms, including:

- Verbal complaints of pain
- Moaning, guarding, sweating, anxiety
- Visible redness and swelling as surgical site

Prevent or Minimize Increased Pain by:

Click each card for more information

Assessing pain/discomfort level using appropriate pain assessment scale	2	3

Prevent or Minimize Increased Pain by:

Click each card for more information

Assessing pain/discomfort level using appropriate pain assessment scale	Evaluating the need for, and administer, prescribed pain medication. Monitor effectiveness	Promoting pain reduction interventions (position for comfort, imagery, relaxation, distraction)

CONTINUE

Nerve Damage

Assess for signs/symptoms, including:

- Pain, numbness, tingling and weakness to lower extremities (causing footdrop)
- Paralysis

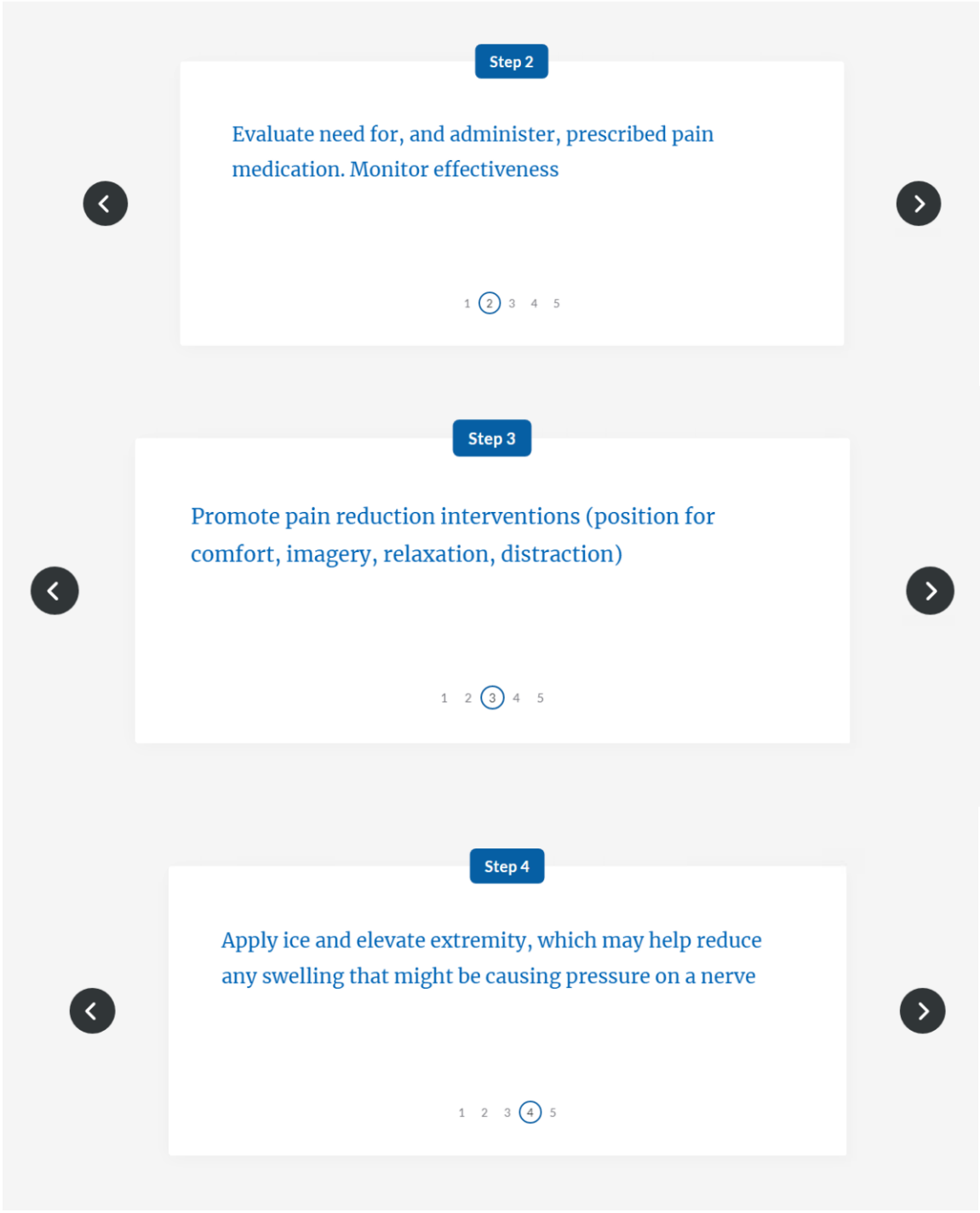
Prevent or minimize nerve damage by doing the following...

START >

Step 1

Assess pain/discomfort level using an appropriate pain assessment scale

1 2 3 4 5

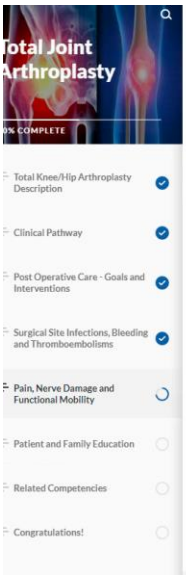

Step 2
Evaluate need for, and administer, prescribed pain medication. Monitor effectiveness
1 2 3 4 5
Step 3
Promote pain reduction interventions (position for comfort, imagery, relaxation, distraction)
1 2 3 4 5
Step 4
Apply ice and elevate extremity, which may help reduce any swelling that might be causing pressure on a nerve
1 2 3 4 5

Step 5

Emphasize nerve may need time to recover from surgery and may heal on its own

1 2 3 4 5

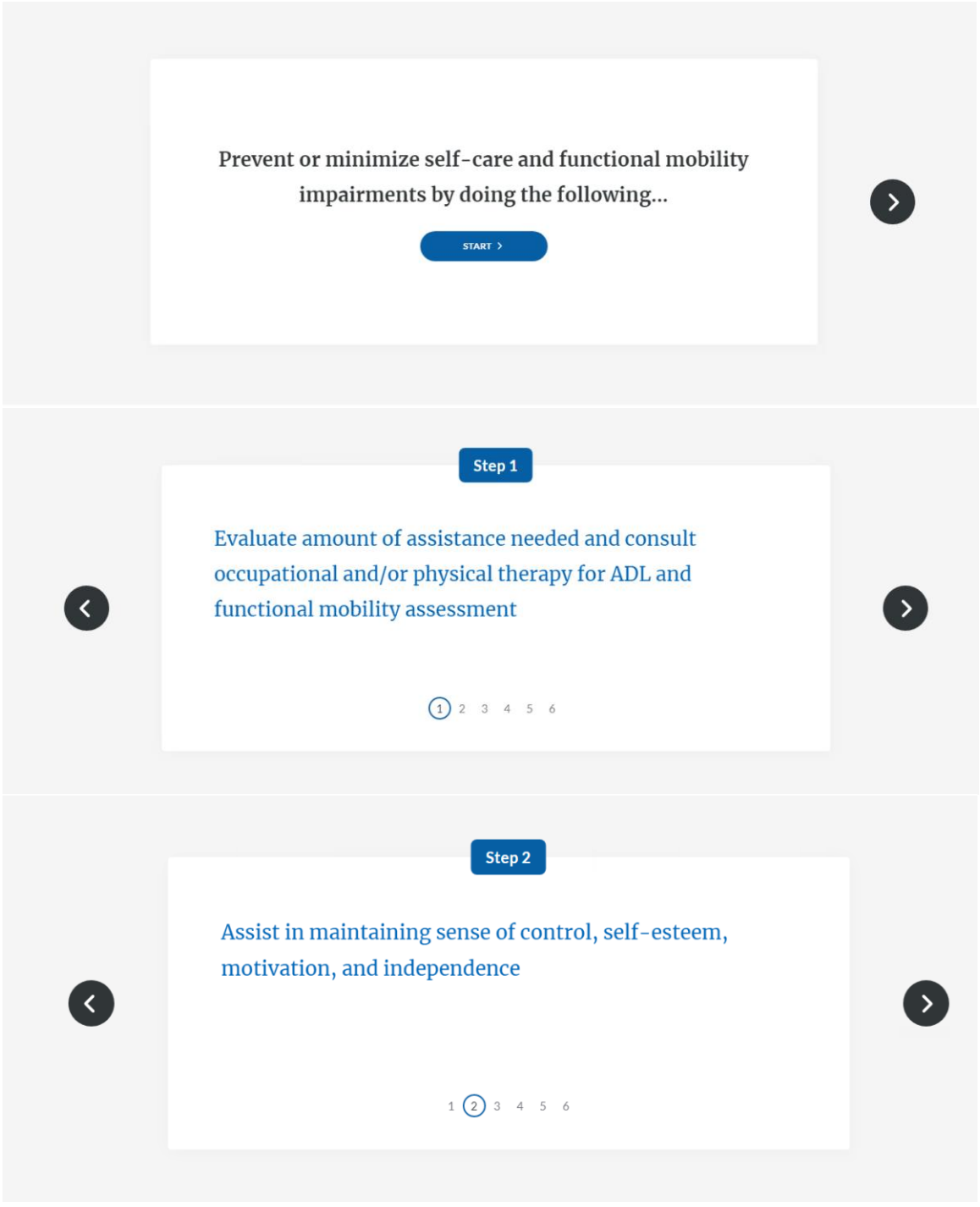
CONTINUE

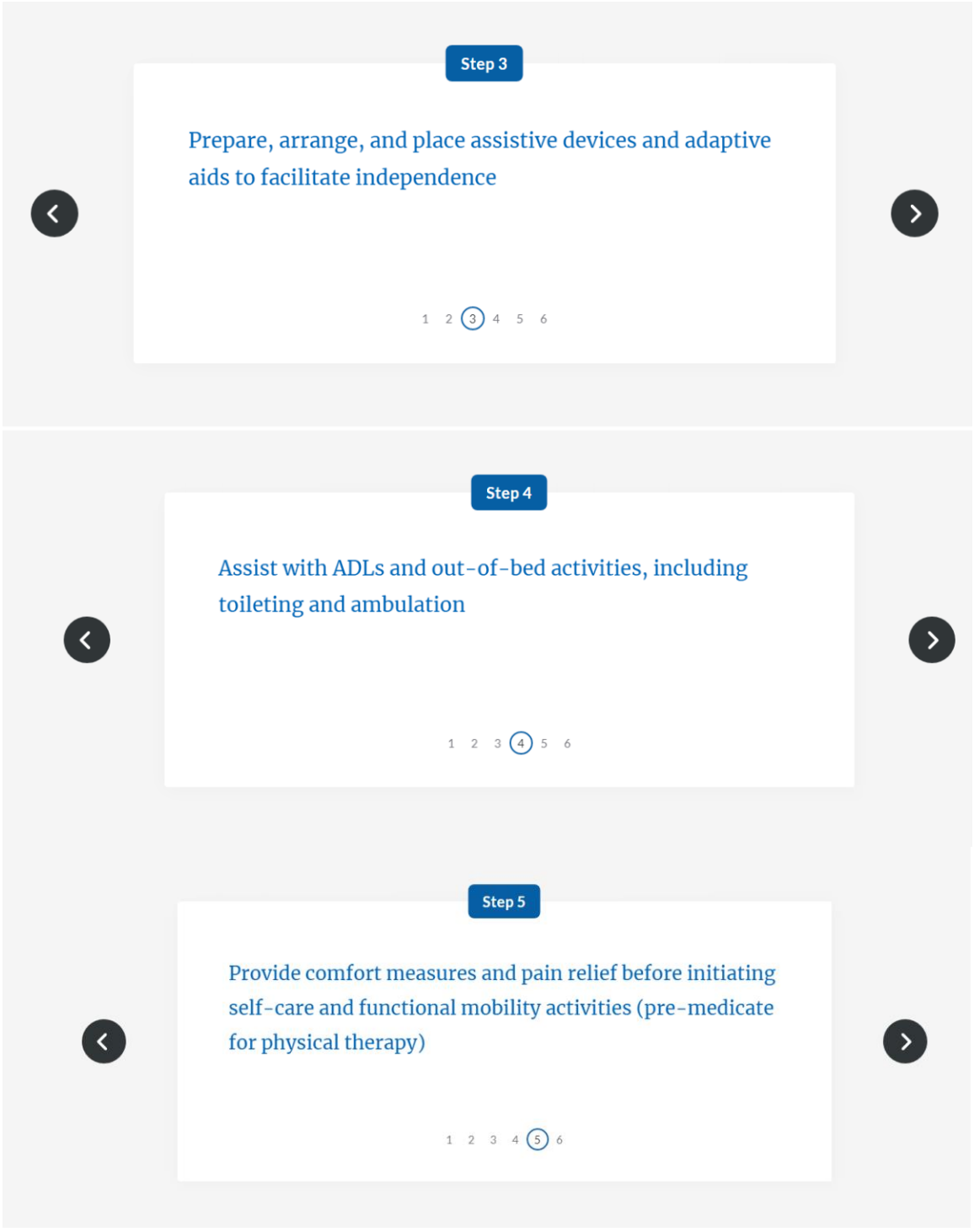


Self-care and Functional Mobility Impairment

Assess for signs/symptoms, including:

- Inability to initiate or perform one or more Activities of Daily Living (ADLs), such as grooming
- Decreased ability to purposefully move
- Limited Range of Motion (ROM), muscle strength, and coordination


Prevent or minimize self-care and functional mobility impairments by doing the following...
START
Step 1
Evaluate amount of assistance needed and consult occupational and/or physical therapy for ADL and functional mobility assessment
1 2 3 4 5 6
Step 2
Assist in maintaining sense of control, self-esteem, motivation, and independence
1 2 3 4 5 6


Step 3
Prepare, arrange, and place assistive devices and adaptive aids to facilitate independence
1 2 3 4 5 6
Step 4
Assist with ADLs and out-of-bed activities, including toileting and ambulation
1 2 3 4 5 6
Step 5
Provide comfort measures and pain relief before initiating self-care and functional mobility activities (pre-medicate for physical therapy)
1 2 3 4 5 6

Step 6

Facilitate occupational and physical therapy for ADL training and functional mobility training

1 2 3 4 5 6

CONTINUE

- Total Knee/Hip Arthroplasty Description
- Clinical Pathway
- Post Operative Care - Goals and Interventions
- Surgical Site Infections, Bleeding and Thromboembolisms
- Pain, Nerve Damage and Functional Mobility
- Patient and Family Education
- Related Competencies
- Congratulations!

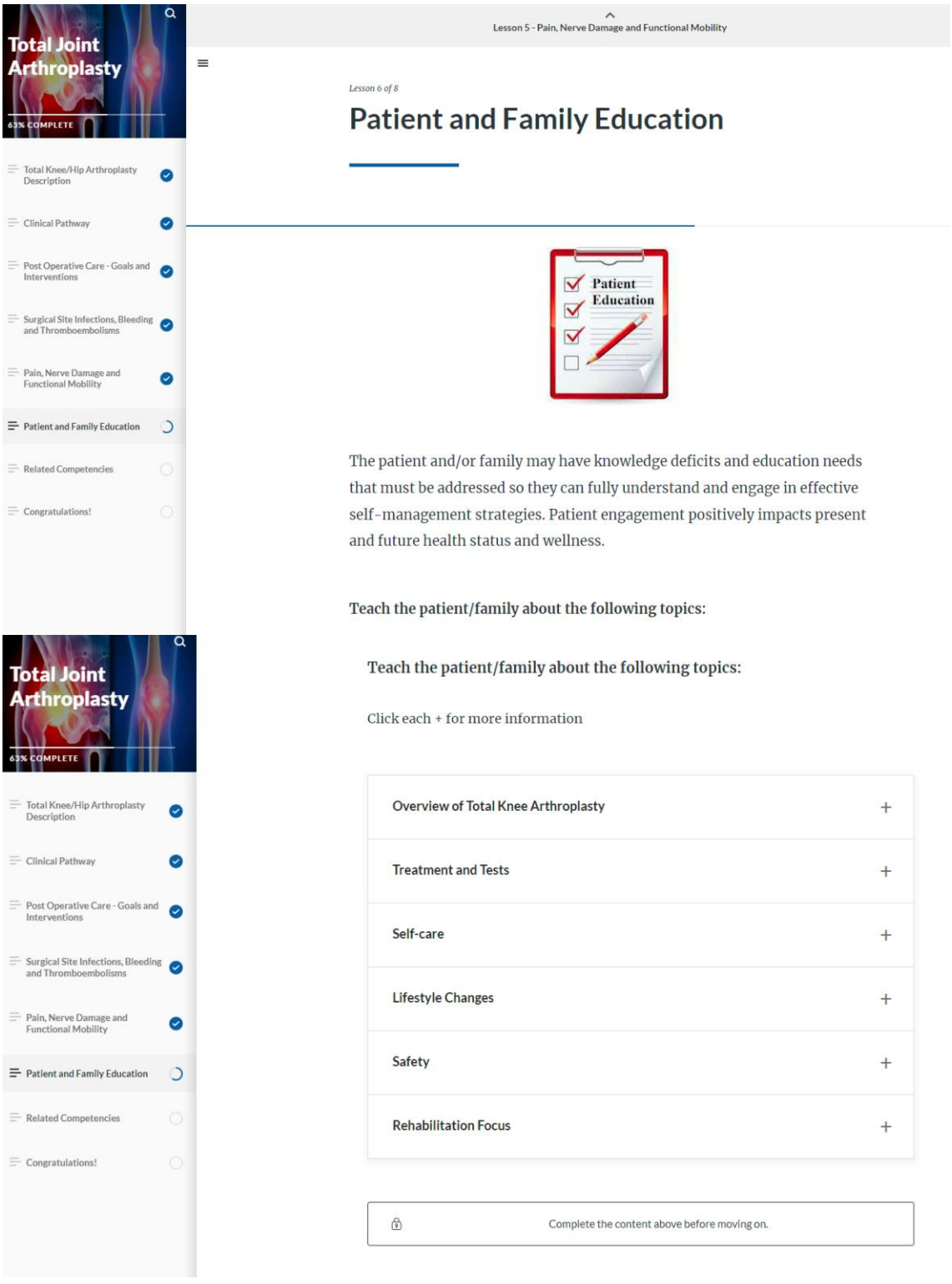
Hip Dislocation (for total hip arthroplasty patients)

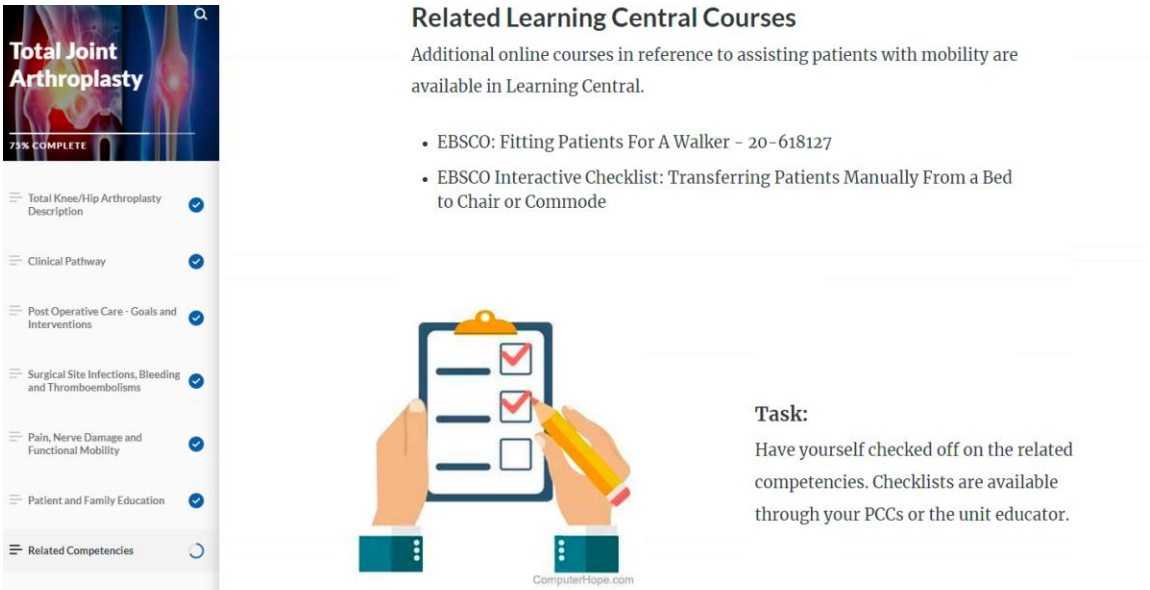
EXIT

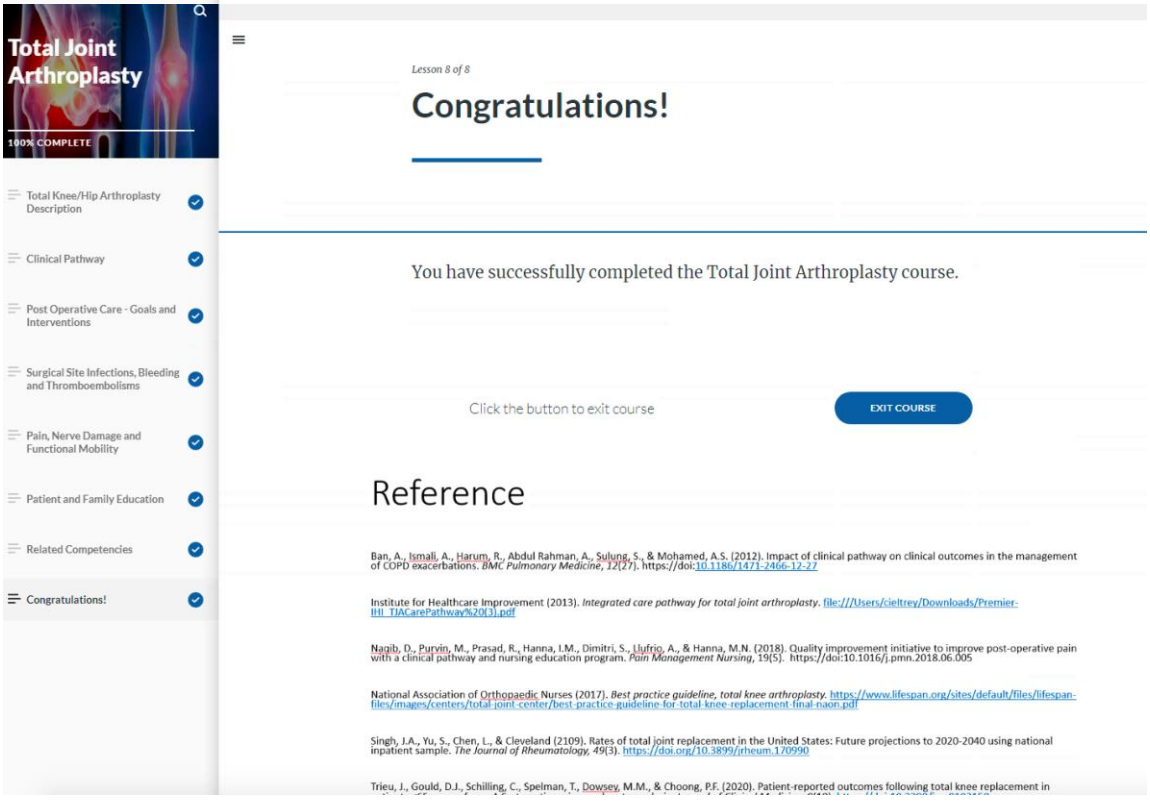
Click + for more information

Assess for signs/symptoms, including: +

Prevent or Minimize Dislocation: +


Total Joint Arthroplasty
63% COMPLETE
Total Knee/Hip Arthroplasty Description
Clinical Pathway
Post Operative Care - Goals and Interventions
Surgical Site Infections, Bleeding and Thromboembolisms
Pain, Nerve Damage and Functional Mobility
Patient and Family Education
Related Competencies
Congratulations!
Lesson 5 - Pain, Nerve Damage and Functional Mobility
Lesson 6 of 8
Patient and Family Education
Patient Education
The patient and/or family may have knowledge deficits and education needs that must be addressed so they can fully understand and engage in effective self-management strategies. Patient engagement positively impacts present and future health status and wellness.
Teach the patient/family about the following topics:
Teach the patient/family about the following topics:
Click each + for more information
Overview of Total Knee Arthroplasty
Treatment and Tests
Self-care
Lifestyle Changes
Safety
Rehabilitation Focus
Complete the content above before moving on.





Reference

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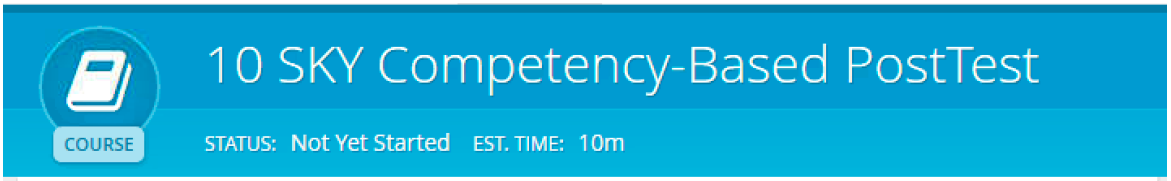
COURSE
EBSCO: Fitting Patients For A Walker
FROM CURRICULUM: 10 SKY Competency-Based Learning Modules
STATUS: Not Yet Started EST. TIME: 1h
Learning Activities
Overview
CE and Certifications
Learning Activities in this Course
Verify Profile Info (Optional)
PROFILE VALIDATION STATUS: Not Yet Started
Start
Fitting Patients For A Walker
ONLINE STATUS: Not Yet Started
Start
Optional Interactive Review
ONLINE STATUS: Not Yet Started
Start
Optional Evaluation
EVALUATION STATUS: Not Yet Started
Start



Return to Curriculum

Learning Activities *in this Course*

10 SKY Competency-Based PostTest

TEST **STATUS**: Not Yet Started **EST. TIME**: 10m

Description

10 SKY Competency-Based PostTest

Learning Objectives

At the conclusion, participants should be able to:

Care of the Total Hip/Knee Joint Arthroplasty

1. Identify the tasks and milestones in the Primary Hip/Knee Joint Arthroplasty Clinical Pathway.
2. Recognize specific care interventions in the prevention of surgical-related complications.
3. Describe the care goals of caring a joint hip/knee post-operative patient.
4. Demonstrate the competency of teaching patients in the use of walker.
5. Demonstrate transferring a patient from a bed to a chair.
6. Appreciate the patient as a holistic being.

Care of the Colorectal Patient:

1. Identify care interventions of an Enhanced Recovery after Surgery (ERAS) patient.
2. Identify the post-surgical care goals of a colorectal patient.
3. Recognize specific care interventions in the prevention of surgical-related complications.
4. Demonstrate the competency of ostomy care.
5. Demonstrate the competency of surgical drain care.
6. Demonstrate the competency of assisting with patient progressive ambulation.
7. Appreciate the patient as a holistic being.

Appendix B: Pretest/Posttest Questionnaire

1. Which of the following best describes Enhanced Recovery After Surgery (ERAS)?
    a. It is a mechanism utilized to provide a smooth transition of the patient in the all the phases of his surgical journey.
    b. It is a patient-centered, evidence-based, and multidisciplinary pathways to optimize the patient's physiologic functions and facilitate recovery after surgery.
    c. It is a set of interventions implemented to meet preset milestones of post-surgical patients.
    d. It a preferred care pathway of patients for their surgical journey.

2. Early mobility is an important milestone for ERAS patients. What is the expectation of the patient's mobility on postop day 1?
    a. The patient is able to ambulate to the restroom.
    b. The patient is able to transfer to the recliner unassisted.
    c. The patient is able to ambulate 4x daily as tolerated.
    d. The patient is able to move up and down in 8-10 flights of stairs.

3. The following are care goals of a patient who had undergone large bowel colectomy, except:
    a. Promote emotional wellbeing, effective coping, and improved quality of life.
    b. Control pain and promote patient comfort.
    c. Provide patient education about large bowel resection.
    d. Implement interventions to discharge the patient the following day after surgery.

4. A nurse caring for a patient after a large bowel resection should be familiar with the assessment focus and care interventions to prevent the following complications:
    a. Pain, infection, and anastomotic leak
    b. Pain, dehydration, and jaundice
    c. Dehydration, bleeding, and urinary retention
    d. Pain, infection, and decreased level of consciousness

5. Dehydration and electrolyte imbalance are one of the complications of colectomy patients. Which of the following is a manifestation of dehydration and electrolyte imbalance?
    a. Increased urine production
    b. Increased thirst
    c. Diarrhea
    d. Wet mucous membranes

6. Which of the following interventions should you be implementing to prevent or minimize disturbed body image and impaired coping?
    a. Encourage the patient to isolate himself to prevent embarrassment from smelly colostomy.
    b. Teach patient to care for ostomy and recommend techniques to minimize adverse effects, such as leakage and odor.
    c. Do not encourage patient to verbalize feelings related to changes in body image and function.
    d. Teach the patient how to accept the new body image the soonest time possible.

7. When providing ostomy care, the peristomal skin should be cleaned using
    a. Hydrogen peroxide
    b. Rubbing alcohol
    c. Warm tap water
    d. Hot sterile water

8. A nurse is fitting a pouching system to a patient with a new ileostomy. To do so, the nurse measures the stoma using an ostomy measuring guide, selects the circular size that fits around the stoma with 1/8 inch (0.3 cm) larger margin, traces the pattern on the pouch/skin barrier, and uses scissors to cut the appropriately-sized opening in the skin barrier to just fit around the stoma. What, if anything, did the nurse do incorrectly?
    a. She used an ostomy measuring guide, which is only appropriate for colostomies
    b. She selected the wrong size circular pattern
    c. She cut the barrier with scissors
    d. Nothing. All steps are appropriate

9. Surgical drain care is performed to
    a. Prevent infection
    b. Encourage wound healing
    c. Prevent abscess formation in the tissue surrounding a surgical wound
    d. All of the above

10. The patient and the nurse have set a goal to ambulate to distance of 50 feet. Before reaching the goal, the patient states “I feel tired and need to take a break.” The appropriate action taken by the nurse is to
    a. Provide a rest period
    b. Encourage the patient to continue ambulating
    c. Measure the patient’s BP
    d. Encourage the patient to drink

11. Which of the following milestones needed to be met at post-op day 0 after a total hip joint arthroplasty?

a. SCDs applied as soon as the patient is able to sit in a chair/recliner
b. Use of incentive spirometer 10x/hour while awake
c. Able to tolerate with head elevated at 90-degree angle
d. Pain controlled with use of IV narcotic medications

12. Complications from joint arthroplasty surgery are common causes of patients longer length of stay and readmission to the hospital. The following interventions are recommended to be implemented in the acute inpatient care unit to prevent complications, except:
    a. Apply SCDs upon arrival to the unit
    b. Ambulate patients manifesting lightheadedness
    c. Utilization of multimodal pain management
    d. Use of incentive spirometer 10x/hour while awake

13. Goal setting is important to engage the patient achieve desired outcomes. Immediate post-total knee arthroplasty goals are to, except:
    a. Promote healing
    b. Maintain hemodynamic stability
    c. Control pain and swelling
    d. Promote understanding and acceptance of immediate treatment regimen and short- and long-term rehabilitation strategies.

14. Application of SCDs immediately upon arrival to the acute inpatient care unit to prevent which complication following a knee/hip joint arthroplasty?
    a. Prevention of bleeding
    b. Prevention of contractures and immobility
    c. Prevention of nerve damage
    d. Prevention of venous thromboembolism

15. Bleeding is one of the most common complications following a hip/knee joint arthroplasty surgery. Which of the following set of signs and symptoms manifest bleeding?
    a. Hypertension, dizziness, and pallor
    b. Hypotension, dizziness, and pallor
    c. Increased respiratory rate, hypertension, and dizziness
    d. Surgical site redness, foul smelling drainage, and change in temperature

16. Hip dislocation is one of the complications after a total hip arthroplasty. A colleague is providing education to the patient. Which of the following education points should alarm you?
    a. Instructing the patient not to cross his knees

b. Instructing the patient to use high armchairs and use of high toilet seat
c. Instructing the patient bend the hip more than 90 degrees during exercises
d. Instructing the patient avoidance of hip internal rotation

17. Which of the following are education focus for patients and their family following a hip/knee joint arthroplasty?
    a. Self-care, such as using medical equipment/supplies and coping strategies (including resources for support)
    b. Lifestyle changes, including regular physical activity such as walking, healthy eating habits to lose weight, (if overweight), and smoking cessation
    c. Safety, such as clearing home of trip hazards including loose rugs or cluttered walkways, to prevent falls and/or injury
    d. All of the above

18. The charge nurse correctly educates the new nurse that when a walker is properly adjusted and the patient is holding the hand grips, the patient's elbows will be
    a. Flexed at a 15-30° angle
    b. Flexed at a 45° angle
    c. Flexed at a 90° angle
    d. Fully extended

19. When standing upright with arms dangling, the top of the walker should be at the level of the patient's
    a. Fingertips
    b. Palm
    c. Wrist
    d. Elbow

20. Which of the following is an example of proper body mechanics during manual transfer of a patient from a bed to a chair/commode?
    a. Bending at the waist
    b. Bending at the knees
    c. Standing with the feet next to one another
    d. Standing with the feet wider than the shoulder-width apart