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# Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay

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# Prospectus Elements:

Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay

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# **Prospectus Elements:**

Developing Ostomy Educational Tools To Decrease Hospital Length of Stay

Clinical Leadership Theme

The clinical nurse leader (CNL) has the ability to represent and implement multiple roles and competencies with the healthcare profession. Due to the CNL's critical thinking and microsystem assessment skill, a quality improvement project at the University of Davis Medical Center (UCDMC) within the Davis 12 Surgical Specialties Unit (D12) was identified and named "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay". This project requires the CNL role of educator and recognizes quality improvement as the theme for inquiry.

For this project, it is essential to recognize the skill of a CNL educator because it "uses appropriate teaching principles and strategies as well as current information, materials, and technologies to teach clients [and] health care professionals" (King & Gerard, 2016, p. 62). The quality improvement theme supports the CNL role because it "ensures that an organization, product, or service is consistent. It is focused not only on product and service quality, but also on the means to achieve it" (King & Gerard, 2016, p. 274). As a result, the aim for the quality improvement project is to implement the CNL role of educator to decrease hospital length of stay for new, non-emergent, colostomy or ileostomy colorectal surgery patients. This will be achieved through the development and implementation of specific ostomy educational tools such as a Colostomy and Ileostomy Nursing Resource Binder, Patient Milestone Checklist, and Registered Nurse (R.N.) Postoperative Process for Ostomy Patients, (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: Patient Milestone Checklist, and Appendix K: R.N. Postoperative Process For Ostomy Patients), for the D12 pilot unit. The evidenced based

tools will enable the nurses to partner with patients in addressing the psychosocial and educational needs related to ostomy acceptance and management.

The process begins with educating all D12 nurses about the new ostomy educational tools (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: Patient Milestone Checklist, and Appendix K: R.N. Postoperative Process For Ostomy Patients). This will lead to implementation of educational tools to be used for future new, non-emergent, colostomy or ileostomy colorectal surgery patients being admitted postoperatively to D12. The process ends with the ostomy patients' being discharged from the acute care setting of D12. By working on this process, four expectations were determined, which include the following: 1). Development and utilization of three new ostomy educational tools, 2). Reduction in the length of stay for ostomy patients, 3). Improve reliability through consistent education and interventions for patients, providers, and families, and 4). Decrease fiscal responsibility for both the patient and UCDMC. It is essential to work on this project now due to UCDMC's ostomy average length of stay exceeding the national average length of stay.

This project complies with all of the requirements of the evidence-based change of practice project checklist (Appendix A: Evidence-based Change Of Practice Project Checklist). To that end, this is an evidence-based project, which will be implemented at UCDMC on D12 and will not require supervision from the Institutional Review Board.

#### **Statement of the Problem**

The role of the CNL educator is necessary, because the length of hospital stay for ostomy patients was recognized as an area requiring improvement and development. The CNL is an established role with ability to implement the quality improvement project, "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay". It is essential to note, the

average length of stay for ostomy patients at UCDMC is twelve days (Kirkland-Kyhn, 2017) compared to the national average length of stay for colostomy and ileostomy patients of three to seven days (American College of Surgeons, 2015). This reflects a need for the CNL role of educator on D12 for the "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" project.

Therefore, the purpose of this project is to implement the CNL role of educator to decrease hospital length of stay for new, non-emergent, colostomy or ileostomy colorectal surgery patient population at UCDMC on D12. This is a quality improvement project to reduce ostomy patients' length of stay from twelve days to five days or less by November 15, 2017(King & Gerard, 2016, p. 62). Education will occur to D12 registered nurses concerning the new Colostomy and Ileostomy Nursing Resource Binder, the ostomy Patient Milestone Checklist, and the R.N. Postoperative Process for Ostomy Patients. Futuristically, D12 nurses will use their new knowledge and available ostomy educational tools to systematize care for new, non-emergent, colostomy or ileostomy colorectal surgery patients during the postoperative phase of care. Through the education of D12 nurses and their future implementation of ostomy educational tools, the length of stay for new, non-emergent, colostomy or ileostomy colorectal surgery patients will be decreased.

#### **Project Overview**

The main goal of the quality improvement project "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" is to reduce length of stay for new, non-emergent, colostomy and ileostomy colorectal surgery patients. This will improve quality of patient care and UCDMC fiscal responsibility due to decreased complications, readmissions, and less time being hospitalized (Burch & Slater, 2012, p. S16).

The specific aim of this quality improvement project is to decrease the length of stay for new, non-emergent colostomy and ileostomy colorectal surgery patients at UCDMC on D12. Current length of stay for new ostomy patients is twelve days. The new goal is to reduce the length of stay to five days or less. This will be achieved by educating D12 nurses using the three following new tools: Colostomy and Ileostomy Nursing Resource Binder, a Patient Milestone Checklist, and also the development and teaching of appropriate R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: Patient Milestone Checklist, and Appendix K: R.N. Postoperative Process For Ostomy Patients). Education will begin October 15, 2017 and continue through November 15, 2017. There will be 100% staff participation. After staff education, length of stay for this patient population will decrease and be re-evaluated in 2018 after six-months of implementing the project.

Due to inability to meet the previous established project timeline, this project is currently pending administrative review and approval. On approval, the project begins with three months of staff education regarding purpose and use of ostomy educational tools followed by six-months of implementation. When complete an analysis will be done to evaluate the impact of these tools on reduction of length of stay, as well as nurse and patient satisfaction with the process.

The specific aim statement corresponds to the global aim, due to the main objective of decreasing hospital length of stay. Both statements identify purpose, goals, intervention, and timeline concerning this quality improvement project. These aim statements will be achieved through the implementation of the CNL educator role using a quality improvement theme.

#### **Rationale**

The role of risk anticipator, systems analyst, and outcomes manager were vital to recognizing the need for "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" project. The combination of these roles facilitated analysis of the UCDMC 2016 coding data, to determine that the new ostomy patient's average length of stay at UCDMC was twelve days (Kirkland-Kyhn, 2017). UCDMC's hospital stay drastically exceeds the national average for colostomy and ileostomy patients. In comparison, the national average length of stay for ostomy patients is presently three to seven days (American College of Surgeons, 2015).

The following tools were used: process mapping, root cause analysis using a fishbone diagram, and Pre-Ostomy Survey data collection to assist with the planning and evolving the quality improvement project "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay". Process mapping was used to assess both current work- flow and future work-flow for the new ostomy patient population (Appendix D: Current High-Level Flow Chart For New Ostomy Patients to D12 and Appendix E: Ideal High- Level Flow Chart For New Ostomy Patients to D12 Surgical Specialties Unit). The process mapping results assisted with identifying the need to perform a root-cause analysis through the tool of a fishbone diagram (Appendix F: Fishbone Diagram: Contributing Factors For New Ostomy Patient's Variance In Length Of Stay).

Through the implementation of the fishbone diagram, (Appendix F: Fishbone Diagram: Contributing Factors For New Ostomy Patient's Variance In Length Of Stay), it is evident multiple factors contribute to prolonged hospitalizations. The major broad contributing factors associated with increased length of stay are identified as equipment, processes, people, and patterns specific to the D12 unit at UCDMC. Issues related to equipment include not enough ostomy appliances or supplies, UCDMC having limited product suppliers, lack of ostomy

resources for the bedside registered nurse, as well as the lack of ostomy educational tools and resources for patients. The processes influencing ostomy length of stay include: delay in patient education, delay in patient self-efficacy, lack of standardized discharge educational checklist, and no standardized discharge instructions.

There are two categories concerning the people influencing length of stay, which are clinical staff and patients. The clinical staff includes all physicians (resident, fellow, chief), bedside registered nurse, ostomy registered nurse, discharge planner registered nurse, dietician, and pharmacist. The clinical staff part of the fishbone diagram recognizes that UCDMC employs one full-time ostomy registered nurse and one part-time registered nurse for the entire hospital. Other pertinent information from the clinical staff aspect of the fishbone diagram includes the following: D12 nurses lack confidence in their ostomy skills and knowledge, as well as D12 microsystem having no formalized ostomy training. In addition, the clinical staff does not have accountability; therefore, clinical staff is not concerned about patients refusing to complete milestones and interventions. This is due to no one being responsible for patient flow. Lastly, the lack of resources, inconsistent staff, no metrics concerning length of stay, new clinical staff hires at UCDMC, and the frequent rotation of physician schedules contribute to possible reasons for ostomy patients having extended length of stay.

Major patterns associated with clinical staff people include: variances in care by physicians and nurses due to there not being standardized care, gaps in communication amongst team members, including the patient. Another risk for increased length of stay is when new ostomy patients are admitted to other units due to D12 being at max capacity. Additional issues include the following: patient acuity, a variance in physician order-sets, inconsistent times of physicians placing patient orders, and delays in medication administration are reasons for

UCDMC's current length of stay data. Two other reasons effecting length of stay include nurses' attitude and the lack of standardize postoperative care process for clinical nurses to implement.

The second people category, the patient population, identifies multiple reasons patients have extended length of stay at UCDMC. Patients may have lack of self-motivation, poor coping skills, a lack of available education tools for them combined with variance in patient education throughout length of stay. Secondly, it is common for patients to refuse discharge, due to no friend or family support, and the fear as well as the standard risk of developing physical complications from having ostomy surgery.

Complications are a main reason for increased length of stay concerning ostomy patients and has been identified as a pattern component of the fishbone diagram. The following physical complications relevant to ostomy surgery include the following: pain issues: uncontrolled and over controlled, nausea and emesis, ileus, constipation, dehydration, deep vein thrombus, infection, skin breakdown, and pulmonary embolism, are recognized as a pattern affecting patients' and time spent in the hospital.

As a CNL educator, instructions to nursing staff concerning the ostomy educational tools is necessary due to "30% to 60% of persons with a new ostomy will experience 1 or more stomal or peristomal complications" (Colwell, Kupsick, & McNichol, 2016, p. 272). Through standardizing ostomy care and implementing ostomy educational tools, patients will have reduced complications and length of stay; thereby improving healthcare costs for both patients and hospitals (Burch & Slater, 2012, p. S16).

A general cost analysis was conducted concerning ostomy care and readmissions through evidence-based research. The article "A Proven Pathway For Stoma Care: The Value Of Stoma Care Services" identifies implementation of standard ostomy care pathway leads to "...8%

reduction of the total stoma care spend" (Davenport, 2014, p.1180). In addition, readmissions within thirty days of being discharge, effects hospital costs. Medicare has reimbursement reduction for readmissions thereby affecting the organization's capital (Readmissions-Reduction-Program, 2016). It is evident that 16.6 percent of major bowel surgery patients are readmitted due to postoperative infection, nutrition deficiencies, or obstruction. The evidence supports that increased length of stay and postoperative complications are the main reasons for readmissions to the acute care setting (Lucas & Pawlik, 2014, p. 189). It is estimated readmissions cost society "...\$17 billion a year and results in high costs to private insurers" (Lucas & Pawlik, 2014, p. 185). Therefore, it is a benefit for the economy and acute care facilities to support hospital quality improvement projects, such as "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay". This project assists with decreasing complications and readmissions (Lucas & Pawlik, 2014, pg. 185, 189).

In addition, an eight-question survey titled "Pre-Ostomy Survey", (Appendix B: Pre-Ostomy Survey), was created and distributed to D12 nurses about the quality improvement project "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay". A total of sixty-eight surveys were collected and analyzed through the Qualtrics online program. D12 has a total of seventy staffed nurses for both day and night shift including the upper management nursing team. There was a ninety-seven percent completion of surveys. The reasons for not having one hundred percent staff participation with the survey is due to one nurse being on maternity leave and the second nurse was on vacation. The survey distribution and collection time frame was from September 22, 2017 through October 26, 2017.

The Pre-Ostomy Survey Results, (Appendix C: Pre-Ostomy Survey Results) is the visual data breakdown of each individual survey question through use of graphs. The survey identified

that 50% of D12 nurses have ten years or more of experience. Although majority of D12 staff has many years of clinical practice and skills, the nursing confidence levels varied. Only 48.53% of nurses felt very confident in providing education and instructions to new ostomy patients while 42.65% identified themselves as somewhat confident, and 8.82% of nurses were not confident concerning this aspect of their practice. The survey also recognized that D12 staff understand ostomy education is a team effort, with 77.94% identifying bedside nurse, inpatient ostomy nurse, and physicians as all being educators to ostomy patients.

Further information gathered from the survey was about available resources and development of additional ostomy resources for staff. The majority of nurses on D12, 77.94%, stated D12 already has easily accessible information and resources concerning the ostomy patient population, yet 100% of staff believe additional resources such as the Colostomy and Ileostomy Nursing Resource Binder, the Patient Milestone Checklist, and the R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients) would be helpful and a benefit to D12 nursing practice. The entire D12 staff that participated in the survey, 100%, agreed if new ostomy resources and educational tools were available, they would implement them and use in their practice. In addition, 100% of staff agreed patients are equally accountable to achieving their postoperative milestones. Finally, 95.59% of D12 nurses ensure patients reach their daily postoperative milestones.

#### Methodology

The model: plan, do study, and act (PDSA), was used as guide for improvement concerning the quality project "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" (Nelson, Batalden, & Godfrey, 2007, p. 275). The PDSA method "provides a

clear path forward for testing ideas, learning from the testing, and moving ahead with better-informed actions to make improvements" (Nelson, Batalden, & Godfrey, 2007, p. 275). This concept assists the quality improvement project "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" with achieving outcomes and supports optimal improvement.

During the Plan stage for the CNL quality improvement project, the objective was identified to decrease length of stay for new, non-emergent colostomy and ileostomy colorectal surgery patients. This led to the project being titled "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay". Through brainstorming sessions and meetings, questions and expected outcomes were determined. The reasons for UCDMC having an extended length of stay concerning the new ostomy patient population were specifically discussed through implementation of doing a root-cause analysis fishbone diagram, (Appendix F: Fishbone Diagram: Contributing Factors For New Ostomy Patient's Variance In Length Of Stay). Therefore, the expected outcome to decrease length of stay to five days or less for new ostomy patients was determined as the main goal for this quality improvement project. It was determined to develop three new ostomy educational tools for UCDMC's D12 unit. Implementation of the role of CNL educator would occur concerning the three new ostomy educational tools to all of D12 nursing staff. This project timeline (Appendix I: Timeline) concerning development of the three ostomy tools and education of D12 nurses was from July 2017 through November 15, 2017 (Nelson, Batalden, & Godfrey, 2007, p. 275).

The Do portion of the PDSA cycle began with development of three new ostomy educational tools for both nurses and ostomy patients. The new ostomy educational tools created were the Colostomy and Ileostomy Nursing Resource Binder, the Patient Milestone Checklist, and the R.N. Postoperative Process for Ostomy (Appendix H: Patients Colostomy and Ileostomy

Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients). During this aspect of the project, the Pre-Ostomy Survey was developed and distributed to D12 nursing staff, (Appendix B: Pre-Ostomy Survey). Analysis of the survey data began in this part of the cycle too (Appendix CL Pre-Ostomy Survey Results). Since the D12 Unit Manager determined not to fully implement the project at this time, no further actions were done. The inability to finish the entire project can be recognized as an unexpected observation (Nelson, Batalden, & Godfrey, 2007, p. 275).

To date, adjustments to the timeline are necessary since this project is pending administrative review and approval. On approval, the project begins with three months of staff education regarding purpose and use of ostomy educational tools followed by sixmonths of implementation.

The Study phase is the third component of the PDSA cycle. It has only been able to be implemented concerning the data collected from the Pre-Ostomy Survey, (Appendix C: Pre-Ostomy Survey Results). The data from this survey was analyzed and supported expected outcomes. After administration approval and implementation of this quality improvement project, a complete analysis will be done to evaluate the impact of these tools on reduction of length of stay, as well as nurse and patient satisfaction with the process. In addition, a second survey, title "Post-Ostomy Survey" will be created, distributed to D12 nurses, and analyzed for comparison to previous data collections (Nelson, Batalden, & Godfrey, 2007, p. 275).

After the project is implemented in 2018, the final stage of the PDSA cycle, Act, will be completed. The coding data and post-ostomy survey data analysis will assist with determining necessary changes for completing future PDSA cycles for this CNL quality improvement project.

Overall, when this project is fully supported and implemented it will exemplify how the PDSA model "conducts change in a disciplined and rapid fashion" and specifically how each stage is relevant to "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" (Nelson, Batalden, & Godfrey, 2007, p. 275).

In addition, it was necessary to identify a change theory supportive of the CNL quality improvement project. To assist with successful nursing education and implementation of ostomy tools within the D12 microsystem, Kotter's 8-Step Change Theory was fundamental concerning the quality improvement process. The eight-steps identified in Kotter's Change Theory include: creating a sense of urgency, creating a guiding coalition, vision for change, communication, empowerment, celebrating short-term wins, consolidating improvements, and institutionalizing change (Mount & Anderson, 2015, pg. 37-38).

In the beginning phase of the project, "Developing Ostomy Educational Tools To
Decrease Hospital Length of Stay", urgency for change was evident due to the UCDMC 2016
coding data demonstrating how new ostomy patient's average length of stay at UCDMC was
twelve days (Kirkland-Kyhn, 2017). UCDMC's ostomy patient length of stay drastically exceeds
the national average for colostomy and ileostomy patients. The national average length of stay
for ostomy patients is presently three to seven days (American College of Surgeons, 2015).
Hence, UCDMC management team members: D12 Unit Manager, D12 Nursing Director, Patient
Care Services Manager, and the Wound Care Team Manager recognized how necessary change
was needed concerning this issue. This led into Kotter's stage of developing a guiding coalition.
Since support from UCDMC management team members was gained, additional
multidisciplinary teams also joined the task force. The additional team members included: D12

dietician manager, the chief of colorectal surgery and her residents, D12 Unit Based Council members, and UCDMC Ostomy registered nurse (Mount & Anderson, 2015, p. 37).

Once urgency and the multidisciplinary team were established, the vision for change was created. It was determined to decrease length of stay to five days or less, for new, non-emergent colostomy and ileostomy colorectal service patients. This outcome would be achieved through the development and implementation of three new ostomy educational tools. The new ostomy educational tools included the following: a Colostomy and Ileostomy Nursing Resource Binder, a Patient Milestone Checklist, and the R.N. Postoperative Process for Ostomy Patients, (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients). The success of ensuring the vision of change to occur was largely due to communication aspect of Kotter's Change Theory (Mount & Anderson, 2015, p. 37). Key elements throughout this process were facilitated amongst all project members due to the CNL's core competencies of collaboration and communication, and ability to be a lateral integrator (Harris, Roussel, & Thomas, 2018).

Implementation of Kotter's stage of empowerment for "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" was evident by using D12 as the pilot unit. This unit selection was due to the CNL student already being employed on this unit as well as the majority of new ostomy patients being admitted postoperatively to this microsystem. Since relationships were already established, the CNL student was able to positively empower all D12 nurses concerning this particular quality improvement project. D12 nurses displayed an environment of trust, respect, and support for decreasing ostomy patients' length of stay by using the three new ostomy educational tools on future colostomy or ileostomy patients. Although the

project was not fully implemented, celebrating short-term wins was achieved. Since there was ninety-seven percent competition of the pre- ostomy survey distributed amongst D12 nurses, celebratory treats were provided to all participating survey contributors (Mount & Anderson, 2015, pg. 37-38).

In 2018, when "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" is fully implemented on D12, the final two stages of Kotter's Change Theory, consolidating improvements and institutionalizing change, will be completed. Consolidating improvement ideas will be identified after six-months of implementation. This will lead to collection and analysis of both UCDMC coding data as well as development and distribution of a post-ostomy survey amongst D12 nurses. The information gained from the data will help determine what aspects of this quality improvement project need to be changed or modified (Mount & Anderson, 2015, p. 38). After review of all data and making modifications the PDSA model will be implemented again. These steps will be necessary to help the upper management team determine if the project was effective and if this change should occur hospital wide (Mount & Anderson, 2015, p. 38).

Kotter's 8- Step Change Theory is appropriate for the quality improvement project "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" due to multiple reasons. First, this particular change theory supports many CNL roles and competencies. Second, each component of Kotter's Theory is easily applicable to decreasing length of stay for new, non-emergent colostomy and ileostomy colorectal surgery service patients. Most importantly, it is a theory that D12 nurses can relate to and understand. The ideal goal for "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" is to reduce new ostomy patient's hospital admission to five days or less from the current twelve-day average length of stay. After

six-months of implementation, the predicted outcome of decreasing the length of stay; will determine project effectiveness. The coding data as well as post-ostomy surveys can be collected and analyzed after project implementation is completed.

#### **Data Source/Literature Review**

Clinical microsystems are "the essential building blocks of the health system, can be found everywhere and vary widely" (Nelson, Batalden, & Godfrey, 2007, p. 7). UCDMC is in Sacramento, California and is representative of numerous diverse microsystems (UC Davis Health, Public Affairs and Marketing, n.d., para.4). Performing a specific microsystem assessment of UCDMC's D12, a clear understanding germane to the unit's purpose, patients, professionals, processes, and patterns was established (Nelson, et al., 2007, p. 126). Through this in depth microsystem assessment, trends and patterns were identified. Hence, the project, "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" displayed the need for proposed solutions to improve D12 microsystem based on using the unit's 5 P's for identification of relevant trends and patterns.

UCDMC is a 627-bed acute care teaching and Magnet recognized hospital (UC Davis Health, Public Affairs and Marketing, n.d., para.4). The microsystem, D12, contains 36-beds. This unit caters to a variety of specialty surgical teams including gastrointestinal, vascular, surgical and gynecological oncology, gynecology, bariatric, colorectal and foregut, and urology. The goal of D12 is to provide care in the acute postoperative phase of hospitalization for their specialized patient populace (UC Davis Health, n.d., para. 5). The majorities of patients are received from post-anesthesia unit, but may also come from one of the hospitals many intensive care units, the emergency department, direct admission from home, or transferred from outside

hospital. Length of stay varies depending on the admitting diagnosis, individual capacity to meet postoperative goals, or the occurrence of complications.

The focus of the "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" project was determined from UCDMC coding data for length of stay. The data showed new ostomy patient's hospital admissions averaging twelve days. Therefore, it was decided to do a quality improvement project to decrease new ostomy patient's length of stay. Additional data to support this specific CNL project was determined from the Pre-Ostomy Survey and results, (Appendix B: Pre- Ostomy Survey and Appendix C: Pre-Ostomy Survey Results). In addition, majority of new ostomy patients are admitted to D12 unit since colorectal surgery service is one of the specific specialties within this microsystem.

Research demonstrates the importance of having standard ostomy guidelines for clinical practice. As a result, it is equally as important to assess length of stay in the acute care setting. In order to implement change, first it is necessary to identify all of the factors involved causing increased length of stay. Second, recognizing the tools necessary to modify these factors, and the barriers present, which have prevented adopting standard ostomy practice guidelines and reduction in length of stay. Therefore, a preliminary literature review was conducted. Articles were selected from PubMed and Cumulative Index of Nursing and Allied Health Literature (CINAHL) databases. The Patient/population, Intervention/influence, Comparison, and Outcome (PICO) method of research was implemented for article selection (Appendix G: PICO).

Terminology used in PubMed and CIHNAL database was: postoperative care, length of stay, colectomy, ileostomy, ostomy, colostomy, continuing education, ambulation, pain management, ostomy guidelines, ostomy pathway, change theory, and Kotter Change Theory.

Only studies conducted in the last five years involving inpatient- hospitalized patients were

considered. A total of ten articles were chosen based on meeting inclusion criteria and relevance to the area of focus. A combination of quantitative and qualitative research was reviewed. For the purpose of this project, ten articles were selected for analysis. In addition, six books were reviewed and included. The books were published in the last ten years. These books pertain to all CNL aspects, development and implementation of quality improvement projects, and colostomy and ileostomy information. All articles and books were necessary to "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" quality improvement project.

Burch and Slater published the article "Enhanced Recovery After Surgery: Benefits For The Stoma Care Patient". The information outlined by these authors discusses how implementation of the enhanced recovery after elective surgery (ERAS) positively impacts patients in the postoperative phase. The ERAS protocol is a current process that was developed and initiated by colorectal surgeons. The ERAS protocol intervention helps reduce individual risk of complications, and decreases the length of stay for ostomy patients. Burch and Slater emphasize the importance of education to patients on the postoperative expectations for early ambulation, pain management plan, preventing nausea and vomiting, removing urinary catheter, and early post-operative diet adjustments. In addition, the article discusses how essential it is to educate staff on appropriate ERAS training tools concerning the entire process (Burch & Slater, 2012). This evidence-based information was used to develop the educational tools, the Patient Milestone Checklist and the R.N. Postoperative Process for Ostomy Patients (Appendix J: the Patient Milestone Checklist and Appendix K: the R.N. Postoperative Process for Ostomy Patients). It supports the "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" project by outlining necessary tasks and education needed to improve patient outcomes, such as decreasing length of stay for new ostomy patients at UCDMC.

In 2013, the Journal of Stomal Therapy Australia published the article "Exploration Of The Primary Care Nurses' Attitudes To Caring For A Client With A New Surgically Formed Stoma". The author developed a study using quantitative and qualitative questions through SurveyMonkey to retrieve data to assess bedside nurses attitudes towards new stoma patients. The information obtained and discussed was applicable to patients in the postoperative phase of care. Burrell stresses the importance of primary nurses playing a pivotal role concerning the patient's physical and emotional state. Nurses' skills and education are key components to stoma patients' recovery process. Although the study had a small number of participants, results indicated major barriers. There was an inability for study participants to determine if changing patient's stoma appliance was unpleasant. In addition, staff did not think "it was their responsibility to teach clients with a new, surgically formed stoma to achieve independence" (Burrell, 2013, p. 14). Positive data reflected nurses' opinions that the stoma plan of care guidelines was easy to follow. Nurses stated the odor produced by stomas was not offensive. Finally, nurses recognized extra education and therapeutic time was necessary for ostomy patients and that supplies were sufficient (Burrell, 2013, p. 14). This article is extremely relevant to D12 quality improvement project due to UCDMC also practicing primary nursing model of care. The authors' research is helpful with identifying potential barriers this project could encounter. This information also enforces essential need for nurses to be competent concerning ostomy skills and ostomy patient education.

Colwell, Kupsick, and McNichol's article "Outcome Criteria for Discharging the Patient With A New Ostomy From Home Health Care" discusses the standards of care and education for new ostomy patients to discharge from the acute care setting. The standards revolve around patient education, understanding, and development of ostomy skills prior to leaving the inpatient

facility and returning to the community. The necessary information new ostomy patients need to understand include the following: dietary recommendations, ostomy supplies, and available ostomy resources. In addition, ostomy patients need education and assistance with developing personal skills for changing the ostomy appliance, emptying appliance, how to assess stoma and surrounding skin, and assessment of ostomy output. Thus, the authors stress the significance of the role of the certified Wound, Ostomy, Continence Nurse in ostomy education, development of ostomy skills, while providing support to the new ostomy patient population (Colwell, et al., 2016). This research article supports development and implementation of the three new ostomy educational tools at UCDMC for the D12 microsystem (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients). Finally, the article recognizes necessary educational topics nurses need to be knowledgeable on and able to re-literate to ostomy patients during the postoperative phase of care.

In 2014, Davenport wrote the article "A Proven Pathway For Stoma Care: The Value Of Stoma Care Services". Davenport discusses the importance and benefits for implementing a pathway for stoma patients. The article identified four phases of the pathway, which include preoperative care, inpatient care, discharging into the community, and life living with ostomy at three months, six-months, and one year (Davenport, 2014, 1176). Davenport stresses the importance of postoperative teaching in the acute care setting phase is necessary for discharging patients thereby ensuring successful patient outcomes. Hence, through the stoma pathway "expected patient outcomes and organisational goals regarding quality of care, costs, patient experience and efficiency" (Davenport, 2014, p. 1174) are achieved. Davenport's article is relevant due to UCDMC lacking current ostomy process. The article provides evidence support

for the entire project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay". It demonstrates the high possibility that if an official ostomy protocol and process, such as the R.N. Postoperative Process for Ostomy Patients (Appendix K: the R.N. Postoperative Process for Ostomy Patients). Implementation of the R.N. Postoperative Process for Ostomy Patients at UCDMC supports how positive outcomes could be achieved for the patient, the hospital, and the specific D12 microsystem.

The article "Meeting The Needs Of New Ostomists: A Patient Evaluation Survey" was written by Helena Edis in 2015 for the *British Journal of Nursing*. Through patient evaluation surveys, quantitative and qualitative data was collected. The purpose was to gather information to assist with improving quality of care and support for ostomy patients while evaluating the current ostomy clinical pathway. The article stresses how the survey results indicated areas needing improvement including: staff knowledge and ostomy skills, availability of ostomy nurse, postoperative expectations, and education on ostomy appliances and supplies (Edis, 2015). Edis's information is applicable to the CNL quality improvement project by providing factual information to UCDMC for the reasons and concepts selected concerning the R.N. Postoperative Process for Ostomy Patients educational tool (Appendix K: the R.N. Postoperative Process for Ostomy Patients). The article identifies areas requiring improvement; therefore the project at UCDMC can ensure these issues are addressed.

In 2015, the article "Clinical Practice Guidelines For Ostomy Surgery" was published in the *Diseases of the Colon & Rectum Journal*. The authors' discussed standards of care for ostomy patients to assist healthcare professionals with determining patient's treatment. The goal is to help to improve ostomy patient care and outcomes through the development and implementation these guidelines. The standards of care discussed included ostomy creation,

ostomy closure, complications, and support for implementation of ostomy nurse for ostomy patients (Hendren, Hammond, Glasgow, Perry, Buie, Steele, & Rafferty, 2015). This article, from *Diseases of the Colon & Rectum Journal*, supports the quality improvement project by explaining ostomy standards of care that are applicable for all healthcare systems, such as UCDMC. Having specific ostomy processes at UCDMC will ensure improved outcomes, increase reliability, and will assist with decreasing length of stay. The article provides evidence-based support for all three ostomy educational tools (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients).

Moore's article "Medication Absorption For Patients With An Ileostomy" is informative for medication prescribers, ostomy nurses, patient care nurses, and ileostomy patients. The article emphasizes three educational topics, which are prescribing considerations, ileostomy absorption compared to other ostomies, and advice concerning ileostomy absorption of medications. Moore highlights these three aspects concerning medication absorption for ileostomy patients due to lack of awareness amongst providers and ileostomy patients (Moore, 2015). This article was essential for the educational component for ileostomy patients. It is evidence-based research that is necessary for healthcare providers to understand concerning the ileostomy patient population and medication administration. This information was important for developing all three of the new ostomy educational tools (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients).

In 2015, the *Nurse Leader* journal published Mount and Anderson's article "Driving Change Not Just A Walk In The Park: The Role Of The Nurse Champion In Sustained Change".

The article describes the project's purpose was to implement nurse champions as facilitators for improving nursing mobility so that hospital length of stay decreased. This study succeeded through using Kotter's 8-step Change Theory as the foundational framework for change amongst nursing staff. The article summarizes how each aspect of Kotter's Theory was demonstrated in the project. The eight-steps of change include the following: establishing urgency, formation of a powerful coalition, developing a vision for change, communicating the vision, empowerment, acknowledging short-term wins, building on the change, and implementation of change system wide. Kotter's Theory provided positive results for the mobility initiative. Nursing staff had improved confidence for mobilizing patients, there was improved patient outcomes, as well as the hospital had a 6.8% reduction in length of stay (Mount & Anderson, 2015). This article provides direct insight and correlation to how implementing a change theory within a nursing culture is effective. It helps ensure the project "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" is an effective change amongst all D12 nurses and in the future possibly the entire hospital.

The article "Discharge Planning For a Patient With A New Ostomy" is evidence based practice information outlining the essential ostomy education and skills required prior to discharging from an acute facility. The authors outline multiple educational topics for new ostomy patients. First, the steps for changing ostomy appliance are provided and followed by recommended diets for either colostomy or ileostomy patients. This article also summarizes how to identify complications requiring medical attention, medication absorption, coping with gas and aromas, and ordering necessary ostomy supplies. Finally, the authors examine the transitions of care for this patient population (Prinz, & et al., 2015). The articles information assists with supporting all the new ostomy educational tools ,(Appendix H: Colostomy and Ileostomy

Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients), that were developed. Also this information is needed to ensure UCDMC ostomy patients are receiving quality care as well as prepared for discharging from the acute care setting.

The article "Hospital Analgesia Practices And Patient-Reported Pain After Colorectal Resection" was a study designed to assist with improving quality of care from the patient's viewpoint concerning their pain management. The data showed that patients in bigger hospitals, where there was increased volume and the use of laparoscopic procedures, reflected patients reporting the lowest pain scores. In addition, the pain management regimen consisted of local anesthesia, use of non-steroidal anti-inflammatory medications, and patient-controlled analgesia. These practices have lead to fewer postoperative adverse outcomes, decreased complications, and reduced emergency room visits and readmissions. Therefore, it is evident that a variety of pain control methods need to be implemented to assist with improving quality of care (Regenbogen, Mullard, Peters, Brooks, Englesbe, Campbell, & Hendren, 2016). The reasons for this article being selected concerning the quality improvement project, is due pain being identified as a contributing factor to increased lengths of stay (Appendix F: Fishbone Diagram: Contributing Factors For New Ostomy Patient's Variance In Length Of Stay). Pain can lead to increased administration of analgesics thereby causing patients to develop constipation or an ileus. These authors provide evidence-research supporting pain management with medications that have decreased ability for affecting one's bowels. In addition, it supports UCDMC's head colorectal surgeon's current order-sets concerning the pain management plan for the new, nonemergent colostomy or ileostomy patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binders).

A total of six books were utilized to assist with the project "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay". The Wound, Ostomy and Continence Nurses Society (WOCN Society) wrote two of the evidence-based books relevant for this quality improvement project. In 2016, WOCN Society published *Wound, Ostomy and Continence Nurses Society Core Curriculum Ostomy Management Continence Management Wound Management*. This publication provided variety of information concerning all information relevant to ostomies. Specifically, the book outlines relevant anatomy and physiology, diseases causing need for ostomy formation, preoperative and postoperative care, patient education topics, ostomy appliance information, specific management issues, rehabilitation issues, peristomal skin conditions, complications, and nursing management recommendations (WOCN Society, 2016, pg. xii -xiv).

The second book, was published in 2017, and titled *Clinical Guideline: Management of the Adult Patient with a Fecal or Urinary Ostomy*. This book referenced updated information concerning all ostomy care pre-operative, postoperative, care post discharge, outlined complications, and recommendations for clinical management (WOCN Society, 2017, pg. ii-iv). Both book publications from WOCN Society were necessary resources for developing all three new ostomy education tools, which included the Colostomy and Ileostomy Nursing Resource Binder, the Patient Milestone Checklist, and the R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients).

Harris, Roussel, and Thomas wrote the book, *Initiating and Sustaining the Clinical Nurse*Leader Role A Practical Guide. This publication was necessary for understanding and identifying CNL roles, competencies and values. It provided guidance for implementation of the

CNL quality improvement project on D12. Another key book relevant to the CNL aspect component of the quality improvement project was *Clinical Nurse Leader Certification Review* by King and Gerard. It was a source of definitional information vital to quality improvement project as well as the CNL components concerning the project "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay".

Challenges. This book provided information on Benner's Stages of Nursing Proficiency.

Benner's Theory was utilized understand Pre-Ostomy Survey data gathered from D12 nurses.

This assisted with understanding current and future Benner's stages in relation to D12 nurses concerning the CNL quality improvement project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay".

The final book, *Quality By Design A Clinical Microsystems Approach*, written in 2007 by Nelson, Batalden, and Godfrey. These authors provide insight, explanations, and direction for understanding variety of concepts, models, and theories concerning development and implementation of quality improvement projects. This specific book was a major contributor to understanding how to develop D12 microsystem project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay".

#### Timeline

"Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" project was initiated on June 20, 2017 by conducting data analysis. After coding data was analyzed, it was determined UCDMC's non-emergent ostomy patient's average length of stay was twelve days. The data determined from coding was new, enlightening information concerning the length of stay for ostomy patients that was unknown to multiple stakeholders, which lead to three

important meetings. The first meeting that occurred was on July 5, 2017 with D12 Unit Based Council Staff and Unit Manager. On July 6, 2017 a meeting the following individuals: the Wound Care Team Manager, Patient Care Services Nursing Manager, D12 Unit Manager, the D12 Nursing Director, and myself gathered to discuss the ostomy crisis. The final meeting was on September 8, 2017 where the Head of Colorectal Surgery, UCDMC's Ostomy registered nurse, and the Wound Care Team Manager collaborated on the current ostomy patient population length of stay and reviewed the tools that were available: the Colostomy and Ileostomy Nursing Resource binder and the R.N. Postoperative Process for Ostomy Patients. Support was gained from all parties and it was determined at the first two meetings that it would be necessary to reconvene at later dates to discuss project progress. October 4, 2017 was a scheduled D12 Unit Based Council Meeting where myself, the Unit Base Council Members, and D12 Unit Manager assembled and reviewed all educational tools and discussed future direction of the project. On October 9, 2017, a meeting occurred with the Wound Care Team Manager, Patient Care Services Nursing Manager, D12 Unit Manager, and the D12 Nursing Director where it was determined necessary to purchase ostomy hospital training course, cross train current Wound Care Team members with Ostomy certification, and offer the training course to all nurses at UCDMC. Two additional meetings necessary for creation of ostomy education tools occurred with Tower 8 Kidney Transplant Team Members. The first meeting was July 10, 2017 with the nurse practitioner of the Kidney Transplant Team. She provided insight concerning her development of a kidney transplant resource binder for all new clinical staff team members. A meeting on August 31, 2017 occurred with the assistant nurse manager of Tower 8. In this meeting, the patient and staff educational components concerning the kidney transplant process were

discussed. In addition, discussion about changing and modifying nursing culture, nurses perceptions, and reward systems occurred.

The timeline specific for tool development began in July and was finished in October.

The development of the Colostomy and Ileostomy Nursing Resource Binder, (Appendix H:

Colostomy and Ileostomy Nursing Resource Binder), began July 18, 2017. This specific educational tool was worked on from the start date until it was completed on October 3, 2017.

The R.N. Postoperative Process for Ostomy Patients was created August 24, 2017-Sepembter 5, 2017 (Appendix K: R.N. Postoperative Process for Ostomy Patients). On September 21, 2017 the Patient Milestone Checklist tool and Pre-Ostomy Surveys were created (Appendix J: Patient Milestone Checklist and Appendix B: Pre-Ostomy Survey).

Pre-Ostomy Survey data collection and analysis began 09/22/2017 through 10/26/2017, data analysis (Appendix C: Pre-Ostomy Survey Results). The implementation of education of D12 nurses was scheduled from 10/15/2017-11/15/2017. The timeline (Appendix I: Timeline) for this project is pending administrative review and approval. On approval, the project begins with three months of staff education regarding purpose and use of ostomy educational tools followed by six-months of implementation. When complete an analysis will be done to evaluate the impact of these tools on reduction of length of stay, as well as nurse and patient satisfaction with the process. The project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay", supports the use Kotter's 8-Step Change Theory thereby ensuring project effectiveness (Mount & Anderson, 2015, pg. 37-38).

#### **Expected Results**

The main result for the project, "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay", is to see a reduction of total days patients are hospitalized. Ideally,

future new, non-emergent colostomy and ileostomy colorectal surgery patients' length of stay will be decreased to five days or less. Indirectly, this will reduce fiscal costs for both the patient and hospital. An additional outcome is for D12 nursing staff to accept, fully utilize, and implement the ostomy educational tools into their standard practice. In addition, this will facilitate D12 nurses achieving the final two stages of Benner's Stages of Nursing Proficiency, proficient practitioner and expert practitioner. An emerging theory is that the three new educational tools will be easy for D12 nurses to understand and use thereby reducing new ostomy patients' length of stay. This will also result in improving the reliability of ostomy care by having standardized care and education. Actual results will be obtained in 2018 after administrative approval. There will be three months of staff education followed by six-months of project implementation on D12. The data will be collected from UCDMC coding department as well as a post-ostomy survey will be created and distributed amongst D12 nursing staff and all information will be analyzed.

## **Nursing Relevance**

It is important to note, "[n]urses are at the heart of the care provision, and are therefore best-placed to evaluate the care and design and implement care changes" (Edis, 2015, p.S4). Hence, the quality improvement project, "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay", has multiple positive contributions to the nursing healthcare profession. Through the CNL educator role, nurses are able to improve their practice through implementation of standardize care for the ostomy patient population. The CNL educator component and professional growth are supported by the ostomy standards facilitating "high-quality care based on evidence and research" (Davenport, 2014, p. 1180). These specific, standards for ostomy care decreases patient's hospital length of stay. Through reduction in

hospital length of stay, patient outcomes reflect decreased complications, readmissions, while also improving both hospital and patient fiscal responsibility (Burch & Slater, 2012).

Finally, through the application of Benner's Stages of Nursing Proficiency there is nursing significance related to professional development. From the Pre-Ostomy Survey data, (Appendix C: Pre-Ostomy Survey Results), D12 nurses reflect the different levels of proficiency concerning new, non-emergent colostomy and ileostomy patients. D12 nurses can be novice due to insufficient ostomy skills and lack of formalized training concerning knowledge, understanding, and implementation of ostomy educational tools. The stage of advanced beginner is how D12 acknowledges ostomy standards of care, implements ostomy educational tools, such as using the Colostomy and Ileostomy Nursing Resource Binder (Appendix H: Colostomy and Ileostomy Nursing Resource Binder). In addition, advanced beginner role is evident by understanding the team dynamic concerning patient, physician, bedside registered nurse, ostomy registered nurse, dietician, pharmacist, social worker, and discharge planner. During this stage, nurses reflect more confidence in their ostomy knowledge and skills. The competent practitioner is the third stage and is identified when the Patient Milestone Checklist, (Appendix J: Patient Milestone Checklist), are being consistently completed as well as nurses are following and implementing the R.N. Postoperative Process for Ostomy Patients, (Appendix K: R.N. Postoperative Process for Ostomy Patients). This level of proficiency has confidence in their abilities concerning the ostomy population.

The fourth and fifth stages, proficient practitioner and expert practitioner, are expected positive outcomes once the project, "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" has been fully implemented and completed. Ideally, all of D12 nurses will become proficient and expert practitioners who "[v]iews patients holistically; recognizes

subtle changes, sets priorities with ease; focuses on long-term goals" while able to "grasps patients needs automatically, responses are integrated, [and] expertise comes naturally" (Chitty & Black, 2011, pg. 135-137).

## **Summary Report**

The project, "Developing Ostomy Educational Tools To Decrease Hospital Length of Stay" aims to decrease the length of stay for new, non-emergent colostomy and ileostomy colorectal surgery patients at UCDMC on D12. Since the current length of stay for new ostomy patients is twelve days, the new goal was to reduce the length of stay to five days or less. This was to be achieved by educating D12 nurses using the three following new tools: a Colostomy and Ileostomy Nursing Resource Binder, a Patient Milestone Checklist, and also through the development and teaching of appropriate R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients). Education was scheduled from October 15, 2017 through November 15, 2017. The goal was to have 100% staff participation. After staff education, length of stay for this patient population would decrease and be re-evaluated in 2018 after six-months of implementing the project. It is important to note, the timeline for this project is pending administrative review and approval. On approval, the project begins with three months of staff education regarding purpose and use of ostomy educational tools followed by six-months of implementation. When complete an analysis will be done to evaluate the impact of these tools on reduction of length of stay, as well as nurse and patient satisfaction with the process.

The process was to begin with educating all D12 nurses about the three new ostomy educational tools: the Colostomy and Ileostomy Nursing Resource Binder, the Patient Milestone

Checklist, and R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients). This would lead to the implementation of educational tools to be used for future new, non-emergent, colostomy or ileostomy colorectal surgery patients being admitted postoperatively to D12. The process would end with the ostomy patients' being discharge from the acute care setting of D12. The four expectations for this project were the following: 1). Develop and implement the three new ostomy educational tools, 2). Decrease the length of stay for ostomy patients, 3). Improve the reliability through consistent education and interventions for patients, providers, and families, and 4). Decrease the fiscal responsibility for both the patient and UCDMC. It is essential to implement this project due to UCDMC's ostomy average length of stay exceeding the national average length of stay.

The acute care hospital, UCDMC, is a 627-bed acute care teaching and Magnet awarded hospital (UC Davis Health, Public Affairs and Marketing, n.d., para.4). The microsystem, D12, contains 36-beds. This unit caters to a variety of specialty surgical teams including gastrointestinal, vascular, surgical and gynecological oncology, gynecology, bariatric, colorectal and foregut, and urology. The goal of D12 is to provide care in the acute postoperative phase of hospitalization for their specialized patient populace (UC Davis Health, n.d., para. 5). The majorities of patients are received from post-anesthesia unit, but may also come from one of the hospitals many intensive care units, the emergency department, direct admission from home, or transferred from outside hospital. Length of stay varies depending on the admitting diagnosis, individual capacity to meet postoperative goals, or the occurrence of complications.

The focus of the "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" project was determined from UCDMC coding data for length of stay. The data showed

new ostomy patient's hospital admissions averaging twelve days (Kirkland-Kyhn, 2017) compared to the national average length of stay for colostomy and ileostomy patients of three to seven days (American College of Surgeons, 2015). Therefore, it was decided to do a quality improvement project to decrease new ostomy patient's length of stay. Additional data to support this specific CNL project was determined from the Pre-Ostomy Survey and results (Appendix B: Pre-Ostomy Survey and Appendix C: Pre-Ostomy Survey Results). In addition, majority of new ostomy patients are admitted to D12 unit since colorectal surgery service is one of the specific specialties within this microsystem. The ostomy patient population on D12 varies due to the colorectal surgery team's schedule varying as well as the availability for admissions to D12. Therefore, due to these issues exact patient population data cannot be stated, as it will vary daily.

The methods used for the quality improvement project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" included the PDSA cycle and application of Kotter's 8 – Step Change Theory. The PDSA model allowed for developing project, implementing project, and determining future and improved actions based on results of the project (Nelson, Batalden, & Godfrey, 2007, p. 275). The PDSA model assists with achieving the projects outcomes and demonstrates optimal quality improvement. Kotter's 8- Step Change Theory was necessary for this CNL quality improvement project for a variety of reasons. First, this particular change theory demonstrates many CNL roles and competencies. Second, each component of Kotter's Theory is easily applicable to decreasing length of stay for new, non-emergent colostomy and ileostomy colorectal surgery service patients. Most importantly, it is a theory that D12 nurses culture can relate to and understand.

Three educational tools were developed for this project as teaching aids. The three specific ostomy educational tools created include the following: the Colostomy and Ileostomy

Nursing Resource Binder, the Patient Milestone Checklist, and R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients). These three specific ostomy tools are to be used in conjunction with the role of CNL educator. Ideally, education on the three - ostomy educational tools would occur to all D12 nurses from the CNL from October 15, 2017- November 15, 2017. After all staff received education, D12 nurses would implement tools into their practice concerning the new, nonemergent colostomy or ileostomy colorectal surgery patients. In May 2018, after six-months of D12 nurses using the tools, a Post-Ostomy Survey would be created and distributed amongst staff to determine effectiveness of tools. In addition, data would be collected from coding to analyze length of stay. The ideal goal after analyzing the coding data from the implementation of these tools; would to see a reduction in length of stay from twelve days to five days or less. The project did not meet the pre-determined timeline because this project is pending administrative review and approval. Once approval is obtained, the project will be initiated. The quality improvement project will begin with three months of staff education regarding purpose and use of ostomy educational tools followed by six-months of implementation.

A Pre-Ostomy Survey was created and distributed to D12 nurses and analyzed,

(Appendix B: Pre-Ostomy Survey and Appendix C: Pre-Ostomy Survey Results), to determine nursing confidence level concerning ostomy patients and staff opinions about current and future ostomy tools with the D12 microsystem. A total of sixty-eight surveys were collected and analyzed through the Qualtrics online program. D12 has a total of seventy staffed nurses for both day and night shift including the upper management nursing team. There was a ninety-seven

percent completion of surveys. Only 48.53% of nurses felt very confident in providing education and instructions to new ostomy patients while 42.65% identified themselves as somewhat confident, and 8.82% of nurses were not confident concerning this aspect of their practice. Additional information gathered from the survey was about available resources and development of additional ostomy resources for staff. The majority of nurses on D12, 77.94% stated D12 already has easily accessible information and resources concerning the ostomy patient population, yet 100% of staff believe additional resources such as the Colostomy and Ileostomy Nursing Resource Binder, the Patient Milestone Checklist, and R.N. Postoperative Process for Ostomy Patients (Appendix H: Colostomy and Ileostomy Nursing Resource Binder, Appendix J: the Patient Milestone Checklist, and Appendix K: the R.N. Postoperative Process for Ostomy Patients) would be helpful and a benefit to D12 nursing practice. The entire D12 staff that participated in the survey, 100%, agreed if new ostomy resources and educational tools were available, they would implement them and use in their practice.

The ideal goal for "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" is to reduce new ostomy patient's hospital admission to five days or less from the current twelve-day average length of stay. Again, this predicted outcome, decreasing the length of stay, futuristically will determine project effectiveness once the project has been implemented for six-months in 2018. After consistent six-months of implementation the project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay", the coding data as well as Post-Ostomy Surveys will be collected and analyzed. Finally, through reducing the length of stay concerning this specific patient population, UCDMC will indirectly have fiscal costs savings for both the patient and hospital. Another positive outcome is D12 nursing staff will accept, fully utilize, and implement the ostomy educational tools into their standard practice. The three new

educational tools will be easy for D12 nurses to understand and use, thereby reducing new ostomy patients' length of stay. This will result in improving reliability by having standardized care and education for ostomy patient. Again, actual results will be obtained in 2018 after sixmonths of full implementation of project on D12. The data will be collected from UCDMC coding department as well as a Post-Ostomy Survey will be created and distributed amongst D12 nursing staff and all information will be analyzed.

The future of "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay" project's sustainability is dependent on the results from full implementation within the D12 microsystem. The CNL quality improvement project future requires an evaluation of the PDSA model. The constant application of the PDSA model will ensure project sustainability. Frequently evaluating coding data concerning length of stay will assist with long-term project effectiveness. In addition, intermittent staff education and reminders to staff concerning implementation of ostomy educational tools will also ensure sustainability. This can be achieved through surveys, PowerPoint in-services, and flyer reminders.

In conclusion, it is essential to implement and sustain the CNL quality improvement project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay", to reduce new, non-emergent colostomy or ileostomy colorectal surgery patients' inpatient postoperative days. Through identification of clinical leadership theme, determining statement of the project, developing project overview, providing project rationale, use of methodology, analyzing data, reviewing the literature, creating and following a timeline, recognizing results, understanding relevance to the profession of nursing are the necessary steps to development and implementation of the CNL quality improvement project, "Developing Ostomy Educational Tools To Decrease Hospital Length Of Stay". Therefore, it is through the implementation of the

CNL role that will ensure the project's acute and long-term success concerning length of stay, improving hospital and patient fiscal responsibility, and strengthening the projects reliability.

#### References

- American College of Surgeons. (2015). Colectomy Surgical Removal of the Colon. Retrieved

  July 22, 2017, from

  https://www.facs.org/~/media/files/education/patient%20ed/2015%20colectomy%20brochure%20final.ashx
- Burch, J., & Slater, R. (2012). Enhanced recovery after surgery: Benefits for the stoma care patient. *British Journal of Nursing*, 21(Sup6). doi:10.12968/bjon.2012.21.sup6.s16
- Chitty, K. K., & Black, B. P. (2011). *Professional nursing: Concepts & challenges* (6th ed.).

  Maryland Heights, MO: Saunders Elsevier.
- Davenport, R. (2014). A proven pathway for stoma care: The value of stoma care services.

  \*British Journal of Nursing, 23(22), 1174-1180. doi:10.12968/bjon.2014.23.22.1174
- Edis, H. (2015). Meeting the needs of new ostomists: A patient evaluation survey. *British Journal of Nursing*, 24(Sup17), S4-S12. doi:10.12968/bjon.2015.24.sup17.s4
- Harris, J. L., Roussel, L., & Thomas, P. L. (2018). *Initiating and Sustaining the Clinical Nurse Leader Role: A Practical Guide* (3rd ed.). Burlington, MA: Jones & Bartlett Learning.
- King, C. R., & Gerard, S. O. (2016). *Clinical Nurse Leader Certification Review* (2nd ed.). New York, NY: Springer Publishing Company.
- Kirkland-Kyhn, H. (2017, June 14). Creating a standard clinical pathway with education etc for Ostomies, also data for LOS for ostomy patients [E-mail to M. Whitmore].

- Lucas, D. J., & Pawlik, T. M. (2014). Readmission After Surgery. *Advances in Surgery*, 48, 185-199. Retrieved October 10, 2017, from https://ac.els-cdn.com/S0065341114000104/1-s2.0-S0065341114000104-main.pdf?\_tid=0d9221c0-adfb-11e7-9f14-00000aab0f6c&acdnat=1507668124\_cbca25f037f73cc3c8ee69cd53cc0b44.
- Mount, A., & Anderson, I. (2015). Driving Change Not Just a Walk in the Park: The Role of the Nurse Champion in Sustained Change. *Nurse Leader*, *13*(4), 36-38. doi:10.1016/j.mnl.2015.06.003
- Nelson, E. C., Batalden, P. B., & Godfrey, M. M. (2007). *Quality By Design: A Clinical Microsystems Approach*. Lebanon, NH: Center for the Evaluative Clinical Sciences at Dartmouth.
- Prinz, A., Colwell, J. C., Cross, H. H., Mantel, J., Perkins, J., & Walker, C. A. (2015). Discharge Planning for a Patient With a New Ostomy. *Journal of Wound, Ostomy and Continence Nursing*, 42(1), 79-82. doi:10.1097/won.000000000000000094
- Readmissions-Reduction-Program. (2016, April 18). Retrieved October 9, 2017, from https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html
- UC Davis Health. (n.d.). Medical Surgical Units. Retrieved April 1, 2017, from https://www.ucdmc.ucdavis.edu/nurse/clinicalareas/medsurg.html
- UC Davis Health, Public Affairs and Marketing. (n.d.). Highest recognition for nursing excellence. Retrieved April 1, 2017, from https://www.ucdmc.ucdavis.edu/medicalcenter/features/2013-2014/01/20140115\_magnet.html

- Wound, Ostomy and Continence Nurses Society. (2016). Wound, Ostomy and Continence

  Nurses Society Core Curriculum Ostomy Management Continence Management Wound

  Management. Philadelphia, PA: Wolters Kluwer.
- Wound, Ostomy and Continence Nurses Society. (2017). *Clinical Guideline: Management of the Adult Patient with a Fecal or Urinary Ostomy*. Mount Laurel, NJ: WOCN Society.

#### Appendix A

Evidence – Based Change Of Practice Project Checklist

## EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST \*

DATE: 7-22-17

supervising faculty: Holly Kirkland - Kyhn

Instructions: Answer YES or NO to each of the following statements:  Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care. ALL participants will receive standard of care.	X	
The project is <b>NOT</b> designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does <b>NOT</b> follow a protocol that overrides clinical decision-making.	Y	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does <b>NOT</b> develop paradigms or untested methods or new untested standards.	>	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does <b>NOT</b> seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	×	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	×	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
f there is an intent to, or possibility of publishing your work, you and supervising aculty and the agency oversight committee are comfortable with the following tatement in your methods section: "This project was undertaken as an Evidence ased change of practice project at X hospital or agency and as such was not armally supervised by the Institutional Review Board."	1 \	

ANSWER KEY: If the answer to ALL of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files. If the answer to ANY of these questions is NO, you must submit for IRB approval.

<sup>\*</sup>Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

## Appendix B

## Pre-Ostomy Survey

## **Pre-Ostomy Survey**

Q1 About how many years have you been in your position?
O At least 1 year but less than 3 years
O At least 3 years but less than 5 years
O At least 5 years but less than 10 years
O At least 10 years or more
Q2 Do you feel confident providing education and instruction to post-operative colostomy and ileostomy patients?
○ Yes, very confident
O Somewhat confident
O Not confident
Q3 Who is primarily responsible for educating new colostomy and ileostomy patients?
O Inpatient Ostomy RN
Outpatient Ostomy RN
O Bedside RN, Inpatient Ostomy RN, and Physicians

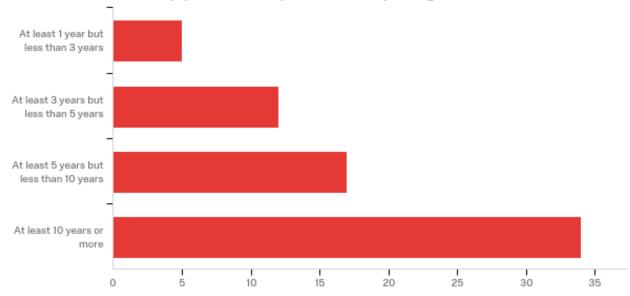
Q4 Does Davis 12 have easily accessible information and resources concerning new colostomy and ileostomy patients?
○ Yes
○ No
Q5 Would additional resources such as resource binder, patient milestone checklist, and nursing process for post-operative ostomy patients be helpful to you?
○ Yes
○ No
Q6 If a resource binder, patient milestone checklist, and postoperative nursing process were available on the unit, would you use them?
○ Yes
○ No
Q7 Should patients be equally accountable for ensuring they meet their post-operative milestones?
○ Yes
○ No
Q8 Do you ensure patients reach their daily post-operative milestones?
○ Yes
○ No

Appendix C

Pre- Ostomy Survey Results

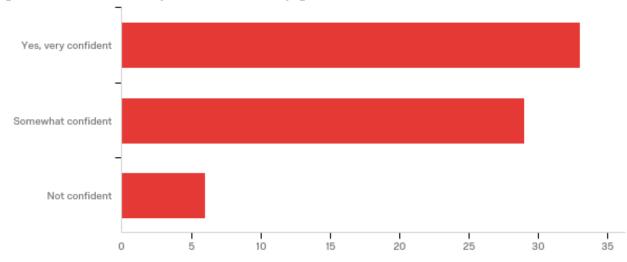
## Pre-Ostomy Survey Report

## Q1 - About how many years have you been in your position?



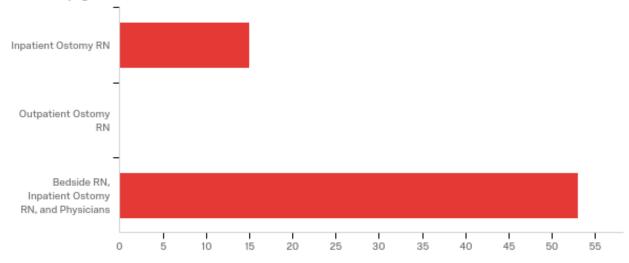
#	Answer	%	Count
4	At least 10 years or more	50.00%	34
3	At least 5 years but less than 10 years	25.00%	17
2	At least 3 years but less than 5 years	17.65%	12
1	At least 1 year but less than 3 years	7.35%	5
	Total	100%	68

## Q2 - Do you feel confident providing education and instruction to postoperative colostomy and ileostomy patients?



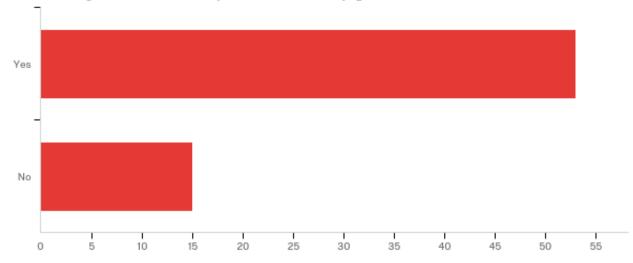
#	Answer	%	Count
1	Yes, very confident	48.53%	33
2	Somewhat confident	42.65%	29
3	Not confident	8.82%	6
	Total	100%	68

# ${\bf Q3}$ - Who is primarily responsible for educating new colostomy and ileostomy patients?



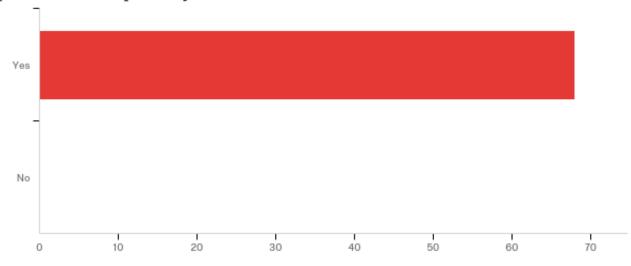
#	Answer	%	Count
1	Inpatient Ostomy RN	22.06%	15
2	Outpatient Ostomy RN	0.00%	0
3	Bedside RN, Inpatient Ostomy RN, and Physicians	77.94%	53
	Total	100%	68

Q4 - Does Davis 12 have easily accessible information and resources concerning new colostomy and ileostomy patients?



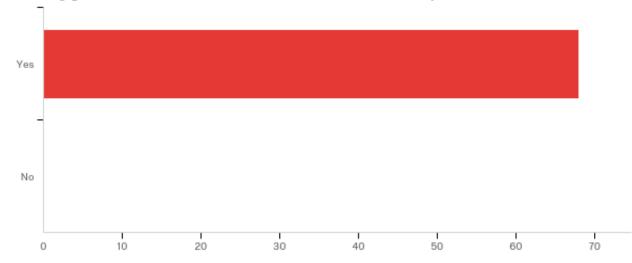
#	Answer	%	Count
1	Yes	77.94%	53
2	No	22.06%	15
	Total	100%	68

Q5 - Would additional resources such as resource binder, patient milestone checklist, and nursing process for post-operative ostomy patients be helpful to you?



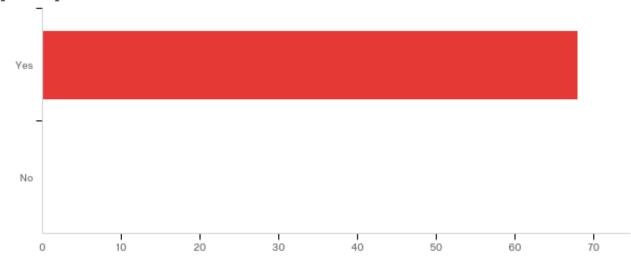
#	Answer	%	Count
1	Yes	100.00%	68
2	No	0.00%	0
	Total	100%	68

Q6 - If a resource binder, patient milestone checklist, and postoperative nursing process were available on the unit, would you use them?



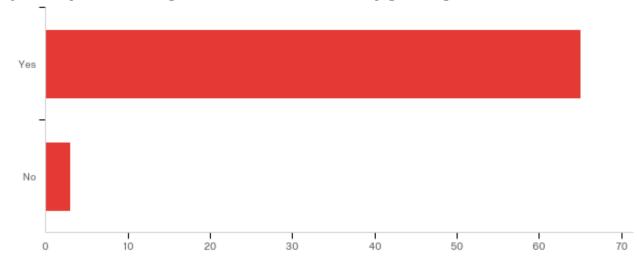
#	Answer	%	Count
1	Yes	100.00%	68
2	No	0.00%	0
	Total	100%	68

# Q7 - Should patients be equally accountable for ensuring they meet their post-operative milestones?



#	Answer	%	Count
1	Yes	100.00%	68
2	No	0.00%	0
	Total	100%	68

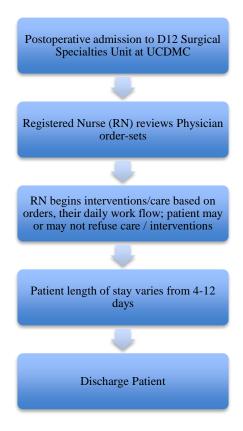
## Q8 - Do you ensure patients reach their daily post-operative milestones?



#	Answer	%	Count
1	Yes	95.59%	65
2	No	4.41%	3
	Total	100%	68

Appendix D

Current High-Level Flow Chart For New Ostomy Patients to D12



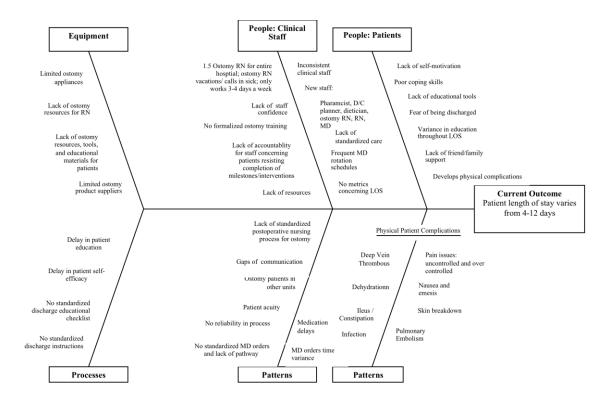
Appendix E

Ideal High- Level Flow Chart For New Ostomy Patients to D12 Surgical Specialties Unit

RN and patient continue to RN and patient continue to implement MD orders, uses implement MD orders uses Postoperative admission to D12 Surgical Specialties ostomy educational tools, & ostomy educational tools, & Unit at UCDMC patient milestones completed patient milestones completed for POD# 3 for POD# 4 Registered nurse (RN) RN and patient continue to RN and patient continue to reviews Physician order-sets, implement MD orders, uses implement MD orders uses provides patient with ostomy educational tools, & ostomy educational tools, & **Patient Milestone Checklist** patient milestones completed patient milestones completed handout; implements use of for POD# 2 for POD# 5 ostomy educational tools RN and patient continue to RN and patient continue to implement MD orders, uses implement MD orders, uses ostomy educational tools, & Discharge patient ostomy educational tools, & patient milestones patient milestones completed completed for POD# 0 for POD# 1

Appendix F

Fishbone Diagram: Contributing Factors For New Ostomy Patient's Variance In Length Of Stay



#### Appendix G

#### **PICO**

**Patient/population:** new, non-emergent colostomy and ileostomy colorectal service patients **Intervention/influence:** Develop and implement ostomy educational tools (resource binder for nurses about colostomies and ileostomies, patient milestone checklist, and postoperative nursing process for ostomy patients) amongst D12 registered nurses

**Comparison:** will compare length of stay of new colostomy and ileostomy colorectal surgery patients. The length of stay prior to development and implementation of ostomy educational tools will be analyzed and compared after full implementation of ostomy educational tools.

Outcome: Decrease length of stay of ostomy patients from twelve days to four-five days

Appendix H

Colostomy & Ileostomy

Nursing Resource Binder

Created by: Morgan Whitmore, RN, BSN, CMSRN, MSN-c Sanaz Martin, RN, MS, FNP-c

#### TABLE OF CONTENTS

- ➤ Check Lists
- > Quick Teaching Points for R.N.
- > Essential DO's & DON'T's
- > Appliance Change
- > Ostomy Assessment
- > Medication Information
- > Pain Management
- Complications
  - Constipation/Blockage
  - Dehydration
  - o Stoma Complications
  - Signs of Infection
- > Irrigation
- Diet and Fluids
- Discharge
- ➤ MD Order-Sets
- ➤ General Ostomy Information
- ➤ Team Roles and Multidisciplinary Rounds
- > Team Schedule
- > R.N. Postoperative Process
- ➤ Website Links
- Video Links
- > Types of Appliances
- > Supply Forms
- > Traveling Information
- > UC Davis Health System Contact Information
- > Support Group Information
- > References

## **Ostomy Checklist:**

Pre-op	eratively:
	Type of surgery/ostomy:
	Pre-operative items completed
	☐ Physical exam
	☐ Abdominal photograph uploaded to EMR
	☐ Consent for surgery complete
	Tentative date of surgery:
	Patient/caregiver attend ostomy pre-operative class
	List handouts provided to patient
	Starter kit ordered
	☐ Hollister
	□ Coloplast
	☐ ConvaTec
	Videos and online education completed
_	
Post-op	peratively:
	Date of surgery:
_	Type of surgery:
	•
Ц	Education provided-
	☐ Ostomy ossessment
	<ul> <li>☐ Ostomy assessment</li> <li>☐ Peri-stomal skin assessment</li> </ul>
	<del>_</del>
	☐ Emptying pouch
	☐ Changing pouch
	☐ Diet/fluid/supplement
	☐ Activity
	□ Shower
	☐ Extra supplies
	☐ Patient/caregiver teach back
	☐ Caregiver video of ostomy care
	☐ Education packet given to patient with phone number
_	Nutritionist consult ordered
	Discharge planning/case management consult ordered
	Patient care giver/companion identified
	Date caregiver/patient teach-back
	Transportation
	□ Car
	□ Taxi
	☐ Uber/Lyft
	☐ Other:
	Discharge disposition?
	☐ Home

□ LTC
☐ Other:
Name(s) of home health agency, SNF, or LTC?
□
□
Discharge patient engagement and teach-back completed
Anticipated date of discharge:
Supplies arranged for discharge
☐ Shield
☐ Other:
Follow up appointment
☐ Clinic/facility/Office:
☐ Physician:
☐ Date/time:

### **Patient Milestone Checklist**

$\Diamond$	Lab draw immediately after surgery (should be done while in post anesthesia care unit)								
$\Diamond$									
$\Diamond$	Pain control								
$\Diamond$	Nausea control								
$\Diamond$	No eating food or drinking fluid, except sips of oral supplement								
$\Diamond$	Sips of Impact oral supplement allowed								
$\Diamond$	Okay to swab mouth/ do oral care								
$\Diamond$	Wearing Alternating Leg Devices while in bed (ALP's)								
$\Diamond$	Sit edge of bed and stand at bedside								
$\Diamond$	Walk								
$\Diamond$	Vital sign monitoring								
$\Diamond$	Blood sugar monitoring								
$\Diamond$	Education and implementation of incentive spirometer (IS)								
$\Diamond$	Coughing and deep breathing								
$\Diamond$	Ostomy RN visit for education								
	o Change appliance								
	o Peri-stoma skin assessment								
^	o Complications								
$\Diamond$	Looking and assessing stoma								
$\Diamond$	Emptying ostomy appliance								
	Second Set of Milestones								
$\Diamond$	Lab draw								
$\Diamond$	Pain control								
$\Diamond$	Nausea control								
$\Diamond$	Wearing Alternating Leg Devices while in bed (ALP's)								
$\Diamond$	Foley catheter removed, urination trial								
$\Diamond$	CHG bath								
$\Diamond$	Diet adjusted								
$\Diamond$	Impact oral supplement with meals								
•									
$\Diamond$	Tolerating at least 8-10 non-caffeinated drinks/day (64 ounces)								

- ♦ Ostomy RN visit
- ♦ Receive ostomy kit from Ostomy RN

γ,	Valk							
V	ital sign monitorin	ıg						
В	lood sugar monito	ring until 24	hours af	ter surge	ry; conti	nues i	f diabetic	_
	Before BKF	Before	lunch	Bef	ore din	ner	At be	d time
$\Diamond$	Implementation	of incentive	spiromet	ter (IS)				
$\Diamond$	Coughing and d	eep breathin	g					
$\mathbf{N}$	Iedication education	on						
If	applicable, educat	tion on empt	tying ostc	my appl	iance			
_	<u> hird Set of Milest</u>	tones						
	ab draw							
	ain control							
	lausea control							
	Vearing Alternating		es while i	n bed (A	LP's)			
	ndependently urina	ting						
	iet adjusted							
Ir	npact oral supplen	nent with me	eals			ı		
Ļ		22.1						
o <u>ler</u>	rating at least 8-10	non-caffeina	ated drink	ks/day (6	4 ounce	s) 	1	
F								
	Dietician education	1						
	stomy RN visit for	r education						
	hange appliance							
	eri-stoma skin asse							
	complications educ	ation						
	Valk							
 ital	sian monitorina							
<u>Itai</u>	sign monitoring							
1	lood sugar monito	ring continu	os if diah	otio				
D					ore din	nor	At bo	d time
В		Refere			ore ann	IEI	ALDE	u ume
B	Before BKF	Before	iuncn	DCI			110 20	
	Before BKF							
							110 20	
	Before BKF							
Ir	mplementation of i	ncentive spi						
Ir	Before BKF	ncentive spi						

- Medication education
- ♦ Education on emptying ostomy appliance
- ♦ Education on measuring output
- ♦ Discharge planner initiates paperwork for ostomy supplies

Fourth	Set of	Mil	lestones

- Lab draw
- Pain control
- ♦ Nausea control
- ♦ Wearing Alternating Leg Devices while in bed (ALP's)
- ♦ Independently urinating
- ♦ Diet adjusted, possibly reach goal diet

$\Diamond$	<b>Impact</b>	oral	supp	lement	with	meal	9
V	mpact	orar	supp.	CHICH	WILLI	mean	L

٥.	Impact	oral su	pplen	nent	with m	eals					1				
<b>\</b>	Tolerat	ing at l	east 8	-10 ı	non-caf	feinate	d dri	inks/da	y (64	oun	ces)				
$\rangle$	Walk														
>	Vital si	gn moi	nitorir	ıg											<u></u>
>	Blood	sugar n	onito	ring	continu	ies if di	abet	tic							<u> </u>
	Bef	ore BI	KF		Before	lunch		Bef	ore d	inn	er	At	bed	time	
>	Implen	nentatio	n of i	ncen	tive sp	iromete	er (IS	<u>S)</u>							<u> </u>
	•				•			,							

♦ Medication education

Coughing and deep breathing

- Reinforcement of education on emptying ostomy appliance
  - o Patient independently emptying
  - o Emptying ostomy appliance in bathroom
- Patient measuring output

#### **Fifth Set of Milestones**

- Lab draw
- ♦ Pain controlled
- No nausea
- ♦ Wearing Alternating Leg Devices while in bed (ALP's)
- ♦ Independently urinating
- Shower or CHG bath  $\Diamond$
- Goal diet
- ♦ Impact oral supplement with meals

Tolera	ating at lea	ast 8-	10 non	-caffe	inated c	lrinks/da	y (64 ou	nces)		
Walk										
Vital	sign moni	toring	, ,							
Blood	l sugar mo	nitori	ing coi	ntinue	s if diab	etic				
В	efore BKI	7	Ве	efore l	lunch	Be	fore dini	ner	At	bed time
Imple	mentation	of in	centiv	e spiro	ometer (	IS)				
Imple	mentation	of in	centiv	e spiro	ometer (	IS)				
Imple	mentation	of in	centiv	e spiro	ometer (	IS)				
	mentation			•	ometer (	IS)				

- ♦ Understands medication education
- ♦ Reinforcement of education on emptying ostomy appliance
  - o Patient independently emptying
  - o Emptying ostomy appliance in bathroom
- ♦ Patient measuring output
- ♦ Extra ostomy supplies
- ♦ Verbalization and demonstration of ostomy appliance change (patient/family teach-back)
- ♦ Loose clothing for discharge
- ♦ Discharge prescriptions
- ♦ Discharge summary and paperwork

## Ostomy Food & Fluid Journal

Date	Time	What did you eat and or Drink	Amount	How did you feel?

#### **Quick Teaching Points for R.N.**

Ostomy R.N. will see patient at least once during postoperative admission. The education is **NOT** the sole responsibility of the ostomy R.N. Ostomy education and skills are within the scope of practice for the bedside R.N.

**Goal:** Keep teaching short and concise. Educate patient throughout the day. Encourage patient to participate in care with hands on experience. All interactions with patients are teaching and learning opportunities.

#### **Colostomy and Ileostomy Teaching Points:**

- ➤ Change ostomy appliance twice per week or PRN if leaking.
- Assess Peri-stomal skin and stoma with each appliance change and notify doctor if there is any S&S of infection or skin irritation noted.
- $\triangleright$  Empty ostomy pouch/bag when it is 1/3-1/2 full.
- > Do not apply ointment, powder or products that contain alcohol to the Peri-stomal skin.
- > Do not use oily soap and shampoo to clean around the stoma.
- You may shower with or w/o ostomy appliance per MD's recommendation.
- ➤ Eat a balanced diet including variety of foods from the basic food groups: grains, vegetables, fruits, dairy, and proteins.
- ➤ If flatus or diarrhea is a problem, limit or avoid beans, cabbage, onions, beer, carbonated drinks, cheese, coffee, spinach, raw fruits, and sprouts.
- > Drink plenty of fluid, unless contraindication by your physician.
- > Ileostomy patients need to monitor intake and output:
  - Monitor and record color of urine
  - Amount of stool output
  - Monitor and record intake
- ➤ Can expect to have bowel movement or pass mucous from rectum for both colostomy and ileostomy patients
- > Small amount of blood in ostomy appliance expected
- **Dehydration** is a common complication of the ileostomy especially high output ileostomy; oral hydration is important part of teaching ileostomy patients.

#### Essential DO'S & DON'TS for R.N.

#### DO:

- ➤ Know your patients: living situation, comorbidities, emotional status concerning body image change
- ➤ Know appliances being used for patient
- Assess peri-stomal skin, stoma color, output volume and consistency when emptying or changing ostomy appliance
- Communicate constantly with team about physical and emotional concerns
- > Discuss sexual activity
- > Sign out thoughtfully and thoroughly concerning education completed and still needed
- > Give all patients and their families the utmost respect and confidentiality
- ➤ Have patience
- ➤ Use all interactions as teaching opportunities
- ➤ Have patient change ostomy appliance
- ➤ Have patient empty ostomy appliance
- ➤ Have patient ambulate/ sit in chair frequently
- > Encourage patient independence

#### DON'T:

- > Ignore stoma discoloration
- ➤ Ignore peri-stoma skin changes
- > Ignore output amounts- (too much or none)
- > Ignore patient's fluid status (fluid intake and output)
- > Ignore ostomy appliance leaking
- > Empty ostomy appliance for patient every time, encourage patient to empty
- > Change ostomy appliance for patient every time; encourage patient to change

#### **Changing Appliance**

#### Supplies:

- 1) Wash cloth/ towel
- 2) Gauze
- 3) New appliance (pouch and wafer)
- 4) Skin barrier ring
- 5) Measuring guide
- 6) Scissors
- 7) Trash bag

#### Instruction:

- 1) Remove the old appliance, pressing the skin away from the wafer.
- 2) Cleanse skin with gauze and warm water.
- 3) Pat dry the peri-stomal skin
- 4) Use the measuring guide to size the stoma; if it has already been sized, use the pattern.
- 5) Use a black marker; trace the size to the back of the wafer
- 6) Use the scissors and cut out the wafer.
- 7) Apply the barrier ring around the stoma and then apply the wafer.
- 8) Snap on the pouch.
- 9) Close the end of the pouch using the clip/close Velcro.



## **Living with a Stoma Handling Medications**



#### Ascending colostomy and ileostomy:

- Medications may be not absorbed completely due to shortened bowel length and transit time.
- Large pills, enteric-coated pills and time-release pills should not be used.
- Liquid meds generally better absorbed.
- Not all pills can be crushed **Ask your pharmacist!**
- Home test for pills place pill in a glass of water, if it begins to dissolve in 30 minutes, you may take the pill.
- Vitamin B12 replacement is recommended if significant resection of the bowel was necessary.
- NO laxatives for people with ileostomies.

#### **Transverse, descending and sigmoid colostomy:**

Normal medication guidelines.

#### **Inpatient Medications**

#### **Tylenol**

- *Purpose:* decrease pain with few side effects
- *Side effects*: bleeding, diarrhea, yellow eyes or skin, increased sweating, nausea and vomiting, abdominal pain, abdominal swelling, increased fatigue, febrile, bloody or black stools, rashes/hives, or itchy, decreased urine output
- *Tips:* doesn't need to be taken with food, effective within 30-60 minutes, DO NOT exceed 4,000 mg/24 hours
- *Considerations*: children, elderly population, kidney, liver, heart disease, diabetes, and seizures health conditions have increased risk for side effects

#### Benefiber

- *Purpose*: fiber supplement, used for constipation an bowel care
- Side effects: constipation, gas, bloating, diarrhea
- *Tips:* Don't mix with carbonated beverages; mix with at 4-8 ounces of any beverage or soft food; no taste; max dose of 3 times daily
- *Considerations:* Don't use if have kidney stones or kidney disease, heart disease, treatment for hypertension, on potassium-restricted diet, gluten intolerance, pregnant, or breastfeeding.

#### Gabapentin

- *Purpose*: decrease nerve pain
- *Side effects:* unsteady gait, uncontrolled eye movements, chest pain, extremity swelling, pain/difficult urination, mental/mood change, febrile, black stools, sore throat, unusual bleeding/bruising, fatigue, decrease memory, blurred vision, flu-like symptoms, delusions, shaking, hoarseness, dizziness, and somnolence
- *Tips:* dose should be slowly increased; most effective TID due to short duration of effect
- *Considerations:* decreased dose for kidney disease, interacts with antacids, hydrocodone, morphine

#### Lovenox

- *Purpose:* anticoagulant to prevent blood clot formation
- *Side effects:* bleeding, difficulty breathing/swallowing, dizzy, headache, nosebleeds, paralysis, red/black stool, red/brown urine, shortness of breath, confusion, seizures, diarrhea, nausea, anemia, and lightheadedness
- *Tips:* safety only activated once entire medication administered, rotate subcutaneous sites, wipe site with alcohol prior to administration of medication
- *Considerations:* Don't give if actively bleeding, has thrombocytopenia, sensitive to heparin, pork products, or enoxaparin sodium

#### **Pain Management**

- The stoma does not hurt due to no sensation present
  - o It is normal for stoma to bleed small amounts with wiping
- Pain is due to surgical incisions of muscles: the stoma has to come through rectus abdominis muscles
- Encourage ambulation to help improve pain; this will strengthen muscles and help them stretch, and encourages GI motility
- Encourage patient to communicate pain and avoid uncontrolled pain situation.
- IV pain medication used until patient can tolerate oral medications
  - Depends on bowel function
- Encourage non-pharmacological methods
  - Deep breathing
  - Relaxation
  - o Imagery
  - Music therapy
  - Distraction: reading; playing on personal electronic devices; visitors/family; art/coloring
- Encourage patients to use pillow when coughing and deep breathing to splint the abdomen
- If previous stated methods are not successful, discuss with MD abdominal binder

#### Dr. Farkas Pain Management Plan

- Post op day # 0
  - o PCA
  - o IV Tylenol
  - o Tap block placed pre-op/ OR
  - o Oral Gabapentin prior to surgery
- Rest of post op days pain management
  - O Dependent on patient and diet advancement
    - PCA and IV Tylenol until diet advanced
    - Once diet advanced from NPO status, will initiate oral pain medication
      - Oral Tylenol tablets scheduled
      - Oral Gabapentin tablets scheduled
      - Oral Oxycodone tablets PRN

## Complications

Dehydration	Blockage	Infection
Signs and symptoms:	Signs and symptoms:	Signs and symptoms:
<ul> <li>Losing more than 1200 ml of liquid stool per 24 hr.</li> <li>Excessive thirst</li> <li>Concentrated urine</li> <li>Weakness</li> <li>Lethargy</li> <li>Ways to prevent:</li> <li>Balance the intake with stoma output What to do:</li> <li>Seek medical attention and meantime: <ul> <li>Drink 4 ounces of orange juice mix with 4 ounces of water and pinch of salt</li> </ul> </li> <li>Drink water mixed with electrolyte beverages</li> <li>Eat food with low osmolality to maintain fluid balance in bowel</li> <li>Avoid high sugar beverages (they cause more fluid loss and dehydration)</li> <li>Have commercial electrolyte containing drinks available all time</li> <li>Drink eight to ten (8 oz.) glasses of liquid</li> </ul>	Colostomy and Ileostomy: Thin and malodorous clear stool or no output from ileostomy for 8 hours and from colostomy for 2 days, abdominal cramping and pain, low and concentrated urine output, abdominal distension and engorged stoma  What to do: Nausea and vomiting not present:  • Cut the stoma appliance larger • Ingest liquid only • Attempt different position and massage the abdomen to help move the blockage Nausea and vomiting present:  • Notify MD and/or go to emergency room Ways to prevent:  • Drink eight to ten (8 oz.) glasses of liquid daily • Eat small, frequent meals • Chew foods well	<ul> <li>Purulent drainage from the incision</li> <li>Pain or tenderness, edema and erythema on the surgical site</li> <li>Fever (temperature &gt;38 ° C</li> <li>What to do: <ul> <li>Notify MD/surgeon or go to emergency room</li> </ul> </li> <li>Ways to prevent: <ul> <li>Increase fluid intake</li> <li>Eat well-balanced diet</li> <li>Uses aseptic technique for wound cleaning</li> </ul> </li> </ul>

#### **Irrigation**

Please note that the following instruction is to irrigate Colostomy only performed by RNs and Ostomy Nurses. Ileostomy irrigation must be done by physician/surgical team.

**Supplies:** Irrigation kit - Hollister 7721, drainable irrigator sleeve – Hollister 18154, water-soluble lubricant, warm water and IV pole.

#### **Instruction:**

- ➤ Gather supplies: irrigation kit, water-soluble lubricant, drainable irrigator sleeve, warm water and IV pole.
- Attach irrigation cone to tubing and fill the bag with 200 ml of warm tap water.
- ➤ Hang the bag on the IV pole.
- ➤ Open the regulator clamp on the tubing and let water run through the tube to remove the air. Re-clamp the tube.
- > Remove colostomy pouch; leave the barrier (wafer) in place.
- Lubricate the cone with water-soluble lubricant and gently insert the cone into stoma until it fits snugly.
- ➤ While holding the cone in place with one hand, open the clamp on the tubing and let 500 to 1000 ml (or the amount ordered by physician) of water flow slowly into the ostomy over 5 to 10 minutes.
- ➤ Once the amount of water is instilled, clamp the tube and hold the cone in place for one minute and then remove the cone from the stoma.
- ➤ Put the drainable irrigator sleeve Hollister 18154 on the wafer and wait for the result. Most will be expelled in first 5 to 10 minutes; the rest may take up to 30 minutes to 45 minutes.
- > Once returns are complete, empty the pouch.
- Document I and O from this procedure in the EMR and notify the physician of result.

#### EMERGENCY ROOM STAFF: ILEOSTOMY OBSTRUCTION

**Symptoms:** No stomal output; Cramping abdominal pain; nausea and vomiting; abdominal distention, Stomal edema, absent or faint bowel sounds.

- Contact the patient's surgeon or WOC/ET Nurse to obtain history and request orders.
- Pain medication should be initiated as indicated.
- > Start IV fluids (Lactated Ringer's Solution/Normal Saline) without delay.
- ➤ Obtain flat abdominal x-ray or CT scan to rule out volvulus and determine the site/cause of the obstruction. Check for local blockage (peristomal hernia or stomal stenosis) via digital manipulation of the stoma lumen.
- Evaluate fluid and electrolyte balance via appropriate laboratory studies.
- ➤ If an **ileostomy lavage** is ordered, it should be performed by a surgeon or ostomy nurse using the following guidelines:
- ➤ Gently insert a lubricated, gloved finger into the lumen of the stoma. If a blockage is palpated, attempt to gently break it up with your finger.
- Attach a colostomy irrigation sleeve to the patient's two-piece pouching system.

  Many brands of pouching systems have Tupperware®-like flanges onto which the same size diameter irrigation sleeve can be attached. If the patient is not wearing a two-piece system, remove the one-piece system and attach a colostomy irrigation sleeve to an elastic belt and place it over the stoma.
- ➤ Working through the top of the colostomy irrigation sleeve, insert a lubricated catheter (#14–16 FR) into the lumen of the stoma until the blockage is reached. Do not force the catheter.
- Note: If it is possible to insert the catheter up to six inches, the blockage is likely caused by adhesions rather than a food bolus.
- ➤ Slowly instill 30–50 cc NS into the catheter using a bulb syringe. Remove the catheter and allow for returns into the irrigation sleeve. Repeat this procedure instilling 30–50 ccs at a time until the blockage is resolved. This can take 1–2 hours.
- ➤ Once the blockage has been resolved, a clean, drainable pouch system should be applied. Because the stoma may be edematous, the opening in the pouch should be slightly larger than the stoma.

#### HOW TO TREAT ILEOSTOMY BLOCKAGE

**Symptoms:** Thin, clear liquid output with foul odor, cramping abdominal pain near the stoma, decrease in amount of or dark-colored urine, abdominal and stomal swelling.

#### **Step One: At Home**

- 1. Cut the opening of your pouch a little larger than normal because the stoma may swell.
- 2. If there is stomal output and you are not nauseated or vomiting, only consume liquids such as Coke, sports drinks, or tea.
- 3. Take a warm bath to relax the abdominal muscles.
- 4. Try several different body positions, such as a knee-chest position, as it might help move the blockage forward.
- 5. Massage the abdomen and the area around the stoma as this might increase the pressure behind the blockage and help it to "pop out." Most food blockages occur just below the stoma.

## Step Two: If you are still blocked, vomiting, or have no stomal output for several hours:

- Call your doctor or WOC/ET Nurse and report what is happening and what you tried at
  home to alleviate the problem. Your doctor or WOC/ET Nurse will give you instructions
  (ex. meet at the emergency room, come to the office). If you are told to go to the
  emergency room, the doctor or WOC/ET Nurse can call in orders for your care there.
- 2. If you cannot reach your WOC/ET Nurse or surgeon and there is no output from the stoma, go to the emergency room immediately.
- 3. IMPORTANT: TAKE THIS PAGE WITH YOU TO THE EMERGENCY ROOM AND GIVE IT TO THE PHYSICIAN.
- 4. **IMPORTANT:** TAKE ALL OF YOUR POUCH SUPPLIES (e.g., pouch, wafer, tail closure, skin barrier spray, irrigation sleeve, etc.)

#### **Stoma and Peri- Stomal Skin Complications**

Abnormalities of the stoma requiring medical attention include changes:

- ➤ In length
- > Color
- > Separation of stoma from the peri-stomal skin.
- ➤ Black, dark maroon, white, or yellow colored stomas
- The junction between the stoma and peri-stomal skin should also be free of separation and or damage (WOCN, 2016, p. 117).
- ➤ Observation of any abnormalities such as rashes, redness, or skin breakdown should be addressed with a healthcare professional (WOCN, 2016, p. 122).
- > Normal peri-stomal skin should be intact, free of any damage or rash, and should not appear different than the rest of the body's skin.

#### **Diet and Fluids**

- Dr. Farkas advances diet based on patient
  - o No nausea and vomiting
  - o Clear liquid diet if patient feels hungry and wants to drink
  - o Will remain NPO if not hungry, doesn't want to drink
- Standard colostomy diet advancement
  - o NPO
  - o Clear liquid
  - o Full liquid
  - o Regular
- Standard ileostomy diet advancement
  - o NPO
  - o Clear liquid
  - o Full liquid
  - Low fiber diet
- **Saline locked, IVF discontinued** 
  - o When patient can tolerate at least 500 mL of clear liquids
  - o IVF may be still present, but decreased if PCA ordered
- ❖ NO color restrictions for food/ beverages; red and purple dyes okay
- ❖ To prevent dehydration:
  - Need to drink 64 ounces of water/day
    - 8-10 drinks per day, non- caffeinated

#### **Ostomy Nutrition**

After a colostomy or ileostomy, certain foods may affect your digestion and stool output. For 6-8 weeks after surgery, your Doctor or Dietitian may want you to limit fiber and avoid fiber supplements (such as Metamucil<sup>®</sup>). After 6-8 weeks, slowly add fiber back into your diet to add bulk to your stool. Most people eventually return to a normal diet.

 High-fiber foods include: nuts, seeds, beans, fresh fruits and vegetables, whole-grain bread and pasta, brown rice, bran, oatmeal

#### **General Diet Guidelines:**

- Eat a balanced diet that includes all of the food groups. You may need to take a daily multivitamin with minerals until you return to a normal diet.
- Eating 4-6 smaller meals per day may help to reduce stool output. Don't skip meals.
- Eat your biggest meal in the middle of the day to help decrease stool output at night.
- Add new foods to your diet one at atime to determine if you tolerate it.
- Eat slowly and chew foods well.
- Lactose intolerance may be a problem after an ostomy. Symptoms include gas, bloating, cramping, and diarrhea. If this occurs, limit dairy products such as milk, yogurt, cheese, and ice cream. Try nondairy substitutes such as Lactaid or soy products.
  - To help prevent gas, eat slowly and avoid smoking, gum chewing, drinking carbonated beverages, or using a straw.

#### **Colostomy:**

- Colostomy output should range from 200-600 mL per day. Output may vary with diet, fluid intake, and medications.
- Dehydration may be an issue. Drink plenty of fluids throughout the day.
- To help prevent gas, refer to the table on page 2.

#### **Ileostomy:**

- Ileostomy output may be more than 1000 mL per day at first, decreasing slowly to about 600 mL per day.
- You may be at risk for dehydration and low blood levels of sodium and potassium. Drink plenty of fluid, do not limit salt, and eat foods that are high in potassium (such asbananas, potatoes, orange or tomato juice, coconut water or yogurt). Try an electrolyte drink (e.g. Pedialyte<sup>®</sup>) if you have high ileostomy output or trouble staying hydrated.
- Drink most of your liquids between meals to help with absorption.
- To decrease the risk of a blockage, eat slowly and chew foods well. Slowly add food and fiber back into your diet.







# No single diet works for everyone. Certain foods may affect your digestion or stool output. Use the following list as a guide as you begin to add new foods back into your diet.

If you have Avoid these food	S
------------------------------	---

n you nave	Avoid these loods				
	Apple peels	Corn, whole kernel	Oranges		
	Cabbage, raw	Dried Fruits Grapes	Pineapple		
Stoma Blockage	Celery	Mushrooms	Popcorn		
	Chinese vegetables	Nuts	Seeds		
	Coconut				
	Asparagus	Eggs	trong cheese (such		
	Beans	Fish	as blue cheese,		
Odor	Broccoli	Garlic	sharp		
Odor	Brussels sprouts	Onions	Cheddar, limburger)		
	Cabbage	Peanut butter			
	Cod liver oil	Some vitamins			
G.	Alcoholic beverages	Cauliflower	Garlic		
	Beans	Chewing	Nuts		
	Broccoli Brussels	Gum	Onions		
Gas	sprouts Cabbage	Cucumbers	Radishe		
	Carbonated beverages	Dairy	s Soy		
	products/milk Eggs				
	Alcoholic beverages	Grape juice	Spicy		
	Apple juice	Green Beans	foods		
	Bran	Milk	Spinach		
Diarrhea	Broccoli	Prunes	Sugar substitutes		
Diarrilea	Cabbage	Prune	(mannitol,		
	Fresh Fruit	Juice	sorbitol, xylitol)		
	Fried foods	Raisins	Whole grains		
	Asparagus	Iron pills	Strawberries		
<b>Color Changes</b>	Beets	Licorice	Tomato sauce		
	Food coloring	Red Jell-			

If you need... Choose these foods...

Odor Doducino	Buttermilk	Orange juice	Tomato	
Odor Reducing	Cranberry juice	Parsley	juice Yogurt	
	Applesauce	Pasta	Rice (white)	
	Bananas	Peanut butter (creamy)	Tapioca	
Stool	Bread (white)	Pectin (fiber powder)	Toast	
	Cheese	Potatoes	Yogurt	
	Marshmallows	Pretzels		
Constipation	Apple juice	Fresh fruits	Pear juice	
Relief	Beans Bran	Fiber supplements	Prune	
(Note: Drink more		(Benefiber , Citrucel ,	Juice	
when eating more fiber)	Coffee	Metamucil <sup>®</sup> )	Warm beverages	

#### Fluids

My fluid goal for the day is: \_\_\_\_\_

This is about ounces or cups.

One cup = 240 milliliters or 8 ounces

One liter = 1000 milliliters or

#### **FLUIDS** come in many forms:



Water Soda Kool-Aid® Milk Crystal Iuice

Light®

**Nutrition Supplements Soup** 



Ice cream\* Sherbet\* **Popsicles** Frozen Bars

Gelatin Coffee Tea

Ice Cubes Electrolyte

Milkshakes\*\* Solutions

- \* 1 ½ cups of ice cream or sherbet = 1 cup of fluid
- \*\* 1 cup of milkshake or smoothie = about 3/4 cup of fluid
- Gravy, syrup, jelly, custard, and pudding are not considered fluids. But they can provide important calories if you are trying to gain weight.
- Fruits like watermelon contain a good amount of water and may be refreshing in a dry mouth.
- Drink the juice or water from canned fruit (avoid canned fruit packed in syrup) and cooked vegetables.

Note: If you have Diabetes, see your dietitian or nurse for fluid ideas. You may keep a record of your fluid intake in any of the following ways:

- 1. Measure fluids and write down the amounts you drink. Add up the total as you go through the day.
- 2. Use a container of water as your guide. At the beginning of the day, pour into a container the same amount of water as your fluid goals. When the container is empty, you know you have done a good job achieving your goals for the day.
- 3. Think about the fluids you tolerate best. Drink these fluids throughout the day.

Fluid goals can change. Continue to ask your dietitian, nurse, and doctor about your fluid goals.





#### **Ostomy Food Journal**

Date	Time	What did you eat and or Drink	Medication	How did you feel?

#### MD Order-Sets: Colorectal Surgery Service

#### NPO

- o POD # 0
- Except sips of Impact
- Oral Gabapentin okay
- Oral Entreg okay
  - Open capsule
  - Used until first bowel movement, then discontinued
  - Can be discontinued if diet advanced to goal even without bowel movement occurring

#### Out of bed

- o POD # 0: out of bed (OOB) X1
- o Rest of POD days: OOB X 3

#### DVT Prophylaxis

- o Patient receives subcutaneous heparin before surgery
- o Patient to wear ALP's, knee high, at all times while in bed
- o CBC drawn right after surgery
- o CBC drawn in AM POD # 1
  - If CBC stable, Lovenox started

#### o Lovenox

- POD # 1
- Once daily if under 100 kg
- Twice daily if over 100 kg
- MD will do Caprini Score
  - If 5 or greater patient will discharge with Lovenox for four weeks, with daily administration
  - If Caprini score 5 or higher and patient greater than 100 kg, will discharge with Lovenox for four weeks, twice daily administrations
  - ALL Irritable bowel syndrome patients will discharge with 4 weeks of Lovenox
    - Dose dependent on Caprini score and weight

#### Laboratory Tests

- CBC POD# 0 immediately after surgery and POD # 1
  - Once determined stable, will discontinue
- o BMP ordered daily

#### • Foley catheter

- o Placed POD # 0
- Removed POD # 1
  - If good urine output remove in A.M.
  - If no void or low urine output after 6 hours from removal, bladder scan patient, notify physician; MD will determine next step
- Ostomy RN Consult
- Dietician Consult

#### **❖** Saline locked, IVF discontinued

- When patient can tolerate at least 500 mL of clear liquids
- Common postoperative IV fluids: Lactated Ringers
  - Rate determined by MD and patient history
- o IVF may be still present, but decreased if PCA ordered
- o Dependent on patient's urine output color and amount

#### • Glucose Monitoring

 Blood sugar monitoring every 6 hours for first 24 hours, even if not diabetic

#### Continuous pulse oximetry monitoring

- Only based on patient history
- If orders continuous basal dose for PCA

#### • Telemetry monitoring

Only based on patient history

#### • Nasogastric tube

Only if complicated case

#### • Incentive Spirometer

- Education and implementation for patient
  - 10 times while patient is awake per hour

#### Medications

- o Benefiber
  - Ora
  - ALL ostomy patients receive order once diet advanced
  - Ordered for three times daily
  - Will continue to take after discharge
- o Lovenox
  - Subcutaneous
  - Started POD # 1
- Tylenol
  - IV transitioned to oral
  - Scheduled
- o Gabapentin
  - Oral
  - Oxycodone
    - Oral
    - PRN

#### • Diet advancement

- Based on patient
- o Colostomy diet advancement
  - NPO
  - Clear liquid
  - Full liquid
  - Regular
- o Ileostomy diet advancement
  - NPO
  - Clear liquid

- Full liquid
- Low fiber diet

#### • Impact Oral Supplement

- Okay to have sips when NPO
- o Patient will take prior to surgery (at least 5 days)
- Patient will continue to take as diet advances TID for at least 5 days postoperatively

#### **Discharge**

- Crucial aspect to post-operative phase
- Ostomy supplies must be arranged by discharge planner or HH must be coordinated
- > Beginning thinking of patient's discharge at first encounter with patient
- R.N. responsible for performing discharge orders and necessary discharge education concerning orders, medications, and supplies
- ➤ A timely, calm, and prepared discharge helps prevents re-admission
- > If you don't understand portion of discharge instructions, clarify with team

#### **Key Stepping Stones to Discharge:**

- ➤ Tolerating diet able to tolerate at least two meals
- ➤ 24 hours without IV fluids and no BUN or Creatinine changes
- ➤ Output for ileostomy < 1.2 Liters
- ➤ Able to ambulate around unit
- ➤ Able to provide own personal care
- > Education completed
- ➤ Adequate support in place
- > Pain controlled on oral pain medications
- **❖** Ileostomy patients without complications can discharge in two-three days

#### **Team Roles and Multidisciplinary Rounds**

Colostomy and Ileostomy patients require a multidisciplinary approach to assist patients with a life changing surgery. It is essential for each team member to participate in patient care, attend huddles, and document in the electronic health record.

The direct surgical team rounds daily at the patient's bedside during the postoperative phase of care. On Mondays, Wednesdays, and Thursdays at 0810 the surgical team huddles with the Davis 12 Charge R.N., bedside R.N., Ostomy nurse, pharmacist, discharge planner, dietitian, and social worker.

#### **Colorectal Surgery Attending Physician:**

- ➤ The attending surgeon is responsible for the patients' admission to University of California Medical Center's inpatient facility
- > Daily rounds with Residents
- > Inpatient consults

#### Responsibilities include:

- ➤ Performs emergent / urgent cases and elective surgeries
- ➤ Surgery Clinic on Mondays in Cypress Building (0800-1700)

#### **Surgery Residents for Inpatient:**

- ➤ Team consists of a senior resident (third or fourth year) for two consecutive months, two second-year residents and one surgery intern at monthly intervals.
- There can be variation of staff numbers depending on month.
- Resident work throughout the week, including rotating night and weekend schedules.

#### Responsibilities include:

- > Participating in clinic
- Overseeing inpatients care/orders
- > Assist in operating room
- > See ER and inpatient consults

#### **Ostomy R.N. Inpatient:**

- > Provides patient with education postoperatively, ideally POD #1
- > Changes ostomy appliance with patient
- > Provides discharge supplies for patient
- > Attends ostomy patients huddle and rounds

#### **Charge R.N. Inpatient:**

- Oversees daily nursing care for D12 unit
- ➤ Makes nursing patient assignments
- > Assists R.N. staff with patient care issues
- > Contact for bed requests
- > Attends huddles

#### **Bedside R.N. Inpatient:**

- > Provides pertinent information to team
- Educates patients in collaboration with ostomy nurse
- ➤ Identifies patient complications to trouble shoot and notify ostomy nurse
- > Attends huddle
- > Provides continuous patient care

#### **Inpatient Discharge Planner:**

- Arranges discharge services, such as home health
- > Coordinates ostomy supplies for discharge
- > Attends huddle

#### **Social Worker Inpatient:**

- Assesses social support (long and short term)
- > Secures transportation
- ➤ Moderates financial issues concerning discharge (medication, equipment, and ostomy supplies)
- > Addresses Mental health issue concerns
- > Attends huddle

#### **Pharmacist Inpatient:**

- Provides expertise and recommendations regarding medications
- > Reviews medication interactions
- Attends huddle and assists with transition of care concerning medications

#### **Dietitian Inpatient:**

- ➤ Provides dietary consultation within two days of receiving order
- > Evaluates patient's diet and nutrition status
- Recommends and educates patient on diet for ostomy or ileostomy; provides handouts
- ➤ Assesses/recommends oral supplements specific to individual patient
- > Attends huddle

#### **Team Schedule**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
DAY shift	DAY shift	DAY shift	DAY shift	DAY shift	DAY shift	DAY shift
change report 0650-0715	change report 0650-0715	change report 0650-0715	change report 0650-0715	change report 0650-0715	change report 0650-0715	change report 0650-0715
NO Ostomy Nurse	Full-time Ostomy Nurse 0600-1530	Full-time Ostomy Nurse 0600-1530	Part-time Ostomy Nurse 0800-1300	Full-time Ostomy Nurse 0600-1530	Full-time Ostomy Nurse 0630-1530	NO Ostomy Nurse
	Part-time Ostomy Nurse	Part-time Ostomy Nurse 0800-1300			Colorectal Clinic 0800- 1700	
	0800-1300 Colorectal		Colorectal Case Manager 0730-1630	Colorectal Case Manager 0730-1630	Colorectal Case Manager	
	Clinic 0800- 1700	Colorectal Case Manager 0730-1630	Colorectal	Colorectal	0730-1630	
	Colorectal Case	0730-1030	Huddle 0810	Huddle 0810		
	Manager 0730-1630 Colorectal	Discharge Planner Assistant	Discharge Planner Assistant 0830-1700	Discharge Planner Assistant 0830-1700	Discharge Planner Assistant 0830-1700	
	Huddle 0810	0830-1700				
	Discharge Planner Assistant 0830-1700					
NOC Shift change report 1850-1915	NOC shift change report 1850-1915	NOC shift change report 1850-1915	NOC shift change report 1850-1915	NOC shift change report 1850-1915	NOC shift change report 1850-1915	NOC shift change report 1850-1915

<sup>❖</sup> Team rounds vary due to OR and outpatient surgery times and days

#### **R.N. Postoperative Process For Ostomy Patients**

#### **POD #0**

- Vital signs q 4 hours
  - o Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - Ensure CBC drawn postoperatively
- Sit on edge of bed, stand at bedside, and/or walk
  - o Distance determined by pain, sleepiness, dizziness, and nausea status
- Glucose Accucheck every 6 hours
- Pain management
  - o PCA
  - o IV Tylenol
  - Oral Gabapentin
- Nausea management
- NPO
  - o Mouth swabs allowed
  - Encourage chap stick
  - o Medications allowed:
    - Entreg
    - Gabapentin
  - Sips of Impact oral supplement allowed:
- Education and implementation of incentive spirometer (IS), coughing, and deep breathing
  - o Do IS 10 times hourly while awake
  - o Encourage abdominal splinting for coughing, deep breathing, and laughing
- Measuring and monitoring patient's I and O's q 4 hours
  - o Foley catheter in place
- No CHG bath

- Vital signs q 4 hours
  - Monitor for signs of infection

- Temperature of 38.5 C or greater
- Excessive redness
- Warmth to the surgical sites
- Purulent drainage
- Increased WBC
- Monitor for pulmonary embolism
  - Desaturation
  - Anxiety changes
  - Changes in mental status
  - Diaphoresis
  - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - o CBC drawn in AM
    - Start Lovenox
      - POD # 1
      - Once daily if under 100 kg
      - Twice daily if over 100 kg
      - MD will do Caprini Score
        - If 5 or greater patient will discharge with Lovenox for four weeks, with daily administration
        - If Caprini score 5 or higher and patient greater than 100 kg, will discharge with Lovenox for four weeks, twice daily administrations
        - All Irritable bowel syndrome patients will discharge with 4 weeks of Lovenox
          - Dose dependent on Caprini score and weight
          - Begin Lovenox teaching and
  - Laboratory Tests drawn in A.M.
    - CBC and BMP
- Pain management
  - PCA until oral medications started then discontinued
  - Oral pain medication when diet advanced
- Ambulate at least three times around the entire unit
  - o Distance and duration as patient can tolerate
  - Sit in chair for meals
- Patient implementing incentive spirometer 10 times hourly while awake
- Ostomy RN first visit to patient-
  - Education provided
  - o Does appliance change with patient
  - Application for starter kits and free sample from Hollister, Coloplast and ConvaTec
  - o Provides patient with supplies
- Diet advancement
  - o Clear liquid for both populations

- Measuring and monitoring patient's I and O's q 4 hours
  - o Foley removed if:
    - Urine output adequate
    - Ensure patient can ambulate to bathroom or up to bedside commode
  - o Voiding trial for 6 hours after Foley removal
  - o Bladder scan if no void after 6 hours or low urine output
- Dietician initiate education at bedside with Dietician Consult Order
- CHG bath daily
- RN initiate medication education
  - Handout
  - No large pills
  - o No enteric-coated, time release medications
  - o Liquids best for absorption
  - o Okay to crush medications if not contraindicated
  - Teach patients when at home to place medication in water for 30 minutes to assess dissolvability if they are unsure if it is ok to take, since not all medications can be crushed.
- RN provides therapeutic time discussing adjustment- if significant RN should ask MD for social worker/psychology referral for patient
  - Body image
  - o Concerns/worries
- Patient watches videos on personal electronic device or hospital television
  - Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder

- Vital signs q 4 hours
  - Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - o Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - Continue Lovenox as prescribed

- Ambulate at least three times around entire unit
  - o Distance and duration determined by patient
- Patient implementing incentive spirometer 10 times hourly while awake
- CHG bath daily
- Education on burping bag for flatus
  - Encourage patient to do after demonstrating
- If stool now present
  - Patient education on how to empty ostomy appliance
- Encourage patient to ambulate to bathroom and empty appliance
- Patient initiate ostomy appliance change with RN's help
  - Ostomy nurse notification if assistance needed.
- Dietician continues diet and nutrition education
- Diet advancement
  - o Full liquid for both patients
- Measuring and monitoring patient's I and O's q 4 hours
  - Monitor oral intake- encourage patient to be mindful of hydration status
  - o Patient involved with both stool and urine
    - Measure urine and assess color of urine
    - Provide patient education on urine color assessment reflecting hydration status
  - Record stool output
    - Assess color
    - Assess consistency
    - Measure output
- Patient watches videos on personal electronic device or hospital television
  - o Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder

- Vital signs q 4 hours
  - o Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated

- Subcutaneous Loveonx continued
- Ambulate at least three times around entire unit
  - Distance and duration determined by patient
- Patient implementing incentive spirometer 10 times hourly while awake
- If stool now present
  - Education and return demonstration burping and emptying ostomy appliance while supervised or with assistance
  - Encourage patient to ambulate to bathroom and empty
- Encourage patient to continue with ostomy appliance change with RN's help
  - Ostomy nurse return to bedside to follow up on patient's ability to change the ostomy appliance and return demonstration.
- Diet advancement
  - o Colostomy: Regular diet or based on patient's history
  - o Ileostomy: Low fiber diet or based on patient's history
- Discharge planner engagement
  - o Supplies
- Possible shower for patient
- Patient watches videos on personal electronic device or hospital television
  - Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder
- Measuring and monitoring patient's I and O's q 4 hours
  - o Monitor oral intake- encourage patient to be mindful of hydration status
  - Patient involved with both stool and urine
    - Measure urine and assess color of urine
    - Provide patient education on urine color assessment reflecting hydration status
  - Record stool output
    - Assess color
    - Assess consistency
    - Measure output

- Vital signs q 4 hours
  - Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT

- Wear ALP's while in bed at all times postoperatively, unless contraindicated
- Measuring and monitoring patient's I and O's q 4 hours
  - o Patient involved for stool and urine I and O's
  - Measure urine and assess color of urine
  - Monitor oral intake
  - Record stool output
    - Assess color
    - Assess consistency
    - Measure output
- Patient independently emptying bag
  - o Reports to RN amount, color, consistency
  - o Encourage patient to ambulate to bathroom and empty over toilet
- Patient independently change the ostomy appliance-return demonstration
- Ambulate at least three times around entire unit
  - Distance and duration determined by patient
- Patient implementing incentive spirometer 10 times hourly while awake
- Patient diet at goal
  - o Colostomy: Regular diet or based on patient's history
  - o Ileostomy: Low fiber or based on patient's history
- Patient showers
- Patient watches videos on personal electronic device or hospital television
  - o Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder

- Vital signs q 4 hours
  - o Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - o Continue subcutaneous Lovenox administration
- Ambulates at least three times around the entire unit
  - o Distance and duration determined by patient

- Measuring and monitoring patient's I and O's q 4 hours
  - o Adequate urine and stool output
  - o No Foley catheter
  - o Patient involved for stool and urine I and O's
    - Measure urine and assess color of urine
    - Monitor oral intake
    - Record stool output
      - Assess color
      - Assess consistency
      - Measure output
- Patient implementing incentive spirometer 10 times hourly while awake
- Patient at goal diet for discharge
- Patient independently burping flatus
- Patient independently emptying stool from bag
- Patient able to verbalize and demonstrate how to change appliance
- Patient verbalizes understanding of complications and when to contact MD
- Pain controlled
- No nausea
- Patient watched videos
- Patient educated on internet resources
- Ensure patient has discharge supplies
- Ensure dietician consult completed
- Ensure ostomy nurse consult completed
- Ensure all educational videos watched by patient and documented in the EMR
- Discharge home
  - Wear loose clothing
    - Educate patient to wear loose clothing for 3-4 weeks after surgery

#### **Website Links**

https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/ostomies/colostomy.html - Colostomy Guide- American Cancer Society

https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/ostomies/ileostomy.html- Ileostomy Guide- American Cancer Society

<u>http://www.ostomy.org/Colostomy\_Facts\_English.html</u> - Colostomy Facts (English) United Ostomy Associations of America Inc.

<u>http://www.ostomy.org/Ostomy\_Information.html#gen\_info</u> - Ostomy Information and Care Guides- United Ostomy Associations of America Inc.

<u>http://www.ostomy.org/Ostomy\_Information.html#ileostomy</u> - Ileostomy Information and Care Guides - United Ostomy Associations of America Inc.

 $\frac{http://www.colostomyassociation.org.uk/index.php?p=204\&pp=3\&page}{Association} - Colostomyassociation.org.uk/index.php?p=204\&pp=3\&page$ 

#### Video Links

- 1. <a href="https://www.youtube.com/watch?v=810j78eswOQ">https://www.youtube.com/watch?v=810j78eswOQ</a>- How to Empty your ostomy bag
- 2. <a href="https://www.youtube.com/watch?v=NtTDMZVqmV8-">https://www.youtube.com/watch?v=NtTDMZVqmV8-</a> How to dress with an ostomy with Shield HealthCare's ostomy Life Specialist Laura Cox
- 3. <a href="https://www.youtube.com/watch?v=WMkdp4mchGM-">https://www.youtube.com/watch?v=WMkdp4mchGM-</a> Returning to work after ostomy surgery
- 4. <a href="https://www.youtube.com/watch?v=Zpc5S05UExM">https://www.youtube.com/watch?v=Zpc5S05UExM</a>- Sleeping with an ostomy with Shield HealthCare's Ostomy Lifestyle Specialist Laura Cox
- 5. <a href="https://www.youtube.com/watch?v=9tuQmWVl6sg-">https://www.youtube.com/watch?v=9tuQmWVl6sg-</a> Tips for Recovery After Ostomy Surgery
- 6. <a href="https://www.youtube.com/watch?v=AhJ1Q4X6v1w-">https://www.youtube.com/watch?v=AhJ1Q4X6v1w-</a> Swimming with an ostomy
- 7. <a href="https://www.youtube.com/watch?v=bLO7IX-EIqA-">https://www.youtube.com/watch?v=bLO7IX-EIqA-</a> How to exercise with an ostomy with Shield HealthCare's Ostomy lifestyle specialist, Laura Cox
- 8. <a href="https://www.youtube.com/watch?v=SUTv-dkpxw4">https://www.youtube.com/watch?v=SUTv-dkpxw4</a> How to eat with an ostomy with Shield HealthCare's ostomy Lifestyle Specialist Laura Cox
- 9. <a href="https://www.youtube.com/watch?v=rafxv4bOe-A-">https://www.youtube.com/watch?v=rafxv4bOe-A-</a> How to tell someone you have an ostomy- Laura Cox, Shield HealthCare's Ostomy Lifestyle Specialist
- 10. <a href="https://www.youtube.com/watch?v=sUwhD35Ebco-">https://www.youtube.com/watch?v=sUwhD35Ebco-</a> How Laura changes her ostomy bag- Shield Healthcare
- 11. <a href="https://www.youtube.com/watch?v=G9x0xSx57kk-">https://www.youtube.com/watch?v=G9x0xSx57kk-</a> How to travel with an ostomy with Laura Cox, Shield HealthCare's Ostomy Lifestyle Specialist
- 12. <a href="https://www.youtube.com/watch?v=AzAwYwokvvU-">https://www.youtube.com/watch?v=AzAwYwokvvU-</a> I don't want an ostomy bag- top concerns for those facing ostomy surgery
- 13. <a href="https://www.youtube.com/watch?v=BQjeAMqCyds-">https://www.youtube.com/watch?v=BQjeAMqCyds-</a> How to help clear an intestinal blockage
- 14. <a href="https://www.youtube.com/watch?v=eXoikZ72Xw8">https://www.youtube.com/watch?v=eXoikZ72Xw8</a>- body image with an ostomy bag
- 15. <a href="https://www.youtube.com/watch?v=U3lgAfN8kEI&list=PLb\_8dzklvK5wumrWqvzw0E0qfzwHRHrsW&index=6-">https://www.youtube.com/watch?v=U3lgAfN8kEI&list=PLb\_8dzklvK5wumrWqvzw0E0qfzwHRHrsW&index=6-</a> Skin care for new ostomates with Shield HealthCare's Ostomy Lifestyle Specialist, Laura Cox

#### **UC Davis Health System Contact Information**

**Cypress Surgery Clinic Contact Information:** 916-734-2680

UCDMC Surgery Clinic Website: <a href="http://www.ucdmc.ucdavis.edu/surgery/">http://www.ucdmc.ucdavis.edu/surgery/</a>

**After business hours on physician on-call contact information:** 916-734-2011 and ask for on-call colorectal surgeon

#### **WOCNs in Our Area**

Renee Alarcon-Chan BSN, RN CWON Outpatient Ostomy Clinic Mercy San Juan Medical Center 6401 Coyle Avenue Suite 115 2 <sup>nd</sup> floor Phone: 916-864-8360	Jeff Sousa, FNP, APRN, WOC Active Life Wound and Ostomy Clinic Professional Village 1733 Professional Drive Sacramento, CA 95825 Phone: 916-436-3015
Denise Barton BSN, RN, PHN, CWON Internal Medicine Center, Tuesday-Friday UCD Cancer Center, Monday-Thursday Internal Medicine office: 916-734-2737 Cancer Center office: 916-734-5959	Kelly L Sparks, RN, BSN, CWOCN, CFCN Mercy Hospital Folsom 1650 Creekside Drive Folsom, CA 95630 Phone: 916-9864387
Barbara Carlson, RN, BSN, CWOCN Sutter General Hospital Sutter Medical Center of Sacramento 2801 L street Sacramento, CA Phone: 916-887-1403	Carey Webster MSN, CWON, RN Wound and Ostomy Care Center 11775 Education St, Suite 211 Auburn, CA 95602 Phone: 530-886-6750 Fax: 530-888-6768
Shaunda Crane, RN, MA, PHN Wound Care and Ostomy Care Lead Nurse 1095 Marshall Way Placerville, CA 95667 Phone: 530-344-5496 Fax: 530-344-5495 Email: scrane@marshallmedical.org	Barbara West, RN, MSN, CWOCN Surgery and Podiatry Clinics Kaiser, Sacramento Inpatient wound and Ostomy Team Kaiser Vacaville Phone: 530-848-3597 Email: nstreetbarbara@hotmail.com
Joyce Moss RN, CWS, CWCN, COCN Wound Ostomy Coordinator 10535 Hospital Way Bldg. 646, Rm# 2016 Mather, CA 95655 Phone: 916-869-1620	Kaiser Roseville 1600 Eureka Rd Medical Office bldg. D., 2 <sup>nd</sup> floor Roseville, CA 95661 Open Monday through Friday 8 am to 12:30 pm and 1:30 pm to 4:30 pm. Information: 916-784-5648 Referral Only

#### **Supply Forms**

#### Supply Companies

- 1) Byram Healthcare 1-800-213-0890 ext. 35474.
- 2) Shields Healthcare 1-800-675-8842
- 3) Edge park 1-800-321-0591

Example: Your ostomy bag maybe a Hollister or ConvaTec bag but you get your supplies delivered from Byram Healthcare. You must call your supply company to reorder monthly. Please call 5 days before you run out.

#### **Ostomy Manufacture Companies**

- 1) Hollister 1-888-740-8999
- 2) ConvaTec 1-877-585-0470
- 3) Coloplast -1-888-726-7872
- 4) Nu-Hope 1-800-899-5017

#### **Types of Appliances**

♦ See Facility Supplier's Handouts- variable

#### **Support Group Information**

- 1. Carmichael Ostomy Association at Mercy San Juan Hospital. Meet the first Saturday of each month 10am- 12pm. Linda Fleig <a href="mailto:landid19am-12pm">landid19am-12pm</a>. Linda Fleig <a href="
- 2. Placerville Ostomy Association at Marshall Cancer Resource Center. Meet the 3 Thursday of each month 1pm 3pm. Barbara Hoffman barbarachoffman@yahoo.com.
- 3. Sacramento Ostomy Association at Sutter Memorial Hospital, the first Sunday of every month 2pm 4pm. Dave Lund <u>oneredsoxfan@hotmail.com</u>.
- 4. Sierra Nevada Hospital (Grass Valley), the first Thursday of the month at 2:30, class room A
- 5. Sonora Ostomy Support Group meets the second Saturday of each month 1100-1230, at Sonora Regional Medical Center 1000 Greenley RD, Sonora CA 95383. Contact Teresa Hernandez 209-536-3283.
- 6. Enloe Medical Center Ostomy Support Group meets the second Sunday of the month. Chico Chapter UOAA Support Group, Meets the second SUNDAY of each month from 2-4pm (there are no meetings in July or August). Occasionally meetings change so if referring someone have them call (530) 332-7144 to confirm scheduled meeting.

### Air Travel



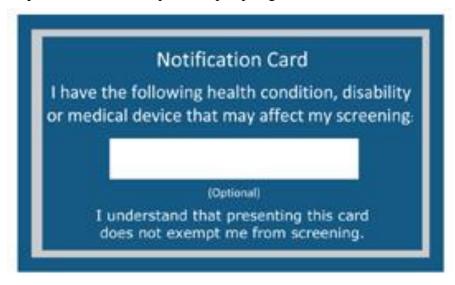
#### **TSA Screening:**

You can be screened without having to empty or expose the ostomy through the advanced imaging technology, metal detector, or a pat down.

The ostomy is subject to additional screening and may require you to conduct a self-pat-down of the ostomy, followed by a test of your hands for any trace of explosives.

#### **3-1-1 Liquids Rule Exemption:**

You may bring medically necessary liquids, medications and creams in excess of 3.4 ounces or 100 milliliters in your carry-on bag. Remove them from your carry-on bag to be screened separately from the rest of your belongings. You are not required to place your liquid medication in a plastic zip-top bag





#### TRAVEL COMMUNICATION CARD

#### COMPLIMENTS OF THE UNITED OSTOMY ASSOCIATIONS OF AMERICA, INC.

This is provided to travelers in order to simplify communication with federal Transportation Security personnel and airline flight attendants, at those times when you wish or need to communicate in a non-verbal way, as is your legal right. This is not a "certificate" and it is not a "pass" to help you avoid screening. Please print out on any weight of paper you wish, trim to wallet-size and laminate if desired. The blue color is important, as it is a "flash-card" developed by the TSA so their own officers will recognize it and be guided to treat the traveler with discretion and sensitivity.

If laminated in a double-side manner, it can be used 'blue side out' during security screening, and the white side out when communicating non-verbally with airline personnel.

#### JUST PRINT, CUT OUT, FOLD, AND PUT WITH TRAVEL DOCUMENTS

**NOTES:** You may always have a travel companion with you during a private screening. TSA officers should NOT ask you to show your pouch—you may be asked to rub over your pouch outside your clothing so they can test your hand to rule out explosive residue. To file a complaint, send email to TSA-ContactCenter@tsa.dhs.gov (with copy to advocacy@ostomy.org, please).

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**OUTSIDE LEFT**—for use during screening before boarding. Intended for the passenger to show the TSO at the beginning of personal screening - before being patted-down or entering a full-body scanner. The TSO may not take it from you to read, since the distinctive blue color makes it like a 'flash card'.

**OUTSIDE RIGHT** 

# Notification Card I have the following health condition, disability or medical device that may affect my screening: (Optional) I understand that presenting this card does not exempt me from screening.

~~ GOTTA GO NOW ~~ RESTROOM ACCESS
The cardholder contains body waste in an OSTOMY
POUCH (stool/urine) and/or carries pouches and
related supplies and/or a cathe- ter to manage personal
hygiene. S/he needs access to the restroom now in
order to empty the pouch — this is critical for the cardholder's well-being and for public sanitation.

TSA respects the privacy concerns of all members of the traveling public. This card allows you to describe your health condition, disability or medical device to the TSA officer in a discreet manner. Alternate procedures which provide an equivalent level of security screening are available and can be done in private.

Presenting this card does not exempt you from screening.



TRAVELER'S COMMUNICATION CARD

Provided by the UOAA, a volunteer-based health organization dedicated to providing education, support and advocacy for people who have or will have intestinal or urinary diversions.

United Ostomy Associations of America www.ostomy.org 1-800-826-0826

#### References

- American Association of Retired Persons, & UC Davis Betty Irene Moore School of Nursing (Producers). (2017, October). Caring For And Maintaining Ostomy Bags [Video file]. Retrieved August, 2017.
- Barton, D. (n.d.). Air Travel [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). Fluids [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). *Living with a Stoma Handling Medications* [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). *Living with a Stoma Handling Medications* [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). Ostomy Nutrition [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). Ostomy Product Companies [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). Support Groups and Web Sites [Pamphlet]. Sacramento, CA.
- Barton, D. (n.d.). WOCNs in Our Area [Pamphlet]. Sacramento, CA.
- Burch, J., & Slater, R. (2012). Enhanced recovery after surgery: Benefits for the stoma care patient. *British Journal of Nursing*, 21(Sup6). doi:10.12968/bjon.2012.21.sup6.s16
- Burrell, L. (2013). Exploration of the primary care nurses' attitudes to caring for a client with a new surgically formed stoma. *Journal Of Stomal Therapy Australia*, 33(4), 12-14.
- Colwell, J. C., Kupsick, P. T., & Mcnichol, L. L. (2016). Outcome Criteria for

  Discharging the Patient With a New Ostomy From Home Health Care. *Journal of*

- Davenport, R. (2014). A proven pathway for stoma care: The value of stoma care services. *British Journal of Nursing*, 23(22), 1174-1180. doi:10.12968/bjon.2014.23.22.1174
- Drugs.com. (n.d.). Benefiber Dietary Fiber Supplement Powder Information from

  Drugs.com. Retrieved September 7, 2017, from

  https://www.drugs.com/drp/benefiber-dietary-fiber-supplement-powder.html
- Drugs.com. (n.d.). Benefiber: Uses, Dosage & Safety Information Drugs.com
  Information from Drugs.com. Retrieved September 7, 2017, from
  https://www.drugs.com/drp/benefiber-supplement.html
- Drugs.com. (n.d.). Gabapentin Uses, Dosage & Safety Information. Retrieved September 7, 2017, from https://www.drugs.com/gabapentin.html
- Drugs.com. (n.d.). Lovenox Search results. Page 1 of about 728 results. Retrieved

  September 7, 2017, from https://www.drugs.com/search.php?searchterm=lovenox
- Drugs.com. (n.d.). Tylenol: Drug Uses, Dosage & Side Effects. Retrieved September 7, 2017, from https://www.drugs.com/tylenol.html
- Edis, H. (2015). Meeting the needs of new ostomists: A patient evaluation survey. *British Journal of Nursing*, 24(Sup17). doi:10.12968/bjon.2015.24.sup17.s4
- Farkas, L. (2017, September 6). Ostomy Information [Personal interview].
- Hendren, S., Hammond, K., Glasgow, S. C., Perry, W. B., Buie, W. D., Steele, S. R., & Rafferty, J. (2015). Clinical Practice Guidelines for Ostomy Surgery. *Diseases of the Colon & Rectum*, 58(4), 375-387. doi:10.1097/dcr.00000000000000347

- Jachniewicz, B. (2011). Bariatric Surgery Procedures & Protocols Performed at U.C.

  Davis Medical Center [Pamphlet]. Sacramento, CA.
- Kirkland-Walsh, H. (Comp.). (2017, May). *Ostomy Information* [UCDMC Data, research articles, and emails]. University of Davis Medical Center Tower 8: Transplant Unit, Sacramento.
- Martin, S., & Whitmore, M. (Comps.). (2017, July). *Ostomy Resource Binder* [Resources for D12 RN staff concerning colostomy and ileostomy patients]. University of Davis Medical Center Tower 8: Transplant Unit, Sacramento.
- Mockford, K., & O'Grady, H. (2017). Prevention of surgical site infections. *Surgery* (*Oxford*), 35(9), 495-499. doi:10.1016/j.mpsur.2017.06.012
- Moore, S. (2015). Medication absorption for patients with an ileostomy. *British Journal of Nursing*, 24(Sup5). doi:10.12968/bjon.2015.24.sup5.s12
- Needham, A. L. (2017, July 17). Understanding how T8 Kidney Transplant Pathway was developed [Personal interview].
- Patzer, C., & Whitmore, M. (2017, August 24). Understanding Tower 8 Transplant Work Flow [Personal interview].
- Prinz, A., Colwell, J. C., Cross, H. H., Mantel, J., Perkins, J., & Walker, C. A. (2015).

  Discharge Planning for a Patient With a New Ostomy. *Journal of Wound, Ostomy and Continence Nursing*, 42(1), 79-82. doi:10.1097/won.00000000000000094
- Regenbogen, S. E., Mullard, A. J., Peters, N., Brooks, S., Englesbe, M. J., Campbell, D.
  A., & Hendren, S. (2016). Hospital Analgesia Practices and Patient-reported Pain
  After Colorectal Resection. *Annals of Surgery*, 264(6), 1044-1050.
  doi:10.1097/sla.00000000000001541

- Martin, S., & Whitmore, M. (2017, October 3). *Colostomy & Ileostomy Nursing*\*Resource Binder. University of Davis Medical Center Tower 8: Transplant Unit,

  Sacramento.
- United Ostomy Associations of America, Inc. (2011). Ileostomy Guide. Retrieved August 28, 2017, from
  - http://www.ostomy.org/uploaded/files/ostomy\_info/IleostomyGuide.pdf?direct=1
- United Ostomy Associations of America, Inc. (n.d.). How To Treat Ileostomy Blockage.

  Retrieved August 31, 2017, from
  - http://www.ostomy.org/uploaded/files/ostomy\_info/blockage\_card.pdf?direct=1
- United Ostomy Associations of America, Inc. (n.d.). Ostomy Travel Tips. Retrieved August 31, 2017, from http://www.ostomy.org/ostomy\_travel\_tips.html
- United Ostomy of America, Inc. (2011). Colostomy Guide. Retrieved August 29, 2017, from
  - http://www.ostomy.org/uploaded/files/ostomy\_info/ColostomyGuide.pdf?direct=
- United Ostomy Associations of America, Inc. (n.d.). What is an Ostomy? Retrieved July 17, 2017, from <a href="http://www.ostomy.org/What\_is\_an\_Ostomy.html">http://www.ostomy.org/What\_is\_an\_Ostomy.html</a>
- United Ostomy Associations of America, Inc. (n.d.). What is an Ostomy? Retrieved September 7,2017, from
  - $\frac{http://www.ostomy.org/uploaded/files/ostomy\_info/OstomyNutritionGuide.pdf?di}{rect=1}$

- University of Davis Medical Center Tower 8 Nurse Practitioners. (2017). [T8 Transplant Resource Binder]. University of Davis Medical Center Tower 8: Transplant Unit, Sacramento.
- University of Wisconsin Hospitals and Clinics Authority. (2017). *Colostomy and Ileostomy Diet Guidelines* [Pamphlet]. WI.
- Wound, Ostomy and Continence Nurses Society. (2016). Wound, Ostomy and Continence

  Nurses Society Core Curriculum Ostomy Management Continence Management

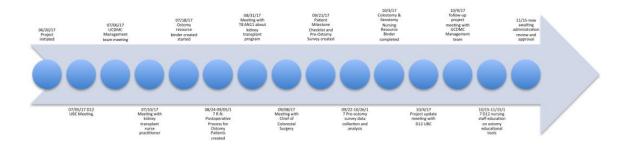
  Wound Management. Philadelphia, PA: Wolters Kluwer.
- Wound, Ostomy and Continence Nurses Society. (2017). Clinical Guideline:

  Management of the Adult Patient with a Fecal or Urinary Ostomy. Mount Laurel,

  NJ: WOCN Society.

# Appendix I

## Timeline



# Appendix J

## Patient Milestone Checklist

First Set of Milestones Immediately After Surger
--

$\Diamond$	Lab draw immediately after surgery (should be done while in post anesthesia care unit)									
$\Diamond$	Transfer from post anesthesia care unit to unit									
$\Diamond$	•									
$\Diamond$										
$\Diamond$										
$\Diamond$	Sips of Impact oral supplement allowed									
$\Diamond$										
$\Diamond$	•									
$\Diamond$										
$\Diamond$	Walk									
$\Diamond$	Vital sign monitoring									
$\Diamond$	Blood sugar monitoring									
$\Diamond$	Education and implementation of incentive spirometer (IS)									
$\Diamond$	Coughing and deep breathing									
$\Diamond$	Ostomy RN visit for education									
$\Diamond$	Looking and assessing stoma									
$\Diamond$	Emptying ostomy appliance									
	Second Set of Milestones									
$\Diamond$										
$\Diamond$										
$\Diamond$	Nausea control									
$\Diamond$										
$\Diamond$	Foley catheter removed, urination trial									
$\Diamond$	CHG bath									
$\Diamond$	Diet adjusted									
$\Diamond$	Impact oral supplement with meals									
$\Diamond$	Tolerating at least 8-10 non-caffeinated drinks/day (64 ounces)									

Г		I	I		I	I			1		
L											
<b>&gt;</b>	•	y RN vis									
>	Receive ostomy kit from Ostomy RN										
· _	Walk										
, <u>-</u>	Vital si	gn moni	toring								
ſ											
<b>,</b>	Blood	sugar mo	nitoring	ıntil 24	hours af	ter surge	rv. cont	inues if d	iabetic		
Ī	Blood sugar monitoring until 24 hours after surgery; continues if diabetic  Before BKF Before lunch Before dinner At bed time										
ŀ	201010 222 201010 Miller Att bott tille										
L	♦ Implementation of incentive spirometer (IS)										
Г	Implementation of incentive sphometer (13)										
ŀ											
L	^ ~	1.	1 1	1 .1 .							
Γ	♦ Cor	ugning ai	na deep	breathin	g	<u> </u>	<u> </u>				
Ĺ	<u> </u>										
<b>&gt;</b>		ition edu									
>	If appli	cable, ec	lucation	on empt	ying osto	my appl	iance				
	<b>Third</b>	Set of M	ileston	es							
<b>&gt;</b>	Lab dra	aw									
<b>&gt;</b>											
>	Nausea control										
<b>&gt;</b>	Wearing Alternating Leg Devices while in bed (ALP's)										
<b>&gt;</b>	Independently urinating										
<b>&gt;</b>	Diet adjusted										
<b>&gt;</b>	Impact oral supplement with meals										
Ī	Impact oral supplement with means										
L اص	olerating at least 8-10 non-caffeinated drinks/day (64 ounces)										
olerating at least 5-10 non-carrellated drinks/day (04 odifices)											
L	Diatioi	n oduce	tion								
	Dietician education Octomy PN visit for education										
	Ostomy RN visit for education										
<b>&gt;</b>	Change appliance										
<b>&gt;</b>	Peri-stoma skin assessment										
<b>&gt;</b>	Complications education										
· -	Walk										
/it	al sign 1	nonitorii	ng								
<b>,</b>	Blood	sugar mo	nitoring	g continu	es if diab	etic					
Ī		ore BKI		Before			ore din	ner	At bed	time	
ľ											
) }	Implen	nentation	of ince	ntive spi	rometer (	IS)					
ſ	r										
f											

$\Diamond$	Coughing and deep breathing									
$\Diamond$	Shower or CHG bath									
$\Diamond$	Medication education									
$\Diamond$	Education on emptying ostomy appliance									
$\Diamond$	Education on measuring output									
$\Diamond$	Discharge planner initiates paperwork for ostomy supplies									
	Fourth Set of Milestones  Lab draw  Pain control  Nausea control  Wearing Alternating Leg Devices while in bed (ALP's)  Independently urinating  Diet adjusted, possibly reach goal diet  Impact oral supplement with meals									
^	Tolomating at least 9.10 man soffeinets d driels /day (64 avmass)									
$\Diamond$	Tolerating at least 8-10 non-caffeinated drinks/day (64 ounces)									
$\Diamond$	Walk									
V	vv aik									
$\Diamond$	Vital sign monitoring									
V	The sign monetary									
$\Diamond$	Blood sugar monitoring continues if diabetic									
	Before BKF Before lunch Before dinner At bed time									
$\Diamond$	Implementation of incentive spirometer (IS)									
$\Diamond$	Coughing and deep breathing									
$\Diamond$	Medication education									

- ♦ Reinforcement of education on emptying ostomy appliance
  - o Patient independently emptying
  - o Emptying ostomy appliance in bathroom
- ♦ Patient measuring output

## **Fifth Set of Milestones**

- ♦ Lab draw
- ♦ Pain controlled
- ♦ No nausea
- ♦ Wearing Alternating Leg Devices while in bed (ALP's)
- ♦ Independently urinating
- ♦ Shower or CHG bath

$\Diamond$	Goal d	liet										
$\Diamond$	Impact	oral sup	plemen	nt wit	h me	als						
$\Diamond$	Tolerat	ing at lea	ast 8-10	0 non	-caff	einated d	lrinks/da	y (64 d	ounces)			
$\Diamond$	Walk											
$\Diamond$	Vital si	gn moni	toring									
$\Diamond$	Blood	sugar mo	nitorin	g coi	ntinue	es if diab	etic					
	Bef	ore BKI	F	Be	efore	lunch	Bef	ore di	nner	<b>A</b> 1	t bed	time
$\Diamond$	Implen	nentation	of inc	entiv	e spir	ometer (	IS)					
$\Diamond$	Coughi	ing and d	leep bro	eathi	ng				·			·

- ♦ Understands medication education
- ♦ Reinforcement of education on emptying ostomy appliance
  - o Patient independently emptying
  - o Emptying ostomy appliance in bathroom
- ♦ Patient measuring output
- ♦ Extra ostomy supplies
- ♦ Verbalization and demonstration of ostomy appliance change (patient/family teach-back)
- ♦ Loose clothing for discharge
- **♦** Discharge prescriptions
- ♦ Discharge summary and paperwork

## Ostomy Food & Fluid Journal

Date	Time	What did you eat and or Drink	Amount	How did you feel?

## Appendix K

## R.N. Postoperative Process For Ostomy Patients

- Vital signs q 4 hours
  - Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - o Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - o Ensure CBC drawn postoperatively
- Sit on edge of bed, stand at bedside, and/or walk
  - o Distance determined by pain, sleepiness, dizziness, and nausea status
- Glucose Accucheck every 6 hours
- Pain management
  - o PCA
  - o IV Tylenol
  - Oral Gabapentin
- Nausea management
- NPO
  - o Mouth swabs allowed
  - Encourage chap stick
  - o Medications allowed:
    - Entreg
    - Gabapentin
  - Sips of Impact oral supplement allowed:
- Education and implementation of incentive spirometer (IS), coughing, and deep breathing
  - o Do IS 10 times hourly while awake
  - o Encourage abdominal splinting for coughing, deep breathing, and laughing
- Measuring and monitoring patient's I and O's q 4 hours
  - Foley catheter in place
- No CHG bath

- Vital signs q 4 hours
  - o Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - o CBC drawn in AM
    - Start *Lovenox* 
      - POD # 1
      - Once daily if under 100 kg
      - Twice daily if over 100 kg
      - MD will do Caprini Score
        - If 5 or greater patient will discharge with Lovenox for four weeks, with daily administration
        - If Caprini score 5 or higher and patient greater than 100 kg, will discharge with Lovenox for four weeks, twice daily administrations
        - All Irritable bowel syndrome patients will discharge with 4 weeks of Lovenox
          - o Dose dependent on Caprini score and weight
          - Begin Lovenox teaching and
  - Laboratory Tests drawn in A.M.
    - o CBC and BMP
- Pain management
  - PCA until oral medications started then discontinued
  - Oral pain medication when diet advanced
- Ambulate at least three times around the entire unit
  - O Distance and duration as patient can tolerate
  - Sit in chair for meals
- Patient implementing incentive spirometer 10 times hourly while awake
- Ostomy RN first visit to patient-
  - Education provided
  - o Does appliance change with patient
  - Application for starter kits and free sample from Hollister, Coloplast and ConvaTec
  - o Provides patient with supplies

- Diet advancement
  - o Clear liquid for both populations
- Measuring and monitoring patient's I and O's q 4 hours
  - o Foley removed if:
    - Urine output adequate
    - Ensure patient can ambulate to bathroom or up to bedside commode
  - o Voiding trial for 6 hours after Foley removal
  - o Bladder scan if no void after 6 hours or low urine output
- Dietician initiate education at bedside with Dietician Consult Order
- CHG bath daily
- RN initiate medication education
  - Handout
  - No large pills
  - o No enteric-coated, time release medications
  - Liquids best for absorption
  - Okay to crush medications if not contraindicated
  - Teach patients when at home to place medication in water for 30 minutes to assess dissolvability if they are unsure if it is ok to take, since not all medications can be crushed.
- RN provides therapeutic time discussing adjustment- if significant RN should ask MD for social worker/psychology referral for patient
  - Body image
  - o Concerns/worries
- Patient watches videos on personal electronic device or hospital television
  - Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder

- Vital signs q 4 hours
  - o Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - o Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT

- Wear ALP's while in bed at all times postoperatively, unless contraindicated
- o Continue Lovenox as prescribed
- Ambulate at least three times around entire unit
  - Distance and duration determined by patient
- Patient implementing incentive spirometer 10 times hourly while awake
- CHG bath daily
- Education on burping bag for flatus
  - Encourage patient to do after demonstrating
- If stool now present
  - o Patient education on how to empty ostomy appliance
- Encourage patient to ambulate to bathroom and empty appliance
- Patient initiate ostomy appliance change with RN's help
  - Ostomy nurse notification if assistance needed.
- Dietician continues diet and nutrition education
- Diet advancement.
  - o Full liquid for both patients
- Measuring and monitoring patient's I and O's q 4 hours
  - o Monitor oral intake- encourage patient to be mindful of hydration status
  - o Patient involved with both stool and urine
    - Measure urine and assess color of urine
    - Provide patient education on urine color assessment reflecting hydration status
  - Record stool output
    - Assess color
    - Assess consistency
    - Measure output
- Patient watches videos on personal electronic device or hospital television
  - Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder

- Vital signs q 4 hours
  - Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)

- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
  - Subcutaneous Loveonx continued
- Ambulate at least three times around entire unit
  - o Distance and duration determined by patient
- Patient implementing incentive spirometer 10 times hourly while awake
- If stool now present
  - Education and return demonstration burping and emptying ostomy appliance while supervised or with assistance
  - o Encourage patient to ambulate to bathroom and empty
- Encourage patient to continue with ostomy appliance change with RN's help
  - Ostomy nurse return to bedside to follow up on patient's ability to change the ostomy appliance and return demonstration.
- Diet advancement
  - o Colostomy: Regular diet or based on patient's history
  - o Ileostomy: Low fiber diet or based on patient's history
- Discharge planner engagement
  - o Supplies
- Possible shower for patient
- Patient watches videos on personal electronic device or hospital television
  - Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder
- Measuring and monitoring patient's I and O's q 4 hours
  - o Monitor oral intake- encourage patient to be mindful of hydration status
  - Patient involved with both stool and urine
    - Measure urine and assess color of urine
    - Provide patient education on urine color assessment reflecting hydration status
  - Record stool output
    - Assess color
    - Assess consistency
    - Measure output

- Vital signs q 4 hours
  - Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status

- Diaphoresis
- Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated
- Measuring and monitoring patient's I and O's q 4 hours
  - o Patient involved for stool and urine I and O's
  - Measure urine and assess color of urine
  - Monitor oral intake
  - Record stool output
    - Assess color
    - Assess consistency
    - Measure output
- Patient independently emptying bag
  - o Reports to RN amount, color, consistency
  - o Encourage patient to ambulate to bathroom and empty over toilet
- Patient independently change the ostomy appliance-return demonstration
- Ambulate at least three times around entire unit
  - Distance and duration determined by patient
- Patient implementing incentive spirometer 10 times hourly while awake
- Patient diet at goal
  - o Colostomy: Regular diet or based on patient's history
  - o Ileostomy: Low fiber or based on patient's history
- Patient showers
- Patient watches videos on personal electronic device or hospital television
  - Available in back of resource binder
- Patient educated on internet resources
  - Available in back of resource binder

- Vital signs q 4 hours
  - Monitor for signs of infection
    - Temperature of 38.5 C or greater
    - Excessive redness
    - Warmth to the surgical sites
    - Purulent drainage
    - Increased WBC
  - Monitor for pulmonary embolism
    - Desaturation
    - Anxiety changes
    - Changes in mental status
    - Diaphoresis
    - Alternation in vital signs (tachycardia)
- Prevention of DVT
  - Wear ALP's while in bed at all times postoperatively, unless contraindicated

- o Continue subcutaneous Lovenox administration
- Ambulates at least three times around the entire unit
  - Distance and duration determined by patient
- Measuring and monitoring patient's I and O's q 4 hours
  - o Adequate urine and stool output
  - No Foley catheter
  - o Patient involved for stool and urine I and O's
    - Measure urine and assess color of urine
    - Monitor oral intake
    - Record stool output
      - Assess color
      - Assess consistency
      - Measure output
- Patient implementing incentive spirometer 10 times hourly while awake
- Patient at goal diet for discharge
- Patient independently burping flatus
- Patient independently emptying stool from bag
- Patient able to verbalize and demonstrate how to change appliance
- Patient verbalizes understanding of complications and when to contact MD
- Pain controlled
- No nausea
- Patient watched videos
- Patient educated on internet resources
- Ensure patient has discharge supplies
- Ensure dietician consult completed
- Ensure ostomy nurse consult completed
- Ensure all educational videos watched by patient and documented in the EMR
- Discharge home
  - Wear loose clothing
    - Educate patient to wear loose clothing for 3-4 weeks after surgery