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Utilizing an Interdisciplinary Approach: Education of Early Progressive Mobility Protocol in the ICU/Acute Setting

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UTILIZING AN INTERDISCIPLINARY APPROACH: EDUCATION OF EARLY PROGRESSIVE MOBILITY PROTOCOL IN THE ICU/ACUTE SETTING

By

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Abstract

Prior to the COVID-19 pandemic, Early Progressive Mobility (EPM) was used more frequently in an interdisciplinary approach to improve patient outcomes. The aim is to create a protocol that takes an interdisciplinary approach and makes use of early progressive mobility. In the acute setting, occupational therapists are equipped to promote quality of life and independence both, during and after hospitalization, which is critical for early mobilization being beneficial for patients who are able to participate in therapy.

This Doctoral Capstone project was aimed at demonstrating the value of occupational therapists in the intensive care unit (ICU)/acute setting by utilizing EPM in collaboration with other healthcare disciplines. Using current literature, a protocol will be developed to provide clear instructions to healthcare providers on what they must do to play an effective role in the ICU/acute setting. Occupational therapists and other healthcare staff will be responsible for increasing awareness, education, and knowledge on early progressive mobility in the ICU/acute setting through the interdisciplinary approach of Early Progressive Mobility.

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Introduction

The primary goal of occupational therapy is to restore a patient's previous level of meaning in activities of daily living (ADL) that are valuable to that person and to enhance their overall health and quality of life. The “occupation” term in occupational therapy refers to every day activities people do to occupy their time and bring meaning and purpose to their lives as individuals, families, and communities (Shiraiwa et al., 2020). Recent research (Pohlman et al., 2010) has indicated that both physical and occupational therapy during critical illness may have the potential to be of immense value. Occupational therapists offer patients a holistic perspective that improves their quality of life and helps them preserve their functional independence while still in the hospital and after being discharged. This is a critical factor to consider because early mobilization benefits patients who can physically participate in therapy.

According to Rogers et al. (2016), occupational therapy is the only spending category inside the hospital that has been shown to have a statistically significant link with lower readmission rates. Occupational therapy is responsible for the low readmission rates considering the profession is one of a kind and is centered on meeting the patients' functional and social requirements. According to Rogers et al. (2016), if these areas are not addressed, they can potentially be significant drivers of readmission. Although early mobility and exercise programs have been shown to improve outcomes for critically ill patients by reducing the incidence of delirium, decreasing the number of ventilator days and length of stay, and achieving a higher functional status at hospital discharge (Linke et al., 2020), Valley Hospital has not followed consistent EPM protocol since the COVID-19 pandemic. This holds true despite these programs being shown to improve outcomes for critically ill patients. Despite knowing that hospital staff members are aware of the benefits of mobility, establishing a consistent early mobility practice

might be difficult due to several factors. A shortage of resources, inefficiencies in interdisciplinary coordination, popular misconceptions about mobility safety in intensive care unit patients, and a need for knowledge regarding mobility's influence on patient outcomes are the components that make up this problem. Due to this, establishing a multidisciplinary team at Valley Hospital's medical intensive care unit (MICU) brought to light these gaps as a potential for quality improvement in the year 2023. To determine the protocol's success, a comparison was made between these factors with an interdisciplinary approach using the EPM as the measuring standard.

The level of care provided at Valley Hospital results in high expectations since it was the first hospital established in Las Vegas, Nevada. Therefore, it has earned a reputation as a teaching hospital (About the Hospital, 2016). Every healthcare staff member offers specialized knowledge based on the highest possible evidence-based practice and academic research standards. This encompasses a wide range of professionals, some of whom are physicians, nurses, respiratory therapists, case management, physical therapist, and occupational therapist. Therapists at Valley Hospital can be assigned to different departments of the hospital depending on the ratio of patients to therapists, the acuity of individual patients, and the volume of physician orders.

In 2018, an established team of therapists carried out the EPM protocol with one physical therapist, one occupational therapist, one respiratory therapist, one therapy technician, and the assigned registered nurse nearby to assist with any immediate medical need. When the EPM team evaluated the patient or provided treatment for them, they did so in a coordinated and cohesive way. Once the patient reached an appropriate level of medical acuity, the physician or registered nurse would initiate an order for therapy to begin the EPM protocol. The EPM team

would treat a particular patient once they received verbal permission. Valley Hospital, owned and operated by United Health Services, is a Universal Health Services, Inc subsidiary.

To efficiently carry out a standardized protocol such as EPM, the interprofessional therapy team, and healthcare staff members need to have developed knowledge in their respective fields. Due to the COVID-19 epidemic, many hospitals were required to reassess how they provided treatment for their patients; in addition, due to their status, patients had restricted access to areas that would have been available pre-Covid, e.g., therapy gyms, nursing stations area, and patient staircases to practice functional mobility. As a result, the demand for workers in the medical field developed into a higher priority. Consequently, the EPM method was postponed.

The PIO arises: "Can a protocol for an interdisciplinary approach help the consistent use of an EPM protocol in the ICU/Acute Care at Valley Hospital?" One of the goals was to assemble a group of healthcare providers to work in the MICU to assist in re-establishing the protocol and ensure that it was appropriately followed. In addition, the goal is to raise awareness of EPM and ensure that it is done safely in acute care and intensive care units. Consequently, the capstone project played a significant part in the collaboration between healthcare professionals, early progressive movement, and the continued advancement of occupational therapy's presence and role as an aid in guaranteeing favorable results for EPM.

Statement of the Problem

Patients critically ill in the ICU or critical care unit are at risk for cognitive, psychosocial, and physical impairments due to their admitting diagnosis or secondary diagnoses acquired during their hospital stay. With the world's aging population, the demand for critical care will only grow exponentially over the next 15 years (Woodard, 2020). Due to these rising numbers

for cardiovascular critical care, the need for the future of acute medical care rests in adapting to a more comprehensive model of care (Bourke, 2016).

From these findings, there are also known correlations between cardiac dysfunction and the incidence of cognitive impairment. Some studies estimate its presence in more than 17% of cardiac patients, potentially increasing to around 75% of patients with heart failure (Norris, 2018). A cardiac disease also shows a range of cognitive deficits; impairment classifies as mild among cardiac patient groups, leading to cognitive deterioration being more significant than expected for the person's age and education level. These impairments affect patients' ability to engage in more complex activities and behaviors.

Patients admitted to an ICU may also experience a lack of control, reduced sensory stimulation, and reduced engagement in meaningful activities, in addition to being subjected to intrusive interventions. Subsequently, patients may develop sequelae of cognitive and physical symptoms known as post-intensive care syndrome (PICS), often accompanied by reduced long-term participation outcomes (Rapolthy-Beck et al., 2021), which could require patients to stay longer and impact their overall health.

The occupational therapist has the potential to play a pivotal role, which may include facilitating early mobility to promote out-of-bed activity, sensory education, and environment intervention. Occupational therapists also address additional factors for their patients such as advocating for a decrease in external stimuli that could potentially add to the patient's level of restlessness, positioning, and splinting, and executing the treatment plan (OT, 2018). In 2018, a collaborative effort was undertaken by occupational therapists, occupational therapy assistants, physical therapists, physical therapy assistants, respiratory therapists, and nursing staff at Valley Hospital to evaluate patients who were admitted to the intensive care unit. Each patient's need for

services was assessed, and prior to evaluation, the physician's order was verified to authenticate the request for occupational therapy services. Upon determination that occupational therapy is required, and the patient's medical condition is stable, treatment is initiated in coordination with other respiratory teams.

The collaborative care of EPM was the driving force. Currently, there is no established role or protocol for therapists to follow in collaboration with other healthcare disciplines. Many COVID-19-related patients admitted to intensive care units have significantly impacted healthcare providers. The incidence of mental health disorders among these professionals has increased significantly during the pandemic, and their professional quality of life has suffered (Moreno-Mulet et al., 2021). This could also be one of the primary reasons nurses have been unable to collaborate with Valley therapists to identify solutions for patients regarding better patient mobilization, health outcomes, and interdisciplinary play with health care practitioners. As a result, there has been increased patient stay, reliance on therapists to only complete mobilization, and a turnover of patients returning to the hospital two years after the COVID-19 pandemic. This program hypothesizes that a protocol for an interdisciplinary approach can assist with consistently using an EPM in the ICU/acute care setting.

Significance to Occupational Therapy

Occupational therapy is a healthcare profession that focuses on assisting patients in regaining the ability to participate in activities of daily living (ADL), as well as job and leisure activities. Occupational therapy in acute care is essential because it enables patients to restore their functional independence and quality of life, shortens the time they need to spend in the hospital, and cuts down on the amount of money spent on medical treatment.

acute care helps patients restore their functional independence and improves their quality of life. Patients admitted to critical care may confront various physical, cognitive, and emotional obstacles, which interfere with their capacity to carry out ADLs. Together with their patients, occupational therapists determine their patients' goals, evaluate their functional skills, and devise and individualized treatment regimens to meet each patient's specific requirements. In addition, occupational therapists assist patients in enhancing their physical capabilities through various interventions, including strengthening and mobility training, exercises to increase range of motion, and more. In addition, occupational therapists can assist patients in improving their cognitive and emotional capabilities by providing them with cognitive and emotional interventions such as memory and problem-solving skills training as well as stress management. Ultimately, occupational therapists assist patients in regaining their functional independence, increasing their levels of self-esteem and self-confidence, and improving their overall quality of life.

Patients' physical and emotional health can suffer during hospitalization, leading to a extended stay at the facility. Occupational therapists collaborate with patients to identify and remove obstacles to their discharge, such as deficiencies in mobility and the ability to care for oneself independently. Furthermore, occupational therapists can support a seamless and safe transfer from the hospital to the patient's home by working with patients and their caregivers to design a discharge plan that includes changes to the patient's home, assistive devices, and training for the patient's caregivers. This results in a shorter overall stay for patients in the hospital and raises their level of contentment with the care they receive.

Occupational therapy in critical care can result in significant cost savings by shortening patients' lengths of stay in hospitals. In addition, occupational therapy interventions can help

minimize readmissions by ensuring that patients are discharged with the knowledge and tools necessary to manage their disease at home. This allows patients to avoid having to return to the hospital. Interventions in occupational therapy can also help prevent complications such as falls and pressure injuries, both of which can lead to expensive treatments and lengthy hospital stays. Occupational therapy interventions initiated early in a patient's hospital stay, including caregiver education and training, were most effective in achieving these outcomes. The authors conclude that occupational therapy in acute care is an effective intervention that can improve patient outcomes, reduce healthcare costs, and increase patient satisfaction Ploeg et al. (2018).

As an essential healthcare profession that helps patients regain their functional independence, reduces the length of time they need to be in the hospital, and minimizes the overall cost of healthcare. Additionally, occupational therapists help patients improve their ADL and instrumental activities of daily living (IADL) by taking a comprehensive approach that considers their physical, cognitive, and emotional capacities. Occupational therapy in acute care settings will be essential in achieving these objectives as healthcare systems continue emphasizing patient-centered care and cost-effectiveness.

Need for the Project

The author was fortunate to participate as a therapy technician in the EPM protocol procedures from 2018 until 2020 at Valley Hospital, specifically in the MICU. However, the author observed that due to the COVID-19 pandemic, the EPM team was no longer active due to a various of factors. The pandemic impacted early mobilization interventions, as hospitals had to establish infection prevention and control measures to limit the possibility of COVID-19 transmission. According to Liao et al. (2021), the pandemic reduced the frequency and intensity of therapeutic services, particularly early mobilization interventions. The study also discovered

that patients were less likely to participate in therapeutic services due to their concern about COVID-19 infection, resulting in delayed recovery and an increased risk of functional decline.

Several studies have shown the benefits of early mobilization interventions in the acute care setting. A systematic review by Stiller et al. (2016) found that early mobilization interventions in critically ill patients improved functional outcomes, reduced hospital stays, and decreased healthcare costs. The study also found that early mobilization interventions were safe and did not result in adverse events. Hodgson et al. (2016) found that early mobilization interventions in mechanically ventilated patients improved functional outcomes and reduced hospital stays. The study also found that early mobilization interventions were safe and did not increase the risk of adverse events.

Shelley Bolor and Jayson McClaren were the occupational and physical therapists assigned to the unit who participated in the EPM protocol for some time in 2018. The author maintained a relationship with Shelley and Jayson and challenged why early mobilization was not always implemented in the MICU. Therapy staff identified several reasons EPM was not initiated three years after the pandemic, such as staff turnovers within the nursing department, productivity demands, decreased staffing, lack of education and communication from one department to the other, and honestly, someone to bring it back (S. Bolor, personal communication, January 3, 2023). Therefore, despite several unfavorable factors, it was essential to establish an interdisciplinary approach to re-implementing the protocol would comprehensively yield advantages for the hospital and its staff.

First, the author needed to gain understanding of the gaps in each department, including the occupational/physical therapy office, case management, physicians, registered nurses, and respiratory therapy perspectives. The author would then collect a team of healthcare providers

who work in the MICU to participate in the project and complete the pre/post-test survey. The survey gave a better understanding of what the healthcare workers understand and know about occupational therapy, EPM, and areas of improvement in the protocol. Ten MICU registered nurses, and one respiratory therapist completed a six-question survey.

The questions were: 1) Do you know what Early Progressive Mobility (EPM) is? 2) What do you understand about the interdisciplinary approach utilizing EPM? What about for physical therapy and occupational therapy (PT/OT)? 3) Do you find the EPM protocol easy to understand and carry out? 4) Was EPM used consistently? If not, why? 5) Do you know what OT is overall? 6) What are your thoughts on an interdisciplinary approach in the MICU?

(See Appendix I)

Literature Review

The author utilized various databases, including AJOT, ProQuest, Google Scholar, PubMed, and EBSCO host, to perform a comprehensive literature review and obtain pertinent and current data pertaining to their research subject. The mentioned databases offer a comprehensive collection of academic resources such as scholarly articles, peer-reviewed journals, books, and conference proceedings that are essential sources of information for the capstone project.

EPM in the ICU

EPM is a concept that has received much attention recently as a potential remedy for the negative consequences of immobility in critically sick patients in the ICU. EPM comprises early mobilization and gradual exercise of critically ill patients to improve physical and functional results, reduce mechanical ventilation duration, and shorten ICU and hospital stays. Several studies have found that EPM improves outcomes in critically ill patients in the ICU. Tipping and colleagues (2015) discovered that EPM is safe, practical, and effective in improving patient outcomes in the ICU in a systematic study. EPM significantly reduced the prevalence of ICU-acquired weakness, confusion, and ventilator-associated pneumonia, as well as improved patient functional status, according to the authors. Similarly, Schweickert and colleagues (2009) discovered that EPM significantly reduced the duration of mechanical breathing, ICU length of stay, and hospital length of stay in critically sick patients in a randomized controlled experiment.

The role of occupational therapy (OT) in applying EPM in the ICU is crucial. OTs can provide early intervention, functional status evaluation, and teaching on the benefits of early mobilization. Engberg and colleagues (2019) discovered that OT participation in EPM increased the likelihood of early mobilization, improved patient functional status, and decreased ICU and

hospital duration of stay. Furthermore, Lefmann and colleagues (2020) discovered that OT-led early mobilization interventions were related to improved patient outcomes, including shorter lengths of stay and better functional status.

To summarize, EPM is a safe and successful technique for improving outcomes in critically ill ICU patients. OTs play a vital role in EPM implementation, and their involvement is linked to better patient outcomes. These findings emphasize the significance of EPM and OT engagement in critical care settings for promoting patient recovery and improving outcomes. The intensive care unit (ICU) may be a challenging environment of severely sick patients, life-sustaining therapies, and emotional ups and downs for patients, family members, and staff. Unfortunately, muscle atrophy, also known as ICU-acquired weakness (ICU-AW), is a prevalent clinical condition in the intensive care unit (ICU), affecting 30% to 100% of patients, depending on their diagnoses (Atkins & Kautz, 2020). In critically ill individuals, deconditioning may also develop a chain reaction of consequences. Complications such as ventilator-associated pneumonia, atelectasis, muscle mass loss, and hemodynamic instability are more frequent in these patients. Every day an ICU patient spends in an ICU bed requires an additional 1.5 days in a non-ICU bed (Atkins & Kautz, 2020).

EPM patients begin with a sequence of planned motions and increase to their previous level of functionality. University Medical Center (UMC) in Lubbock, Texas, launched an ICU early mobilization program in 2014. There was no official early mobilization program in the ICU before the start of this program; PT and OT were consulted at the discretion of the physicians caring for the patient. From the hospital's inception in 1978 until the development of a structured early mobilization program at UMC in 2014, no patients had successfully ambulated on a ventilator while endotracheally intubated (Sigler et al., 2016). Following the program's

inception, more than 50 patients successfully ambulated while on mechanical ventilation, with these patients completing 105 ambulation sessions. No problems or adverse events were discovered during any early mobilization session (Sigler et al., 2016).

Occupational Therapy with the Use of EPM

OTs will assess the patient's tolerance to an activity before progressing to more physically demanding activities, such as getting out of bed and ambulating. To begin an occupational therapy session, the patient may participate in active and passive range-of-motion exercises in bed. Physical deconditioning is a problem in critically ill patients. Being in the ICU already puts patients at risk, including complications like ventilator-associated pneumonia, atelectasis, plasma volume loss, and muscle mass loss (Atkins & Kautz, 2020). These complications are common, but they can be avoided with gradual mobility. In addition, the sooner a patient is mobilized, the sooner their body can acclimate, avoiding secondary complications such as orthostatic hypotension.

Many nurses believe that leaving the patient in bed is more accessible, however, this causes more complications. Prolonged bed rest increases ventilator time, resulting in a more extended ICU stay, a longer hospital stay, and higher costs for the patient and the organization (Atkins & Kautz, 2020). According to studies, ICUs with a mobility intervention group reach milestones much faster than those without a dedicated mobility group. ICUs with a mobility group also have lower delirium and ventilator days, as well as a much lower 6-month mortality rate (Atkins & Kautz, 2020).

At Valley Hospital, EPM is normal for healthcare practitioners to achieve while working in their unit. The importance of providing excellent quality care will be one of the driving forces while re-establishing EPM back at the facility. Everyone should receive competency training on

all the functions of the beds and lifts, and most importantly, ensure that staff understands how to accurately assess the patient's cognitive level (Atkins & Kautz, 2020). EPM may also need to become a clear unit goal or core measure. The unit's governance team can then monitor how the unit performs and report the results to staff members. All parties' benefits from fewer complications, shorter stays, happier nurses, and satisfied patients and families when a mobility team becomes the standard of care.

Functional Status of Patients Using EPM

Prospective studies have shown that introducing mobility programs and periods of increased activity during hospitalization has benefits (Schujmann et al., 2020). Daily interruption of sedation combined with physical and occupational therapy from the start of critical illness in patients on mechanical ventilation resulted in an improved return to (premorbid) independent functional status at hospital discharge compared with daily interruption of sedation and standard care (Schweickert et al., 2009). Assessing the impact of ICU mobilization programs on musculoskeletal and cardiorespiratory systems and function can increase the understanding of the benefits of these programs. Although advances in research and technology have expanded healthcare providers' ability to manage the short-term complications of critical illness, there has been a shift in focus on preventing functional deficits and optimizing ICU survivors' quality of life (QOL) (Rukstele and Gagnon). As a result, a large body of evidence has emerged supporting early progressive mobility as a standard of care in reducing the risks of immobility.

Interdisciplinary Focus in Acute Care

Interdisciplinary collaboration across disciplines is acknowledged as a critical component in improving patient outcomes in the intensive care unit (ICU). According to the findings of a study conducted by Kazaure et al. (2018), interdisciplinary teamwork among medical

professionals, such as doctors, nurses, and physical therapists, was associated with lower death rates and shorter ICU stays for patients after heart surgery. In addition, a study conducted by Mikkelsen et al. (2017) indicated that interprofessional teamwork between physicians, respiratory therapists, and nurses effectively lowered the number of patients who required readmission to the intensive care unit.

Occupational therapists are essential in interdisciplinary teamwork in the intensive care unit (ICU). An article written by Engle et al. (2019) highlighted the significance of occupational therapy in the intensive care unit (ICU). The authors stated that the involvement of occupational therapists can result in improved functional results, reduced deliruim, and a shorter length of stay in the hospital. In addition, early mobilization, which has been found to enhance outcomes in critically sick patients, is something that occupational therapists are involved in. In addition, early mobilization combining occupational therapists, physical therapists, and nurses was found to improve functional outcomes and lower rates of delirium in intensive care unit patients in a study that was conducted by Morris et al. (2016).

It is important to have strong communication skills when working with other disciplines. According to the findings of a study conducted by Presciutti et al. (2019), effective communication between members of the intensive care unit team is essential for the successful execution of an early mobility program. The authors stressed the significance of multidisciplinary huddles, which are meetings in which members of a team who specialize in various fields gather together to discuss the care of patients and their progress. It was determined that the huddles successfully enhanced members of the team's ability to communicate and work together.

In conclusion, multidisciplinary collaboration is essential in the intensive care unit (ICU). This type of collaboration comprises medical professionals from various fields working together to treat patients who are critically sick with the finest care currently available. Studies have indicated a connection between interdisciplinary teamwork and improved patient outcomes, including lower death rates, shorter stays in the intensive care unit (ICU), improved functional outcomes, reduced rates of delirium, and suitable hospital-acquired injuries. However, in order to have productive interdisciplinary collaboration in the intensive care unit (ICU), effective communication and a common knowledge of the role and expertise of each field are required.

Statement of Purpose

The purpose of this project was to explore the benefits and challenges of early progressive mobility (EPM) in acute care settings using an interdisciplinary approach. While there is evidence to support the effectiveness of EPM, its implementation in acute care settings requires collaboration among various healthcare disciplines, including physicians, nurses, physical therapists, and occupational therapists. Through a review of relevant literature and case studies, the project examined the interdisciplinary nature of EPM and its impact on patient outcomes, knowledge of occupational therapy, and the effectiveness of the EPM protocol. By highlighting the benefits and challenges of EPM and emphasizing the importance of interdisciplinary collaboration in its implementation, this capstone project provided a comprehensive understanding of the practice and its potential to improve patient outcomes in acute care settings.

Valley Hospital is a prominent healthcare facility in the Las Vegas area. The author devoted time to each discipline in order to enhance their comprehension of the gaps in acute care. Additionally, the author participated in weekly safety meetings, physician, case management, and therapy meetings for each patient in the hospital, and conduct in-services for the hospital staff. The author aimed to establish a connection with each discipline and engage in regular rounds to evaluate the suitability of patients for the EPM protocol. Additionally, is important to enlist diverse participants to gain insights into occupational therapy in the acute care context.

Table 1.

Capstone Project Agenda

Capstone Experience Timeline	Objectives
January 2023	Assimilation with the ICU setting and establishing a rapport with various healthcare workers. Begin rounding procedures with the designated therapy team member.
February 2023	Attend hospital meetings on the understanding of critical care teams, physician meetings, safety huddle meetings, etc. Conduct semi-structured interviewing with participants and explain pre/post survey.
March 2023	Collection and data entry through the ICU department. Providing education and resources to participants.
April 2023	Data Analysis of capstone experience. Attend the last critical team meeting and provide current findings after conducting data. Final in-service presentation to therapy team on what capstone experience entails and project findings.

Theoretical Framework

The frame of reference utilized was the rehabilitative frame of reference. This specific frame of reference emphasized the client's strengths while modifying the tasks to compensate for limitations. The interdisciplinary team in the acute care/intensive care unit implemented the EPM protocol when the patient is given medically stable from their attending physician to start the rehabilitation process. This framework emphasized the patient's remaining abilities rather than the diagnosis to achieve the highest level of function in the patient's desired occupation. Despite the presence of ongoing impairments, the objective of this Functional Independence Measure (FIM) was to achieve the highest possible level of independence. In addition, occupational therapists recognized the importance of considering both the physical and mental aspects of occupational performance, in contrast to the traditional approach to rehabilitation, which placed more emphasis on treating physical disabilities.

The person-environment-occupation-performance (PEOP) model aimed to investigate how a person's environment and the efforts in the specific occupation interact to influence their level of performance in a given setting. By this model, intrinsic and extrinsic factors can affect a person's performance while in the ICU. During a patient’s stay at Valley Hospital, patients were exposed to various medical treatments, examinations, and interventions performed by multiple healthcare providers. The patient may or may not have had access to social support, which is one of the psychological aspects that could influence the patient's performance in vocations that the occupational therapist will evaluate. Other considerations included sleep and stress levels. Because the PEOP model is client-centered, it required the patient to participate in goal setting and developing an occupational performance plan actively. The patient's mental state was considered when setting goals for their time in the ICU. According to the proposed protocol, the

patient and occupational therapist were expected to maintain a collaborative relationship for implementing the PEOP model in the ICU. The author and EPM team gained an understanding of the challenges and opportunities presented by the patient's needs and goals by eliciting the patient's narrative by asking the appropriate questions, concerns, and goals for the patient. The model identified critical occupational performance factors in personal performance capabilities and environmental performance enablers and barriers, ultimately leading to a realistic and sequential intervention plan.

At Valley Hospital's MICU, the PEOP model assisted the author in understanding the person's diagnosis and background and will be one of the primary pillars for constructing the occupational profile for patients. While incorporating the interdisciplinary parts of the EPM protocol, the environment of being in the ICU plays a critical role for the patient. Some patients may be unfamiliar with the ICU setting, while others may be accustomed to the setting from previous hospital admissions. While the focus is on the interdisciplinary approach of the EPM Protocol, this promoted the awareness of certain occupations can demonstrate why occupational therapy is vital in the ICU. Through this model, knowing what motivates the patient, how the environment is displayed, and the occupation in which the client is engaged ultimately determined whether the interdisciplinary approach of the EPM Protocol will be useful at Valley Hospital ICU.

Methodology

Study Design

As a quality improvement initiative, this study investigated the impact of an interprofessional approach on the utilization of an EPM in the intensive care Unit/Acute Care at Valley Hospital. A pre/post design survey and a needs assessment were utilized to assess changes in EPM utilization before and after implementing the interdisciplinary approach. In addition, semi-structured interviews were conducted with physicians, nurses, physical therapists, and occupational therapists to gather qualitative data about their experiences with the program, their understanding of the roles of OT versus PT, and other open-ended and closed-ended questions to understand their insight of EPM.

Personal interviews were conducted during various staff meetings e.g., Safety Huddle and physician/case management/therapy meetings to obtain insight into the participants' experiences with the program, including barriers and facilitators to the consistent use of EPM. The qualitative data collected from the interviews were subjected to thematic analysis to identify common themes and patterns associated with using EPM and the interdisciplinary approach. This study provided valuable information on the efficacy of an interdisciplinary approach to promoting the consistent use of EPM in the ICU/Acute Care setting and to identify future strategies to improve EPM implementation.

Semi-structured Interview Questions

1. *On a personal level what do you wish could happen here in the MICU, specific to EPM?*
2. *What were some of the reasons why you got into your profession?*
3. *How can there be areas of improvement in your department to help with patient's overall wellbeing?*

4. *Why do you think EPM took so long to come back into play?*

Agency

The implementation of this capstone project was carried out at the MICU of Valley Hospital, located in Las Vegas, Nevada. The author has a previous connection to EPM, as she was part of the EPM ICU team in 2018. In addition, the student was closely monitored by experienced professionals, including occupational therapist Shelley Bolor, physical therapist Jayson McClaren, and MICU Manager Alvin Estrellado, who have more than a decade of experience in their respective fields and have served in various capacities on the EPM team in 2018.

Valley Hospital, situated in the heart of the Las Vegas Medical District (LVMD), has been providing acute care services for over five decades, featuring 306 beds for patient care, including a behavioral health unit with 48 beds and a rehabilitation unit with 16 beds. As a teaching hospital, Valley Hospital strongly emphasizes the utilization of evidence-based medicine and adheres to clinical paths that have demonstrated effectiveness in previous studies. As a part of Universal Health Services Inc., implementing EPM is not a new thought at Valley Hospital but rather a familiar concept that has already been integrated into the hospital's formal patient documentation, specifically the Progressive Mobility Policy Title: Fall Prevention. This policy will be re-implemented to target the ICU staff and new therapists who joined the field following the COVID-19 epidemic. **See Appendix II**.

Outcome Measures

One of the critical of this study was the pre- and post-survey developed for staff in the MICU to gather the knowledge of healthcare providers outside of the therapy department at Valley Hospital. The participants were given questions that were created by faculty site mentor

Dr. Christina Bustanoby, Dr. Donnamarie Krause, and the author. The questions posed were both open-ended and closed-ended. Furthermore, brief verbal discussion and a poster board presentation were developed to further distinguish the role of therapy in the MICU. The poster board presentation was designed to provide evidence-based information on the benefits of EPM, specific techniques and protocols, and the interdisciplinary approach to implementation. By disseminating this information to healthcare providers, the education provided aimed to promote the consistent use of EPM and improve patient outcomes. The development of these educational materials demonstrated the importance of interprofessional collaboration and the role of occupational therapy in critical care. Overall, this outcome measure served as a valuable contribution to the field of healthcare field and highlights the potential for future research and interventions aimed at improving patient outcomes through interdisciplinary approaches to care.

Data Collection

For this study, data collection was collected through a handwritten pre/post survey distributed to registered nurses during their shifts in the MICU on either Monday through Thursday. The author carried out a 40% caseload to better familiarize with the steps of EPM and actively seek participants interested in the project. The author's site mentors were able to assist with gathering information due to the limited time and demands of hospital care. Handwritten surveys were chosen as the data collection method due to their accessibility and ease of use in a busy clinical setting. The survey questions were designed to assess the effectiveness of the interdisciplinary approach to EPM in the ICU. They included questions related to the utilization of EPM, interdisciplinary teamwork, and barriers to implementation. The surveys were distributed during the morning shift and collected at the end of the same shift at the convenience of the RN's schedule. The use of handwritten surveys has been shown to be a valid and reliable

data collection method in healthcare settings, particularly in situations where electronic data collection may not be feasible (Wilson et al., 2021).

The project gathered information through informal interviews with designated charge nurses and attendance at separate meetings from therapy-led meetings. These interviews aimed to collect information on the utilization of EPM in the ICU/acute care setting and to gain insight into the barriers and facilitators of its implementation. Observing the assigned charge nurses provided valuable insight into the daily procedures of the interprofessional team and the utilization of EPM, the gaps in their specific department's experience, and their comprehension of quality improvement in their department. Through personal narratives, this study sought to capture the subjective experiences of those involved in EPM and gain a deeper understanding of the factors that influence its use in the ICU/acute care setting.

Table 2.

Demographic Characteristics of Sample; n=11

Demographic Characteristics		*n=11*
Age	18 - 24 years of age	0
		3
	25 - 34 years of age	3
		5
	35 - 44 years of age	
	45+ years of age	
Gender	Male	4
	Female	7
Position	Registered Nurse	10
	Respiratory Therapist	1
	Physicians	0
Years of Experience	0 - 2 years	0
		2
	3 - 5 years	2
		7
	5 - 10 years	
	10+ years	

Participant Sampling

In this study, participants were selected from the staff of Valley Hospital, who were either registered nurses or respiratory therapists with diverse professional backgrounds and levels of experience. The participants all worked day shift hours and were present Monday-Thursday. Purposive sampling was the method of choice, with participants based on specific characteristics pertinent to the research query. In this instance, the author was interested in collecting information from individuals with direct experience implementing an EPM program in an ICU/acute care setting. Therefore, those who met the inclusion criteria were invited to participate in the study after they were identified through direct contact with the ICU/acute care unit administrators. A total of eleven participants were recruited: one respiratory therapist manager and ten registered nurses. Alvin Estrellado, director of MICU and SICU recommended the registered nurses, and Tammy Sanders, the lead manager of the respiratory team was the only participant. The purposive sampling allowed for an opportunity to target a specific group of healthcare professionals with relevant experience and knowledge, ensuring that the collected data was informative and relevant to the research question.

Data Analysis

The qualitative data analysis of pre/post-test surveys on EPM in the medical ICU with an interdisciplinary approach involved discovering themes and patterns in healthcare professionals' responses. The study aimed to assess the method's effectiveness and identify improvement areas. The surveys provided information about the method's implementation and its influence on patient outcomes. The study directed the development of future initiatives to improve patient care and outcomes in the ICU. Coding would be used to find common themes and concepts from healthcare experts' comments. Another essential component of qualitative data analysis was

triangulation which was used to cross-check the findings from many sources or methodologies to guarantee the data's validity and dependability. In the case of surveys, triangulation can be accomplished by including three persons in the coding process, Shelley, Jayson, and the author, to guarantee that the detected themes and concepts are consistent among several coders, hence boosting the study's credibility and rigor. Including numerous coders also allowed for conversations and arguments, resulting in a more nuanced interpretation of the data.

Qualitative Data Analysis

The analysis of pre/post-surveys in this study was carried out with meticulous attention to detail and scholarly rigor. The survey replies were thoroughly examined by the research team, which included Shelley, Jayson, and the author. Each researcher read through the survey data separately, thoroughly studying the participants' responses to discover the themes that emerged from the data. An inductive approach was used to identify distinctive concepts that might otherwise have gone missing. The codebook used in the study was continuously refined throughout the analytical process, and changes to the codebook were meticulously documented via an audit trail. Such a rigorous and systematic approach to data analysis is compatible with best practices in qualitative research. It emphasizes the importance of methodological rigor in increasing knowledge and practice in healthcare.

Table 3.

Survey Questions of Participants

Question	**Selective Coding**	**Quote**
What do you understand about the interdisciplinary approach utilizing EPM? What about for PT/OT?	*Collaboration*	"All disciplines are working together. PT/OT come to work with the patient and see the progress of what the patient is doing." – Participant 1
Was EPM used consistently? Why or why not?	*Pandemic*	"Staffing issues prevented it to continue, alongside Covid playing another role." – Participant 2
Do you know what OT is overall?	*ADL's*	"Yes, OT's assist and teach activities of daily living to the patient." -Participant 3

Key Themes

Collaboration

The theme of collaboration emerged as a critical factor impacting the effectiveness of interdisciplinary interventions in the context of EPM in the MICU. The successful implementation of EPM programs in healthcare settings necessitates establishing effective collaboration among healthcare professionals from diverse disciplines. One of the participants stated, “It allows for collaboration and identifying the specific needs of each patient.” The dynamic involvement of physicians, nursing, therapists, and other healthcare experts in strategizing and implementing interventions. Collaboration among healthcare professionals can facilitate the creation of all-encompassing care strategies that effectively cater to the complex demands of patients while also being customized to their individual goals and health status.

Using an interdisciplinary approach in the context of EPM crutcial to optimize patient outcomes. During the author's time in the MICU, each discipline showed great respect for one another and communicated well on the patient’s status report after each evaluation or treatment session. Integrating knowledge and skills from various healthcare disciplines is a fundamental aspect of an interdisciplinary approach. This approach aims to develop comprehensive care plans catering to patients' needs. Implementing an interdisciplinary approach towards EPM can potentially enhance patient outcomes and improve the overall quality of care provided in the MICU by healthcare professionals.

Collaboration is a central theme in the context of EPM and interdisciplinary care in the medical ICU. The successful implementation of interventions that address the complex needs of patients requires the effective collaboration of healthcare professionals from various disciplines. Implementing an interdisciplinary methodology in the context of EPM can enable healthcare

practitioners to devise all-encompassing care strategies that optimize patient outcomes and enhance the general standard of care dispensed in the MICU.

Covid-19 Pandemic

At Valley Hospital, many healthcare providers wrote in their responses and through semi-structured interviewing that the COVID-19 pandemic had brought unprecedented challenges to the healthcare system, including implementing EPM interventions in the ICU setting. The COVID-19 pandemic emerges as a critical theme that has influenced the delivery of care and the use of an interdisciplinary approach to EPM. The pandemic forced healthcare professionals to adapt quickly to changing circumstances and implement innovative care delivery approaches to ensure patient safety. The use of an interdisciplinary approach to EPM has become even more critical during the pandemic, as it allowed for the integration of knowledge and skills from different healthcare disciplines to develop comprehensive care plans that address the unique needs of patients during the challenging time. One of the participants stated, “the pandemic was a force that no one saw coming and it was hard to juggle what we could or could not do with all the safety precautions that were in place. We were pulled in various directions and performing EPM wasn’t the top of my priority list at the time. However, things are different now and we should go back to what we were doing before the pandemic”.

A common theme from surveys and observations is that healthcare professionals' experiences with implementing EPM interventions during the COVID-19 pandemic provide valuable insights. Although there was a significant decline in early mobility, implementing EPM interventions in the ICU plays a vital role. As healthcare professionals work together to address the unique challenges posed by the pandemic and ensure patients' safety and well-being, the importance of an interdisciplinary approach has increased. Thematic analysis can provide

valuable insights into healthcare professionals' experiences in this challenging context and help identify areas where care delivery can be improved.

ADLs

Activities of Daily Living (ADLs) are an important component of occupational therapy in the acute care setting, especially while using the EPM protocol with an interdisciplinary approach. This theme emphasizes the need to address patients' need for self-care as a critical component of the recovery process, especially in the ICU. Occupational therapists are crucial in assisting patients in achieving their ADL goals and fostering independence during their hospital stay. In addition, occupational therapists can develop care plans that involve a patient's physical, emotional, and mental needs by collaborating with other healthcare specialists. Participants involved with the research project had background experiences in nursing and respiratory therapy. However, all eleven participants could explain the meaning of occupational therapy.

Participants in the research came from various backgrounds and experiences in nursing and respiratory therapy. However, all eleven participants were able to give a brief understanding of what occupational therapy is in great detail. ADLs are an essential component of occupational therapy in acute care, particularly in EPM interventions that utilize an interdisciplinary approach. By incorporating ADLs into care plans, healthcare professionals can address patients' basic self-care needs and promote functional independence, improving patient outcomes and overall quality of life. One participant stated during a semi-structured interview, "I understand what OTs do. They focus on ADLs, fine motor skills, retraining the patient to get up and use the toilet again or to be able to dress themselves. This is some of the many things OTs can do".

Ethical and Legal Considerations

While implementing the EPM protocol through an interdisciplinary approach, some considerations must be determined for each patient at Valley Hospital MICU. The patient's resting heart rate must not exceed 20%. The present discourse concerns various clinical parameters that are used to evaluate a patient's medical fitness and suitability for participation in certain interventions. These parameters include resting heart rate, dysrhythmia, anti-arrhythmic medication, ECG, cardiac enzymes, pulse oximetry, blood pressure, orthostatic hypotension, mean arterial blood pressure, vasopressors, and mechanical ventilation.

Resting heart rate is considered abnormal if it falls below 40 or exceeds 130 beats per minute. In cases where a patient develops a new dysrhythmia or begins to use a new anti-arrhythmic medication, it is imperative that they receive clearance from the attending physician and interdisciplinary team before being allowed to participate in any intervention. Similarly, if the patient presents with a new myocardial infarction or if their pulse oximetry drops by 4% or more, or falls below 88-90%, the MICU nurse must be present and authorize any intervention.

Furthermore, it is essential to closely monitor a patient's blood pressure as it can have a significant impact on their medical status. Systolic blood pressure should not be higher than 180, and clinical judgment should be exercised in cases of orthostatic hypotension, which causes a 20% reduction in blood pressure. The mean arterial blood pressure should be maintained between 65 and 110 millimeters of mercury. In cases where a patient requires vasopressors, the MICU nurse must obtain clearance for EPM implementation if the client is on multiple vasopressors, a new vasopressor, or escalating vasopressor medication.

Finally, when a patient requires mechanical ventilation with a FiO2 of .60 or less and a PEEP of 10 or higher, it is crucial to evaluate their medical suitability. This evaluation must consider factors such as patient-ventilator asynchrony, mitral valve (MV) mode change to assist control, and other clinical indicators to determine whether the patient is medically appropriate for the intervention. During the time at Valley Hospital, all HIPAA requirements were followed throughout the student's capstone experience, and patient confidentiality was maintained. Additionally, Chris Williams, the therapy manager, and the other lead therapists contributed to improving the student-employee connection. Although the author was employed, it was determined that a leave of absence from human resources was necessary to complete the capstone experience.

Results

According to the findings of this capstone project, using an interdisciplinary approach to the EPM protocol in an ICU/acute care context can potentially improve patient outcomes. There was a decline of length of stay compared from MICU and SICU in the past three months (P. Stuart, personal communication, April 1, 2023) The researcher anticipated positive effects as a result of the EPM protocol with an interdisciplinary approach. Nursing staff will benefit from proper training and benefit from utilizing the protocol in the MICU. Additionally, carryover to other nursing staff will develop competent skills withing the nursing department in the MICU. In addition, the interdisciplinary approach is projected to improve patient results, resulting in a shorter length of stay, less time spent on mechanical oxygen intake, and overall better patient health outcomes. The researcher's purpose in this project is to serve as a leader for a finding previously uncovered by Valley Hospital's MICU nursing and therapy team. Furthermore, by participating in this program, other occupational therapy students may broaden their knowledge of the occupational therapy function in the ICU/acute care setting, and it is intended that future occupational therapy students will continue the research to ensure the proposed research topic is in accordance with specific standards and research conducted by the Institutional Review Board.

This study has implications for the area of occupational therapy practice and the larger healthcare community, in addition to the predicted favorable consequences for nursing staff and patients. This study could inspire other healthcare facilities to implement similar protocols by demonstrating the usefulness of an interdisciplinary approach to EPM in the ICU/acute care setting. This could result in better patient outcomes, lower healthcare expenditures, and a broader understanding of the value of occupational therapy in critical care situations. Furthermore, by including occupational therapy students in this program, this research can potentially improve

future occupational therapists' education and training, preparing them for the challenges and opportunities of working in acute care settings. This study's findings also help to shape future research on the efficacy of interdisciplinary approaches to EPM and the function of occupational therapy in critical care settings. Overall, the ramifications of this study go beyond the Valley Hospital MICU and have the potential to impact the profession of occupational therapy and critical care medicine more broadly.

Discussion

The present study aimed to evaluate the effectiveness of the EPM protocol with an interdisciplinary approach in the MICU at Valley Hospital. The study hypothesized that the implementation of the EPM protocol would further benefit the health outcomes of MICU patients, reduce the length of hospital stay, increase the understanding and education of nursing staff about EPM, and provide a concise method for therapy staff to follow with the existing mobility protocol. The study was inspired by the evidence-based focus of Gosselink et al. (2012) on early physical activity, exercise, and rehabilitation of ICU patients. While such interventions have been associated with positive outcomes, their application in ICUs is often inadequate, as Gosselink et al. (2012) noted.

Before the COVID-19 pandemic, Valley Hospital's MICU healthcare team had a well-established protocol for the EPM program, which included input from ICU nurses, respiratory therapists, and physical and occupational therapists. However, the study acknowledges that many ICU survivors face significant challenges returning to their previous health status, as evidenced by the Post-Intensive Care Syndrome (PICS), which affects their physical, cognitive, and mental health (Schmidt et al., 2021). The occupational therapists' role was deemed essential in the EPM program, as they could contribute their expertise in functional movement, as noted by Mitchie et al. (2019). The present study's interdisciplinary approach aimed to utilize the expertise of each discipline to provide comprehensive care to MICU patients. The study aimed to bring back the improvement that had been reinstated before the COVID-19 pandemic by using the EPM technique in an interdisciplinary manner. The study findings showed that the EPM program, with an interdisciplinary approach, positively impacted patient outcomes and reduced hospital stays. The interdisciplinary approach facilitated collaboration among healthcare professionals and

enhanced the quality of care provided to MICU patients. The study recommends further research to assess the EPM program's long-term outcomes and explore ways to maximize the utilization of occupational therapists in the EPM team.

In conclusion, the present study highlights the importance of the EPM protocol with an interdisciplinary approach by enhancing patient outcomes and reducing the length of hospital stay. The study emphasizes the significance of collaboration among healthcare professionals and the crucial role of occupational therapists in the EPM team. The study provides a comprehensive understanding of the effectiveness of the EPM program and its interdisciplinary approach in the MICU setting.

Implications

The implications of this study are significant for the healthcare field, particularly in the ICU/acute care settings. By implementing an interdisciplinary approach using the EPM protocol, healthcare teams can potentially improve patient outcomes, reduce the length of stay in the hospital, and decrease healthcare costs. Additionally, this approach can provide an opportunity to educate nursing staff about the benefits of EPM and provide a clear protocol for therapy staff and other healthcare professionals to follow. The focus on collaboration among healthcare disciplines, particularly with the involvement of occupational therapists, can address the limitations of inadequate rehabilitation in ICUs and improve the long-term outcomes of patients. Furthermore, with thSmalle COVID-19 pandemic, it is crucial to recognize the potential impact on patients' physical, cognitive, and mental health, particularly with the Post-Intensive Care Syndrome. Finally, this study emphasizes the importance of implementing evidence-based interventions to mitigate the effects of PICS and improve patients' quality of life.

Limitations

There are many variables to take into consideration. Even though this study of EPM therapies utilized a collaborative technique in the ICU revealed a number of beneficial discoveries, there are also several limitations to take into consideration. The relatively small number of participants in this study is one of the most prominent disadvantages of the investigation, which could be difficult to generalize the results. Many participants stated that they would be able to participate; however, due to shift changes, some nurses could not follow up due to working night shifts. In addition, the challenging nature of the setting in the critical care unit, which is characterized by a high level of both severity and urgency, affected how practical it was to commence and continue interdisciplinary treatments. In some cases, nursing staff would maintain a caseload of several patients, requiring their attention to two patients simultaneously. Another observation is that the nursing staff would need more assistance from other team members throughout the unit to care for patients and take breaks. Furthermore, this would limit the nursing staff's participation in the EPM protocol training. The varying levels of experience and competence carried by various healthcare professionals also impacted the interprofessional approach's efficacy. In addition, the trial's primary focus was on the EPM protocol, which could have overshadowed the significance of other critical aspects of patient care, such as pain management and emotional support. The data collection method, which relied on self-reported questionnaires and interviews, may also have been prone to response bias and social desirability bias. This is because the participants themselves completed the surveys and interviews.

Last, the research structure did not allow for an analysis of long-term results or assessing the maintainability of EPM interventions in the intensive care unit context. In subsequent

research, these limitations should be addressed in subsequent research by using bigger sample sizes, including patients from varied patient populations, and implementing interventions that consider patients' changing needs and outcomes over time.

The study did not investigate these interventions' effects on healthcare spending. EPM interventions may potentially enhance patient outcomes and decrease ICU length of stay, but their cost-effectiveness remains unclear. There is a need for additional research to evaluate the impact of these interventions on healthcare costs, including the potential for cost savings through shorter hospital stays and diminished need for post-acute care services. In addition, the impact of EPM interventions on healthcare resources, such as staff time and equipment utilization, may warrant investigation. EPM interventions require additional personnel or equipment, which may affect their overall cost-effectiveness. Research should therefore investigate the resource utilization and practicability of implementing EPM interventions on a larger scale.

Despite these limitations, the findings of this study support the prospective advantages of an interprofessional approach to EPM interventions in the ICU. As a result, EPM interventions may improve patient outcomes and decrease healthcare costs by enhancing functional outcomes and reducing ICU length of stay. However, prospective studies with larger sample sizes and longer follow-up durations are required to investigate these outcomes further and evaluate the cost-effectiveness of EPM interventions in the ICU setting.

Conclusion

In conclusion, the implementation of an interdisciplinary approach using the EPM protocol in the MICU or an acute care setting had the potential to improve patient outcomes, reduce the length of stay in the hospital, and provide a better understanding of EPM to nursing staff as well as education on the topic. From meetings with other healthcare professionals, it is highlighted that the impact of re-introducing the EPM protocol provided conclusive data of similar themes. It has been demonstrated that early mobility and rehabilitation can lower the likelihood of Post-Intensive Care Syndrome and improve long-term results for patients who are being treated in the intensive care unit (ICU). The COVID-19 pandemic has brought attention to the significance of this finding. The EPM components can only be successful without the close collaboration of a wide range of medical professionals, including nurses, respiratory therapists, physical therapists, and occupational therapists. When analyzing the findings of studies conducted in the ICU, including EPM protocol, it is important to consider the small sample size and any additional limitations.

According to the findings of this research, the interdisciplinary strategy utilized in the EPM protocol was well-received by the nursing staff working in the MICU. It is predicted that positive results will result from its implementation. It was determined that the protocol was manageable to implement and execute. This protocol can educate nursing personnel as well as students who are studying occupational therapy. There is a substantial amount of weight placed upon the researcher's role as a leader in this endeavor, as well as the potential for more research and the advancement of knowledge within the realm of occupational therapy.

The EPM protocol provided an opportunity to enhance patient outcomes and minimize the length of stay in the Intensive Care Unit (ICU) or acute care setting. An interdisciplinary

approach is essential to the success of this protocol. As research and understanding of the protocol continue to evolve, it is anticipated that more transparent, straightforward, and readily recognizable outcomes will be obtained, resulting in additional benefits for patients in intensive care units and other acute care settings. Medical personnel must continue working together and seek education on significance of early mobility and rehabilitation in the ICU and acute care setting. This study may also show significant improvements in patient outcomes as well as in patients' long-term health. The early progressive mobility goal was to apply best-practice recommendations to COVID-19 patient populations while applying the profession's holistic patient-centered lens (Margetis et al., 2021).

Appendices

Appendix I: Quality Improvement Pre/Post Survey of Interdisciplinary Approach Utilizing Early Progressive Mobility (EPM) for MICU Staff/Therapy Department at Valley Hospital

Do you understand what EPM is?
What do you understand about the interdisciplinary approach utilizing EPM? What about for PT/OT?
Do you find EPM protocol easy to understand and carry out?
Was EPM used consistently? If not, why?
What are your thoughts on an interdisciplinary approach in the MICU?

Appendix II: Progressive Mobility

The A-B-Cs of early mobilization foe healing

A. Why is early mobility important?

Patients who walk frequently:

- Have shorter length of stay in the ICU
- Are removed from beathing machines in the ICU sooner
- Are less likely to fall
- Go back to their lives stronger and with fewer complications

B. What are the eight mobility levels?

A patient's mobility is determined at rounds:

Level 1: Passive Range of Motion

Level 2: Active Assisted Range of Motion

Level 3: Bed Mobility Activities, Transferring to Upright Sitting

Level 4: Weight Bearing Exercises

Level 5: Ambulate at Bedside/In Room

Level 6: 10-15 feet

Level 7: 25+ feet

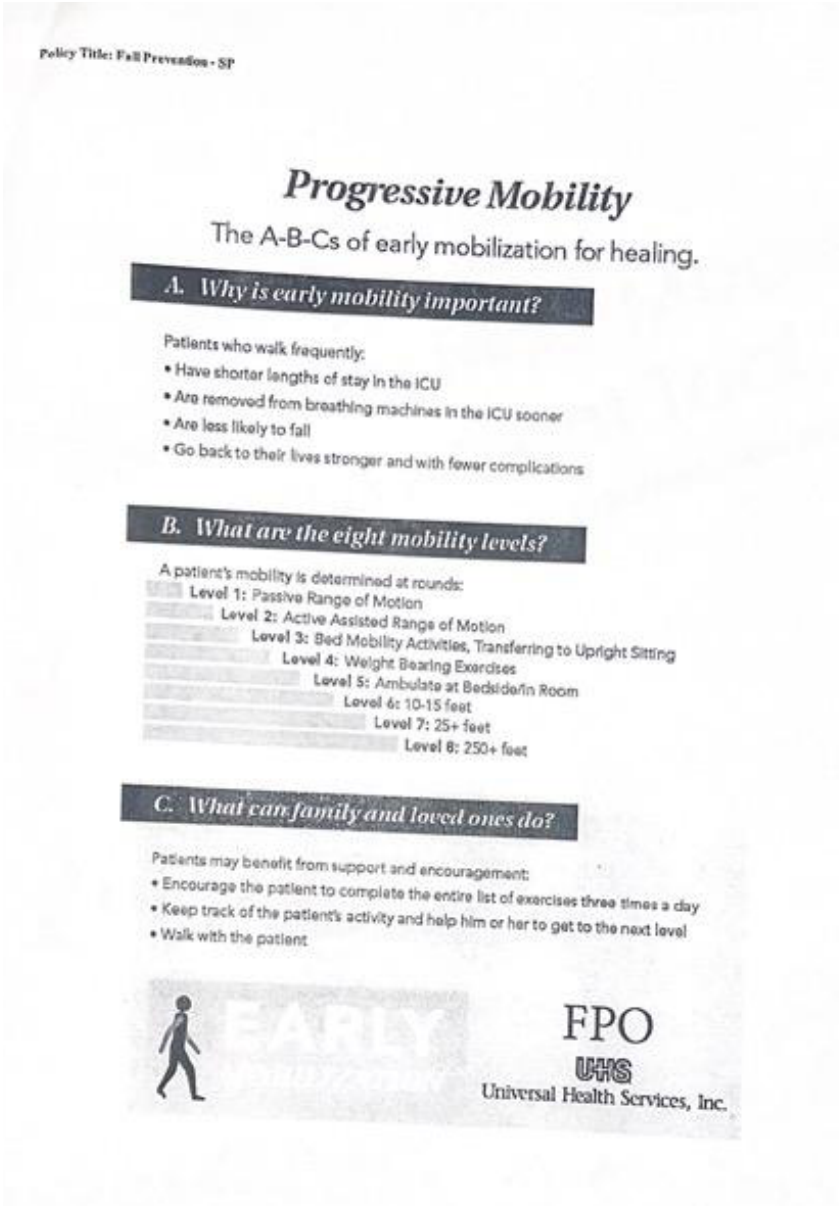
Level 8: 250+ feet

C. What can family and loved ones do?

Patients may benefit from support and encouragement:

- Encourage the patient to complete the entire list of exercises three times a day
- Keep track of the patient's activity and help him or her get to the next level
- Walk with the patient

Appendix IIa:



Policy Title: Fall Prevention - SP

Progressive Mobility

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Table 4: Memorandum of Understanding

Dates	Weekly Activity	Description	Related Learning Objectives	Number of Hours
Week 1 1/23	Re-education on the role of OT in the ICU/Acute Setting	Student will form proper introductions and assimilate within ICU/Acute setting culture, specifically in MICU Student will shadow OT within first 3 days.	ICU/Acute Setting Introduction to MICU staff	4 hours on site; 4 hours off-site for write-up, organization, and data collection findings
Week 2 1/23	Relationship established with MICU nurses	MICU nurses will be provided pre-survey	Understand nursing's knowledge of Early Progressive Mobility and interdisciplinary approach Inquire nurses and therapists (PT/OT/RT) interested in being part of Early Progressive Mobility	4 hours on site; 4 hours off-site for write-up, organization, and data collection findings
Week 3 1/23	Understand the role of respiratory therapy in the ICU Interdisciplinary rounding	Record data through qualitative methods on perspective of interdisciplinary approaches	Respiratory Staff analysis Interdisciplinary rounding has been established by	4 hours on site; 4 hours off-site for write-up, organization, and data

		through respiratory therapy lens	the end of week 3	collection findings
Week 4 2/23	Student will collect data from past 3 weeks to record on Excel sheet findings of interdisciplinary approach with Early Progressive Mobility Interdisciplinary rounding	PowerPoint presentation of findings and areas of improvement	Inservice completed by student to therapy department and MICU staff	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 5 2/23	Further collection and data entry through ICU nurses and therapy department Interdisciplinary rounding	Hands on competent with additional research findings of ICU staff and therapy team	Student will observe leadership meetings regarding Early Progressive Mobility from physician perspective** TBD when	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 6 2/23	1-on1 Education with MICU nurses and leadership Education of OT lens of Early Progressive Mobility	Student will be available for RNs who are agreeable to Early Progressive Mobility to further educate on proper body positioning and proper use of body mechanics	Occupational Therapy Leadership	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 7 2/23	OT/PT check in with student and interdisciplinary team	Student has conducted best approaches of Early Progressive Mobility. However, now student	Interdisciplinar y Team Approach Easy-to-understand	4 hours on site; 4 hours off-site for write-up, organizatio n, and data

		delineates what can be further addressed or made simpler for therapy dept and MICU staff	language of Early Progressive Mobility in MICU	collection findings
Week 8 3/23	Student will assess/re-evaluate and make appropriate changes to interdisciplinary approach of Early Progressive Mobility	Student needs to make appropriate changes in timely manner in order to fulfill requirements of capstone experience	--	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 9 3/23	Student will assess/re-evaluate and make appropriate changes to interdisciplinary approach of Early Progressive Mobility	Student needs to make appropriate changes in timely manner in order to fulfill requirements of capstone experience	Student begins layout of poster board presentation and makes edit on capstone paper	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 10 3/23	Student will assess/re-evaluate and make appropriate changes to interdisciplinary approach of Early Progressive Mobility	Student needs to make appropriate changes in timely manner in order to fulfill requirements of capstone experience	Student begins layout of poster board presentation and makes edit on capstone paper	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 11 3/23	Provide post-survey to therapists and MICU nurses Posterboard/final presentation prep	During specific nursing breaks-student will conduct post-survey Student will email findings to capstone members	Student begins layout of poster board presentation and makes edit on capstone paper	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 12 4/23	Inservice presentation to be completed to	Report findings of interdisciplinary	Conclusion of on site	4 hours on site; 4 hours off-

	therapy and MICU staff	protocol and Early Progressive Mobility		site for write-up, organizatio n, and data collection findings
Week 13 4/23	Final write-up and editing of capstone experience	TBD: If necessary, further questions conducted on site Capstone team will provide feedback/edits	Wrapping-up capstone experience	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings
Week 14 4/23	FINAL!	Student will give final paper and poster board presentation to	FINAL EDITS OF CAPSTONE EXPERIENCE Proofread with other members of capstone team	4 hours on site; 4 hours off-site for write-up, organizatio n, and data collection findings

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Curriculum Vitae

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OCCUPATIONAL THERAPY DEGREE	Occupational Therapy Doctorate (OTD) Program Length – 3 years Program starting and ending time – June 2020 to May 2023 Degree Conferred Date – (May 12, 2023) University of Nevada, Las Vegas. School of Integrated Sciences, Las Vegas, NV, USA.

OCCUPATIONAL THERAPY EXPERIENCE

May 2021 – August 2021	Fieldwork IIA – Reno, NV Renown Regional Medical Center Ruchi Joshi, OTR/L & Amanda Crowe, OTR/L Phone – 775-527-5269, 775-233-3361 Email – Ruchi.Joshi@renown.org & Amanda.Crowe@renown.org Duties – Focus on medically stabilizing, mobilizing, treating, and discharging patients with occupational therapy lens in the acute setting: oncology unit, trauma ICU, neuro ICU, orthopedics, pediatric ICU.
May 2022 – August 2022	Fieldwork IIB – Las Vegas, NV Valley Health Specialty Hospital Mason Stanley, OTR/L Phone – 575-654-9073 Email – masonkstanley1@gmail.com Duties – Focus on maximizing patients functional independence and participation in all occupations in the inpatient acute rehab setting.
January 2023 – April 2023	Capstone Experience, Las Vegas, NV Valley Hospital Medical Intensive Care Unit Shelley Bolor, OTR/L & Jayson McClaren DPT Phone – 949-413-7366 Email – shelleybolor@gmail.com and jaysonmcclaren@gmail.com Duties – Reimplementing Early Progressive Mobility protocol with interdisciplinary approach and education

PUBLICATIONS/PRESENTATION/RESEARCH

April 2023	"Utilizing an Interdisciplinary Approach: Education of Early Progressive Mobility Protocol in the ICU/Acute Setting"– University of Nevada, Las Vegas

PROFESSIONAL MEMBERSHIP

2020 – present	American Occupational Therapy Association (AOTA)
2020 – present	Nevada Occupational Therapy Association (NOTA)