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**Occupational Therapy's Role in Medication Management within the Corewell Health System**

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OT 7202: Doctoral Capstone Experience

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21 April, 2023

### **Abstract**

**Gap:** Corewell Health lacked a competency program to assess their occupational therapist ability to provide medication management services. The occupational therapist required an educational resource to support the use of the Pill-Box Test. Additional resources were needed to identify evidence-based interventions and documentation tips to aid with reimbursement of services. The patient education library required a resource to highlight strategies to support clients in reaching their medication management goals.

**Objective:** To standardize practice of medication management services including evaluation, intervention, and documentation of outcomes for occupational therapy patients at Corewell health.

**Outcomes:** The health system was equipped with a medication management focused annual competency assessment of their OTs ability to provide related services. The occupational therapists have an educational resource guiding administration and scoring of the Pill-Box Test. A resource is available providing examples of remediation and compensatory strategies to address common deficit areas impacting performance on the Pill-Box Test. A documentation guide is available sharing medication management goal examples, common procedural codes (CPT), and language from the occupational therapy practice framework to support reimbursement. A new patient education is available for all members of the care team to share with the client to support their medication management goals.

## **Introduction to Capstone Project**

### **About Corewell Health System**

This capstone experience was completed at Corewell Health West formally known as Spectrum Health in Grand Rapids, Michigan. Corewell Health West's mission is to improve health, instill humanity, and inspire hope. The vision of the organization is a future where health is simple, affordable, equitable, and exceptional. The system provides occupational therapy services at varying levels of care including in-patient rehabilitation consisting of acute and subacute levels, long term care at the acute and skilled nursing facility levels, outpatient rehabilitation, and home care. This capstone specifically targets in-patient rehabilitation at the acute and subacute care levels to contribute to reaching the mission and vision statements.

### **Acute Concentration Areas**

The Acute concentration areas demonstrated throughout this capstone experience include leadership and program development. The role of leadership is evident in the collaboration with stakeholders and health care professionals who represent the rehabilitation departments within Corewell health. Further collaboration occurred with the professionals who represent continuing education and create educational resources for the rehabilitation departments to ensure system wide competency and best practice. The role of program development was demonstrated by standardizing occupational therapy practice regarding the evaluation, intervention, and outcomes of medication management skills within the Corewell health system. This was accomplished by constructing various educational resources designed to introduce occupational therapist to their role in addressing medication management skills.

**Population**

The population served throughout this experience included all patients who received occupational therapy within the various settings of Corewell Health. More specifically the program directly targeted individuals who fit the following scenarios. The client identified the goal of increasing their medication management skills or individuals who demonstrated decreased cognitive function from their baseline and independently manage their medications. The population also included the occupational therapist working in any of the rehabilitation facilities throughout Corewell Health. Each therapist will be required to complete the program in order to demonstrate competency in providing medication management services and were provided with resources to support best practice.

**Site Mentors**

Throughout the duration of this doctoral capstone experience support was provided by three different site mentors with occupational therapy backgrounds serving in various roles within the Corewell Health System. The main site mentor was Dawn Newell (OTR/L, MBA, CNP) currently serving as the director of inpatient rehabilitation for Corewell Health West. Dawn assisted with establishing a collaborative relationship with each of the rehabilitation managers and supervisors in order to gain perspective on each of their sites. Dawn's expertise of the processes within the system helped to guide feasibility of the project within the 14-week timeline and assisted with decision making throughout the experience. The second site mentor was Rachel Koldenhoven (OTR/L, CHFP) currently serving as the rehabilitation manager of Butterworth and Blodgett hospitals. Rachel provided expertise on the expectations for the acute care and inpatient rehabilitation therapist regarding medication management screening and

intervention. Rachel aided in the creation the medication management intervention guide along with the pill-box test administration and scoring guide. The third capstone mentor for this experience was Kelly Blanchard (OTR/L) outpatient rehabilitation educator. The outpatient rehabilitation educator's role is to develop and update clinical education resources and track completion of competency trainings of the clinical staff members. Kelly collaborated on the patient education resource and assisted with the completion of the patient education counsel review process. Completion of the patient education counsel review process is required for the resource to be available in the patient education library system wide. Kelly also provided guidance to support the construction of the medication management knowledge track.

### **Literature Review of Capstone**

#### **Define Medication Management**

According to the world health organization (WHO) medication management is defined as "the extent to which a person's behaviors—taking medication... corresponds with the agreed recommendation from a health care provider" (World Health Organization, 2003, p. 2).

More specifically medication management includes ingesting the correct dose, the correct frequency, the correct spacing, and avoiding inappropriate discontinuation of medications (Howell et al., 2017). Medication adherence is the term used to objectively measure a person's ability to take their prescribed medications. Medication adherence is described using a percentage which compares the number of pills consumed by the patient over a period of time to the number of pills that were prescribed (Schwartz & Smith, 2017). Total adherence to the prescribed medication plan would be 100%, while adherence over 100% could indicate overdose, and under 100% would indicate under dose. Medication adherence has been shown

to decrease as the number of medications for the patient increase, and the number of doses per day increase (Howell et al., 2017). In addition, the complexity of the medication instructions and the number of physicians prescribing the medication increases the likelihood of the patient forgetting a dose (Schwartz & Smith, 2017). A lack of medication management skills has been shown to increase health care utilization, which includes increased emergency room visits, and readmissions to the hospital.

### **The Role of OT**

Medication management is an interprofessional duty that includes all health care professionals on the patients' care team. Medication adherence aligns with the outcomes defined in the affordable care act, specifically with the triple aim of population health, cost of care, and patient experience (Schwartz & Smith, 2017). Poor adherence to medication plans limits treatment effects leading to a decline in health and function. In addition, individuals with poor adherence are more likely to be sick and stay sick which increases the rate of mortality. Occupational therapists are equipped with the skills to address deficits impacting an individual's ability to adhere to a medication plan through teaching adaptive strategies, modifying activities to manage the demands of their condition, and help clients to develop routines and behavior modifications to support physical, psychosocial health, and overall well-being (Blum et al., 2019). Medication management within occupational therapists scope of practice refers to the daily systems and processes of taking prescribed medications (American Occupational Therapy Association, 2017). In order for a client to demonstrate 100% medication adherence they must be able to negotiate with prescribing physician, interact with the pharmacist to have the prescription filled, interpret the information described on the bottle, take the medication on a

daily basis, and refill the medication in a timely manner (Schwartz & Smith, 2017). Occupational dysfunction in the area of medication management is due to a complex interaction between the client, their environment, and the specific demands of the tasks. To address these complex interactions, occupational therapists develop individualized client centered plans to support the client in overcoming barriers impacting their performance in the instrumental daily activity of medication management (Schwartz & Smith, 2017). A client's health literacy impacts their ability to adhere to medication prescriptions. To address this occupational therapist, implement interventions to increase the client's capacity to decode medical jargon, making materials easier to read and understand, and by supporting other healthcare professionals in creating patient education resources (Schwartz & Smith, 2017).

OT's role in medication management will also look different depending on the practice setting in which the OT is practicing. In home health practice OTs will complete a home evaluation to understand the demands of the environment and make adaptations to clients routine and the task to meet the demands of the condition (Blum et al., 2019). In an acute care setting the OT is tasked with creating medication routines before the client is discharged home (Guariglia & Smallfield, 2015). The process begins during the initial evaluation by gathering information about the client's preadmission medication routine. From here, the OT will complete an appropriate assessment to observe the clients executive functioning skills required to adhere to the medication plan (Guariglia & Smallfield, 2015). OTs should also screen individuals for a cognitive impairment as it has been shown to be associated with poor medication management skills (Howell et al., 2017). Common elements of standardized assessment tools occupational therapist use to evaluate the client's medication management



skills include the ability to read the bottle, open the bottle, and correctly allocate pills (Howell et al., 2017). In all practice settings OT should routinely screen client's ability to complete the common components listed above while also keeping in mind medication errors also occur in clients who do not present with a cognitive impairment (Howell et al., 2017). OTs should use their professional reasoning, inter-professional involvement, professional competence and confidence to assist clients in meeting medication adherence goals (Blum et al., 2019).

### **Assessment Tools**

There is a lack of consensus within occupational therapy on which assessment tool to use when assessing a client's ability to manage their medications, despite there being a number of different standardized and non-standardized options available. Three standardized assessments that include sections on medication management include Performance Assessment of Self-Care Skills (PASS), the Cognitive Performance Test (CPT), and the Executive Functioning Performance Test (EFPT) (Guariglia & Smallfield, 2015). The PASS medication section focuses on the client's ability to identify dosage directions directly from a prescription label on the bottle (Guariglia & Smallfield, 2015). The PASS collects three different scores based on the client's independence level in completing the task, the ability to do so safely, and the overall outcome of the task which is useful to determine if scores were low due to deficits in independence or issues with safety (Guariglia & Smallfield, 2015). The CPT medication section requires the client to set up one weeks' worth of medications based on the prescription label on four different medication bottles. This section is brief and instructs the client to read the bottles and place the prescribed dosage into a pill box correctly (Guariglia & Smallfield, 2015). The EFPT medication section assess the client's current routine for managing medications,

where the medications are stored, and the amount of time it takes to follow their current routine (Guariglia & Smallfield, 2015). All three of these assessment sections are brief and can be incorporated into an evaluation or treatment session with a client to gain perspective on their medication management and adherence.

In addition to the assessments listed above that contain sections on medication management there are two assessments whose sole focus is evaluating client's medication management skills, which are the Pill-Box Test and the ManageMed Screen (MMS). The Pill-Box test requires a client to demonstrate purposive action and self-regulation, planning and attention, volition and inhibition, and effective performance and self-monitoring (Logue et al., 2015). The test begins by directing the client to read the prescription label on the bottle aloud and organize a weeks' worth of medication in the pillbox provided within the time limit of five minutes (Logue et al., 2015). The Pill-Box test demonstrates good criterion validity and successfully differentiates with a mixed neurological group of patients including stroke, vascular dementia, Alzheimer's disease, and a healthy community control group (Logue et al., 2015). The assessment also demonstrates good convergent validity through similar results in the executive functioning section of other assessments available including the Trail Making Test, Clock Drawing Test, and the Designed Fluency Test (Logue et al., 2015).

The MMS is a task-based tool designed to assess the individual's ability to complete a moderately difficult medication routine which includes three different medications, and three different schedules or doses (Hartl et al., 2021). The assessment includes four metacognitive questions that offer information on the client's level of self-awareness and are scored on a scale of one to ten. The client will also be asked twenty-nine questions analyzing various

executive functioning skills such as reading, medication knowledge base, problem solving, short term and prospective memory, and calculations which are all worth one point each. Finally, the client will set up a weekly medication organizer from the three different medications and schedules to earn a score of ten points. The MMS takes anywhere from fifteen to forty-five minutes and can be used with adults eighteen plus with no greater than mild dementia (Hartl et al., 2021). The MMS has been shown to be an effective tool to use in the acute care setting prior to discharging the client home as well as in other settings presenting with high face validity, good construct validity, good concurrent validity, and ecological validity (Hartl et al., 2021).

The final standardized resource which can be used by occupational therapist to assist their client's in managing medications is the Medication Plan (MP). The MP is a printable document for the patient that specifies the complete medication list, instructions, and indications to facilitate strong medication adherence (Botermann et al., 2016). The MP is also useful for health care professionals to inform them on the complete list of medications including prescription and non-prescription drugs as well as specifying dosages (Botermann et al., 2016). It has been shown that medication errors can be avoided and medication adherence increased if patients with multiple medications are urged to possess a complete list of all their medications with them during medical appointments (Botermann et al., 2016). Various international patient safety initiatives focus on the need for a medication list or schedule as a central patient safety indicator with a standardized format, wording of administration information, and is precise and understandable (Botermann et al., 2016). The MP can also be utilized to support verbal instructions at discharge equipping patients with the resources to be

informed and making it easier to take an active part in the decision-making process (Botermann et al., 2016).

### **Medication Management Intervention Strategies**

According to the American Journal of Occupational Therapy (AJOT) interventions for medication adherence are often behavioral in nature (Schwartz & Smith, 2017). Evidence-based interventions for medication management include the utilization of assistive technology, education in self-monitoring of symptomology, incorporation of a daily schedule, behavior change techniques, and developing good provider and patient interactions to foster a safe environment (Schwartz & Smith, 2017). Occupational therapy skills coincide with evidence-based adherence interventions but also can address many of the factors that affect nonadherence (Schwartz & Smith, 2017).

Common factors impacting an individual's ability to independently manage their medications include cognition/memory deficits, fine motor deficits, visual motor/perceptual deficits, low health literacy, and access to healthcare/medication (Schwartz et al., 2017). While common themes exist in medication nonadherence, there are infinite combinations of health conditions, medications, and individual experiences that influence nonadherence which means that each person's nonadherence is caused by a unique set of barriers (Schwartz & Smith, 2017). Occupational therapists are equipped with the skills to assist their clients overcome the barriers impacting medication adherence through developing cues, training on the use of adaptive equipment, and altering the environment in which they engage in their instrumental activities of daily living (Schwartz et al., 2017).

### **Documentation of Medication Management Services**

In order to document and receive reimbursement for services targeting medication management skills the occupational therapist must write a goal related to the task (K. Karr, personal communication, February 2, 2023). Once a medication management goal has been written, the OT must describe the skilled interventions being provided to address the goal, how the skills are being assessed during the intervention, and share any modifications to the environment to meet the client's performance skills (K. Karr, personal communication, February 2, 2023). Another important aspect of documentation is demonstrating how the services provided are distinct to the occupational therapy profession and scope of practice. After a goal has been written for medication management tasks the occupational therapist will bill for services based on the intervention being provided during treatment (K. Karr, personal communication, February 2, 2023). For example, the current procedural terminology (CPT) codes 97129/97130 are used for individuals receiving cognitive treatment to address their ability to manage their medications (K. Karr, personal communication, February 2, 2023). Any further questions regarding documentation and reimbursement for medication management related services can be directed to the regulatory affairs department of the American Occupational Therapy Association.

### **The Gap**

A gap in the research surrounds the lack of consensus about which assessment tool OTs should use when addressing medication management skills (Howell et al., 2017). This gap can be attributed to the lack of coverage in continuing education resources on medication management which leads to a lack of confidence limiting OTs involvement in medication

management research, practice, and education (Schwartz & Smith, 2017). There is a need to educate clinicians on appropriate interventions to address the deficit areas identified following the administration of the Pill-Box Test. The development of a competency program that utilizes concrete processes such as alignment, validity, review of assessments on a regular basis, and professionals subject matter expertise would address this gap in the literature (Cunningham et al., 2016). An effective competency program provides opportunities for students and professionals to be assessed on the skills they possess while building on the skills which may need some more development (Cunningham et al., 2016). The final gap identified by this capstone is regarding the documentation and reimbursement of skills related to medication management intervention. The gap in education for therapist regarding documentation impacts the lack of treatment sessions designed to address medication management deficits due to fear of decreased productivity on the therapist part. In order to increase medication management treatment sessions therapist must become competent in documentation of services to ensure reimbursement and maintain their productivity standards (K. Karr, personal communication, February 2, 2023).

### **Needs Assessment**

Following a literature review and needs assessment with the site, it was determined Corewell Health's rehabilitation department would benefit from an educational resource to address services provided for medication management skills. Stakeholders at the site shared one of the leading factors contributing to hospital readmissions within their system was medication errors. The occupational therapy special interest group (OT SIG) began to address this issue by introducing the Pill-Box Test to their acute rehabilitation teams in order to

evaluate a client's ability to manage their medications independently following discharge.

Shortly after the OT SIG introduced the new assessment tool the site would undergo a rebranding ultimately impacting the organizational structure and internal processes. The OT SIG was disbanded and progress towards addressing medication errors from a rehabilitation perspective stopped.

One of the site mentors shared a concern that her therapists were not confident administering or scoring the newly introduced Pill-Box Test. The therapist also required direction of next steps following administration of the Pill-Box Test including evidence-based interventions to implement when targeting medication management skills. The OTs were not confident in how to document for those services, or where to find resources to support best practice. This capstone experience addressed this gap by providing proper administration techniques and scoring guidelines for the Pill-Box Test. To support therapist with next steps following the use of the Pill-Box test this capstone project identified evidence-based interventions to address common deficit areas including fine motor, visual perceptual, visual motor, cognitive behavioral, and health literacy deficits. To address documentation and reimbursement of medication management services the capstone provided examples of medication management goals, language from the occupational therapy practice framework to support reimbursement, and applicable CPT codes to bill following treatment sessions. In order to assess each occupational therapist's ability to provide medication management services the site determined an annual competency check in the form of a knowledge track MedBridge would best meet their needs. The final gap identified by the site mentors was the lack of resources related to medication management strategies to support patients following discharge

from the hospital. The capstone project addressed this gap by creating a new patient education resource highlighting the importance of medication adherence, compensatory strategies for each of the common deficit areas, and advocacy for the inclusion of the patient as part of the health care team.

### **Objectives Achieved during the Capstone**

The objectives listed in table 1 were targeted during the 14-week capstone experience. The capstone student, the main site mentor, and the supporting site mentors collaborated on each objective to effectively address medication management services provided by the occupational therapy staff. Each were assigned a timeline and required various learning activities in order to meet the requirement by the assigned timeline. Evidence of the completed objective was determined by finalizing of each of the various educational resources.

**Table 1**

<b>Objective 1</b>	Standardize implementation of medication management services including evaluation, intervention, and outcomes for occupational therapy patients at Corewell health.
<b>Objective 2</b>	Create a resource to educate OTs on Pill-Box Test administration and scoring guide.
<b>Objective 3</b>	Create a resource that identifies evidence-based interventions for common deficits in medication management and documentation guide to support reimbursement.



<b>Objective 4</b>	Create a patient education resource covering barriers to medication adherence, information for self-advocacy, and compensatory strategies to support medication adherence.
<b>Objective 5</b>	Create a knowledge track to serve as an annual competency of the occupational therapist ability to provide medication management services.

### **Objective 1**

Objective 1 was the overarching goal of capstone experience and was written to encompass each of the objectives that follow. It stated "standardize implementation of medication management services including evaluation, intervention, and outcomes for occupational therapy patients at Corewell health." The timeline for the completion of this objective was the 14<sup>th</sup> week of the capstone experience. The first step in addressing this objective was to gain perspective on the current medication management practices of each of the rehabilitation departments throughout the system. Time was dedicated to each of the sites observing occupational therapy sessions, attending daily team meetings, and initiating discussion with each of the site supervisors. During this time, it became evident each site was at a different stage of implementation as some sites were using the assessment regularly and other sites did not have a Pill-Box Test kit available to its therapists on site. The next learning activity was to build Pill-Box Test kits for each site to begin to standardize the evaluation of medication management skills. The completion of objectives 2-5 build upon each other to reach

the goal of objective 1, creating a standardized program for addressing medication management skills from an occupational therapy perspective.

## **Objective 2**

The goal of objective 2 was to create an educational resource for OTs covering the Pill-Box Test including the steps for proper administration, tips to support efficient screening, and a guide for how to score the assessment. The timeline to accomplish this objective was the 4<sup>th</sup> week of the experience. The first learning activity of this objective was to review "The pillbox test: An ecological measure of executive functioning and estimate of medication management abilities" to pull applicable information for the new resource. Following the identification of applicable material, a collaboration meeting occurred with Tom Herin (rehab supervisor of Butterworth hospital) to review the initial resource created by the OT SIG. Tom shared his therapist were not utilizing the resource due to its length and the time it required to review. With Tom's support, a revised version of the document was created to include the information from the scholarly article as well as information from the original Pill-Box Test resource. The revised document was a concise one-page reference highlighting administration steps, and defined each type of error the therapist would count while scoring the assessment. The new resource was sent to Rachel Koldenhoven (rehab manager Blodgett/Butterworth hospitals) for review. Rachel provided recommendations to assist with ease of use which were applied prior to a final review by a veteran occupational therapist on Blodgett's acute care team. Following the approval of the veteran OT the final version of the Pill-Box Test Administration & Scoring Guide was complete meeting the requirements for objective 2 within the assigned timeline.

**Objective 3**

The target of objective 3 was to identify evidence-based interventions including remediation and compensatory strategies for medication management skills. Objective 3 was also designed to provide documentation tips and applicable CPT codes to therapist to support reimbursement of medication management evaluation and treatment sessions. The first learning activity was to review the resource "Further Validation of the Pillbox Test in a Mixed Clinical Sample" to identify the common deficit areas impacting occupational performance on the Pill-Box Test. The common areas identified throughout the research included fine motor deficits, visual motor/perceptual deficits, cognition/memory deficits, health literacy deficits, and language barriers (Logue, et al., 2015). After identifying the common deficits, the next learning activity was to research evidence-based interventions to address medication management dysfunction. A review of the resource "Integration of medication management into occupational therapy practice" provided insight on this topic. The source emphasized occupational therapy's role in remediation while recognizing that occupational dysfunction with instrumental activities of daily living (IADL) are caused by a complex interaction of factors between the person, environment, and task (Schwartz & Smith, 2017). Further literature from "Intervention to Improve Medication Management: Qualitative Outcomes from a Phase I Randomized Control Study" provided compensatory strategies and assistive devices to support clients with chronic and degenerative health conditions. Some examples of compensatory strategies to support clients with cognitive and memory deficits was setting medication alarms and utilization of a calendar to track each dose taken throughout the day (Schwartz et al., 2017). Another example discussed in the article are compensatory strategies for clients with

fine motor deficits such as introducing a new “easy open pillbox” or changing the location where the medications are stored to be more accessible (Schwartz et al., 2017).

Following the identification of remediation and compensatory strategies for each of the common deficit areas, the next task of objective 3 was to provide medication management specific documentation resources to the occupational therapist. After an unsuccessful attempt to locate the appropriate resources on the American Occupational Therapy Association (AOTA) webpage a decision was made to reach out to the regulatory affairs department of the AOTA. An email was crafted describing the capstone project focus, and requesting guidance on the proper method of documentation of medication management services. The Coding and Payment Policy Manager of AOTA named Kim Karr who also had an occupational therapy background, replied to the request. She provided medication management goal examples, applicable CPT codes, and additional documentation resources to guide the completion of objective 3.

Equipped with the information provided by the Coding and Payment Policy Manager of AOTA, work began to create an educational resource. The initial version of the document was sent to the rehab manager Rachel for review. She suggested to shorten the document and incorporating text boxes to adjust the layout of the information. This process continued three additional times before the finalized version of the medication management intervention and documentation guide (available in the appendix) was completed meeting the requirements of objective 3 within its established timeline.

**Objective 4**

The goal of objective 4, was to address the gap in patient education resources available within the system covering the topic of medication management. The first learning activity was to determine who the education would target and what information the resource would provide. To begin this discussion, a meeting occurred with Kelly Blanchard and the rest of the clinical rehab practice team. Following a collaborative effort, it was decided the resource would target clients and caregivers of individuals who did not pass the Pill-Box Test during their initial evaluation. The team decided the resource should provide background on the importance of medication adherence, strategies and services to support adherence, and reminders to advocate for the best interest of the patient.

The next learning activity was to create the initial version of the resource incorporating the requirements of the system patient education counsel. Once the initial draft was created, a request was submitted to system patient education counsel for review. This request led to a meeting which included the capstone student, the site mentor, and the members of the counsel where recommendations were provided to improve upon the initial draft. Incorporating the recommendations provided during the meeting a second version of the resource was created and sent for another review by the education counsel. This version of the resource met all of the requirements of the education counsel including: use of a 6<sup>th</sup> grade or lower reading level, no repetitive information included on any other patient education resources, and use of approved visuals or images (available in the appendix). While this objective was completed prior to the end of the capstone experience, the initial timeline was not met due to the absence of patient education counsel members.

**Objective 5**

This objective was designed to target the need for a competency program regarding occupational therapist's ability to provide medication management related services. The first learning activity for this objective was to create an outline for the online learning module called a knowledge track incorporating aspects of each of the previously listed objectives. This was accomplished by reviewing existing learning modules and by collaboration with the clinical rehab practice team. The knowledge track would include information on proper administration and scoring instructions to support the use of the Pill-Box Test. It would highlight evidence-based interventions to address common deficit areas impacting the performance of medication management skills including fine motor, visual motor, visual perceptual, cognitive, and health literacy deficits. The knowledge track would cover the documentation tips and applicable CPT codes for therapist to utilize in order to ensure reimbursement of services. The newly approved patient education resource would be introduced on the knowledge track highlighting the target population and the information covered within the resource. Like all other knowledge tracks a short quiz was included to serve as a competency check and is required to be completed by each therapist on an annual basis. The final portion of the outline was titled "additional resources" where each of the previously created educational documents would be attached which can be printed off as needed by each therapist. The initial outline was sent to the clinical rehab practice team and the first draft of the knowledge track was created using a software called articulate. The next learning activity was to bring the first draft to the weekly touch base meeting with each of the site mentors for their review. Each site mentor provided their recommendations utilizing their expertise which were brought back to the clinical rehab

practice team to continue work on the knowledge track. This process continued for two additional weeks before the finalized version of the Pill-Box Test knowledge track was complete meeting the requirements for objective 5 within the assigned timeline.

### **Implications of Capstone**

Following the completion of the capstone objectives, Corewell Health has been equipped with multiple educational resources to support occupational therapist in competency development providing medication management services. These resources were designed to address each aspect of occupational therapy practice from the initial evaluation, to individualized intervention plans, to documentation of treatment sessions, and patient education and advocacy efforts. The capstone project continued the mission of the previous OT SIG to provide a more comprehensive and standardized program to assist clients demonstrating occupational dysfunction in medication management skills. The creation of each resource helped to facilitate a collaborative interprofessional discussion of their roles in supporting successful medication management and provided an opportunity to learn from one another. Corewell Health system's goal moving forward is to adopt a more preventative approach to limit the number of hospital readmissions due to medication errors. The completion of a medication management capstone experience serves to continue the development of occupational therapists' role and best practices for the instrumental activity of daily living. This capstone project will be sustainable long after the completion of the initial experience due to the efforts of the clinical rehab practice team. Site mentor Kelly Blanchard and the rest of her team will now lead the program and continue updating each of the resources on an annual basis to provide the latest evidence-based strategies to the occupational therapist within the

system. The knowledge track is now a required learning module each therapist will complete on an annual basis allowing the project to remain sustainable for years to come.

### **Conclusion**

In summary, four educational resources have been provided to Corewell Health system's occupational therapist working in all practice settings. Those resources include the Pill-Box Test Administration and Scoring guide (appendix A), The Medication Management Intervention and Documentation Guide (appendix B), The Medicine Management Support Guide also known as the patient education document (appendix C), and the Pill-Box Test Knowledge Track which can be accessed through the link provided in (appendix D). The capstone experience provided opportunities for the development of advanced clinical practice skills including administration and leadership roles occupational therapist can serve in as well as program development and the creation of educational resources. Many lessons were learned along the way such as the importance of being adaptable in order to fit the specific needs of each capstone objective and learning activity. Another lesson was to be flexible in the timeline required to complete each objective. For example, the creation of the patient education resource required completion of specific processes and procedures in order to meet quality requirements to be used throughout the entire system. A large system such as Corewell Health has such procedures in place to ensure quality content which can take time to complete properly.

With this in mind it is recommended to utilize a timeline when working with this site in order to track progress on each of the capstone objectives but allow those timelines to reflect the length of time required to throughout complete each procedure within the system. Another



recommendation with this site is to spend time in person at each location to gain perspective on the population served, the requirements of the therapist, and the leadership styles of the rehabilitation supervisors. This perspective will support the experience and allow for the project to address the true needs of the system in a way that is efficient and sustainable. The final recommendation for working with Corewell Health is to attend as many meetings as time will allow. There are endless areas to learn and grow as a clinician through the discussions occurring during the team meetings. For example, during the experience I attended monthly rehabilitation manager meetings where each supervisor would share their gate chart report and year to date goals for their department. While this information did not specifically pertain to the objectives of the capstone experience it did provide opportunities to ask questions to support the development of my leadership skills throughout the duration of my career. Attending these meetings also served as an opportunity to develop working relationships with individuals across the system which can assist with project follow through at each site. This is crucial to the effectiveness of the capstone project because without follow through by site supervisors and their teams even the best resources and education programs can become obsolete. Overall, the doctoral capstone experience with Corewell Health was instrumental in the development of advanced clinical practice skills which will long serve any occupational therapy student throughout their career.

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## Appendix A

### Pill-Box Test Administration and Scoring Guide

- ❖ Complete this assessment with any client presenting at a cognitive level lower than their baseline and who also manage their own medications.

#### Administration

- Place the five medication bottles in front of the client along with the pillbox. Tip: place a towel under the testing area to reduce the risk of losing “pills” in the event of a spill.
- Ask the client to read each of the medication labels on the bottles aloud to verify adequate reading ability.
- Set a timer for 5 minutes and start the timer following the next step.
- Instruct the client to organize the medication into the pillbox as they normally would for one week. No further direction or feedback is provided.
- Observe the task to identify any executive functioning deficits or other cognitive and motor impairments impacting performance on the assessment.

#### Scoring Rubric

- This assessment is Pass or Fail.
- Failing score is 3 or more total errors and/or failure to complete the task within 5 minutes.

Error Type	Explanation
Omission	Less pills are placed in pillbox than prescribed on medication label
Commission	More pills are places in pillbox than prescribed on medication label
Misplaced movement	Pills are placed in incorrect compartments of pillbox.
Total Errors	Total omission + total commission + total misplaced movement

## Appendix B

### Medication Management Intervention and Documentation Guide

#### Fine Motor Deficits

##### Remediation

- Grip and pinch strength
- Bilateral coordination skills
- Crossing midline
- Utilization of pincer grasp
- In-hand manipulation
- Opposition and finger isolation

Remediation Goal Example:  
Client will demonstrate an increase in grip strength to assist with opening pill bottles as evidenced by increased score using dynamometer.

##### Compensatory

- Use of an easy open pillbox
- Use of Dycem to open/stabilize
- Use of Pill pack
- Use of automatic pill dispenser

Compensatory Goal Example:  
Client will demonstrate the ability to access pills in an easy open pillbox independently.

#### Visual Motor/Visual Perceptual Deficits

##### Remediation

- Visual scanning
- Saccades
- Eye-hand coordination
- Form Constancy
- Visual Memory
- Visual discrimination
- Visual figure ground

Remediation Goal Example:  
Client will demonstrate ability to scan environment and identify all pill bottles to be taken in the AM with no cues

##### Compensatory

- Large print medication instructions
- Visual schedule
- Color coordinated pillbox
- Tactile indicator on pill bottle

Compensatory Goal Example:  
Client will demonstrate ability to follow visual schedule independently to manage daily meds.

#### Cognitive Retraining

##### Remediation

- Safety awareness
- Problem solving
- Working memory

Remediation Goal Example:  
Client will identify the warning signs on each of their pill bottles independently.

- Cognitive flexibility
- Planning

### Compensatory

- Setting alarms
- Medication checklist
- Automatic pill dispenser
- Designated location for pills
- Use of Pill Pack
- Simplified Medication Instructions

Compensatory Goal Example:  
Client will use medication checklist to support total adherence with daily medications independently.

### **Health Literacy/Language Barrier**

#### Health Literacy

- How to read a pill bottle
- Purpose of each medication
- Warning signs of their condition
- How to communicate concerns
- Ensure client understands their diagnosis

Health Literacy Goal Example:  
Client will demonstrate ability to read essential information on the pill label independently.

#### Language Barrier

- Pill labels in primary language
- Use of translator at visits

Language Barrier Goal Example:  
Client will demonstrate understanding of how to acquire a translator to accompany them during health care visits independently using the teach back method.

### **Tips on Documentation of Medication Management Evaluation and Treatment**

\* The key is to write a goal associated with medication management such as one of the examples listed above and choose a code based on the deficit area you are addressing.

#### Applicable Billing Codes

- 97535 Self-care/home management training
- 97530 Restore patients' functional performance with dynamic activities (Can be used with oculomotor/saccadic dysfunction)
- 97533 Sensory integration techniques to enhance sensory processing and adaptive response to environmental demands
- 97129 Cognitive function and compensatory strategies to manage activity performance (Used for the initial 15 minutes of treatment)
- 97130 Cognitive function and compensatory strategies to manage activity performance (Used for additional units of treatment)

- 97110 Developing strength, endurance, and range of motion to improve functional performance (Can be used for fine motor/visual deficits such as convergence insufficiency or accommodative dysfunction)
- 92065 Orthoptic and/or pleoptic training, with continuing medical direction and evaluation focusing on improving the function of the eye muscles. (Can be used to address amblyopia)

In order to maximize reimbursement your notes should include:

- How the intervention relates to the goal
- Aspects of the performance you are assessing during the activity
- Any modifications needed to the activity or environment
- How the services are unique to occupational therapy scope of practice

Include language from the occupational therapy practice framework such as:

- Client factors: values, beliefs, and spirituality; body functions; and body structures
- Performance skills: Observable, goal-directed actions that result in a client's quality of performing desired occupations
- Performance patterns: Habits, routines, roles, and rituals that may be associated with different lifestyles and used in the process of engaging in occupations or activities
- Outcomes: Improvement, enhancement, prevention, quality of life, participation, role competence, well-being.

## Appendix C

### Medicine Management Support Guide

**It's important to take your medicine as ordered to avoid:**

- Worsening health conditions
- More doctor office or emergency room visits
- Hospital admissions
- Other serious health issues including death

**If you have questions ask your health care team about:**

- Your condition and common symptoms
- Name and purpose of the medicine
- Possible side-effects of the medicine

**Below are some strategies to help you better manage your medicine**

#### **Understand Medicine Labels**

- Ask your health care provider to explain the medicine label
- Ask for a simplified medicine list
- Have medicine labels printed in your primary language
- Use a translator to assist you during healthcare visits

#### **Open Medicine Bottles**

- Use an easy open medicine box
- Use an automatic medicine dispenser
- Use a non-childproof medicine bottle
- Ask family/caregiver to assist you in setting up a medicine box

#### **Remember to take Medicine**

- Use a medicine checklist
- Set alarms
- Use a visual chart
- Have a designated space to store medicine
- Ask healthcare team about PillPack

#### **See Medicine Label**

- Place object on bottle to help you identify them (rubber band, tape, raised sticker)
- Highlight important information on medicine label (example: time/dose)
- Use color-coded medicine box

#### **Pay for Medicine**

- Ask about generic medicine brands
- Ask about prescription savings card
- Ask insurance provider if your healthcare plan is the best option to pay for your medicine
- Price check your medicine online at GoodRX

**Remember you're an important member of the healthcare team!**

- Be comfortable asking questions
- Share information or concerns you may have
- Be involved in the planning process
- Ask healthcare team for support when you need it



## **Appendix D**

### **Medication Management Annual Competency**

<https://rise.articulate.com/share/S1fmNtVJGVjiXp1 ht2tOyOVmXYqGCaA#/>