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## Holistic Occupational Therapy Dining Interventions Supporting Individuals with Dementia in Skilled Nursing Facilities

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**Holistic Occupational Therapy Dining Interventions Supporting Individuals with Dementia  
in Skilled Nursing Facilities**

by

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A culminating capstone project submitted to the faculty of Dominican University of California in  
partial fulfillment of the requirements for the degree of  
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## Abstract

The purpose of this project is to provide occupational therapy practitioners (OTPs) with a Holistic Occupational Therapy Dementia Dining Toolkit to enhance the dining experience in the SNF setting for individuals in all stages of dementia. Dementia is a prevalent condition seen in skilled nursing facilities (SNF) that is expected to continue to rise; in 2016, 47.8 percent of individuals living in a SNF had a diagnosis of dementia (Center of Disease Control, 2020). Dining experiences for individuals with dementia (IwD) are impacted by an individual's cognition, physical, environmental, and psychosocial factors. Additionally, the task oriented and structured approach to the provision of care and often noisy, crowded communal dining in SNFs contribute to challenges associated with facilitating an individualized dining experience (Milte et al., 2017). Despite the ability of OTPs to improve the occupational performance of IwD in important activities of daily living, like dining, occupational therapy services provided and billed in SNFs are heavily focused on therapeutic exercise and therapeutic activity (Rafeedie et al., 2018). Expanding the focus of current dining related interventions in clinical practice can be accomplished by providing additional resources and programming to OTPs. Implementing holistic interventions that facilitate participation in feeding, one of the longest remaining abilities of IwD, affords OTPs the opportunity to actively expand and transform their current practice patterns, and subsequently the culture at SNFs (Rafeedie et al., 2018). To address this gap in practice, this project culminated in the creation and dissemination of an evidence-based, Holistic Occupational Therapy Dementia Dining Toolkit that empowers OTPs to effectively use their full scope of practice in order to enhance the dining experience of IwD in SNFs.

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## **List of Abbreviations**

ADL - Activities of Daily Living

ACL - Allen Cognitive Levels

CDM - Allen Cognitive Disabilities Model

EHP - Ecology of Human Performance

IADL - Instrumental Activities of Daily Living

IwD - Individuals with Dementia

OTPF-4 - Occupational Therapy Practice Framework: Edition 4

OTPs - Occupational Therapy Practitioners

QoL- Quality of Life

SNF - Skilled Nursing Facility

The Code - American Occupational Therapy Association's Code of Ethics

## **Introduction**

Dementia is a prevalent condition that is expected to impact 13.8 million individuals by 2050 (Alzheimer's Association, 2019). As dementia progresses, the ability to self-feed is frequently impaired. With the expected increase in dementia, it is important to equip healthcare providers who work in skilled nursing facilities (SNFs) with evidence-based resources to optimize the dining experience and improve the quality of life (QoL) of individuals with dementia (IwD). Despite the ability of occupational therapy practitioners (OTPs) to improve the occupational performance of IwD in important activities of daily living (ADL), like dining, occupational therapy services are heavily focused on therapeutic exercise and activity (Rafeedie et al., 2018). OTPs have the distinct ability to add a holistic perspective to their practice by focusing on the whole individual. This distinct perspective enables OTPs to enrich the dining experience of IwD, an occupation that improves the QoL and well-being of IwD.

Implementing holistic interventions that facilitate participation in one of the longest remaining abilities of IwD, feeding, affords OTPs the opportunity to actively expand and transform their current practice patterns, and subsequently the culture at SNFs (Rafeedie et al., 2018). To address this gap in practice, this project culminates in a Dementia Dining Toolkit which supports OTPs in making evidence-informed decisions regarding holistic dining interventions for IwD living in SNFs. The target population for this project includes OTPs who provide services for residents with dementia in SNFs. We partnered with Ensign Services for the design and pilot implementation of our project. The purpose of our project is to provide OTPs with a Dementia Dining Toolkit incorporating holistic interventions supported by evidence to improve and establish a rich dining experience for residents in all stages of dementia.

## Literature Review

### Dementia

Dementia is a progressive neurodegenerative condition that includes the loss of memory, language, problem solving, and other thinking abilities that become severe enough to interfere with daily life (Alzheimer's Association, 2020a). Dementia is a broad term that describes symptoms caused by abnormal brain changes that result in a decline in cognitive abilities (Alzheimer's Association, 2020a). The progression of dementia results in a gradual loss of ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs), requiring increasing amounts of assistance to perform daily activities. The demands associated with caring for an IwD, such as the cost of unpaid care and reduced emotional well-being and physical health, take a toll on caregivers and families (Alzheimer's Association, 2019; Piersol & Jensen, 2017). This results in caregivers of IwD seeking the full-time support and services provided at SNFs as the condition progresses, evidenced by the fact that greater than 47 percent of individuals living in nursing homes experience dementia (Center of Disease Control, 2020). In order to provide effective care to IwD in SNFs, it is important for OTPs to identify and promote the remaining abilities and strengths of all IwD.

### *Stages of Dementia*

The stages of dementia are helpful categorizations for healthcare providers to identify the progression of dementia, however, the focus is often placed on functional impairments, rather than on the abilities that remain in each stage of dementia. This focus on impairment and loss may limit the healthcare providers ability to identify opportunities for IwD to be as independent as possible. Rather than aiming to remediate cognitive-related deficits that impact an IwD's performance in daily activities, practitioners can focus on the remaining abilities to increase

opportunities for independence (Smallfield, 2017). A detailed description of the remaining abilities and challenges in each stage of dementia can be found in Table I.

*Table I. Stages of dementia: Abilities and challenges. (Allen, 1995; Champagne, 2018)*

<b>Stage:</b>	<b>Remaining Abilities</b>	<b>Challenges</b>
<b>Early Stage</b>	<ul style="list-style-type: none"> <li>• Trial and error problem solving</li> <li>• Relies on old habits and routines</li> <li>• Good verbal skills</li> <li>• Benefits from striking visual cues</li> <li>• Learn new information and skills with repetition</li> <li>• Can learn to use walker and adaptive equipment</li> <li>• May have normal gait pattern</li> <li>• Sequence through familiar activities with minimal assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Following social norms</li> <li>• Impaired judgment and safety awareness</li> <li>• Risk for exit-seeking behavior, looking for ways to leave</li> <li>• May notice mistakes, but is unable to problem solve</li> </ul>
<b>Middle Stage</b>	<ul style="list-style-type: none"> <li>• Repetitive motor and manual actions</li> <li>• Appropriately uses objects</li> <li>• Retains awareness of topographic orientation when supported by routines</li> <li>• Sequence parts of familiar tasks with one-step directions</li> <li>• Utilizes a storyboard or memory book to reminisce and engage in meaningful interactions</li> <li>• Imitates caregiver demonstration</li> <li>• May follow short, simple instructions</li> <li>• Talks in short sentences</li> <li>• Moderate assistance during fine motor ADLs</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty learning new tasks</li> <li>• Unable to solve problems</li> <li>• Poor Safety awareness</li> <li>• Over stimulating environment may cause difficulty with attention and sequencing during mealtime</li> <li>• Disorientation- may wander the halls</li> <li>• May not recognize family members</li> <li>• May have delusions, depression, anxiety, and hallucinations</li> <li>• May exhibit emotional outbursts due to difficulty communicating needs</li> </ul>
<b>Late Stage</b>	<ul style="list-style-type: none"> <li>• Communicates with a few words</li> <li>• May follow one-step commands within context when given extra processing time</li> <li>• Responds and engages with gross body movements</li> <li>• May experience difficulty with eating and swallowing</li> </ul>	<ul style="list-style-type: none"> <li>• At risk for falls</li> <li>• Restless</li> <li>• Resist care, decreased orientation</li> <li>• Delayed responses and need or additional processing time</li> <li>• At risk for dehydration, contractures, skin breakdown, and weight loss</li> </ul>

Stage:	Remaining Abilities	Challenges
<b>End Stage</b>	<ul style="list-style-type: none"> <li>• Looks at contrasting or moving objects for short period of time</li> <li>• Non-verbal communication through facial expression and making eye contact</li> <li>• Responds to oral stimuli and may swallow</li> <li>• Responds to multi-sensory stimuli</li> <li>• May enjoy tactile touch such as massage or hair brushing</li> <li>• Responds to stimuli with partial range of motion</li> <li>• Sustains awareness of autonomic actions</li> </ul>	<ul style="list-style-type: none"> <li>• May be bed bound</li> <li>• Reflexively grabs objects and may have difficulty releasing grasp</li> <li>• May bite down on anything in their mouth and be unable to let go</li> <li>• May respond to someone within 12 inches of their face</li> <li>• May resist care due to fear or disorientation</li> <li>• Decreased ability to express needs and may not be able to express when something is wrong</li> </ul>

### Dining and Dementia

Feeding experiences for IwD vary based on an individual's cognition, physical and social environment, and psychosocial factors. Eating and feeding difficulties can lead to problems such as inadequate food and nutritional intake, weight loss, malnutrition, dehydration, aspiration, respiratory problems, reduced performance in ADLs, weakness and fatigue, and infections which all contribute to increased morbidity, mortality and diminished QoL (Stone, 2014). According to Chang et al. (2017), 50 percent of IwD will experience food intake difficulties within eight years of disease onset. Eating is considered a late loss ADL and is one of the last functional and meaningful occupations that IwD enjoy before becoming fully dependent in all ADLs and IADLs. Feeding difficulties and weight loss are common in residents of SNFs (Chang et al., 2017). In various studies, the prevalence rates of feeding difficulties among people with dementia living in SNFs range from 30.7 percent (Lin et al., 2010), to 40.8 percent (Slaughter et al., 2011) to 60.2 percent (Chang, 2012).

Despite the feeding and eating challenges associated with dementia, it is important to understand the ways in which dementia also impacts the social and personal aspects of the dining experience. Supporting the remaining abilities of each IwD is an important way to encourage independence, autonomy, and social interaction during dining (Milte et al., 2017). Occupational therapy interventions may aim to create successful dining experiences with family by modifying the demands of self-feeding or facilitating positive mealtime interactions among staff and individuals in each stage of dementia (Liu et al., 2020; Padilla, 2011). OTPs look beyond maintaining proper nutrition by focusing on the impact of various factors, including lifelong habits and routines, on the quality of the dining experience. As dementia progresses, creating a sense of comfort and familiarity within the dining experience may prevent negative behaviors and psychosocial outcomes (Genoe et al., 2012). OTPs can promote the QoL of IwD by establishing and maintaining a positive dining experience and promoting healthy relationships among caregivers and residents while engaging in meaningful occupations, including the functional activity of feeding.

### ***Dining by the Stages***

Utilizing a stage specific perspective during a long lasting ADL such as dining provides OTPs with the opportunity to create individualized quality care throughout the progression of the disease. Each IwD will experience loss of different performance skills or functions, and at a different rate. Despite these individual variances, there is a generally predictable order to the loss of function as dementia progresses (Allen, 1995). For example, individuals in middle stage dementia typically lose the ability to sequence complex tasks, individuals in late stage dementia typically lose the ability to correctly use and handle objects such as utensils, and individuals in end stage dementia typically lose the ability to lift their hand to self-feed (Allen, 1995).

**Early Stage Dementia (ACL Stage 4).** In early stage dementia, IwD may eat independently and participate in socialization during group dining, are able to accomplish goal-oriented activities, and are able to sequence through familiar activities. Dining is a familiar activity with strong associated procedural memories, therefore IwD at this stage are able to participate in dining and maintain the necessary skills to participate. OTPs can educate caregiving staff to support these abilities by providing supervision to solve any problems that may arise from minor changes in routines. Individuals at this stage may notice mistakes but not fix them, and often ask for reassurance when completing tasks (Allen, 1995). OTPs can educate caregiving staff to provide feedback and validation during dining to reassure individuals and support successful engagement. IwD may ignore dietary restrictions during this stage; providing striking visual cues or verbal feedback may improve adherence to dietary requirements. Individuals in the early stage still possess strong verbal skills. Supporting social skills in communal dining situations may include having family or friends join during mealtime to facilitate meaningful conversation and reminiscence about the individual's life experiences. Families may bring in old photos or personal items to encourage social skills during dining. Supporting social skills during communal dining may enhance opportunities for IwD to associate dining with positive engagement, thus, making dining more enjoyable (Keller et al., 2015). Creating opportunities for habits, routines, rituals, and roles not only supports IwD's social skills during mealtime, but it may also improve IwD's psychosocial well-being and provide structure to their daily routines.

**Middle Stage Dementia (ACL Stage 3).** In middle stage dementia, IwD are typically able to self-feed when all dining supplies are laid out for them. Caregivers may need to provide verbal or multi-sensory cues to complete the steps of an activity in the proper order or sequence.



A caregiver can support these abilities by utilizing easy-to follow, few word phrases such as, “Pick up your fork” (Alzheimer’s Association, 2020b). Distractions from a noisy or cluttered environment may cause difficulty in the continuation of self-feeding (Allen, 1995). OTPs can recommend environmental modifications that decrease auditory and visual stimulation, provide sensory context cues related to the occupation of dining, and enable successful engagement by decreasing maladaptive behaviors. Many IwD at this stage require greater time for meals due to prolonged processing and decreased attention. Identifying the usual processing delay and educating caregivers to provide additional time for meals can reduce the risk of excess disability.

Excess disability occurs when an individual is not given the opportunity to perform at their current functional capacity (Slaughter et al. 2011). For example, when a caregiver cuts the food for an IwD, who is able to cut their food but requires extra time to perform this task, the IwD is not afforded the opportunity to utilize the skills required to cut with a knife. The lack of practice and use of specific performance skills, not physiological factors, therefore results in the loss of abilities and excess disability (Slaughter et al. 2011). Other ways to support IwD in middle stage would be to create opportunities to increase participation by providing sensory context cues related to the occupation of dining. Allen (1995) states that sensory context cues include cues to chew longer, slower, altering the rate of eating to prevent choking, and checking food and liquid temperature for safety.

**Late Stage Dementia (ACL Stage 2).** Having the individual self-feed with finger foods is an effective way to encourage independence during dining in the late stage (Jones, 2019). Since IwD in the late stage attend to items within reach, OTPs can ensure appropriate environmental setup by placing food directly in front of an IwD. Individuals at this stage may tend to bright colors and may benefit from a contrasting placemat to bring awareness to their

food during mealtime (Jones, 2019). Allen (1995), states that OTPs can simplify tasks by providing one bowl and utensil to minimize distractions. IwD in the late stage may be at risk for malnutrition and dehydration, thus requiring more assistance during dining. IwD in the late stage may utilize one utensil when placed in their hand during meals but may benefit from hand under hand assistance to bring the utensil to mouth for the individual to take a bite (Alzheimer's Association, 2020b). Underhand feeding enables IwD to control the pace of feeding when assisted by caregivers and can result in fewer negative behaviors when compared to overhand feeding (Batchelor-Murphy et al., 2017). IwD in the late stage benefit from one- or two-word instructions during feeding. In the late stage, IwD are able to sustain attention to tasks for five minutes and may require frequent multisensory prompts such as tactile and verbal cues to continue eating. IwD may suffer from postural instability at this stage, making it a priority to establish a supportive dining environment that addresses postural support in order to facilitate engagement in feeding (Bamford et al., 2019).

**End Stage Dementia (ACL Stage 1).** In end stage dementia, individuals eventually become dependent in ADLs, including feeding (Alzheimer's Association, 2020c). While individuals in end stage dementia depend on caregivers to provide feeding assistance, it is one of the longest remaining abilities of IwD. Feeding creates the opportunity for IwD to experience pleasure through sensory stimulation and oral motor activities (Allen, 1995; Champagne, 2018). According to Allen (1995), IwD may positively respond to the pungent scents and primary tastes of food, such as salty or sweet. An IwD may raise a cup to their mouth if placed in their hand, or drink from a cup held to their lips (Allen, 1995). They can maintain tongue strength for as long as possible by licking their lips in response to sticky food, while modifying the diet of an IwD can also maintain the ability to safely swallow (Allen, 1995). Difficulty chewing and swallowing

are common challenges that arise in the end stage of dementia (Kai et al., 2015). To reduce the energy expenditure required during eating, IwD may benefit from an altered diet of pureed, mechanically soft, or thickened liquids (Liu et al., 2019). Additionally, consuming liquids throughout meals has been shown to result in greater intake when compared to consuming solid foods alone (Liu et al., 2019). As dementia in the late stage progresses, IwD may also lose the ability to swallow (Kai et al., 2015). With the potential loss of deglutition, IwD may respond to sensory stimulation by sucking, salivating, or moving their tongue and lips (Champagne, 2018). Therefore, adaptive equipment such as a flat, bowl-shaped spoon, coated spoons, nosey cup, vacuum cup, and frequent cues may help support performance patterns of IwD in end stage dementia and with the continuity of eating during mealtime (Allen, 1995). Other client-centered approaches that support individuals in end stage dementia include utilizing familiar smells, foods, drinks, music, and lighting to mimic their home environment (Champagne, 2018; Fetherstonhaugh et al., 2019).

### **The Occupation of Dining**

The abilities and skills of each individual influences the way in which they participate and engage in various occupations. ADLs are essential to an individual's identity and are essential to the daily habits and routines that contribute to an individual's welfare. As dementia progresses, it may be harder for IwD to participate in novel and unfamiliar activities, including exercise and activity programs. Familiar ADLs provide an opportunity for engagement, facilitate basic survival and well-being, and allow individuals to care for themselves (AOTA, 2020a). The occupation of dining is an ADL; eating and feeding are two components of this occupation (Boop et al, 2017). Eating includes "manipulating food or fluid in the mouth" and swallowing (AOTA, 2020a, p. 30). Feeding includes setting up, arranging, and bringing food from the plate

to the mouth, and also applies to using a cup with fluid (AOTA, 2020a). The occupation of dining encompasses a broader range of components than merely eating and feeding, and it is a fundamental part of life (Boop et al., 2017). The experience of dining creates the opportunity for individuals to socialize, stimulate their senses, and participate in a functional activity that brings meaning and enjoyment (Boop et al., 2017; Champagne, 2018; Hung et al., 2016). The occupation of dining is a multi-faceted process that involves remaining abilities, personal factors, and habits and routines and occurs within a specific physical and social context (AOTA, 2020a; Liu et al., 2017). In order to create a meaningful dining experience, it is important to recognize the ways in which these interrelated factors impact the occupation of dining.

### **Domains of Dining**

To address all the interrelated aspects that comprise the dining experience, it is important to view dining as more than just a nutritional act of eating by looking holistically at how mealtimes can benefit an individual. According to the Occupational Therapy Practice Framework: Edition 4 (OTPF-4), all domains of an occupation “are of equal value and together interact to affect occupational identity, health, well-being, and participation in life” (AOTA, 2020a, p.6). Thus, it is important to view the experience of dining as a whole occupation and from the lens of each dynamic and complex domain.

### ***Remaining Abilities***

Remaining abilities refer to the physical, cognitive, and sensory capabilities and skills that enable IwD to participate in desired occupations (Allen et al., 1995). These abilities are observable and are carried out for functional purposes. Physical skills allow for objects to be moved around the individual and the environment. They enable IwD to grasp and lift food, utensils, and cups to their mouth before they bite, chew, and swallow food. Cognitive functions

of attention, memory, thought, and orientation contribute to the conscious experience of dining, while social skills enable individuals to participate in mealtime conversations. Cognitive abilities enable individuals to choose, use, and handle appropriate objects as intended. This includes the ability to select and use a knife to cut food, as well as handling the proper end of the knife. Social skills enhance the dining experience by enabling individuals to interact with others. Mealtimes create the opportunity for staff to engage residents in eating activities and facilitate meaningful social interactions (Keller, 2017). Sensory functions of taste, smell, touch, sound, and sight contribute to the enjoyment resulting from the experience of dining (Champagne, 2018). As dementia advances, IwD experience a progressive loss of abilities that ultimately impacts their occupational performance in everyday activities, including dining (Liu-Seifert et al., 2015). Despite this impact, OTPs can skillfully assess, identify, and support the remaining abilities of IwDs to facilitate engagement and performance in the dining experience.

### ***Personal Factors***

Personal factors are the preferences, values, beliefs, and spirituality of residents that face the possibility of being overlooked during mealtimes, as healthcare workers often prioritize the nutritional act of feeding and eating (Lea et al., 2018). Personal factors bring meaning to occupations, as well as create the motivation to participate. It is important to understand that personal factors, such as the value of dinner table etiquette, may impact the success of interventions. According to a study that assessed the effectiveness of adaptive silverware for individuals with limited range of motion of the hands, therapy practitioners found that providing adaptive feeding utensils that eliminate the need to grasp, such as a built-up spoon, is one method to improve the performance of self-feeding and participation in dining (McDonald et al., 2021). When considering adaptive equipment, OTPs do more than address the impact on physical

performance for IwD. OTPs must also ensure adaptive equipment is culturally relevant and aligns with the personal preferences and values of each IwD. Targeted occupational therapy interventions that align with personal factors can minimize the occupational impact of dementia-related deficits and create a successful dining experience.

### ***Psychosocial Factors***

Psychosocial factors refer to the interpersonal and intrapersonal skills, as well as social interactions, that influence the ways in which an individual engages in an occupation (AOTA, 2020a). These influences consist of the cognitive, emotional, social, cultural, and spiritual qualities of an occupation. Psychosocial factors impact the way an individual thinks, perceives, and behaves when engaging in an occupation, as well as the meaning and purpose associated with an occupation (AOTA 2020a). It is important for OTPs to consider various ways psychosocial factors support or hinder the dining experience of IwD.

**Autonomy.** IwD may experience diminished QoL due to the progressive nature of the condition resulting in the loss of functional skills and independence, as well as the related lifestyle changes and loss of personal autonomy and roles (Alzheimer's Association, 2019; Milte, 2017). This loss of autonomy is often evident during the transition from an individual's home environment to a SNF. Transitions to an unfamiliar congregate living arrangement may be distressing due to lack of familiarity of the physical environment, insufficient time and awareness to process the transition, and exclusion from the decision to transition to a SNF (Gilmore-Bykovskiy et al., 2016). In addition to this challenging transition and loss of autonomy, IwD may experience neuropsychiatric behaviors that make dining with others difficult. Behavioral changes may occur as a result of medication side effects or changes in their cognitive perceptions of others (Curelaru et al., 2021). Dining creates opportunities for autonomy by

enabling IwD to serve and feed themselves to the best of their ability (Barnes et al., 2013), make independent decisions regarding the types and amount of food they eat (Hung et al., 2016), contribute to the decision of when and where to eat (Milte et al., 2017), and engage in a familiar and meaningful activity (Keller et al., 2017).

**Self-Efficacy and Stigma.** The dementia-related progressive loss of abilities may negatively impact the self-efficacy of IwD. Communication deficits, resulting from a loss of cognitive abilities, are associated with an increased sense of loneliness (Yin et al., 2019). A lack of comfort, familiarity, and emotional support may lead to negative behavioral outcomes, self-doubt, apathy, a loss of meaning, and decreased QoL (Genoe et al., 2012; Nguyen & Li, 2020). IwD may feel like they are inadequate, weak, and worthless due to loss of independence in daily habits, routines, and familiar roles (Gove et al., 2016). Limited self-view resulting from these psychosocial factors may decrease an IwD's social participation and engagement in meaningful occupations, which are elements that contribute to the dining experience. Participating in familiar activities that require minimal staff support, including dining, may minimize these negative feelings or behavioral outcomes (Forbes & Gresham, 2011). Dining is more than a means for nutritional intake; it creates the opportunity to have a pleasant and successful sensory, social, and spiritual experience that supports the self-efficacy of IwD (Liu et al., 2016).

**Identities.** As dementia progresses, it is important to honor the identity of IwD in order to nurture their personhood (Keller et al., 2015). With the loss of familiar roles and abilities, IwD fear losing their “essence as a person and their awareness of themselves and others, as well as a loss of their own personal history and intellect” (Gove et al., 2016, p. 395). To honor the identity of IwD, both care providers and individuals must find a balance between limited control of situations and progression of the diagnosis, as well as their own capacity to cope and adapt to

these situations (Gove et al., 2016). Understanding the remaining abilities of an individual at each stage of dementia, and acknowledging that each human-being behind the diagnosis has lived a rich life, OTPs can facilitate a sense of connectedness and meaning for IwD through the occupation of dining (Keller et al., 2015). OTPs possess the skills to meet each client where they are, at any stage of life, by providing client-centered care that address the psychosocial aspects of an occupation.

### ***Habits and Routines***

Habits, routines, and rituals are cultivated over a lifetime and contribute to social norms surrounding the dining experience and self-feeding. The occupation of dining can be connected to memory, social occasions, and emotions; therefore, it fulfills more than just a physiological need (Milte et al., 2017). The occupation of dining incorporates individualized preferences, experiences, personal abilities, values, preferences, and needs (Hung et al. 2016).

Supporting lifelong habits and routines related to dining can be achieved by providing person-centered care at mealtimes, including offering choice and preferences, supporting independence, showing respect, and promoting social interaction (Hung et al. 2016). Simple rituals like being able to get coffee or tea, and having a choice promote feelings of safety, and comfort which reinforces autonomy (Hung et al, 2016). Encouraging mealtime rituals, structuring mealtime interactions, and individualizing the dining experience promote and maintain eating performance of residents with dementia (Palese et al., 2018). The personal nature of dining leads each individual to have a unique dining experience. It is important for OTPs to have an understanding of cultural, ethnic, and religious influences on habits and routines related to dining in order to individualize the dining experience (Capezuti et al., 2014).



### ***Role of Context***

Dining can be identified as an individualized, communal, and social experience. Environmental factors in SNFs include both the physical and social context. The context in a SNF can pose challenges for IwD due to the social and physical environment of dining (Liu et al., 2017; Liu et al., 2020; Milte et al., 2017). An individual with dementia may retain the ability to self-feed, but environments that are unfamiliar and do not reflect their individual dining preferences may hinder IwDs to participate to the best of their remaining abilities.

Caregivers vary in their skills with their own care practice, training, and knowledge which can affect the social interaction with IwD during dining (Liu et al., 2020; Milte et al., 2017). Due to budgetary limitations, staffing arrangements, and communal dining schedules, IwD may lack autonomy, choice, and control regarding mealtimes (Milde et al., 2017). The social dining experience at SNFs may be further impacted by staffing, meal schedules, care practice and safety and infection control considerations (Liu et al., 2017). Understanding the physical and social context may alleviate barriers to dining in SNFs.

**Physical Context of Dining.** Environmental elements impact IwD's participation and engagement during dining. The physical characteristics of the environment include lighting, noise, tableware, contrast, adaptive devices, finger foods, room size, and furniture arrangement (Liu et al., 2017). In the study conducted by Hung et al. (2016), themes that influence the dining experience include creating a familiar environment and respecting independence and autonomy. Their study showed that with a proper stimulating physical environment, IwD were more likely to engage in eating which increased their dining experience. Characteristics of the physical context contribute to the sensory stimulation experienced within the environment and can affect an IwD's participation in dining. Serving meals on dishes that contrast the table, such as red or

blue plates on a neutral tablecloth, can increase the intake of both solid foods and liquids (Douglas & Lawrence, 2015).

Challenges found in the physical environment include overstimulation which contributes to negative behaviors that influence eating performances (Liu et al, 2017). Noise levels vary depending on the environment and can be a distraction from eating and elicit behaviors such as agitation and fear. A majority of studies have reported the effectiveness of changes in the dining environment for mealtime routines (Palese et al., 2020a). An overstimulating physical environment can impact an IwD's emotions, attitudes, and quality of feeding experience. Research found noise levels exceeding 40-50 dB are associated with negative outcomes, and noise levels above 55- 60 dB triggered an increase in catecholamine and cortisol (Garre-Olomo et al., 2012).

In order to create physical environments that provide the optimal level of stimulation for an IwD, OTPs can suggest environmental modifications that promote successful dining. According to Champagne (2018), IwD benefit from a sensory focused assessment of the physical environments in which they function. Sensory based environmental modifications, enhancements, and equipment can enhance the dining experience. Furnishings, pictures, and other items can be used to stimulate memories, increase curiosity, and draw attention to the dining environment. Playing relaxing and familiar music has been associated with a calming atmosphere, reducing agitation, negative behaviors, and increasing nutritional intake (Chaudhury et al., 2013 & Hung et al. 2016). Lighting, temperature, and noise levels can impact the ability of IwD to perform daily activities and result in a negative mood and decreased QoL (Garre-Olmo et al., 2012).

**Social Context of Dining.** Residents in SNFs typically eat meals with a group in the dining room or individually in their room. During mealtimes, dining rooms are filled with staff and residents walking and talking in the area, while residents share tables (Liu et al., 2017). The social and cultural context of a dining area include food delivery style, dining routines, social engagement, and cultural aspects of food choices (Liu et al., 2017) and can affect the motivation and participation of dining for an IwD. The social environment in the SNF may be used to support daily routines, which help IwD orient themselves in the familiar occupation of dining. Family visitation may be rare but has potential to increase motivation for eating (Hung et al., 2016). In the study by Hung et al (2016), some families visited daily to feed their loved ones and help others. Family participation created positive memories for both residents and staff and contributed to the QoL of residents.

Caregivers play a vital role in creating a social atmosphere that is positive, welcoming, and supportive for all residents (Liu et al., 2020). Caregivers can help create supportive, stress-reduced environments that enable IwD to participate in feeding (Padilla, 2011). The dining experience of IwD is influenced by caregiver knowledge and experience. Caregivers may perceive that IwD are unable to participate in communal dining or expect IwD to understand and respond to social cues. Caregivers can learn to use strategies, including providing multi-sensory cues and modeling appropriate behaviors, that create a social environment in which IwD can successfully participate in communal dining (Liu et al., 2020). Rewerska-Juško and Rejdak (2020) discuss the results found in several stigma surveys and concluded there is a lack of knowledge about dementia which can impact patient and family care, as well as negative stereotypes regarding the behavior of IwDs. This is evidenced by 62% of healthcare professionals who think dementia is a normal stage of aging, while 50% of IwD feel ignored by

health professionals (Rewersaka- Jusko & Rejdak, 2020). Health professionals' lack of knowledge and stigmatizing stereotypes regarding dementia may negatively impact the care IwDs receive, along with their overall QoL.

Alternatively, OTPs can support a positive social context during meals through reminiscence. The aim of reminiscence is to facilitate conversations and evoke memories of past experiences and events through the use of physical or verbal prompts (O'Philbin et al., 2018). Group reminiscence has been shown to improve communication and increase socialization of IwD (Asiret & Kapucu, 2016). OTPs have the opportunity to support successful and meaningful engagement in the occupation of dining by addressing factors related to the physical and social context, as well as the performance skills, client factors, and performance patterns of each IwD.

## **Role of Occupational Therapy**

### ***Scope of Occupational Therapy Practice***

The holistic approach enables OTPs to promote a client's abilities through the successful engagement of meaningful occupations (Arbesman et al., 2014). OTPs address the occupational engagement and performance of clients, who may be individuals, groups, or populations, with a holistic perspective (AOTA, 2020a). They employ a holistic perspective when identifying ways in which successful engagement in occupations are impacted by multidimensional interrelated factors, including physiological, psychosocial, cultural, personal, social and environmental (AOTA, 2020a; Boop et al., 2017). In addition to this holistic perspective, OTPs employ client-centered care, in which clinicians and clients create a partnership. Client-centered care is an approach that guides interventions by recognizing and embracing the client's knowledge, experiences, and autonomy (AOTA, 2020a, as cited in Schell & Gillan, 2019). Providing client-centered care that encourages client choice and autonomy is a core principle of the profession

(Rafeedie et al., 2018). OTPs help client's to participate in meaningful occupations, in order to make sure the intervention has value and is meaningful to each individualized client. Utilizing a holistic and client centered approach will ensure that the OTP is using their unique lens and skillset to create meaningful interventions. The ability to account for the complex array of factors impacting occupational performance enables OTPs to perform comprehensive evaluations and activity analyses that identify specific demands of an activity, as well as factors that support or impede functional engagement in an occupation (AOTA, 2020a).

As dementia advances, IwD experience a progressive loss of abilities that ultimately impacts their occupational performance in basic activities, including dining (Liu-Seifert et al., 2015). The domain and process of occupational therapy, as described in the OTPF-4, enables OTPs to effectively address these challenges by identifying factors that impact the dining performance of an IwD (AOTA, 2020a). This includes the supports and barriers to the social context, psychosocial factors, habits and routines, and physical context. OTPs utilize aspects of the OTPF-4, which is a document that articulates occupational therapy's distinct perspective and contribution to promoting health and participation through engagement in occupations (AOTA, 2020a). The OTPF-4 was utilized to develop personalized interventions that facilitate the use of current remaining abilities of an IwD to promote occupational engagement and performance in dining (Boop et al., 2017). To enhance QoL, OTPs have the expertise to incorporate multiple domains into treatment such as physical and mental health, the physical environment, the social context, participation, and wellbeing to support a holistic health promotion approach.

Despite the ability of OTPs to improve the occupational performance of IwD in important ADLs, like dining, services provided and billed in SNFs reflect a different focus of occupational therapy interventions. In SNFs, occupational therapy services are heavily focused on therapeutic

exercise and therapeutic activity (Rafeedie et al., 2018). When combined, therapeutic exercise and activity interventions were billed more than two times as often as ADLs by OTPs in SNFs (Rafeedie et al., 2018). Allocating a significant portion of resources to exercise, elucidates the limited frequency in which OTPs utilize a holistic perspective to address occupations, including dining. Implementing holistic interventions that facilitate participation in one of the longest remaining abilities of IwD, feeding, affords OTPs the opportunity to actively expand and transform their current practice patterns. By providing holistic, occupation-based interventions, OTPs can begin to transform the culture in SNFs (Rafeedie et al., 2018).

One way to begin this transformation is for OTPs to embrace their role as educators. A systematic review of effective occupation-based interventions to support IwD identified caregiver education as an essential practice principle of OTPs (Padilla, 2011). It is important for OTPs to consider the remaining abilities of each IwD when providing education. Cognitive impairments may limit IwD's ability to carryover new knowledge; thus, OTPs play an important role in educating caregivers and families to incorporate intervention strategies into the daily life of IwD (Collins, 2018). This role of OTPs goes beyond teaching clients and caregivers, extending to educating interdisciplinary colleagues. The ability and skills to educate caregivers and interdisciplinary teams to provide the best quality of care is a foundational skill of OTPs (AOTA, 2016). OTPs' scope of practice also includes training in advocacy for occupational therapy services and clients. The ability and skills to educate caregivers and interdisciplinary teams to provide the best quality of care is a foundational skill of OTPs (AOTA, 2016). Embracing the role of OTPs as educators, as well as the holistic, occupation-focused approach to practice, readies OTPs to expand and improve their current practice patterns.

### ***Evidence-Based Practice***

Evidence-based practice guides occupational therapy clinical decision making by integrating the best available research with the clinical expertise of practitioners and the preferences and needs of each recipient of services (Goldstein & Olswang, 2017). Evidence-based practice promotes standardized, quality care by decreasing practice variations among clinicians that can result in disparities between individuals receiving care (Murad, 2017). Additionally, utilizing evidence-based interventions empowers and improves outcomes of individuals receiving care (Murad, 2017). Therapeutic exercise and therapeutic activity are both evidence-based interventions that promote ADL performance in this population (Piersol & Jensen, 2017). However, providing such attention to therapeutic exercise and therapeutic activity consequently overlooks the wide variety of distinct and holistic evidence-based dining interventions OTPs can utilize with IwD at SNFs (Piersol & Jensen, 2017).

Despite the value of evidence-based practice, it takes an average of 17 years for evidence in research to be widely adopted into practice (Juckett et al., 2019). Time, insufficient administrative support, and limited confidence and skill in finding and translating research into practice are identified barriers to employing evidence-based practice (Greber, 2021; Lindstrom & Bernhardsson, 2018). In order to close this gap and increase clinician use of current evidence in actual practice it is crucial to educate clinicians on practical evidence-based interventions (Greber, 2021; Jeffery et al., 2021). A main focus in health care is to improve the quality of care and the health of populations while reducing the cost of care (Whittington et al., 2015). As a result of this focus, OTPs are under greater scrutiny to utilize evidence-based and evidence-informed interventions and expand their practice to efficiently improve the quality of care

(Arbesman et al., 2014). An evidence-informed dining toolkit can empower OTPs by promoting clinical decision making and reaffirm that their clients are receiving holistic, client centered care.

## **Conclusion**

Dementia is a prevalent condition among individuals living in SNFs and is expected to affect 13.8 million individuals by 2050 (Alzheimer's Association, 2019). Abnormal changes to the brain disrupt the daily life and functioning of IwD (Alzheimer's Association, 2019). The four stages of dementia (early, middle, late, and end) are identified by distinguishable functional declines, as well as by remaining abilities of IwD. Self-feeding is one of the daily life activities and functions affected by dementia, which can result in a challenging dining experience in SNFs. Eating is considered a late loss ADL and is one of the last functional and meaningful occupations IwD actively engage in before becoming dependent in all ADLs and IADLs. Inadequate food and nutritional intake, weight loss, malnutrition, dehydration, aspiration, reduction in performance levels are some of the challenges that staff and caregivers face in SNFs when working with IwD (Stone, 2014). Physical, social, psychosocial, and environmental contexts impact the ability of IwD to successfully participate in their dining experience. OTPs possess the skills to identify and promote the potential range of remaining abilities IwD need to successfully engage in meaningful dining activities. However, limited occupational therapy literature in SNF practice poses a challenge to incorporating evidence-based interventions into practice. Providing OTPs with resources to incorporate findings from other health professions, such as nursing and psychology, can support OTPs in shifting the focus from therapeutic exercise to essential ADLs, like dining (Rafeedie et al., 2018). OTPs holistic and multifactorial approach can promote an IwD's functional and meaningful occupational performance during dining.



### **Statement of Purpose**

The purpose of this project is to provide OTPs with a Dementia Dining Toolkit that promotes holistic interventions that enhance the dining experience of individuals in all stages of dementia in the SNF setting. The current focus of occupational therapy interventions in SNFs can be expanded, from therapeutic exercise and therapeutic activity, to facilitate participation in functional and meaningful occupations such as dining, one of the longest remaining abilities of IwD. To address this gap in practice, a Dementia Dining Toolkit, evidence manual, and online training module was created to support OTPs in making informed decisions regarding holistic dining interventions for IwD living in SNFs. Goals and objectives include promoting the use of best available practices that align with the OTPF-4, educating OTPs on the purpose of the Dementia Dining Toolkit, as well as ways to incorporate holistic dining interventions in SNFs. The Dementia Dining Toolkit incorporates evidence-based interventions - *including social and physical context, habits and routines, and psychosocial factors* - and is designed to educate OTPs to identify and address the distinct needs and remaining abilities of individuals in the early, middle, late and end stages of dementia. Creating a context that supports social interaction and feeding performance, promotes the autonomy of each individual, and incorporates lifelong routines and rituals into the dining experience.

## Theoretical Frameworks

The Allen Cognitive Disabilities Model (CDM) provides a framework for OTPs to identify an IwD's cognition, processing, and occupational performance. The CDM organizes cognitive abilities in a hierarchical, six-point scale, called Allen Cognitive Levels (ACLs), which describe a client's strengths, ability to complete familiar activities, and ability to learn new tasks (Kang & Tadi, 2020). Multidisciplinary staff members working in the SNF setting can refer to the CDM's six-point hierarchy of cognition to gain a better understanding of the remaining abilities and levels of assistance required during ADLs and IADLs. The ACLs parallel each stage of dementia: early stage (ACL 4), middle stage (ACL 3), late stage (ACL 2), and end stage (ACL 1). ACL 5 correlates to mild cognitive impairment and individuals in ACL 6 have normal cognitive function.

The CDM guides the OTPs to identify and utilize interventions that are appropriate for IwD at each ACL. Allen focuses on the concepts of "can do", "will do", and "may do." According to Allen (1995), "can do" refers to the remaining abilities of IwD, including their emotional, physical, and sensory abilities. "Will do" refers to the relevance and meaning each task has to an individual and is influenced by personal interests, culture, values, and beliefs. "May do" refers to the occupations in which an IwD has the opportunity to engage given the support and barriers of their physical and social environment. IwD experience their "best ability to function" when the things they "can do," "will do," and "may do" intersect in one activity or occupation. Rather than focusing on the progressive loss of abilities, the CDM provides a framework to identify and support the remaining abilities of IwD in order to promote their engagement in meaningful activities and occupations. The interventions included in the Dementia Dining Toolkit are categorized into the four ACLs associated with dementia to enable

OTPs to identify appropriate interventions based on the remaining abilities of individuals in each stage of dementia.

While the CDM provides a strengths-based approach that promotes engagement by supporting the remaining abilities of IwD, the Ecology of Human Performance (EHP) focuses on the ways in which environmental context influences occupational performance. According to Dunn et al. (1994), the four constructs of EHP include: person (sensorimotor, cognitive, psychosocial), context (physical, social, cultural, temporal), task (objective sets of behaviors), and performance (interaction of person and task). The EHP focuses on a holistic assessment to better understand an individual's occupations by addressing the skills and abilities of an individual in their natural context. In order to enhance the performance of an individual in an occupation, five distinct categories are used to describe interventions. Therapeutic intervention within EHP consists of remediation of skills and abilities, alteration of the context in which an individual performs, adaptation of the task, prevention of maladaptive performance, and creation of more adaptable opportunities for individuals to perform within context.

For IwD in relation to the occupation of dining, EHP serves as a way for practitioners to modify the environment in which an IwD may experience difficulty during the dining. For example, an environment requiring an individual in middle stage dementia to prepare and set up their own meal would not be conducive to a successful dining experience. However, individuals in middle stage dementia are able to self-feed when all familiar supplies are set up for them, centralizing on the importance of providing optimal contexts to support occupational opportunities.

The five-tier intervention approach described in the EHP - establish or restore, alter, adapt, prevent, and create - was used to develop the Dementia Dining Toolkit. For example, if a

resident experiences consistent difficulty scooping food onto a spoon, an OTP can adapt the task by installing a plate guard. OTPs can educate caregivers on communication strategies to promote positive interactions with individuals in late stage dementia. Likewise, OTPs can create a homelike dining environment with warm-colored tablecloths to support a pleasant sensory experience for individuals in middle stage dementia. Incorporating the five-tier intervention allows for OTPs to target the person, context, or task to enhance occupational performance, and design an intervention tailored for the specific individual. To effectively use the interventions in the Dementia Dining Toolkit, OTPs must view each individual, with unique skills and abilities, within their context to determine the ways in which they can, will, and may engage in the occupation of dining.

## **Ethical and Legal Considerations**

### **Ethical Considerations**

The American Occupational Therapy Association's Code of Ethics (the Code) is an official document that guides OTPs in the ethical decision-making process when working with clients (AOTA, 2020b). The primary ethical principles from the Code considered throughout this project include: autonomy, fidelity, and beneficence.

Occupational therapy prioritizes the client's QoL through meaningful engagement, and it is the duty of OTPs to honor self-determination in practice. OTPs can support resident autonomy by utilizing client-centered interventions from the dementia dining toolkit that support the remaining abilities of each resident. Recognizing that information included in the dementia dining toolkit is only one element that will inform each occupational therapy practitioner's clinical decision-making process supports their autonomy. OTPs will be encouraged to respect clients wishes regarding their desire to continue or terminate eating during mealtime. Fidelity will be upheld through this project by respecting the anonymity of clients, meeting the needs of the partnered SNFs, and fostering rapport and support for OTPs and caregivers who will be utilizing the dementia dining toolkit. To uphold the Principle Beneficence, OTPs will be educated on ways to expand and improve their practice, ultimately benefiting IwD in SNFs. A client centered approach helps to formulate the dementia dining toolkit because it supports the remaining abilities of IwD and opportunities for successful engagement in dining.

### **Legal Considerations**

In addition to upholding the American Occupational Therapy Association Code of Ethics, legal considerations were taken into account when developing and implementing this project. The purpose of this project is to develop resources for therapy practitioners who work at Ensign

affiliated facilities, as well as the broad population of licensed OTPs. Thus, the stage-specific dining toolkit, evidence manual, and online training module are accessible to all Ensign affiliated facilities through the learning management system and the public through a link to the Rise Articulate website. In developing these resources, communication with Ensign affiliated facilities occurs virtually and only with their explicit consent. Two therapy practitioners reviewed and disseminated all communication regarding surveys and educational sessions to a larger group of therapy practitioners working in Ensign affiliated facilities. All survey responses are anonymous and collected electronically. Limited identifying information, including respondents' names and email addresses, was voluntarily shared. The sole purpose and use of identifying information was explicitly stated in each survey and included either (1) emailing respondents to gather more feedback, or (2) emailing a gift card after completing the survey.

No specific permissions were required to create the stage-specific dining toolkit, evidence manual, and online training module. Images included in the training module are personally taken by creators of this project or are legally obtained through the Rise Articulate software and stock image websites. Photographs taken by creators of this project are legally and ethically generated and include inanimate objects. Photographs obtained through Rise Articulate are included in the software subscription. Photographs obtained from stock image websites are free to access and use for the scope of this project with a website account. All research literature referenced in the stage-specific dining toolkit, evidence table, and online training module are cited in accordance with the *Publication Manual of the American Psychological Association, Seventh Edition* (APA, 2020). All funding sources are disclosed in the stage-specific dining toolkit and online training module.

## **Methodology**

### **Agency Description**

The agency we partnered with is Ensign Services, an organization that supports Ensign-affiliated skilled nursing facilities. Within Ensign services, the long-term care committee is a group of therapists and leaders, from around the country, who are committed to bringing the latest techniques and programs to clients in the SNFs where they are employed. Therapists, including occupational therapists and occupational therapy assistants, who are employed by Ensign affiliated facilities are provided educational and programmatic resources to ensure they provide quality care.

### **Project Design**

The purpose of this project is to provide OTPs with additional tools to expand their knowledge and skills to improve the dining experience for individuals in all stages of dementia in the SNF setting. The Dementia Dining Toolkit is influenced by the domains described in the OTPF-4 and is designed to holistically address all aspects of dining as an occupation (AOTA, 2020a). Terminology describing these occupational therapy practice domains is modified in the Dementia Dining Toolkit to ensure the language is accessible, easily communicated, and convenient for OTPs to utilize in their daily practice. Terminology used throughout the Dementia Dining Toolkit to describe the holistic aspects of the dining experience includes: remaining abilities, personal factors, psychosocial factors, habits and routines, environmental factors, and social context. The Dementia Dining Toolkit includes a printable dementia dining toolkit containing stage-specific dining interventions for IwD, an evidence table, and an online training module to prepare OTPs to integrate the evidence-based interventions into their practice. A detailed description of the components of the Dementia Dining Toolkit is listed in Table II.

Table II. Project Design

<b>Component:</b>	<b>Description &amp; Rationale:</b>
Stage-Specific Dining Toolkit	<p><b>Description:</b> The printable Dementia Dining Toolkit consists of three sections: (1) a holistic perspective of dining, (2) common dining-related remaining abilities, and (3) stage-specific evidence-based dining interventions (refer to Appendix D). The final version of the stage-specific dining toolkit was printed, laminated, and bound into a five by seven inch mini toolkit ringlet.</p> <p><b>Rationale:</b> The first section of the stage-specific dining toolkit defines the holistic perspective that guides the design of the toolkit. The holistic perspective includes the remaining abilities, personal factors, habits and routines, psychosocial factors, environmental factors, and social context of individuals in each stage of dementia. Specific examples pertaining to dining are provided to further define each aspect of a holistic approach to dining. The second section lists common remaining abilities and challenges pertaining to dining for individuals in each stage of dementia. The third section lists stage-specific, evidence-based interventions that OTPs can implement to support the dining experience of individuals in each stage of dementia. The interventions included in the stage-specific dining toolkit aim to help OTPs facilitate engagement and performance in all aspects of dining to the best of each IwD's abilities. The printed design enables OTPs to easily access, reference, and incorporate stage specific dining interventions into clinical practice in a SNF setting.</p>
Evidence Manual	<p><b>Description:</b> The evidence manual is a compilation of all the research articles that inform every intervention included in the online training module and stage-specific dining toolkit (refer to Appendix E). It is broadly divided into four domains of occupational therapy which include performance patterns, physical context, social context, and psychosocial factors. The manual includes the key findings of each article, the interventions they informed, and article citations.</p> <p><b>Rationale:</b> The evidence manual enables OTPs to directly access the evidence backing this project, as well as explore the quality and content of this evidence. The evidence manual is divided by the four stages of dementia and the domains of occupational therapy for easier navigation. Presenting a summary of key findings from each research article displays the supporting evidence in a way that is easy to process.</p>
Online Training Module	<p><b>Description:</b> The online training module is designed to educate OTPs on dining-related remaining abilities of individuals in all stages of dementia and recommendations of stage-specific interventions to support a holistic dining experience for IwD. The training module begins with an introduction and</p>



Component:	Description & Rationale:
	<p>overview of dementia and dining, describes a brief summary of each stage of dementia, then defines the six aspects of a holistic occupational therapy approach to dining. The main portion of the module, <i>Dining by the Stages</i>, includes stage-specific interventions that OTPs can use to address all aspects of dining for individuals in the end, late, middle, and early stages of dementia.</p> <p>The online training module operates on the Rise 360 Articulate platform. It can be accessed by computer, tablet, or smartphone and exported to a learning management system. The online training module incorporates written and aural text, images, videos, checklists, interactive scenarios, and flashcards, while short quizzes are embedded at the end of each lesson. The end of the online training module includes a summary and access to additional resources that link to the stage-specific dining toolkit and evidence manual.</p> <p><b>Rationale:</b> The online training module operates on the Rise 360 by Articulate platform due to its accessibility, customization, creative license, and multimodal approach to learning. The tools in Rise 360 by Articulate creates a highly interactive and user-friendly course that maximizes engagement. Quizzes enable learners to apply and assess their knowledge. The online training module can be accessed on multiple devices and operating systems, improving its usability and accessibility. Attaching printable resources to the online training module enables OTPs to download and quickly reference training materials, ultimately increasing the likelihood of incorporating knowledge from the training module into clinical practice.</p>

### Target Population

The primary target population for this project includes licensed occupational therapists and certified occupational therapy assistants who provide services for long-term care residents with dementia in SNFs. We partnered with Ensign Services to design and pilot this project. We seek to impact change by providing resources and education to therapy practitioners and the leadership team at Ensign Services, in order to promote the adoption of evidence based programming and educational resources. The secondary target population for this project includes IwD who receive services from OTPs in the SNF setting. We aim to improve the dining

experience of IwD in the SNF setting as a result of OTPs implementing holistic interventions included in the Dementia Dining Toolkit.

### **Project Development**

The project content was informed by our literature review, an interview with the Director of Rehab at an Ensign affiliated facility, and a needs assessment. A variety of journal databases were searched to evaluate peer-reviewed research articles published within the last 10 years that pertained to dementia and dining. Current literature related to dining in occupational therapy practice and IwD were gathered to understand current practice and were organized based on social context, psychosocial factors, performance patterns, and physical context. The Director of Rehab was interviewed via Zoom, to identify current practice of dining for IwD in a SNF. The needs assessment was created using a Google survey to understand OTPs knowledge, experience, and to explore current practice patterns when working with IwD at Ensign-affiliated SNFs (refer to Appendix A). Specific information was gathered regarding which assessments and interventions OTPs used to address dining, the extent to which each domain is addressed, and the ways OTPs utilize evidence-based practice. The needs assessment was shared to an OTP Facebook group and emailed to OTPs at Ensign affiliated SNFs; 12 responses were received.

The needs assessment results found that less than 25% of the time OTPs included dining, eating, or feeding in intervention plans for long-term care residents. When addressing dining, current OTP interventions often focus on caregiver training, providing adaptive equipment, and modifying the set-up or meal trays. Over 80% of OTPs reported they sometimes or rarely addressed socialization during meals, while 70% of OTPs reported they rarely utilized sensory strategies during mealtimes. On a five point scale, with one representing not so confident and five representing very confident, over 80% of respondents reported their confidence in creating

holistic, stage-specific dining interventions for residents with dementia as a three or less. However, when asked what creates a meaningful dining experience for residents with dementia, OTPs responses addressed all areas of dining. This included facilitating socialization, respecting resident autonomy, addressing sensory and physical elements of the environment, ensuring staff use appropriate communication strategies, and providing food to match each resident's personal preferences. Most respondents had a desire to improve the dining services at their facility. The needs assessment informed the decision to create a Dementia Dining Toolkit to provide OTPs with a resource supporting evidence-based interventions to improve the dining experience for IwD. The overall results found a need for caregiver training and support and environmental modifications. Based on the results from the needs assessment, the aim of this project was to educate OTPs and expand their use of the occupational therapy scope of practice to support all aspects of dining.

The stage-specific dining toolkit was created by compiling information from current research findings on evidence-based interventions that can be implemented with individuals in each stage of dementia. Interventions were categorized in two ways: (1) the dementia stage in which interventions were most appropriate and (2) the holistic aspects of dining addressed by each intervention. This ensured interventions included in the stage-specific dining toolkit addressed all holistic aspects of dining for each stage of dementia. The layout of the stage-specific dining toolkit was modified to create an additional five by seven inch mini toolkit. The mini toolkit was printed, laminated, bound into a ringlet, and mailed to therapy practitioners at Ensign affiliated SNFs. Summaries of all the research articles used to create the stage-specific dining toolkit were compiled into an evidence manual. After creating these resources, the online training module was developed.

A former capstone student provided education regarding how to use the Rise Articulate 360 platform to create an online training module. Additionally, existing modules were explored in the Rise platform to better understand available interactive components and design elements. Portions of the online training module, including summaries of dementia stages, were built on existing modules created by a capstone advisor and previous capstone groups. The remaining portions of the online training module were independently created with content from the Dementia Dining Toolkit. In developing the training module, multiple interactive components were incorporated to match diverse learning styles of OTPs. After creating and piloting the online training module, the content was revised based on feedback from an immediate post-training survey. The font size was revised, pictures were updated to better reflect the stages of dementia and SNF setting, and the readability and accessibility of print resources was improved.

### **Project Implementation**

The Dementia Dining Toolkit was initially piloted with the Therapy Experts for the Abilities Care Holistic Approach (TEACHAs), a group of Ensign-affiliated therapy practitioners who serve as field-based educators for other Ensign practitioners on the Abilities Care Approach to Dementias. The Dementia Dining Toolkit was exported to the Ensign Services learning management system, where therapy practitioners self-enrolled in the online training module. After piloting the program, the online training module and print resources were revised based on feedback collected in an immediate post-training survey (refer to Appendix B). Once finalized, The Dementia Dining Toolkit was disseminated to OTPs during the Long-term Care Think Tank, a training session of the Ensign Long-Term Care Committee. The Dementia Dining Toolkit was also presented; at the Occupational Therapy Association of California (OTAC) conference in October 2021; and on the Dominican of University of California's Dominican Scholar website.

Additionally, the Dementia Dining Toolkit was made available throughout Ensign Services by means of the organization's learning management system, which can be accessed at over 250 facilities in 13 states. In 2022, the Dementia Dining Toolkit will be disseminated during a poster presentation at the American Occupational Therapy Association (AOTA) Inspire conference in 2022.

*Table III. Project Timeline*

<b>Component</b>	<b>Target Date</b>
Initial needs assessment survey	February 2021
Review project overview and survey results with stakeholders	March 2021
Review resources and available course materials and solicit feedback from one to two stakeholders	March 2021
Provide online training module and resources to Ensign learning management system team for upload	May 2021
Pilot program to TEACHAs	May 2021
Send online follow up impact survey to TEACHAs who attended the pilot program and completed the online training module	Three months post-training
Compile satisfaction and follow up survey results	September 2021
Dissemination to Ensign Long-term Care Think Tank	October 2021
Dissemination to Occupational Therapy Association of California	October 2021
Summarize survey results and project overview in a poster presentation	September 2021
Mail laminated stage-specific dining toolkit to therapy practitioners at Ensign affiliated SNFs	December 2021
Dissemination to American Occupational Therapy Association	March 2022

### **Project Evaluation**

Participant knowledge was evaluated with quizzes embedded in the online training module. Learner satisfaction as well as the impact of the project were measured with two post-

training surveys. The primary topics of evaluation included therapy practitioner satisfaction with the training materials, dementia and dining related knowledge of therapy practitioners, and the impact of the training on the practice patterns of OTPs. The project evaluation process began during the initial pilot of the online training module, where nine therapy practitioners completed the course. Four quizzes were embedded throughout the online training module to assess the acquisition of knowledge regarding stage-specific dining interventions. A combination of multiple choice, true or false, and multiple response questions were included in the online training module. Participants received immediate feedback regarding their comprehension of the content upon answering each question.

A brief post-training survey was provided upon completion of the online training module (refer to Appendix B). The post-training survey assessed therapy practitioners' response to and satisfaction with the online training module. This included the relevance of the training content and whether the online training module was engaging. According to the post-training survey, eight out of nine therapy practitioners stated they strongly agree they learned new strategies to support the dining experience of individuals in each stage of dementia, and they would incorporate new dining interventions into their clinical practice. Nine out of nine therapy practitioners stated they would recommend the online training module to a colleague.

An impact survey was sent to therapy practitioners three months after completing the online training module to assess the long-term impacts of the training materials on clinical practice patterns (refer to Appendix C). Of the nine therapy practitioners who completed the online training module, three returned the impact survey. Questions on the survey were presented in a five-point likert scale. To evaluate the translation into practice, therapy practitioners rated their perceived value, relevance, and practicality of the Dementia Dining Toolkit. All

respondents either strongly agreed or somewhat agreed that: (1) the dining interventions added value to the care they provided, (2) the dining interventions were accessible and easy to employ in their clinical practice, and (3) they felt confident in using the strategies learned from the online training module. All respondents strongly agreed that the online training module was relevant to their clinical practice.

## Discussion

During the development of the project, the lack of clinical resources that address occupational therapy dining interventions in each stage of dementia motivated our team to create an evidence-based Dementia Dining Toolkit to support clinical practice. The original plan for this project was to create evidence-based best practice guidelines that would support OTPs in planning dining interventions for IwD. Creating this required a large body of occupational therapy-driven research that explored the effectiveness of specific dining interventions that support IwD in SNFs. The limited amount of research conducted with the lens of occupational therapy and pertinent to this narrow population stymied the development of best practice guidelines. The limitation of available occupational therapy literature prompted our team to create a Dementia Dining Toolkit that incorporates findings from a broader range of healthcare professionals. Through clinical reasoning, our team assessed research conducted by occupational therapy, nursing, psychology, dietitians, and other health professions to identify evidence-based interventions within the scope of OT practice. The variety of interventions that were identified in the literature and subsequently included in the Dementia Dining Toolkit are within OTPs' scope of practice and can be implemented when working with IwD in SNFs.

The domains of the OTPF-4 guided the organization of the literature on the occupation of dining to fit into the occupational therapy scope of practice (AOTA, 2020a). By organizing the content into specific domains, OTPs can have a better understanding on how each intervention is related to an individual's remaining abilities and the OTPF-4 (AOTA, 2020a). We implemented our project through dissemination of our online training module, toolkit, and evidence manual to practitioners working in SNFs. Based on feedback collected during our program evaluation and impact surveys, OTPs working in SNFs responded positively to educational resources that



support best practice. Thus, similar toolkits and training may be beneficial in other areas of occupation to expand the practice of OTPs in SNFs. In implementing this project, our aim was to provide OTPs with the tools to guide their clinical practice as they facilitate meaningful engagement in dining. We sought to address all aspects of dining by creating opportunities to incorporate lifelong habits and routines into the dining experience based on the remaining abilities of residents in each stage of dementia, as these are all within our occupational therapy scope of practice.

### **Implications for Occupational Therapy**

OTPs have the opportunity to facilitate meaningful engagement in one of the longest remaining abilities and improve the QoL of IwD. While self-care retraining and therapeutic exercise are both evidence-based interventions that promote ADL performance in this population, allocating a significant portion of resources to exercise illuminates the limited frequency in which OTPs utilize a holistic perspective to address occupations, such as dining. If OTPs expand their current practice patterns by implementing holistic, evidence-based interventions, they can increase participation in dining and may decrease the risk of excess disability for IwD.

### **Limitations**

The COVID-19 pandemic has made it difficult for residents and staff to interact, especially during mealtimes. This made it difficult to fully address the social aspect of dining, a core component of the Dementia Dining Toolkit, due to social distancing restrictions in SNFs. Ensign affiliated facilities follow the recommendations from the Centers for Disease Control and Prevention (CDC) and adhere to the guidance being transmitted from the Centers for Medicare and Medicaid Services (Ensign Group, Inc., 2020). According to the CDC (2020), staff and

visitors should wear a mask at all times to help minimize the spread of COVID-19. Masks make it difficult for residents to recognize who their caregiver may be and can pose a challenge during mealtimes. Staff would need to take extra measures to ensure they limit resident exposure to the virus and eat an adequate amount of food.

Although the Dementia Dining Toolkit will be easily accessible, the inability to complete in-person training, due to current social distancing restrictions, may limit the effectiveness of the education. The COVID-19 pandemic has strained the resources at SNFs, potentially affecting the ability of practitioners and facilities to allocate resources and time required to implement this project. Generating the buy-in of practitioners to modify their practice when utilizing the clinical practice guidelines adds to the challenge of program implementation. Effectively promoting the benefits of this program will be essential in mitigating the impact of these limitations.

## **Future**

For future direction, measuring the long term effects of the dining toolkit will assess the efficacy and impact of this project. Collecting long-term objective measures, such as changes in the weight of IwDs or the number of positive and negative mealtime behaviors over six months, will provide data that improves our understanding of the impact of the Dementia Dining Toolkit. Additionally, collecting perspectives directly from IwD and their loved ones before and after implementation of interventions from the Dementia Dining Toolkit may provide insight on areas that are still not addressed in the toolkit.

Implementing this project in a pandemic free environment, where OTPS are not inundated with new and ever-changing information, may increase the capacity of OTPs to engage in optional educational opportunities. Additionally, providing incentives, such as

continuing education units, may validate the content of the online training module and motivate OTPs to complete and integrate the training into their clinical practice.

A large portion of interventions included in the Dementia Dining Toolkit were informed by research conducted from the perspective of nursing or psychology. Even less research was available regarding interventions for individuals experiencing different stages of dementia. This elucidates the need for OTPs to expand their body of research to better support the dining experience of IwD in SNFs. Addressing dining interventions for each stage of dementia would be an important contribution to the field of occupational therapy, and healthcare as a whole.

OTPs have the ability to implement holistic, evidence-based interventions that facilitate engagement and performance in one of the longest remaining abilities of IwD. To empower OTPs to effectively use their full scope of practice to address dining, we will continue disseminating the Dementia Dining Toolkit with as many OTPs as possible, including at the American Occupational Therapy Association Inspire Conference in 2022.

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**APPENDIX A: Needs Assessment Survey**

## Dementia Dining Toolkit Survey

The purpose of our project is to provide occupational therapy practitioners with a dining toolkit and online training module to enhance the dining experience of individuals in all stages of dementia in skilled nursing facilities. This toolkit will translate evidence supported in current literature to holistic dining interventions that can be utilized by occupational therapy practitioners at Ensign affiliated facilities. In order to develop an effective dining toolkit that meets the needs at your facility, we are seeking your valuable insight.

### Disclaimer\*

We understand the impact COVID-19 has in nursing facilities. Please answer the best you can.

How long have you been working in a skilled nursing or long-term care facility?

- 1-2 years
- 2-4 years
- 5-9 years
- 10+ years

I am a: (select all that apply)

- Occupational Therapy Assistant
- Occupational Therapist
- Rehab Director
- Other:

When working with long term care residents, what percentage of your intervention plans include dining, feeding and/or eating?

- Less than 25 percent of the time
- 25 to 75 percent of the time
- Over 75 percent of the time
- Other:

What tools, assessments, or interventions do you use when addressing dining for residents with dementia?

Tools, Assessments, and Interventions	Not Often	Sometimes	Very often
Adaptive Equipment			
Modify Tray Set-up			
Caregiver Training			
Modify Food Type			
Socialization during meals			
Sensory Strategies			
Habits and Routines			
Standardized assessment of functional cognition			
Allen Cognitive Levels			

On a scale of 1 to 5, how would you rate your understanding of the stages of dementia (early, middle, late, and end stage)?

I would like more information      I have a good understanding of the ACL/Stages  
 1 2 3 4 5

How confident are you in creating stage specific dining interventions that address holistic factors with individuals with dementia?

Not so confident      Very confident  
 1 2 3 4 5

On a scale of 1 to 5, rate the overall quality of dining services for long term residents with dementia at your facility.

Could use improvement      Outstanding  
 1 2 3 4 5



In your opinion, what is the quality of services and support for the dining experience of residents with dementia at your facility?

<b>Services and Supports</b>	<b>Could use improvement</b>	<b>Satisfactory</b>	<b>Outstanding</b>
Physical objects and physical environment (i.e. adaptive plates or utensils, homelike environment, supportive seating)			
Use of effective communication strategies and cueing by staff providing direct resident care			
Resident routines (i.e. regularly scheduled mealtimes, washing hands before eating)			

Based on your experience, what creates a meaningful dining experience for residents with dementia at your facility?

What barriers do you experience in addressing dining for residents with dementia (e.g. physical or social environment, psychosocial factors, organizational barriers, etc.)?

Specifically, what would improve your ability to address the occupation of dining for residents with dementia?

Any additional comments or suggestions that may improve the dining experience of residents with dementia?

If you are willing to participate in a follow up interview (in May 2021) to further discuss the role of occupational therapy practitioners in supporting the occupation of dining for IwD in SNFs, please type your name and email below.

Thank you for participating in our short survey. We appreciate your time, input, and feedback.

If you have any questions or comments, please contact us.

Take care and be well!

**APPENDIX B: Post Training Survey**

Rate the following questions based on your experience completing the dining intervention training module to support individuals with dementia.

<b>Statements</b>	<b>Strongly agree</b>	<b>Somewhat agree</b>	<b>Neither agree nor disagree</b>	<b>Somewhat disagree</b>	<b>Strongly disagree</b>
I learned new strategies to support the dining experience of individuals in each stage of dementia.					
I can directly apply the information in this course to my clinical practice.					
The information provided in throughout this training module met my expectations.					
Overall, this training module was engaging and effective.					
I would recommend this training module to a colleague.					

Please share any comments or suggestions to improve this training.

In order to receive a \$5 Starbucks gift card for completing this survey, please write your email below. Your email will not be sold or shared with any parties.

**APPENDIX C: Three-Month Post-Training Survey**

## 3-Month Impact Survey

1. Following the TEACHA training on May 20th regarding holistic dining interventions supporting residents with dementia, select the following based on your use of the interventions.
  - a. I did not use the interventions
  - b. I attempted to use the interventions
  - c. I occasionally use the interventions
  - d. I regularly use the interventions
  
2. Policies or restrictions related to the COVID-19 pandemic limited me from implementing these interventions.
  - a. Yes
  - b. No
  
3. I added a new resident to my caseload that I would not have normally seen as a result of this training.
  - a. Yes
  - b. No
  
4. I attempted to create a facility wide intervention/change as a result of this training. If yes, please elaborate
  - a. Yes
  - b. No
  
5. If yes, were you successful in creating some change?
  - a. Yes
  - b. No
  - c. N/A
  
6. I tried a new dining intervention for individuals with dementia that was not included in the training.
  - a. Yes
  - b. No
  
7. If you did attempt to implement facility wide interventions or change at a facility wide level, were you successful?
  - a. Yes
  - b. No

8. Please select your answer to the following statements about the training module.

<b>Statements</b>	<b>Strongly Agree</b>	<b>Somewhat agree</b>	<b>Neither agree nor disagree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>
The Dementia Dining Learning Module was <b>RELEVANT</b> to clinical practice at my workplace					
I feel <b>CONFIDENT</b> in using the strategies I learned from the Dementia Dining Learning Module					
The dining interventions <b>ADDED VALUE</b> to the care I provided to residents.					
The interventions were <b>ACCESSIBLE</b> and easy to employ in my clinical practice.					

9. The dementia dining toolkit and training caused me to consider new aspects of OT interventions for dining.

- a. Strongly agree
- b. Somewhat agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree

10. Based on this training, I paid more attention to environmental facts, psychosocial factors, etc. in my dining interventions

<b>Domains of Dining</b>	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Neither Agree nor Disagree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>
Environmental Context					
Psychosocial Context					
Social Context					
Habits and routines (performance patterns)					
Personal (client) factors					

11. Please select your answer to the following statements.

<b>Statements</b>	<b>Strongly Agree</b>	<b>Somewhat agree</b>	<b>Neither agree nor disagree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>
Clients' dining experience (performance engagement, etc.) improved when I implemented interventions from this training module.					
I will incorporate dining interventions learned in this course into my future clinical practice.					

12. Any additional comments?

13. In order to receive a \$5 Starbucks gift card for completing this survey, please write your email below. Your email will not be sold or shared with any parties.

14. To receive a laminated copy or PDF version of the dementia dining toolkit, please write your preferred mailing address or email. You may enter both.

**APPENDIX D: Holistic Occupational Therapy Dementia Dining Toolkit**



## DINING-RELATED REMAINING ABILITIES

### HOLISTIC DINING TOOLKIT SUPPORTING INDIVIDUALS WITH DEMENTIA

#### Dining Related Remaining Abilities & Challenges for Each Stage of Dementia:

<b>Remaining Abilities for End Stage Dementia</b> <ul style="list-style-type: none"> <li>• May raise a cup to their mouth if placed in their hands or raised to their lips</li> <li>• Responds to sensory stimulation by sucking, salivating, or moving tongue and lips</li> <li>• Respond to stimulation of all five senses provided within 6-12 inches</li> <li>• Residents at this stage may communicate through facial expressions, eye gaze, and body language</li> </ul>	<b>Challenges for End Stage Dementia</b> <ul style="list-style-type: none"> <li>• May reflexively grab objects, difficulty releasing grasp</li> <li>• May bite down on anything in their mouth and have difficulty releasing</li> <li>• May resist care due to fear or disorientation</li> <li>• Unable to verbally express needs and desires, including when something is wrong or when in pain</li> <li>• Typically dependent on caregiver for feeding</li> <li>• Swallowing difficulties</li> </ul>
<b>Remaining Abilities for Late Stage Dementia</b> <ul style="list-style-type: none"> <li>• Interact with people and items within 12-18 inches of oneself</li> <li>• Follow one-step directions when given contextually relevant verbal, visual, and tactile cues, and up to 15-20 seconds to process information</li> <li>• Communicate with a few words &amp; respond to “yes” or “no” questions</li> <li>• Self-feed with finger foods</li> <li>• Engage in gross motor movements, including postural control, and may be able to walk</li> </ul>	<b>Challenges for Late Stage Dementia</b> <ul style="list-style-type: none"> <li>• May experience difficulty in eating and swallowing</li> <li>• Require extra time to process information and complete tasks</li> <li>• Difficulty communicating, following directions, and making simple decisions</li> <li>• May resist eating if rushed or pressed to eat when not hungry</li> </ul>
<b>Remaining Abilities for Middle Stage Dementia</b> <ul style="list-style-type: none"> <li>• Self-feed when all dining supplies are laid out and caregivers provide one-step directions using multi-sensory cues to sequence activities</li> <li>• Understand simple and short verbal phrases such as, “Pick up your fork.”</li> <li>• Appropriately use common objects, such as cups, forks, and spoons</li> <li>• May communicate their wants and needs with simple phrases</li> </ul>	<b>Challenges for Middle Stage Dementia</b> <ul style="list-style-type: none"> <li>• Overstimulation of environment (visual or auditory) may impair sequencing during mealtimes</li> <li>• May exhibit emotional outbursts due to difficulty communicating needs while waiting for meals</li> <li>• Difficulty learning new tasks</li> <li>• Disorientation (may wander)</li> <li>• May not recognize family members</li> <li>• May experience prolonged processing and decreased attention</li> </ul>
<b>Remaining Abilities for Early Stage Dementia</b> <ul style="list-style-type: none"> <li>• May problem solve through trial and error with assistance</li> <li>• Rely on old habits and routines to support independence</li> <li>• Participate in conversations</li> <li>• Benefit from striking visual cues</li> <li>• Learn new information and skills with repetition</li> <li>• Often independent in functional mobility to transition to communal dining area</li> <li>• Sequence and complete familiar activities with minimal assistance</li> </ul>	<b>Challenges for Early Stage Dementia</b> <ul style="list-style-type: none"> <li>• Impaired judgement and safety awareness</li> <li>• May exhibit exit-seeking behavior, looks for ways to leave</li> <li>• May notice mistakes, but be unable to problem solve</li> <li>• Difficulty preparing food (e.g. making a sandwich)</li> <li>• May forget dietary restrictions</li> <li>• May experience difficulty following social norms</li> <li>• May be easily aggravated and may experience difficulty with perspective taking</li> </ul>

Allen, C.K., Earhart, C.A., & Blue, T. (1995). *Understanding Cognitive Performance Modes*. Ormond, FL: Allen Conferences, inc.

# END STAGE DEMENTIA

## HOLISTIC DINING TOOLKIT SUPPORTING INDIVIDUALS WITH DEMENTIA

### Dining Interventions to Support Residents in End Stage Dementia

*Feeding and eating are some of the longest remaining abilities that enable participation in a familiar activity. Maintaining dining-related routines creates daily structure and predictability, while also providing comfort through pleasant sensory experiences. Below are some helpful ideas to support residents' dining routines.*

- Provide hand over hand assistance and frequent multi-sensory cues to continue eating and drinking
- Educate caregivers and loved ones on adaptive equipment that supports participation in dining. For example, flat bowl-shaped spoons facilitate lip closure, coated spoons protect lips and teeth from biting reflexes, and nosey cups maintain neutral head posture when drinking liquids.
- Use familiar smells, foods, drinks, and lighting that mimic a home environment to promote engagement in feeding and eating. Sensory input provides contextual cues that help residents tap into long-term, procedural memory.
- Create opportunities for engagement and participation in dining-related activities to the best of each resident's abilities

#### ***Modify food and the environment to facilitate residents' remaining abilities and promote engagement while eating***

- Use chairs and seating that provide adequate postural support for upright positioning when eating
- Establish environmental set up. Place food items within 6-12 inches and caregivers sitting directly in front of residents when assisting
- Establish a quiet environment for eating
- Encourage soft foods or liquids to reduce energy required for chewing

***Establish a sensory stimulation program to create a pleasant experience and provide opportunities for a response to sensory stimuli.***

#### **Prevent Sensory Deprivation**

- Sensory stimulation focused on oral motor input creates the opportunity to actively engage in a pleasant activity and can prevent sensory deprivation. Along with taste, eating provides proprioceptive input from oral motor movements and tactile stimulation from the texture of foods.
- Teach loved ones and caregivers to utilize sensory strategies to maintain a sense of connection with residents

#### **Oral Motor Sensory Input**

- Teach caregivers sensory strategies to maintain tongue strength
- Apply sticky food to lips to stimulate taste receptors and maintain tongue strength
  - Honey, peanut butter, and chocolate syrup are familiar tastes and readily available
- Suck on popsicles
  - Cold sensations and sweet foods can increase arousal
  - Proprioceptive input from sucking can have a calming effect

#### **Olfactory Stimulation**

- Introduce strong scents 30 minutes before meals to stimulate appetite and optimize arousal.
- Consider the calming or alerting properties of familiar scents when implementing olfactory stimulation
  - Calming scents: Herbal teas, chocolate
  - Alerting scents: Ginger, basil, citrus, rosemary, cinnamon, peppermint, coffee
  - **CAUTION:** Some individuals may be allergic or hypersensitive to scents and chemicals. Proceed with caution.

***Educating caregivers and loved ones to implement individualized sensory strategies during visits may create a sense of connection through a nurturing and positive experience.***

*Utilizing respectful language helps retain the dignity and sense of self-worth of all residents. Residents retain the ability to communicate through facial expressions, eye contact, touch, and music. Communicate with multisensory cues and short verbal commands such as, "Bite your fish stick."*

# LATE STAGE DEMENTIA

## HOLISTIC DINING TOOLKIT SUPPORTING INDIVIDUALS WITH DEMENTIA

### Dining Interventions to Support Residents in Late Stage Dementia

*Residents may frequently feel disconnected as a result of their cognitive decline.*

*This can make it increasingly difficult for them to interact with others and their environment.*

***Create a routine to help facilitate a smooth transition to mealtimes and recognition of the start of dining.***

- Listen to familiar music for 30 minutes before dining to optimize arousal
- Wash hands before walking to the dining area
- Once residents are seated, ring a bell to announce the start of meals
- Place a napkin on the lap to prepare for eating

***To maintain lifelong habits of feeding, encourage residents to self-feed to the best of their ability.***

- Educate and train staff to provide multi-sensory cues and allow for extra processing time
- Place one bowl and one spoon within 12 inches of a resident to reduce visual stimulation and simplify decision making when feeding
- Encourage self-feeding with finger foods if utensils are difficult to manage
- Provide hand under hand assistance during feeding, with gentle tactile support under the forearm, to maximize resident control during the feeding process

***Adaptive equipment can help residents engage in lifelong activities and support their dining routine. Provide adaptive equipment that supports self-feeding only if residents can intuitively use the equipment.***

- Plate guards and bowl-shaped dishes simplify the task of scooping food onto a spoon
- Large handled or coated spoons enable utensil use with a gross grasp and protect lips and teeth
- Nosey cups may reduce the risk of aspiration due to poor positioning, while vacuum cups slow the rate of liquid consumption
- Dycem mats prevent dishes from slipping

***Dining in a social environment can facilitate social interaction for some residents, while others may be over-stimulated in communal settings. Modify aspects of the environment to meet individual resident needs.***

#### **Environmental Factors:**

- Seat residents with hyper-sensitivities in quieter and less chaotic areas
- Provide adequate lighting without glare. Natural and bright lights may increase arousal levels.
- Maintain a comfortable temperature – set the thermostat to 78.4F to maximize engagement and feeding performance during meals.
- Ensure residents have adequate postural security to allow them to focus on eating during meals - wheelchairs that fit under tables enable residents to relax and enjoy meals.
- Limit seating to four residents per table to minimize distractions
- Provide ample space between residents – residents should not be able to move into another resident's space

#### **Social Interaction:**

- Encourage residents to sit directly across one another to promote social interaction
- Provide verbal, visual, and tactile cues to facilitate continued attention to the dining experience
- When able, encourage staff to sit with residents to create a positive social experience

***Consider psychosocial factors that support resident autonomy and well-being.***

- Educate staff on the importance of respectful language to prevent feelings of inadequacy related to a loss of independence
  - Refer to bibs as napkins or clothing protectors
  - Refer to feeders as dining companions
- Provide meal cards with simple pictures of 2-3 food options to support decision making
- Provide mid-afternoon snacks to help residents feel safe and comforted, mitigating the impact of 'sundowning'
- Educate caregivers on the importance of creating a positive dining experience focused on engagement, not solely nutritional needs



## MIDDLE STAGE DEMENTIA

### HOLISTIC DINING TOOLKIT SUPPORTING INDIVIDUALS WITH DEMENTIA

#### Dining Interventions to Support Residents in Middle Stage Dementia

*Residents are able to use familiar objects and engage in simple familiar actions when they are set up for success by having the materials they need and cues for what to do next. Caregivers and families tend to underestimate the abilities of residents in this stage. Excess disability may occur when a resident is made more disabled, because of environmental barriers or ineffective caregiving approaches.*

***Create and maintain familiar routines before, during, and after eating to provide residents with a sense of independence and control. Knowing what to expect and actively participating to the best of their ability can foster a sense of comfort.***

- Once all residents are seated, ring a bell and announce which meal is being served to orient residents
- Establish a sequence of activities at the table before the main meal is served. Wash hands with a warm towelette, encourage residents to arrange their dining area, then pass a basket with individually wrapped food
- Provide a simple menu to support decision making, and provide favorite and culturally relevant options
- Create a routine that facilitates active engagement in feeding such as utilizing adaptive equipment, reducing the number of items on a plate, or providing one food item at a time
- Encourage resident to clear their table after eating meals

***Consider residents' environment and sensory experience to promote independence during dining.***

**Promote Independence:**

- Set personal alarms or post daily schedules to remind residents of mealtimes
- Place signs with pictures and names of residents to support independence in locating designated seat

**Modify Personal Dining Area:**

- Reduce visual clutter – keep individual dining area free of unnecessary items
- Place one food item at a time if a resident has difficulty initiating feeding
- Utilize striking visual cues or contrasting colors to improve visual attention to meals

**Create a Home-like Environment:**

- Use warm-colored tablecloths and napkins
- Set tables with a simple and short centerpiece

**Sensory Strategies:**

- Adjust auditory and visual stimulation to enable successful engagement, and decrease maladaptive behaviors
- Promote awareness and orientation with food aroma, a clock, meal menu, table settings, condiments, personalized items, and memorabilia

***Support social engagement before, during, and after dining.***

- Encourage family visits and face to face seating to maintain social connection
- Educate loved ones and caregivers on expected behaviors regarding residents in middle stage and strategies to maintain a sense of connectedness through talking, laughter, and enjoying meals together
- Engage small groups of familiar residents in social activities that initiate conversations
  - Place a reminiscence or conversation card on each table. Cue residents to take turns sharing stories then passing the card around the table.
  - Share memory books, reminiscence boards, or photos of past roles and occupations
  - Remember – Listening is a form of social participation. It is okay if the resident doesn't answer questions.

***Support resident interactions during dining.***

- Respect the independence of residents who appear to be struggling with a task. Ask if they would like assistance, rather than assuming so.
- Support the independence of residents who wander during mealtimes. Provide finger foods that can be eaten when away from the table.
- Honor personal and cultural identities by celebrating birthdays and culturally relevant holidays. Encourage residents to sing songs like, "Happy Birthday," or recite a prayer before eating.

## EARLY STAGE DEMENTIA

### HOLISTIC DINING TOOLKIT SUPPORTING INDIVIDUALS WITH DEMENTIA

#### Dining Interventions to Support Residents in Early Stage Dementia

*Residents rely heavily on routines to keep them feeling capable and in charge of their lives. Many individuals in this stage reside in their own home and not in a nursing home. Consider their remaining abilities, maintain their routines, and provide a sense of autonomy during dining.*

*Residents may experience trauma and grief related to the transition to a skilled nursing facility from their own homes. To support individuals in their transition, it is important to consider their lifelong habits and routines regarding everyday activities, including dining. Supporting habits and routines during the transition reflects our respect for their autonomy. Routines also facilitate a positive and calming environment and promote a sense of independence.*

***Residents come with a lifetime of rituals and routines when transitioning from their home to a skilled nursing facility. Take the time to discover your residents' habits and routines for dining.***

- Start a mealtime ritual
  - Announce the start of mealtimes, ring a bell before meals
  - Encourage residents to set their table, prepare simple foods, and clean up after meals.
- Establish a structured dining routine with external memory aids to facilitate independence and control over one's daily routine
  - Set personal alarms to prepare for walking to the dining area
  - Post a schedule with mealtimes, group events, and other activities
- Encourage residents to choose their preferred meals
- Embrace resident culture and religious differences when dining

***Establish an environment that promotes a sense of comfort, warmth, and familiarity.***

- Create a home-like environment
- Offer their favorite foods to promote opportunities for normalcy
- Place cards with the name or picture of each resident on their table or chair to enable residents to locate seats
- Play music to create a calm environment when dining. This may also be another opportunity to get to know the residents and compile a resident playlist of their favorite music
  - Suggestions: Slow, rhythmic, ambient noise, classical, or personal choice of music
- Provide coffee, tea, or water pitchers for each table at meals to promote autonomy to serve themselves

***Residents in early stage may be fairly independent in their activities of daily living, including dining. Maintaining social opportunities may decrease isolation. Encourage loved ones and caregivers to participate during mealtimes or foster social opportunities amongst the residents.***

- Encouraging family and/or friends to join for meals
- Maintain a regular mealtime seating arrangement to allow for residents to nurture positive relationships and engage with familiar faces
- Educate the staff on use of respectful language
- Allow for social interactions before meals are served (e.g. answer prompts on a reminiscence card to spur conversations before, after, or during mealtimes)
- Celebrate birthdays, common holidays, and embrace resident culture and religious differences when dining

# A HOLISTIC LOOK AT DINING

## HOLISTIC DINING TOOLKIT SUPPORTING INDIVIDUALS WITH DEMENTIA

Dining enables residents to socialize, stimulate their senses, and participate in a familiar functional activity that brings meaning and enjoyment to their daily life.

### Personal (Client) Factors

Personal factors – including preferences, values, beliefs, and spirituality – may be overlooked during mealtimes as intake is often prioritized.

### Remaining Abilities

Individuals in each stage of dementia retain various skills and abilities. Identifying the things residents can do and using a strengths-based approach enables practitioners to maximize engagement.

### Psychosocial Factors

Healthcare practitioners have the opportunity to promote resident self-efficacy and autonomy by creating positive dining experiences. Conversation cards or modified menus can prevent a sense of isolation or loneliness attributable to dementia-related communication deficits.

### Habits and Routines (Performance Patterns)

Performance patterns are habits, routines, roles, and rituals; are cultivated over a lifetime; and contribute to social norms regarding dining. This may include the routine of setting the dinner table for family or the ritual of praying before eating.

### Environmental Factors

Environmental factors include the physical characteristics of the built environment and the sensory aspects of dining and eating. This includes spacing of furniture in the dining room, visual and auditory stimuli, food delivery style, plates and utensils, lighting, and the smell of food.

### Social Context

The social context consists of relationships with, and expectations of, individuals and groups. Cultural norms and personal preferences influence expectations, such as residents participate in mealtime conversations or engage in their own self feeding. Caregivers play a vital role in creating a social atmosphere that supports all residents.

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Dominican University of California • 2021

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**APPENDIX E: Evidence Manual**

# **Evidence Manual for Holistic Occupational Therapy Dining Interventions to Support Individuals with Dementia**

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**Purpose**

This manual provides brief summaries of the research and evidence supporting interventions included in the holistic dining toolkit. The purpose of the evidence manual is to provide occupational therapy practitioners with the tools and research to expand their knowledge and clinical practice to improve the dining experience of individuals in all stages of dementia in skilled nursing facilities.

<b>End Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
Performance Patterns (Habits and Routines)	<p>Utilizing adaptive equipment, hand over hand assistance, modifying diet, and providing multi-sensory cues will support individuals with dementia in end stage. Individuals in end stage dementia may also require frequent reminders to initiate and sustain action of eating and drinking (Allen, Earhart, &amp; Blue, 1995).</p> <p>Drinking liquids are associated with greater intake when eating in comparison to solid foods (Liu, Williams, Batchelor-Murphy, Perkhounkova, &amp; Hein, 2019).</p>	<p>Provide hand over hand assistance and frequent multi-sensory cues to continue eating and drinking</p> <p>Educate caregivers and loved ones on adaptive equipment that supports participation in dining. For example, flat bowl-shaped spoons facilitate lip closure, coated spoons protect lips and teeth from biting reflexes, and nose cups maintain neutral head posture when drinking liquids.</p> <p>Use familiar smells, foods, drinks, and lighting that mimic a home environment to promote engagement in feeding and eating. Sensory input provides contextual cues that help residents tap into long-term, procedural memory.</p>
Physical Context	<p>Educating caregivers to implement individualized programs designed to maintain the skills of individuals with severe dementia, including appropriate strategies for cueing, can result in lower caregiver burden and increase resident participation (Champagne, 2018).</p> <p>Interventions focused on matching the demand of activities to the highest remaining cognitive and physical abilities of each individual with dementia assists them in maintaining independence longer (Padilla, 2011).</p> <p>Sensory stimulation aims to create a pleasant experience, reduce anxiety and depression, and increase social interaction. It creates the opportunity for loved ones and caregivers to maintain a sense of connectedness to individuals with dementia.</p> <p>Implementing a sensory stimulation</p>	<p>Use chairs and seating that provide adequate postural support for upright positioning when eating</p> <p>Establish environmental set up. Place food items within 6-12 inches and encourage caregivers to sit directly in front of residents when assisting during mealtimes.</p> <p>Establish a calm and quiet environment for eating</p> <p>Encourage consumption of soft foods or liquids to reduce energy required for chewing</p> <p>Establish a sensory stimulation program focused on oral motor input. Sensory stimulation creates opportunities for active engagement in a pleasant activity and can prevent sensory deprivation</p> <ul style="list-style-type: none"> <li>• Apply sticky food to lips to</li> </ul>

<b>End Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
	<p>program focused on oral senses, even when individuals are not on a regular diet, may prevent sensory deprivation (Champagne, 2018).</p> <p>Noise levels exceeding 40-45 dB are associated with negative outcomes, and noise levels above 55-90 dB triggered a stress response, evidenced by an increase in catecholamine and cortisol (Garre-Olmo, López-Pousa, Turon-Estrada, Juvinyà, Ballester, &amp; Vilalta-Franch, 2012).</p>	<p>stimulate taste receptors and maintain tongue strength</p> <ul style="list-style-type: none"> <li>• Suck on popsicles to provide calming proprioceptive input</li> <li>• Introduce strong scents 30 minutes before meals to stimulate appetite and optimize arousal. Consider the calming or alerting properties of familiar scents when implementing olfactory stimulation.</li> </ul>
<b>Social Context</b>	<p>Respecting personal abilities, values, preferences, needs, and promoting social interaction are components that help to create a person-centered environment during mealtimes (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Educating staff on the use of respectful language when engaging with individuals with dementia and encouraging engagement has shown to have positive effects during the dining experience (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Occupational therapy practitioners can individualize programs that utilize an individual's remaining abilities. Educating caregivers and loved ones to independently implement these programs may increase social interactions between individuals with dementia and their loved ones (Padilla, 2011).</p>	<p>Educating staff on use of respectful language to reduce objectifying and infantilizing the dining experience</p> <p>Educate caregivers and loved ones to implement individualized sensory strategies during visits to create a sense of connection through a nurturing and positive experience.</p>
<b>Psychosocial Context</b>	<p>Focusing on normalcy as well as respectful language and actions demonstrates respect for an individual's dignity and decreases infantilization. For example, placing a napkin on the lap rather than using it</p>	<p>Create opportunities for engagement and participation in dining-related activities to the best of each resident's abilities. Establishing sensory stimulation programs and suggesting effective communication strategies</p>

<b>End Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
	<p>as a bib decreases infantilization. Additionally, avoiding the word “feeder” when staff are assigned to assist residents with feeding promotes person-centered care (Hung, Chaudhury, &amp; Rust, 2016).</p>	<p>enables residents in end stage dementia to have positive and nurturing experiences.</p> <p>Encourage engagement in dining and allow for the opportunity to feed one’s self even if they may not be neat.</p> <p>Focus on quality of life and engagement, rather than only eating a balanced diet</p>

<b>Late Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
Performance Patterns (Habits and Routines)	<p>Allow two to three times more time to eat, use adapted cups, order preferred finger foods, and limit food options to three choices to support individuals' autonomy and ability to self-feed in late stage dementia (Allen, Earhart, &amp; Blue, 1995).</p> <p>Beginning mealtime rituals, structuring mealtime interactions, and individualizing the dining experience promote and maintain eating performance of residents with dementia (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson, 2018).</p> <p>Under hand feeding enables residents with dementia to control the pace of feeding when assisted by caregivers. Underhand feeding resulted in fewer negative behaviors than overhand feeding (Batchelor-Murphy, McConnell, Amella, Anderson, Bales, Silva, Barnes, Beck, &amp; Colon-Emeric, 2017).</p> <p>Interventions focused on matching the demand of activities to the highest remaining cognitive and physical abilities of each individual with dementia assists them in maintaining independence longer. Simple adaptive equipment can be used to support feeding performance if it does not modify the task in a way that causes confusion (Padilla, 2011).</p> <p>Providing adaptive feeding utensils that eliminate the need to grasp can improve performance of and participation in self-feeding for individuals with limited hand range of motion (McDonald, Levine, Richards, &amp; Aguilar, 2016).</p>	<p>Create a routine to help facilitate a smooth transition to mealtimes and recognize the start of dining</p> <ul style="list-style-type: none"> <li>• Listen to familiar music for 30 minutes before dining to optimize arousal</li> <li>• Wash hands before walking to the dining area</li> <li>• Once residents are seated, ring a bell to announce the start of meals</li> <li>• Place a napkin on the lap to prepare for eating</li> </ul> <p>Maintain lifelong habits of feeding by encouraging residents to self-feed to the best of their ability</p> <ul style="list-style-type: none"> <li>• Educate and train staff to provide multi-sensory cues and allow for extra processing time</li> <li>• Place one bowl and one spoon within 12 inches of a resident to reduce visual stimulation and simplify decision making when feeding</li> <li>• Encourage self-feeding with finger foods if utensils are difficult to manipulate</li> <li>• Provide hand-under-hand assistance during feeding, with gentle tactile support under the forearm, to maximize resident control during the feeding process</li> </ul> <p>Adaptive equipment can help residents engage in lifelong activities and support their dining routine. Provide adaptive equipment that supports self-feeding only if an individual can intuitively use the equipment</p> <ul style="list-style-type: none"> <li>• Plate guards and bowl-shaped dishes simplify the task of scooping food onto a spoon</li> </ul>

Late Stage Dementia		
Domains of Dining	Key Findings from Research	Related Interventions
		<ul style="list-style-type: none"> <li>• Large handled or coated spoons enable utensil use with a gross grasp and protects lips and teeth</li> <li>• Nosey cups may reduce the risk of aspiration due to poor positioning, while vacuum cups slow the rate of liquid consumption</li> <li>• Dycem mats prevent dishes from slipping</li> </ul>
Physical Context	<p>High levels of noise can impact the ability to socialize in communal areas. Exposing individuals with severe dementia to excessive noise may increase confusion or trigger a stress response, which can decrease social interaction. Lighting and temperature impact the ability to perform daily activities, like feeding. Poor lighting and hot or cold room temperatures can result in negative mood and decreased quality of life (Garre-Olmo, López-Pousa, Turon-Estrada, Juvinyà, Ballester, &amp; Vilalta-Franch, 2012).</p> <p>Environmental modifications can reduce unnecessary stimulation and support individuals with dementia when dining. Modifications include reducing unnecessary noise, eliminating clutter, creating a homelike environment, and facilitating mealtime routines (Douglas &amp; Lawrence, 2015).</p> <p>Controlling environmental stimulation when dining, including formal seating arrangements and the number of residents at a table, promotes eating performance of residents with dementia (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson, 2018).</p>	<p>Modify aspects of the physical environment to meet the individual needs of each resident</p> <ul style="list-style-type: none"> <li>• Seat individuals with hyper-sensitivities in quieter and less chaotic areas</li> <li>• Provide adequate lighting without glare</li> <li>• Establish supportive upright posture during meals</li> <li>• Reduce number of individuals sitting at each table</li> <li>• Provide ample space between each individual</li> </ul> <p>Maintain a room temperature of 78.4F to maximize engagement and feeding performance during meals.</p>
Social Context	Caregivers can modify the demand of an activity by providing short, clear	Encourage residents to sit directly across one another to promote social

<b>Late Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
	<p>directions that match the cognitive abilities of each individual (Padilla, 2011).</p> <p>Mealtimes create the opportunity for staff to engage residents in eating activities and meaningful social interactions (Keller, Carrier, Slaughter, Lengyl, Steele, Duizer, Morrison, Brown, Chaudhury, Yoon, Duncan, Boscart, Heckman, &amp; Villalon, 2017).</p>	<p>interaction</p> <p>Provide verbal, visual, and tactile cues to facilitate continued attention to the dining experience, including feeding and eating</p> <p>When able, encourage staff to sit with residents to create a positive social experience</p> <p>Identify seating, including wheelchairs, that enables residents to sit at tables during meals</p>
Psychosocial Context	<p>While staff largely view the use of respectful language as important, continued support and education are needed to ensure staff are knowledgeable and proficient in providing person-centered care (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Individuals with dementia at care facilities may experience increased confusion or disorientation during afternoon staffing changes. Participating in familiar activities that require minimal staff support may minimize negative feelings or behaviors (Forbes and Gresham, 2011).</p> <p>Positively engaging residents during mealtimes and person-centered care may support improved food intake (Keller, Carrier, Slaughter, Lengyl, Steele, Duizer, Morrison, Brown, Chaudhury, Yoon, Duncan, Boscart, Heckman, &amp; Villalon, 2017).</p> <p>The verbal interactions influence the amount of food individuals with severe dementia intake during meals. Continuous positive verbal</p>	<p>Educate staff on the importance of respectful language to prevent feelings of inadequacy related to a loss of independence. For example, refer to bibs as napkins or clothing protectors, and feeders as dining companions</p> <p>Provide meal cards with simple pictures of 2-3 food options to support decision making</p> <p>Eating a mid-afternoon snack can help residents feel safe, secure, and comforted, mitigating the impact of “sundowning.”</p> <p>Educate caregivers on the importance of creating a positive dining experience focused on engagement, not solely nutritional needs</p>

<b>Late Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
	interactions increase the amount of food intake for individuals with severe dementia, while negative verbal interactions decrease their amount of food intake (Liu, Perkhounkova, Williams, Batchelor, & Hein, 2020).	



<b>Middle Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
Performance Patterns (Habits and Routines)	<p>Use verbal and physical cues to promote eating independence. Be aware of special dietary needs (Allen, Earhart, &amp; Blue, 1995).</p> <p>Place signs with IwD's picture/name at table to assist with independent seat finding (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018).</p>	<p>Create and maintain routines</p> <ul style="list-style-type: none"> <li>• Announce the start of meals</li> <li>• Seating arrangements with names and pics</li> <li>• Establish a sequence of activities</li> <li>• Menu choices</li> <li>• Utilize adaptive equipment during dining</li> <li>• Residents clear table after meals</li> </ul> <p>Provide cues to encourage eating</p>
Physical Context	<p>Provide adaptive equipment and an environment to support independence. Make sure food temperature and size is appropriate for proper eating (Allen, Earhart, &amp; Blue, 1995).</p> <p>Create an environment that promotes awareness and orientation (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Sensory strategies include reducing noise and having them sit in a quiet area of the dining room (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Serving meals on dishes that contrast the table, such as red or blue plates on a neutral tablecloth, can increase the intake of both solid foods and liquids (Douglas &amp; Lawrence, 2015).</p> <p>Other client-centered approaches could entail utilizing familiar smells, foods, drinks, music, and lighting to mimic their home environment that supports individuals in end stage dementia (Champagne, 2018; Fetherstonhaugh et al., 2019).</p>	<p>Promote Independence</p> <ul style="list-style-type: none"> <li>• Alarms/ reminders of mealtime</li> <li>• Name and pictures for designated seating area</li> </ul> <p>Modify Personal dining area</p> <ul style="list-style-type: none"> <li>• Reduce visual clutter</li> <li>• Modify individual table settings with visual cues and contrasting colors to improve visual attention</li> </ul> <p>Create Home Like Environment</p> <ul style="list-style-type: none"> <li>• Use warm colors</li> <li>• Simple and short centerpieces</li> </ul>
Social Context	<p>Have them wait for everyone to be seated before eating and train for desirable social manners (Allen, Earhart, &amp; Blue, 1995).</p>	<p>Encourage residents to bring storyboards or memory books to facilitate social interaction before meals</p>

<b>Middle Stage Dementia</b>		
<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
	<p>Proper training should be required to educate family/visitors and staff on expected behaviors in regard to IwD (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018).</p> <p>Educating staff on the use of respectful language (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Culturally relevant holidays create a sense of connectedness and community through social interaction. Occupational therapy practitioners can modify the social and physical environment to enable participation in meaningful holiday celebrations (Luboshitzky &amp; Gaber, 2001).</p>	<ul style="list-style-type: none"> <li>• Share photos of past roles, occupations, and memorabilia</li> </ul> <p>Educate family, visitors, and staff of expected behaviors and use of respectful language</p> <p>Encourage visits from family and loved ones</p> <p>Celebrate different cultures and relevant holidays ie) sing “Happy Birthday”</p>
Psychosocial Context	<p>Create opportunities for autonomy by having consistent food service staff and open kitchen supported IwD better control of what and how much to eat (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Replacing terms such as bib and feeder increases normal, respectful language (Hung, Chaudhury, &amp; Rust, 2016).</p>	<p>Support residents’ remaining abilities</p> <ul style="list-style-type: none"> <li>• Ask if they would like assistance</li> <li>• Provide finger foods to support independence</li> <li>• Educate staff on respectful language</li> </ul>

Domains of Dining	Key Findings from Research	Related Interventions
Performance Patterns (Habits and Routines)	<p>Individuals in the early stage may ask for help with recognized errors like spillage from overfilled cups. At this stage individuals may have difficulty waiting for food to cool down or be served but will understand explanations for delays. Remaining abilities allow them to follow food taboos, and own food rituals and routines. (Allen, Earhart, &amp; Blue, 1995)</p> <p>Start a mealtime ritual to improve orientation, including announcing the start of mealtimes and ringing a bell before meals (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018).</p> <p>Place signs with IwD's picture and name at the table to assist with independent seat finding (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018).</p> <p>Support independence in mealtime routines with the use of external memory aids including diaries, calendars, lists, and notes (Genoe, Keller, Martin, Dupuis, Reimer, Cassolato, &amp; Edward, 2012).</p> <p>Help prep dining table, food and clean up (Du Toit, Baldassar, Raber, Millard, Etherton-Ber, Buchanan, Du Toit, Collier, Cheung, Webb, &amp; Lovarini, 2020).</p> <p>Provide daily tea times that offer decaf and herbal teas (Champagne, 2018).</p>	<p>Create a mealtime ritual before each meal, like ringing a bell before meals, setting their table area, and washing hands before meals</p> <p>Use external memory aids (diaries, calendars, lists, notes) to support independence in mealtime routines</p> <p>Post a daily schedule with mealtimes</p> <p>Provide daily tea times (decaf and herbal teas)</p>
Physical Context	<p>Requires safety reminders to check temperatures of hot food and liquids. Assist with new containers or assistance to cut food. Simplified AE accommodating may be used (e.g.,</p>	<p>Create a homelike environment such as letting individuals use familiar dining ware and cups, and flower arrangements on tables</p> <p>Plan for special dietary needs; give</p>

Domains of Dining	Key Findings from Research	Related Interventions
	<p>dycem, plate guard, scoop dishes, side-cutting fork, build up/cuffed/weighted utensils, adapt drinking cups). May not adhere to special dietary restrictions; requires reminders to reinforce selecting foods and beverages within dietary needs (Allen, Earhart, &amp; Blue, 1995).</p> <p>Create a homelike environment (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018)</p> <p>Promote desire to eat with pleasant smells of food (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018)</p> <p>Offer favorite foods (Greener, Poole, Emmett, Bond, Louw, &amp; Hughes, 2012).</p> <p>Have a tea/coffee bar or water pitchers on each table at meals (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Signs with name and picture place on table. Chair to find their seats (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018).</p> <p>Music (slow rhythmic/ ambient noise, classical music) (Cohen, Post, Lo, Lombardo, &amp; Pfeffer, 2020).</p>	<p>reminders of foods to avoid or specialized menu card for a reminder of dietary restrictions (ie, sugar free, low cholesterol)</p> <p>Play soft music in the dining area (slow rhythmic/ambient noise, classical music)</p> <p>Dining environment smell of food to promote the desire to eat</p> <p>Leave plenty of room between people at each table to avoid individuals moving into another person's space or touching their food</p>
Social Context	<p>Train in highly desired social manners (Allen, Earhart, &amp; Blue, 1995).</p> <p>Encourage family to join for meals, maintain regular mealtime seating arrangement to allow residents nurture positive relationships--familiar faces (Padilla, 2011).</p> <p>Educating staff on the use of respectful language (Hung, Chaudhury, &amp; Rust, 2016).</p>	<p>Encourage seating that will support and allow social interaction</p> <p>Have loved ones, family members, and staff sit with residents whenever possible</p> <p>Begin meals with reminiscence cards to help facilitate conversation</p> <p>Allow extra time before meals are served for social interactions</p> <p>Embrace resident culture and religious</p>

Domains of Dining	Key Findings from Research	Related Interventions
	<p>Allow social interaction before meals are served (Palese, Bressan, Kasa, Meri, Hayter, &amp; Watson 2018).</p> <p>Celebrate birthdays- sing along and embrace resident culture and religious differences (Du Toit, Baldassar, Raber, Millard, Etherton-Ber, Buchanan, Du Toit, Collier, Cheung, Webb, &amp; Lovarini, 2020).</p> <p>The aim of reminiscence is to facilitate conversations and evoke memories of past experiences and events through the use of physical or verbal prompts (O’Philbin et al., 2018).</p> <p>Group reminiscence can improve communication and increase socialization of IwD (Asiret &amp; Kapucu, 2015).</p>	<p>differences by celebrating Holidays and customs</p>
Psychosocial Context	<p>Create opportunities for autonomy (Greener, Poole, Emmett, Bond, Louw, &amp; Hughes, 2012).</p> <p>Access to tea or coffee bars and placing water pitchers on each table at meals can promote resident autonomy (Hung, Chaudhury, &amp; Rust, 2016).</p> <p>Self-serve family style food to promote resident autonomy (Barnes, Wasielewska, Raiswel, &amp; Drummond, 2013).</p> <p>Replace bib with napkin. Place a napkin on their lap, not as a bib, even if they spill some food (Hung et al, 2016).</p> <p>Individuals in nursing homes dining with family-style service, were more independent when dining and interacted more than residents who received tray service (Barnes,</p>	<p>Serve meals family-style to promote independence and social interactions</p> <p>Encourage individuals to choose their preferred meals</p> <p>Create opportunities to support autonomy by providing a tea/coffee bar or water pitchers on each table at meals</p> <p>Provide problem solving assistance when a person struggles with or is refusing to eat or drink</p> <p>Facilitate active engagement in dining by encouraging residents to set their own dining space (placemat, plate, silverware, napkin, cup)</p>

<b>Domains of Dining</b>	<b>Key Findings from Research</b>	<b>Related Interventions</b>
	<p>Wasielewska, Raiswel, &amp; Drummond, 2013).</p> <p>Maintaining choice and individual preferences regarding food is a dominant concern of individuals with dementia. Including individuals with dementia in the decision-making process of what and when they eat improved their perception of the dining experience (Milte, Shulver, Killington, Bradley, &amp; Miller, 2017).</p> <p>Provide problem solving assistance when a person struggles with or is refusing to eat or drink (Champagne, 2018).</p>	

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