First Edition

Quality Resource Guide

The Dental Patient with Dementia Part Two

Providing Oral Healthcare for Patients with Dementia

Author Acknowledgements

JUNE M. SADOWSKY, DDS MPH
Professor, Dentist Geriatrician

BEN F. WARNER, MS DDS MD
Professor, Oral Diagnostician

Department of General Practice and
Dental Publich Health
UT Health Houston School of Dentistry
Houston, Texas

Drs. Sadowsky and Warner have no relevant relationships to disclose.

Educational Objectives

Following this unit of instruction, the learner will be able to:

1. Discuss the relationship between oral and systemic health.
2. Describe appropriate oral health therapy for a person with dementia.
3. Review the general dentist's role and anesthesia use for individuals with dementia.
4. Discuss the future of oral health care for individuals with dementia.

This Quality Resource Guide is the second aspect of a two-part set on managing oral health care for a patient with dementia. It is suggested that Part One by Drs. Sadowsky and Warner titled, *The Dental Patient with Dementia: An Introduction to Dementia for the Oral Healthcare Team* be read first.

MetLife designates this activity for **1.0 continuing education credits** for the review of this Quality Resource Guide and successful completion of the post test.

Published November 2024. Expiration date: November 2027.

The content of this Guide is subject to change as new scientific information becomes available.

ADA C·E·R·P® | Continuing Education Recognition Program

MetLife is an ADA CERP Recognized Provider.

Accepted Program Provider FAGD/MAGD Credit **05/01/21 - 06/30/25.**

ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

Address comments or questions to:

DentalQuality@metlife.com

MetLife Dental Continuing Education
501 US Hwy 22
Bridgewater, NJ 08807

Cancellation/Refund Policy:
Any participant who is not 100% satisfied with this course can request a full refund by contacting us.

Concerns or complaints about a CE provider may be directed to the provider or to ADA CERP at www.ada.org/goto/cerp.

MetLife

Navigating life together

No discussion of dementia can be commenced without reviewing the basics of aging physiology, both generally and orally, that affect oral health care for individuals who are aging and have dementia. Normal aging demonstrates changes that can contribute to oral diseases. Decreases in agility, mobility, coordination, focus, eyesight, hearing and memory that accompany normal aging can affect the ability of older adults to maintain oral health. Individuals with dementia have compounded obstacles of being unable to comprehend or recall instructions, perform effective oral hygiene, or express discomfort. Considerations for individuals with dementia will be the focus of this Quality Resource Guide.

Aging and Oral Health

Understanding the relationship between systemic health and oral health is critical to evaluating and treating aging patients. Glessner[1] found an association between the number of missing teeth and the American Society of Anesthesiology (ASA) classification, but none between Class V lesions and worsening ASA status. ASA II and III status patients show more periodontal disease than ASA Status I patients.

Although there was no association between endodontically treated teeth and ASA classification, there are ASA associations with the number of teeth with interproximal caries and the number of fractured or broken teeth.[1]

There are several things a dentist should consider during the treatment of each patient:

- Do they self-report chewing problems and poor oral health?
- Do they only eat soft foods because they cannot masticate efficiently because of fewer posterior biting pairs and diminished masticatory efficiency?
- Are their food choices impacted?
- Other factors include saliva quality and production, mastication musculature, and quality of prostheses.

A relationship between mastication and cognition has been reported. Although a cause-and-effect relationship has not been firmly established, dentists treating persons with dementia need to be aware of all possible complicating factors.

Research suggests that the above issues increase the risk of dementia in both animal models and humans.[2] Masticatory efficiency may be measured in the dental office.[3] Dentists may also access a patient's MMSE score (a screening tool for cognitive impairment) if they have been evaluated for dementia. Scores will be no dementia (MMSE=28-30), mild cognitive impairment (MCI) (MMSE=25-27), mild dementia (MMSE=18-24), moderate dementia (MMSE=10-17), severe dementia (MMSE=<10). It has been shown that chewing efficiency decreases with increasing dementia. Oromotor training may be needed to optimize mastication in dental prosthesis wearers with dementia.[4]

The co-existence of cognitive impairment and oral frailty, including loss of posterior occlusion and

Figure 1 - Association of DMFT Scores with Patient Health Status[1]

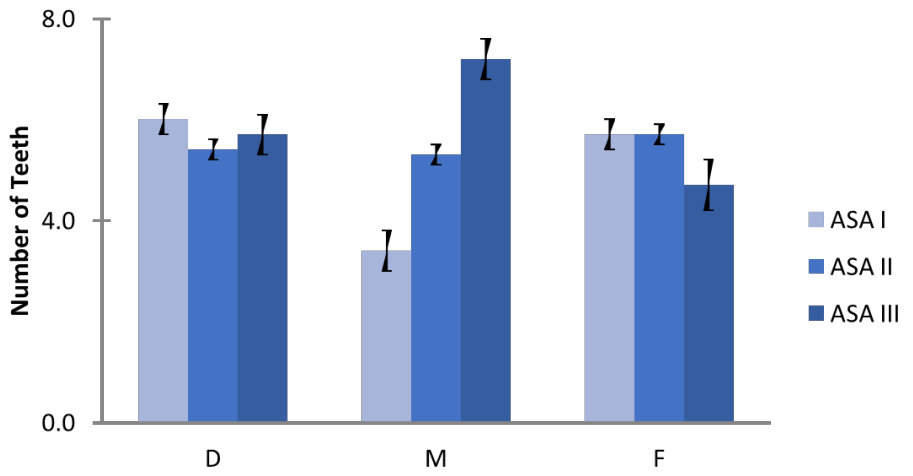
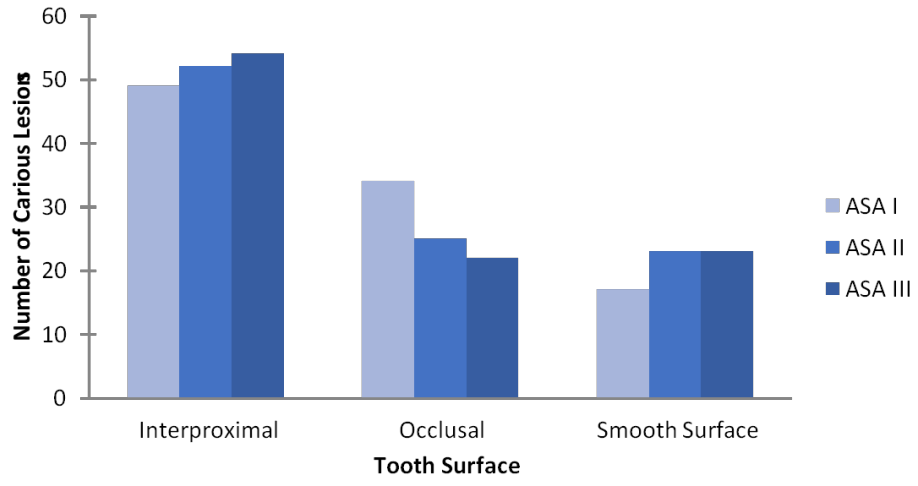


Figure 2 - Association of Location of Caries with Patient Health Status[1]



impaired tongue movements, also increases the risk of aspiration pneumonia.[5] The incidence of aspiration pneumonia is higher in those with no posterior occlusion than for any other single factor alone. Early evaluation of the oral conditions, including a video-endoscopic examination and cognitive function assessment, may be indicated in dementia patients with missing posterior teeth.

Oral Health Care Considerations for the Individual with Dementia

Preventive Oral Care Considerations

Multiple factors influence the ability of an individual with dementia to perform adequate oral hygiene. An alteration in memory, decision-making, and judgment, as well as a slowing of task completion, may negatively impact the completion of daily habits. Disturbances may appear in emotional regulation, causing resistance to otherwise regular activities. Individuals may self-isolate and show no motivation for doing daily/weekly responsibilities.[6]

Individuals in the early stages of dementia characteristically have trouble learning complex new tasks or performing multistep tasks, such as following a recipe or performing complex household chores. 'Procedural memory', the ability to remember how to perform simple, well-learned everyday tasks, is typically retained during this period. However, these tasks (including toothbrushing) falter in the later stages of dementia unless methods to maintain consistent repetition are present.[7] Individually structured oral hygiene guidance based on the patient's current oral condition and cognitive and physical ability will assist the patient to properly clean their teeth, and provide reminders to perform the cleaning tasks routinely. Structured assistance and enthusiasm from caregivers have proven to be helpful.[7]

A 3-month personalized oral hygiene instruction program can alert care partners to what is needed to coach behavior changes successfully. Oral hygiene skills assessment is essential. The early introduction of an electronic tooth-brush helps reinforce a preventive message. It can also desensitize the patient to the noise and vibration before they become irritating factors in the later stages of dementia. The application of prescription high-fluoride toothpaste, regular application of fluoride varnish, and diet control to reduce sugar intake will improve the oral health of individuals with dementia. Frequent professional recall appointments and caregiver self-reporting can motivate patients to remain involved in oral health care.[9]

Sensitive teeth and gums, toothache, dry mouth, bleeding gums, sore or cracked lips, broken or loose teeth, and ill-fitting dentures are frequently experienced in older individuals with dementia. This can be challenging for the oral health care team during the advanced stages of dementia. There is little to no ability of the patient with advanced dementia to understand their condition and the indicated procedure; consent is not possible. The patient may no longer be able to control their swallowing safely, and their discomfort may increase. General health and frailty may affect the overall safety of delivering comprehensive treatment. Sedation or general anesthesia may be indicated but are associated with additional risks.[10,11]

Periodontal Considerations

A recent systematic review found that older people with dementia have increased accumulations of plaque and many oral health problems related to oral soft tissues, such as gingival bleeding, periodontal pockets, stomatitis, mucosal lesions, and reduced salivary flow.[2] Yang. *et al,*[12] outlined a potential role for pathophysiological mechanisms for dementia through the penetration of periodontal pathogens through the blood-brain barrier, allowing virulent factors to activate the inflammation and enhance atherosclerotic changes (**Figure 3**). While this theory has not been scientifically substantiated, maintaining the best periodontal health possible is a prudent goal when managing the oral health of an individual with dementia.

Restorative Dentistry Considerations

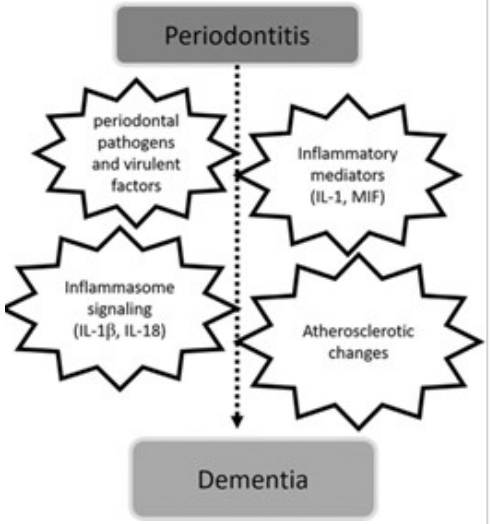
Tooth demineralization with potential carious activity may be present in the mouth of a patient with dementia. Restorative dentistry decisions should be evidence-based and harmonious with the patient's modifying factors and desires. An approach should be utilized to manage caries activity with a minimally invasive dentistry approach, treating caries as a chronic infection, carefully assessing risk, adjusting preventive strategies, and deploying remineralization techniques. If a restoration is indicated, preservation of dental substance should be a primary goal. Frequent professional evaluations are recommended.[13,14]

Prosthodontic Considerations

Cognitive decline, oral function, and diminished ability to carry out activities of daily living are associated with the non-use of dentures. This is especially true in assisted living facilities. The risk of aspiration is the most prevalent reason for evaluating dementia patients' psychological and behavioral factors when considering denture treatment.[15]

Cognitive impairment and functional decline both play an essential role in prosthodontic

Figure 3 - Potential Pathophysiological Mechanism of Periodontal Pathogens in Dementia[12]



treatment planning. A prosthesis that is too complex to manage leaves the patient without replacement teeth and all the associated consequential disadvantages.

Patients should be assessed following the delivery of a removable dental prosthesis with straightforward problem-solving. The prostheses can be presented in an inverted orientation. Patients must correct the orientation and insert it in the appropriate jaws. A patient's demonstration of the regime for denture care (cleaning and removal at night) is essential. The dentures, denture cup and denture brush should be identified with the patient's name in large letters. This reassures the patient that they have the correct appliances. This approach is mandatory in institutional settings.

Pharmaceutical Concerns

Certain medications that cause dry mouth are an adverse factor in maintaining oral health and providing dental care with an optimal outcome. They are particularly implicated in older individuals, including those with dementia. These medications include urologicals, antihistamines, decongestants, antidepressants, antipsychotics, sedatives and anxiolytics, antihypertensives and anticholinergic agents. Urological drugs, including those for urinary incontinence (tolterodine and tofenacin) and alpha-adrenoreceptor antagonists (alfuzosin and tamsulosin), have been demonstrated to be associated with dry mouth and risk for dental issues in individuals with dementia. Dental practitioners should carefully examine medication lists and consult with the person's medical practitioner if medication adjustment may be indicated.[16] Any drugs that cause dry mouth may contribute to atrophy of the oral mucosa, increased propensity for dental caries, and difficulty swallowing and chewing.[17]

Treatment Planning Considerations

When assessing the oral health of a patient with dementia, there may be multiple treatment strategies available. Questions need to be considered to reach a treatment plan that best fits the individual patient:

- Is there a will and time for the patient and caregivers to accept and complete the treatment plan?
- Does the provider, staff and office have the resources, facilities, skills, experience and desire to provide care?
- What are the patient's modifying factors;
  - o medical issues
  - o medications
  - o psychological concerns

In addition, the patient must determine if the recommendations are within their budget.

Oral factors that must be considered:

- oral hygiene
- tooth loss
- condition of existing restorations
- caries activity
- mucosal health
- periodontal status
- presence and condition of prostheses and implants
- occlusion
- ability to function (chew an adequate diet) without pain

Considerations must be made for the patient's general health:

- Is consultation with the patient's medical providers indicated?
- Can the patient perform Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs)? (**see Table 1**)
- Is the patient capable of independently maintaining oral hygiene?
- Is the patient capable of providing informed consent for care?*
- Are the timeline of disease and life expectancy issues?

Table 1 - ADLs and IADLs[19]

Activities of Daily Living (ADLs)

- Walking or otherwise getting around the home or outside
- Feeding - getting food from a plate into one's mouth
- Dressing and grooming, selecting clothes, putting them on, and adequately managing one's appearance
- Toileting - getting to and from the toilet, using it appropriately, and cleaning oneself
- Bathing - washing one's face and body in the bath or shower
- Transferring - being able to move from one body position to another. This includes being able to move from a bed to a chair, into a wheelchair, and stand up from a bed or chair to grasp a walker or other assistive device.

Instrumental Activities of Daily Living (IADLs)

- Managing finances, paying bills and managing financial assets.
- Managing transportation, either via driving or organizing other means of transport
- Shopping and meal preparation - This covers everything required to put a meal on the table, shop for clothing, and perform other activities needed for daily life

** A complete discussion of obtaining informed consent from a patient with diminished decision-making capacity may be found in Haas SE. Informed Consent in the Dental Setting. MetLife Quality Resource Guide, 2021.*

As the above are developed, the treatment plan(s) to be presented to the patient (and potentially their caregiver or individual with the power of health care) may range from limited (control of pain and infection) to fixed prosthetics and implants.[18]

The Rapid Oral Health Risk Deterioration Assessment (ROHD)

A tool, the Rapid Oral Health Deterioration (ROHD) risk assessment,[20] was created to provide a structured process for providers who care for frail and functionally dependent older adults. It is designed to process the overwhelming amount of information gathered from the patient and develop a decision-making process that can lead to rational treatment planning (**see Table 2**).

An oral health care provider should carefully listen to patients' preferences, regardless of their mental capacity, and consider these in decisions. Geddis-Regan, *et al*.,[21] found that individuals with dementia want active involvement in their dental treatment and feel they may be insufficiently involved in the final decisions. Individuals with dementia accumulate dental experiences over their lives and are informed by these past experiences; they may have specific views of dental care.

Anesthesia Considerations

The use of anxiolytic or sedative medications is an option for treating persons with dementia. However, they require careful management, dose titration and monitoring because of the side-effect complications that are possible with all such medications.

Patients with dementia may also experience airway obstruction, apnea and Cheyne-Stokes-like respiration. A patient with Lewy body dementia may have episodes of hallucinations during the recovery period.[22]

General anesthesia (GA) may be a method of choice for managing the care of a patient with dementia, but only if other methods are not feasible and the patient has confirmed pain or significant dental issues. The site for GA is generally in the hospital to facilitate the management of any complications. Follow-up appointments are crucial to monitor oral health post-procedure for care delivered under sedation or GA.[11]

Managing the Patient with Dementia in an Assisted Living Facility

Multiple oral health issues have been linked with residence in an assisted living facility. A patient's level of oral hygiene tends to be lower in this environment. Increased plaque retention is associated with increased rates of nosocomial pneumonia, with bacteria identified as identical to those in the oral cavity. Because of the generally low priority of oral care in these facilities, alternate oral care techniques such as chlorhexidine mouthwash may be utilized. The latter must be prescribed with care as this product may increase multidrug-resistant mouth bacteria if used consistently.

Table 2 - Utilization of the ROHD[20]

Step 1. Gathering information concerning ROHD risk factors

- General health conditions
- Social support
- Oral health conditions

Step 2. Prioritizing the information and developing an appropriate communication plan

- What matters most for disease progression and treatment planning?
- What will happen if the patient does not receive dental care?
- An appropriate communication plan includes but is not limited to explaining the findings, the prognosis, the treatment alternatives, and the maintenance plan to the patient and care personnel.

Step 3. Categorizing the risk for ROHD

- Risk factors are not present; therefore, ROHD is not occurring.
- Risk factors are present; however, ROHD currently is not occurring.
- Risk factors are present, and ROHD is currently occurring.
- Risk factors are present, and ROHD already has occurred.

Step 4. Identifying possible treatment alternatives compatible with rational treatment planning

- Comprehensive care
- Limited care (maintenance and monitoring)
- Emergency care (pain and infection control)
- No treatment

Step 5. Developing a maintenance plan

Another aspect of dementia/oral care in an assisted living environment is the phenomenon of care-resistant behavior (CRB). An approach entitled MOUTh (Managing Oral Hygiene Using Threat Reduction), a nonpharmacologic, relationship-based intervention developed for those with dementia who resist oral care.[23,24,25]

The behavioral techniques and protocols of MOUTh are easily taught to providers of oral care to desensitize the dementia patient to oral care. MOUTh intervention was originally conceptualized as a "toolbox" of strategies to prevent and reduce CRBs by:

- Establish rapport, approaching the individual with dementia at or below eye level with a pleasant and calm demeanor to provide mouth care in front of a sink and mirror (to stimulate procedural or implicit memories)
- Avoid "elderspeak" (sing-song baby-talk)
- Initiate mouth care and have the patient finish the task
- Cue using gestures, pantomimes and short, 1-step command
- Distract ("You are such a good helper")
- Bridge, where the patient is asked to hold a toothbrush during mouth care.
- Chain and rescue, where a second mouth-care provider replaces the first mouth-care provider if CRBs are escalating.
- Hand-over-hand - involves either the patient placing their hand over the hand of the mouth-care provider or the mouth-care provider gently guiding the patient's hands.

Resistance to mouth care may elevate during a MOUTh session with an increased duration. The process should stop when CRBs are recognized and restarted at another time when the patient has forgotten the incident. Quality of oral care is more important than frequency. Practice guidelines recommend a goal of twice-daily mouth care. This may not be achieved immediately and will probably take time to achieve.

MOUTh can be taught to care partners or employed caregivers to assist the patient in receiving more comprehensive oral hygiene. Care must be taken to be gentle and not injure the patient's sensitive oral tissues.

Providing Care in an Assisted Living Facility

Conservative dental treatment, including the use of atraumatic restorative treatment (ART), is an option for controlling caries that arise in a patient living in an assisted living facility and unable to travel. ART procedures require less equipment and instruments.

When recurrent caries activity is detected, the provider only removes the visible carious material. If the caries does not undermine the restoration, only that portion of the restoration affected by the recurrent caries is restored. The technique is completed with a spoon excavator or a slow-speed portable handpiece. Patients find it esthetically acceptable and cost-effective. Prescription fluoride daily as a follow-up is essential. Restoration survival after two years is not statistically significantly different between ART and conventional caries removal and restoration for partially dentate older adults.[26]

The Future

The number of patients with an altered mental status that an oral health care provider encounters is increasing, and interacting with them can be very challenging. Future dentists will require more knowledge, training, and skills to improve the quality of care offered to those with dementia.[27] Providers must also reassess the environment surrounding the care they provide.[28]

- Facilities should create a calm and secure caring atmosphere.
- A separate room or space for patients with cognitive issues is helpful. It allows the patient and caregiver to wait with fewer distractions. The room also provides a place to meet the provider prior to the procedure and may be used for rest periods if needed.
- The office should be designed to compensate for a decreased ability to orient.
- The entire office team should assess all the public spaces and suggest helpful modifications.
- Assessment should begin outside. The entrance is clearly visible and welcoming, with ramps, handrails, and a suitable-width door, as needed.
- The dental treatment room should provide easy access for a wheelchair transfer.
- If there is room for the caregiver, it is helpful.
- Utilize non-glare lighting and, when possible, make use of natural light.
- Floors should not be shiny and reflective as they may appear as water to patients with dementia.[29]

Summary

The alteration in memory, decision-making, judgment, and a slowing of task completion shown by the individual with dementia may negatively impact oral health maintenance. Their general health and frailty may affect the overall safety of comprehensive oral health care delivery. Treatment planning must carefully assess all the factors that may impact care outcomes, and each stage of care may need to be modified to meet the conditions and needs of the patient with dementia. In addition, dental practices must consider that the number of patients with an altered mental status they encounter will increase and ensure their team's knowledge, training, and skills and that the facilities are ready to accommodate them (**see Table 3**).

Table 3 - The Stages of Dementia and Considerations for th Oral Health Care Team

Dementia		Oral Selfcare Proficiency	
Stage	**Oral Health Care Considerations**	**Patient Abilities**	**Caregiver Actions**
Early	Independence continues Memory lapses Decisions become more difficult Depression possible	Minor decrease	Small reminders are necessary
Moderate (Usually lasts the longest)	Memory losses more often Confusion Agitation Hallucinations Denial of their condition ADLs become challenging Isolation	Significantly less	Assistance required
Advanced	Unaware of surroundings Inability to recognize family Anger, profanity, yelling frequent	Little to none	Increases until fully dependent

References

1. Glessner C, Desai B, Looney S, et al. The associations between dental disease and systemic health. Odontology (2024) 112:264–271 https://doi.org/10.1007/s10266-023.
2. Weijenberg RAF, Delwel S, Ho BV, van der Maarel-Wierink CD, Lobbezoo F. Mind your teeth—The relationship between mastication and cognition. Gerodontology 2019:36:2-7. https://doi.org/10.1111/ger.12380
3. Schimmel M, Christou P, Herrman F, Muller F. A two-color chewing gum test for masticatory efficiency: development of a different assessment methods. J Oral Rehabil. 2007;34(9):671-678.
4. Jockusch J, Hopfenmüller W, Nitschke I. Chewing function and related parameters as a function of the degree of dementia: Is there a link between the brain and the mouth? J Oral Rehabil. 2021; 48:1160-1172.
5. Naruishi K, Nishikawa Y, Kido J, Fuguwaga A, and Nagata T. Relationship of aspiration pneumonia to cognitive impairment and oral condition: a cross-sectional study. Clinical Oral Investigations (2018) 22:2575–2580 https://doi.org/10.1007/s00784-018-2356-7.
6. De Luca R, De Cola MC, Leonardi S, et al. How patients with mild dementia living in a nursing home benefit from dementia cafés: a case-control study focusing on psychological and behavioral symptoms and caregiver burden. Psychogeriatrics 2021;21:612–7.
7. Wesson J, Clemson L, Crawford JD, et al. Measurement of functional cognition and complex everyday activities in older adults with mild cognitive impairment and mild dementia: validity of the large Allen's cognitive level screen. Am J Geriatr Psychiatry 2017;25:471–82.
8. Kinsella GJ, Mullaly E, Rand E, et al. Early intervention for mild cognitive impairment: a randomized controlled trial. J Neurol Neurosurg Psychiatry 2009;80:730–6.
9. Wu B, Plassman BL, Poole P, Siamdoust S, et al. Study protocol for a randomized controlled trial of a care partner assisted intervention to improve oral health of individuals with mild dementia. BMJ Open 2022; 12:e957099. doi:101136/bmjopen-2021-057099.
10. Porter J, Ntouva A, Read A, et al. The Impact of Oral Health on the Quality of Life of Nursing Home Residents. Health and Quality of Life Outcomes (2015 13:102. DOI 10.1186s12955-015-0300-y.
11. Geddis-Regan A, Kerr K, Curl C. The Impact of Dementia on Oral Health and Dental Care, Part 2: Approaching and Planning Treatment. Prim Dent J. 2020;9 (2)31-37.
12. Yang CH, Huang PC, Fang CY. Does periodontitis really play a role in dementia? - Novel evidence from molecular insights. Journal of Dental Sciences (2021) 16k 530-531 https://doi.org/10.1016/j.jds.2020.09.004.
13. Featherstone JD, Dome'jean S. Minimal intervention dentistry: part 1. From 'compulsive' restorative dentistry to rational therapeutic strategies. Br Dent J 2012;213(9):441–5.
14. Chalmers JM. Minimal intervention dentistry: Part 1. Strategies for addressing the new caries challenge in older patients. J Can Dent Assoc 2006;72(5):427–33.
15. Meguro A, Ohara Y, Edahiro Ayako, Shirobe M, Iwasaki M, Igarashi K, Motokawa K, Ito M, Watanabe Y. Factors Associated with Denture-Non-use in Older Adults Requiring Long-Term Care. Archives of Gerontology and Geriatrics. 95 (2021) 104412.
16. Tan ECK, Lexomboon D, Häbel H, et al. Validating a model for medication-related dental outcomes in older people. Oral Diseases. 2022; 28:1697-1704.
17. Wu YH, Chiang CP. Association of medication in burning mouth syndrome in Taiwanese aged patients. J Dent Sciences 18 (2023)833-839.
18. Ronald Ettinger R Marchini L, and Hartshorn J. Consideration in Planning Dental Treatment of Older Adults. Dent Clin N Am.65 (2021) 361–376. https://doi.org/10.1016/j.cden.2020.12.001.
19. Better Health While Aging. https://betterhealthwhileaging.net/what-are-adls-and-iadls.
20. Marchini L, Hartshorn JE, Cowen H, et al. A teaching tool for establishing risk of oral health deterioration in elderly patients: development, implementation, and evaluation at a U.S. dental school. J Dent Educ 2017;81(11):1283–90.
21. Geddis-Regan A, Wassall RR, Abley C, Exley C. Exploring dental treatment decision-making experiences of people living with dementia and family carers. Gerodontology. 2023;00:1-11. doi:10.1111/ger.12687.
22. Nishizaki H, Morimoto Y, Hayashi M, Lida T. Analysis of intravenous sedation for dental treatment in elderly patients with severe dementia – a retrospective cohort study of a Japanese population. Journal of Dental Sciences. (2021) 16, 101-107.
23. Jablonski RA, Kolanowski AM, Azuero A, et al. Randomized clinical trial: Efficacy of strategies to provide oral hygiene activities to nursing home residents with dementia who resist mouth care. Gerodontology. 2018; 35:365-375.
24. Jablonski RA, Therrien B, Kolanowski A. No more fighting and biting during mouth care: applying the theoretical constructs of threat perception to clinical practice. Res Theory Nur Pract. 2011;25:163-175.
25. Jablonski-Jaudon RA, Kolanowski AM, Winstead V, et al. Maturation of the MOUTh intervention: from reducing threat to relationship-centered care. J Gerontol Nurs. 2016;42:15-23; quiz 24-15.
26. da Mata C, Allen PF, McKenna G, et al. Two-year survival of ART restorations placed in elderly patients: a randomized controlled clinical trial. J Dent 2015; 43(4):405–11.
27. Gurtmann S, Schwahn C, Kruger M, et al. Proposing a communication module to enhance dental students' attitudes towards people with dementia: Phase 1 of a curriculum revision study. Eur J Dent Educ. 2023:00:1-8. doi:10.1111/eje.12942
28. McNamara G, Millwood J, Rooney YM, Bennett K. Forget me not – the role of the general dental practitioner in dementia awareness. British Dental Journal. (2014) 217:245-248.
29. Curl C, Kerr K, and Geddis-Regan A. Oral Health and Healthcare for People Living with Dementia and other Cognitive Impairments. Chapter 10. Oral Health and Dental Care in the Ageing Population, Clinician's Guides. https://doi.org/10.1007/978-3-031-10224-0_10.

POST-TEST

Internet Users: This page is intended to assist you in fast and accurate testing when completing the "Online Exam." We suggest reviewing the questions and then circling your answers on this page prior to completing the online exam.

(1.0 CE Credit Contact Hour) Please circle the correct answer. 70% equals passing grade.

1. **The following conditions have shown a positive association with dementia, except for one. Which one is the exception?**
   a. Caries
   b. Endodontically treated teeth
   c. Missing teeth
   d. Periodontal disease

2. **The incidence of aspiration pneumonia is highest in patients with:**
   a. impaired tongue movement.
   b. oral frailty.
   a. impaired cognition.
   b. no posterior occlusion.

3. **This statement about how masticatory function is related to dementia is <u>not true</u>.**
   a. Chewing efficiency declines as stages of dementia progress.
   b. Individuals with dementia have decreased maximum bite force.
   c. Pain limits the mastication process of the individual with dementia.
   d. Individuals with dementia have increased loss of opposing molars.

4. **The success of a three-month personalized oral health program is dependent on:**
   a. Patient cooperation
   b. Care partner acceptance
   c. Oral skills assessment
   d. All of the above

5. **MOUTh intervention is a:**
   a. A medication for dementia patients
   b. An oral surgical procedure
   c. A non-pharmacologic approach for managing resistance to oral care in dementia patients
   d. A type of oral health assessment tool

6. **In the future to improve oral health in earlier stages of dementia could be achieved by:**
   a. Community intervention
   b. Caregiver participation
   c. Emphasis on quality
   d. All of the above.

7. **Planning denture treatment for a person with dementia will <u>NOT</u> be successful if:**
   a. denture cleaning instructions are clear and easy to follow.
   b. there is a willingness to follow directions.
   c. there is a high risk of aspiration.
   d. there is a lack of aggression in the patient.

8. **Yang describes several components in the relationship between periodontal disease and dementia. What is the exception?**
   a. periodontal pathogens
   b. atherosclerotic changes
   c. inflammasomes IL-1ß, IL-18
   d. occlusal caries activity

9. **The following medication(s) is(are) associated with Xerostomia?**
   a. Antipsychotics
   b. Anxiolytics
   c. Antihistamines
   d. All of the above

10. **What should the dentist try to include in the treatment room to help compensate for the patient's decreasing ability to orient?**
    a. Shiny floors
    b. Natural light
    c. Both of the above
    d. None of the above

Registration/Certification Information (Necessary for proper certification)

Name (Last, First, Middle Initial): _____

PLEASE PRINT CLEARLY

Street Address: _____ Suite/Apt. Number _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

Date of Birth: _____ Email: _____

State(s) of Licensure: _____ License Number(s): _____

Preferred Dentist Program ID Number: _____ ☐ Check Box If Not A PDP Member

AGD Mastership: ☐ Yes ☐ No

AGD Fellowship: ☐ Yes ☐ No Date: _____

Please Check One: ☐ General Practitioner ☐ Specialist ☐ Dental Hygienist ☐ Other

FOR OFFICE USE ONLY

Evaluation - The Dental Patient with Dementia - Part 2

Providing dentists with the opportunity for continuing dental education is an essential part of MetLife's commitment to helping dentists improve the oral health of their patients through education. You can help in this effort by providing feedback regarding the continuing education offering you have just completed.

Please respond to the statements below by checking the appropriate box, using the scale on the right.

	1 = POOR				5 = EXCELLENT	
	1	2	3	4	5	
1. How well did this course meet its stated educational objectives?	☐	☐	☐	☐	☐	
2. How would you rate the quality of the content?	☐	☐	☐	☐	☐	
3. Please rate the effectiveness of the author.	☐	☐	☐	☐	☐	
4. Please rate the written materials and visual aids used.	☐	☐	☐	☐	☐	
5. The use of evidence-based dentistry on the topic when applicable.	☐	☐	☐	☐	☐	☐ N/A
6. How relevant was the course material to your practice?	☐	☐	☐	☐	☐	
7. The extent to which the course enhanced your current knowledge or skill?	☐	☐	☐	☐	☐	
8. The level to which your personal objectives were satisfied.	☐	☐	☐	☐	☐	
9. Please rate the administrative arrangements for this course.	☐	☐	☐	☐	☐	

10. How likely are you to recommend MetLife's CE program to a friend or colleague? *(please circle one number below:)*

10 **9** **8** **7** **6** **5** **4** **3** **2** **1** **0**

extremely likely — neutral — not likely at all

What is the primary reason for your 0-10 recommendation rating above?

11. Please identify future topics that you would like to see:

Thank you for your time and feedback.

MetLife

To complete the program traditionally, please mail your post test and registration/evaluation form to:
MetLife Dental Quality Initiatives Program | 501 US Highway 22 | Bridgewater, NJ 08807