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Maturation of the MOUTH Intervention:

From Reducing Threat to Relationship-Centered Care

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Abstract

The purpose of the current article is to describe a personalized practice originally conceived as a way to prevent and minimize care-resistant behavior to provide mouth care to older adult with dementia. The original intervention, Managing Oral Hygiene Using Threat Reduction Strategies (MOUTH), matured during the clinical trial study into a relationship-centered intervention with emphasis on developing strategies that support residents behavioral health and staff involved in care. Relationships that were initially pragmatic (i.e., focused on the task of completing mouth care) developed into more personal and responsive relationships that involved deeper engagement between mouth care providers and nursing home (NH) residents. Mouth care was accomplished and completed in a manner enjoyable to NH residents and mouth care providers. The MOUTH intervention may also concurrently affirm the dignity and personhood of the care recipient because of its emphasis on connecting with older adults.

Mouth care is oral infection control (Fulmer Jablonski, Mertz, George, & Russell, 2012). Consistent oral hygiene reduces the incidence of pneumonia in dependent and cognitively impaired older adults residing in nursing homes (NHs) (Maeda & Akagi, 2014; Tada & Miura, 2012; van der Maarel-Wierink, Vanobbergen, Bronkhorst, Schols, & de Baat, 2013; Van Ness, Peduzzi, & Quagliarello, 2012). Consistent mouth care also stimulates salivary production, improves appetite, and contributes to overall well-being (De Visschere, Schols, van der Putten, de Baat, & Vanobbergen, 2012; Dyck, Bertone, Knutson, & Campbell, 2012). However, older adults with dementia often resist caregiving activities associated with mouth care. Care-resistant behavior (CRB) remains one of the primary reasons for the omission of mouth care (Jablonski et al., 2009; Willumsen, Karlsen, Naess, & Bjorntvedt, 2012). As a result, NH residents with dementia who exhibit CRBs are three times more

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likely to have more tooth decay than those who allow mouth care (Willumsen et al., 2012; Zuluaga, Ferreira, Montoya, & Willumsen, 2012).

The purpose of the current article is to describe a personalized practice originally conceived as a way to prevent and minimize CRB to provide mouth care to older adults with dementia. The intervention, Managing Oral Hygiene Using Threat Reduction Strategies (MOUTH), contains three components: (a) an evidence-based mouth care protocol for older adults with dentition or dentures; (b) recognition of CRBs; and (c) strategies designed to lower the perception of mouth care as a threatening, scary, or assaultive activity (Jablonski, 2010; Jablonski, Therrien, & Kolanowski, 2011; Jablonski, Therrien, Mahoney, et al., 2011). The current article will focus on the third component: reducing threat perception. The goal is to provide sufficient detail about threat-reduction strategies to enable nurses and other clinicians to apply these techniques to their own practice.

THEORETICAL FRAMEWORK OF MOUTH

The MOUTH intervention is grounded in the neurobiology of threat perception (Jablonski, Therrien, & Kolanowski, 2011) and person-centered practices (Kitwood, 1997). A perceived threat can trigger the freeze–fight–flight response. The various nuclei of the amygdala interface with the brain stem, producing autonomic fear responses of sweating, elevated pulse, and pupil dilation, in addition to behavioral responses of immobility, escape, and fight (LeDoux, 2003; Ohman, 2005). Other parts of the brain, specifically the hippocampus and cerebra, cortex, can override the autonomic response by providing awareness rationality, and reasoning to the threat appraisal equation (Corcoran, Desmond, Frey, & Maren, 2005; Maren, 2005). Individuals with dementia experience progressive atrophy of the cerebral cortex and hippocampus (Henry et al., 2009). As the atrophy advances, the older adult exhibits hyperactive threat perceptions (Corcoran et al., 2005) CRB can be interpreted as a fight of flight response to a perceived threat. Therefore, mouth care often trigger CRB because of its intimate nature and close proximity between the older adult and care giver (Jablonski Therrien, & Kolanowski, 2011).

Person-centered care (PCC) recognizes individuals' self-determination, choices, worth, histories, and interests (Koren, 2010). The focus of care shifts from decontextualized outcomes to those that are important to individuals. For individuals with dementia, these outcomes often concern quality of life or the ability to function or care for themselves. Nolan, Davies, Brown, Keady, and Nolan (2004) took this idea one step further and proposed a relationship-centered model of care that includes the resident and all who are involved in the care relationship. Their model's underlying assumption is that every individual in the caring relationship should experience a sense of worth, purpose, and achievement. This approach is particularly salient for staff who care for residents who exhibit CRB and present safety concerns for all involved. Consistent assignment and knowledge of the resident's history and behavioral patterns and preferences can facilitate personalized relationship-based care and prevent many CRBs (Caspar, Cooke, O'Rourke, & MacDonald, 2013; Kolanowski, Van Haisma, Penrod, Hill, & Yevchak, 2015).

METHOD

The intervention as reported in the current article was recently tested in a 4-year clinical trial funded by the National Institutes of Nursing Research. The study was approved by the institutional review boards of two universities. The protocol for the study has been published elsewhere (Jablonski, Kolanowski, et al., 2011). Participants were randomly assigned at the individual level to either an active control or experimental group. Both groups received twice-daily mouth care for 3 weeks from research staff. The difference between the groups was that the experimental group received the full MOUTH intervention, whereas the control group received mouth care only from a standardized protocol.

Sample and Setting

Forty-six residents from nine facilities that varied in size, ownership, reimbursement patterns, and locations received the MOUTH intervention. Resident participants met the inclusion criteria of having a documented diagnosis of dementia; being *dentate* (i.e., having at least two adjacent teeth, or edentate, but using at least one denture plate); age 55 or older; and identified by staff as being resistant to mouth care. Residents with dysphagia or a documented swallowing disorder were excluded.

Instrument

In addition to demographic data, including age, gender, race/ethnicity, and duration in facility, the following information was also collected: dementia severity and functional status.

Dementia Severity—The progression of dementia was quantified using the Global Deterioration Scale (Reisberg, Ferris, De Leon, & Crook, 1982), with dementia severity classified in one of seven stages: 1 = *no cognitive decline (normal)*, 2 = *very mild cognitive decline (forgetfulness)*, 3 = *mild cognitive decline (early confusional)*, 4 = *moderate cognitive decline (late confusional)*, 5 = *moderately severe decline (early dementia)*, 6 = *severe cognitive decline (middle dementia)*, and 7 = *very severe cognitive decline (late dementia)*.

Functional Status—Functional status was quantified using the Katz Activities of Daily Living Index (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963). The instrument assessed overall performance in six areas of self-care: bathing, dressing, toileting, transferring, continence, and feeding (Katz et al., 1963). A score of 1 (*completely dependent*), 2 (*requires assistance*), or 3 (*completely independent*) was assigned for each of the six areas, with scores ranging from 6 = *completely dependent* to 18 = *completely independent*.

Description of Strategies

Various techniques to prevent and minimize CRB were obtained from two sources: existing practices identified in the extant nursing and dental literature, and new techniques that involved personalized care practices discovered during a pilot study (Jablonski, Therrien, Mahoney, et al., 2011). A key element is to determine the preferences the resident has for performing oral care, such as products used and time and place for performing care. This

information can be obtained from family or individuals who have knowledge of the resident's past behavioral patterns. There are also general approaches that can be used on a trial-and-error basis. Techniques are described in the current article, along with original sources. A video demonstrating the techniques within the context of mouth care can be accessed at <http://www.uab.edu/medicine/alzheimers/care-resistant-behavior>. Multiple strategies are usually used simultaneously.

Overall Approach (Chalmers, 2000)—The older adult is approached from the side (at or below eye level if sitting down or reclining in bed). The mouth care provider (MCP) approaches in an unhurried manner and smiles during the interaction. Although individuals with dementia can have difficulty interpreting facial emotions, they remain able to recognize smiles and happy expressions (Burnham & Hogervorst, 2004; Guaita et al., 2009; Luzzi, Piccirilli, & Provinciali, 2007).

Establishing Rapport (Kayser-Jones, Bird, Redford, Schell, & Einhorn, 1996)—Rather than starting the interaction with a request to engage in mouth care, the MCP first engages in affirming social conversation. MCPs are further instructed to start with positive comments and observations, such as, “Your sweater is very pretty” or “Your nails look beautiful; that color is lovely.” This exchange helps meet the older adult's need for social interaction and positive emotional experiences (Williams & Herman, 2011). Knowledge about the resident's past, such as hobbies and previous occupation, is critical in establishing rapport. Establishing rapport over time also helps build relationships between MCPs and NH residents.

Judicious Touch (Chalmers, 2000; Kayser-Jones et al., 1996)—Most older adults with dementia respond to gentle and non-threatening contact, such as stroking a forearm or rubbing the upper back. It is best to start at the wrists and assess the older adult's reaction to touch, before progressing to the upper arm. Care must be taken when holding an older adult's hand, in the event that the he/she interprets this touch as a restraining action (Jablonski, Therrien, & Kolanowski, 2011; Jablonski, Therrien, Mahoney, et al., 2011).

Establishing rapport over time also helps build relationships between mouth care providers and nursing home residents.

Priming (Kayser-Jones et al., 1996)—*Priming* is a process by which implicit memories are accessed (Harrison, Son, Kim, & Whall, 2007; Son, Therrien, & Whall, 2002). Implicit memories are also known as procedural or unconscious memories; these memories pertain to specific, repetitive tasks learned early in childhood and performed throughout adulthood (Harrison et al., 2007; Son et al., 2002). The best place to provide mouth care is in front of a sink because its presence, along with other stimuli (e.g., sound and sight of running water), serves to activate implicit memories attached to the independent provision of mouth care. Simply placing a toothbrush in an older adult's hand can sometimes help him/her access procedural memories. In addition, providing mouth care in an environment with as little ambient noise as possible (i.e., no background television or radio noise) also enhances the priming technique (Jablonski, Therrien, Mahoney, et al., 2011).

Gestures and Pantomime (Kayser-Jones et al., 1996)—The ability to understand verbal language is reduced in dementia; the loss of short-term memory and concentration abilities also interferes with processing verbal commands (Grossman & White-Devine, 1998; Kemper, Mitzner, Birren, & Schaie, 2001). Gestures and pantomime help communicate and cue the steps associated with mouth care in a non-threatening manner (Jablonski, Therrien, Mahoney, et al., 2011).

Cueing (Chalmers, 2000; Kayser-Jones et al., 1996)—Cognitive deficits associated with dementia also result in the inability to process and conform to complex commands (Grossman & White-Devine, 1998; Kemper et al., 2001). *Cueing* Is the verbal analog of priming (Chalmers, 2000; Kayser-Jones et al., 1996). Respectful and polite one-step requests are used, often in tandem with gestures, and pantomime, to successfully guide the older adult through mouth care activities (Jablonski, Therrien, Mahoney, et al., 2011). MCPs also avoid asking yes/no questions, such as, “Do you want to brush your teeth?”

Avoiding Elderspeak (Herman & Williams, 2009; Williams, Herman, Gajewski, & Wilson, 2009; Williams & Herman, 2011)—Elderspeak describes a speech pattern similar to baby talk: high-pitched, sing-song prosody, and use of collective plural pronouns and infantilizing endearments in lieu of the individual’s name (e.g., honey, dearie) (Williams et al., 2009; Williams & Herman, 2011). Elderspeak is a documented trigger for CRB (Herman & Williams, 2009), most likely because it is a direct assault on the individual’s dignity. An older adult with dementia may forget important information about his/her life, but never forgets he/she is an adult. As a companion to avoiding elderspeak, MCPs also use lower pitched speaking voices to accommodate the loss, of hearing of higher frequency tones that occur as part of aging.

Encouraging Self-Care—CRB is usually triggered when caregivers attempt to provide mouth care instead of allowing older adults to perform it themselves (Coleman & Watson, 2006). From a threat-perception perspective, it is not difficult to see why older adults would perceive caregiver-provided mouth care as a forceful attempt to place something in their mouth. Promoting self-care is accomplished by having individuals with dementia perform as much mouth care as possible in their preferred manner, especially if the mouth care involves removal and replacement of dentures (Jablonski, Therrien, & Kolanowski, 2011; Jablonski, Therrien, Mahoney, et al., 2011). Gestures, pantomimes, cues, and simple one-step commands are usually used to encourage self-care.

Chaining (Chalmers, 2000)—*Chaining*, a variation on priming, is the initiation of mouth care activities by MCPs with, the expectation that older adults will take over the activities (Jablonski, Therrien, & Kolanowski, 2011).

Bridging (Chalmers, 2000)—When older adults start to resist oral hygiene activities, MCPs place a related object, usually an extra toothbrush, in their hand. Bridging may be understood as a combination of priming and distraction (Jablonski, Therrien, & Kolanowski, 2011).

Distraction (Chalmers, 2000)—Distraction is an attempt to “change gears” when faced with CRB. Useful distraction techniques include singing, talking about a topic that the older adult finds pleasurable, or providing a plush object, such as a doll (Jablonski, Therrien, & Kolanowski, 2011). A note of caution: what works with one resident may backfire with another. In their pilot study, Jablonski et al. (2011) reported that singing was crucial for preventing CRB in one Individual, but precipitated CRB in another. Knowing and recording resident preferences is critical for the effective and safe use of distraction as a CRB-reduction technique.

Hand-Over-Hand (Chalmers, 2000)—This technique is conceptually aligned with chaining, except the MCP places his/her hands over those of the older adult and guides him/her with specific mouth care activities. A variation is having the older adult place his/her hands over those of the MCP. Jablonski, Therrien, Mahoney, et al. (2011) found hand-over-hand especially useful during denture removal.

Mirror-Mirror—This is the provision of mouth care with the MCP standing behind the resident while facing a mirror (Jablonski, Therrien, Mahoney, et al., 2011). This strategy works best with individuals who are unable to perform their own mouth care and do not open their mouths regardless of prompts. The MCP reaches around and performs mouth care from behind the resident. The success of this strategy may be related to priming: the individual with dementia can see his/her image in the mirror without the caregiver in the way. The caregiver’s hand reaching around from the back may create the illusion that the individual with dementia is providing his/her own care (Jablonski, Therrien, & Kolanowski, 2011).

Rescuing (Chalmers, 2000)—This is the replacement of one MCP by another when CRB-reduction strategies are not effective and the CRB is escalating. It may be related to distraction.

Procedure

A full description of the parent study protocol has been published previously (Jablonski, Kolanowski, et al., 2011). MCPs, who were members of the research team and not NH staff, provided mouth care to enrolled participants twice daily for up to 6 weeks. MCPs provided care in teams of two per mouth care session. They were predominantly undergraduate students and nursing assistants who were hired specifically for the study. MCPs were trained to provide mouth care according to an evidence-based protocol (Chalmers & Johnson, 2004; Chalmers, Johnson, Tang, & Titler, 2004; Felton et al., 2011; Gil-Montoya, de Mello, Cardenas, & Lopez, 2006). This protocol included brushing with soft toothbrushes and flossing with interdental brushes for dentate individuals. Denture care was completed using denture brushes and cleaning pastes specifically for denture use. MCPs were also trained to recognize CRB using materials developed by the principal investigator (R.A.J.-J.) and to use threat-reduction strategies while providing mouth care.

MCPs were instructed to gain assent from participants prior to engaging in oral hygiene activities. *Assent* was defined as an affirmative response (verbal “yes” nodding head) to the

MCP's request to perform mouth care. MCPs could approach the individual with dementia up to three times to obtain assent. MCPs were taught to wait several minutes before revisiting the topic if the initial attempt was unsuccessful. The outcome of the assent process was documented.

MCPs were instructed to tailor the strategies according to the personal preferences of the individual with dementia. Families and staff were the source of much of this knowledge. MCPs shared strategies pertinent to a particular participant with other team members by documenting the information in the communication book, which was kept on site in a secured container with a combination lock.

The research study was conducted, sequentially, one facility at a time, using the same procedures. New and returning MCPs received the same training prior to engaging in research activities at each facility.

Statistical Analyses

Characteristics of participants were obtained using descriptive statistics. Patterns and frequencies of threat-reduction strategies were obtained from treatment fidelity instruments completed by the principal investigator/program, managers and self-report by MCPs. Because data were recorded uniquely for each instance of mouth care, the search function of Microsoft Word® 2010 was used to delineate each instance a particular strategy was used. In addition, data were visually examined for strategies that were described using vernacular language. Percentages of mouth care completed were also calculated. Analyses were calculated using SPSS version 22.

RESULTS

Mean age of the 46 participants was 83.8 years ($SD = 8.92$ years). The majority of participants were female (78.3%) and White (82.6%). They had moderate to severe dementia with a mean Global Deterioration Score of 5.74 ($SD = 0.71$) and were dependent on others for care. Regarding dentition, 74% of participants had teeth, with at least one adjacent pair; 15% used dentures and 11 % had mixed dentition.

Data were analyzed for 2,275 mouth care sessions. MCPs were able to provide oral hygiene for 73% of mouth care sessions. The primary reason for inability, to provide mouth care was refusal by the participant during the assent process (17%). For the remaining 10% of mouth care sessions, participants were unavailable (e.g., out of the facility). One of the findings from the treatment fidelity checks was that MCPs integrated the *approach* and *establishing rapport* threat-reduction strategies into the assent process.

Mouth care was always provided in residents' rooms but was not always performed in front of a sink. If residents were already in bed for the night when MCPs arrived, mouth care was performed with the head elevated to a sitting position. MCPs were not allowed (for liability reasons) to transfer residents from beds to chairs.

All of the threat-reduction strategies were used, but two patterns emerged. Some strategies were used in preemptive, consistent, and synergistic combinations during reported and

observed mouth care sessions: *approach, establishing rapport, avoiding elderspeak, gestures/pantomime, cueing, and chaining*. *Mirror-mirror* was also used regularly but only with residents who responded to mouth care with immobility (freezing). Other strategies were used to address CRB and prevent escalation: *rescue, distraction, bridging, and hand-over-hand*. The *rescue* technique was most effective when used with teams of one female and one male. For example, Mrs. P. was becoming argumentative and verbally aggressive in response to attempts by the NH staff to provide activities of daily living. When the first MCP (female) approached, Mrs. P. loudly told the provider to “go away.” The second MCP (male) approached and engaged Mrs. P. in a positive conversation; she ultimately went into the bathroom and performed her own mouth care, accompanied by the male MCP. The rescue strategy was used with Mrs. P. throughout the study.

While performing treatment fidelity assessments, the principal investigator and program managers noticed that MCPs were developing special relationships with participants. Instead of MCPs simply taking turns providing mouth care to various residents, they developed systems whereby they would provide care to participants with whom they had established bonds. It was common to hear conversations between MCPs, such as, “Debbie, if you don’t mind, I’d like to do mouth care for Mrs. D. She likes it when I sing gospel songs during mouth care,” and, “That’s fine, Eve. I noticed she prefers you to me. I’ll take care of Mr. J. He likes to talk about his fishing trips.”

Additional strategies were creatively developed on-the-spot to counter CRBs that were not responding to previously established techniques, and were captured as part of the treatment fidelity assessments. These strategies were added to the MOUTH repertoire as the study progressed. One technique involved the use of a second toothbrush as a bite-block. This technique was especially helpful for individuals with movement disorders, such as Parkinson’s disease. The MCP would begin brushing the resident’s teeth. When the older adult bit down on the toothbrush and did not release it, the MCP would gently turn the toothbrush so that the width of the head served as a bite-block and proceed to clean the other side of the mouth with a second toothbrush. When one side was completed, the MCP would simultaneously turn the second toothbrush to the side while turning the first toothbrush flat, facing the bristles downward toward the teeth. The MCP then resumed brushing with the freed toothbrush.

Another strategy developed as the study progressed was *requesting help*. This occurred when the MCP framed the mouth care activity within the context of the NH resident: “Can you help me by brushing your teeth?” This novel approach rarely resulted in a negative response despite the question’s dichotomous structure.

Individuals with dementia often insisted that they had already completed mouth care or that mouth care was not needed. MCPs soon learned that presenting logic resulted in an unproductive argument and the loss of a mouth care session. MCPs were observed going along with the older adult to a point and then circling back to suggest mouth care would be beneficial. For example, when an MCP encountered the statement, “I just brushed my teeth,” he/she responded in a version of the following: “I know. And I’m glad you did. But you just

ate your supper. Let's get your mouth all fresh and nice before bedtime." This strategy was labeled *entering the individual's reality*.

Another application of *entering the individual's reality* was creating a scenario where mouth care was necessary based on the resident's previous occupation. For example, one of the participants, Mr. B., was a retired educator. When enrolling him in the study, the NH staff suggested he not be included, claiming, "He never lets anyone brush his teeth." When MCPs worked with him, they tried the various techniques with mixed success. Near the end of the first week, one MCP quietly told the resident that "the students are waiting in class." Mr. B. immediately followed her into his bathroom and allowed the provider to begin mouth care. This strategy, based on knowing the resident's history, was adopted by the NH staff to prevent and reduce CRBs associated with bathing and dressing.

DISCUSSION AND NURSING IMPLICATIONS

The MOUTH intervention was originally conceived as a way to provide non-threatening mouth care, an intimate activity that was necessary but not always well-received by individuals with dementia. It was discovered that the MOUTH intervention matured during the current study into a relationship-centered intervention, with emphasis on having to learn about the individual to establish rapport and modify one's approach. That is, the MOUTH intervention has many person-centered elements and has evolved to additionally incorporate caregiver preferences for providing optimum care. Incorporation of caregiver and care-receiver preferences, with emphasis on care-receiver preferences, changes the dynamic of the caregiving interaction. Even using specific distraction techniques, such as singing favorite hymns or talking about special hobbies, involved getting to know the individual with dementia in a deeper way. Relationships that were initially pragmatic (i.e., focused on the task of completing mouth care) developed into more personal and responsive relationships that involved deeper engagement between the MCP and NH resident (Wilson, Davies, & Nolan, 2009). In fact, the technique of asking for help may have moved the relationship into a "reciprocal relationship" that provided an opportunity for the individual with dementia to collaborate in his/her care (Wilson et al., 2009, p. 1053).

The MOUTH intervention may provide a way for NH staff to deliver evidence-based oral hygiene within the context of person-centered, relationship-based care (Dewar & Nolan, 2013; Nolan et al., 2004; Van Haitsma et al., 2014). Not only was mouth care accomplished, it was completed in a manner enjoyable to the NH resident and MCP. The MOUTH intervention, originally designed to reduce threat perception, may also concurrently affirm the dignity and personhood of the care recipient because of its emphasis on connecting with the older adult (Nolan et al., 2004). In addition, use of a small and consistent number of MCPs also helped build relationships. This finding supports consistent assignment of staff, which promotes relationship building, and should be instituted in all nursing homes (Beck, Ortigara, Mercer, & Shue, 1999).

The strategies used and developed as the study progressed also validate findings from other studies that resonate with the underpinnings of relationship-based care. Beach and Kramer (1999) interviewed nursing assistants to describe communication patterns used with

individuals with Alzheimer's disease. One of the themes was *compliance-gaining strategies*. Nursing assistants reported using similar strategies as the ones tested in the current study: framing care within a request for assistance, using knowledge about the resident to redirect behavior, trying different staff members when faced with CRB (i.e., changing faces), nonverbal communication, gentle touch, and entering the individual's reality.

The current authors were concerned that entering the individual's reality may, at times, result in "therapeutic fibbing," a technique offered by Beach and Kramer (1999, p. 13) as an expedient way to counter perseverative behavior that seems distressing to an individual with dementia. One nursing assistant interviewed by Beach and Kramer (1999) offered an example of such therapeutic fibbing: she told a NH resident who repeatedly inquired about her family that they would be visiting "later." The rationale offered by the nursing assistant was that any other response caused visible anxiety and anguish to the resident. Not all nursing assistants were comfortable with therapeutic fibbing and perceived the practice as one of last resort. Other advocates of PCC disagree with the use of therapeutic fibbing, instead proposing validation techniques that do not involve falsehoods but have caregivers accompany older adults on their emotional journey (Feil & Altman, 2004). A risk of therapeutic fibbing is that trust between the older adult and caregiver may be breached, and the relationship compromised, if the older adult realizes the caregiver has lied.

One challenge of implementing the MOUTH intervention in NHs may be the amount of time needed after the intervention is initiated. Knowing which strategy to use and when to use it within the mouth care interaction was a matter of trial-and-error during the first few weeks. This may prove to be initially frustrating for NH staff. However, having a toolbox of strategies to prevent and reduce CRBs, which are upsetting to care recipients and providers, could prove to be an incentive for adoption.

LIMITATIONS

The MOUTH intervention was always delivered by research staff. No data were collected on how feasible it would be to disseminate the MOUTH intervention to NH staff. Further testing is required to determine its acceptability by direct care staff and the best methods for dissemination. However, NH environments are slowly changing. These changes are fueled by (a) the Centers for Medicare and Medicaid's expectation that PCC be delivered in facilities (Van Haitsma et al., 2014) and (b) the need for non-drug interventions for dementia-related behaviors. Nurses working in these facilities may find the adoption of the MOUTH intervention a welcome additional tool for meeting both directives.

Another limitation involved the lack of systematic measurement of research staff's tailoring of the MOUTH intervention and incorporation of participants' preferences. Data captured occurred within the context of treatment fidelity observations and self-report by research staff. Measuring the concept of PCC remains a challenge (Van Haitsma et al., 2014). Development of instruments or methods to capture components of relationship-based care, including caregiver preferences and interactions between care recipients and caregivers, remains a fruitful area for future inquiry.

CONCLUSION

Strategies described in the current article represent personalized practices for addressing CRB within the context of providing a safe and relationship-centered environment. These techniques may have applicability to other activities of daily living that trigger CRB, such, as bathing. The strategies may also be helpful to family caregivers in the community. More research will inform the translatability of the MOUTH intervention to other care activities and settings beyond the NH.

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Keypoints

1. Mouth care is oral infection control and is important in maintaining systemic health.
2. Care-resistant behavior (CRB) is part of the freeze–fight–flight response to a perceived threat.
3. The Managing Oral Hygiene Using Threat Reduction (MOUTH) intervention is a relationship-centered intervention, with emphasis on staff having to learn about the patient to establish rapport and modify one’s approach.
4. Strategies often used together at the beginning of each mouth care session to prevent CRBs included *approach, establishing rapport, avoiding elderspeak, gestures/pantomime, cueing, and chaining*.

Figure 1.