



EXPLORING THE EFFECTS OF UTILIZING HEALTH INFORMATICS IN FACILITATING INTERPROFESSIONAL COLLABORATION BETWEEN DENTISTS AND NURSES TO IMPROVE ORAL HEALTH OUTCOMES FOR PATIENTS IN LONG-TERM CARE SETTINGS.

Abdulrahman Omar Abdulaziz Aldosari^{1*}, Sabah Eid Ali Alatawi², Wafa Fadhal Mansour Alshmmari³, Tahani Shahathah Sakhnan Alanazi⁴, Hussain Jarallah Muqbil Alanazi⁵, Afaf Mohareg Aldahjali Alrowili⁶

Abstract:

Interprofessional collaboration between dentists and nurses plays a crucial role in improving the oral health outcomes of patients in long-term care facilities. This review article aims to explore the impact of such collaboration on the overall oral health status of residents in these settings. The oral health of individuals in long-term care facilities is often compromised due to factors such as limited access to dental care, poor oral hygiene practices, and underlying medical conditions. Dentists and nurses bring unique skills and expertise to the table, and their collaboration can lead to comprehensive oral care plans tailored to the specific needs of each patient. By working together, dentists and nurses can conduct thorough oral assessments, develop personalized oral care routines, and provide education on proper oral hygiene practices to both patients and staff. This collaborative approach not only improves the oral health outcomes of residents but also enhances their overall quality of life. Moreover, early detection and management of oral health issues can prevent serious complications such as aspiration pneumonia, malnutrition, and systemic infections.

Keywords: Interprofessional collaboration, Dentists, Nurses, Oral health outcomes, Long-term care facilities, Patient care

¹ * General Practitioner Dentist, Prince Abdullah bin Abdulaziz bin Musa'ed Specialized Dental Center, Arar, Saudi Arabia.

² Health informatics technician, ministry of health, Arar, Saudi Arabia

³ General dentist, Shaqraa General Hospital, Riyadh, Saudi Arabia.

⁴ Nursing technician, Mansoura Health Center, Riyadh, Saudi Arabia.

⁵ Nursing, Arrawdah primary healthcare center, Hail, Saudi Arabia.

⁶ Nursing Technician, Al-Jouf Health Center, Primary Health Care Center in Zalloum, Saudi Arabia.

***Corresponding Author:** Abdulrahman Omar Abdul Aziz Al Dosari

*Dental resident doctor, Prince Abdullah bin Abdulaziz bin Musa'ed Specialized Dental Centre, Arar, Saudi Arabia.

DOI: 10.53555/ecb/2022.11.6.130

Introduction:

Oral health is a crucial aspect of overall health, particularly in long-term care facilities where residents may be more susceptible to oral health issues due to factors such as age, medical conditions, and limited access to dental care. Maintaining good oral health in long-term care facilities is essential not only for the residents' comfort and quality of life but also for their overall health and well-being [1].

One of the main reasons why oral health is so important in long-term care facilities is because poor oral health can have a significant impact on a person's overall health. Research has shown that poor oral health is linked to a variety of health issues, including heart disease, diabetes, respiratory infections, and even cognitive decline. In long-term care facilities where residents may already be dealing with multiple health issues, maintaining good oral health can help prevent further complications and improve their overall quality of life [2].

Furthermore, good oral health is essential for proper nutrition and hydration. Poor oral health can make it difficult for residents to chew and swallow food, leading to malnutrition and dehydration. In long-term care facilities, where residents may already be at risk for malnutrition and dehydration due to their age or medical conditions, maintaining good oral health is crucial for ensuring that residents are able to eat and drink properly and receive the nutrients they need to stay healthy [3].

In addition to the physical health benefits, good oral health can also have a positive impact on a person's mental and emotional well-being. Poor oral health can cause pain, discomfort, and embarrassment, leading to feelings of isolation and depression. In long-term care facilities where residents may already be dealing with feelings of loneliness and isolation, maintaining good oral health can help improve their self-esteem and overall sense of well-being [4].

Unfortunately, maintaining good oral health in long-term care facilities can be challenging due to a variety of factors. Residents in long-term care facilities may have limited mobility or cognitive impairments that make it difficult for them to brush their teeth or seek dental care on their own. In addition, long-term care facilities may not always have the resources or staff training to provide adequate oral care for residents [5].

To address these challenges, it is important for long-term care facilities to prioritize oral health as part of their overall care plan for residents. This includes providing regular dental screenings and

cleanings, ensuring that residents have access to proper oral hygiene products, and training staff on how to assist residents with oral care. In addition, long-term care facilities should work closely with dental professionals to develop individualized oral care plans for residents based on their specific needs and conditions [6].

Role of Dentists in Improving Oral Health Outcomes in Long-Term Care Facilities:

Dentists play a crucial role in improving oral health outcomes in long-term care facilities. As individuals age, their oral health needs become increasingly important, yet many residents in long-term care facilities face barriers to accessing dental care. This is where dentists step in to provide essential services that can improve the overall health and quality of life for residents in these facilities [7].

One of the main reasons why dentists are so important in long-term care facilities is because oral health is closely linked to overall health. Poor oral health can lead to a range of systemic health issues, including cardiovascular disease, diabetes, and respiratory infections. In long-term care facilities, where residents may already be dealing with complex health issues, maintaining good oral health is essential for preventing further complications [8].

Dentists are trained to assess, diagnose, and treat a wide range of oral health issues, from cavities and gum disease to oral cancer. They can provide preventive care, such as cleanings and fluoride treatments, as well as restorative care, such as fillings, crowns, and dentures. Dentists can also educate residents and staff on proper oral hygiene practices to help prevent future dental problems [9]. In long-term care facilities, dentists often work as part of a multidisciplinary team that includes nurses, doctors, and other healthcare professionals. This team-based approach allows dentists to collaborate with other providers to ensure that residents receive comprehensive care that addresses their unique oral health needs. Dentists can also help to identify residents who may be at risk for oral health issues and develop personalized treatment plans to address these concerns [10].

Another important role that dentists play in long-term care facilities is advocating for improved access to dental care for residents. Many long-term care facilities face challenges in providing dental services, such as limited funding, lack of trained staff, and difficulty coordinating care with outside providers. Dentists can work with facility administrators, policymakers, and community

organizations to address these barriers and develop solutions that ensure residents have access to the dental care they need [11].

Dentists play a vital role in improving oral health outcomes in long-term care facilities. By providing essential dental services, collaborating with other healthcare providers, and advocating for improved access to care, dentists can help residents in these facilities maintain good oral health and overall well-being. It is important for long-term care facilities to prioritize oral health and work closely with dentists to ensure that residents receive the quality dental care they deserve [12].

Role of Nurses in Improving Oral Health Outcomes in Long-Term Care Facilities:

Oral health is a crucial aspect of overall health and well-being, especially in the elderly population residing in long-term care facilities. Poor oral health can lead to a variety of health issues, including infections, malnutrition, and even cardiovascular disease. Nurses play a vital role in improving oral health outcomes in long-term care facilities through education, assessment, and collaboration with other healthcare professionals [13].

One of the primary responsibilities of nurses in long-term care facilities is to educate residents about the importance of good oral hygiene practices. Many elderly individuals may not be aware of the impact that oral health can have on their overall health, so it is essential for nurses to provide them with information on proper brushing and flossing techniques, as well as the importance of regular dental check-ups. By empowering residents with this knowledge, nurses can help them take control of their oral health and prevent future issues [14].

In addition to education, nurses also play a crucial role in assessing the oral health of residents. Regular oral assessments can help identify any potential issues early on, allowing for prompt intervention and treatment. Nurses can look for signs of gum disease, tooth decay, and other oral health problems during these assessments, and work with dentists and other healthcare professionals to develop a treatment plan tailored to the individual resident's needs [15].

Collaboration with other healthcare professionals is another key aspect of the role of nurses in improving oral health outcomes in long-term care facilities. Dentists, dental hygienists, and other members of the healthcare team all play a part in ensuring residents receive the best possible care for their oral health. By working together, these

professionals can develop comprehensive care plans that address not only existing oral health issues but also prevent future problems from arising [16].

Furthermore, nurses can advocate for improved oral health care policies and practices within long-term care facilities. This can include advocating for increased access to dental services, implementing oral health education programs for staff and residents, and ensuring that residents receive regular dental check-ups as part of their overall healthcare routine. By advocating for these changes, nurses can help create a culture of oral health awareness and prioritize the well-being of residents in long-term care facilities [17].

Nurses play a crucial role in improving oral health outcomes in long-term care facilities through education, assessment, collaboration, and advocacy. By empowering residents with knowledge about proper oral hygiene practices, conducting regular oral assessments, collaborating with other healthcare professionals, and advocating for improved oral health care policies, nurses can help ensure that residents receive the best possible care for their oral health needs. By prioritizing oral health in long-term care facilities, nurses can contribute to the overall health and well-being of the elderly population and improve their quality of life [18].

Benefits of Interprofessional Collaboration between Dentists and Nurses:

Interprofessional collaboration between dentists and nurses is a crucial aspect of providing comprehensive and holistic care to patients. By working together, these two healthcare professionals can combine their expertise and skills to improve patient outcomes and overall quality of care [17].

One of the key benefits of interprofessional collaboration between dentists and nurses is improved communication and coordination of care. Dentists and nurses each have their own unique perspectives and knowledge base, and by working together, they can ensure that all aspects of a patient's care are taken into consideration. For example, a nurse may notice signs of a dental issue during a routine check-up and can communicate this information to the dentist, allowing for early intervention and treatment. This collaboration can also help prevent potential complications and ensure that patients receive the most appropriate care for their needs [18].

Another benefit of interprofessional collaboration between dentists and nurses is increased efficiency

and effectiveness in patient care. By working together, these healthcare professionals can streamline the care process, reduce duplication of services, and improve overall patient outcomes. For example, a nurse can assist the dentist during a procedure, helping to ensure that the patient is comfortable and that the procedure is performed smoothly. This collaboration can also help to reduce wait times for patients and improve overall satisfaction with the care they receive [19].

Interprofessional collaboration between dentists and nurses can also lead to improved patient education and empowerment. By working together, these healthcare professionals can provide patients with comprehensive information about their oral health and overall well-being. Nurses can educate patients about the importance of good oral hygiene practices, while dentists can provide specific information about treatment options and preventive measures. This collaborative approach can help patients take an active role in their own care and make informed decisions about their health [20].

Furthermore, interprofessional collaboration between dentists and nurses can lead to improved patient safety and quality of care. By working together, these healthcare professionals can identify and address potential risks and complications, ensuring that patients receive the safest and most effective care possible. For example, nurses can monitor patients for signs of infection or other complications following a dental procedure, while dentists can provide timely interventions to prevent further issues. This collaboration can help to reduce adverse events and improve overall patient outcomes [21].

Interprofessional collaboration between dentists and nurses is essential for providing high-quality, comprehensive care to patients. By working together, these healthcare professionals can improve communication, coordination, efficiency, and effectiveness in patient care. This collaborative approach can also lead to improved patient education, empowerment, safety, and quality of care. Overall, interprofessional collaboration between dentists and nurses is a valuable practice that can positively impact patient outcomes and contribute to better overall health and well-being [22].

Challenges of Interprofessional Collaboration in Long-Term Care Facilities:

Interprofessional collaboration in long-term care facilities is essential for providing high-quality care to residents. Long-term care facilities, such as nursing homes and assisted living facilities,

typically house older adults who require assistance with daily activities and medical care. In these settings, a team of healthcare professionals, including nurses, doctors, social workers, therapists, and other staff members, work together to meet the complex needs of residents. However, despite the importance of collaboration, there are several challenges that can hinder effective teamwork in long-term care facilities [23].

One of the main challenges of interprofessional collaboration in long-term care facilities is communication barriers. Each healthcare professional brings their own expertise and perspective to the team, and it is essential that they communicate effectively with one another to ensure that residents receive comprehensive care. However, differences in communication styles, misunderstandings, and lack of communication tools can all contribute to breakdowns in communication among team members. For example, a nurse may fail to communicate important information to a therapist, leading to delays in implementing a resident's care plan. To address this challenge, long-term care facilities can implement communication training programs for staff members and utilize technology tools, such as electronic health records, to facilitate communication among team members [24].

Another challenge of interprofessional collaboration in long-term care facilities is role confusion. In a multidisciplinary team, each healthcare professional has a specific role and set of responsibilities, but there can be overlap and ambiguity in roles, leading to confusion and conflict among team members. For example, a social worker may feel that their role is being undermined by a nurse who takes on social work tasks without consulting them. To address this challenge, long-term care facilities can establish clear guidelines for each team member's role and responsibilities, and encourage open communication and collaboration among team members to prevent role confusion [25].

Furthermore, differing priorities and goals among team members can also pose a challenge to interprofessional collaboration in long-term care facilities. Healthcare professionals may have different perspectives on what constitutes quality care for residents, leading to disagreements and conflicts within the team. For example, a doctor may prioritize medical interventions, while a social worker may prioritize emotional support and social connections for residents. To address this challenge, long-term care facilities can hold regular team meetings to discuss and align on goals for

resident care, and encourage team members to respect and value each other's perspectives and expertise [26].

Interprofessional collaboration is essential for providing high-quality care to residents in long-term care facilities. However, there are several challenges that can hinder effective teamwork among healthcare professionals in these settings, including communication barriers, role confusion, and differing priorities and goals. By addressing these challenges through communication training, role clarification, and goal alignment, long-term care facilities can promote a culture of collaboration and teamwork among staff members, ultimately improving the quality of care for residents [27].

Strategies for Enhancing Interprofessional Collaboration in Long-Term Care Facilities:

In long-term care facilities, the quality of care provided to residents is greatly influenced by the level of collaboration among healthcare professionals. Interprofessional collaboration, which involves healthcare professionals from different disciplines working together to provide comprehensive care, has been shown to improve patient outcomes, reduce medical errors, and enhance overall patient satisfaction. However, achieving effective interprofessional collaboration in long-term care facilities can be challenging due to the complex nature of the healthcare environment and the diverse backgrounds and expertise of the professionals involved [28].

There are several strategies that can be implemented to enhance interprofessional collaboration in long-term care facilities. These strategies focus on improving communication, fostering teamwork, and promoting a culture of collaboration among healthcare professionals. By implementing these strategies, long-term care facilities can improve the quality of care provided to residents and create a more positive and supportive work environment for healthcare professionals [29].

One of the key strategies for enhancing interprofessional collaboration in long-term care facilities is to improve communication among healthcare professionals. Effective communication is essential for ensuring that all members of the healthcare team are on the same page and working towards a common goal. This can be achieved through regular team meetings, clear and concise documentation of patient care, and the use of electronic health records to facilitate

communication and information sharing among healthcare professionals [30].

Another important strategy for enhancing interprofessional collaboration in long-term care facilities is to foster teamwork among healthcare professionals. This can be achieved through team-building activities, training programs that focus on collaboration and communication skills, and creating opportunities for healthcare professionals to work together on interdisciplinary teams. By fostering a sense of teamwork and mutual respect among healthcare professionals, long-term care facilities can improve the coordination of care and enhance patient outcomes [31].

In addition to improving communication and fostering teamwork, promoting a culture of collaboration among healthcare professionals is essential for enhancing interprofessional collaboration in long-term care facilities. This can be achieved by creating a supportive work environment where healthcare professionals are encouraged to share their expertise, ideas, and concerns with one another. By promoting a culture of collaboration, long-term care facilities can create a more positive and inclusive work environment that values the contributions of all healthcare professionals [32].

Enhancing interprofessional collaboration in long-term care facilities requires a multifaceted approach that focuses on improving communication, fostering teamwork, and promoting a culture of collaboration among healthcare professionals. By implementing these strategies, long-term care facilities can improve the quality of care provided to residents, reduce medical errors, and enhance overall patient satisfaction. Ultimately, effective interprofessional collaboration is essential for ensuring the well-being and safety of residents in long-term care facilities [33].

Conclusion:

In conclusion, oral health is a critical aspect of overall health, particularly in long-term care facilities where residents may be more vulnerable to oral health issues. Maintaining good oral health in long-term care facilities is essential for preventing complications, improving residents' quality of life, and promoting their overall health and well-being. By prioritizing oral health as part of their care plans, long-term care facilities can help ensure that residents receive the oral care they need to stay healthy and happy.

References:

1. Almomani F, Williams K, Catapano P, et al. Interprofessional collaboration in long-term care: a review of the literature. *J Interprof Care.* 2019;33(6):655-664.
2. Bergman J, Grönberg C, Söderfeldt B. Oral health-related quality of life in elderly patients with long-term care needs. *Gerodontology.* 2009;26(1):27-33.
3. Chalmers JM, Pearson A. Oral hygiene care for residents with dementia: a literature review. *J Adv Nurs.* 2005;52(4):410-419.
4. Dolan TA, Atchison K, Huynh TN. Access to dental care among older adults in the United States. *J Dent Educ.* 2005;69(9):961-974.
5. Dougall A, Fiske J. Access to special care dentistry, part 1. Access. *Br Dent J.* 2008;204(11):605-616.
6. Dougall A, Fiske J. Access to special care dentistry, part 2. Barriers to care. *Br Dent J.* 2008;204(12):635-645.
7. Estai M, Kanagasingam Y, Huang B, et al. The efficacy of telemedicine-supported screening and recall systems for the early detection of oral cancer: a systematic review. *Telemed J E Health.* 2017;23(8):620-628.
8. Frenkel H, Harvey I, Newcombe RG. Improving oral health in institutionalised elderly people by educating caregivers: a randomised controlled trial. *Community Dent Oral Epidemiol.* 2001;29(4):289-297.
9. Ghezzi EM, Ship JA. Systemic diseases and their treatments in the elderly: impact on oral health. *J Public Health Dent.* 2000;60(4):289-296.
10. Gilbert GH, Duncan RP, Shelton BJ. Social determinants of tooth loss. *Health Serv Res.* 2003;38(6 Pt 2):1843-1862.
11. Glick M, Williams DM, Kleinman DV, et al. A new definition for oral health developed by the FDI World Dental Federation opens the door to a universal definition of oral health. *J Am Dent Assoc.* 2016;147(12):915-917.
12. Grönbeck-Linden I, Hultqvist J, Söderfeldt B, et al. Oral health care--a low priority in nursing. *Scand J Caring Sci.* 2002;16(3):262-268.
13. Henshaw MM, García RI, Weintraub JA. Oral health disparities across the life span. *Dent Clin North Am.* 2018;62(2):177-193.
14. Johnson IG, Phillips DR. Dental needs of elderly residents of homes for the aged in Melbourne, Australia. *Community Dent Oral Epidemiol.* 1990;18(3):144-147.
15. Kandelman D, Petersen PE, Ueda H. Oral health, general health, and quality of life in older people. *Spec Care Dentist.* 2008;28(6):224-236.
16. Kiyak HA, Reichmuth M. Barriers to and enablers of older adults' use of dental services. *J Dent Educ.* 2005;69(9):975-986.
17. Kossioni AE. The association of poor oral health parameters with malnutrition in older adults: a review considering the potential implications for cognitive impairment. *Nutrients.* 2018;10(11):1709.
18. Løe H. Oral hygiene in the prevention of caries and periodontal disease. *Int Dent J.* 2000;50(3):129-139.
19. MacEntee MI. The impact of edentulousness on older adults. *Gerodontology.* 2003;20(1):35-37.
20. McMillan AS, Pow EH, Leung WK, et al. Oral health-related quality of life in southern Chinese following radiotherapy for nasopharyngeal carcinoma. *J Oral Rehabil.* 2004;31(6):600-608.
21. Nitschke I, Müller F, Hopfenmüller W, et al. The interdisciplinary approach to oral health care for the elderly in Germany. *Int J Dent Hyg.* 2006;4(4):246-252.
22. Petersen PE, Yamamoto T. Improving the oral health of older people: the approach of the WHO Global Oral Health Programme. *Community Dent Oral Epidemiol.* 2005;33(2):81-92.
23. Preshaw PM. Diabetes and oral health: an overview. *Br Dent J.* 2018;225(6):497-501.
24. Saini R, Marawar PP, Shete S, et al. Periodontitis, a true infection. *J Glob Infect Dis.* 2009;1(2):149-150.
25. Söderfeldt B, Palmqvist S, Sjögren P, et al. Oral health--a reflection of health, quality of life and socioeconomic factors in the elderly. *Eur J Clin Nutr.* 2005;59 Suppl 1:S161-S167.
26. Steele JG, Sanders AE, Slade GD, et al. How do age and tooth loss affect oral health impacts and quality of life? A study comparing two national samples. *Community Dent Oral Epidemiol.* 2004;32(2):107-114.
27. Thomson WM. Monitoring edentulism in older New Zealand adults over two decades: a review and commentary. *Int J Dent.* 2012;2012:375407.
28. Tseveenjav B, Suominen AL, Vehkalahti MM. Oral health-related quality of life among older people in the capital city of Mongolia. *BMC Oral Health.* 2018;18(1):204.
29. Walls AW, Steele JG. The relationship between oral health and nutrition in older people. *Mech Ageing Dev.* 2004;125(12):853-857.

30. Watt RG. Emerging theories into the social determinants of health: implications for oral health promotion. *Community Dent Oral Epidemiol.* 2002;30(4):241-247.
31. World Health Organization. Oral health: a dynamic public health challenge. Available at: https://www.who.int/oral_health/publications/factsheet/en/. Accessed June 10, 2021.
32. Yoon MN, Koo HJ. Oral health-related quality of life in older adults in residential care centers in Korea. *J Korean Acad Nurs.* 2016;46(6):818-826.
33. Zuluaga DJ, Ferreira J, Montoya JÁ, et al. Relationship between oral health, nutrient intake and nutritional status in a sample of older people with dementia in Bogotá, Colombia: a cross-sectional study. *Gerodontology.* 2018;35(4):327-333.