

# Oral Health Education of Staff in Long-Term Care Institutions

## SUMMARY

*Creating of protocol for the education for oral health and improving oral hygiene among institutionalized elderly is of great significance in prevention of the consequences that can provide numerous oral diseases among the elderly. Activation of as much as possible range of professionals in the field of dentistry in creation of this protocol and the fundamentals for the education of dental staff, and other professionals who care for health also has great significance. In this way with minimal financial loss will be reached maximum benefit-improved quality of life for institutionalized elderly. Taking into consideration the previously mentioned facts about of oral health, the presence of numerous dental problems and increased health needs and poor health among institutionalized elderly the aim of this paper was made- to make a draft protocol for education of the staff responsible for care of the institutionalized elderly aged over 65 years. In this paper are presented fundamentals of a proposed protocol for improving of oral health and hygiene among institutionalized elderly. Presented are all disadvantages in of oral health care for the elderly, are given directions and goals in order for improving of oral health and hygiene among the elderly, guidelines and targets for prevention programs to educate the professionals who care for them.*

**Key words:** Institutionalized Elderly, Caregivers, Oral Hygiene, Education of Medical Staff

**Mihajlo Petrovski<sup>1</sup>, Olivera Terzieva-Petrovska<sup>1</sup>, Ivona Kovecvska<sup>1</sup>, Ana Minovska<sup>1</sup>, Kiro Ivanovski<sup>2</sup>, Kiro Papakoca<sup>1</sup>**

<sup>1</sup> Faculty of Medical Sciences, University "Goce Delcev"-Stip, North Macedonia

<sup>2</sup> Faculty of dentistry SS. Ciril and Methodius-Skopje, North Macedonia

**REVIEW PAPER (RP)**

**Balk J Dent Med, 2019;63-67**

## Introduction

Institutionalized people have a great objective need for oral care and treatment despite the fact that they are extremely rarely aware of it and perceive the need. The significance of this education is increased due to the fact that the percentage of institutionalized persons is increasing, just like the needs for medical and dental care<sup>1</sup>. Older people today live longer, the use of prosthetic devices has increased as well as the number of teeth in the elderly, which further increases the importance of care staff in long-term care institutions to improve the oral health of institutionalized elderly people<sup>2</sup>. In the institutions for care of the elderly, most of the medical, social and personal needs of those elderly people who are unable to care for themselves are satisfied<sup>3</sup>.

Taking into consideration the previously mentioned facts about of oral health, the presence of numerous dental problems and increased health needs and poor health among institutionalized elderly the aim of this paper was made- to make a draft protocol for education of the staff responsible for care of the institutionalized elderly aged over 65 years.

## Basics of Oral Health Education of Nursing and Auxiliary Staff in Long-Term Care Facilities

Dental care is of special importance to institutionalized elderly people because oral diseases can have a complex negative impact not only on the quality

of life but also on the general health. The presence of a small number of residual teeth, oro-facial pain, teeth problems, and periodontal tissues can greatly affect the feeding process, like nutrition and the choice of nutrients, psychological condition and interpersonal communication<sup>2,4-10</sup>.

In the programs for maintaining oral hygiene among the institutionalized elderly, we should focus on the people who need help for basic or additional care for the mouth, tooth brushing, cleaning the prosthetic devices and removing of the discomfort associated with eating and talking. What should be aware of the persons who are primarily responsible for the care of institutionalized elderly people is the fact that oral diseases are often more complex over time, because they are diseases that are cumulative. For the best functioning of this educational protocol, a high-quality preventive program is needed, the activities for its implementation, as well as covering the funds for appropriate treatment of the diseases in the institutionalized elderly, should be financially covered by the state budget<sup>5,11-15</sup>.

Institutionalized elderly people are characterized by inadequate or insufficient oral hygiene. This situation is especially characteristic for people who need help to maintain oral hygiene, whose percentage is not for neglect. Activities aimed at regular maintenance of oral hygiene should be related to the use of appropriate toothbrushes that would be used manually or electrically, using additional supplements for maintaining oral hygiene other than toothpaste, which should be fluorinated as well as with and containing chlorhexidine<sup>16-19</sup>.

Most often responsible for maintaining oral hygiene are the persons responsible for the care of the elderly - nurses and paramedics. Their educational characteristics and needs should be taken into account, especially the need for training in carrying out for the activities for maintaining oral hygiene among the institutionalized elderly. One of the reasons why nurses most often avoid activities related to the care of the elderly is related to the insufficient recognition of the priorities associated with oral hygiene among institutionalized elderly<sup>20-23</sup>.

It can therefore be concluded that they have a lack of knowledge of the oral hygiene and oral diseases in general. These professionals also encounter other problems related to the maintenance of oral hygiene in foster care: deficiency of time, lack of knowledge of the techniques and means for maintaining oral hygiene, non-communicative and inadequate patients.

The training of these staff can improve the quality of oral hygiene. It is best to educate both professionals in education sessions which will take about 1 h in small groups (from 5 to 10 people). Guidelines to target educational programs for the improvement of oral health and hygiene, referring to professionals employed in care institutions are: Significance of the daily maintenance of oral hygiene among the institutionalized elderly,

theoretical basics and practical improvement of the techniques for maintaining oral hygiene among the institutionalized elderly, recognition of the most common oral diseases.

Hence, educational programs that include evaluation of oral health among institutionalized elderly, education of caregiving staff and planning of oral hygiene in the elderly must be implemented in order to meet the basic criteria for prevention of oral diseases, and appropriate dental health care in case of need. Such educational programs need to be related to the role and attitude of the care staff, they need to understand and improve the activities that they need to undertake to improve oral health, and above all to take into account the needs of the targeted population group. Education should be appropriate and include the use of appropriate lectures with audiovisual effects, appropriate presentations and independent exercises and discussions among the participants themselves. What needs to be taken into consideration due to the different educational level of the care staff is the adaptation of the educational program according to their pre-knowledge. Numerous authors point out that the staff, apart from practical educational contents (presentation of different teeth brushing techniques) should be familiar with certain theoretical bases (for oral and dental diseases, their clinical manifestation and prevention). The objectives of the educational program of professionals responsible for the care of elderly people in long-term care elderly centers are directed to:

- Getting information about oral conditions and diseases as well as the possibilities for their prevention,
- The importance of regular maintenance of oral hygiene, as well as the negative effects of non-maintenance of oral hygiene on oral and general health,
- The influence of xerostomy on oral health, nutrition and general health,
- Determination of changes in the oral mucosa caused by inadequately dimensioned prosthetic devices,
- Knowing the positive effects of the use of fluoride toothpastes, rinsing agents for the oral cavity, cleansing agents for prosthetic devices<sup>7,20,24-28</sup>.

Because there are not always opportunities to obtain proper dental care in the dentist's offices, the persons responsible for their care are the ideal candidates for the implementation of such protocols. The caregiving staff plays an enormous role in providing dental care to institutionalized elderly people within the long-term facilities. This primarily refers to the fact that they come directly into contact with the elderly and know their needs and possibilities for performing daily oral hygiene. The significance of the training of this type of staff can also be seen in cases where the activities for maintaining oral hygiene should be carried out with institutionalized elderly people who are "tied up to bed". In such persons, the

position in which the person should be located is the lateral decubitous position. It is best to brush the teeth of the persons who need help to perform before going to bed, but because of the shortage of staff in the night shifts brushing of the teeth can be done just once a day, sometime after breakfast or lunch. The average time it takes for a patient is 2 min, with minor variations in people who, besides natural teeth, have prosthetic devices. The use of an electric brush in such cases has the significance of saving both the time and the physical fitness of the persons responsible for maintaining oral hygiene.

It is necessary at minimum to have an electric unit, mobile heads of electric brushes that are removable for each patient as well as a toothpaste containing fluoride and disposable gloves. Additionally it is necessary to use 0.12% solution of chlorhexidine in patients who have no problems with swallowing and spitting, as well as agents for moistening the oral mucous membranes in the form of solutions or gels. The staff who takes care of the oral hygiene of the institutionalized elderly needs to be trained to hydrate the mucous membranes of people with severe xerostomia who are unable to take care of themselves. In people who have xerostomy, it is proposed to use sugar-free chewing gum or artificial sweeteners, non-alcoholic solutions and gels, and in the most difficult cases on the recommendation of a dentist artificial saliva can be used.

The lack of cooperation, their lack of coordination or a negative attitude towards oral health in general can lead to an even more negative attitude about their oral health. In this way, we face another problem in the admission of the oral hygiene protocols for institutionalized elderly people. Nurses who take care of the patient have a significance in the postoperative care when they are responsible for post-operative monitoring.

Institutionalized elderly people have dental needs equal to all of us, from regular control checks and preventive measures and activities for complex restorative, periodontal and prosthetic treatments. In order to have successful dental care for institutionalized elderly people, the elderly, as well as the staff responsible for their care, need to be highly aware and motivated to pay enough attention to oral health and hygiene, as well as satisfaction when wearing prosthetic devices. The activation of the elderly in carrying out the various activities for maintaining oral hygiene is aimed at restoring self-esteem, as well as enabling the exercise of physical and muscular activity and coordination<sup>28-30</sup>.

In order to achieve appropriate results, it is important to increase the awareness of staff who care for the elderly, as well as the management who should take into account the increased needs of the elderly. In this way, it was created an image of how dental care and the oral hygiene should be practiced and managed in such institution. The influence of the management and the administration is fully increased in the cases of staff selection. The choice of staff that is specialized or capable of meeting

all the needs of institutionalized elderly people is of great importance for the general and oral health.

The basic activities for implementation of the protocols for oral health in the elderly are aimed at resolving the following problems:

- The teeth hygiene, by brushing all sides with the use of fluoride paste. In the case of persons with mobile prosthetic devices before undertaking such activities, partial dentures should be removed from their bed. Fluoride pastes are scientifically proven to be effective in the reduction of both coronary and root cavities,
- Cleaning of the oral mucosa with the use of chlorhexidine. For patients, possible daily rinsing of the mouth with this solution for 1 mi. The use of chlorhexidine is due to a scientifically proven role against bacteria,
- Hygiene of prosthetic devices. Maintenance of the hygiene of the prosthetic aids is by brushing the prosthesis itself. Patients, but also institutionalized elderly carriers of mobile prosthetic devices should know that it is necessary to remove the contacts from the mouth during the night. If financial possibilities allow, additional medical chemicals can be used for additional hygiene of the dentures,
- Solve xerostomia. It is also necessary to educate the very staff who are grieving for the institutionalized elderly, as well as the institutionalized elderly people for proper nutrition, rich in fresh vegetables and fruits, rinsing with mouthwashes, etc<sup>4,6,11,13,16,28</sup>.

Oral health programs and protocols can also serve us to educate institutionalized elderly people as well as non-dental personnel who take care of the elderly such as nurses to change the way of understanding for oral health and its promotion. The goal of an educational program that should be implemented by caregiver staff should describe certain habits and behaviors that need to be accepted. The knowledge, attitudes and habits that they will acquire and develop can have significance for the oral health of the elderly. They have a major role in promoting and determining the goals of preventive programs, the early detection of most common oral conditions, the maintenance of oral hygiene in functionally dependent individuals, determining the needs of elderly people for dental treatment, developing group and individual plans for dental care for the elderly persons, make the first contact with dentists and thus directly related to the promotion of oral health among institutionalized elderly people. Often the goals of such preventive programs are:

- Understanding the importance of reducing the high intake of carbohydrates between meals in reducing the prevalence of dental caries and the need to explain it to most of the community<sup>31</sup>,
- Understanding the meaning that in the mouth there is a growing number of teeth and the need to transfer it to the wider environment,

- Increase the percentage of the population that makes regular controls among the participants in the program. With this attitude, they get to know a greater number of individuals and of course understand their importance for the early detection of various diseases,
- To familiarize the participants with the various techniques and means of maintaining oral hygiene, to practice them practically and above them, to be presented as the easiest they can present such techniques to other people,
- An ideal or optimal oral health, imperative for everyone. The need for caregivers of institutionalized elderly people to become familiar with optimal oral health and to understand the role of why it should translate it massively.

When the patient is unable to maintain oral hygiene on his own, it is necessary to assess the staff who care about them in relation to their knowledge and training for maintaining oral hygiene in other people. Risk factors faced by institutionalized elderly people in determining the activities for maintaining oral hygiene are the following: presence and progress of the carious processes and periodontal disease, presence of xerostomy, loss of definite restorations, bruxism or weariness of teeth, loss of bone tissue, as well as other general factors that may have an effect on oral health in these individuals. It is best to mention the involvement of the nurses and the auxiliary staff in case of inability for a dental care, as it is best to conduct training for these persons for routine maintenance activities for oral hygiene among institutionalized elderly people. Such staff should enable communication with the dental team.

The tasks of the nursing and auxiliary staff are directed towards: detecting and monitoring the health status of the persons and information about the drugs they receive, following the instructions for the period after treatment, modifying the oral-hygienic activities at the request of the dentist. Nurses can help in communicating with people in cases of cognitive impairment.

The reasons why this protocol is proposed is the staffing shortage that would implement the protocol that concerns staff who care for institutionalized elderly people. Also, due to the conservatism of our environment, the members of the family are often taken care of for the persons accommodated in these facilities.

## Conclusions

Knowledge of the biomedical and clinical features of institutionalized elderly people is greater than knowledge of socio-psychological and behavioral factors. The organization and promotion of a public health program for the improvement of oral health in the elderly is based on determining appropriate oral care, communicative skills

and health education. The analysis of the psychological and economic moments of poor oral health and hygiene that can have a negative effect on the quality of life itself should be the basis of each protocol for the improvement of oral health. Hence, the importance of the multidisciplinary approach is recognized in order to meet the health needs of the elderly.

## References

1. Giannakouris K. Ageing characterises the demographic perspectives of the European societies. Eurostat Statistics in focus, 2008;72:1-11
2. Sfeatcu R, Dumitrache A, Dumitraşcu L, Lambescu D, Funieru C, Lupuşoru M. Aspects of oral and general health among a community center for the underserved. J Med Life, 2011;4:168-171.
3. Zenthöfer A, Dieke R, Dieke A, Wege KC, Rammelsberg P, Hassel AJ. Improving oral hygiene in the long-term care of the elderly- a RCT. Community Dent Oral Epidemiol, 2013;41:261-268.
4. De Visschere LM, Vanobbergen JN. Oral health care for frail elderly people: actual state and opinions of dentists towards a well-organised community approach. Gerodontol, 2006;23:170-176.
5. Fonesca FA, Jones KM, Mendes DC, Dos Santos Neto PE, Ferreira RC et al. The oral health of seniors in Brazil: addressing the consequences of a historic lack of public health dentistry in an unequal society. Gerodontol, 2013;32:18-27.
6. Kalebjian DM, Murphy-Tong CA. A focus on the institutionalized aged and special care patient for today's practice. J Calif Dent Assoc, 2001;29:408-414.
7. McMillan AS, Wong MC, Lo EC, Allen PF. The impact of oral disease among the institutionalized and non-institutionalized elderly in Hong Kong. J Oral Rehabil, 2003;30:46-54.
8. Saintrain MVdL, Vieira APGF. Application of the Community Oral Health Indicator by Non-Dental Personnel and Its Contribution to Oral Healthcare. PLoS ONE, 2012;7:e39733.
9. Rabbo MA, Mitov G, Gebhart F, Pospiech P. Dental care and treatment needs of elderly in nursing homes in Saarland: perception of the hemoes managers. Gerodontol, 2012;29:e57-62
10. Skorupka W, Zurek K, Kokot T, Nowakowska-Zajdel E, Fatyga E, Niedworok E et al. Assessment of oral hygiene in adults. Cent Eur J Public Health, 2012;20:233-236.
11. Gil-Montoya JA, Ferreira de Mello AL, Cardenas CB, Lopez IG. Oral Health Protocol for the Dependent Institutionalized Elderly. Geriatr Nurs, 2006;27:95-101.
12. Knabe C, Kram P. Dental care for institutionalized geriatric patients in Germany. J Oral Rehabil, 1997;24:909-912.
13. Missouri Department of Health and Senior Services, Office of Primary Care and Rural Health, Oral Health Program, Adult Oral Health Assessment Executive Summary, November 2009: 1-14

14. Petersen PE, Kjølner M, Christensen LB, Krstrup U. Changing dentate status of adults, use of dental health services, and achievement of national dental health goals in Denmark by the year 2000. *J Public Health Dent*, 2004;64:127-135.
  15. Sapuric M, Tozija F. Strategy for oral health among adult population over 65 years old-public health priority. *Arch Pub Health*, 2011;1:54-61.
  16. De Vries D, Zuidgeest TG, de Baat C. Providing oral healthcare to frail older people who wear complete dentures. No place for standard treatments. *Ned Tijdschr Tandheelkd*, 2011;118:622-629.
  17. Nitschke I, Kaschke I. Special care dentistry for dependent elderly and people with disabilities. *Bundesgesundheitsgesund*, 2011;54:1073-1082.
  18. Thorne SE, Kazanjian A, MacEntee MI. Oral health in long-term care: the implications of organizational culture. *JAS*, 2001;15:271-283.
  19. Petrovski M, Ivanovski K, Minovska A. DMFT Index among Institutionalized Elderly. *Balk J Dent Med*, 2015;19:21-25.
  20. Bansal V, Sogi GM, Veerasha KL. Assessment of oral health status and treatment needs of elders associated with elders' homes of Ambala division, Haryana, India. *Indian J Dent Res*, 2010;21:244-247.
  21. Hagman-Gustafsson ML, Holmén A, Strömberg E, Gabre P, Wårdh I. Who cares for the oral health of dependent elderly and disabled persons living at home? A qualitative study of case managers' knowledge, attitudes and initiatives. *Swed Dent J*, 2008;32:95-104.
  22. Wårdh I, Jonsson M, Wikström M. Attitudes to and knowledge about oral health care among nursing home personnel-an area in need of improvement. *Gerodontology*, 2012;29: 787-792.
  23. Wu M, Li SX, Zhang NJ, Zhu AA, Ning B, Wan TT, Unruh L. Nursing home research in Jinan, China: a focus group approach. *Int J Public Pol*, 2012;8:21-30.
  24. Peltola P, Vehkalahti MM, Wuolijoki-Saaristo K. Oral health and treatment needs of the long-term hospitalised elderly. *Gerodontology*, 2004;21:93-99.
  25. 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;33:81-92.
  26. Petrovski M, Minovska A, Ivanovski K, Forna DA, Forna CN. Chemical Induced Xerostomia Among Institutionalized Elderly. *Rev Chim*, 2015;66:1614-1617.
  27. Dundar N, Kal BI. Oral mucosal conditions and risk factors among elderly in a Turkish School of Dentistry. *Gerontol*, 2007;53:165-172.
  28. Antoun JS, Adsett LA, Goldsmith SM, Thomson WM. The oral health of older people: general dental practitioners' beliefs and treatment experience. *Spec Care Dentist*, 2008;28:2-7
  29. Wenman A, Wigren L. Need and demand for dental treatment a comparison between evaluation based on an epidemiological study of 35-, 50- and 65-year olds and performed dental treatment of matched age groups. *Acta Odontol Scan*, 1995;53:381-392.
  30. World Health Organisation. *Active Ageing: a Policy Framework*. Geneva, Switzerland: WHO; 2003.
  31. Sweeney MP, Bagg J, Fell GS, Yip B. The relationship between micronutrient depletion and oral health in geriatrics. *J Oral Path Med*, 1994;23:168-171.
- Conflict of Interests:** Nothing to declare.  
**Financial Disclosure Statement:** Nothing to declare.  
**Human Rights Statement:** None required.  
**Animal Rights Statement:** None required.
- Received on May 17, 2018.**  
**Revised on July 11, 2018.**  
**Accepted on December 2, 2018.**
- 
- Correspondence:  
Mihajlo Petrovski  
Faculty Of Medical Sciences  
University "Goce Delcev"-Stip, Macedonia  
e-mail: mihajlo.petrovski@ugd.edu.mk