Oral health assessment in domiciliary care service planning of older people

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Running title: Oral health assessment

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Acknowledgments:
No acknowledgments.

Conflict of Interest Statement:
During the writing process, first author has been employed by the same city, but by different organization where the study was conducted. Despite of this fact, all the authors do not have conflicts of interest.

Ethics Statement:
Participants were informed about the study and participation was voluntary. Responding to the questionnaire was considered as informed consent. The Finnish Medical Research Act and the Ethical principles by the Finnish Advisory Board on Research Integrity waive the need for approval for surveys of volunteering adults. The permission for the study was granted by the conglomerate administration of the city, and the study was considered appropriate.

Funding: No funding or sponsorship.

Abstract

Objectives: The aim was to examine importance and consideration of oral health-related issues (OHRIs) during service planning by the case managers (CMs).

Methods and results: The study was conducted in a major Finnish city. All 25 CMs, supervising over 450 domiciliary care employees who are caring for 4600 domiciliary care clients, received a multiple-choice questionnaire with additional open-ended questions. CMs were dichotomized by age and educational background. Differences were compared with the chi-square test and Fisher´s exact test. Response rate was 88%. All CMs considered OHRIs important. However, OHRIs were not routinely considered during service planning, especially by the CMs with a social service than health background (0% vs 30%, p<0, 0.056). OHRIs were considered never or seldom by 73% of the CMs. OHRIs were mostly considered after evaluating the over-all need for domiciliary care. A lack of guidelines was reported by 45% of the CMs. Of the CMs, 41% could use their knowledge for paying attention to OHRIs. All CMs wished for better routines for paying attention to OHRIs.

Conclusion: OHRIs are not routinely considered in service planning. This study indicated a need for structured guidelines and further education for assess the need for oral home care assistance.

Keywords: older people, domiciliary care, oral health assessment

Introduction

Local authorities are responsible for supporting wellbeing, health, functional capacity and independent living for older people in Finland. In addition, they provide social and health care services in the municipality.[1] Provided services are based on the assessment of the care needs of older client. Care needs must be assessed primarily in co-operation with the client. Assessment of service needs is done by a qualified professional, who is regulated by social welfare[2] or health care professionals' legislation[3]. Several definitions are used for these professionals who assess the need for services, such as service navigator, client counselor, service coordinator and later referred as case manager (CM). Based on the assessment a comprehensive service plan is determined[1].

Finnish municipalities organize part of these services as domiciliary care for older people who have a disability that prevents them from living independently and thus, requiring professional assistants for daily routines[4,5]. Services are public funded but can be provided either by public or private organizations. Most domiciliary care clients in Finland are older people[6]. After the assessment of service needs, the domiciliary care is implemented by nursing staff. Domiciliary care clients may receive domiciliary care services from several times a day to a few times a month as home visits. These offered services include, for example catering, cleaning assistance, daily care provision, health and medical care services. They should also include OHRIs and assessment of oral health service needs as older people have frequently poor oral health[7], but tend to use oral health services less often than younger Finnish adults[8].

Promoting and supporting good oral health among older people, especially those with reduced functional capacity, is vital for wellbeing, management of systemic diseases, nutrition and oral health-related quality of life[9,10]. Presence of oral infections, such as periodontitis has been confirmed to have associations with cardiovascular

disease, pulmonary infections[11] and diabetes[12]. Poor oral health can compromise nutrition intake[13], and also compress life expectancy[14]. Supporting oral health is a multi-disciplinary endeavor and education in oral health issues should be an integral part of nursing staff´s education[15,16]. Older people may face difficulties in maintaining good oral hygiene, as well as general hygiene at home due to functional limitations[17], memory disorders and frailty[18,19]. Consequently, assistance for maintaining oral hygiene is needed from domiciliary care nursing staff. Knowledge concerning oral health related issues was at a good level among domiciliary care nursing staff. However, the nursing staff reported need of oral health education and structured guidelines especially for older people.[20]

In domiciliary care, the CMs have a key role since their assessment will determine the contents of oral home care assistance for a large group of clients. The aim of this study was to examine if OHRIs are considered important and taken into account during service planning by the CMs in a major city in Finland; and if there were differences among the CMs with a social or health care background.

Materials and methods

A cross-sectional survey using electronic questionnaires was delivered through the Webropol surveys application in October 2013 to all the CMs (N=25) in a major Finnish city with a population 230.000. The study was conducted simultaneously with another questionnaire study concerning the nursing staff of domiciliary care in the same city. These CMs supervise over 450 domiciliary care employees taking care of about 4 600 clients[6]. Questions were multiple-choice, dichotomous questions (yes or no) or open-ended questions. The questionnaire included six questions on the considerations of OHRIs among older people. Four of the questions and their response alternatives are

presented in Table 1 and 2. Two questions are not presented in the tables. First question was specifying question, “What kind of oral health-related issues are considered in home care?”, if oral health was considered during service planning. Following specifying items were asked: client´s ability to perform oral home care, need for assistance in maintaining oral home care, need for oral hygiene products, client´s dental prosthesis, diet or other issues (and what). Second question was “Should domiciliary care consider OHRIs routinely?”. For the second question response alternatives were yes, no and do not know. The questionnaire was structured according to previous national investigations and literature overview. Questionnaire was pilot tested for clarity and feasibility with five dental students. Socio-demographic information about CMs age, gender, education and working experience were also recorded. General guidelines refer to any available recommendations regarding oral health and it´s maintenance for all age groups in Finland.

In electronic surveys, limiters were used so that participants could answer only once through the link. The links were sent by the contact person due to the privacy policy of the city. Reminder messages were not needed due to active response. Participants were informed about the study and participation was voluntary. Responding to the questionnaire was considered as informed consent. The Finnish Medical Research Act[21] and the Ethical principles by the Finnish Advisory Board on Research Integrity[22] waive the need for approval for surveys of volunteering adults. The permission for the study was granted by the conglomerate administration of the city, and the study was considered appropriate.

The data were analyzed with IBM SPSS 22 software (IBM Corporation, Chicago IL, USA). Descriptive statistics were used to describe the sample and study variables. Respondents were categorized into two groups according to age (under 40-years-old and 40-years-old or over) and education background (social services or health care).

Differences between these groups were compared with the Mantel-Haenszel χ^2 test. The level of statistical significance was set at $p < 0.05$. Gender was not considered because all respondents were women, except for one who did not report their gender.

Results

Respondents

A total of 22 CMs participated in the study giving a response rate of 88%. The CMs were mostly Bachelor of Social Services (BSS, 41%) and Public Health Nurses (PHN, 36%). The rest were Registered Nurses (RN, 9%), Bachelor of Social Services and also Licensed Practical Nurse (BSS and LPN, 5%) and other education background (9%). Of the respondents, one had worked for 7 years, 10 for 5 years, 7 for 3 to 4 years and 4 for 1 to 2 years. The respondents ages were between 25 to 59 years. The age, gender and educational background of one respondent was unknown. The CMs with a health care background were older and had more working experience than the CMs with a social services background. From the CMs with social services background, 73% were under 40 years of age.

Consideration of oral health-related issues

OHRIs were considered seldom or never by most of the CMs (Table 1), while the older CMs reported considering OHRIs in most cases (Table 2). OHRIs were mostly related to individual cases and were considered after service planning (Table 1). OHRIs were considered seldom and only if the client or relative made the initiative (Table 1). The CMs with a health care background considered more often these initiatives from the client or relatives (Table 2). Attention to oral health was paid less routinely during service planning by the CMs with a social services background (Table 2). However, all

22 respondents indicated that routine attention should be given to OHRIs in domiciliary care.

If OHRIs were considered during service evaluation, these were because of the client´s ability to maintain oral self-care (77%), the client´s need for assistance for oral self-care (73%), the client´s dental prosthesis or diet (59%). Other reported issues were pain in the mouth, poor oral health, loss of appetite due to problems in mouth, memory problems or difficulties in swallowing.

Availability of guidelines

The CMs reported a lack of available guidelines regarding the OHRIs during the service planning (Table 1). General guidelines were mostly used by the older CMs (40-year-old or older). In addition, CMs with educational background in health care used mostly general guidelines (Table 2).

Importance of oral health-related issues

All CMs responded that OHRIs should be routinely considered by domiciliary care. Of the CMs, 45% favored client-oriented support, for example, in cases where functional ability was low, whereas 55% preferred general, uniform supporting for all the clients.

Discussion

This study showed that oral health is not routinely considered when evaluating the need for home care services for older people. However, the CMs considered that oral health should be an important component when assessing a client´s needs for given services. The perceived importance of OHRIs is a positive sign as oral health has important effects on well-being and the association between chronic diseases[23-25], frailty[26] and oral

infections have become obvious in recent years[27]. Oral health is an important precondition for older people´s health[28]. Various strategies are applied for organizing, financing, providing and assessing domiciliary care services across Europe. Regulations and policies on domiciliary care differ in the European domiciliary sectors[29,30] Most strategies are done from a general viewpoint of health-related issues, not taking into account oral health specifically. Oral care is also one of the usually missed nursing care[31-34]. In Finland, policies and legislation exist to regulate that the individual evaluation of service must be done as a basis for care and treatment[1]. Positive attitudes of CMs help in implementing oral health-related issues in their practical work, but OHRIs are not official part of evaluating of service needs.

One possible reason for the fact that oral health, however, was not included in individual service evaluation might be the lack of guidelines about how oral health of older people ought to be assessed on an individual basis. Therefore, the consideration of OHRIs during the evaluation of service contents might depend mostly on the CMs knowledge of the matter or ability to use available guidelines. The general level of knowledge[35,36] regarding oral health, ability to assess OHRIs during service planning[37,38] and attitudes toward[39,40] OHRIs might also have an effect on OHRIs during the evaluation of services.

The study group included all CMs in the major Finnish city who were responsible for assessing the service needs and making the care plan for almost 4 600 clients, whereby about 450 domiciliary care employees implements the needed care services. Therefore, the CMs could have a key role in supporting the oral home care of the older clients. Although the participation rate was high a nationwide study is needed before the results can be generalized, because the service plan assessment can be done differently in other cities or organizations.

The older CMs were more oriented towards considering OHRIs, and they also seemed to have more knowledge of available guidelines and experience on paying attention to oral health. The younger CMs in particular, reported missing guidelines and a lack of knowledge in observing oral health while evaluating client´s needs for services. The previous study also showed that instructions and education on OHRI is needed among domiciliary care nursing staff[20]. There is a need for guidelines and training in assessing oral health during domiciliary care service planning. Oral health personnel should be involved in the training and in modifying the existing general guidelines on oral health issues for the use of home care. Guidelines should be modified in collaboration with CMs taking also into account their current knowledge on oral health. Guidelines should also support guiding older people to use oral health services[8] when needed. These services are provided in Finland both by public or private organizations. Implementing assessment tools[41-46] or modified guidelines for domiciliary care service and care planning can improve the assessment of oral health issues of older people by the CMs.

The first group, consisting of CMs with a health care educational background have wider knowledge of health-related issues compared to the second group of CMs with a social services educational background. Therefore, the first group might also have more knowledge about the importance of the oral cavity as a source of infections and the effects of poor oral health[9-14]. In this study, the first group also considered OHRIs in care planning more often than the second group. The approach to service planning might also be more related to social care legislation among the second group. On the contrary, the first group can relate better to working under health care legislation.

Guidelines about OHRIs assessment during domiciliary care planning for older people should be structured both for CMs and nursing staff regardless their educational background. This would help to improve oral health related quality of life of older

people which should be one of priorities in oral health care in all countries with increasing older populations. For further research, assessing CMs' knowledge about oral health and comparing oral health assessment in service planning among a larger group of CMs on national and international levels could give more information regarding the topic.

Conclusion

This study indicated a need for structured guidelines and further education developed in collaboration with oral health personnel for evaluating the need for oral home care assistance. In addition, including oral health as a part of domiciliary care service planning may help nursing staff in their practical work. This requires that client needs are systematically evaluated and recognized in advance.

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Table 1. Distributions (%) of responses to questions concerning OHRIs of the clients (n=22).

How client´s oral health-related issues are considered in home care?	Never	Seldom	Mostly	Always	Do not know
- Arises in the evaluation of the need for home care	5	68	27	0	0
- Arises only in special cases	0	32	59	5	5
- Arises only when the care has already begun	0	27	64	5	5
- Arises if client or relative contacts	5	45	23	9	18
How much attention is paid to oral health-related issues during the service planning?	None	Little	If needed	Routinely	Do not know
	0	36	50	14	0
Are any guidelines regarding the oral health related issues used in the service planning?		Guidelines (city specific)	Guidelines (general)	No guidelines but self-awareness	No guidelines
		0	14	41	45
Should client's oral hygiene be supported by home care		Yes, for client specific	Yes, for everyone	No, client is responsible	Do not know
		45	55	0	0

Table 2. Responses (%) to questions concerning the oral health issues of the clients according to age and education (Mantel-Haenszel χ^2 test) among HCCM(n=22).

Questions with possible items	Answer	Age <40 n=11	Age ≥40 n=10	p	Social Welfare Education n=11	Health care Education n=10	p
How client´s oral health related issues are considered in home care?							
Arises in the evaluation of the need for home care	Mostly/Always	9	50	0.043	27	30	0.893
Arises only in special cases	Mostly/Always	82	50	0.132	64	70	0.763
Arises only when the care has already begun	Mostly/Always	82	60	0.281	64	80	0.418
Arises if client or relative contacts	Mostly/Always	18	40	0.281	9	50	0.043
How often attention is paid to oral health issues during the service planning?	Routinely	9	20	0.486	0	30	0.056
Are any guidelines regarding the oral health related issues used in the service planning?	Guidelines (general)	0	20	0.013	9	10	0.067
	No guidelines but self-awareness	27	60		18	70	
	No guidelines	73	20		73	20	
Should client's oral hygiene be supported by home care	Yes	55	50	0.839	64	40	0.290