

## Common risk factors for oral cancer and general diseases among institutionalized older people

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### Abstract:

**Objectives of this paper** are to evaluate the burden of common risk factors for chronic diseases and oral cancer in a disadvantaged community, institutionalized older people and to conduct an oral cancer examination.

**Material and method:** after obtaining informed consent, 93 institutionalized older people were interviewed about smoking, alcohol consumption and diet; afterwards they were clinical examined in order to detect oral mucosal lesion.

**Results:** there is unmet need among this group; health promotion and disease prevention have to be based on the common risk factors approach. It is important to understand the biomedical and psiho-social aspects of care for older people; the needs for care are highest among socio-economic disadvantaged, vulnerable older people.

**Conclusions:** interrelationship between oral health and general health is particularly pronounced among older people. The consequences of chronic diseases are significant, leading to disabilities and reduced quality of life.

**Key words:** risk factors, elderly, institutionalized people.

### Introduction

The proportion of older people continues to grow worldwide. Chronic disease and most oral diseases share common risk factors. The negative impact of poor oral condition on the quality of life of older adults is an important public health issue. Oral health promotion and disease prevention have to be based on the common risk factor approach. The needs for care are highest among disadvantaged, vulnerable groups [1]. Institutionalized and home-bound elderly have poorer oral health status than active elderly. Behavioral risk factors including oral hygiene behaviour, diet and tobacco use contribute significantly to the disparities. Studies show that such life style, are modifiable and there are positive experiences from intervention programmes to improved oral health status of older people [2].

As emphasized in the World Oral Health Report 2003, oral health is an integral to general

health and a determinant for quality of life. In recent years, much research has demonstrated the impact of oral health on quality of life and general health. Poverty is the most critical factor affecting health and longevity. "Poverty is a carcinogen" (Dr. Samuel Broder, U.S. National Cancer Institute-NCI, 1991).

Opportunities to reduce cancer disparities exist across the entire cancer spectrum, from primary prevention to palliative care (American Cancer Society, 2004). Although tobacco is considered the primary culprit, both tobacco and alcohol products independently increase the risk of oral pharyngeal cancer, and people who use both are at much higher risk than are those who only smoke or drink. Other risk factors include not consuming fruits and vegetables and not using the methods of sun protection [3].

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## Material and methods

The study was conducted on 93 institutionalized elderly people from Bucharest, after informed consent for participation.

*Face to face interview:* Based on standardized survey instruments and agreed upon indicators, definitions and the methods, WHO has developed new tools for chronic disease surveillance [4]: the STEPwise approach to surveillance (STEPS) and the WHO Global InfoBase. The framework underlying STEPS involves three levels of risk factor assessment: Step1: information obtained using questionnaire comprise markers of socioeconomic status, data on tobacco and alcohol use and measurement of nutritional status; in this survey we used Step 1; Step 2: physical measurements (e.g. blood pressure, height, weight); Step 3: biochemical measurements (microbial assessment, e.g. Streptococcus mutans or buffer capacity of saliva), not recommended for countries with limited resources.

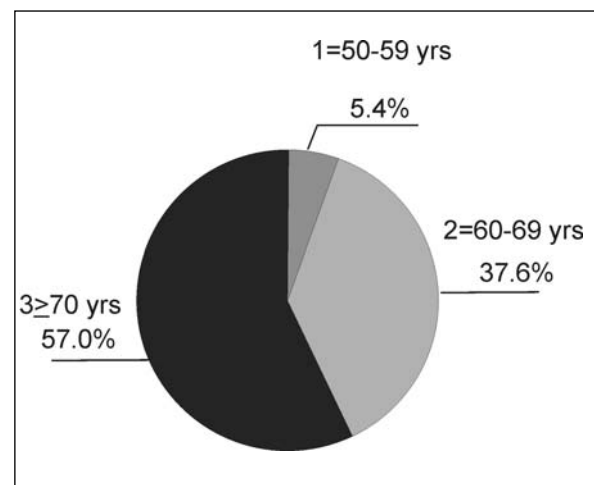
*Clinical examination:* Examination of this age group is important for monitoring the burden of risk factor on oral and general health and for planning appropriate medical care. Direct inspection and palpation of the oral cavity is the most commonly recommended method of screening for oral cancer, although there are little data on sensitivity and specificity of this method [5]. Screening techniques other than inspection and palpation are being evaluated but are still experimental. There is also no evidence for the harms of screening. Regular screening examination by a health care professional can result in the early detection, when treatment is more likely to be successful. Extraoral (head, face and neck areas, including lymph nodes) and intraoral clinical assessment, after removal of dental appliances, by observation and palpation, with: mirror, explorer, periodontal probe, 2/2 gauze, paper towel, glass of water and personal protective equipment for the examiner [6].

*Assessment of oral health and general health:* Poor oral health amongst older people has been evident in high levels of tooth loss, dental caries experience and the prevalence rates of periodontal disease, xerostomia and oral precancer/cancer. Poor oral health can increase the risks to general health and with the compromised chewing and eating abilities, affect nutritional intake. Similarly, systemic diseases and/or the adverse side effects of their treatments can lead to increased risk of oral diseases, dry mouth and altered sense of taste and smell [1]. The high prevalence of multi/medication

therapies in advanced age may further complicate the impact on oral health.

## Results

97 institutionalized people were invited to participate in the study and 93 agreed, from which 6 with immobilities. From all samples (n=93), 40.9% are men (n=38) and 59.1% female (n=55); they covered three age groups (*Fig.1*): 50-59 yrs (54%), 60-69 yrs (37.6%) and 70 yrs and after (57%); mean age is 72.46.



*Fig.1: Distribution (%) of the subjects by age*

*Face-to-face interview* regarding subjects' current, past and type/amount of alcohol and tobacco used revealed: 29% are current smokers (93% smoke daily), the same percent, 29% former smokers and 42% never used. As regards the alcohol use: 25% declare the alcohol consumption in the last year (most of them drink beer –70% and less drink distilled spirits and wine –13%, respective 17%), but very seldom (less than one day on month); 65% are former users and 35% never used.

The prevalence of tobacco and alcohol use for elderly by age and gender is shown in *Table 1*.

Regarding the diet, the consumption of fruits and vegetables, another risk factor, the situation is presented in *Table 2*.

Levels of knowledge, attitudes and self care were low: 25% says that they are aware of effects of tobacco on health, respective 20% about effects of alcohol; even more, only a few could illustrate by examples.

Concerning their last dentist visit, 73% says that it happened many years before, 17% recently (6-12 months) and 10% never been to dentist (*Fig. 2*).

Table 1: Prevalence (%) of tobacco and alcohol use by age and gender

	TOBACCO USE			ALCOHOL USE		
	Smoker	Former smoker	Never use	In the last year	Former use	Never use
<b>Total</b> (N= 93)	29	29	42	25	65	35
<b>By age</b>						
50-59 yrs (n = 5)	80	20	0	0	60.0	40.0
60-69 yrs (n = 35)	37.1	22.9	40	37.1	57.1	42.9
> 70 yrs (n = 53)	18.9	34	47.2	18.9	69.8	30.2
<b>By gender</b>						
Male (n = 38)	39.5	36.8	23.7	31.6	86.8	13.2
Female (n = 55)	21.8	23.6	54.5	20.0	49.1	50.9

Table 2. Distribution (%) of subjects according to how often they consume fruits and vegetables in relation to gender

Consumption	Gender	Daily	Seldom
Fruits in the past	Male	53%	47%
	Female	47%	53%
Fruits in the present	Male	95%	5%
	Female	87%	13%
Vegetables in the past	Male	92%	8%
	Female	75%	25%
Vegetables in the present	Male	95%	5%
	Female	90%	10%

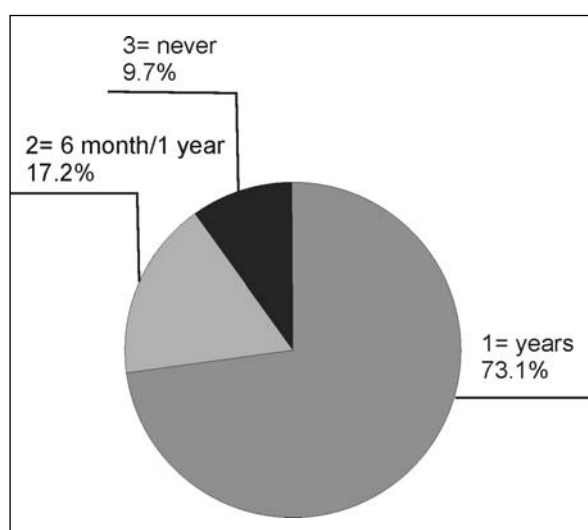


Fig.2: Distribution (%) related to the last dental visit of the subjects

*Screening for oral cancer:* precancer or oral cancer lesions (erythroplakia, leucoplakia, ulceration, lymphadenopathy: not found).

*Abnormal findings:* xerostomia (6 female subjects and 2 men), herpes labialis blister (n=1) and candidiasis (n=3).

*Assessment of oral health:* poor oral hygiene 85% and high levels of dental plaque; denture stomatitis found at 2 subjects.

*Assessment of general health:* cardiovascular diseases 80%, diabetes mellitus 16 subjects, Parkinson disease 2 patients, 3 with epilepsy and 10 with iron chronic deficit.

*Multimedication therapies:* diuretics 34%, antiarrhythmics 33%, hypotension drugs 54%, hypoglycemic drugs 17%. Their side-effects: dry mouth or xerostomia (only six subjects complaint) and hyperplasia gingivalis (not found).

## Discussions

Clinicians should be alert to the possibility of oral cancer when treating patients who use tobacco or alcohol. The American Cancer Society recommends annual oral cancer examinations for all people 40 years of age or older; the U.S. Preventive Services Task Force recommends a careful oral cancer examination for all people who use tobacco or alcohol. Oral cancer screenings may provide an excellent opportunity for raising public awareness and providing patient education (including self-examination technique) and counseling regarding behavioral risk factors and how to reduce them.

Tobacco use in all forms is the biggest risk factor for oral cancer [7]. Alcohol abuse combined with tobacco use increase risk. Tobacco use, including smoking is causally linked to chronic diseases including cancers, chronic obstructive pulmonary disease and cardiovascular diseases.

People should be encouraged not to use tobacco and limit alcohol use in order to decrease their risk for oral cancer as well as heart disease, stroke, lung cancer and cirrhosis. Remind people that no one who starts smoking intends to become hooked,

that breaking the addiction will be one of the toughest, but also one of the most rewarding things they will ever accomplish [7].

## Conclusions

It is important to recognize that tobacco use is the world's most avoidable cause of cancer and that control measures, such as legislation, education, promotion of smoke-free environments and treatment of tobacco dependence can be effectively applied.

Oral cancer, as well as cervical, breast and prostate cancers are amenable to early detection and treatment, important objectives to increase survival, reduce mortality and improve quality of life.

Sound knowledge about progress made in prevention of oral and chronic disease and in health promotion may assist to implement effective public health programmes to the benefit of the poor and disadvantaged population groups worldwide, thereby reducing social inequities.

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