Program of primary, secondary and tertiary prevention for the elderly

Abstract

The aging process is normal physiological phenomenon. The elderly are a heterogeneous group that requires individual gerontological approach. The basis for the implementation of the program of healthy aging represent their own decisions about positive health behaviors, that are made at a younger age and interact with an effective health programs of preventive health measures. As part of evaluation of the implementation of the preventive program for is important to define negative health behaviour of the elderly and determine the risk factors of pathological ageing. Primary prevention ensures not only prevention of death in early old age but also preservation of functional ability through health promotion in old age. The implementation of secondary prevention in health care of the elderly people results in timely diagnosis of disease which can stop its further development and help in its treatment, nursing care and rehabilitation. Tertiary prevention includes different health procedures that prevent physical and mental decline in a diseased old individual and develops the remaining functional capacity. The Program of Health care Measures of Prevention for the Elderly is primarily carried out through active primary health care institutions within local, regional and national gerontological centres of the Institute of Public Health. Implementation of preventive programs for the elderly can avert the development of a number of preventable diseases as are diabetes mellitus, obesity, hypertension, cerebrovascular and cardiovascular diseases, cancer of the breast, ovaries, prostate, lungs, osteoporosis/fractures, incontinence, mental disorders, respiratory diseases. In Croatia, the program promotes a healthy active aging, consisting of the “Guide for active healthy aging”.

DEMOGRAFIC TREND OF AGING IN CROATIA

The demographic fact is that the world, European, and thus the Croatian population is aging which reflects as the rise in life expectancy (1). In 2011 this rate was 73.9 years for men and 80.0 years for women (2). Looking at a comparison of elderly assessment in Croatia since 2001 to 2011, we can see an increase of elderly with a share of 15.62% to 17.09% (1). Since there is a larger share of older woman, both now and in the future, therefore economic and social policy should be adjusted. It is evident that the rapidly growing aging of the Croatian population has crucial implications for the economic structure of the entire population (3–9). Analysis of demographic indicators of gender structure of the census 2011th year indicates the growth of women older than 65
years of the total female population in relation to the census in 2001. The proportion of women aged 65 g of the total female population in 2011 amounts to 20.84% (N = 462,425), while in 2001. was 18.61% (Figure 1, Figure 2). Although the proportion of men aged 65 years or more in the total male population in census 2011 was significantly lower than in women (14.33%, N = 296,208), compared to the total share of men in 2001 (12.41%) also increased.

The aging process is a normal physiological phenomenon (10–16). One of prejudice is that aging and age must necessarily be associated with disease and functional disability and dependence (1, 3). The fact is that only one of five people, and most in the group of the very old age, i.e. those 85 years and above, is dependent on other people’s help (1, 5). The elderly people who need such help are geriatric patients suffering from long-term diseases (16–18). This indicates that the elderly are a heterogeneous group that requires individual gerontological approach (1, 3–5). Gerontological integral scope of health care of elderly with the necessary application program monitoring, research, and evaluation of the identified health needs and functional disability of elderly based on the Program of primary, secondary and tertiary prevention for elderly, promotes and supports the process of healthy active aging (8–11). The basis for the implementation of the program of healthy aging represent their own decisions about positive health behaviors, that are made at a younger age and interact with an effective health programs of preventive health measures for the elderly (1, 3–4).

IMPLEMENTATION OF PREVENTIVE PROGRAMS FOR THE ELDERLY

Gerontological and public health management provides implementation and evaluation of the program of primary, secondary and tertiary prevention for older people (19–25). The purpose and primary objective is to contribute to the preservation and improvement of health and functional ability of rapidly growing elderly Croatian population, and thereby ensuring a productive aging (26–30). Health management for older people through the implementation of the regular four areas of gerontological activities of the Reference Center for Gerontology along with gerontological public health teams in the county public health institutes allows the production of gerontological standards and algorithms to establish the network of gerontological and geriatric health care in order to meet the health needs of older persons in its area of operation (1, 3, 23).

Monitoring programs, research and evaluation of health needs and functional abilities of older people are conducted by an individual gerontological approach based on professional and methodological gerontological instruments (1, 3). Basic health management for the elderly are gerontology centers, Centers for geriatric health
care, Old people’s and nursing homes, geriatric hospitals, day care hospitals for geriatric patients, daycare centers for older people, rehabilitation centers for occupational therapy and support for older people, associations and clubs for the elderly, etc. (6). They are responsible for the operational planning level or for specific procedures and processes in health care management for seniors. Disability and dependence in the old age mostly are result from disease but not from the determination, follow-up and evaluation of the Program of Obligatory Preventive Minimum implementation for the elderly people (1, 3).

The implementation of primary prevention contributes to preventing pathological aging in middle age by preserving functional capacity and by preventing the most frequent health disorder in the elderly, namely the atherosclerotic process (1).

MEASURES OF PRIMARY PREVENTION FOR THE ELDERLY

Primary prevention for the elderly ensures not only prevention of death in early old age but also preservation of functional ability in deep old age through health promotion in old age. The role of family physician primarily implies health education and counseling, and to a lesser extent diagnostic and therapeutic service. Health education is crucial to preserve optimal health condition and functional abilities in advanced age and refers to all knowledge and skills of an individual, group or community where the individual is living and which influence his attitudes towards favorable health behaviors related to the promotion and preserving functional ability and good health in old age. The measures of primary prevention, which first of all include continuous physical and mental activity during the process of aging, should be initiated as early as possible, as defined by the Program of Healthcare Measures and Procedures for the Elderly (14, 26). The measures of primary prevention include the following:

1. Health education of the elderly and their families on proper preparing for old age, life in advanced age and retirement;
2. Identification of risk factors for pathologic aging;
3. Identification of unfavorable health behaviors in the elderly (inappropriate personal hygiene and environmental hygiene, physical inactivity, mental inactivity, noncompliance with occupational therapy, obesity, alcoholism, cigarette smoking, noncompliance with physician’s instructions, unreasonable medication, taking more than two cups of coffee daily, lack of moderate sun and cold exposure);
4. Encouraging self-responsibility for one’s own health and functional ability (favorable health behavior) and providing advice on reasonable utilization of healthcare and health tourism for the elderly;
5. Education on the use of favorable Mediterranean diet for the elderly and on appropriate preparation of healthy food;
6. Discouraging smoking habits of both insured persons and various health professionals involved in healthcare of the elderly;
7. Measures of prevention of alcoholism and other addictions;
8. Measures of prevention of mental disorders (prevention of seclusion);
9. Continuous health education on the use of drugs, vitamins and minerals, and health-preventive counseling of the elderly;
10. Vaccination and revaccination of all individuals aged ≥65 (vaccination of all individuals aged ≥65 at the time of influenza epidemic, pneumococcal pneumonia vaccination of all persons in old people’s and nursing homes, geriatric hospitals and chronic disease hospitals once in 5 years, and tetanus vaccination at age 60); and
11. Preparation of printed material intended for health education of the elderly (outlines, brochures, handbooks) and other professional material for computer and audio-visual presentation.

Monitoring, identification, exploration, evaluation and reporting of healthcare needs and functional ability of the elderly are crucial for proper implementation and evaluation of the Program of healthcare measures of primary prevention as the only objective way of planning the series of priority preventive healthcare measures and procedures with evaluation of the program implementation in order to ensure healthy and active aging and preserve functional ability of the markedly old population of Croatia.

MEASURES OF SECONDARY PREVENTION FOR THE ELDERLY

The goal and purpose of the implementation of secondary preventive measures in healthcare of the elderly are timely detection and management of a disease that has not yet fully manifested in the elderly person, thus to primarily prevent development of complications and progression of the disease (1–3). Health care measures of secondary prevention are performed through targeted systematic check-ups and testing according to the preset Program of basic preventive health care measures for the elderly at the respective general practitioner/family physician’s office and in institutions providing primary healthcare for the elderly, at age 45, 65, 75 and 85. The measures of secondary prevention include the following (1, 14, 26):

– early detection of visual impairments,
– early detection of hearing impairments,
– early detection of mental disorders (Alzheimer’s disease, G30),
– early detection of neurologic disorders; of visual, hearing and olfactory disturbances with targeted preventive vision testing at age 65 and 75; and dental and denture treatment;
– early detection of diabetes mellitus;
– early detection of hypertensive heart disease;
– early detection of gastrointestinal pathology (digi- 
resectal examination, occult blood test/Hemoccult);
– lipid profile determination, early detection of hyper-
lipidemia and anemia, and vitamin-mineral status as-
essment;
– early detection of the musculoskeletal system diseases 
(prevention of osteoporosis with records of M80 and 
M81);
– early detection of ovarian malignancy at age 65 (Dop-
pler ultrasonography);
– early detection and records of health impairment due 
to menopause (N95) and other gynecologic diseases in 
elderly women, and of andropause in elderly men;
– early detection and records of pathologic changes of 
urinary system (e.g., benign and malignant prostate 
lesions, urinary incontinence (R52) and other urinary 
difficulties); and
– sputum bacteriology and lung X-ray as needed (once 
in 3 years in all persons older than 65).

MEASURES OF TERTIARY PREVENTION 
FOR THE ELDERLY

Tertiary prevention for geriatric patients is primarily 
directed towards disease complications and prevention of 
physical and mental decompensation of diseased elderly 
persons, while preserving and developing their residual 
functional ability (14, 25). Tertiary preventive health care 
measures are focused upon geriatric patients that live 
alone, where an even minor health problem can cause 
serious health deterioration in the form of confusion, 
incontinence, dehydration and bed-ridden condition with 
complete functional disablement within a short period of 
time. Implementation of these preventive measures is of 
particular importance for timely prevention of compli-
cations associated with prolonged immobility (decubitus, 
hypostatic pneumonia, muscular atrophy, throm-
bophlebitis, edema, contractures, vertigo and anemia), 
along with continuous health care and rehabilitation of 
the elderly. In these activities, preventive measures of 
reactivation and reintegration of elderly individuals, as 
well as preventive pharmacotherapy are of paramount 
importance. The measures and procedures of tertiary 
prevention can also be carried out at self-care societies/ 
clubs where patients with similar health difficulties re-
gularly gather and meet medical professionals (e.g., clubs 
of patients with arterial hypertension, diabetes mellitus, 
carcinomas, stroke, osteoporosis, Alzheimer’s disease, 
etc.).

Implementation of the program of primary, secondary 
and tertiary prevention for the elderly at the level of 
general/family medicine has the key role in preserving 
functional ability and health promotion in the elderly, 
throughout prevention of pathologic aging and thus of their 
dependence on institutional geriatric healthcare. The 
goal is specifically to prevent disease in younger age, thus 
rationaizing the growing geriatric healthcare utiliza-
tion. For this reason, it is necessary to monitor, explore 
and evaluate the effects of risk factors for the develop-
ment of pathologic aging in target population groups, 
and identify unfavorable health behaviors while prom-
oting healthy lifestyle, all these by use of the geron-
tology-public health approach within the frame of the 
overall prevention programs for the Elderly, with family 
physician taking an active and coordinating role.

A substantial precondition for proper implementation 
of the program of disease prevention and of preservation 
and promotion of functional ability in the elderly is a well 
organized and coordinated communication and collab-
oration between general practitioners as care providers 
for geriatric patients and specialist consultants providing 
inpatient geriatric treatment.

GUIDE FOR ACTIVE HEALTHY AGING

The education in gerontological and geriatric topics, 
particularly in terms of spreading knowledge about age-
ing as a normal physiological process that occurs gra-
dually and with different pattern of progression in each 
individual is the focus in methodological task about the 
promotion of active and healthy ageing (23). Geron-
tology-Reference Center of the Ministry of Health sug-
gests changes of the existing rigid administrative limit of 
65 years of retirement to a gradual retirement conditional 
upon the functional ability of the individual. This con-
siders professions and vocations in which the transfer of 
skills, experience, knowledge and skills to younger work-
ers is necessary to avoid the mistakes of the past work 
process. This will not only strengthen and develop the 
economy but will also greatly affect the employment of 
younger generation of employees.

Ministerial Conference on Ageing, held in September 
2012. in Vienna, accepted the Declaration: Ensuring a 
society for all ages: promoting quality of life and active 
ageing, which encourages the extension of working life 
as well as maintaining working capacity. In the present 
conditions of life for the elderly, 65 and over is time to 
adapt to new activities after termination of employment 
(27–37). However, such a departure is more prolonged, 
so that in some European countries, retirement shifted to 
68 years.

European and Croatian gerontological findings high-
light the interdependence of the elderly and their pre-
servation of health in relation to the community in which 
he lives and works. Active healthy aging encourages new 
development opportunities to achieve other orientation 
of work activities which involves adapting to new cir-
cumstances, knowledge, and constantly learning and 
discovering the benefits of aging and old age. It is known 
that the activity of healthy older people never stops, it just 
changes its form. Consequently, the UN General As-
sembly on 14 December 1990, resolution 45/106 declared – 
1st October International Day of Older Persons, stressing 
the importance of a rapidly growing, aging population in
GUIDE FOR ACTIVE HEALTHY AGING

1. CONSTANT PHYSICAL ACTIVITY
To be started in youth and pursued until the very old age.
It includes breathing exercises and pelvic floor muscle exercises, the latter being carried out to the effect of involuntary urination prevention.

2. CONSTANT MENTAL AND OCCUPATIONAL ACTIVITY
Lifelong learning and acquisition of novel skills and competencies.

3. PROPER MEDITERRANEAN DIET
When it comes to the elderly over 65, this diet should be restrictive in its nature, in terms of a limited caloric intake (which should not surpass 1,500 cal a day due to the diminished basal metabolism typical of the elderly).
The diet includes regular vegetable & fruit intake and regular consumption of fish and crust-free white meat; the intake of “5 Ws” – white flour, white sugar, white rice, salt, fat – should be diminished as well. Consumption of up to 2 litres of unsweetened liquid a day (plain potable water would be the best).
The food should generally be cooked and free of browned flour. Fried and roasted food should be avoided.

4. THE OLD AGE CALL FOR THE PREVENTION OF NOT ONLY OBESITY, BUT UNDERNOURISHMENT AS WELL

5. NON-SMOKING AND NON-ADDICTIVENESS TO DRUGS, ALCOHOL, OPIATES, BLACK COFFEE AND OTHER ADDICTIVE SUBSTANCES

6. CONSTANT WORK, EVEN AFTER RETIREMENT

7. POSITIVE ATTITUDE
One should strive to laugh as often as possible and to keep up the good spirit; the blame for own failures should not be shifted to others.

8. KINDNESS AND LOVE SHOULD BE SPREAD AROUND
They should be targeted towards family, juniors and seniors around one, and towards one’s work; sex life as an integral component of love that cuts across the age boundaries, should not be neglected as well.

9. LONELINESS AND DEPRESSION SHOULD BE AVOIDED BY ALL MEANS
One should strive to develop communication skills and prepare oneself to adapt to stressful events.

10. PERSONAL AND ENVIRONMENTAL HYGIENE
Oral (teeth & dental prosthesis) hygiene, regular finger and toe nail cutting; removal of any barriers and slippery & wet surfaces at one’s home and surroundings, so as to prevent falls and injuries.

11. REFUSAL TO ACCEPT PREJUDICES AND IGNORANCE ON AGING, LEADING TO THE PERCEPTION OF OLD AGE AS A SYNONYM FOR THE DISEASE, DISABILITY AND DEPENDENCE ON OTHERS (of note, only every fifth older person depends on care of the others due to functional incapacity).

12. FULL COMPLIANCE WITH THE PRESCRIBED THERAPY AND REGULAR MONITORING BY THE ATTENDING PHYSICIAN

13. TRANSFER OF SKILLS, KNOWLEDGE AND PROFESSIONAL & LIFE EXPERIENCE TO YOUNGER GENERATIONS AND PEERS (1–2).
the world. Marking the International Day of Older Persons emphasizes the necessity of ensuring environmental adaptation abilities and needs of elderly residents.

Assessment and monitoring of functional disability, negative health behavior in the elderly and risk factors for the development of debilitating aging include the necessary health measures and procedures to be applied in order to prevent diseases and old-age dependency on others for care and assistance. Identify the different factors debilitating aging such as physical and mental inactivity, smoking, alcohol abuse, improper medication, obesity, malnutrition, poor personal hygiene and poor hygiene of the environment, and other factors.

There is an obvious connection between the negative health behavior of older people with debilitating aging factors. To prevent the negative health behavior joint responsibility shared Gerontological multidisciplinary team, herself an older person and her family. Negative health behavior by PZP-in (The health measures and procedures for the elderly) includes: physical inactivity, physical inactivity, accepting occupational therapy, failure to maintain personal and environmental hygiene, obesity, alcoholism, smoking, failure to follow directions doctor, drinking black coffee over two cups a day, exposing moderate sunlight, uncontrolled medication (1, 14).

Prevention of disease and lack of independence in the elderly has been the focus of the concept of a healthy, active aging, which is based on the correlation of health activities and the elderly. Intergenerational solidarity and effective health care with special emphasis on prog rams of primary, secondary and tertiary prevention for seniors is required, in order to achieve a healthy, independent and productive lives of the elderly. Healthy active aging while maintaining functional ability in very old age prior to decisions being made in childhood and involves the implementation of positive health behavior. Proper, balanced nutrition to maintain normal body weight, not smoking, and daily, moderate and appropriate physical activity are to identify factors that contribute significantly to the maintenance of health and vitality in old age. Functionally capable elderly are significant potential for the transfer of knowledge and skills and work experience to the younger and the other older generation.

CONCLUSION

A number of diseases occurring in the old age can be prevented through programmed and properly planned health care activities for the elderly, not only within health care system, but also on a wider scale, i.e. as part of the activities of social welfare, education, retirement and pension system, economic and other systems, particularly in terms of including the elderly population into the design and carrying out of all kinds of actions. The implementation of primary, secondary and tertiary health care preventive measures for the elderly as part of obligatory Program of Fundamental Preventive Health Care Measures for the Elderly in general/family medicine makes it possible to avert the majority of multimorbidity issues and functional disability in individuals of early, middle and late old age. Reference Center of the Ministry of Health of the Republic of Croatia for health care of the elderly published guidelines for active healthy aging which promote proper health –related behaviour that aids in prevention of risk factors responsible for unhealthy aging. In Croatia, the program promotes a healthy active aging, consisting of the “Guide for active healthy aging” (30, 31): Aging is a normal physiological occurrence and an inevitable future prospect of each and every person. It depends on the aging genome and proper health-related behaviour that aids in prevention of risk factors responsible for unhealthy aging.

REFERENCES

14. TOMEK-ROKSANĐIĆ, S., PERKO, G., MIHOK, D., PULJAK, A., RADAŠEVIĆ, H., ŠKES, M., VRAČAN, S., KURTÓVICI LJ, FOR-
17. STRNAD M 2005 Starija i zdravlje - starija životna dob i rak.
18. Tomek-Roksandić S, Šostar Ž, Fortuna V 2012 Četiri stupnja gerijatrijske zdravstvene njege sa sestrinskom dokumentacijom i postupkom opće/obiteljske medicine u domu za starije osobe, II dopunjeno izdanje. Referentni centar MZRH za zaštitu zdravlja starijih osoba – Centar za gerontologiju Zavoda za javno zdravstvo „Dr. Stampar“, Zagreb, str. 5–431