Во всем мире наблюдается рост доли лиц пожилого и старческого возраста в общей популяции. Такая перемена в демографической ситуации нынешнего сообщества, конечно, возбуждает вполне закономерную заинтересованность медико-социальными проблемами этого разряда населения. Особая роль в решении этих проблем уделяется среднему медицинскому персоналу, т.к. у среднестатистического пациента >60 лет обнаруживается целый ряд различных хронических заболеваний, в т.ч. имеются расстройства когнитивного характера и старческого слабоумия, синдром дефицита питания, серьезные нарушения опорно-двигательной системы и т.д. В целях решения этих и других насущных проблем требуется разработка комплексных целевых программ и особая подготовка среднего медицинского персонала для работы в стационарах, хосписах, на паллиативных койках и т.п. В «стареющем» обществе при сложившихся обстоятельствах необходимо найти соответствующие рациональные формы в плане организации медицинской помощи лицам старшей возрастной группы и современные пути межведомственного взаимодействия, которые бы отвечали принципам реструктуризации системы здравоохранения. В настоящее время в России действует целый ряд специализированных гериатрических и геронтологических центров, оказывающих многостороннюю медицинскую помощь старшему поколению. Комплексность, доступность и эффективность медико-социальной помощи лицам старших возрастных групп позволит обеспечить развитие гериатрической службы. Развитие такого вида поддержки выгодно и с экономической стороны, поскольку предупреждается повторное пребывание в стационаре, сокращается число вызовов скорой помощи и т.д. Указанные мероприятия помогут оптимизировать лечение и диагностику возраст-ассоциированных заболеваний, а также позволят сделать актуальным термин «здоровое старение». В статье рассматриваются проблемы оказания медицинской помощи населению старших возрастных групп, с акцентом на повышение роли сестринского персонала в реализации медицинской и социальной помощи пожилому населению в рамках трехуровневой системы на примере Воронежской области.

**Ключевые слова:** Воронежская область; гериатрическая помощь; медицинская помощь; пожилой возраст; старческий возраст; трехуровневая система оказания медицинской помощи; «Территория ЗАБОТА»; паллиативная помощь; стационарная помощь; сестринский персонал.

**MODERN LEVEL OF RENDERING PALLIATIVE AND IN PATIENT KINDS OF GERIATRIC ASSISTANCE BY NURSING STAFF**

*N.N. Chaikina*

N.N. Burdenko Voronezh State Medical University, Voronezh, Russia

In the world, a share of elderly and old individuals in the total population is constantly growing. This change in the demographic situation in the modern society certainly arouses a justi-
fied interest for the medico-social problems of this category of the population. A special role in this problem is assigned to the medium-grade medical personnel, since a statistically average patient >60 years of age suffers from a number of different chronic diseases, including cognitive disorders, senile dementia, syndrome of nutrition deficit, serious disorders in the musculo-skeletal system, etc. Salvation of these and other essential problems requires elaboration of complex targeted programs and special training of the nursing staff for work in hospitals, hospices, palliative beds, etc. In the ‘ageing’ society it is necessary to find appropriate rational forms of organization of medical assistance for aged group of patients and modern ways of interdepartmental interactions that would correspond to the principles of restructure of the healthcare systems. At present in Russia there exist several specialized geriatric and gerontological centers that render different kinds of medical care to the older generation. Integrated character, availability and effectiveness of medico-social assistance for individuals of older age groups is the aim of well-developed geriatric service. Development of such kind of support is also beneficial from the economical point of view in the sense that it permits to reduce duration of repeat stay in hospital, the number of ambulance calls, etc. The mentioned measures will help optimize treatment and diagnosis of age-related diseases and will permit to actualize the term ‘healthy ageing’. In the article, the problems of rendering medical assistance for the older age groups of population are considered with accentuation on the increased role of nursing personnel in realization of medical and social help to the elderly population within the three-level system on an example of the Voronezh region.

**Keywords:** Voronezh region; geriatric care; medical care; old age; senile age; the three-tier system of medical assistance; «Territory CARE»; palliative care; in-patient care; nursing staff.

At present demographic ageing of the population – increase in the share of individuals of the older age group in the total population takes a global tendency, while recently is was considered a phenomenon existing only in the developed countries. According to different literature data, in 2000 this part of the population reached 590 million people, and by 2025 it is expected to rise to 1 billion (1/6 share) [1,2].

Growth in the rate of aging of the population that began in the Russian Federation (RF) has led to the need for in-depth study of various factors that are closely associated with age-related changes and concomitant negative changes in health condition of people. In order to find innovative ways of collaboration between the agencies providing assistance and support to the elderly and rational forms of organization of medical, social and other types of assistance, it is necessary to restructure the health care system [3].

According to the preliminary statistical estimates, by 2025 the share of individuals of non-working age in the RF will rise to 27%, that will require expansion of provision of the population with medico-social assistance, with the result of restructure of regional healthcare systems. According to prognosis, the amount of individuals of elderly and old age in the next 50 years will steadily grow against the background decline of individuals of the working age [1,4].

As the data of the Russian Gerontological Research Clinical Center show, more than 80% of individuals of the older age group have chronic polyopathy. According to statistical research, in one elderly patient, on average, a wide range of very different clinical diseases is identified. The cost of medical treatment of individuals above 60 is almost 7 times that of individuals under 60. Besides, in the ageing society, the medico-sanitary significance of appearance
and development of cognitive disorders and dementia, of malnutrition syndrome, pathology of musculo-skeletal system increases, which makes it necessary to elaborate targeted programs or salvation of these actual problems [1].

According to the published data, ageing of the population is highly evident in the European part of Russia which stimulates development not only of gerontology and geriatrics as respective scientific trends, but also of geriatric service as a whole [1].

An important goal of geriatric care as a specialized long-term medical and social kind of help to patients of 60 and older with chronic debilitating diseases and a partial or complete loss of the ability to take care of themselves, is a prolongation of active longevity and increase in the quality of life in the elderly and old age. The main task of geriatric care is to maintain and maximally preserve health and the ability to work in individuals of the old age group, which is in full correspondence with a range of normative legal documents developed and adopted in different Ministries and Agencies of the RF with the aim to increase duration of active full-value life of people including aged ones [1,4,5].

At the moment, the primary normative legal document that regulates geriatric assistance in the territory of the Russian Federation, is the Order of Health Ministry of Russia № 38н of 29.01.2016 «On Approval of the Order of Rendering of Medical Assistance of Geriatrics Profile» (the Order) in which the rules of organization and of rendering medical assistance to patients with age-related asthenia are stated with the aim to preserve or recover their ability to self-care, their physical and functional activity, and independence of other people’s help in everyday life.

At present the modern science ‘geriatrics’ is aimed at rendering certain kinds of medical and social assistance to individuals of 60 and older, since in these individuals, besides a chronic pathology, ‘general geriatric symptoms’ are also present. Of special importance is malabsorption or incomplete nutrition syndrome associated with loss of one or many nutrients that enter the digestive system, due to their incomplete absorption in the small intestine. The risk and danger of this syndrome is that is causes a rapid start of senile enfeeblement, which manifold increases the need in permanent help of other persons. Senile asthenia and other geriatric syndromes in many aspects result from malabsorption [6].

A sensation of weakness and fatigue in an aged person not associated with any load, that can appear at rest and may remain after rest, is called ‘asthenia’. For designation of such disorders in the modern medicine two main terms are used: ‘asthenic syndrome’ that is traditionally used in Russian literature and in the clinical practice, and ‘chronic fatigue syndrome’ (CFS). This syndrome has been widely used in literature in the nearest two decades. In the opinion of modern scientists, asthenic syndrome includes patients’ complaints of general weakness, fast fatigue in any kind of load, considerable decline in the working activity and working capacity combined with a certain range of symptoms. Emotional lability of elderly individuals is accompanied by sensations of the internal tension and anxiety. Individuals of older age exhibit mood swings or reduction of mood and irritability without any visible reason. In individuals of old age this syndrome may be also manifested by cognitive disorders in the form of disorders in attention, absentmindedness, impairment of the ability to memorize information, and also by autonomic disorders like dizziness, tachycardia, elevation of body temperature, increased sweating, increased intensity of breathing that enhances the demand of an individual for oxygen, dyspeptic symptoms, etc. In an elderly individual asthenic syndrome may be manifested by pain
phenomena such as myalgias, tension headaches, cardialgias, abdominalgias, pain in the back, etc. Common are motivational and endocrine-metabolic disorders: reduction in libido, alteration of the appetite, loss of body mass, increase in sensitivity to light, sound and to other stimuli, which in many elderly individuals combine with sleep disorders [7].

The Order states the rules of organization of the activity of geriatric department (room) of a medical organization rendering medical assistance in the outpatient and inpatient conditions; the rules of organization of a geriatric center with the recommended norms concerning staff and standards for equipment. Effective, available and complex character of medico-social care rendered to patients of elderly age should help development of geriatric services. Development and improvement of this service provides an economic benefit since it will prevent unjustified repeated costly hospitalizations, ambulance calls, etc. In its turn, this will permit to optimize diagnostic and therapeutic procedures of age-associated diseases (geriatric disease – multifactor conditions resulting from reduction in the functions of many organs and systems, and will also permit to actualize the term ‘healthy ageing’ [1,2].

On 01.01.2019 the population of the Voronezh region was more than 2 million 335 thousand people, of them 28% were elderly individuals, which makes development of medico-social help to individuals of older age groups of the region one of the actual tasks.

At present in our region there exist a complex of structural and organizational conditions for realization of the pilot project «CARE Territory» for development of gerontological care based on the three-level model of its realization.

The All-Russia meeting on development of geriatric care held in Samara in October 2016 and chaired by the Deputy Healthcare Minister T.V. Yakovleva, determined the participants of the pilot project «CARE Territory» which, besides the Voronezh region, included five other constituent entities of the RF: the Belgorod, Volgograd, Kaluga, Samara regions and the Republic of Bashkortostan. For each of six regions participating in the project, work flow charts were developed.

The project is realized in the territory of the Voronezh region (the VR) in the following stages:

I stage (2017) consisted in development and introduction of normative-legal acts on creation of the three-level model of rendering geriatric assistance in the territory of the VR, on determination of the routing of patients, development of regulations for interdepartmental interaction with social security organs. Systemic work was carried out to determine the methods of payment for medical assistance of ‘geriatrics’ profile in the system of compulsory health insurance (CHI. This is payment by clinico-statistical groups within the effective federal framework, and also discussions and solution of questions concerning use of multiplying factor of complexity in treatment for individuals of the old age group.

A problem of organization of geriatric rooms in outpatient departments of 5 city and 6 interregional medical centers was being solved (BHI VR Voronezh City Polyclinic №18, BHI VR Voronezh City Clinical Polyclinics №7, BHI VR Voronezh City Clinical Polyclinics №4, BHI VR Voronezh City Hospital №4, BHI VR Pavlovskaya Regional Hospital) and of development of care service for old age population (in 2018 a geriatric room was organized in BHI VR A.V. Goncharov Semiluki Regional Hospital).

A decision was taken on creation of the regional geriatric center on the base of Pavlovsky Hospital of Veterans of War, and of the city center on the base of City Hospital № 4 with the twenty-four-hour functioning of hospital for rendering specialized assistance.
Coordination of work of geriatrists in polyclinics, unified record of aged individuals under a high risk and control of timely counseling by hospital specialists using potentials of telemedicine became possible owing to creation of organization-methodical center headed by the chief non-staff specialist of the Healthcare Department of the VR on geriatrics.

Use of profile departments of N.N. Burdenko Voronezh State Medical University as an educational ground for advanced training of physicians of all specialties. Training and retraining of medical nurses of palliative departments and departments of nursing care, workers of medical prophylaxis rooms. And as a methodical support – development of the respective recommendations, instructions, algorithms, protocols, manipulations and other documents.

Provision with specialized geriatric help on achievement of the respective age will become possible only on condition the population is informed about it which is one of important tasks requiring adequate decision [9]. Development of communication links continues between different agencies, such as organs and institutions of healthcare and of social security. They actively participate in organization and rendering different kinds of help to aged individuals through creation of interdepartmental structures, coordination of probable pilot projects, for example, EUCALYPT. It is a research of Healthcare Ministry of Russia dedicated to epidemiological study of prevalence of geriatric syndromes and age-related diseases in elderly individuals in the regions of the RF with different climatic, economic and demographic characteristic, in which our University also participates.

«Memory» rooms and «memory» schools are created with the aim of rendering medical and counseling assistance to aged individuals with memory disorders, and also for dynamic observation of individuals of the old age group. In these rooms consultations are given to patients’ relatives and to persons looking after patients, where a significant role is assigned to specially prepared nursing personnel [10,11].

In 2018 II stage started – introduction of the «CARE Territory» pilot project, where the mechanism of payment for ‘Geriatrics’ profile came into action. In the VR a tariff was imposed for a visit to a geriatrist in an outpatient clinics, and a complexity factor for treatment of aged patients in hospitals. Besides, at this stage the questions of routing of the aged patients were elaborated for provision of them with geriatric assistance with complex use of both intradepartmental and interdepartmental interactions. The trend was elaborated for finding ways for improvement of professional competence of medical and social workers in geriatrics. The professional retraining and improvement of competence of specialists both with higher and secondary medical education is conducted not only on the educational ground of the Voronezh region (N.N. Burdenko Voronezh State Medical University, Voronezh Basic Medical College and BHI VR Voronezh Regional Hospital №1), and also in other educational institutions (N.I. Pirogov RNRMU).

III stage (2019) is the stage of systemic analysis of realization and improvement of the mechanism of the «CARE Territory» pilot project.

In the three-level system of rendering geriatric assistance to the population of the VR, providers of the first-level assistance, besides geriatric rooms of municipal and interregional outpatient clinics, are also general practitioners, therapists, nursing personnel in nursing care departments with organization of social care [12-14].

On the second level specialized care is delivered in the geriatric department (30 beds) of HBI VR Voronezh City Hospital (VCH) № 4 and HBI VR Pavlovsky Hospital for Veterans of War which received the status
of geriatric profile organizations. The regional center was created on the basis of the hospital due to accumulated experience in organization and administering of assistance to aged individuals and the existing material basis. Expansion of the possibilities of rendering specialized medical care on the 2nd level permitted to perfect telemedicine and to enhance control of treatment of aged patients in all inpatient medical institutions of the VR by specialists possessing wide knowledge in geriatrics.

The third level of rendering geriatric counselling-diagnostic and inpatient medical care is provided by HBI VR Voronezh Regional Clinical Hospital № 1 and HAI VR Voronezh Regional Counselling and Diagnostic Center. These medical institutions possess a wide range of innovative diagnostic, therapeutic and rehabilitation technologies for prophylaxis and treatment of diseases of all profiles.

In the territory of the VR, the system of organization and rendering of nursing care is being continuously developed. Since 2014-2015 600 beds of the nursing care were organized on the base of inpatient medical organizations of all regional and of some city hospitals. These beds were created with the aim of providing supporting therapy and temporary stay of individuals who are in need of medical and social care. Nursing beds permitted to increase the effectiveness of use of expensive inpatient bed capacity and to provide disadvantaged groups of population such as elderly and aged groups, with medical care. Hospitalization of patients of these age groups to beds of nursing care noticeably ‘unloaded’ specialized departments of multiprofile hospitals [8,13].

For rendering palliative care in the VR, 81 palliative beds are created and are actively working. In the first half of 2016, palliative care rooms were organized in 4 regional hospitals and 2 large city outpatient clinics with the population of the respective age group more than 20 000 [15].

An example of realization of the multidirected geriatric care in the VR may be the work of Verkhne-Havsk Regional Hospital (RH) for rendering palliative care and hospitalization of patients to the nursing care beds for medical and social indications.

The department of nursing care beds with palliative beds is an independent department of the regional hospital that was opened by the Order of Chief Doctor in 2014. At first the nursing department was opened for 10 beds which starting from 01.02.2015 was expanded to 15 beds, and on 13.05.2015 five beds were allocated for palliative care. The department is equipped in full compliance with the Order of rendering medical assistance of geriatrics profile.

The room of palliative medical assistance in the outpatient clinics of the regional hospital has been working since 2016. Analysis of reception of patients in 2016-2018 showed the following: in 2016, 141 patients visited the room, in 2017 – 125 patients, in 2018 the number of patients practically twice increased and made 240. This can be attributed to increase in the medical activity of the population due to its better awareness of the work of the palliative care room.

Besides, in the RH a home-based inpatient facility was organized for oncological patients with a considerable share of elderly and aged individuals. A study of its work for 2016-2018 period showed that in 2016 114 patients were treated, the same amount of patients in 2017, and in 2018 – 112 patients. This permits to speak about stability in the work of the home-based inpatient facility.

According to the plan of work of the ‘nursing school’ and on request of the relatives, educational interviews and training classes are systematically conducted for people who are looking after oncological patients and patients with severe somatic pathology. A
similar work is conducted by oncologists and general practitioners visiting patients at home. 765 Patients and 510 their relatives received training in the ‘nursing school’ during the period of its functioning.

Within the recent 3 years 2 patients were directed to the bureau of socio-medical examination and were recognized disabled.

The research showed that in the elderly most commonly are detected chronic non-infectious diseases, such as essential hypertension, chronic ischemic heart disease, glaucoma, consequences of acute cerebrovascular event, oncological diseases of different degree and localization.

Comparative analysis of the parameters of the work of nursing care beds (bed-day) during 2016-2018 gave the following results: average annual bed occupancy in 2016 was 322.0; in 2017 this parameter slightly declined to 320.0; in 2018 it rose to 325.0; the average duration of staying in bed in 2016 was 24.3 bed-days; in 2017 the parameter declined to 21.1; in 2018 it continued to decline to 19.9. A study of bed turnover for 3 years showed that in 2016 it was 14.5; in 2017 it increased to 15.1; in 2018 – 16.3. Lethality was in 2016 – 1.6%; in 2017 – 1.8%; in 2018 – 0.6%. From this it is possible to say that relatively low parameters of bed turnover and lethality with rather high parameter of average stay duration may indicate insufficient occupancy of these beds.

Considering statistical data of the last three years for the main categories of individuals that are taking treatment in the nursing beds, it may be noted that in 2016 the leading position was occupied by the category of patients with chronic progressive diseases of therapeutic profile in the terminal stage – 52 patients (29.7%). In 2017 in the first place was the category of patients with severe irreversible consequences of cerebrovascular disorders requiring symptomatic treatment and nursing care (with a low rehabilitation potential or without it) – 86 patients (37.9%). In 2018 – patients with organ failure of decompensated stage, with inability to achieve remission of the disease or stabilization of the patient’s condition including 64 patients (21.6%) with the underlying chronic non-infectious diseases. On this basis a conclusion can be made about development and improvement of inpatient nursing care of the patients who need it. The standard of management of patients in the nursing departments/beds is not yet approved. Patients hospitalized to the nursing departments, may receive medication according to their main disease (supporting/symptomatic therapy), or may receive only nursing care [12,14-16].

At present an active work is conducted in the VR for development and realization of measures for protection of health of the elderly. In 2019 the Healthcare Department jointly with Department of Social Security will start realization of measures for organization of the long-term care system (LTCS) for elderly and disabled individuals. The main aim of this program is introduction of progressive innovative approaches to organization of assistance to elderly individuals in all kinds of social institutions and development of LTCS that implies maximally long stay of an elderly individual at home. LTCS combines medical and social spheres, formal (professional) and non-formal (family) care that expands the possibilities of promote the idea of ‘healthy ageing’.

In summary it should be noted that realization of the pilot project ‘CARE Territory’ is supposed to provide this activity on a systemic basis which in the nearest future will give positive results in terms of quality and availability of medico-social assistance to individuals of the older age group. Further development and perfection of this activity will permit to prolong the life and to increase its quality component and to provide availability of medical assistance for disadvanta-
dered by nursing personnel in palliative and inpatient aspects.

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Дополнительная информация [Additional Info]

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Конфликт интересов. Автор декларирует отсутствие явных и потенциальных конфликтов интересов, о которых необходимо сообщить в связи с публикацией данной статьи. [Conflict of interests. The author declares no actual and potential conflict of interests which should be stated in connection with publication of the article.]

Информация об авторе [Author Info]

*Chaikina Natalya Nikolaevna – к.м.н., доц., доцент кафедры общественного здоровья, здравоохранения, гигиены и эпидемиологии, ФГБОУ ВО ВГМУ им. Н.Н. Бурденко Минздрава России, Воронеж, Россия. [Nataja N. Chaikina – MD, PhD, Associate Professor, Associate Professor of the Department of Public Health, Health Care, Hygiene and Epidemiology, N.N. Burdenko Voronezh State Medical University, Voronezh, Russia.]

SPIN: 7174-1078, ORCID ID: 0000-0003-3369-0813. E-mail: chaikinavr@rambler.ru
ДИСКУССИЯ


To cite this article: Chaikina NN. Modern level of rendering palliative and in patient kinds of geriatric assistance by nursing staff. I.P. Pavlov Russian Medical Biological Herald. 2019;27(4):536-45. doi:10.23888/PAVLOVJ2019274536-545

Поступила/Received: 12.03.2019
Принята в печать/Accepted: 16.12.2019