REALIZATION OF PRIMARY CARE PERSONNEL MANAGEMENT PRINCIPLES: COMPARATIVE ANALYSIS OF FINLAND AND KAZAKHSTAN

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ANNOTATION

The management of human resources for health is a key part of the implementation of public health policy. There are many theories and approaches to management of human resources for health. The purpose and methods of this study is to compare the management of human resources for health in Finland and Kazakhstan, based on the implementation of the 8 basic management principles found by Avril D Kaplan and co-authors. The study was carried out using Pubmed database, World Health Organization site, data provided by Regional Office for Europe on Primary Health Care. Overall, 25 scientific sources, regulatory documents, resolutions and guidelines were analyzed. It includes 11 international and 14 domestic sources of scientific information. On the basis of the study were identified the strengths, weaknesses, opportunities and threats of the domestic experience of human resources for health management.

The strengths of the domestic human resource management are the availability of strategic programs aimed at developing human resources, the availability of programs aimed at training students from rural areas, the introduction family principle of care and opening Health Human Resources Observatory.

The weaknesses were the weak role of medical associations, low funding and low salaries of primary health care workers, uneven distribution of human resources for health throughout the country, the lack of separation of nurses in various specialties, low status of nurses.

The opportunities for primary care: increased financing of health care system, improving the quality of medical care, improving the quality of human resources for health planning and forecasting, integration of health information systems.

Possible threats for primary care: lack of human resources, lack of funding, inconsistencies of general practitioners competences to the needs of the population, loss of patient data privacy.

Key words: human resources, primary health care, stakeholders, nurses, general practitioners.

The management of human resources for health is an essential part of the health care system that leads to increasing the quality of medical care, through providing medical care to the population with competent workers [1].

Nowadays, developed countries implementing policy on providing appropriate number of physicians, with the right skills, in the right place. It is well known that this is not so easy, and the over-training of some specialists may lead to a shortage of other specialists and to unnecessary waste of finances. In this regard, developed countries increasingly training general practitioners, as they specialists of a wide profile [2].

Based on the definition of the World Health Organization, «Management is ensuring the implementation of strategic policies and their combination with effective monitoring, creation of coalitions, provision of relevant legislations.» In this regard, the management of human resources for health is a complex process aimed at implementing public health policy, where necessary to take into account the interests of different stakeholders [3].

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The implementation of the State health policy is achieved through the establishment of legal acts, principles of management. In this regard, it becomes relevant to determine the principles of management of human resources for health and roles of stakeholders to improve management efficiency.

**Purpose.** Comparative analysis of the realization of primary care personnel management principles and identification priority areas for the development of human resources for health.

**Materials and methods.** Conducted a comparative analysis of primary care personnel management and role of stakeholders in Finland and Kazakhstan. The Finnish primary health care model is one of the effective models for providing primary health care. A comparative analysis of the Finnish and Domestic primary health care system was carried out to determine the strengths, weaknesses, threats and opportunities for the domestic primary health care system. A comparative analysis was performed using the following 8 principles, according to Avril D Kaplan [4,5].

1. The first principle is a strategic vision that helps to determine the priorities and roles of health care system stakeholders. The evaluation indicator for this principle is the availability of a strategic plan.

2. The second principle is the using various measures to improve the responsibility of healthcare workers to provide quality medical services (clear understanding their responsibilities). The evaluation indicators for this principle are: clinical protocol, job responsibilities, certification and licensing.

3. The third principle is transparency in decision making and resource allocation. The evaluation indicators for this principle are: financial and managerial transparency of the health care system.

4. The fourth principle is availability of information and data. Evaluation indicators for this principle are: Types of data collection (paper or automatic), using of information by patients and stakeholders.

5. The fifth principle is the efficient use of human and financial resources without unnecessary costs and expenses. While analyzing this principle, will be evaluated factors that will lead to the improvement of effectiveness of medical workers activity. For example, motivation of workers, salary satisfaction.

6. The sixth principle is equality and justice. Equality and justice means equal degree of application of any procedures to all parties of the health care system. Indicators of assessment for this principle are: wages of urban and rural primary health care workers, personnel imbalances in the city and the village.

7. The seventh principle is the responsiveness of the government and other institutions to the needs of the population. Indicators for this principle are: problems and features of the training of primary health care personnel.

8. The eighth principle is the voice of citizens and patients, the satisfaction of the population with the quality of medical care. The evaluation indicator for this principle is patient satisfaction with the quality of medical care [5].

The study was carried out using Pubmed database, World Health Organization site, data provided by the World Health Organization Regional Office for Europe on Primary Health Care. Overall 25 scientific sources, regulatory documents, resolutions and guidelines were analyzed. It includes 11 international and 14 domestic sources of scientific information. As well as, official sites of stakeholders were analyzed. Inclusion criteria were: literature and data for the last 10 years on selected keywords.

Before starting comparative analysis were identified the main primary care workers in two country. In Kazakhstan, primary health care is provided by district physicians, pediatricians, general practitioners, paramedics, midwives, social workers and nurses [6]. In Finland, in addition to the abovementioned specialists, primary health care is provided by physiotherapists and dentists [7].

Then, were identified main stakeholders realizing management of human resources for health in two countries. The main
stakeholders in domestic healthcare system are: Ministries of Healthcare, Municipal Healthcare Management, Republican Center for Healthcare Development, Associations, Trade Unions, Universities, Colleges, medical organizations and Insurance Foundation. In Finland: Ministries of Health and Social Development, Local Health Administration, Associations, Trade Unions, Health Centers, Universities and Ministries of Education.

Results and discussions. Analysis based on the first principle shows that the national health care system develops and implements strategic plans and programs aimed at developing human resources for health. For example, in the concept of health human resources development for 2012–2020, reflected the state of human resources for health in Kazakhstan and identified following development priorities:

1. Improving regulatory framework for personnel policy
2. Establishment of a national observatory of human resources for health
3. Modernization of health personnel services
4. Improving the image and stimulation of health workers
5. Improving vocational and continuing professional education
6. Introduction of an institute for independent assessment of the qualification level of medical workers [8].

As well as, the following tasks were identified in the comprehensive plan for development of nursing in the Republic of Kazakhstan until 2020:

1. Introduction of new roles and competencies for nursing specialists in the health care system
2. Institutional development of medical colleges and universities in accordance with the needs of nursing reform
3. Creating a scientific basis for the development of nursing
4. Enhancing the image of nursing specialty workers [9].

In the development of strategic documents plays an important role: Ministry of Healthcare, Municipal Health Administration, Medical organizations and institutions.

In the Finnish health care system, there is no separate strategic document for planning human resources for health. The planning of human resources is carried out on the basis of a comprehensive strategic document that determines the requirements for human resources in all specialties. Therefore, Ministry of Labor and Economy, Ministry of Education and Culture, Ministry of Health and Social Development, and Ministry of Finance take part in developing strategic documents [10].

Analysis on second principle shows that clinical protocols and regulatory documents are being developed in the domestic health care system. Clinical protocols and guidelines on various nosologies are developed starting from 2011. Official duties and responsibilities of general practitioners and nurses are specified in order No. 7 of the Minister of Healthcare. In addition, was adopted a standard for organizing primary health care in the Republic of Kazakhstan, which indicates the functional responsibilities of primary health care workers. This standard were adopted by the Order of the Minister of Health and Social Development of the Republic of Kazakhstan in 2016 [11,12]. All healthcare professionals have to undergo a certification procedure before they begin their working activity in practice. In the development of legislations the Ministry of Healthcare plays a huge role. Clinical protocols and standards are developed by various working groups under the direction of the Republican Center Healthcare Development (Republican center for healthcare development: [site]. URL: http://www.rcrz.kz). Certification of health professionals is carried out by a special body. It should be noted that in many European countries the certification and development of clinical protocols is the responsibility of professional associations. The main challenge in domestic healthcare system is that the developed clinical protocols are not fully used by physicians in practice.

In contrast to domestic healthcare system, in Finland health care professionals have to undergo licensing procedure to start working in practice. The responsibilities of
general practitioners and nurses are clearly separated. Many responsibilities are delegated from physicians to nurses, which helps to save physicians time to treat a patient. Every year developing various clinical guidelines. In total, there are over 190 clinical protocols. But it is worth noting that most protocols are used in hospitals. The licensure of medical professionals is carried out by organization - Valvira [13]. Development of regulatory documents and clinical protocols is handled by the Ministry of Health and Social Development, the Finnish Medical Society Duodecim, with various medical specialized societies (The Finnish Medical Society Duodecim: [Site]. URL: http://www.kaypahoito.fi/web/english/about-current-care-guidelines).

The analysis on third principle shows that financing of domestic health care system was indicated in the State Healthcare Development Program “Densaulyk” for 2016-2019, but this was not enough to assess financial transparency. According to this program, patient expenditures for receiving medical services make up 35.4% of the total expenditure on health care, while this indicator in the European Union is less than 20%. Insurance contributions of citizens were specified in the Law of the Republic of Kazakhstan № 405 «On Compulsory Social Health Insurance.» Transparency of health care system is played ensured by the Ministries of Healthcare, Local executive bodies, and by Mandatory Social Health Insurance Fund [14, 15].

Management transparency includes: process of procurement, decision-making, and patient rights. The rights of patient and health care workers are specified in the Code «On people’s health and health care system» [16]. The procurement process of medical organizations is open and announced on the official websites of medical organizations.

In the global healthcare system transparency ranking, the Finnish health care system takes second place with 72 points, after Danish health system. In terms of financing and management transparency, takes leading positions with 88 and 83 points, respectively (KPMG: [Site] Global health system transparency index. URL: https://home.kpmg.com/xx/en/home/campaigns/2017/04/health-transparency-map.html).

The government, ministries of health and local health authorities, health information system “Finland statistics” plays an important role in ensuring transparency of the Finnish healthcare system.

The analysis on fourth principle shows that there are several information systems and electronic health passports are being introduced in domestic healthcare system. But all information systems are not integrated into a single health information system. According to the e-Health program until 2020, the integration of all information systems is planned. Electronic health passports are only being introduced into the health care system, which indicates the paper type of workflow in medical organizations. Ministry of Healthcare of the Republic of Kazakhstan has begun to develop the Unified Information System of Healthcare that will improve decision-making by health managers. All these innovations contribute to the improvement of the quality of medical services, to the rapid acquisition of data through information systems [17].

Automated Management System for Personnel is functioning, which collects the following data regarding human resources for health: place of work, type of personnel, category, education, specialty, position and working experience. It should be noted that in this information system, workers are not divided by specialties, which complicates determining needs on medical workers according specialties. The register of the attached population contains following information about population: full name, individual identification number, gender, nationality, date of birth and place of work. Automated Information System “Unified System of higher education management” collects information regarding specialty, year of entry, form of student education. It is worth of note that there is no information regarding internship and residency [18].

There was conducted e-health research, where were participated 305 medical organizations and 171 commercial enterprises providing social services in Finland, in 2014. According to the result of this study, electronic
Health passports were used by all medical organizations. In terms of accessibility of information systems to patients and stakeholders, Finland takes first place with 93 points in the global healthcare system transparency. This indicates a high level of information accessibility and its application by citizens and stakeholders during making decisions [19,20].

The analysis on fifth principle shows that outpatient clinics are funded on the basis of per capita standard in Kazakhstan. There has been introduced stimulated component of per capita standard, in order to improve the motivation of primary care workers. In accordance with order “On Approval of methodology for tariff developing and costs planning for medical services provided under the guaranteed volume of free medical care”, medical workers are encouraged by per capita standard. Nowadays, salaries of general practitioners and nurses may vary depending on performance. However, average salary of general practitioners and nurses are relatively low. Therefore, it is planned to increase the salary of general practitioners to the average monthly salary in the Republic of Kazakhstan [21].

There was conducted study, in Almaty city among 300 nurses. The results of this study showed that only 53% of nurses are satisfied with their salaries [22]. It is worth of note that the Ministry of Healthcare, the municipal Health Departments, and Medical organizations plays an important role in providing workers with salaries. According to international practice, professional associations are involved in setting salaries for their employees, and unions protect the rights of medical workers. Domestic professional associations do not have such powers.

In the Finnish health care system, primary care workers receive basic wages, as well as fee for service. The average monthly salary of primary care physicians makes up 5,200 euros, and nurses takes 2,400 euros. In the process of salary establishment takes part: Ministry of Health and Social Development, local health authorities, medical associations. The results of the study, conducted by Tarja Kvist, Raija Mäntynen, Pirjo Partanen, show high satisfaction of nurses with their work [23].

Analysis on sixth principle shows that there is a huge personnel imbalance in Kazakhstan. The rural population suffers from a shortage of personnel. For example, in Almaty city, 75 nurses comes to 10,000 populations, while in Almaty region 50 nurses comes to 10,000 populations (Medinform: [site]. Basic indicators of population health and healthcare activity in Kazakhstan from 2000 to nowadays. URL: http://www.medinfo.kz/#/dpsraion).

A third of rural population lives at a distance of more than 4 kilometers from the nearest medical organization [24]. The state program “With Diplomas to Village” was designed to ensure equality in the human resources for health. The quotas for students entering universities from rural areas were allocated, according to this program. It is worth to admit that students from the countryside after graduation had to work 3 years in the countryside where they came from. According to statistics 9813 health workers went to work in village (Информационная Агентства Regnum: [сайт]. With diploma to village.URL: https://regnum.ru/news/society/2187199.html).

In distribution of medical personnel takes the leading role: Ministry of Healthcare, Municipal Health Management, Medical organizations and universities.

In Finnish health care system, there are also big challenges with personnel imbalances and salaries of urban and rural primary health care workers. The shortage of physicians is a serious problem for rural municipalities. Per capita expenditures range from 940 euros to 2,310 euros depending on the region [25]. The Ministry of Education, Local Health Administrations and medical organizations are involved in ensuring equality in salaries.

Analysis on seventh principle shows that chronic non-communicable diseases-is one of the main challenges throughout the world. According to statistics, 40 million people dies from non-communicable diseases each year, representing 70% of all deaths in the world. The burden of chronic non-communicable diseases is high in low- and middle-income countries [26].
The domestic health care system is no exception. In order to reduce burden of non-communicable diseases and meet the needs of population in obtaining necessary medical care, in domestic health care system pays special attention to the training of multi-professional primary health care specialists (general practitioners and nurses). It should be noted that in this area existing following challenges:

1. Poor-quality selection of students for specialty: “General practitioner”
2. Inconsistency of compulsory educational standards to international standards of education in this area
3. Low number of credits for practical activities.

Medical students are trained at universities and colleges. Medical organizations cooperate with educational institutions and act as a base for practice. Despite of the fact that medical associations should play an important role in educational activities, nowadays, their role remains low.

In this regard, it is necessary to note, the system of training of general practitioners in the UK, where medical students are attached to one family from the first course. This practice is very important for general practitioners, as it allows students to learn the features of this profession from other medical specialties [27].

The Finnish system of health professionals training is distinguished by high-quality training of nurses. All nurses are training in a competency-based approach. In addition, the Finnish system has many of the following advantages:

1. After graduating of baccalaureate, nurses have to work in practice for 2 years, before entering the magistracy.
2. A high number of credits for practical training
3. Systematic process of educational activity: theory, simulation center and then practice.
4. University professors are highly qualified and have the right to develop their own study programs.
5. The «nursing» specialty is divided into various directions: pediatrics, public health nurse.

In Finland, the Ministry of Education, universities and medical associations are involved in educational process.

An analysis on eighth principle shows that the urban population is less satisfied with activity of general practitioners than in rural areas. This is probably due to the lower availability of narrow specialists for the rural population. According to the results of research, in total, 51% of all respondents were satisfied with the quality of services provided by general practitioners [28].

Another study conducted in Almaty with a sample of 1200 populations showed that only 43% of the elderly populations are satisfied with the quality of medical care [29].

In Finland, a study conducted with a huge sample of 157549 populations showed that satisfaction of older people is 75%, and overall satisfaction of the population is 63% [30].

Conclusion. On the basis of the study were identified the strengths, weaknesses, opportunities and threats for domestic healthcare system and human resources for health management (Table 1).

Table 1. SWOT analysis of health care system

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>* Availability of strategic programs aimed at developing of human resources for health</td>
<td>* The weak role of medical associations in the field of healthcare</td>
</tr>
<tr>
<td>* Availability of programs aimed at training students from rural areas</td>
<td>* Low transparency of health care system</td>
</tr>
<tr>
<td>* Introduction family principles of care</td>
<td>* Low salary for primary health care workers</td>
</tr>
<tr>
<td>* Opening Health Human Resources Observatory</td>
<td>* Uneven distribution of human resources for health in cities and villages</td>
</tr>
<tr>
<td>* Lack of separation of nurses in various specialties, low status of nurses</td>
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### Opportunities

* Increased financing of health care system through introduction of compulsory social health insurance  
* Improving the quality of medical care through competition of medical organizations  
* Improving the quality of human resources for health planning and forecasting, on the basis of observatory of human resources for health  
* Integration of health information systems on the basis of the implementation of e-health program  
* Support of science in health care through providing reliable data on e-health  
* Increasing salary for physicians and nurses  
* delegation of responsibilities, as a result of development of high-quality clinical protocols

### Threats

* Lack of human resources due to the rapidly growing demand for general practitioners  
* Lack of funding as a result of poor implementation and introduction of mandatory medical insurance  
* Inconsistencies of general practitioners competences to the needs of the population and to the reforms being introduced (for example, delegation of patients with tuberculosis to general practitioners)  
* Low attractiveness of the general practitioner and nursing professions as a result of the low status and salaries of general practitioners and nurses  
* Loss of patient data privacy due to the introduction of electronic technology in health care system

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**REFERENCES**


6. Приказ Министра здравоохранения и социального развития Республики Казахстан от 3 февраля 2016 года № 85 “Об утверждении Стандарта организации оказания первичной медико-санитарной помощи в Республике Казахстан”.


8. Концепция развития кадровых ресурсов здравоохранения на 2012-2020 годы.

9. Приказ и.о. министра здравоохранения Республики Казахстан от 1 августа 2014 года «Комплексный план развития сестринского дела в Республике Казахстан до 2020 года».


11. Приказ и.о. Министра здравоохранения Республики Казахстан от 5 января 2011 года № 7 «об утверждении Положения о деятельности организаций здравоохранения, оказывающих амбулаторно-поликлиническую помощь».

12. Приказ министра здравоохранения РК от 3 февраля 2016 «об утверждении стан-
РАЗДЕЛ II. Общественное здравоохранение

dарта организации оказания первичной медико-санитарной помощи».
15.Закон Республики Казахстан от 16 ноября 2015 года № 405 «Об обязательном социальном медицинском страховании»
16.Кодекс Республики Казахстан от 18 сентября 2009 года № 193-IV «О здоровье народа и системе здравоохранения».
17.Приказ Министра здравоохранения РК № 498 от 3 сентября 2013 года, «об утверждении Концепции развития электронного здравоохранения Республики Казахстан на 2013-2020 годы».
18.Мусина Г.А. Модернизация управления кадровыми ресурсами. Обсерватория кадровых ресурсов здравоохранения МЗ РК. 2017. http://www.rcrz.kz/files/%D0%94%D0%BE%D0%BA%D0%BB%D0%B0%D0%B4%0D%9C%D1%83%D1%81%D0%B8%D0%BD%D0%BE%D0%B9%20%D0%93%D0%90.pdf.
21.Приказ МЗ РК № 801 от 26 ноября 2009 года «Об утверждении методики формирования тарифов и планирования затрат на медицинские услуги, оказываемые в рамках гарантированного объема платной медицинской помощи».
22.Кайдаулов М.К. Қазіргі денсаулық сақтау жүйесіне орта медициналық қызметкерлердің ұзақ мерзімді қажеттілігін анализдеу. Маг.диссертация. Алматы. 2015ж.
27.Резолюция 3-го Конгресса ассоциации семейных врачей Казахстана, 2016.
29.Байсугурова В.Ю., Кашафутдинова Г.Т., Аимбетова. Г.Е., Рамазанова М.А., Кошимбеков М.К., Калмаханов С.Б. Удовлетворенность населения медицинской помощью как показатель ее качества//Вестник КазНМУ. №1-2014. Алматы. С. 393.
Денсаулық сақтау кадрларының басқару – денсаулық сақтау саласындағы мемлекеттік саясатты ісіңе арналған мәнділігі бойынша табылды. Кадрлый ресурстарды басқарудың қызметін артқандықтан тарихи, әдістемелер мен өндірісті көрсету қажет екен. Зерттеу үшін табылған Avril D Kaplan және соавторлары зерттеу бағдарламасының құрылысындағы тәртіптік саясатқа, мемлекеттік құқықтық актілерге, резолюцияларға, ресурстарды өндіреді беру үшін қосымша іс-шешім құрастыру қажет екен. Зерттеу ықпалыдануға қажетті кадрлых ресурстарды құрастыру қағидасын қорғау қабылдайды.

Зерттеу қорытындысы нәтижесінде отандық денсаулық сақтау кадрларының әлсіз және күшті жақтары, мүмкіндіктері мен қауіп-қатерлері анықталды. Отандық денсаулық сақтау кадрларын басқаруға қатысты қысқаша талдау ұсынылды: стратегиялық бағдарламаның әзірленуі және іске асырылуы, кадрлых ресурстарды қала мен ауыл менде теңдік етуге бағытталған бағдарламалардың іске асырылуы, денсаулық сақтау ресурстары обсерваториясының негізі каланы.

Отандық денсаулық сақтау кадрларын басқару қағидаларын анықтама ғиір алуға қажет екен. Отандық денсаулық сақтау кадрларының мүмкіндіктері мен қауіп-қатерлерін анықтау қажет екен. Отандық денсаулық сақтау кадрларының әлсіз және күшті жақтары, мүмкіндіктері мен қауіп-қатерлері анықталды.

Кіт сәйкес: кадрлых ресурстар, ауылдағы медико-санитарлық комек, мүдделі партиялар, мейірбиектор және тәжірибелі дәрігерлер.
В ходе анализа сильными сторонами отечественной системы управления кадровыми ресурсами были определены: наличие стратегических программ, направленных на развитие кадровых ресурсов, наличие программ, направленных на обучение студентов из сельских районов, внедрение семейного принципа обслуживания, открытие Обсерватории кадровых ресурсов здравоохранения.

А слабыми сторонами были: слабая роль медицинских ассоциаций, низкое финансирование и низкая зарплата работников первичной медицинско-санитарной помощи, неравномерное распределение кадровых ресурсов здравоохранения по всей стране, отсутствие разделения медицинских сестер по различным специальностям, низкий статус медсестер.

Возможности для первичной медико-санитарной помощи: увеличение финансирования системы здравоохранения, повышение качества предоставляемой медицинской помощи, повышение качества планирования и прогнозирования кадровых ресурсов здравоохранения, интеграция информационных систем здравоохранения

Угрозы для первичной медико-санитарной помощи: недостаток кадровых ресурсов, недостаток финансирования, несоответствия компетенции врачей общей практики на потребности населения и внедряемые реформы, потеря конфиденциальности данных пациентов

Ключевые слова: кадровые ресурсы, первично-медико-санитарная помощь, заинтересованные стороны, медицинские сестры, врачи общей практики.

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РОЛЬ СПЕЦИАЛИСТОВ ОБЩЕСТВЕННОГО ЗДРАВООХРАНЕНИЯ В УПРАВЛЕНИИ ХРОНИЧЕСКИМИ ЗАБОЛЕВАНИЯМИ

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АННОТАЦИЯ

Удовлетворение потребностей в помощи людям, живущим с множественными или даже с одной хронической болезнью, является сложной задачей для общества. Расходы на здравоохранение и затраты на социальные пособия для людей с хроническими заболеваниями высоки, поэтому управление хроническими заболеваниями требует лучшей координации ухода за пациентами. Качество лечения пациентов с хроническими заболеваниями может быть улучшено путем принятия более систематического и структурированного подхода к уходу и повышения способности пациентов к само менеджменту, удовлетворять свои собственные потребности и управлять своим хроническим состоянием.

Все вмешательства, такие как ранжирование людей в соответствии с их риском, услуги многопрофильной команды и поддержка самоуправления, имеют потенциал только в том случае, если в совместной работе учтены аспекты общественного здравоохранения.

Ключевые слова: общественное здравоохранение, управление хроническими заболеваниями, программа управления заболеваниями, хронические неинфекционные заболевания.

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