

*Materials of Conferences***THE FIELD OF PUBLIC HEALTH PLACE AND ROLE IN THE SOCIAL REPRODUCTION SYSTEM**

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The demographic situation, having emerged in Russia just in the XXI-st century beginning, has revealed the character of its social and economic policy. The economic and political shocks at the close of the XX century have become, especially, for Russia the real catastrophe and disaster in the field of the human population. The Russian's human losses for the last 20 years are being commensurated with the USSR losses during the Second World War. In this connection, the challenge investigation on the field of public health place and role in the social reproduction system is being taken on the special theoretical and practical significance.

It is presented to us, that the emerged negative and demographic situation is being conditioned, in particular, by the quite insufficient scientific and theoretical comprehension of the field of the public health place and role in the social reproduction. Meanwhile, the public health – is the most complex field just in the production relations system, which, as all the other non – production – related sphere fields, indirectly of the labor resources, is constantly being influenced upon the production expansion rates; the increase of the labor productivity; the generated production cost saving, and, in the end, upon the rates of the Gross Domestic Product (GDP) growth rates.

At the same time, the public health is that specific non – production – related sphere field<sup>1</sup>, as the public health not only «save labor», having lowered the temporal disability for the work, but it is being improved the labor resources qualitative structure. In addition to that, the public health is being increased the labor resources quantitative structure, having lowered the disablement and the mortality of the employable population, having lowered the children's mortality and their disablement, and also having increased the economically – active longevity.

It should be said, having noted the specific and the special public health role just in the social reproduction system, that this kind of field itself is being depended upon the economy development level. That is, the practical medicine services quantity and quality are being conditioned by the labor, the material, and the financial resources the public health field provi-

sion. In other words, the rise in the health standard level and the broadening reproduction provision is quite impossible to be carried out just without the corresponding public health field financing. At the same time, the public health resources efficient use challenge that is, very sharply, being laid before us, under the limited financial possibilities conditions. We shall note – the resources efficient use just for the public health field is not quite «the economy» for the population health. The efficiency in the public health is being meant the higher qualitative and the quantitative indications forms of the medically – health – improving activity.

The definition and the progressive forms and the modes of operation development the public health field and the medical science, owing to which it is quite possible to improve the demographic situation in the country, that is to achieve the real results in the disablement lowering and the premature mortality, to provide the healthy population extended reproduction, to lower the children disablement and the morality is the main target of our investigation.

The «population health level» category is the multiple – factor one. Correspondingly, the population health normal level provision, as well as, the demographic situation improvement is quite possible only at the system approach.

But, in our opinion, it should be developed a number of the first – priority programs, under the conditions, when our state is not quite able to provide the «Healthy Nation» program realization, by the objective reasons. These programs are the following:

1. The «Healthy Generation» Program;
2. The «Premature Disablement Lowering and the Mortality» Program.

The «Healthy Generation» Program is being occupied the specific and the special place just in the public health system: firstly, the healthy generation – is the healthy nation's basis; secondly, the adolescent generation quantitative and qualitative structure is being characterized the production – related and the non – production – related spheres efficiency of the social production. Correspondingly, it is necessary to develop a number of directions interdepartmental program's model for the healthy generation provision challenge solution. They are the following:

- the public health;
- the medical psychology;
- medicine sociology;
- the education;
- the law – enforcement authorities and the

others.

Moreover, we shall note, that cannot be the first – priority directions just in the «Healthy Generation» program. In our mind, it is, as very much important the normal and the balanced feeding, well as very much significant that, how the light is being fallen on

<sup>1</sup> The service «... of a doctor...maintains the health that is he preserves the source of all the values – the working force itself...»// K. Marx and F. Engels Philosophy – The Complete Works, vol. 26, part I, p. 149.

the child's working table; what kind of the square is found to be for the school desk; and, at last, how much the pupil «is sagging» under the school rucksack's weight. All these above – mentioned things are very much significant. It is also very much important, that the child, having fallen into the hungry syncope, would not be subjected by some physical exercises (for all that physical activity significance), and, at last, it is necessary to provide the obligatory hot plate nourishment in the schools and the others.

The «Premature Disablement Lowering and the Mortality» Program is the demographic policy backbone. [In its report «Russia in the Face of the Demographic Challenges» – 2009 – the U.N.O. points out the long – term strategy necessity of the demographic situation further improvement. It was, especially, that strategy, which has been provided the arrangements on the population health improvement, and also that method of the deaths quantity

in 1995 year:

RF (the Russian Federation)	– 1,271,5;
SFD (the Southern Federal District)	– 1,364,2;
RNO – A (the Republic of the North Ossetia – Alania)	– 966,1;

in 2006:

RF (the Russian Federation)	– 1,734,1;
SFD (the Southern Federal District)	– 1,673,5;
RNO – A (the Republic of the North Ossetia – Alania)	– 1,519,2.

[RNO – A (the Republic of the North Ossetia – Alania) Public Health. «The RNO – A Statistic Collection». Vladikavkaz, 2008, p. 92.]

Having spoken on the first – priority directions, with due regard for the population health statistical data, the note should be taken on the persons quantity distribution at the age of 18 and older, firstly,

The blood circulation system diseases (BCSD)	– 754,673;
The malignant tumors	– 191,236;
The musculoskeletal apparatus system diseases	– 118,045;
The endocrine system diseases	– 49,638;
The mental disorders	– 48,329;
The tuberculosis (T.B.C.)	– 34,852.

We shall note that the population mortality statistical data by the main classes, practically, is being corresponded with the disablement ones. Thus, the dead persons number in 2006 for the 100, 000 people has been made up: from the blood circulation system diseases (BCSD) – 864,7; from the tumors – 200,9. [Ibid., p. 86.]

It should be done, with due regard for the medical and the socially – economic significance of the preservation and the maintenance strategic programs at the high level of the public health:

— to improve the public health field management;

— to use the reliable and the objective population public health statistical data, that is to get rid of from the «cleaned» statistics;

reduction and so on, and so forth.] In this connection, it should be developed a number of the first – priority directions within the framework of this kind of Program, with due regard for the Russian Federation (RF) population health statistical data. For example, «The Blood Circulation System Diseases (BCSD) on the cases' number are being occupied the 1–st place in the population total mortality rate structure and also the 2–nd place among the persons of the employable population». [Chechenin G.E. and et. al. – «The Life and Labor Potentials Losses by Reason of the Blood Circulation System Diseases of the Adult Population». «The Russian Federation Public Health». – №1 – 2009, p. 35.] The malignant tumors morbidity rate is being left at the, sufficiently, high level. Thus, this index has been made up for the 100, 000 people the following figures:

having recognized by the disabled persons, by the reasons of the disablement in 2006 (persons) [RNO – A (the Republic of the North Ossetia – Alania) Public Health. «The Statistic Collection». Vladikavkaz, 2008, p. 86.]:

— to develop the scientifically – grounded needs' and requirements' predictive estimates of the public health field in the resources;

— the medical science, together with the fundamentally – scientific investigations, will have to pay its attention upon their applied character, that is not to be limited by the health statistical data, but, at the same time, to try to research and to divulge the pathologies' reasons;

— to revise the public health field financing principles, as the current practice (e.g. the Russian Federation (RF) population health status – is being characterized, as the catastrophic one, even at the U.N. level) has already been shown the whole insolvency of

the public health field financial policy (e.g. I should not want to be agreed with Mr. A. Potapov<sup>1</sup>);

— to return all the state medical and the prophylactic institutions (e.g. the hospitals, the polyclinics, the sanatoria, the rest homes, the boarding houses, the children health – improving institutions) to the people;

— to return all the preschool education institutions to the children (and also to their parents);

— to return the gratuitous sporting schools, and the athletic complexes to the children, and so on, and so forth.

After all, we shall not work the vitally important for us challenge out – the healthy population extended reproduction provision challenge – without the cardinal changing of the financially – organizational system just in the public health field and the medical science, which has been emerged for the last 15–20 years, without the sufficient programs financing of the further population health improvement.

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#### THE LYMPHATIC SYSTEM SEGMENTAL ORGANIZATION

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The lymphatic system is being gathered the «excessive» tissue fluid in the lymph form just from the organs. The lymphatic channel walls structure is being complicated during its length: the lymph capillaries (LC) endothelium, the valves are being appeared in the lymph post – capillaries (LPC), the myocytes – in the lymphatic vessels (LV), and the lymphoid tissue – in the lymph nodes (LN). The lymphangions contractions – e.g. the LV valvate segments are being served the lymph flow main motive power, according to E. Horstmann (1951, 1959) and H. Mislin (1961, 1983). The distal valve and the proximal muscular cuff are being entered in to their structure. The valves cusps are not contained the myocytes, and they are being moved passively, by the lymph flow gradient. But the lymphangions with one valve are not being functioned (Webb R., 1933). And so, I have suggested to consider the lymphangion, as the intervalvular segment with the myocytes just in the walls: the muscular network from the muscular segment cuff is being spread over both its valves, e.g., as the inlet one, well as the outlet one, –

the single structurally – functional system. The intervalvular segment is being appeared to be the lymphatic system universal structure.

The human's and the animals' lymphatic channel whole mounts have been stained by the gaullocyanine by Einarson, the histological sections – by the picrofuchsine, by the orcein, by the azan by Geidengaine, by the benzidine on the myoglobinperoxidase; they have been impregnated by the silver nitrate; they have been treated by the reagent with the antibodies to the myocytes  $\alpha$  – actin. The rat's LC, LPC, LV electron microscopy has been conducted.

The LV valves are being contained the smooth myocytes. The valve's muscle is being continued into the cusps just from its basis, by means of the muscular bundles it is being connected with the muscular cuffs of the adjacent lymphangions and with the other valves. Such muscular connections are being permitted the contractions coordination of the lymphangion's various parts and the various lymphangions. The valve's muscle is being served not only its tensor, but it is also able to change its cusps' position, and, thus, to regulate, actively, the lymph flow just between the lymphangions. The valves are being divided the lymphatic channel into the intervalvular segments, which are quite various by their structure. Their variable movements are being defined by the surrounding tissues: 1) the tissue fluid is being filtered into the LC and LPC lumen – the lymphopoiesis, the primary lympho – motive force (e.g. the tissue pump piston); 2) The tissues' mechanical pressure on the LC, LPC and LV walls (e.g. the tissue pump external cuff); 3) the reverse lymph flow, having appeared at the lymphopoiesis energy insufficiency, is being closed the valves; the lymph is being accumulated, and it is being stretched out the walls' intervalvular segment, that it is resulted in the myocytes membranes deformation and the depolarization – so, the LV contractive activity mechanism is being switched on in such a way. The valve is being belonged to the both adjacent lymphangions, it is being united together their walls, but it is being divided their cavities at the closing (e.g. the compartmentalization). The adjacent lymphangions are being contracted, frequently, in a separate way, at the critical lymph portion entering in them, but they are able to be contracted together: the supra-valvular myocytes bundles are being expressed just in the large LV, they, in their turn, directly, are being connected the adjacent lymphangions muscular cliffs, having passed the valves, – this is the short and the direct way of the muscular contraction wave spreading on the LV length. The valvate segment is the semi – open system with the infinitely large capacity, therefore, it is not able, independently, to be contracted and to provide the efficient lymph transport. So, the valvate segment is being stopped the reverse lymph flow, that it is preceded, as the biomicroscopy has been shown, the intervalvular segment contraction launching just in the field of the valvate sinus.

<sup>1</sup> «It is extremely difficult to reform the emerged public health financing system» – Potapov A.E. – «The Russian Federation Public Health». – №5 – 2008, p.3.