

MAJOR REQUIEREMENT AT THE CURRENT STAGE OF THE REPUBLIC OF MOLDOVA HEALTHCARE SYSTEM REFORMING - OPORTUNITY PROBLEMS OF MODERN INFORMATION TECHNOLOGIES MPLEMENTATION IN PRYMARY MEDICAL ASSISTANCE

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Abstract — The modern electronic techniques implementation of information technologies and implementation of information technologies in administrative process from Health System needs significant expenditures. Because of this, a particular attention is paid to efficiency, when solving the problems regarding the opportunity to create the Automatic Working Position. The efficiency estimation of the information technologies usage in medicine is based, on one hand, on general evaluation principles of economic efficiency and efficiency's theory of capital allocations, and, on the other hand, on the evidence of efficiency specific sources, which displays during the information systems running having different destination.

Index Terms — The family doctor workstation, high information technologies, Automatic Working Position, Primary Medical Assistance, quantitative efficiency, qualitative efficiency, “man-machine” system.

Activities efficiency increase in various domains of human society is a consequence of the progress in the information technologies development domain achieved on the international scene.

This phenomenal evolution is explained by international exchange and advantages offered by information technologies when solving problems of information acquisition, supply, storage, processing, distribution and use. Not excepting the medicine as well – timely and efficient medical information use is necessary, starting with the inferior level – Primary Medical Assistance (PMA), in the centre of which the main figure – is the family doctor.

Most world countries are passing over their own healthcare systems reforming process. Obviously, these reforms are of political nature, but they also contain combination of economic and financial restrictions. But the experience shows that healthcare systems financial changes strongly depend on the system organization modifications, by application of efficient methods of material, human and not in the last of informational resources use.

Healthcare System reforms main task is the hope for life increase to achieve the goal: increase of medical services accessibility, quality and efficiency; equity guarantee in financial effort distribution for the medical services payment; the population universal coverage by main medical services; medical services quality improvement and their accordance on time; medical services supplier status change and buying and caring out these services functions division.

To reach these goals some changes on the financial, planning, medical services supply and information level through information technologies and modern electronic techniques use are necessary.

Implementation of mandatory medical assistance insurance in the Republic of Moldova will impel solution of a set of problems that seriously affect healthcare system.

Health insurance public system introduction assumes some good administrative, management and information structures existence.

The experience gained in the pilot-region Hînceşti proves that a fixed budget is more efficiently used, and the performance indicators reflecting services quality and medical needs satisfaction of insured population accomplishment is emphasised.

“Per capita” payment mechanism application in primary medical assistance, as well contributed to the more efficient use of financial resources. By means of head-money payment systems, adjusted to risks, primary medical assistance financial guarantee of 35% from incomes was obtained as well as the decrease of patients sending to the doctor specialist. Thus family doctors activity were stimulated, they were donated with all necessary means to maintain insured people's health and out-patient treatment which requires less resources.

Regardless the radical transformations in national economy control system, major urgency and importance of PMA development principles were and remain untouched. Direction to the population insurance with local medical

services which form the basis of the family doctor activity, according to the principles worked out by a group of specialists from prestigious school of the university scientist, Professor Nicolae Testemiţanu is both of present-day and becomes of national priority.

At each infrastructure level according Healthcare System information course, a series of medico-social evidences that serve both for the information movement support and for watching the phenomena connected with the patient, health indicators analysis and estimation, statistics etc. exist for PMA.

When assuring more effective activity, high efficiency and quality of medical services afforded by family doctors an important role plays their providing both with medical information and necessary non-medical information, medical documentation, statistical forms, as for instance patient's statistical Ticket or The patient's file (family passport), which contain all data characterizing patient and his family particular features, financial position, heredity, composition etc. Complete information about each family member is also concentrated here. Not of less importance are child's development histories, files with the child's vaccination and revaccination evidence, radiology, serology, infectious diseases etc.

Base indexes that characterise medical personnel activity at the PMA level are:

Quantity indexes: number of patients served at home; number of consultations (primary and repeated); number of patients in the stationary; number of patients at the primary stage follow-up (children, teenagers, pregnant women, invalids and war veterans, participants of the Chernobyl accident etc); number of patients from the district healthy contingent involved in the second level of the follow-up.

Quality indexes: birth rate; morbidity; invalidity; infant, maternal and general mortality including that of working population; complications that appear in the follow-up groups (Groups of patients with cardiologic, gastro-enterologic, pulmonary diseases; Cases of belated tuberculosis and malignant tumours; Glaucoma; Sexually – transmissible diseases); complications that appear in paediatrics, obstetrical – gynaecological; involving with the immuno-prophylaxes of the respective planned contingents.

Specified data including non-medical ones represent information categories necessarily provided by Medical Information Systems to the local healthcare structures, to evaluate population health state and determine the direct and indirect local level activities.

Family doctor workstation (see fig. 1) created for the primary medicine organization through some family doctor main functions automation is determined as a group of technical means and technological processes meant to implement the following main functions: Gathering information at the PMA level;

Information supply and storage; Information processing; Information transfer to the user.

As the result of the experience made in the pilot-region Hînceşti the following conclusions can be drawn:

Most medical interventions are made within Primary Medical Assistance, which leads to the costs reduction within specialized inpatient and off-patient services;

Mandatory medical assistance insurances contribute to the essential increase of population addressing to the family doctor services;

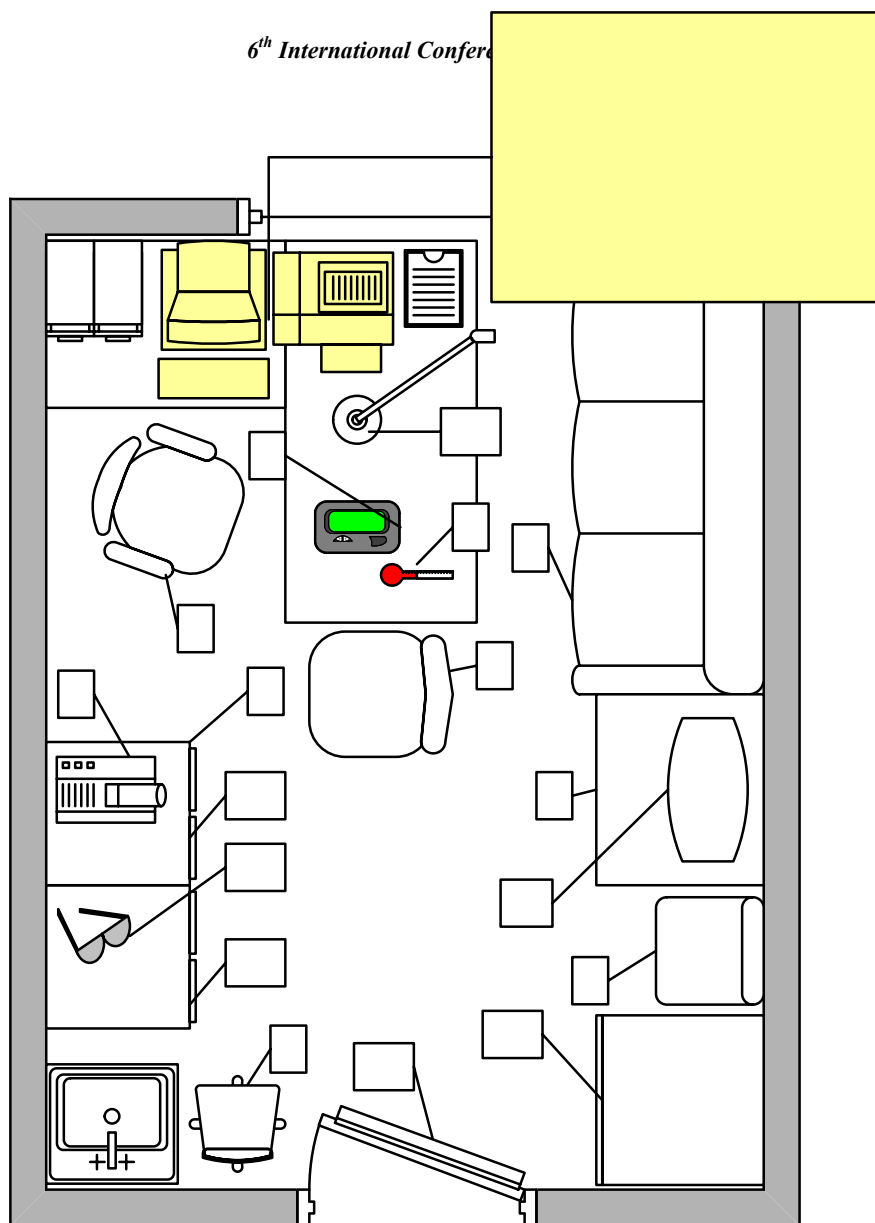
Family Doctor Workstation must be interpreted as a model intended to be introduced into Medical Integrated Information System which must be implemented in the Republic of Moldova.

Timely supplies and necessary volume of Primary Medical Assistance truthful, actual and correct information at the present stage of Healthcare System reforming is practically impossible without implementation of modern achievements in electronic technique and information technologies.

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1. Furniture for the patients and personell;
2. Tonometer;
3. Thermometer;
4. Stethofonendoscop;
5. Electrocardiograph;
6. A set for the eye tonometry;
7. Height measurement device;
8. Medical scales;
9. Baby swadling table;
10. Circumference meter;
11. Table lamp;
12. ENT examination set (nose, ear mirrors, refractor etc.);
13. Eye table (ototip);
14. Refrigerator;
15. Medicine chest;
16. Family doctor's PAL.

Fig.1. Supply of unique sector doctor's working place and family doctor's cabinet.