FEATURES OF PHARMACEUTICAL INSURANCE FINANCING IN THE CONTEXT OF HEALTH INSURANCE IN DEVELOPED AND DEVELOPING COUNTRIES

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Introduction. Health insurance, which also includes drug reimbursement, has expanded access to drugs in many countries, including Argentina, China, Egypt, South Africa, and Vietnam [WHO 2004/2007]. Health insurance schemes are convenient for both the citizens and their governments as they help manage the financial burden by sharing the overall cost of health care among different partners. Policymakers need to assess the most appropriate mechanisms for pooling health risks, as low- and middle-income countries have high levels of out-of-pocket costs, and choosing the right mechanisms for interaction between the public and/or private sectors can ensure a high level of health protection.

In the context of discussing the mentioned health financing models, it is important to understand the feasibility of implementing this or that system, including the distribution of financial burden and benefits, technical efficiency and other factors.

The distribution of the burden and benefits of the health care system can be represented by three axes:

- Who pays and how much?
- Who gets – what and when?
- Who gets paid and how much? [Mossialos et al., 2002]

Insurance systems in Canada, Germany, Japan, Singapore, the United States, and other developed countries are diverse and include the most expensive (US) and cheapest (Singapore), single and multiple insurers, state and employer sponsored insurance, and other types of insurance.

Methodology. Quantitative and qualitative research methods were used in the article to study the features of health insurance and, especially, drug insurance financing in developing and developed countries. In order to comprehensively understand the problem, the authors also used statistical, mathematical (graphical), comparative and

structural analysis methods within this research. Using quantitative methods, the authors analyzed statistical data available in the field to answer their research questions. Then, based on the results of the quantitative analysis of the problem, they also gave qualitative assessments describing the situation.

In general, two methods are used in the theory: the hypothetico-deductive method, used mainly by neoclassical economists, and the historical-deductive method, advanced by classical and Keynesian economists. Despite the fact that both research methods have their advantages, however, taking into account the fact that the issue of health care is an important socio-economic problem, the authors chose the historical-deductive method. The theoretical, informative and methodological basis for the article are the works of foreign economists, which are related to the health insurance processes.

Literature review. There are several health insurance models that may or may not include drug eimbursement.

- State-funded systems through ministries of health or national health services.
- Social health insurance systems.
- Voluntary or private health insurance, etc.

Ministry of Health/National Health Service Systems. These systems generally have three main properties. First, their primary funding comes from general revenues. Second, they provide health insurance to the entire population of the country. Third, their services are delivered through a network of public providers. Broad coverage means that major risks are compensated, rely on a broad base of income, operate under state control. Although national health service systems receive the "theoretical benefit" of providing free health care to the entire population (minus any applicable user fees), the reality is less encouraging. These systems are quite vulnerable from the perspectives of allocated budgets, political priorities, corruption and inefficiency, lack of appropriate incentives and accountability. And in low-income developing countries, public health spending is quite low. Unlike social health insurance systems, which are mainly financed by wage payments, national health service systems can rely on a very broad base of income from tax and non-tax sources. Most national health service systems are integrated systems. The simplicity of managing these systems enables the healthcare system to be organized with lower transaction costs. For this reason, publicly funded systems have enabled successful public health programs in many developing countries.

Social or public health insurance, which implies that it is mandatory for certain groups of the population, the allocations of the insurance system are made from payroll deductions, there is cross-subsidization between high and low risk, as well as high and low income population groups. Social health insurance contributions are usually linked to income and shared between employees and employers. These systems are typically characterized by the presence of independent or quasi-independent insurance funds that

rely on mandatory earmarked contributions from wages. In this case, there is a clear relationship between targeted allocations and entitlement to a defined package of health benefits. These systems cover only limited population groups, if successfully operationalized this insurance coverage can be expanded to include wider segments of the population. The state generally defines the main attributes of this system, although the funds are generally non-profit and controlled by the government.

The financing base of social health insurance systems is also mainly formed from budget allocations, but they are not enough to fully compensate these costs, especially if this coverage is used by wide sections of the population. Social security contributions can also have a negative impact on employment and economic growth if they increase costs for workers or employers [Gottret & Schieber, 2006].

Scientific novelty. As we have seen, in this model, insured persons pay regular, usually salary-based, fees, and independent quasi-governmental agencies are the main governing bodies of the system and act as payers for health care. Thus, in France these payments are income-based, usually shared between employers and employees, but insurance is entirely voluntary (also called private social health insurance). Compulsory health insurance in Switzerland is managed by private insurance companies. In countries with social health insurance systems, general taxation is an important source of revenue for health systems, but sometimes the money collected is not enough to provide universal coverage because the number of insured persons is often greater than those paying into the systems.

In the case of social health insurance, the state defines the main characteristics of the system: the conditions, the content of the insurance package, the procedure for calculating and collecting payments [Busse et al., 2004, 33-81]. Most social health insurance systems are managed through sickness funds. Sickness funds often collect payments directly, although in some cases, resources are first collected by the state and then redistributed by the funds. Social health insurance funds are financed either in their own institutions or on the basis of contracts for health services provided by private and public providers. Insurance services, their quality, prices, payment terms and other requirements subject to regulation are defined in the contracts.

Depending on the country, there may be several funds (Argentina, Chile, Colombia, France, Germany, Japan, Netherlands and Russia) or one fund (Estonia and Hungary). Beneficiaries can be linked to one fund or another by employment (Argentina, Bolivia, and Mexico), by age (Japan), or by individual choice (Chile, Colombia, Germany).

Analysis. Social health insurance systems are more or less comprehensive, depending on the resources of the system, and usually fully or partially compensate the

benefits defined in the package. Social health insurance is seen as an easy and efficient way to raise resources to offset health care costs, since it is believed that payroll deductions are easier to collect than general taxes. At the same time, social security contributions can increase labor costs, and if the government is a large employer, wage payments will significantly increase government spending.

Private or voluntary health insurance often complements publicly funded coverage, especially in high-income countries. Private health insurance is paid for by non-income-based premiums (not tax or social security contributions). Voluntary health insurance is defined as any health insurance that is paid for through voluntary contributions. Although both types of coverage are different, private forms of health insurance are also voluntary in most countries (with the exception of a few countries, such as Switzerland and Uruguay, where the purchase of private coverage is mandatory for all or a portion of the population. Private/voluntary health insurance plays an important role in public or social coverage;

• Primary- as the main source of insurance coverage for the entire population or specific population groups.

• Duplicative- covering the same services or coverage as public insurance, but differing in providers, timing, quality, and other amenities.

• Additional- with cost-sharing coverage in public programs.

• Extra- for services not covered by public coverage.

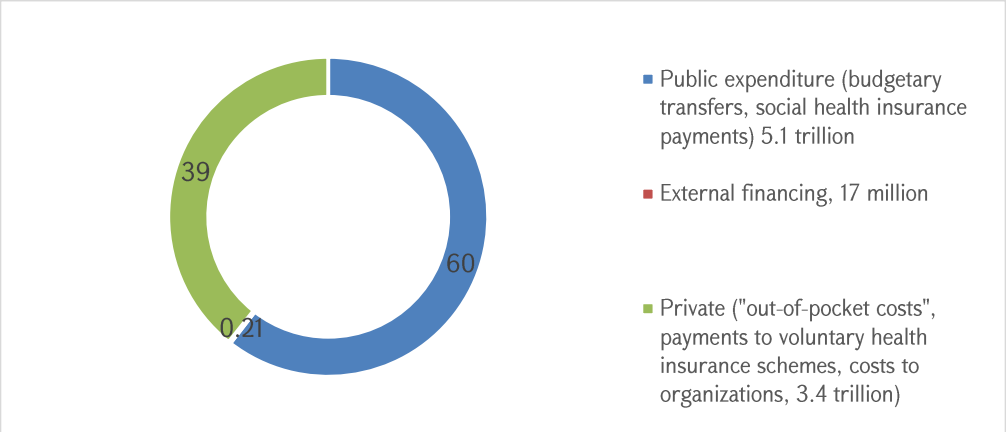


Figure 1: Major sources of funding for global health expenditure, 2019[1]

The complexity of private/voluntary health insurance markets raises questions about their adequacy and feasibility in low-income countries. Application of this model is appropriate in middle-income countries with large literate urban populations. These require and imply regulatory frameworks, political support, and well-functioning financial and insurance markets. However, coverage of health services, including medicines,

[1]Compiled by the authors based on data from WHO Global Health Expenditure Database, 2021.

is higher in several European countries than in other regions of the world. The healthcare system responds to the challenge of universal access to quality healthcare by applying various mechanisms for collecting and distributing financial resources in the healthcare sector. From this point of view, sources of funding for the health sector, funded health functions, health service providers, etc. are important. About 60% of health expenditure came from public sources, while 40% came from domestic private sources.

Health systems in EU member states are organized and financed in different ways, but universal access to quality health care is considered one of the general principles of EU health systems. State schemes financed 28.2% of all healthcare expenditure in the EU in 2019, while compulsory health insurance schemes and compulsory medical savings accounts accounted for 51.5%. The last two sources accounted for 79.7% of the funding. In 2019, more than half (53.5%) of healthcare spending in the EU went to curative and rehabilitative care, while almost a fifth (18.4%) went to the purchase of medical products, including medicines. In terms of spending, hospitals are the largest health care provider (accounting for 36.4% of spending), followed by ambulatory health care providers (25.5%) and retailers and medical product suppliers (17.5%)[1]

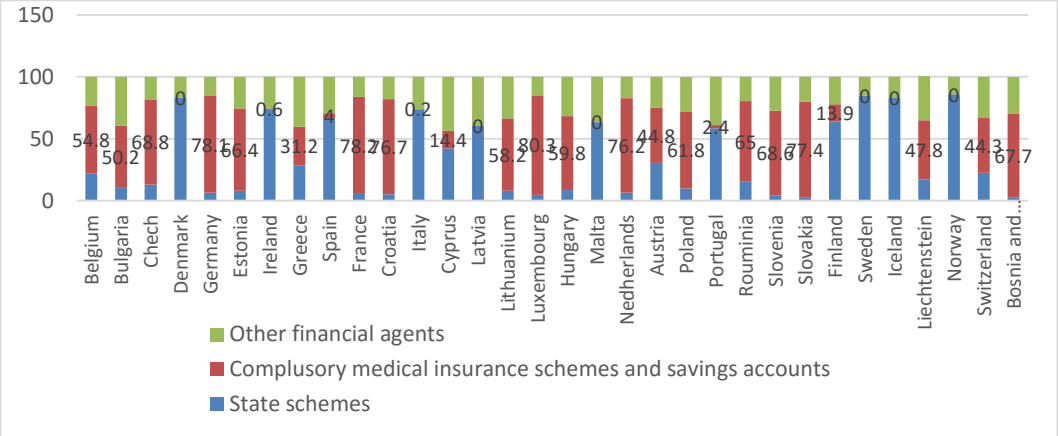


Figure 2. Health expenditure in the EU by funding schemes, % (2019)[2]

As we can see from Figure 2, the share of public and state-mandated insurance schemes in total current health expenditure is particularly high in Luxembourg, Sweden, Germany, France, Denmark, the Netherlands, Croatia, the Czech Republic and Romania. Most EU member states were dominated by state schemes or mandatory schemes / accounts. In 2019 more than three-quarters of the total expenditure on healthcare is accounted for by compulsory social insurance schemes, particularly in Luxembourg

[1] https://ec.europa.eu/eurostat/data/database Healthcare expenditure by financing scheme
[2] Compiled by the authors based on data from https://ec.europa.eu/eurostat/data/database Healthcare expenditure by financing scheme.

(80.3%), France (78.2%), Germany (78.1%), Slovakia (77.4%), Croatia (76.7%) and the Netherlands (76.2%), while in Spain, Portugal, Ireland and Italy this figure is less than 5.0%. It should be noted that mandatory schemes/accounts do not exist in Denmark, Latvia, Malta and Sweden. Private health insurance is an alternative to mandatory social health insurance. In some countries, certain groups of the population that are not included in the field of compulsory social insurance must use the services of private insurance markets. In other countries, people have the option of joining a private medical or social health insurance system.

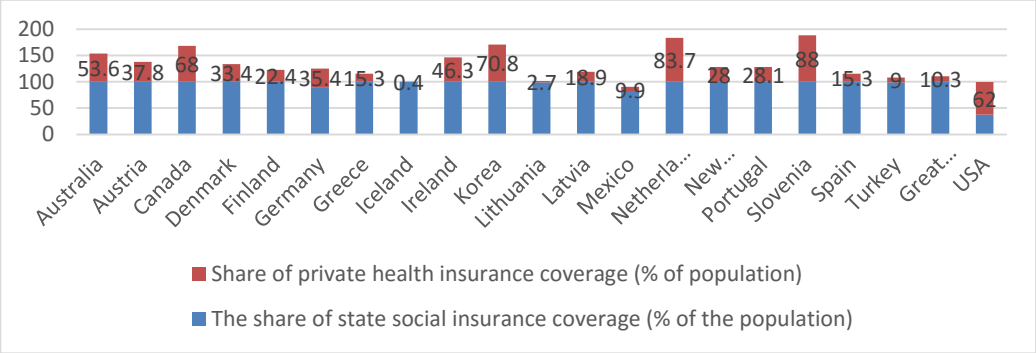


Figure 3. Private and public health insurance coverage in several OECD countries (% of population)[1]

Private health insurance often offers coverage for services not covered by social insurance, such as dental care for adults, homeopathic medicines or cosmetic surgery. This form of supplementary insurance is available in almost all OECD countries. Furthermore, policyholders can avail additional coverage through co-payments and co-insurance [Greß, et al/, 2002].

In 2019, spending on retail sales of pharmaceuticals (not counting drugs used during hospital treatment) accounted for one-sixth of total healthcare spending in OECD countries. Expenditures on pharmaceutical products constitute the third largest expenditure group after inpatient and outpatient care.

Pharmaceutical costs have two main components: prescription and over-the-counter drugs. In 2019, prescription drugs accounted for 79% of pharmaceutical spending in OECD countries, and over-the-counter drugs accounted for the remaining 21%. The differences are due to country-specific differences in prescription drug coverage, as well as the prices and availability of different drugs. Poland was the only OECD country where the cost of over-the-counter drugs exceeded that of prescription drugs.

[1] Compiled by authors oecd.stat Social Protection based on public, private health insurance data.

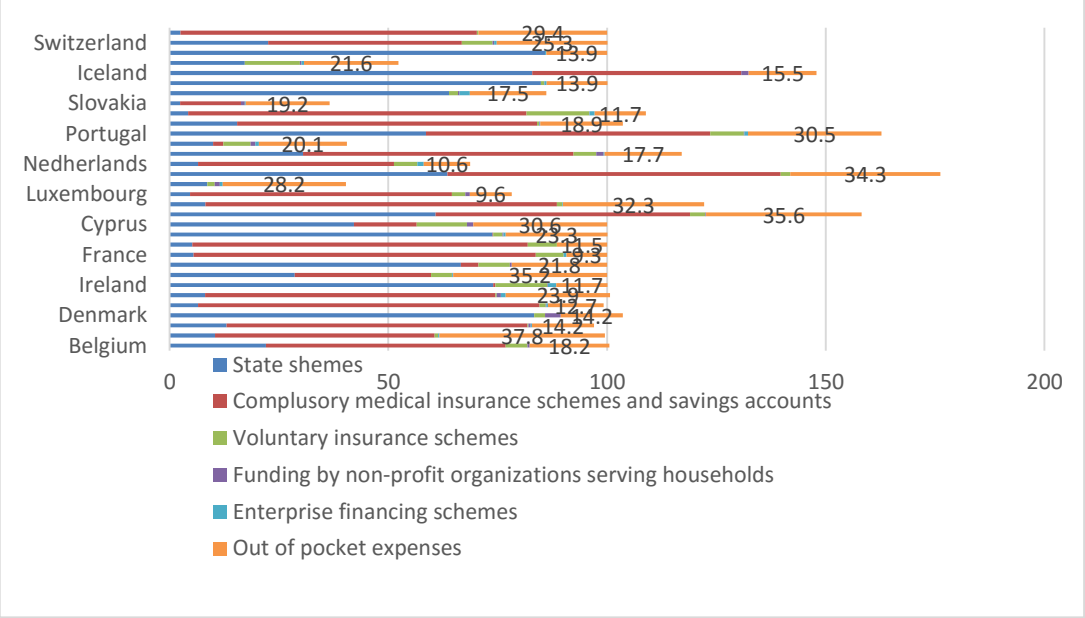


Figure 4. Current health expenditures by funding sources, 2019, in %[1]

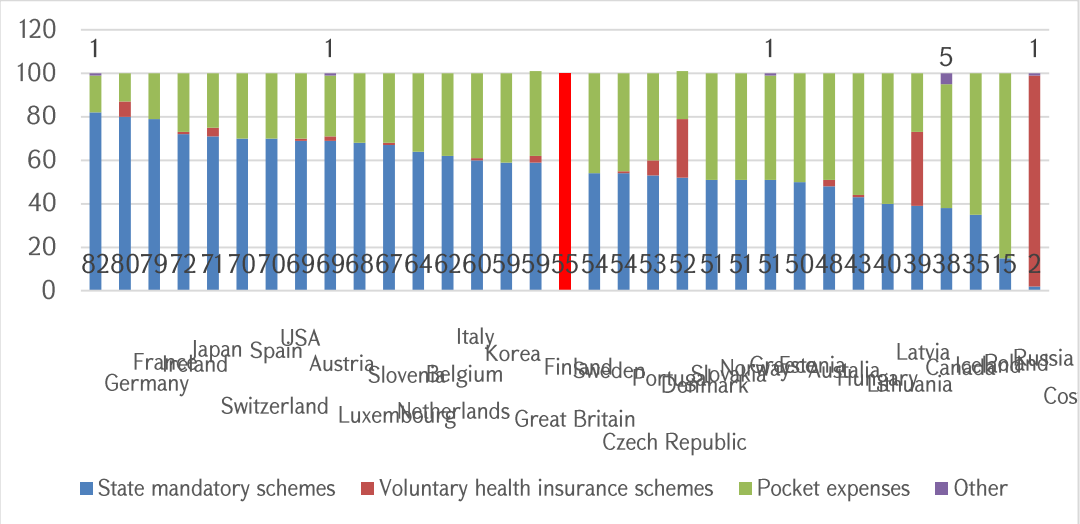


Figure 5. Expenditures on retail pharmaceuticals by type of financing, 2019 (or nearest year), 2019, in %[2]

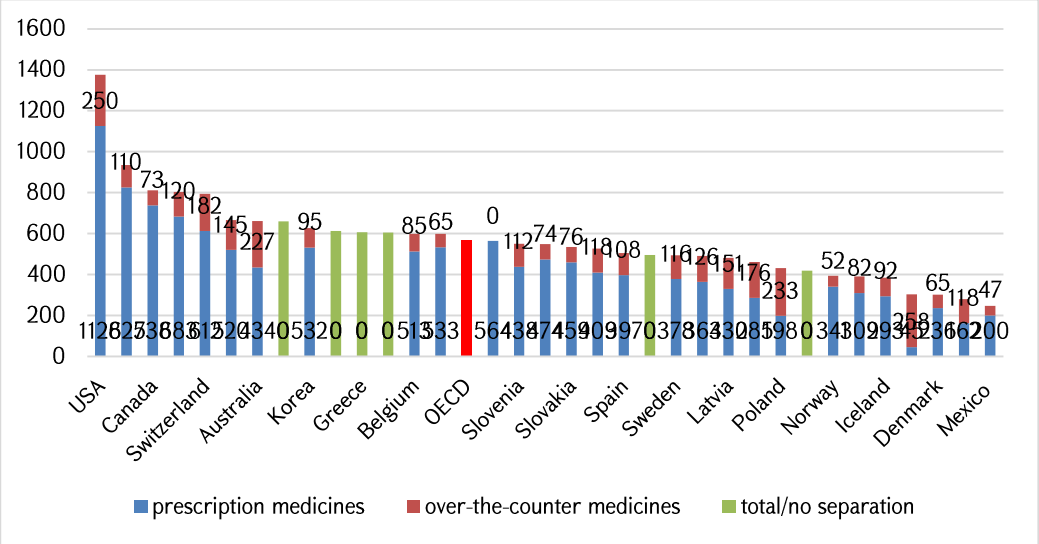
As we can see from the chart, in OECD countries, state and compulsory insurance schemes accounted for the largest share of pharmaceutical retail spending, around 56%.

[1] Compiled by authors on ec.europa.eu/eurostat/data healthcare expenditure by financing scheme.
[2] OECD (2021), Health at a Glance 2021: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/ae3016b9-en.

In countries such as Germany and France, this figure is over 80%. In contrast, voluntary health insurance schemes reimbursed an average of 3% of drug procurement costs. In Slovenia and Canada, one third of pharmaceutical costs were reimbursed by private insurance. Out-of-pocket costs were used to purchase 41% of pharmaceuticals, especially in Poland and Latvia.

Many factors affect the level of spending in pharmaceutical retail per capita, including distribution and supply costs, prescriptions, pricing and government procurement policies, new drug introductions, and more. As a result, retail pharmaceutical spending in OECD countries per capita averaged $571 in 2019[1].

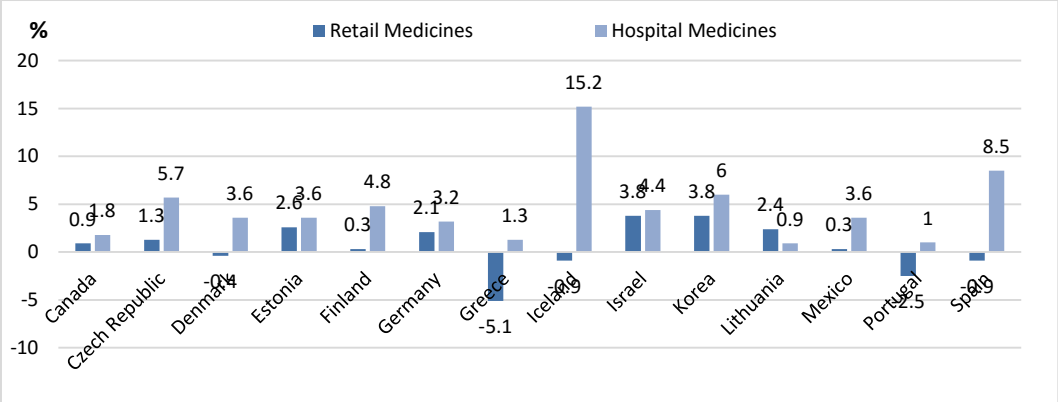
Figure 6. Per Capita Retail Pharmaceutical Expenditures, USD, 2019 (or nearest year)[2]



As we can see from the chart, these costs in the US are quite high, even double the OECD average. Per capita retail pharmaceutical spending was lowest in Mexico and Costa Rica. Overall, retail pharmaceutical consumption has been growing in recent years. This is also affected by differences in drug prices. Thus, the representative basket of health services and goods varies considerably by country. Thus, in Iceland and Switzerland the same basket is 72% more expensive than the OECD average, while in Chile and Greece they are 2/3 of the OECD average. Turkey has the lowest price level among the OECD countries[3]. Analysis of retail pharmaceutical costs only represents a fraction of the cost of pharmaceuticals in the health care system, as drug costs in the hospital sector can also be significant.

[1] https://doi.org/10.1787/ae3016b9-en.
[2] Ibid
[3] Ibid

Figure 7. Average Annual Growth of Retail and Hospital Pharmaceutical Expenditures, in Real Terms, 2010-2019 (or nearest year)[1]



As we can see from the chart, hospital pharmaceutical spending has increased significantly over the past decade due to the introduction of new high-value drugs and treatments, particularly in the fields of oncology and immunology. As we can see, spending on pharmaceuticals in hospitals has grown faster than on retail drugs, with the highest growth rates recorded in Iceland and Spain. Retail pharmaceutical costs have fallen in countries such as Greece and Portugal. In Greece, this significant reduction is due to the implementation of a policy to reduce the "wasteful use" of medicines.

Conclusion. As we can see, drug insurance is one of the elements of the health insurance system, within the framework of which the population is provided with free medicines or a part of their cost is reimbursed, with the aim of solving such problems as disease prevention among the working population, increasing the life expectancy of citizens, population abandonment from self-medication, saving on expensive medicines, maintaining income and diverting funds for other needs.

However, no model of universal health insurance is widely accepted, and there may not be universal health coverage, so a number of countries are debating private and public insurance implementation schemes from the perspective of equity, efficiency, and sustainability.

[1] OECD (2021), "Pharmaceutical expenditure", in Health at a Glance 2021: OECD Indicators, OECD Publishing, Paris.

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Features of pharmaceutical insurance financing in the context of health insurance in developing countries

Key words. health insurance, Medicine Package Reimbursable by Insurance, healthcare costs, retail pharmaceutical costs

Health is one of the fundamental human rights that is necessary for the realization of many other rights, in particular, the right to development, it is also necessary for a decent life. An essential element of everyone's right to health is the right to access quality medical technology, including medicines. Essential medicines meet the priority health needs of the population. Existing health systems must ensure that necessary medicines can be obtained at any time, in sufficient quantities, in appropriate dosages, of guaranteed quality, and at a price that is acceptable to both the individual patient and the community as a whole. In this context, the main goal of the article is to study and understand the features of drug insurance financing in developed and developing countries, presenting different models of health insurance and their implementation mechanisms. The authors have also studied the main sources and directions of financing global healthcare costs.

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