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THE FINANCING PRIMARY HEALTH CARE UNDER PANDEMIC THREATS

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ABSTRACT

The pandemic COVID-19 exposes a number of health care problems common for developed and developing countries, creates unprecedented threats and risks and cast doubt on the rightness of widespread approaches to the development of health care and especially primary health care (PHC). The pandemic has shown that even in developed countries the lack of access to first aid for vulnerable groups of the population (pensions, poor, migrants, etc.) can lead to catastrophic consequences for the society. Thus, PHC has indisputable characteristic of a public goods and services - non-excludability. This means that access to PHC must be free and equal to all persons in any region, whether such persons are temporary or permanent residents without exemptions caused by citizenship and social status. Insurance medicine, the source of financing of which is the contributions of insured persons and employers, is not able to provide such access. Thus, the social institutions combining market and non-market principles of financing and providing PHC services must support health care system workable. Budget is a main source of funding PHC service. Also, additional funding of open and equal access to PHC needed. Such funding can support: by earmarked deductions from income of insurance funds; by restrictions of tax evasion by "free-riders" entrepreneurs using unfair low wages of migrants and minorities for rising profits; by the issuing special "green bonds" for finance PHC equipment; and by expansion of activities local charity funds.

Keywords: pandemic, insurance, primary health care, public goods and services, equal and free access.

JEL codes: H51; I18; J15; P36

1. INTRODUCTION

The pandemic COVID-19 not only demonstrates new threats and risks, but also exposes the society and economy vulnerabilities first of all a number of health care problems common

for developed and developing countries. The disastrous effects of these problems not-solving are the suffering of millions of people from illness and death, overwhelming direct and indirect costs that affect negatively people's well-being, even in the most developed countries, and may leave the poor countries to poverty. The risk of new health emergencies continues to increase, driven by the escalating climate crisis, environmental degradation, and increasing geo-political instability, disproportionately impacting the poor and most vulnerable (WHO, 2022).

The most pressing problems are the efficiency of the public health basic services and access to these services for the population. Research also needs to be done on: what social institutions (norms, rules, and organizations) should be prioritized in order to respond to the pandemic, how health system vulnerabilities relate to dominant health financing patterns; how health care insurance is changing to counter pandemic threats and uncovered risks; what institutions and models of financing will be demanded by consumers, doctors, regulators, health care organizations, and by other operating companies as a result of the changes taking place.

One among this set of problems the combination of market and non-market fundamentals of health care financing and organization is. At the same time, it's one the most controversial issues in economic theory and welfare economics.

Despite debates countries need to adopt measures, policies, and regulations that are evidence-informed and supported by adequate and sustainable financing to ensure uninterrupted access to medicines and supplies (Jakab, *et al.*, 2020). For timely and effective response, it's necessary first of all to investigate the reasons the health care system failure to prevent the expansion COVID-19 incidence and its transformation into the pandemic.

A complete analysis all aspects above problems are beyond the scope of this research. The article focuses on health care system potential the countering pandemic threats under non-calculability and non-insurability of diseases risks, proves the necessity of equal and free access for all habitants including vulnerable social groups to the primary medical care, and uncovers opportunities of using additional sources of health care funding for this aim.

This paper is structured as follows.

Section 2 notes problems of health care insurance and payable health care under pandemic.

Section 3 justifies necessity of equal and free access to primary health care for entire population, especially for vulnerable social groups.

Section 4 put on some proposals concerning funding.

Section 5 presents Conclusions.

2. WHY HEALTH CARE INSURANCE AND PAYABLE HEALTH CARE DON'T COVER RISKS UNDER PANDEMIC

Public health is an oft-used illustration of market failure and of the necessity of governmental action to overcome such failure. This is one side. On the other side the imperfections in government health management are well known: the signals of market prices, profit and loss, feedback mechanisms are weak or lack; hence the government not possesses the knowledge necessary to optimize revenue and expenditures in order to maximize social welfare.

The contradictions of approaches above are related with the dualistic nature of health care services as public services. The public goods and services have two necessary features – no-excludability and no-rivalrous consumption. But the health care as a whole is no public service in pure sense. There are no technical obstacles often to exclude some groups of the health care consumers from public services consumers and to reorganize the providing of some health care services on the base of market competition. Such decisions may be resolved by governments, local communities, and entrepreneurs. The methods of using of the health care services specific sets by particular consumers groups is a result of social conflicts and compromises as a rule. There are no theoretical limits of health care expenditures rising and their effectiveness decrease.

Obviously, it's necessary to control and limit the growth of health care costs. The rising of health care private and especially budget expenditures became the problem that governments in many countries tried to resolve at last decades on the way of the widening of health care insurance and stronger control free medical services providing. This approach is predicted by the goal of ensuring that services are provided in a cost-efficient and cost-effective manner (microeconomic efficiency). At the same time, the more consistently the insurance principles are used, the more vulnerable groups remain outside the scope of insurance coverage (migrants, oldest, poor, and others covered by health care insurance in minimum size or not at all). In fact, often these groups have the least opportunities to pay. In developed countries, there have been continuous attempts to choose the way in recent decades to limit the growth of health care costs through increased competition and the transfer of credentials and responsibility to regions and communities. At practice these attempts often turns the services providing no-payable primary care into "a lame duck" the first in list under funding cuts. It should also be borne in mind that the global processes of erosion of the middle classes in developed and developing economies limit the economic base of medical insurance, including cases where the functions of the insurer are entrusted to government-controlled funds.

Developing economies are particularly vulnerable under pandemic threats due to the weakness in many cases of health care systems when health care costs relative to GDP are significantly lower than necessary. The relatively large shares of the population in developing economies are vulnerable groups especially who are engaged in a semi-legal business.

The new reality is that the "incalculable, non-compensable, and non-localization" risks originated by internal and external causes are key features of modern society development (Beck, 2006). The health care insurance covers risks that transparent and calculable. The pandemic originates circumstances when no longer possible to calculate the probability that an event will occur because no collected data from the same past accidents. Hence risks impossible to calculate, compensate, localize, timely identify. That's a sphere of Knightian uncertainty opposing the calculable risks (Knight, 1921).

It's extremely difficult to correctly estimate the likelihood of new viruses and new strains, risks of epidemic incidents and costs of its prevention and treatment, risks morbidity and mortality due to the absence of similar risk events in the base period and/ or incomplete information about them. A number of following factors also affect the possibility of correctly risk assessment:

The behavior of pathogenic viruses and their impact on the human body cannot be often predicted especially in the phase of initial spread.

Long-term side effects of viruses spread including the rise of mental illness are diverse and in many cases are critical for people's health and working ability.

The structure of access to health care services for insured persons change and reduce due to the overweight of the health care system caused by an increase in the incidence of the entire population caused by viruses,

The unpredictable impact of changes in components of the environment conditions on morbidity is increased.

Consequently, insurers find themselves in a situation where it is practically impossible to forecast and reimburse direct and indirect losses. Even for OECD countries, the claim that almost all of these countries have "achieved universal coverage of health care risk" (Docteur and Oxley, 2003) seems overly optimistic in circumstances when the developed counties were top the list of most affected especially under the first pandemic's wave blow at 2020 (Worldometer, 2020). So, with just 4.2 percent of the world's population, the United States had, as of June 23, 2020, 25.3 percent of its confirmed Covid-19 cases and 25.5 percent of its deaths (Lazonick, Hopkins, 2020).

Vulnerable groups were the epicenters of pandemic, especially where, like in nursing homes, these social groups were in close contact each other. Epicenters of pandemic were agglomerations – New York, London, Paris, Madrid, and others where as a result of the combination of the high density of the population, preexisting vulnerabilities (the share of the elderly, urbanization, obesity prevalence, and air pollution) the spread of the pandemic and/or the mortality rate are increased. Prior to the pandemic, researchers at the Barcelona Institute for Global Health attempted to estimate the health impacts of air pollution in 1,000 European cities based on the number of preventable deaths. According to this criterion,

Brescia and Bergamo, cities in the highly urbanized region of Lombardy, located in northern Italy, had the worst performance among cities in Europe (Khomenko *et al.*, 2021). It's hardly incidental a coincidence with these estimates that during the first wave of the pandemic from February to September 2020, Lombardy had the highest excess mortality of the population among the regions of Italy (Cerqua and Letta, 2020; Michelozzi, *et al.*, 2020).

The scale of harm is obvious evidence that universal coverage of health care risks is not achieve and modern health care relying heavily on risk insurance coverage is exposing to massive threats overwhelming these system capacities to resist it. As a result, the health care system as a whole remains vulnerable, that leading to significant financial, economic and social losses.

3. RESPONSES ON PANDEMIC THREATS

The effectiveness of responses on pandemic threats depends from the capabilities of the national health care systems, scientific potential, financial resources and many other factors. Each country is forced to solve this complex of problems based on its capabilities and conditions. No doubt, the health care system that more focused on primary medical aid, diagnostics, prevention, and has more significant reserves of medical supplies and equipment enabled mitigate threats; the rapid shifts in priorities and allocation of resources to strengthen primary health care (PHC) that include primary pre-medical, medical and specialized, palliative, ambulance (including ambulance specialized in conditions requiring urgent medical intervention) provides better resistance to pandemic.

But more fundamental changes needs. The significant features of medical care, "in fact, stem from the prevalence of uncertainty", defined by K. Arrow in pioneering research "Uncertainty and the Welfare Economics of Medical Care". He noted that "a great many risks are not covered" by health care insurance and predicted circumstances when market's optimization fails in part: therefore "some social institutions will step into an optimality gap", these institutions the usual assumptions of the market are to some extent contradicted (Arrow, 1963). The pandemic confirms this foresight: since the market of insurance health care services failed under the threats posed by the pandemic, the social institutions combining market and non-market principles of financing and providing the health care basic services (payable and free) must support health care workable roles, especially to protect vulnerable populations (Jakab, at al., 2020).

The Author supposes that a principal chart of such institutions is the task to provide an equal and free access to the PHC for all habitants, including vulnerable group. These institutions should be a set of legal norms, methods of action and organizations ensure the implementation of norms and methods to guarantee equal and free access for all habitants of specific territories (regardless of their citizenship) to PHC using insurance, charity, and

budget. An exclusion of individuals and vulnerable groups from equal and no-payable access immediately creates epidemic threats to the entire society (often not limited by state borders) that health care is already no longer able to deal with.

The vaccination practice should be considered as a forced by extreme circumstances experience of applying the principles of equal access of all social groups to primary care and anti-epidemic measures. Vaccinations and preventive measures, the scale of which is expanding to cover an increasingly significant part of the population, are usually carried out free of charge. Thus, health care is moving step by step towards expanding equal and no-payable access to first aid services because there are no other rational options for countering the pandemic. Therefore, the idea that health care resources should be allocated in line with needs has not only "a strong intuitive appeal" (Hurley, 2000), but now become the reflection of a rational and empirically based approach to counter pandemic threats by PHC service. This part of health care system is public service by its nature.

The ensuring free and equal access to PHC can be seen as a crucial step aimed to the changing the social health factors of racial / ethnic minorities and other vulnerable groups. PHC alone cannot adequately improve health overall or reduce health disparities without also addressing where and how people live. The changes should include used minorities economic resources and education, as well as the prevention of discrimination.

The social institutions permanently functioning to ensure such inclusion is not creating now at needed capacity. It needs a clearer stratification and functional differentiation of the health care system, the focusing additional expenditures on its basic level, which should ensure for the entire population, including vulnerable groups, timely and equal access to primary care, prevention, diagnosis, and to other anti-epidemic measures. In particular these institutions must be capable coordinate actions through non-priced interactions between private people, use alternative feedback mechanisms, such as reputation networks and citizen participation through co-production, can potentially serve as a means of coordinating activities to improve human well-being (Coyne, 2020). Such changes can be effective only as a part of health care reorganization. Legislation and regulation of PHC should be developed in the context of an overall vision its position within total health care provision (Boerma, at al., 2015). Such approach is capable to provide synergy between institutional capabilities for systems strengthening and financing, and integrated into national health and social systems based on universal health coverage and primary health care. These priorities declared by World Health Organization (WHO, 2022).

4. FUNDING

Movement towards above goals is primarily limited by funding opportunities. But economic and social costs of a lockdown will always be higher than the costs social institutions ensuring equal and free access to medical services for all.

Additional large-scale funding needs experts WHO and WB noted at the begging of the pandemic (Barrow, *et al.*, 2020; World Bank, 2020). Institutions that provide enlargement of an equal and free access entire population (vulnerable groups especially) to the PHC are financed by public funds primarily and charity funds partly. The failure of the health insurance market under pandemic blow and widening above mentioned "optimality gap" is not a reason or an excuse for the refusal of the insurance institutions to cover the standard risks of diseases. The task of limiting the growth of costs related with the provision of free PHC and reservation of medical equipment is not insoluble when the list of such services is strictly defined and a constant control over the appointment and use of these services and reserves is organized. These costs must be constant to prevent the next pandemic attacks and similar threats. Problems are inevitably appears on the agenda: from what sources to finance these costs, what institutions should participate in determining the needs for financing, accumulating, distributing and using the required financial resources. It's impossible to calculate costs of the first action for immediate pandemic response ex-ante and the supplies and equipment funding for next actions, especially at scientific field. Permanent funding capable quick rising at uncertain costs is needed. Undoubtedly, this "global" aim will be the subject of political collusion always, but PHC must not be "a lame duck" in all cases. Budget is a main source of funding PHC service because its nature is public service.

The additional PHC funding sources as follows:

Firstly, the complete transformation PHC on the principles of free and equal access will reduce the influence of uncertainty in the calculation of standard risks of diseases. The reduction of epidemic risks directly reduces the possible insurance payments. Therefore, additional earmarked deductions from income of insurance funds may be justified for PHC funding.

Secondly, beneficiaries which are using directly for profitability and preferences the vulnerability of different social groups and (indirectly) public services that are decreasing the harmful consequences of this vulnerability must pay PHC costs. In this case these beneficiaries are "free riders" in pure sense as economic theory defines. For example, "free riders" are managers and entrepreneurs who are using migrants and discriminated minorities as cheap labor force, not pay market salaries and wages, no pay taxes, no pay to pension funds, and so on. Vulnerable groups in this case are victims not free riders.

Thirdly, a promising direction for mobilizing financial resources to counter threats to public health the scale of which cannot be determined ex-ante is the issuing special bonds to finance equipment of PHC services are possible also. This method is institutionally close to self-taxation and charity, which can be effectively applied in local communities, where information on the spending of collected funds is more accessible and transparent. The covid pandemic is a case where the need of pro-social spending is obvious to everyone,

regardless of social status and wealth. It must be taken into account also that studies have shown that around 70% of funds budgeted for government assistance go to bureaucratic and administrative expenses, whereas by contrast, it is estimated that charities devote more than two-thirds of donations to recipients. Based on data collected in 2020 at the peak of the pandemic in Italy (conducted from March 21 to April 8, 2020), it was found that people are significantly more willing to pay when the contribution is positioned as a voluntary donation, rather than a one-time mandatory tax (Castiglioni e Lozza, 2021). However, it should be borne in mind that voluntary donation may have a priority in a country where strong traditions of Catholic charity and self-organization of local communities are. Attempts to apply self-taxation and charity for financial resources mobilizing in different regions should be based on research, both experimental and in the field.

Thus, the social institutions combining payable and free services, market and non-market principles of financing and providing PHC services must support health care system workable.

Besides the widening of ESG to prevent air and water pollution needs. As mentioned above the high possibility is that air pollution causes additional conditions of pandemic spread.

Generally, the better legislation, collaboration, and coordination of different government bodies, health insurance funds, charities, endowments, public funds, banks, non-banking organizations and other socially responsible investors can foster the rise of funding for countering pandemic threats.

5. CONCLUSIONS

The pandemic COVID-19 not only demonstrates unprecedented threats and risks, but also exposes the society and economy vulnerabilities. The pandemic creates threats and risks that impossible insured by standard medical insurance. The pandemic has overweighted the capacity of the health care systems in developed and developing countries, especially where these systems primarily rely on insurance protections and where budget restrictions of health care are priorities. As a result, the health care and habitants' well-being as a whole in developed and developing countries remains vulnerable that leading to significant financial, economic and social losses.

The pandemic confirm that primary health care (PHC) has indisputable characteristic of a public goods and services - non-excludability. The low solvency and high vulnerability of some social groups (migrants, oldest, poor, and others) has become the critical threat for health care under the pandemic: these groups stayed partly outside PHC. In developing economies where the proportion of vulnerable groups is higher and health care opportunities are lower these problems are more complex and tighter. To protect the population from pandemic threats and mitigate its first and most dangerous blows are possible on the base an equal and free access to PHC for entire population: all habitants whether such persons

are temporary or permanent residents especially for vulnerable social groups without exemptions caused by citizenship and social status. The economic and social costs of repeated lockdowns will always be higher than the costs providing equal and free access to PHC and reservation of medical supplies and equipment necessary for it. The vaccination should be considered as a forced by extreme circumstances experience of applying the principles of equal access to primary care and anti-epidemic measures. Thus, the social institutions combining market and non-market principles of financing and providing the health care basic services (payable and free) must support health care workable and close "an optimality gap" health care system which possibilities noted by K. Arrow at 1963 (Arrow, 1963).

Also, additional funding of open and equal access to PHC needed. Such funding can support: by earmarked deductions from income of insurance funds; by restrictions of tax evasion by "free-riders" entrepreneurs using unfair low wages of migrants and minorities for rising profits; by the issuing special "green bonds" for finance PHC equipment; and by expansion of activities local charity funds. Besides the widening of ESG to prevent air and water pollution needs.

Better legislation and coordination of government bodies, health insurance funds, charities, public funds, banks and other socially responsible investors is necessary for these tasks.

Conflict of interest

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