

Policy of the European Union in the Field of Healthcare

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OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.

ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidajsd.com

Also available at <https://www.ssm.com/index.cfm/en/oida-intl-journal-sustainable-dev/>

Abstract: In this study were analyzed healthcare provision, health needs meeting ‘state-of-the-art’, as well as healthcare policies and frameworks throughout the EU space. In particular, some implications of COVID-19 crisis were examined. Based on the method of thematic analysis, authors conducted a review of both scholarly publications and EU policy documents and reports. This allowed to trace patterns of health policies formation and their effects in healthcare field, including addressing health inequalities, staff shortage, and other acute current issues. The factor of trust and quality of institutions was also taken into account, demonstrating that non-data-related issues might be overlooked aspects of health inequality monitoring. As the result of conducted analysis, authors suggested the capability maturity model, describing the levels of nation-state’ healthcare system overall capability in face of the current challenges.

Keywords: cohesion policy; EU health policy; health inequalities; healthcare needs.

Introduction

By supporting international initiatives and enacting its own health policies, the EU has a big impact on world health. Its main objectives are to confront health threats including pandemics, improve access to care, fortify health systems, and advance global health.

To enhance diagnosis and treatment worldwide, the EU also makes use of its potential in health data and technology. Adopted in November 2022, the EU Global Health Strategy offers a fresh approach to tackling global health issues in a world that is evolving. Three targets are outlined in the Strategy, which took the place of the 2010 EU global health policy, to address global health issues [1]:

- improve people’s health and well-being throughout their lives;
- promote universal health coverage and fortify health systems;
- use a One Health approach to avoid and fight health risks, such as pandemics.

The strategy represents the exterior dimension of the European Health Union, ensuring Europeans’ well-being and the resilience of their health-care systems. It is also an important component of Global Gateway, which fosters partnerships of equals based on shared responsibility.

Regarding the EU regional health policies, it should be mentioned that EU public policy in the field of healthcare focuses on enhancing national healthcare systems in order to modernize them, safeguard and improve the health of individuals, and improve readiness for health risks. The EU’s duty is to help national health systems and deal with cross-border health challenges, not to replace them.

Ensuring fair access, controlling cross-border health hazards, tackling the rising costs of healthcare, and adjusting to changing health demands including mental health and long-term care are just a few of the major difficulties facing EU

public policy in the healthcare sector. As it navigates the challenges of globalization and digitalization, the EU must also increase the resilience and crisis-preparedness of its health systems [2].

The inequality problem is one of the most important concerns in the EU healthcare system. Health inequalities in the European Union exist both between and between member states. The average difference in life expectancy between those with the highest and lowest levels of education is three years for women and seven years for men across all member nations [3;4;5]. In Croatia and Greece, the largest percentage of unmet medical needs was reported by older persons; in Denmark, younger people are more likely to face unmet needs [6]. More than half of countries report difficulties in providing rural and peripheral communities with access to the health system [7;8;9]. Health disparities are equally pronounced among member states. Preventable mortality in Hungary, Latvia and Lithuania is more than twice the EU norm while, in Bulgaria and Cyprus, a large group of the population are still excluded from universal healthcare coverage [6]. Preventive healthcare is an essential part of efforts to address health disparities, although its share of overall health spending ranges from over 4% in Italy to 1% in Slovakia [3].

It is challenging to map the connections between these (long-standing and pre-existing) disparities and those in COVID-19 expression. A comprehensive analysis of national COVID-19 experiences shows several unexpected and random outcomes. Hungary, Czechia, and Bulgaria are excellent examples of member states who performed surprisingly well in the early months of the crisis despite being deemed to be weak in terms of pandemic readiness [7]. Others with very robust health systems suffered from timing, since early outbreaks occurred before much of the disease's scientific understanding was developed, causing them to suffer more severely [10] on the situations of Italy and Spain, for example. Nevertheless, it is obvious from the wider picture that COVID-19 has hit those worst off the most, mirroring and increasing existing health inequities.

The COVID-19 pandemic, and the heightened attention to the EU's role in health that has followed it, present a chance to address the difficulties and enhance public policy in healthcare inside the EU.

Additionally, specialists pinpoint the problems that the European healthcare workforce faces as well as potential fixes [11]. National investments in the health labor force are required to offset the declining capability of Europe's health workforce. Planning for shifting demographics requires a comprehensive strategy from the EU and its member states. Furthermore, more must be done to close the skills gap and get healthcare professionals ready for the digital and green shift.

The pandemic revealed a clear link between healthy populations, the resilience of the EU's economy, robust supply chains, and the risk of undesired reliance on other regions of the globe. Health policy, like other policy areas, is inextricably related to other domains such as industrial policy, research and innovation, digital health and artificial intelligence, and environmental and broader social policies. This emphasizes the importance of a more comprehensive approach to policymaking, which should be a focus for the European Commission and Parliament's upcoming mandates.

With this in mind, in the current research we aim to systematize strengths, challenges, and prospects of EU public policy in healthcare domain, and outline the concepts of optimization.

Method

The study is based on thematic analysis methodology, namely - inductive thematic analysis of healthcare 'state-of the art' and policy qualitative data. It involves the identification and reporting of patterns in a data set, which are then interpreted for their inherent meaning [12]. Thematic analysis implies a search for themes that emerge as being significant to the explanation of the phenomena, and thus we chose this method, bearing in mind the complex nature, multifacetedness, and multicomponent character of the EU public policy in the field of healthcare, and at the same time evident lack of sufficient theoretical implications which would allow effective application of grounded theory.

Thematic analysis allows us to analyze both scholarly publications and the EU regulatory documents, policy briefs, and reports, finding the provisions that ultimately constituted as a basis and landscape for analysis.

Results and Discussion

Strategic priorities concerns

The health scene in Europe is changing dramatically. The digital transformation, as well as demographic and climate change, influence socioeconomic and health inequities, and these are bound to shape the future of public health in the region. It is evident that health policy has grown strategically significant for the EU when it considers the difficulties and achievements of the 2019–2024 mandate, which was characterized by crises like the COVID-19 epidemic and the conflict in Ukraine. Significant progress has been made in tackling both short-term health emergencies and long-term

issues during this time, from the successful vaccination policy to the creation of the European Health Union (EHU) and the funding for the EU4health program. But as Kuiper and Brady [11] correctly point out, “many challenges remain as we stand on the cusp of the 2024-2029 period”. The strategic agenda of the Council, the new Parliament, and the next Commission must make health a strategic priority and present a plan that takes into account not only health policy but also how it intersects with issues of gender equality, economic security, industrial policy, changing demographics, digitalization, and the environment.

In the meanwhile, as Pistolatto et al. [13] correctly assert, developing creative approaches for research policy interventions requires an awareness of the causes of today’s unmet medical requirements and public health concerns. A roundtable and a multistakeholder survey assisted in identifying possible needs that should be taken into account for the EU’s research and policy agenda. According to survey results, public health issues that should be prioritized included mental health disorders, antimicrobial resistance, metabolic syndrome, cancer, environmental pollution, and cardiovascular illnesses. Additionally, the most chosen unmet medical needs were early detection, primary prevention, the effect of environmental contamination on the beginning of disease, and personalized treatment techniques. A multistakeholder online roundtable was held to further examine the research-policies interventions (RPIs) that were developed as a result of the survey results. Public health and biomedical research subjects that are ready for multidisciplinary collaboration and deserve attention within the EU’s research and policy agenda were discussed, along with recent EU-level initiatives that were in line with the survey-derived RPIs.

The study by Pistolatto et al. [13] also offers practical suggestions to help translate information into revolutionary, science-based policies, specifically: increasing financing for tailored prevention plans to stop the development, progression, and recurrence of illnesses; changing the education of medical professionals to incorporate instruction that tackles many comorbidities and prioritizes person-centered care; stepping up initiatives to support the curation, standardization, and harmonization of health data; supporting individual biobanks’ datafication processes to improve sample and data accessibility throughout the EU; and cultivating ongoing collaborations between industry, academia, policymakers, and regulatory agencies to expedite the implementation and optimize the impact of research findings.

Healthcare staffing challenges

The European Commission presented proposals for a European Health Union (EHU) in reaction to the COVID-19 pandemic. The EHU will help the Union and its member states better protect the health of EU people, address and combat future pandemics, and strengthen the resilience of Europe’s health systems. The healthcare staff is arguably at the heart of each of these goals, as the European Health Union’s objectives would be impossible to achieve without them. In order to ensure the smooth operation of Europe’s health systems and the delivery of high-quality healthcare, it will be crucial to have a competent, skilled, and trained health workforce throughout the continent [14;15;16].

Most significantly, the epidemic exposed the lack of physicians and nurses in many nations. Data shows that, on average, the EU had 8.4 nurses and 3.9 doctors per 1000 people in 2019 [17]. The demand for care has increased more quickly as a result of an aging population and the growing burden of chronic diseases, even though this indicated increases of 16% and 14% over the previous ten years.

The average life expectancy at birth for men and women in 2018 was 78 and 84 years, respectively. By 2060, this is expected to increase by five years for women and seven years for males. Research indicates that chronic diseases are more prevalent in the EU’s older populations, with those aged 75 to 84 having the highest risk of developing them. The need for care is probably going to rise as life expectancy rises. According to estimates, there would be 30.5 million EU people in need of long-term care by 2050, up from 19.5 million in 2016 and 23.6 million in 2030 [18]. There will undoubtedly be a greater need for healthcare professionals across all EU health services as a result of this increase in service demand. Additionally, it is anticipated that the health and care sector will have eight million job opportunities between 2025 and 2031 [18]. The demand for healthcare personnel will exceed the supply unless specific measures are taken to address retention rates and the attractiveness of careers in the health sector.

The EU released estimates [19] of the long-term (2021–2071) health care workforce requirements for each of its member states in late 2024. The aging of the population and the health care workforce are twin challenges for many nations. By 2071, the EU will require 30% more doctors and 33% more nurses, which is significantly greater than the current pace of increase, if trends in health care usage and disease load hold steady from 2021.

National investments in the health labor force are required to offset the declining capability of Europe’s health workforce. While more effort needs to be done to close the skills gap and get the workforce ready for the digital and green transitions, a comprehensive approach to planning is necessary to prepare for shifting demographics. Programs at the EU level to reskill and upskill the health workforce should be implemented in conjunction with member state action. Last but not least, the next European Mental Health Strategy must focus and include measures to enhance the health workforce’s well-being.

Furthermore, resilient health systems should be able to withstand stresses and shocks while also addressing some of the difficulties that health systems are currently facing. The digitalization of healthcare provides a chance to increase care efficiency, accessibility, and quality, simplifying the move to new care models that prioritize people's needs [20]. Furthermore, digital solutions could reduce the bureaucratic strain on healthcare professionals by eliminating time-consuming and repeated administrative processes. Despite the presence of digital tools in health-care systems, many are underutilized due to a lack of digital skills.

The necessity to raise the population's level of digital literacy is acknowledged within the EU. There are other programs in place, such as the Pact for Skills, the Digital Education Action Plan, and the European Skills Agenda. In order for public and private organizations to prosper during the twin transitions, the latter seeks to assist them with reskilling and upskilling. Healthcare professionals will need to be prepared for the future and in the pursuit of resilient and sustainable healthcare systems by possessing both digital and green skills and knowledge. Nonetheless, healthcare professionals have identified knowledge gaps regarding green skills, much like they have with digital competences [21].

Additionally, according to the WHO Policy Brief of 2025, which was created as part of the BeWell project and funded by the European Union's Erasmus+ program, there are currently insufficient digital skills education and training courses available in the EU, with gaps in the availability of courses for specific skill levels, in non-English languages, and for more advanced areas of digital health. Moreover, more work is required in this area because many EU Member States have not yet created national or regional laws and regulations to incorporate digital health education and training into professional training requirements and core curriculum. The absence of a national or regional body tasked with supervising the creation and execution of such programs frequently hinders efforts in education and training. In some situations, employers bear the majority of the cost of continuing education and training, which presents challenges for health care organizations with limited resources [21].

One prominent EU-funded research initiative in the field of digital and green skills is the BeWell project, which seeks to develop a skills strategy that can be applied locally, regionally, nationally, and eventually at the European level through the Pact for Skills and to create a Blueprint Alliance for the health ecosystem. The project's output might serve as a guide for the EU27 to close the skills gap and get the health workforce ready for the digital and green shifts. Furthermore, as part of DG REFORM, the Commission has proposed to member states that they focus on developing digital skills for the health workforce. Although the proposal's effects are too soon to tell, it is a good sign of the Commission's dedication to helping member states make the shift to digital health. Additionally, a number of member states have stated their intentions to invest in the digitization of health in their National Recovery and Resilience Plans. The Commission can still have an impact, but member states still have responsibility for health.

Healthcare inequalities in Europe

For the European Union, rising health disparities within and across nations continue to be a problem. According to a WHO analysis of health disparities for the European region, for instance, life expectancy varies greatly within the continent, and disparities have risen even in wealthy nations [22].

Using microdata from national household budget surveys, Thompson et al. [23] conducted a cross-sectional analysis of financial hardship in 40 European nations in 2019 (the most recent year of data available prior to COVID-19). According to the authors, catastrophic health spending is defined as out-of-pocket expenses that surpass 40% of a household's ability to pay for medical care, while impoverishing health spending is defined as expenses that cause households to fall below or even further below the relative poverty line. Additionally, they connect these findings to survey data on unmet health care, dental, and prescription medication needs as well as data on two facets of national coverage policy: the primary determinant of eligibility for publicly funded health care and user fees for covered services.

In every country in the study, out-of-pocket medical expenses result in unmet needs and financial hardship, especially for those with low incomes. With a median of 3%, impoverishing health spending varies from less than 1% of households (in six countries) to 12%. With a median of 6%, catastrophic health spending varies from less than 1% of households (in two countries) to 20%. Out-of-pocket expenses for outpatient medications, medical supplies, and dental care - all of which ought to be a fundamental component of primary care - are the main cause of catastrophic health spending, which is continuously concentrated in the lowest fifth of the population. In nations with a population of over 99%, the median incidence of catastrophic health spending is three times lower than in those with a population of less than 99%. Contributions to a social health insurance (SHI) program serve as the foundation for eligibility in 16 of the 17 nations with populations of less than 99%. Catastrophic health spending is lower in nations that provide low-income individuals with more protection from user fees [24].

State-level policy is crucial to lowering health disparities, even as the European Commission assists member states in carrying out the EU's common goals through the Health Program.

The causes of the enormous health disparities that persist even in the wealthiest nations are explained by Forster et al. [24]. It indicates how strongly health and health disparities are influenced by the social environment. This is a changeable social environment. It is the duty of businesses, the community, and public and private actors and organizations at all policy levels to properly consider the data presented in this study and to contribute to the development of healthy societies. Healthy childcare facilities, schools, and workplaces are the first steps toward creating these healthy societies and reducing health disparities. They need policies that promote civic-mindedness, tolerance, and empathy while combating egoism and social exclusion.

Patterns of health disparities are influenced by a wide range of economic, social, and political factors that affect people throughout their lives. Resources, especially healthcare, can be arranged and managed by nations in ways that either promote or impede health outcomes and inequality. These “institutional environments” cover varying levels of government involvement in policy domains such as pensions, labor concerns, and social security. As shown in Fig. 1 [24], the importance of public policies in influencing the health gradient goes much beyond the most evident set of welfare-state metrics and includes economic policies as well. Indeed, this broader set of policies establishes the constraints within which welfare states operate and, more crucially, influences the social determinants of health.

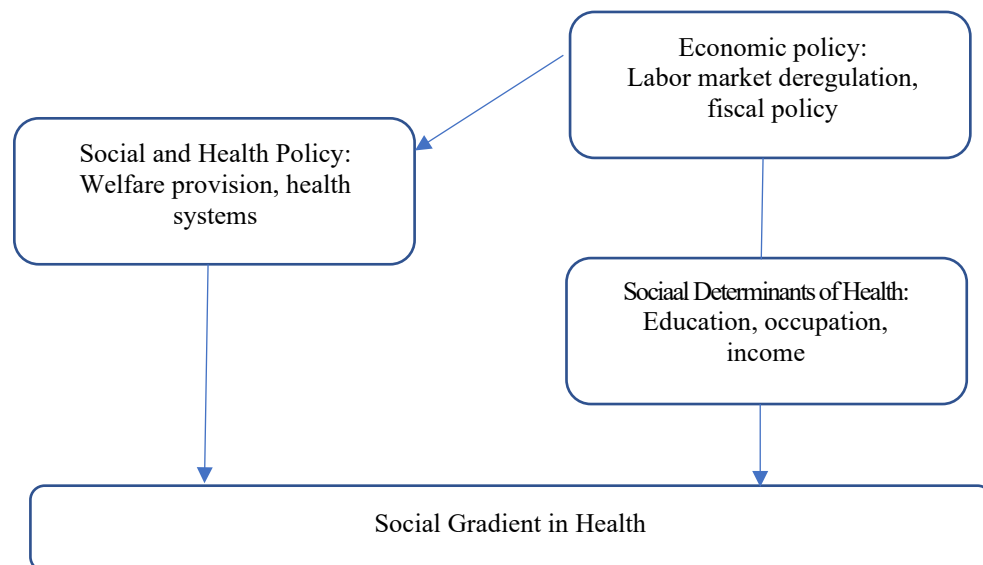


Figure 1: Public Policies and Health Inequalities: Overview of Mechanisms [24].

National health-care systems are essential components of the larger European welfare state machinery. Effective and equitable health systems that provide universal access and high-quality services (for prevention, treatment, and rehabilitation) can enhance population health and eliminate health inequities that are easily visible in healthcare-amenable mortality. The role of the state in healthcare delivery, financing methods, eligibility for health services, population coverage, and resources devoted to enhancing public health are just a few examples of how national health systems across Europe differ significantly from one another due to their diverse historical and contextual development [25]. Social security (such as social assistance, pensions, sickness benefits, and unemployment support) and family policies are governed by social and health policies in addition to national health systems.

With the primary goal of examining and contrasting out-of-pocket health spending in nations with a European Mediterranean connection, Grima et al. [26] examined healthcare spending and provision in six Mediterranean nations that use the National Health System (Beveridge model) and are members of the European Union. The total per capita health spending (in constant 2011 US dollars, adjusted for PPP) for all EU nations in 2014 is broken down by funding source in Fig. 2.

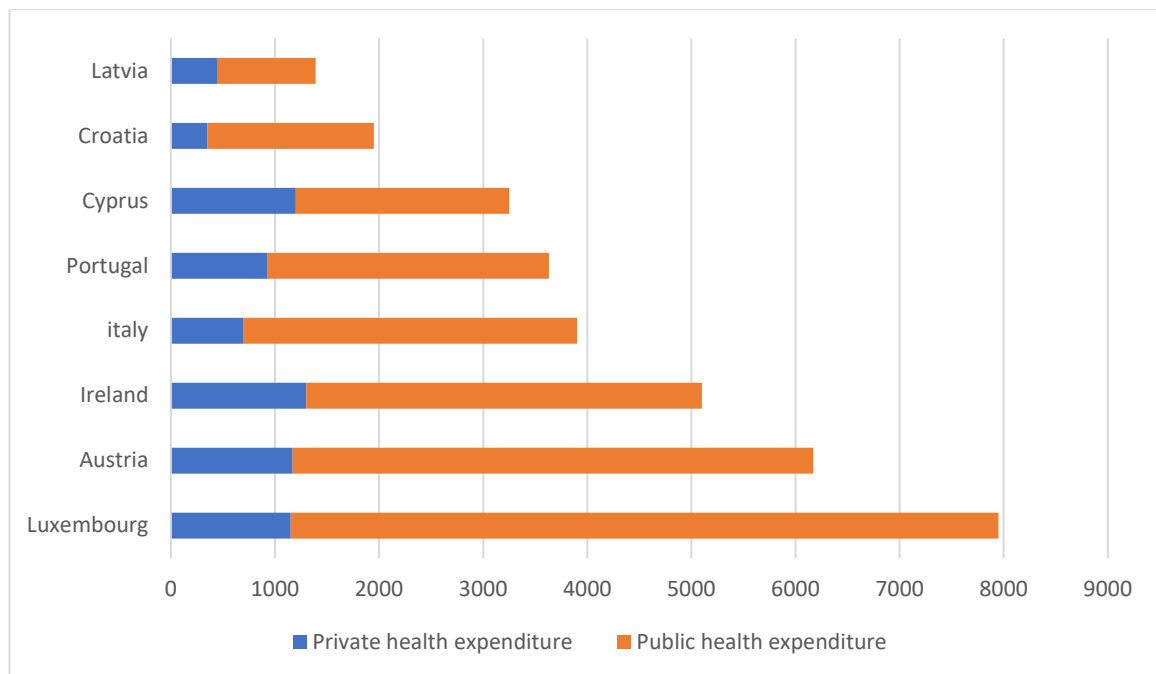


Figure 2: Public and private funding of the healthcare systems in the EU, in PPP\$ per Capita [26].

According to the findings in [26], Mediterranean nations generally spend less on total healthcare expenditure (THE) than the EU average, both in terms of GDP as a percentage and per capita. The main cause of this is because public funding for healthcare is below the EU average. The nations under consideration were significantly impacted by the macroeconomic and financial crisis of 2008/2009, which also explains why public health spending has been consistently reduced as part of the austerity measures implemented across sectors. Conversely, Mediterranean nations have a greater proportion of private health providers in overall funding, which helps to explain why their Out-of-Pocket (OOP) health spending is higher than the EU average. Regarding the general health infrastructure in these nations, we found that while the number of doctors is about the same as in the rest of the EU, there is a shortage of hospital beds. This could be an indication of less money coming from the government.

Furthermore, a key factor in guaranteeing an efficient crisis response is public confidence in government institutions. More than half of people in 19 EU nations said they had faith in their government's ability to prepare for emergencies in 2023. Trust levels, however, differed greatly. With two-thirds or more of their populace expressing trust in their government's ability to handle crises, Finland, the Netherlands, and Denmark had the highest scores. In Latvia, Portugal, and Greece, on the other hand, only roughly one-third of the population expressed confidence [27].

The incidence of unmet healthcare needs, or self-reported forgone care, among people aged 15 and over in 27 countries varied from 5.9% in Cyprus to 42.4% in Portugal, with an overall prevalence of 24.4%, according to WHO data [28].

Since they account for a sizable portion of potentially preventable mortality and morbidity, health disparities both within and between EU member states are generally acknowledged as a public health issue [29]. Despite years of increased awareness and action, there is still a significant disparity in governance and policy responses throughout Europe. A new Joint Action, JAHEE (Joint Action Health Equity Europe), was funded by the third EU Health Program in 2018 with the primary objective of enhancing collaboration among participating nations and putting tangible measures in place to lessen health disparities. This initiative aims to help achieve greater equity in health outcomes. Twenty-four nations participated in the collaboration, which was directed by Italy. It used a three-step implementation method and carried out activities in five policy domains: migration, governance, healthy living environments, health systems, and monitoring. First, certain Policy Frameworks for Action (PFA) were created in order to gather the evidence that was available regarding the best practices for each domain. Second, to verify that the nation was following the suggested practices in each area, various Country Assessments (CAs) were finished.

The selection of specific activities to be carried out in JAHEE was influenced by the discrepancy between the expected policy response (PFA) and the current policy response (CA), many of which are still going on long after JA is over. Together with the representatives of the participating Ministries of Health, final recommendations were developed and approved based on the best outcomes from JAHEE. According to the data, practically all of the participating

nations have enhanced their level of action and strengthened their capacities to address health inequities, demonstrating that the JAHEE initiative was a significant opportunity for collaboration [30].

The main takeaways from the JAHEE were examined by Högberg et al. [31]. The authors sought to address how to improve the capabilities of present health inequality monitoring by highlighting its strengths and flaws based on lessons acquired from 12 European nations, drawing on work done under the Joint Action Health Equity Europe. The findings show that there are significant differences in the requirements for monitoring among nations. Most people agree that the data is readily available, of high quality, and can be broken down by gender and age. The ability to break down data by socioeconomic characteristics, such as income and education, or by other indicators of social standing, like ethnicity, is regarded as being worse. Few nations have an effective system in place for tracking health disparities, and those that do are frequently thought to be out of step with the demands of policymakers.

These results imply that aspects of health inequality monitoring that are not related to data may be disregarded. Aspects that merit further consideration include stakeholder involvement and communication structures that draw policymakers' attention. Many nations lacked established and widely used methods for tracking health disparities. Such approaches should ideally specify the goals of health inequality monitoring, decide which health issues and socioeconomic determinants of health should be covered, and illustrate how the results should be used to inform policy decisions. It will be challenging to set up a systematic and long-lasting health inequality monitoring system (HIMS), where the findings will serve as the foundation for choices about how to improve public health, if the strategy lacks legal or formal status or is not connected to any kind of political commitment. The statement "The national health inequality monitoring strategy is well recognized" had the biggest strategy-related difficulty. This implies that communication is a frequently overlooked element that, if strengthened, might result in the greater political commitment required to establish or strengthen a HIMS, regardless of whether a plan is in place or not.

EU Cohesion Policy' role in healthcare

Supporting national healthcare systems, enhancing health outcomes, and tackling cross-border health threats are the main objectives of EU health policy. While the EU strives to support national efforts through a number of programs, member states continue to bear main responsibility for their healthcare systems. This includes supporting illness prevention, facilitating cross-border healthcare, and encouraging healthcare innovation.

As demonstrated by the aforementioned data, public health systems are under unprecedented strain as a result of the increasing number of significant health issues that European governments are dealing with. They must find policy solutions in this and related non-health sectors to best address these issues since they are the primary players in charge of providing and funding healthcare, which is typically founded on the social solidarity principle. The European Union has an impact even though it has little authority in the area of health, especially through promoting collaboration among member states, providing funding for health initiatives, and upholding internal market regulations.

Member states are in charge of healthcare. The institutions of the European Union do, however, also share authority over public health safety issues (Article 4, TFEU) and have the authority to coordinate and assist national initiatives aimed at preserving and enhancing human health (Article 6, TFEU). Therefore, in order to transform the EU into a smart, sustainable, and inclusive economy, the EU has taken a cross-sectoral "health-in-all-policies" strategy.

The third EU health program has historically been the primary tool used by the European Commission to carry out EU health policy. It establishes the funding criteria and priority areas for health-related initiatives. The new Multi-Annual Financial Framework for 2021–2027 states that the European Social Fund Plus (ESF+) Program is now the main source of funding for public health. This initiative combines several existing programs and funds, such as the Employment and Social Innovation Program, the European Social Fund, and the Health Program. Other important financial tools like Horizon, the European Regional Development Fund, and the InvestEU Fund also contribute to the funding of health initiatives.

ESF+'s health strand focuses on enhancing disaster preparedness, bolstering digital health efforts, and enhancing the resilience of health institutions. To guarantee a comprehensive response to social and health issues, the health strand of ESF+ is interwoven with other ESF+ initiatives, such as those pertaining to employment, education, and social inclusion.

In particular, € 413 million is allocated to the Health strand of the ESF+ Program [25]. In addition to maintaining a particular health strand, the new ESF+ design will facilitate the coordination of complementary health-related lines and the integration of health into other relevant policies. New and improved synergies with the other pillars of the European Pillar of Social Rights will result from the integration of health within ESF+. The ESF+ program's health strand seeks to assist and enhance national initiatives to accomplish, for instance, the following goals [32]:

- Boost EU crisis response and readiness to shield citizens from international health risks;
- Increase the effectiveness, accessibility, and resilience of health systems by assisting with the digital transformation of healthcare and care, the creation of a sustainable EU health information system, and national reform initiatives that specifically address the issues noted during the European Semester;
- Endorse EU public health laws (medicines, tobacco, HTA, and cross-border care);
- Implementing best practices to promote structural innovation in public health (such as ERNs, HTA, and the use of best practices in health promotion, disease prevention, and management) is one way to support integrated work.

Furthermore, in order to lessen inequalities and support regional development, EU Cohesion Policy is crucial to the advancement of healthcare inside the EU. This program allocates funds to a number of health-related fields, including as e-health, infrastructure, and access to high-quality services. It also highlights how crucial it is to address health disparities and collaborate across borders. This strategy, which is mostly carried out by the European Structural and Investment Funds (ESIF), is centered on advancing health equity, strengthening healthcare reforms, and enhancing healthcare infrastructure.

The EU's primary investment tool is the Cohesion Policy. Through the European Regional Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund Plus (ESF+), and the Just Transition Fund (JTF), EUR 392 billion (in current prices) will be provided between now and 2027. Additionally, Cohesion Policy is a significant source of public investment, especially in Central, Eastern, and Southern Europe's less developed areas. Cohesion policy can help to promote health and lessen current health inequities in keeping with its goal of fostering economic, territorial, and social cohesion.

Nevertheless, not every Member State initially intended to make large EU spending in health. According to data, the majority of those who mobilized Cohesion Policy funds to invest in healthcare infrastructure and access were from Central and Eastern European nations, such as Poland and Romania, which have low levels of per capita healthcare expenditure [32]. One example is Bulgaria, which received almost EUR 71 million from the ERDF in 2018 to upgrade its emergency medical services.

Investments in health are still supported under the Cohesion Policy for the years 2021–2027. Ensuring equal access to healthcare, building health systems' resilience, especially primary care, and encouraging the shift from institutional to family- and community-based care are listed as specific goals for the ERDF in Article 3 of the Regulation on the ERDF and Cohesion Fund. The ERDF emphasizes the resilience of national healthcare systems and enhancing public health systems' capacity to prevent, respond to, and recover from health emergencies as a lesson learned from the COVID-19 pandemic. Article 5 states that the ERDF's purview has been expanded to include the acquisition of essential medical equipment and supplies. The capacity of healthcare facilities and the number of yearly consumers of health care services are two examples of the common output and outcome indicators that the regulation establishes for evaluating the performance of health-related investments [33]. Additionally, the ERDF will keep funding cross-border health initiatives (Interreg programs), including those under the recently added outermost regions strand. According to Article 4 of the ESF+ Regulation [33], the new European Social Fund Plus (ESF+) will prioritize improving healthy and active aging, a healthy and well-suited workplace, equitable and prompt access to high-quality, sustainable, and reasonably priced healthcare services, and the resilience and efficacy of healthcare systems and long-term care. The ESF+ will also assist policy and system changes, especially in access to healthcare, and the implementation of relevant country-specific recommendations in the scope of the European Semester. The effects of the shift to a climate-neutral economy on health may also be addressed via the new Just Transition Fund, which has EUR 17.5 billion.

As correctly noted by Manjcherek et al. [34], the digitization of healthcare systems presents a significant chance to alleviate disparities in access to healthcare throughout the European Union. Building on the lessons learnt from the COVID-19 pandemic, digital health technologies to be quickly integrated to limit problems in healthcare delivery is imperative. The authors contend that regional variation should be acknowledged in a more comprehensive digital health strategy for the EU. Access should be improved by developing digital infrastructure and managing new technologies well.

Capability modelling

Striving to outlining the possible vectors of enhancing cohesion policy results in the domain of healthcare, we suggest to apply a capability maturity model, adapted based on Regulatory Compliance Capability Maturity Model (CMM). This capability maturity model can be used to measure the maturity of a country's healthcare policy compliance process and to assist its progress from the initial/ad-hoc stage toward the optimized state.

The capability maturity model describes a maturity curve on the following capability levels: **Initial**, which describes a poorly aligned function with non-documented strategies, manual management processes, lack of integrated systems

and heavy reliance on ‘manual’ (often - ‘common-sense’) governance; **Repeatable**, which characterizes a function that is loosely aligned and supported by unofficial (informal) policies; **Defined**, which outlines a strategic management framework with clear procedures and highly skilled staff; **Managed**, which explains a role that is in line with the personnel and organizational strategy plan; and **Optimized**, which describes a management procedure carried out at its finest with the full application of best practices.

The model can include various components, such as relationship of expenditure and health outcomes, accessibility and affordability, digital maturity, etc. Based on assigning appropriate level of capability maturity to a country’s healthcare policy, it would be possible to evaluate the prospect (‘capability’) of the application (disbursement) of funds and programs.

Meanwhile, the changes to EU health policy that are currently being implemented in the context of COVID-19 may result in an increase in policy space. Existing competences within the ‘core’ of EU health policy are being strengthened and expanded, as is the scope and reach of EU health policy, thanks to a significantly larger health budget. A free movement derogation reinterpreted to view public health as a European priority rather than a national one would improve the foundation of solidarity required to address health disparities while also rebalancing the connection between market interests and public health. The Cohesion Policy, in turn, should become a landscape within which healthcare public policy is designed and implemented.

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