



# ASPEN HEALTHCARE & QUALITY OF LIFE PROGRAM

PROGRAM WHITE PAPER 2023



# Aspen Healthcare & Quality of Life Program Program White Paper 2023

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## About the Aspen Healthcare & Quality of Life Program and the Program White Paper

Aspen Institute Romania's **Healthcare & Quality of Life Program** was created to broaden the scope of the debate on health policy and support sustainable reforms in the health sector. It has developed a Program community involving all relevant stakeholders (public officials and decision-makers, private stakeholders and representatives of the non-governmental and academic sectors and patients' associations). It provides a neutral and balanced venue, not just for discussing, but also for acting on critical issues affecting the Romanian and regional healthcare systems.

The **White Paper** of the 2023 edition of the Program contains **key policy recommendations** based on the discussions that took place during the following Program public events, dialogues and closed-doors roundtable meetings organized throughout 2023:

- ✓ **Working Breakfast with Prof. Univ. Dr. Alexandru Rafila**, Minister of Health of Romania – March 10th, 2023.
- ✓ Roundtable on **Shifting the Paradigm Towards Prevention-Based Healthcare**, May 3<sup>rd</sup> 2023.
- ✓ **Aspen Dialogue: Vision, Innovation, and Transformation in Healthcare Systems** – October 19th, 2023, with the participation of **Mircea Geoană**, Deputy Secretary General of NATO and Founding President, Aspen Institute Romania.
- ✓ **Aspen Healthcare Summit 2023 – Towards a Health System Based on Prevention and Innovation**, the twelfth edition of the Program's flagship public event.
- ✓ Roundtable on **Operational and Medical Management of Hospitals** – November 15th, 2023.

The 2023 Program edition benefited from the **valuable support of our Program Partners: Roche, Alliance Healthcare, Pfizer, Sanofi, Astra Zeneca, Bristol Myers Squibb, Merck Sharp & Dohme, AbbVie, Medtronic**

## National Context – Challenges in the Romanian Health System

Before looking into the main focus areas identified during the 2023 edition of the Aspen Healthcare & Quality of Life Program, an **overview of the Romanian health system** is needed to explain the Program priorities.

The Romanian health system faces significant challenges because, according to the most recent data, **health spending per capita in Romania remains the lowest among EU countries**, even though in recent years healthcare financing increased due to the COVID pandemic. In 2021, Romania spent €1,663 per capita on healthcare (adjusted for differences in purchasing power), which amounts to less than half of the EU average of €4,030 and translates to 6.5 % of GDP, compared to the EU average of 11%. Romania **spends significantly less money than the EU average in all areas of healthcare**, including inpatient care, outpatient care, prevention, pharmaceuticals & medical devices (OECD/European Observatory on Health Systems and Policies, 2023).

Another main challenge is the fact that, while Romania has compulsory social health insurance, **many population categories are exempt from making contributions**, including but not limited to unemployed people, pensioners and those receiving social benefits, people with disabilities or chronic conditions, children and students younger than 26. A recent study found that only about 36% of those covered by social health insurance paid contributions (Scîntee G, Mosca I, Vlădescu C, 2022), while Minister of Health Alexandru Rafila recently declared that out of a population of 19 million, only 5 million citizens are paying contributions (Hotnews.ro, 2023). In recent months, legislative steps have been taken to impose health contributions to some categories that were exempted (workers in construction and the food industry). Furthermore, there is the matter of **uninsured persons**. While around 12% of the population is estimated to be uninsured in 2020, they do receive a minimum benefits package covering life-threatening emergencies, treatment for infectious diseases and some primary care services. Finding out the exact number of uninsured persons is problematic due to the high number of Romanians working and living abroad. **The large number of persons exempt from health contributions, uninsured persons as well as an aging population / diminishing working age population** (with 19.5% of Romanians over the age of 65) are factors that are **putting strains on the financial sustainability of the Romanian health system** (OECD/European Observatory on Health Systems and Policies, 2023).

Key indicators of the performance of an underfunded health system, both **preventable mortality** (death that can be mainly avoided through public health and primary prevention interventions) and **treatable mortality** (death that can be mainly avoided through healthcare interventions, including screening and treatment) **in Romania are the highest in the EU**. This is a result of years in which the aim of the healthcare system was extending the lives of chronic patients, many of whom were subject to a late diagnosis. In the case of lung cancer, over 75% of cases receive a diagnosis in late stages (Law on prevention and cancer control). Moreover, despite being largely preventable through vaccination and screening, cervical cancer still remains an important public health problem, Romania having, by far, the highest rate of mortality for cervical cancer in EU. **Cardiovascular diseases** accounted for 55.2% of all deaths in 2020, followed by **cancers** – 16,7% and **stroke** – almost 14%. Among deaths caused by cancers, lung cancer was the most frequent, followed by colorectal and breast cancer (OECD/European Observatory on Health Systems and Policies, 2023).

Additionally, **behavioral and environmental risk factors account for more than half of all deaths in Romania**. Around 46 % of all deaths are related to behavioral risk factors such as dietary risks (contributing to 25% of deaths), tobacco smoking (17%), and high alcohol consumption (7%), while air pollution contributes to about 7% of deaths, much higher than the EU average. At the same time, in 2022, 73.3 % of Romanians reported their self-perceived health as very good or good, higher than the EU average of 68.0% (OECD/European Observatory on Health Systems and Policies, 2023). This indicates that more resources are needed for **health education**, including raising awareness on the **importance of prevention and a healthy lifestyle**.

While not enough attention is given to prevention and healthy behaviors, the **primary care sector** (providing key services for disease prevention, diagnosis, treatment, patient monitoring, medical rehabilitation, and palliative care) remains **underdeveloped and underfunded in Romania**. According to the WHO, primary care is widely regarded as the most inclusive, equitable and cost-effective way to achieve universal health coverage. It is also key to strengthening the resilience of health systems to prepare for, respond to and recover from shocks and crises (WHO – Primary care). However, only 18% of healthcare spending in Romania is dedicated to outpatient care, the lowest in the EU and well below the EU average of 29%. Instead, the Romanian healthcare system is highly **hospital-centric, in-patient focused**, with inpatient care amounting to

44% of healthcare spending in Romania, the highest in the EU and significantly more than the EU average of 28%. This means that the Romanian health system has a very high bed capacity, with 7.2 beds/1,000 persons in 2021, compared to the EU average of 4.8/1,000 persons. However, relatively high spending on hospital care is **detrimental to other healthcare priorities**, particularly but not only primary care and prevention, and encourages population over-reliance on hospital services. An approach meant to increase cost-effectiveness of hospital care is the semi-stationary hospitalization (day hospitalization lasting less than 12 hours) as alternative to long terms hospital admission, which offers patients a less disruptive option for care and a lower risk of hospital-acquired infections. Pharmaceuticals are also to a high proportion paid for out of pocket. The most important consequence of a hospital-centric, in-patient focused system is that patients in need of diagnosis, treatment or monitoring often **bypass facilities providing primary care** and go directly to hospitals to receive medical attention (OECD/European Observatory on Health Systems and Policies, 2023). **The weakness of primary care is strongly correlated with preventable mortality in Romania**, which as mentioned is the highest in the EU.

Bypassing primary care is often a result of patient preference, but the main cause is the **limited availability of GPs and primary care centers**, particularly in rural areas. Indeed, **health workforce shortages** reduce the availability of care and lead to an overburdened workforce. Moreover, this led to Primary care activity to be dominated by acute care and basic monitoring of chronic patients. In contrast, prevention services and active monitoring through an integrated management plan for high-prevalence chronic diseases represent a small part of the reported activity of family physicians.

The main cause for this shortage is the emigration of health professionals and, despite increases in the health workforce in recent years and the fact that Romania trains a large number of doctors and nurses, their numbers per 1,000 persons remain below the EU averages. Most problematically, there are **significant regional disparities** in the healthcare workforce across Romania, with rural, isolated areas lacking the necessary workforce. Around **50% of all doctors are located in only 6 counties of Romania**, out of a total of 41 counties (ZF.ro, 2022). Furthermore, the number of GPs/family doctors is diminishing, and remaining GPs are increasingly overburdened.

The performance of the vaccination program has been suboptimal in recent years, with most of the vaccines in the **National Immunization Schedule recording a vaccination coverage level below 95%** (Strategia Națională de Sănătate 2023 – 2030, 2023). For example, the values recorded for vaccination with the MMR vaccine are far from the optimal level of vaccination coverage, these results being correlated with the measles epidemic from 2016 to 2020, when more than 20,000 cases of measles were registered, with 64 deaths.

**Screening for preventable cancers** is at an early stage of development, the predominant mode of delivery being the opportunistic one, at the expense of the **population approach**, which is the only effective one. Romania reports the lowest rates of participation in screening programs for cervical cancer, breast cancer and colorectal cancer. Only 7.9% of women over 15 have had a mammogram in the last 2 years, compared to the EU average of 35.4%. The percentage of people who state that they have benefited from a colorectal cancer screening test is 2.9% compared to the EU average of 18.9%. The percentage of women aged over 15 who received a cervical cancer screening test was 30%, compared to the EU average of 59.5% (OECD/European Observatory on Health Systems and Policies, 2023).

The challenges presented above need to be addressed in order to ensure the **sustainability and resilience of**

the **Romanian healthcare system**, which are priorities of the **National Health Strategy 2023 – 2030** elaborated by the Ministry of Health and adopted by the Government of Romania. The Strategy aims to improve **the healthy life expectancy and quality of life** of Romanian citizens and aims to **improve health education**, offering patients the possibility of adequate information and active involvement in decisions related to maintaining and improving their own health. The Strategy foresees the reform of the health system by 2030, in order to **expand access to ambulatory services** and **create the conditions for bringing medical services closer to patients**.

The Strategy also aims to strengthen the **capacity of local public authorities** for concrete and sustained actions to improve the health of the communities they represent, to ensure **timely access to diversified, high-performance and quality healthcare services** offered by teams of professionals in primary health care, as well as the **diversification, flexibility, increasing the performance and resilience of health professionals**. (Strategia Națională de Sănătate 2023 – 2030, 2023). The Strategy provides specific targets to be achieved by 2030.

Aiming to contribute to the development of relevant, topical policies in the healthcare sector and bearing in mind the existing challenges, the leadership of the Aspen Institute Romania together with the 2023 Program Partners of the Aspen Healthcare & Quality of Life Program chose to further **develop the following main topics** throughout the 2023 edition of the Program:

- ✓ **Shifting the Paradigm towards a Prevention-Based System**
- ✓ **Predictability & Resilience of the Healthcare System**
- ✓ **Supporting the Implementation of Critical National Strategies**
- ✓ **Innovation in Healthcare: E-health, Biotech, AI and the Digitalization of the Healthcare System**

## Main Focus Areas

### 1. Shifting the Paradigm towards Prevention-Based Healthcare

Discussions throughout the 2023 Aspen Healthcare & Quality of Life Program activities focused on the need to **act towards putting prevention at the center of the healthcare system and to boost a prevention-oriented mindset equally among the population and health services providers**. Since its beginnings, the Program has emphasized the fact that **financing a resilient, prevention-oriented healthcare system needs to be viewed as an investment rather than a cost**. According to a recent study, each dollar invested in healthcare brings back to society, in various forms, between 2 and 4 US dollars (McKinsey & Company, 2020).

Investments in the health system and especially prevention are **essential for improving the well-being of the entire society's** and, at the same time, constitute a **key strategic lever for increasing national income** along with the **prosperity of the population**. There is growing evidence that good health generates higher incomes, as it **increases work productivity and improves the return on investment in health**. In particular, the Romanian workforce takes a very high number of sick leave days, around 8 million in 2000 – this would amount to **approximately 320,000 people who do not work a single day in a year** out of a total of around

6 million people in the workforce (Digi24.ro, 2023). By reducing sick leaves and disability leaves by 10%, it has been calculated that the Romanian state budget would earn almost 3 million lei extra. Thus, increased investments in healthcare and particularly prevention would not just improve Romanians' health and quality of life, but also bring **economic benefits to the state budget and to individuals**.

The 2023 edition further elaborated on the **main benefits** prevention brings in terms of life expectancy and quality of life, as well as the **significant cost reduction to which** a prevention-based health system can contribute. Because prevention is the most cost-effective way to avoid treatment, prevention should be the **main principle in public health**, and investing in core capacities at the national level is fundamental. This includes both **primary prevention** (e.g. access to vaccination and promoting a healthy lifestyle) and **secondary prevention** (e.g. screening to identify diseases in the earliest stages and proper diagnosis). Furthermore, bearing in mind that given the high hospital-centric nature of the Romanian healthcare system, a shift towards the paradigm of a health system centered on pre-hospital medical services / outpatient care is needed in the long term. Bringing medical services closer to patients by improving access increasing the preventive effectiveness of primary care **decreases healthcare costs and reduces avoidable hospitalizations**.

The main points emphasized during the 2023 Program discussions were:

- **The strategy, policy and regulatory framework regarding prevention has improved significantly but proper financing and implementation remain key.**

In Romania, there has been significant progress in terms of a **legal framework fostering prevention**. In addition to the **National Health Strategy 2023-2030**, the Government, at the proposal of the Ministry of Health, also approved in October 2023 the **National Vaccination Strategy 2023 – 2030** and the **National strategy for the prevention and limitation of healthcare-associated infections and combating the antimicrobial resistance in Romania 2023-2030**.

The **National Vaccination Strategy 2023 – 2030** is a milestone document for the central role of immunization in the Romanian public health system as it aims to increase the population's confidence in the benefits of vaccination and access to health services and vaccines. The Strategy does not impose mandatory vaccination, but it gives the right to everyone, especially to the individuals at risk/chronically ill, to get vaccinated for free. Moreover, the Ministry of Health has taken important steps to **increase access to vaccination by compensated access to a series of vaccines**.

The most important objectives of the Strategy include **increasing awareness and confidence** in HPV vaccination, ensuring **access to vaccination for those with a higher risk of contracting vaccine-preventable diseases**, ensuring the **continuity of vaccination programs** during emergency situations through early detection and rapid response in case of outbreaks caused by vaccine-preventable infectious diseases, **adequate communication** to increase the population's confidence in the benefits of vaccination, implementation of national and local **health education campaigns on vaccination and vaccine-preventable diseases**, and ensuring **essential, safe, effective medicines and vaccines at affordable prices** for the entire population.

Through the implementation of the Strategy, the aim is to **increase the population's demand**

**for/acceptance of vaccination**, achieve a **vaccination coverage of over 90%** for all vaccines included in the national vaccination program, but also adopt a life course approach to immunization so that vaccination programs can be tailored to close immunity gaps at different stages of life; in this regard the National Vaccination Strategy aim to reach a **vaccination coverage of 70% for lifetime vaccination for groups at risk** for vaccine-preventable diseases (Strategia Națională de Vaccinare în România pentru perioada 2023 – 2030, 2023).

While the legal framework on prevention has improved significantly, the success of the newly adopted Strategies depends on their **timely implementation**. Discussions during the Aspen Healthcare & Quality of Life Program 2023 stressed that implementation will ultimately require not just **vision and political will**, but, most importantly, **adequate financial resources allocated to prevention**.

- **Improving primary prevention, particularly through health education and effective prevention pathways, is critical.**

While the importance of healthcare spending must be acknowledged, it is not the only key indicator for a healthy population. **Education and a healthy diet** are also essential and complementary to increasing spending in healthcare. Long-term positive effects on life expectancy, quality of life and well-being can only be achieved by **promoting a healthy lifestyle and raising awareness about the critical importance of prevention**. Prevention must take place from an early age and should be **taught both in schools and at home**. In particular, health education must address the importance of a **healthy diet and exercise**, as the available data points out that behavioral risk factors are a significant problem in Romania.

**Healthcare and education are two strategic sectors** which must be treated as such by decision-makers. On the one hand, **there is a lack of education on behalf of Romanian patients**, who often dismiss a preventive approach and only go to the doctor when they are sick, ignoring regular screening and investigations. This could be related to a fear of going to hospitals but also to the lack of access to primary care in the case of a large segment of the population (particularly in rural areas). On the other hand, another important problem is the **lack of communication between GPs/family doctors and patients**. GPs often do not recommend preventive measures such as attending recommended screenings. Furthermore, patients are often **not aware of free of charge services** they can benefit from, such as vaccines covered by health insurance or various screening programs. An important first step towards change is that **prevention by GPs is now covered by the National Health Insurance House**. The implementation of this by GPs is crucial.

The existing challenges in the Romanian healthcare system point towards a rethink of the architecture of the system by emphasizing health education. Given the fact the **most effective way to do prevention is at the primary care level**, it is clear that more needs to be done in terms of **awareness raising through information campaigns and educational programs**. Health education requires a more focused **collaboration between the public sector, the private sector, medical societies, family doctors and civil society**. This is essential for **building trust** in data and scientific education, as opposed to the disinformation and fake news which have become prevalent during the pandemic.

An important case study on health education campaigns is related to **HPV vaccination**, as Romania has the highest cervical cancer incidence in Europe, with 5 women dying each day due to the disease. However, cervical cancer is the only cancer that can be **prevented through vaccination**, and over the last three years more than 100,000 girls have been immunized. A **key legal step** has been taken in December 2023, with the



law now providing free access to the vaccine for both girls and boys aged 11 to 19, while women up to 45 years old now pay half the price (Euronews, 2023). However, in order for the vaccination campaign to continue gathering momentum, a **tailored prevention-oriented, healthcare education campaign** is needed. It should be **tailored for the different age groups** targeted for vaccination and **use schools but also social media and communication by influencers** as a means to raise awareness among young people.

Health education should come hand in hand with prevention, as **improving vaccination pathways** is also a precondition to putting prevention at the center of the health system. Facilitating access to vaccination in Romania does not require an innovative approach but rather an analysis of **best practices** around the world and particularly in Europe. Vaccination at family doctors' offices is a positive example in Romania, but the pandemic has provided further important examples of success stories in the region. A key policy recommendation is to **extend immunization against vaccine-preventable diseases to locations such as schools and pharmacies**. Moreover, the issue around monitoring of vaccination coverage rates is raised in the Council Recommendation on vaccine-preventable cancers, showing the importance of improving quality and data collection at subnational, national and EU level in order to drive policy-making and increase VCR levels. Insufficient data collection makes it difficult to assess the effectiveness and impact of vaccination programmes. Robust data (vaccine uptake, HPV infection rates, and related cancers' incidence) are necessary to estimate vaccine coverage rates, identify any gaps or disparities in vaccine uptake and evaluate long-term benefits. This information provides actionable insights to guide policymaking towards **better protection against vaccine-preventable cancers**. Publication of annual / quarterly HPV vaccination rates by gender, age, and dose at a county level via interactive dashboards can further support VCR growth. This approach will allow for granular analysis of differences at a subnational level, identification of root causes, and design of mitigation plans in case of low VCRs. Furthermore, vaccination programs could be carried out by **local authorities**. Both health education campaigns and vaccination pathways should focus on **lifelong immunization** as a key disease-prevention strategy, particularly considering the demographics of an aging population and the shift of several infectious diseases towards adulthood.

➤ **Investments in diagnostics are an excellent investment complementary to a prevention- centered approach.**

A landmark World Health Assembly Resolution on strengthening diagnostics capacity was adopted in May 2023, with the aim of **addressing the challenges related to access, affordability, and quality of diagnostic tests** (World Health Assembly, 2023). The Resolution relies on the findings of a comprehensive **report on diagnostics carried out by the Lancet Commission** (The Lancet Commission, 2021) which showcases the critical importance of investing in diagnostics and proposes policy recommendations of relevance to the Romanian context.

The report finds that there **significant and surprising shortcomings on diagnostics** – the **biggest gap in the continuum of care is in diagnostics**, even in high income countries. Throughout the world, there is **suboptimal availability of even basic diagnostic tests** such as blood glucose tests. Since a correct diagnosis is obviously essential prior to treatment, efforts must be made globally to **tackle this deficit**. Diagnostic tests are an **excellent investment**, even compared to medicines and vaccines, according to the report's cost-benefit analysis. They are **particularly effective for infectious diseases** such as TB or HIV as they enable earlier detection. Furthermore, the **returns are especially higher in higher income countries** where effective treatments are available. Some of the **key messages** of the report include:

- ❖ 47% of the global population has little to no **access to diagnostics**.
- ❖ Diagnostics are **underfunded** because their central importance is **underappreciated**.
- ❖ Improving access in primary health care is **critical for improving equity**.
- ❖ The COVID-19 pandemic has underscored how **crucial diagnostics are for Universal Health Coverage**.
- ❖ Recent **innovations** can help transform access to and democratize diagnostics.
- ❖ **1.1 million deaths annually could be averted by better diagnostic access** for key conditions such as TB, HIV, hypertension, diabetes and syphilis.
- ❖ Each dollar invested in diagnostics **returns multiple dollars in benefits**.

The most important recommendation relevant to Romania is the creation of a **National Diagnostics Strategy**, which needs to be **tailored to the country's needs**, with a clear **set of criteria** in order to **prioritize the most cost-effective diagnostics**. Essential diagnostic packages need to be **decentralized**, and **tests for key conditions should be available at all primary care centers**. **Digitalization, integrated health information systems and connectivity** are essential to maximize the benefits of improved diagnostics capacity. **A national financing strategy** is required to enable improved access to diagnostics and to maximize the benefits this brings to the population.

## 2. Predictability & Resilience of the Healthcare System

In today's ever evolving healthcare landscape, predictability and resilience must be **key components of any healthcare system**. As defined by the WHO, a resilient healthcare system is one that can **effectively prevent, prepare for, detect, adapt to, respond to and recover from public health threats** while ensuring **quality essential and routine health services** (WHO – Health Systems Resilience). In Romania, decision-makers need to ensure the **predictable financing** of the system in order to provide **continuous and universal access to medical services** to all categories of patients, while also ensuring access to new, lifesaving, **innovative medicines**. Furthermore, adopting new technologies and access to innovative medicines are not the only aspects of innovation in healthcare that need to be taken into account – **innovation in legislation and policy** is very important. Addressing the **needs of the healthcare workforce** and **continuity in the management of relevant public institutions** are also critical to ensuring the predictability and resilience of the system.

The following main topics were addressed throughout the Aspen Healthcare & Quality of Life 2023 Program deliverables:

- **A resilient healthcare system is not possible without resilient financing – this requires a predictable growth of healthcare spending.**

The **core pillar of a resilient healthcare system is financing**. It is necessary to **increase the healthcare budget** as the entire healthcare system is underdeveloped and underfunded in Romania. In particular, **more funds need to be directed to the National Health Insurance House**, which has a key role in administering the system. To leapfrog and get closer to the EU average, private sector partners involved in the Aspen Healthcare & Quality of Life Program proposed **a gradual, predictable growth towards a target of 9% of GDP** (from 6.5% in 2021). The **role of the Ministry of Finance** is crucial in this, and, for growth in healthcare spending to become reality, decision-makers must start viewing healthcare as an investment

rather than a cost.

In Romania, nearly 80% of health expenditure was from public sources (OECD/European Observatory on Health Systems and Policies, 2023), and the **private health insurance sector is underdeveloped** compared to Western Europe. Considering the need to increase the healthcare budget, **policies encouraging private health insurance should be adopted** to provide an additional **means of covering healthcare costs**. This would create a more balanced system where less money would be needed from the National Health Insurance House, allowing hospitals to **diversify income streams**. For instance, in Western Europe, public sources are successfully complemented by private health insurance and industry paying for clinical trials.

At the same time, **reforms must be carried out to spend the available money more efficiently**. There are challenges of a political, as well as technical nature. Decision-makers need to **rethink the payments and reimbursement mechanism** at the level of the healthcare system in order to truly be able to shift the paradigm towards a prevention-centered system. As adapting to public health threats is essential to a resilient healthcare system, **innovation must be better financed** to bring results – not just medicines and diagnostics but also the health professionals offering innovative interventions to patients. To reap the benefits of cost-effectiveness over a longer period of time, **multiannual budgeting for healthcare** should be considered by decision-makers.

A **shift in resources from urban to rural** is required to get closer to patients, and the **shift from a hospital-centric to an ambulatory-centric system** would contribute not just to the resilience of the system, but also to a **decrease in costs** and to **spending resources more efficiently**. This would be complementary to a **shift in the tasks of healthcare professionals** – specialists should have more time to work on complicated diagnoses and treatments, while much of the routine work they are currently burdened with could be transferred to GPs and nurses. Furthermore, the **impact on sustainability must also be emphasized** – choices in patient care have a direct impact on healthcare emissions, as **primary care / visits to a GP emit much less CO2 than visits to an emergency department or inpatient admissions** (Coalition for Sustainable Pharmaceuticals and Medical Devices, 2015).

➤ **Concrete initiatives must address the needs of the healthcare workforce.**

Healthcare workers represent the backbone of health systems, yet they are often being allocated **insufficient resources and work in unfavorable conditions**, not just in Romania but also across Europe. In Romania, challenges such as staff shortages, burnouts and concerns about mental well-being are exacerbated by **substantial outflow of medical professionals**, as more than 21,500 Romanian doctors had relocated by 2020, mostly to OECD countries (Rafila et al, 2023). Furthermore, Romania faces issues due to the **geographic distribution of the existing professionals**, as there is a significant imbalance between the urban and rural areas and between regions. Thus, due to the critical role of human resources, **no investments in healthcare can be effective without also addressing the needs of the healthcare workforce**.

Romania has been central in driving efforts on the topic at the WHO level in the Europe region. Regional Guidelines on adopting policies benefiting the healthcare workforce were discussed at the **High-Level Regional Meeting on Health and Care Workforce in Europe**, which took place in Bucharest in March 2023. The meeting highlighted the importance of **optimizing the use of public funds to ensure effective health workforce financing and the effective use of digital technologies** supporting health workers. Policies must

focus on **improving health workforce supply mechanisms, recruitment and retention**, enhancing the **performance of healthcare workers**, and improving **investment in workforce development, education, and protection** – both mental and physical (Rafila et al, 2023). Based on these efforts, WHO Europe adopted in Astana in October 2023 a new **Framework for Action on the health and care workforce 2023-30** – a political commitment to put into action measures to tackle the health workforce crisis (WHO Europe, 2023). In the Romanian context, both **improving working conditions** and **reducing disparities in the healthcare workforce** can be fostered by **an increasing role of digitalization** in healthcare (for instance telemedicine facilitating access to medical services) as well as a shift towards outpatient care and ambulatory services.

➤ **Hospital management must become patient-centered, while optimizing efficiency.**

While a key reform of the health system should be the paradigm shift from a hospital-centered system to ambulatory medical services, **large hospital centers will remain essential in providing continuous and universal access to medical services** for all categories of patients. Thus, **improving the operational and medical management of hospitals** is critical. In the context of limited financial resources, the goal must be to **make hospital spending more efficient, without affecting the quality of medical services**.

The management of hospitals should focus on **patient-centricity**, on **consolidating access to and quality of clinical services in hospital-integrated ambulatories**, with an increase in the share of cases treated in the specialized outpatient clinic and by day hospitalizations, in parallel to the optimization of the number of longer term hospital admissions. The shift towards ambulatory services and day hospitalizations has the benefit of being more profitable, **bringing additional financial resources to the hospital**, while also taking the pressure off continuous hospital services.

There needs to be a shift to **evidence-based management**, with a **focus on obtaining results** by improving processes and performance. Hospital managers should carry out an **analysis of all operational processes of the institution**, with an emphasis on their economic impact and profitability, **standardize medical operational processes**, as well as develop and implement **strategies for the efficient use of resources**. Furthermore, **key performance indicators** must be used in the operational and medical management of hospitals in order to measure performance. Procurement processes must be supported by **implementation of best practices in procurement** and **existence of procurement guidelines**. To increase the financial resources available to hospitals, managers should also look towards **new sources of income**, which already make up a large part of hospital budgets in other parts of the world, particularly **clinical trials** and **public-private partnerships** (Dașcă, 2023 - II).

Around the world, **multiple factors are pointing towards the need to change the current model of healthcare management**, including increasing costs of care, systemic inefficiencies leading to high costs with suboptimal results, inadequate access to health services and the need for patient-centered healthcare as well as the demographic shift and the increased threats to public health. Thus, in the long run, to reduce costs and increase efficiency, decision-makers around the world will also have to consider implementing a **value-based healthcare model** where the amount earned by the health provider for the services provided is linked to the results delivered for patients, such as the quality, equity, and cost of care. However, before being able to implement such a model, healthcare systems must fulfill important preconditions, including **political will, instruments to measure costs and results, value-based procurement, as well as value-based reimbursements** – a system where producers and distributors are reimbursed based on outcomes rather

than volume (Dașcă, 2023). In the case of Romania, being able to accurately measure costs and results remains a challenge.

- **Progress has been made on access to clinical trials but there is an ongoing need to improve Health Technology Assessment.**

Access to medicines truly starts before the long bureaucratic legal process of authorizing medicines. **Clinical trials** are not only **key to putting innovative treatments or tests on the market**, but also bring to patients the opportunity to **benefit from potentially life-saving medicines in a timely manner**. For more than 10 years, Romanian patients had been unable to benefit from ongoing trials available to patients from other countries. Due to **legislative changes** proposed by the **National Agency for Medicines and Medical Devices**, the clinical trials approval system has finally been unblocked in Romania, doubling the rate of trials approved in a timeframe of 6 months. Furthermore, the newly founded **National Health Innovation Hub** has taken the subject of clinical trials as its first project, looking at improving the predictability and competitiveness of the trials system in Romania (LAWG, 2023). While progress has been made on clinical trials, a natural next step will be **improving the Health Technology Assessment (HTA) framework** in the country. For this to happen, a **multi-stakeholder cooperative approach** on the model of the clinical trials legislation is needed, where the National Agency for Medicines and Medical Devices cooperates with the industry, academia and patient associations, possibly under the aegis of the National Health Innovation Hub. A new HTA framework would need to look at treatment rates in Romania, but also promote **harmonization with the EU HTA** which will soon change significantly.

- **More predictability is needed in the pharmaceuticals distribution sector.**

The distribution of pharmaceuticals is **central to the resilience of the healthcare system**. However, the distribution sector is currently facing **challenges and bottlenecks** due to changes in legislation. One important issue for distributors is the law imposing a 1% tax on turnover for companies with turnovers of over 1 million euros, which places a much **higher burden on companies** compared to before. This will ultimately lead to a **cut in investments** and **shortages in medicines**. This is because there is a maximum 30 lei mark-up on products more expensive than 300 lei, which means these medicines will not be profitable so they will become increasingly difficult to find on the market. It is estimated that **around 65,000 patients will be impacted** by this change in legislation, particularly oncological patients as oncological medicines are the most expensive. A possible solution would be to **analyze the methodology of price calculation**, which has not been changed in many years. Another significant challenge is that **of late payments from the National Health Insurance House**, leading to problems with the delivery of medicines to pharmacies (Trandafir, 2023). Without an **increase in financing to the National Health Insurance House**, the resilience of the entire system would be at risk.

- **The National Health Innovation Hub will be a tool for improving the predictability and resilience of the system:**

The benefits of the newly launched **National Health Innovation Hub** as a central element in a modern health system, acting in accordance with the priorities of the National Health Strategy 2023-2030, must be emphasized. The Hub is driven by a **multi-stakeholder approach**, involving the Ministry of Health, the G6-

UMF University Alliance and the Local American Working Group, in an effort to boost research and development, access to innovation, medicines and new technologies. The Hub has been operationalized in 2023 and takes a collaborative approach to projects, with the key benefit of involving the private sector, academia and patient associations together with representatives of public institutions.

### 3. Supporting the Implementation of Critical National Strategies

**Cardiovascular diseases and cancers are the two leading causes of deaths in Romania**, making it imperative to address them through **dedicated, comprehensive National Strategies**. The good news is that, in recent years, **political will** at the highest level has been gathered towards this. Following a non-partisan, multi-stakeholder approach, the **National Plan for Combating and Controlling Cancer (PNCC)** was adopted in 2022. The Aspen Institute Romania has been one of the **early proponents of a national plan to combat cancer**, raising awareness on the need to adopt a multi-stakeholder approach and being instrumental in the formation of the dedicated Group on Combating Cancer in the Romanian Parliament. At the same time, the same multi-stakeholder approach is being taken on a **National Strategy for Cardiovascular and Cerebrovascular Diseases (SNBCC)** – at the time of writing, a team of experts had drafted a first version which was under public consultation. The finalization and adoption of the SNBCC is targeted for the first half of the year 2024.

The challenge in the case of both PNCC and SNBCC is to ensure their **quality governance and timely implementation**, while providing **adequate financing** in the context of scarce resources and existence of competing priorities in health. **Innovative technologies** are critical nowadays in prevention, treatment and palliation. **Investing in new technologies, in innovative medicines and medical devices** is costly today but will save money in the future and will improve health outcomes and patients' quality of life.

Supporting the implementation of these two critical national strategies has become a priority for the Aspen Healthcare & Quality of Life Program in 2023, with discussions focusing on **prevention and education** while addressing ways to improve access to **diagnosis** and **innovative treatments**.

#### ➤ **National Plan for Combating and Controlling Cancer (PNCC) – Progress and areas for improvement.**

Cancer control planning and the governance of cancer care are essential as cancers are the **second leading cause of death in Europe and Romania**. Cancer imposes a significant economic burden on society. According to a study by the Swedish Institute for Health Economics (IHE), cancer brings an **economic burden of €1.6 million/year in Romania**, or €83/capita/year (Hofmarcher, 2023). Another study estimated the huge indirect costs related to productivity losses of patients and caregivers (Volintiru et al, 2021). Given the high costs of cancer to the health and the economic welfare of the population, engagement **at the highest political level** is required. However, political commitment is just a prerequisite, as it needs to be translated into effective actions.

Even before the adoption of the PNCC, the fight against cancer was defined as a priority for the EU Commission, as per the **EU Beating Cancer Plan** launched in 2021. The EU Beating Cancer Plan was

important in the development of the PNCC, acknowledging the fact that **cancer needs to be tackled comprehensively and requires political commitment**. The European Plan emphasizes all aspects of combating cancer (both reducing the risk of cancer and improving cancer survival rates and quality of care), from **prevention, early detection, diagnosis and treatment to support for survivors**. It aims to **support research and access to innovation** while **reducing inequalities in access to care** (EU Beating Cancer Plan, 2022). There are **significant financing opportunities** available at the EU level in the fight against cancer. For instance, funds are available under the **EU4Health Programme**, the largest EU health program ever, which will invest over €5 billion over seven years (2021 – 2027). Additionally, **Horizon Europe** provides important financing solutions through the Cancer Mission, aiming to improving the lives of more than 3 million people by 2030 through prevention, treatment and better quality of life for cancer patients and their families (EU Mission: Cancer).

The PNCC has aimed to follow the same **comprehensive path** to fighting cancer as the EU Beating Cancer Plan. Goals include **developing an integrated oncology health information system** for evidence-based cancer prevention and care and increased research capacity; ensuring a consolidated framework for a **consistent and sustainable primary prevention system**; developing an **early cancer detection framework**; **ensuring equal and fair access to diagnosis and high quality care**; improving the **quality of life** for patients diagnosed with cancer, cancer survivors and families and caregivers of cancer patients; Developing **oncological research**; Developing **human resources** in oncology (Planul Național de Combatere și Control al Cancerului, 2023).

A key precondition to its implementation, the adoption of a favorable **legal and regulatory framework**, able to enable the roll out of various activities stipulated in the PNCC, has begun. One of the key aspects of the plan is setting up an integrated **national population-based cancer registry**, as current cancers reporting is fragmented and not aligned to European applicable guidance. A national cancer registry will help **organize resources and provide a better image of the needs**. The recent revision of the regulatory framework creates the premises for emphasizing registration's role and value, and opens prospects for more coherent cancer registration practices nationwide. The first steps on IT procurement have been made. Additionally, a set of recommendations for diagnostics, including specific procedures that must be followed by doctors, as well as a standard form for reporting examinations have been adopted. These are important as **homogenous reporting** throughout the country is required for the registry. Further legal steps have been taken on other aspects of NCCP such as genetic testing, radiotherapy, psychological services and palliative services.

**Monitoring cancer care** is an essential part of cancer control as it provides an overview of the implementation process and provides much-needed information on parts of the Plan that are working well and areas that need to be improved. Thus, to support the implementation of the Plan, the Swedish Institute for Health Economics (IHE) has produced a **"Cancer Dashboard" for Romania** (Hofmarcher, 2023). The Dashboard looks at the current status quo (compared to the EU average) as well as the recent trend in the past few years, in order to analyze ongoing developments and identify needs. It uses indicators related to the health and economic burden of cancer and to the quality of care (prevention, early detection, diagnosis and treatment and survivorship). An analysis of the status quo shows **huge challenges** as Romania is below EU averages on survival, expenditure on cancer care and quality of care, but the **recent trend shows improvements**. However, **further positive developments are required when it comes to access to innovation and access to personalized treatments**, as the proportion of reimbursed medicines is far below the EU average and the amount of time it takes for new medicines to enter the market is much higher

(Hofmarcher, 2023). Also, a **wider adoption of minimally invasive surgery** is needed in Romania. Monitoring implementation through such a Cancer Dashboard should be carried out regularly, ideally on a yearly basis. Furthermore, this instrument is a useful tool which should be transferred to **monitor the implementation of other strategies in healthcare**.

Romania registers **significant gaps in access to innovative medicines compared to the EU average**. The time elapsed between the approval and the effective availability for patients of an innovative drug (access to the reimbursement list) is on average 918 days, ranking last in Europe, while the average duration of access to oncology innovative drugs is 991 of days (EFPIA Patents WAIT indicator 2022 Survey).

As access to innovation is a significant problem in the fight against cancer and other diseases in Romania, a key development would be the **operationalization of an Innovation Fund for Medicines**, which is an objective of the NCCP. The Fund should be operationalized as a **budget dedicated to the early and provisional reimbursement of innovative medicines**. It should not be an alternative reimbursement system to the current system, but an **advance compensation system**, through which innovative drugs can be made available to patients until formalities are completed to include these drugs in the current reimbursement system. Moreover, **innovative medicines for early-stage cancers deliver better patient outcomes** (by improving cure rates or by slowing or reducing the risk of relapse and reducing cancer-related symptoms) by treating the patient as early as possible. Along with the clinical benefits, medicines in early-stage cancers also deliver psychological benefits to the patients, and economic benefits to the healthcare system and the society. More broadly, there are also **economic benefits** for the society as early-stage cancers are often detected in working-age population, and by successfully treating these patients, innovative medicines allow patients to resume their work and increase general productivity.

**Civil society organizations can play a very important role in the fight against cancer**, as proved by the work of the Renaşterea Foundation, which has gained significant traction in the Romanian health system and carried out, since 2001, many successful initiatives on cancer control. Renaşterea Foundation provides examples of best practices on screening programs, showcasing efficient management and **good cooperation between NGOs, local authorities, hospitals and patients**. **Access to preventive services is a must for patients in rural areas**, as well as one of the most **cost-effective investments in the fight against cancer**, so Renaşterea Foundation's mobile screening units (for breast and cervical cancer) are another example which should be replicated throughout the country by other actors – the national screening program for breast cancer providing for such mobile units. **Telemedicine and digital solutions** are essential to leapfrog and provide access to a wider population. For instance, the doctors diagnosing the tests carried out by the mobile units in rural areas are located in Bucharest. **Well-designed communication interventions** are key to the success of any cancer control initiative, including anti-HPV vaccination. Renaşterea Foundation is carrying out an important study on the effectiveness of previous vaccination campaigns, the role of fake news in boosting anti-vaccination sentiment and ways to counter this.

➤ **Towards a comprehensive National Strategy for Cardiovascular and Cerebrovascular Diseases (SNBCC).**

Vascular diseases are the **leading cause of death** worldwide and in Romania. There is a disparity between Western and Eastern Europe when it comes to the types of vascular diseases affecting the population. In the West there is a balance between strokes and neurodegenerative disorders, **towards the East strokes are becoming prevalent** – being responsible for 62% of all disability-adjusted life years – the number of years lost due to ill-health, disability, or early death. In Romania, **55.2 % all deaths are caused by diseases of the**



**circulatory system, 13.9% of those being attributed to strokes** (Mureşanu, 2023). Strokes, ischaemic heart diseases and hypertensive diseases make up high proportions among the **preventable and treatable causes of deaths in Romania**. While access to the treatment of cardiovascular and cerebrovascular diseases has improved in Romania, a lot of progress still needs to be made in order to **catch up with the EU average**. Thus, a future comprehensive SNBCC (at the time of writing the first draft is in informal consultations) will play a **key role in addressing the current challenges**.

At the EU level, there is no comprehensive plan on cardiovascular and cerebrovascular diseases on the model of the EU Beating Cancer Plan, but the **EU Non-Communicable Diseases (NCDs) Initiative** provides a model for the future SNBCC. At the EU level, an important tool is the Stroke Action Plan for Europe, to which the Ministry of Health of Romania contributed significantly. Furthermore, there are **WHO recommendations on the prevention and control of NCDs** which need to be considered when developing the SNBCC (Mureşanu, 2023).

The SNBCC must be developed to improve the level of health of the Romanian population by a **comprehensive reform action plan** in the field of cardiovascular and cerebrovascular care, **under the framework of the National Health Strategy 2023-2030**, which aims to lower the burden of NCDs with major negative impact on public health. The SNBCC will aim not just to lower the burden of NCDs, but **efficiently use available health system resources** and incorporate **evidence-based policy, monitoring tools and best practices**.

The SNBCC will be designed as a comprehensive framework addressing key pillars such as the **human resource** (through training programs and measures intended to prevent brain drain), **key infrastructure** (such as acute stroke units and pre-hospital care), **clinical tools** (clinical guidelines, reimbursement protocols and personalized information), and necessary **health policies** that need to be adopted (adequate funding mechanisms and public health programs). When it comes to developing infrastructure, **increasing capacity to perform thrombectomies** must be emphasized (Mureşanu, 2023). The **main objectives** will be:

- ❖ Developing an integrated health information system for cardiovascular and cerebrovascular disease prevention and care.
- ❖ Developing an integrated framework for the prevention, early detection, diagnosis, treatment and monitoring of cardiovascular and cerebrovascular diseases.
- ❖ Improving acute treatment of cardiovascular and cerebrovascular diseases.
- ❖ Developing specialized cardiovascular and neurological rehabilitation in Romania.
- ❖ Diagnosis and treatment of rare cardiovascular and cerebrovascular diseases
- ❖ Training specialized human resources for the prevention, diagnosis, treatment and rehabilitation of cardiovascular and cerebrovascular diseases.
- ❖ Promoting research, development and innovation activities in the cardiovascular and cerebrovascular field in Romania.

As in the case of the PNCC, **public health campaigns** will be crucial for the effectiveness of the SNBCC. Examples of best practices already exist, for instance a campaign by the Ministry of Health in partnership with the Association for the Fight Against Stroke (ALIA) to reduce the time between the onset of a stroke and the call to the emergency services.

The SNBCC is still in the early stages and will require a **concerted effort of all actors involved in its development**, from the public institutions, medical societies, private sector as well as civil society and patient associations. The Aspen Institute Romania has identified **opportunities to contribute with the expertise of the Aspen Healthcare & Quality of Life Program in the process of elaborating the strategy**, particularly in supporting the initiators by organizing informal meetings gathering stakeholders' suggestions and feedback during the consultation process.

#### 4. Innovation in Healthcare: E-health, Biotech, AI and the Digitalization of the Healthcare System

Another key topic addressed throughout the 2023 edition of the Aspen Healthcare & Quality of Life Program was **the increasing the pace of adopting innovative digital solutions in the medical sector in Romania**. **Benefits for the healthcare system and Romanian patients** were discussed, as well as **best practices** from abroad and **cost-effective solutions** that could be implemented in Romania. The importance of **partnerships between the public sector, private sector and academia** was also emphasized.

Innovation is critical to **efficiently complementing healthcare professionals** and delivering **prevention, quality diagnosis and state of the art, patient-centered medical services**. The **shift from a provider-centric to a patient-centered model** must be emphasized. The innovation implemented in a healthcare system should be **outcome-oriented**, with an eye on **health economics**, particularly in systems where there are lots of challenges which could be solved in a **cost-effective manner**. An example for the Romanian health system would be increasing the number mobile screening units in areas where there is a scarcity of doctors. Furthermore, to boost innovation in healthcare, decision-makers must aim to **involve the private sector**, not necessarily by increasing spending but by creating the right conditions for mobilizing private investments. The MITRE Corporation in the United States provides a good example of how to foster innovation – it is a not for profit, independent and objective institution but it advises the US Government, operating federally funded research.

**Biotechnology** aims to deliver innovation and **shorten the innovation cycle**, but delivering this innovation would not be possible without **employing big data** which could then be analyzed in order to draw conclusions regarding medical processes. Using big data facilitates monitoring safety concerns as well as efficacy of innovative treatments, while also driving approaches to mitigate or manage side effects. **AI / machine learning** plays a critical role in utilizing big data. Feedback loops allow for the generation of **large integrated datasets utilized in a centralized fashion through machine learning**. This **accelerates the development and approval of innovative therapies** in diseases such as cancer, laying the foundations of next generation interventions. Thus, **AI is a key tool in healthcare** due to its ability to categorize and generalize data and develop inferences, allowing for **personalized treatments**. While there have been some failures, AI is already able to successfully complement doctors in detecting conditions. In particular, AI has made significant progress on **diagnosis through imaging**. Top companies in health imaging have developed databases and are employing AI to make diagnoses faster and more efficiently, as well as providing better diagnoses than by solely relying on doctors. Embracing AI, while costly in the beginning, would ultimately lead to **cheaper, more efficient healthcare**.

At the same time, when using health data, AI systems could have access to **sensitive personal information**, necessitating **robust legal and regulatory frameworks for safeguarding privacy, security, and integrity**. Unethical data collection, cybersecurity threats and amplifying biases or misinformation are some of the **dangers that must be addressed**. While the issue of **regulation** is particularly challenging when it comes to complex new technologies such as AI, at the global level efforts are already being made in that direction. In October 2023, the WHO published some important **guidelines for the regulation of artificial intelligence for health**, stressing the importance of data quality, transparency and documentation, risk management, externally validating data, as well as privacy and data protection. At the same time, the document emphasizes the need to **foster collaboration** between regulatory bodies, patients, healthcare professionals, industry representatives, and government partners (WHO, 2023).

In Romania, technologies such as AI are still not deployed on a wide scale, but there is **one key policy priority which needs to be implemented, namely the digitalization of the healthcare system**, aiming for the **interoperability of data**. This would improve the quality of patient care while **integrating Romania into a wider ecosystem**. Romania needs to **generate, integrate and optimize a system to share data among hospitals, public institutions, and pharmacies**. From the perspective of public decision-makers, the goal should be to have **electronic health records**, enabling access to **the full history of a patient** based on his ID or health card. **Patient registries** are essential and **disease registries** are crucial. Electronic health records and registries would not just improve the quality of care, but also enable **evidence-based policies** in the healthcare system.

While progress has been made during the pandemic in areas such as telemedicine, there needs to be a **shift in mentalities in the Romanian healthcare system** to bring about the wider digitalization of medical practices. Digitalization should be addressed both at the level of the Ministry of Health and the National Health Insurance House.

The **digitalization of Romanian hospitals** should address three main issues:

- The **access of patients**: shifting to an electronic system of admissions and appointments rather than going to the emergency room or hospital registration. This is currently happening in private hospitals but some public hospitals have also begun implementation
- **Medical activity**: there is currently a **hospital information system** which is very bureaucratic and needs to be adapted to decrease the workload of doctors and nurses.
- **Integrating digital solutions across hospital activity**: Hospitals should put in place the position of **Chief Innovation Officer** aiming to facilitate the digital transformation of the institution while making processes more efficient throughout all hospital activity (Dașca, 2023 - I).

## Key take-aways

### Shifting the Paradigm towards Prevention-Based Healthcare

- ✓ Investments in the health system and especially prevention are **essential for improving the entire society's well-being** and, at the same time, represent a **key mechanism for increasing national income** as well as the **prosperity of the population**. There is growing evidence that good health generates higher incomes, as it **increases work productivity and improves the return on investment in health**.
- ✓ Prevention should be the **main principle in public health**, and investing in core capacities at the national level is fundamental. This includes both **primary prevention** (e.g. access to vaccination and promoting a healthy lifestyle) and **secondary prevention** (e.g. screening to identify diseases in the earliest stages and proper diagnosis).
- ✓ Bearing in mind the highly hospital-centric nature of the Romanian healthcare system, in the long term a paradigm shift towards **ambulatory services / outpatient care** pre-hospital medical services / outpatient care is needed. Bringing medical services closer to patients by improving primary care access can **decrease healthcare costs and reduce avoidable hospitalizations**.
- ✓ The **legal framework** on prevention has improved significantly. However, the timely implementation of prevention strategies will ultimately require not just vision and political will, but, most importantly, **adequate financial resources allocated to prevention**.
- ✓ **Improving primary prevention is critical** – in particular, investments are needed in **improving health education and vaccination pathways**.
- ✓ Investments in **diagnostics** are an excellent investment complementary to a prevention-centered approach. A **National Diagnostics Strategy** is required, tailored to the country's needs, with a clear **set of criteria** in order to prioritize the most cost-effective diagnostics.

### Predictability & Resilience of the Healthcare System

- ✓ A **resilient healthcare system** is not possible without **resilient financing** – this requires a **predictable growth of healthcare spending**.
- ✓ Due to the critical role of the human resource, **no investments in healthcare can be effective without also addressing the needs of the healthcare workforce** – this includes optimizing the use of public funds to ensure effective health workforce financing and the effective use of digital technologies supporting health workers. In the Romanian context, both improving working conditions and reducing disparities in the healthcare workforce can be fostered by an **increasing role of digitalization in healthcare** (for instance telemedicine facilitating access to medical services) as well as a **shift towards outpatient care and ambulatory services**.
- ✓ **Hospital management must become patient-centered, while optimizing efficiency**. There needs

to be a shift towards **evidence-based management**, with a focus on obtaining results by improving processes and performance.

- ✓ **Clinical trials** are not only key to putting innovative treatments or tests on the market, but also bring patients the opportunity to benefit, in a timely manner, from potentially life-saving medicines. Some progress has been made on access to clinical trials in Romania but there is an ongoing need to **improve Health Technology Assessment**.
- ✓ Policies encouraging **private health insurance** should be adopted to provide an additional means of covering healthcare costs.

### Supporting the Implementation of Critical National Strategies

- ✓ **Cardiovascular diseases and cancers** are the two leading causes of deaths in Romania, making it imperative to address them through **dedicated, comprehensive National Strategies**. The **National Plan for Combating and Controlling Cancer (PNCC)** and the **National Strategy for Cardiovascular and Cerebrovascular Diseases (SNBCC)** will aim to address existing challenges.
- ✓ **Innovative technologies** are critical nowadays in the prevention, treatment and palliation. **Investing in new technologies, innovative medicines and medical devices** can seem costly today, but will save money in the future and improve the healthcare and quality of life of patients.
- ✓ In the case of both PNCC and SNBCC it is imperative to ensure their **quality governance and timely implementation**, while providing **adequate financing** in the context of scarce resources and multiple priorities in the healthcare system.
- ✓ PNCC priorities include: **developing an integrated oncology health information system** for evidence-based cancer prevention and care and increased research capacity; ensuring a consolidated framework for a **consistent and sustainable primary prevention system**; developing an **early cancer detection framework**; **ensuring swift, equal and fair access to diagnosis and high quality care**; improving the **quality of life** for patients diagnosed with cancer, cancer survivors and families and caregivers of cancer patients; Developing **oncological research**; Developing **human resources** in oncology.
- ✓ **Setting up an integrated national cancer registry** is critical, as currently cancers are being reported in a fragmented manner. A national cancer registry will help organize resources and provide a better image of the needs.
- ✓ As access to innovation is a significant problem in the fight against cancer and other diseases in Romania, a key development would be the **operationalization of an Innovation Fund for Medicines**, which is an objective of the PNCC. The Fund should be operationalized as a **budget dedicated to the early and provisional reimbursement of innovative medicines**. It should not be an alternative reimbursement system to the current system, but an **advance compensation system**. Also, allocation of **adequate budget for the reimbursement of the increasing number of new innovative cancer medicines**, especially for early-stages cancers.

- ✓ The SNBCC, the first draft of which was at the time of writing under public consultation, will aim not just to **lower the burden of NCDs**, but **efficiently use available health system resources** and **incorporate evidence-based policy, monitoring tools and best practices**.
- ✓ The SNBCC should be designed as a **comprehensive framework** addressing key pillars such as the **human resource** (through training programs and measures intended to prevent brain drain), **key infrastructure** (such as acute stroke units and pre-hospital care), **clinical tools** (clinical guidelines, reimbursement protocols and personalized information), and **necessary health policies that need to be adopted** (adequate funding mechanisms and public health programs).

### Innovation in Healthcare: E-health, Biotech, AI and the Digitalization of the Healthcare System

- ✓ Innovation is critical to **efficiently complementing healthcare professionals** and **delivering prevention, quality diagnosis and state of the art, patient-centred medical services**.
- ✓ The shift from a provider-centric to a **patient-centred model** must be emphasized.
- ✓ The innovation implemented in a healthcare system should be **outcome-oriented**, with an eye on health economics, particularly in systems where there are lots of challenges which could be solved in a **cost-effective manner**.
- ✓ **Biotechnology** aims to deliver innovation and **shorten the innovation cycle**, but delivering this innovation would not be possible without **employing big data** which could then be analyzed in order to draw conclusions regarding medical processes.
- ✓ **AI is a key tool in healthcare** due to its ability to categorize and generalize data and develop inferences, allowing for **personalized treatments**. While there have been some failures, AI is already able to successfully complement doctors in detecting conditions.
- ✓ At the same time, when using health data, AI systems could have access to sensitive personal information, necessitating **robust legal and regulatory frameworks for safeguarding privacy, security, and integrity**.
- ✓ The importance of **partnerships between the public sector, private sector and academia** in fostering innovation is critical.
- ✓ One **key policy priority** needs to be implemented in Romania, namely the **digitalization of the healthcare system**, aiming for the **interoperability of data**.
- ✓ The goal should be to have **electronic health records**, enabling access to **the full history of a patient** based on his ID or health card. **Patient registries** are essential and **disease registries** are crucial. Electronic health records and registries would not just improve the quality of care, but also enable **evidence-based policies** in the healthcare system.

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