# Healthcare investment and outcomes in Central and Eastern Europe

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# Summary

- Health systems in Central and Eastern Europe (CEE) have undergone major reforms in financing, coverage and service delivery and a positive trend is observed regarding investments and outcomes in healthcare. Yet a substantial gap remains compared with the EU4 countries (Germany, France, Italy and Spain). CEE governments still invest a smaller share of GDP on health, populations experience higher levels of treatable mortality and disability, and patients wait longer to access innovative medicines.
- In 2023, public health care investment in CEE averaged **5.47% of GDP**, compared with **8.17% in EU4**. The gap has narrowed only slightly since 2017, from 3 to 2.78 percentage points. In per-capita terms, public health and pharmaceutical spending in CEE remain well below EU4 levels, and OOP payments represent **22%** of total health investment versus **15%** in EU4, but this masks notable OOP variation across CEE countries.
- CEE health outcomes mirror the investment gap: compared with EU4, the CEE region records **~41% higher DALYs** and **~137% higher treatable mortality**. Moreover, CEE is converging more slowly with EU4 in terms of longevity: **life expectancy at birth has increased by ~14% since 1960 in CEE on average versus ~20% in EU4**, and a 5-year gap persisted in 2024 (78.2 vs 83.2 years).
- Access to innovation is another critical gap. Between 2020 and 2023, patients in CEE on average gained reimbursed access to only 31% of new EMA-authorized medicines, compared with 76% in the EU4. The average time from EMA authorization to reimbursement was 705 days in CEE – **260 days longer than the EU4 average of 445 days**.
- Demographic change will further strain health systems and public finances. By 2050, the working-age population (15-64) in CEE is projected to fall by **12.9 million people (20%)**, reducing annual income-tax revenue by an estimated **€14.6 billion** if current patterns persist. At the same time, age-related per-capita health spending rises steeply after age 55.
- The GLOBSEC **Healthcare Readiness Index (HRI) 2024** summarizes these challenges: CEE countries score systematically lower than EU4 on both “readiness today” and “readiness tomorrow”, underlining the need for sustained investment to close the readiness gap.
- Despite this, convergence is underway. Public health and pharmaceutical spending in CEE is growing faster than in EU4, and in several markets could reach today’s EU4 levels within the next two decades if current trends are maintained. The central message of this report is therefore that **health should be treated as a strategic, long-term investment that supports growth, productivity and fiscal stability, not just a short-term cost.**

# Progress in the CEE region is evident; however, the gap with the EU4 remains wide and shows no signs of closing rapidly

- The EU4 with Germany and France in particular investing above 9.5% of GDP on health (**or 4 543€ per inhabitant on average**) is more than double of what many CEE countries devote. At the same time, these Western economies maintain GDP per capita above the EU average, reflecting stronger economic capacity and healthier, more productive populations. In contrast, lower health investment in CEE correlates with weaker GDP per capita, compounding structural economic disadvantages.
- Latvia, Lithuania, Bulgaria, and Romania all invest between 4.3 - 4.9% of GDP on health (**or 1 300€ per inhabitant on average**, which is **almost 3.5 times lower** than Germany and France' average), some of the lowest in Europe, while also having GDP per capita well below the EU average (<72–77% of EU average). This means less economic output per person, lower disposable budgets for investments into modern technologies and under-funded health systems — a double drag on competitiveness and human capital retention. Without significant investment increases, these countries risk further demographic decline, brain drain and workforce erosion that undermine growth.
- Czechia and Slovenia — the CEE countries closest to EU average health investment (~7%) — also exhibit comparatively higher GDP per capita among CEE peers. This suggests a positive link between social investment and economic performance. Targeted increases in public health investment can be a lever to strengthen labor participation, reduce disease burden, and enhance productivity. Still though the average investment on healthcare per inhabitant is **2 300€** which is more than 2-fold lower than the top European economies.

# CEE countries are slowly catching up with EU4 on public HC investment as % of GDP. In 2017 the difference was 3 percentage points and in 2023 it reached 2.78 percentage points.


Source: EUROSTAT, Health care investment by financing scheme, Total and Government schemes and compulsory contributory health care financing schemes

The CEE average health care investments are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia and Bulgaria.

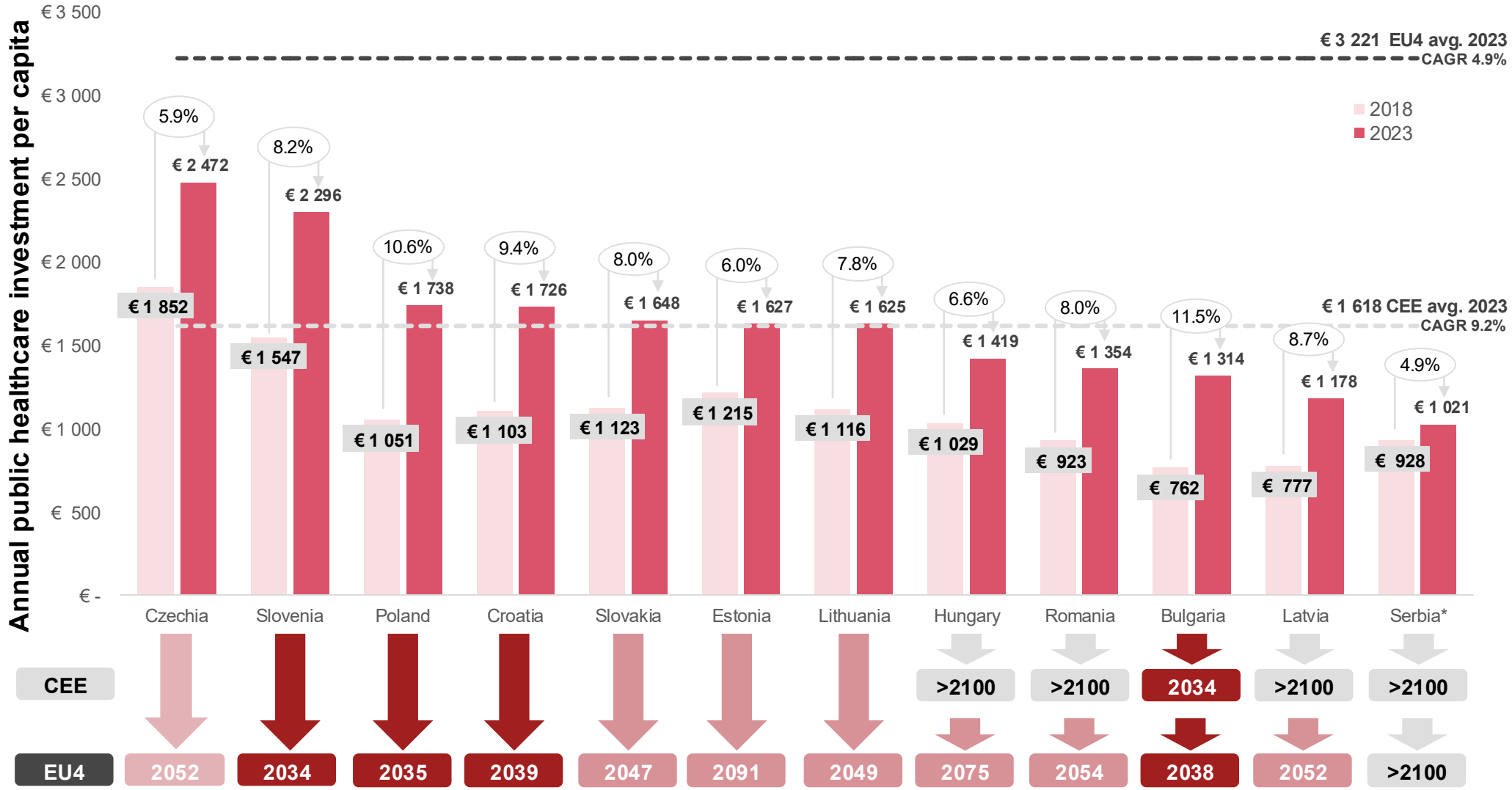
The EU4 average health care investments are calculated based on data from Germany, Italy, Spain and France

# Rapid growth, diverging paths: CEE healthcare investments' uneven race toward EU4 levels

- **CEE remains structurally under-invested compared to EU4:** in 2023, public healthcare investment averages **€1,618 per capita in CEE vs €3,221 in the EU4** (roughly half).
- **A higher growth rate is necessary but not sufficient:** **9.2% CAGR in CEE vs 4.9% in EU4** must translate into sustained, country-specific investment commitments. **Current growth rates are unlikely to persist without policy commitment.**
- **Leaders must sustain growth: Slovenia, Poland, Croatia and Bulgaria** are on track to reach the EU4 trajectory by 2040 **only if current growth is sustained**.
- **Laggards must accelerate now: Hungary, Romania and Latvia** require a step-change to avoid falling below the regional pathway; **Serbia** is projected to reach **neither** the CEE nor the EU4 trajectory within this century.

# Public healthcare investment per capita in the CEE is rising faster than in the EU4

## Public healthcare investment in Slovenia, Poland, Croatia and Bulgaria is projected to reach the EU4 average by 2040




Source: EUROSTAT, Health care investment by financing scheme, Government schemes and compulsory contributory health care financing schemes, PPS per inhabitant

The CEE average health care investments are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland,Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia* and Bulgaria.

The EU4 average health care investments are calculated based on data from Germany, Italy, Spain and France

*Data for Serbia are available starting from 2021

### Methodology

The 2018-2023 data is extrapolated based on the CAGR

$$= \left(\frac{value\ in\ 2023}{value\ in\ 2018}\right)^{1/6}$$

**CAGR** (Compound Annual Growth Rate): shows the average yearly increase in public healthcare expenditure per capita, assuming steady, compounded growth

# CEE countries continue to face **worse health outcomes** compared to the EU4

- **Higher rates of disability, treatable mortality and shorter life expectancy** in Central and Eastern Europe (CEE) are consistent with a long-standing gap in healthcare investment relative to Western Europe.
- While life expectancy has risen across the region, the **pace of improvement has been slower than in EU4:** between 1960 and 2024, life expectancy increased by around 14% in CEE, compared with ~20% in EU4. In addition, the average **life expectancy in CEE remains 5 years lower than in EU4**: 78 vs 83 years.
- Outcome indicators show a similarly persistent gradient. On average, CEE countries **have a ~41% higher DALY burden per 100,000 people than EU4 and ~137% higher treatable mortality per 100,000** – differences that suggest a substantial gap in "healthy life years" and potentially avoidable deaths.

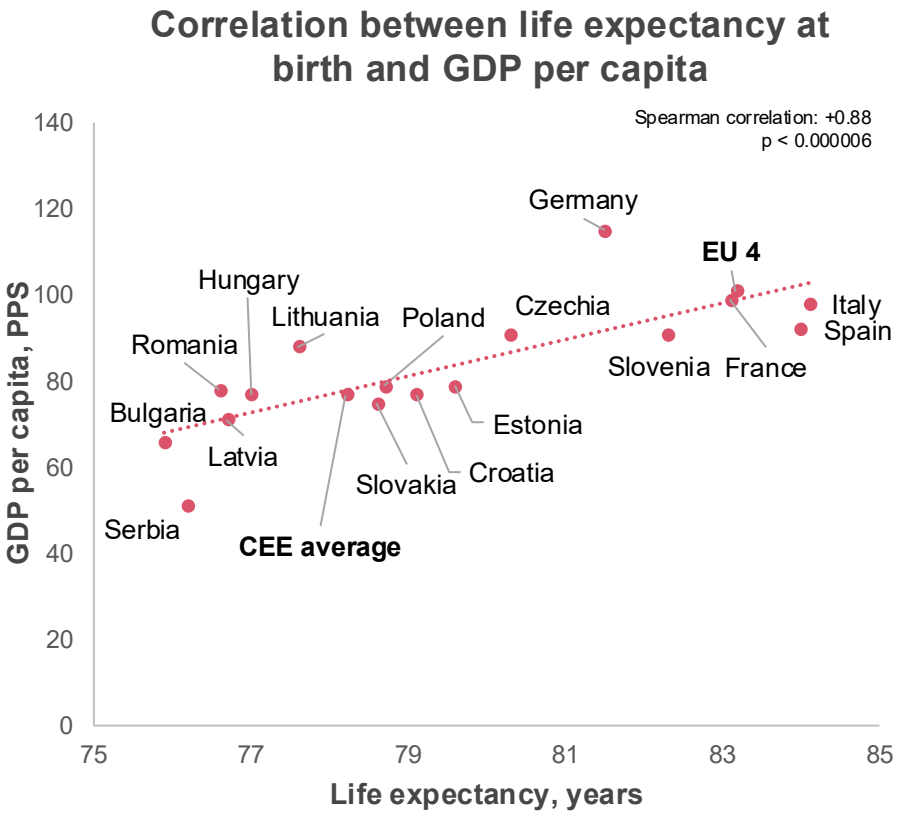
# CEE life expectancy continues to improve, but still ranks behind EU4 – with significant and persistent variations within the region

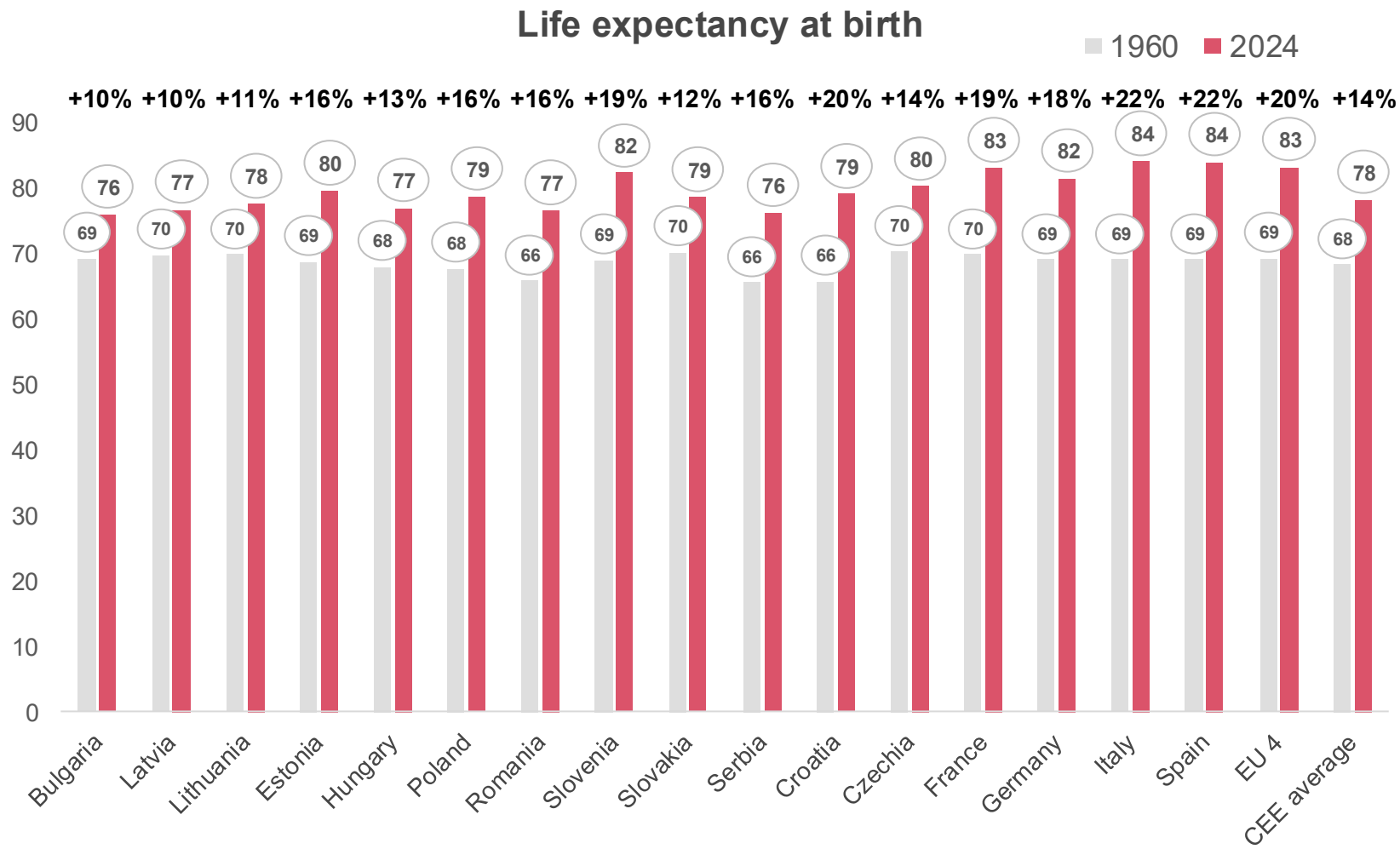
Despite substantial gains in life expectancy since 1960, **CEE countries have not fully converged with Western Europe**. In 2024, life expectancy at birth averages 78 years in CEE, compared with 83 years in EU4 – a gap of **5 years**. Within CEE, Slovenia (82.3) and Czechia (80.3) are closest to EU4, while Bulgaria (75.9) and Serbia (76.2) are furthest behind.

While all CEE countries have made considerable progress since 1960, the **pace of improvement** has been **slower than in EU4** (**+14% vs +20%**), and **highly heterogenous within the region.** Slovenia (+19%) and Croatia (+20%) have nearly matched Western Europe's rate of improvement, while Bulgaria (+10%), Latvia (+10%), Lithuania (+11%), Slovakia (+12%), and Hungary (+13%) have seen much slower gains.

This gap reflects **persistent differences in public healthcare investment and overall economic development.**

# Countries with lower GDP face shorter life expectancy




→ Clear positive correlation: the higher the GDP, the higher the life expectancy and *vice versa*

→ CEE countries have made progress in life expectancy, but at a slower pace than the EU4 average (14% vs. 20% increase)

→ Top performers in CEE: Slovenia and Czechia

*Average values used for EU4 (France, Italy, Sprain, Germany) and CEE (Bulgaria, Serbia, Latvia, Lithuania, Romania, Hungary, Croatia, Slovakia, Slovenia, Poland, Estonia, Czechia)

Source: Eurostat data for life expectancy at birth (2024) and OECD data for life expectancy at birth (1960); Eurostat data for GDP per capita (2024). Note that the Life expectancy at birth data are shown rounded in the figure on the right.

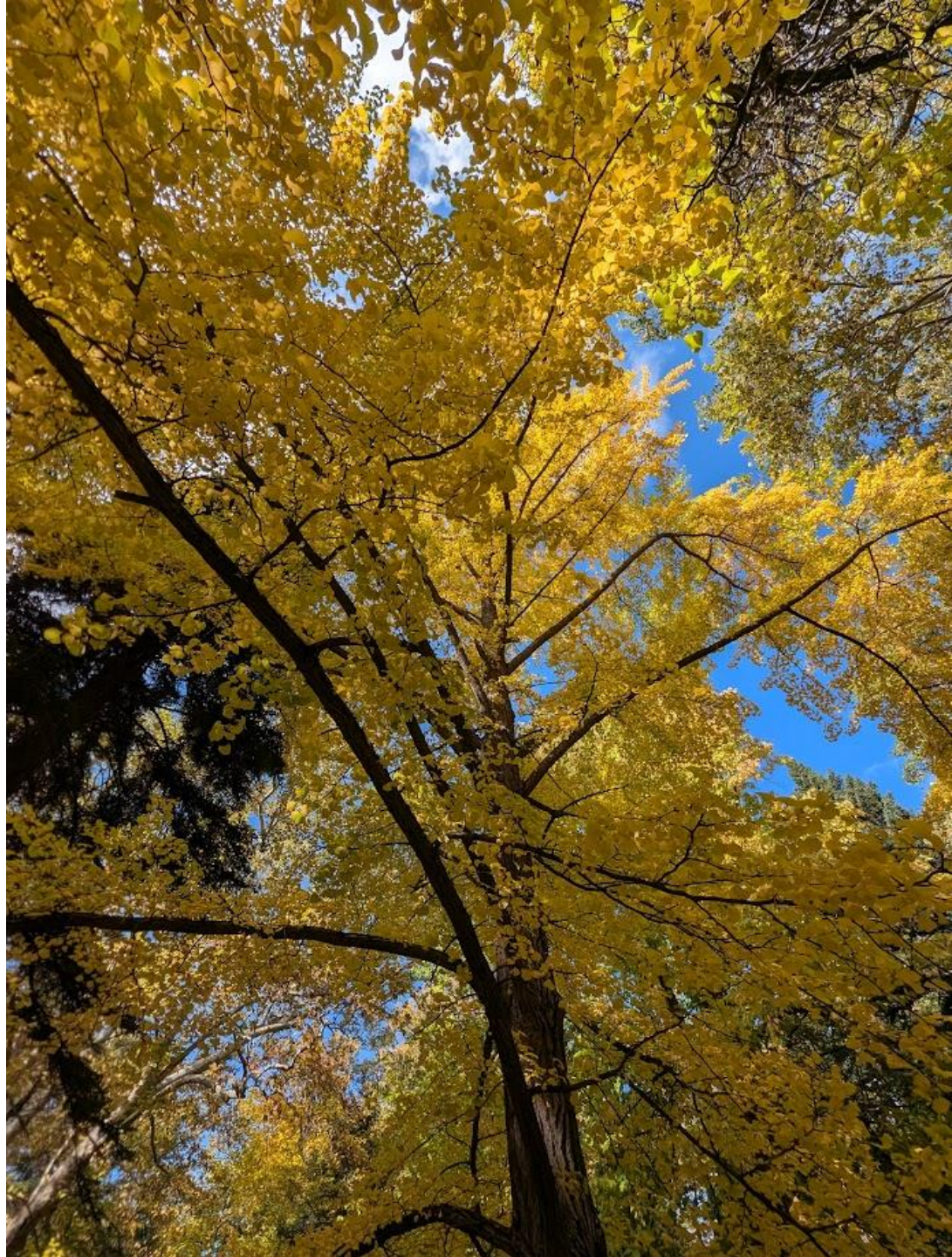
# CEE loses substantially more healthy life years than Western Europe

Life-expectancy alone masks the true scale of inequality – **DALYs** and **treatable mortality** reveal a **much wider gap** between CEE and the EU4. On average, the **DALY burden is ~41% higher** in CEE than in EU4 (per 100,000 people), and **treatable mortality is ~137% higher** (per 100,000) – indicating substantially more years lived with disability and far more deaths that should be preventable with timely, effective care. This underperformance sits alongside a clear investment gap: EU4 spends around **50% more in government healthcare investment per capita** than CEE and **57% more in net public pharmaceutical spending per capita**.

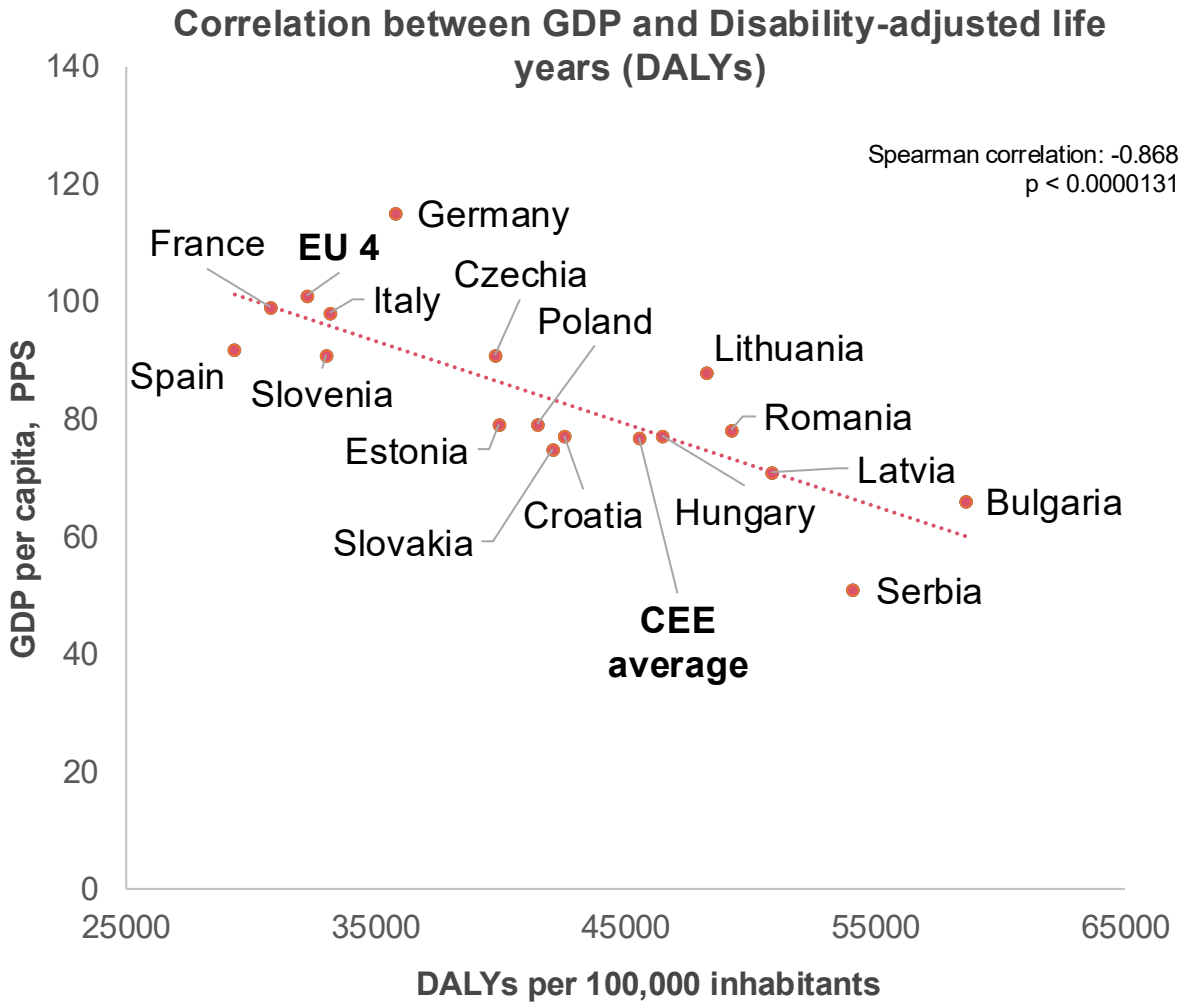
**The pattern is clear:**

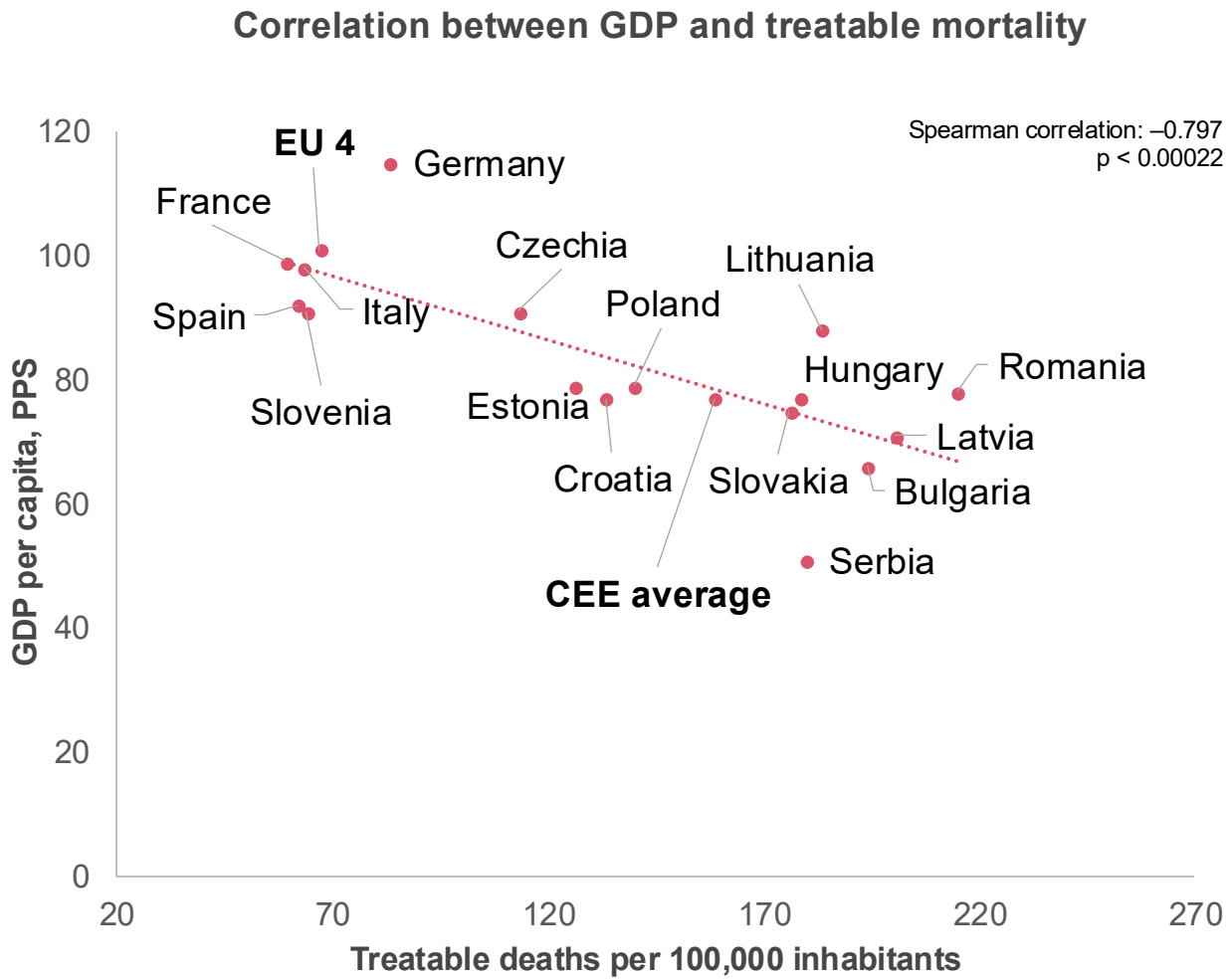
Countries with **lower GDP**, **under-investment in public health**, and **lower pharmaceutical spending per capita** face the **highest burden of disability and treatable deaths**. Bulgaria, Serbia, Romania, and Latvia consistently underperform, while **Slovenia and Czechia** demonstrate that **targeted investment and system maturity** translate into significantly better outcomes.

**CEE's challenge is not longevity – it is preventable disability and avoidable loss of life.** Closing this gap requires **strategic healthcare investments.** Moreover, innovative pharmaceuticals have helped neutralize existing risk factors (alcohol consumption, smoking, obesity), which are highly prevalent in CEE.



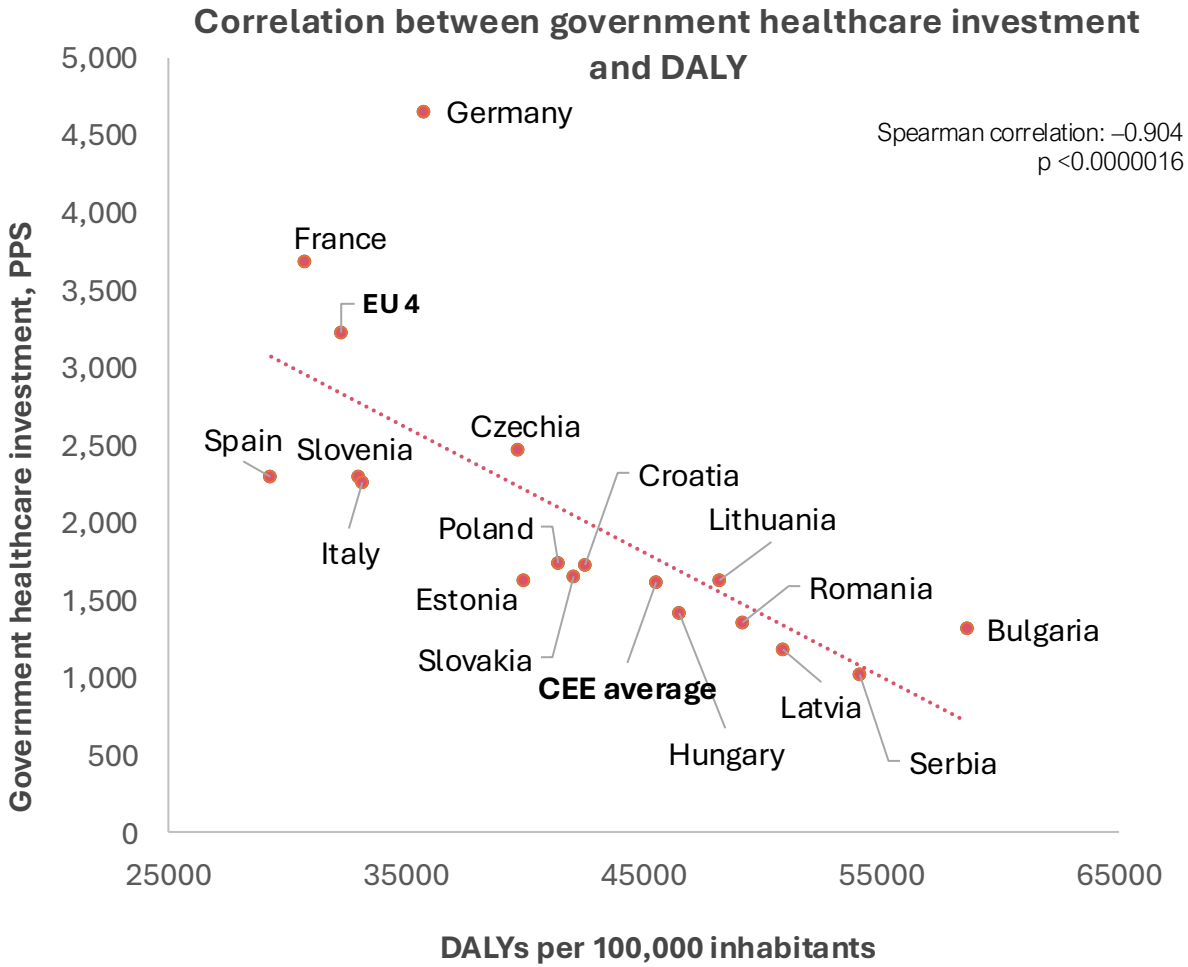
# CEE countries have higher rates of disability and treatable deaths as well as lower productivity (GDP per capita) compared to the EU4 average

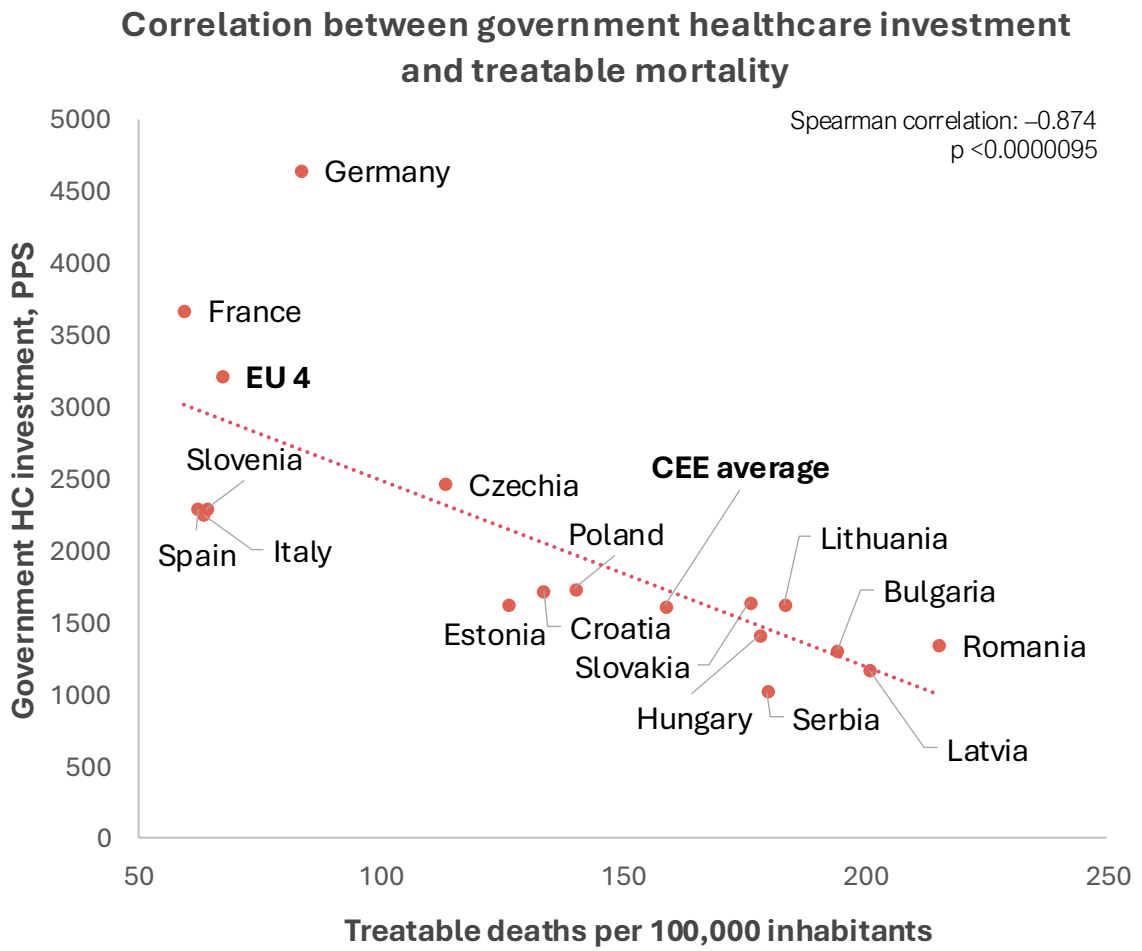



*Average values used for EU4 (France, Italy, Sprain, Germany) and CEE (Bulgaria, Serbia, Latvia, Lithuania, Romania, Hungary, Croatia, Slovakia, Slovenia, Poland, Estonia, Czechia)
DALY – disability adjusted life years; GDP – gross domestic product
PPS (purchasing power standard) is an artificial currency unit used by Eurostat in which national accounts aggregates are expressed when adjusted for price level differences using Purchasing Power Parities (PPPs). Thus, PPPs can be interpreted as the exchange rate of the PPS against the euro.
Treatable mortality refers to premature deaths that could have been avoided with timely and effective healthcare interventions, including secondary prevention, after a disease has developed
Source: WHO data for DALY (2021); Eurostat data for treatable deaths (2022) and Eurostat data for GDP per capita (2024)

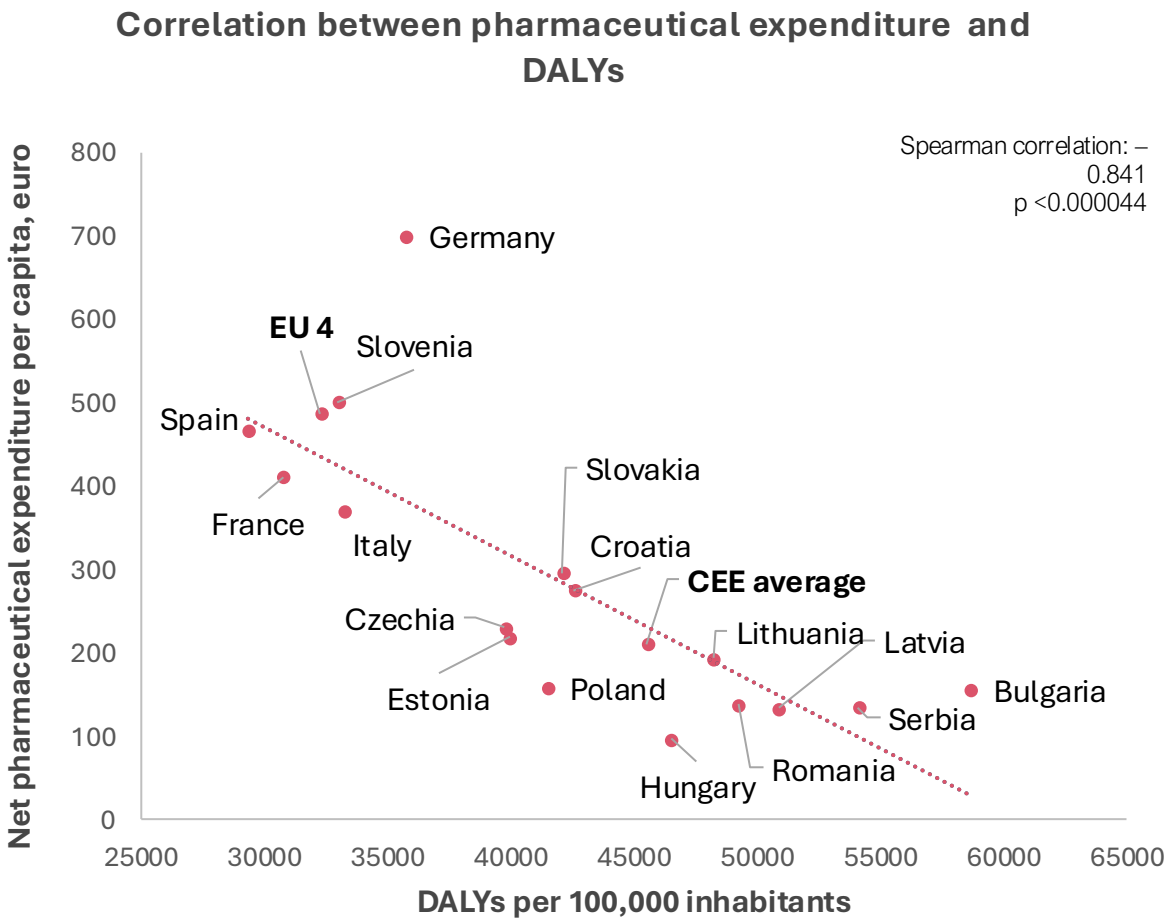
# CEE countries have higher rates of disability and treatable deaths as well as lower healthcare investment per capita compared to the EU4 average

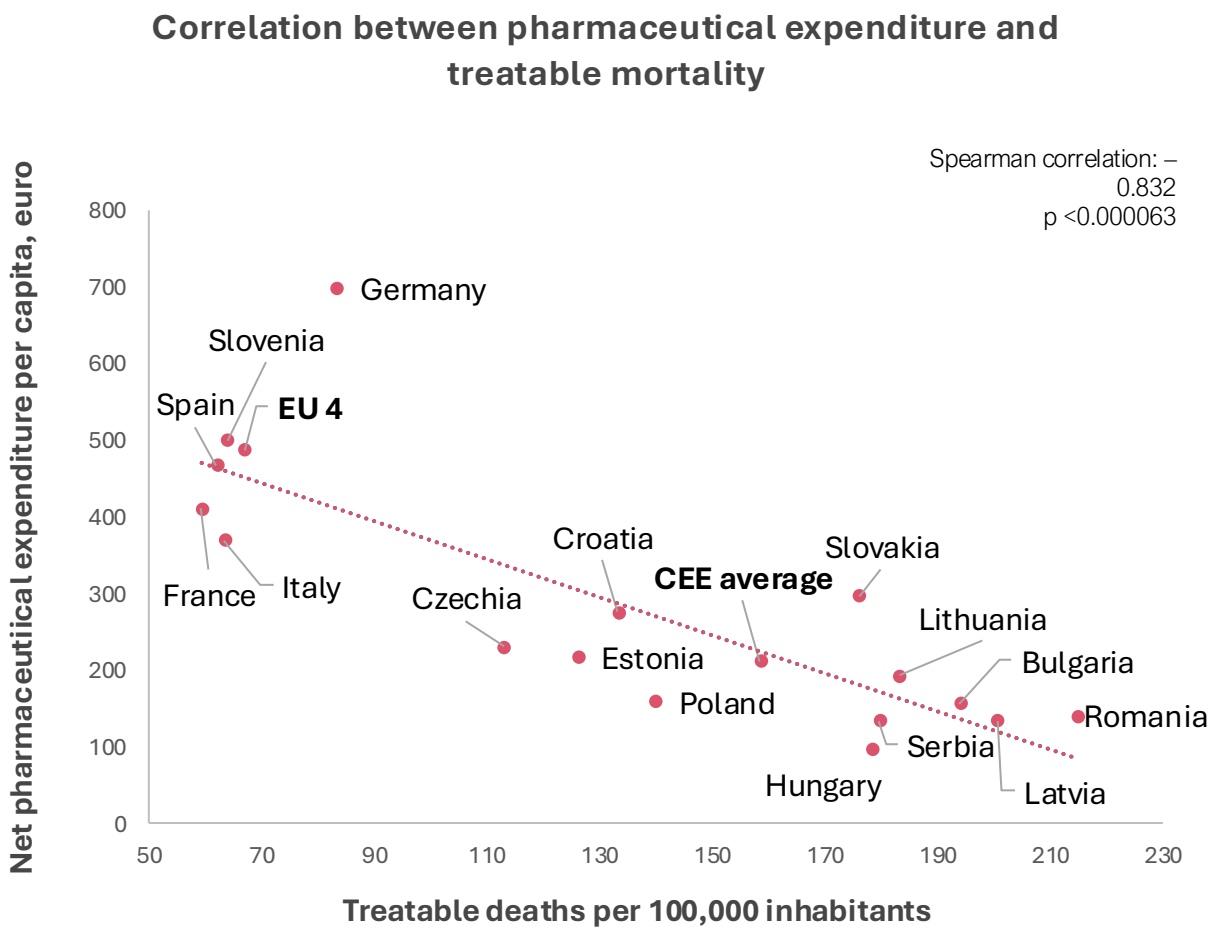



*Average values used for EU4 (France, Italy, Sprain, Germany) and CEE (Bulgaria, Serbia, Latvia, Lithuania, Romania, Hungary, Croatia, Slovakia, Slovenia, Poland, Estonia, Czechia)
DALY – disability adjusted life years; GHCE – government healthcare expenditure
PPS (purchasing power standard) is an artificial currency unit used by Eurostat in which national accounts aggregates are expressed when adjusted for price level differences using Purchasing Power Parities (PPPs). Thus, PPPs can be interpreted as the exchange rate of the PPS against the euro.
Treatable mortality refers to premature deaths that could have been avoided with timely and effective healthcare interventions, including secondary prevention, after a disease has developed
Source: WHO data for DALY (2021); Eurostat data for treatable deaths (2022) and Eurostat data for GHCE (2023)

# CEE countries have higher rates of disability and treatable deaths as well as lower net pharmaceutical spending per capita compared to the EU4 average

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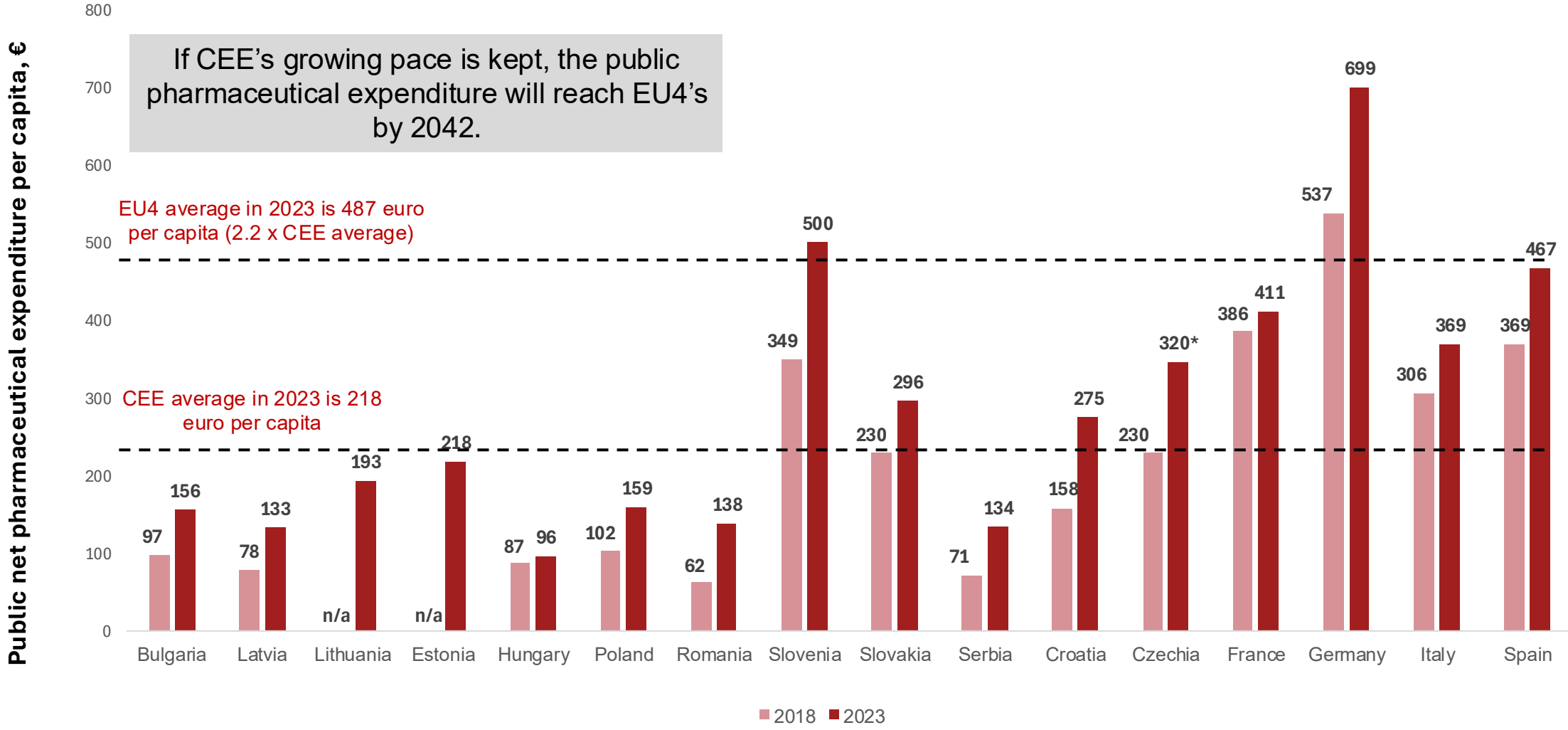
Treatable mortality refers to premature deaths that could have been avoided with timely and effective healthcare interventions, including secondary prevention, after a disease has developed
Source: WHO data for DALY (2021); Eurostat data for treatable deaths (2022) and IQVIA data for net pharmaceutical expenditure in euro per capita (2023). Data on net pharmaceutical expenditure for Czechia for 2023 are yet available; therefore, data from 2018 have been used.

# Poor investment in pharmaceuticals in the CEE is directly correlated with more DALYs and worse quality of life

- In 2023, the gap in public net pharmaceutical expenditure between Central and Eastern Europe (CEE) and the EU4 remains substantial. Among CEE countries, only Slovenia exceeds the EU4 average. Overall, CEE governments allocate **€218 per capita** to pharmaceutical spending – **less than half** of the **€487 per capita** invested on average by EU4 countries.
- This lower investment is mirrored in population health outcomes. **Bulgaria, Latvia, and Romania**, which record the **lowest per-capita pharmaceutical expenditure** in the region, also face the **highest burden of disease**, with Disability-Adjusted Life Years (DALYs) per 100,000 inhabitants reaching **58,640 in Bulgaria**, **50,873 in Latvia**, and **49,224 in Romania**. These figures highlight the strong association between limited healthcare investment and poorer health outcomes.
- At the same time, it is important to recognize the progress underway. CEE countries have been **increasing their pharmaceutical investments at a significantly faster rate** than the EU4. Between the measured years, the CEE recorded an average **CAGR of 7.66%**, compared with **3.18%** in the EU4. If this momentum is sustained, the CEE region could theoretically **close the expenditure gap by 2042 if the pace is kept.**
- This trajectory demonstrates both the commitment of CEE governments to strengthening healthcare systems and the continued need for targeted investment to ensure equitable access to innovation and to improve population health outcomes across Europe.

# In 2023 the public net pharmaceutical spending in most CEE countries is still lower than the 2018 EU4 average (400 € per capita).

## On the other hand, the average CEE CAGR for this period is 4.48% higher than the EU4 average.




Source: IQVIA, Public pharmaceutical expenditure per capita in euro.

* Data for 2022.

The EU4 average health care expenditures are calculated based on data from Germany, Italy, Spain and France

# The innovation gap: access is still uneven in CEE

- Between 2020 and 2023, only 31% of EMA-authorised medicines were reimbursed in CEE, compared to 76% in the EU4 – **a 45-percentage-point gap.** The mean time to availability was 705 days in CEE versus 445 days in the EU4 – **representing a 260-day delay.**

- **This gap was not uniform across CEE**: Czechia and Slovenia stood out as the strongest performers within CEE in terms of broad and timely availability, although further improvements are still needed, as outcomes continue to lag behind the EU4 average. In Estonia, Romania, Slovakia, Lithuania and Serbia, access remained limited and substantially delayed, with the longest delays observed in Lithuania and Romania, where the mean time to availability exceeded two years (819 and 828 days, respectively).

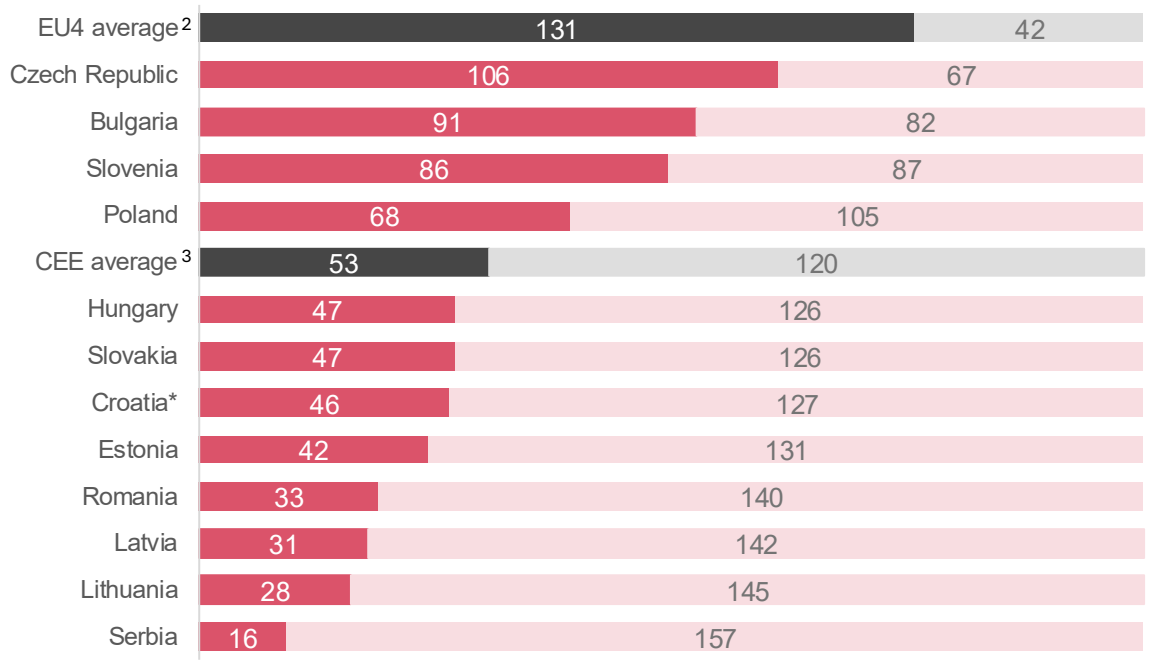
- **These delays are driven by structural barriers**, including the price and reimbursement process, the value assessment process, and health system constraints and resources. In some countries, additional layers of decision-making processes can further extend timelines and contribute to regional disparities.

- As patient needs increase, health systems face growing pressure. In this context, **timely access to innovative therapies becomes a key determinant of system performance**. Without reforms to expand access and shorten time to availability, CEE will continue to lag behind the EU4 – deepening disparities in health outcomes and undermining capacity of the health systems to realise the full clinical and economic value of pharmaceutical innovation.

# Patients in CEE had more limited and delayed access to new drugs authorised by the European Medicines Agency (EMA) compared to patients in the EU4 (2020-2023)

In CEE[3], patients gained access to 31% of new EMA-authorised drugs, compared to 76% on average across the EU4. The average time to availability in CEE[3] was 705 days, which is 260 days longer than the EU4 average[2] (445 days).

**W.A.I.T. Indicator: Availability of new drugs[1]**
2020 - 2023



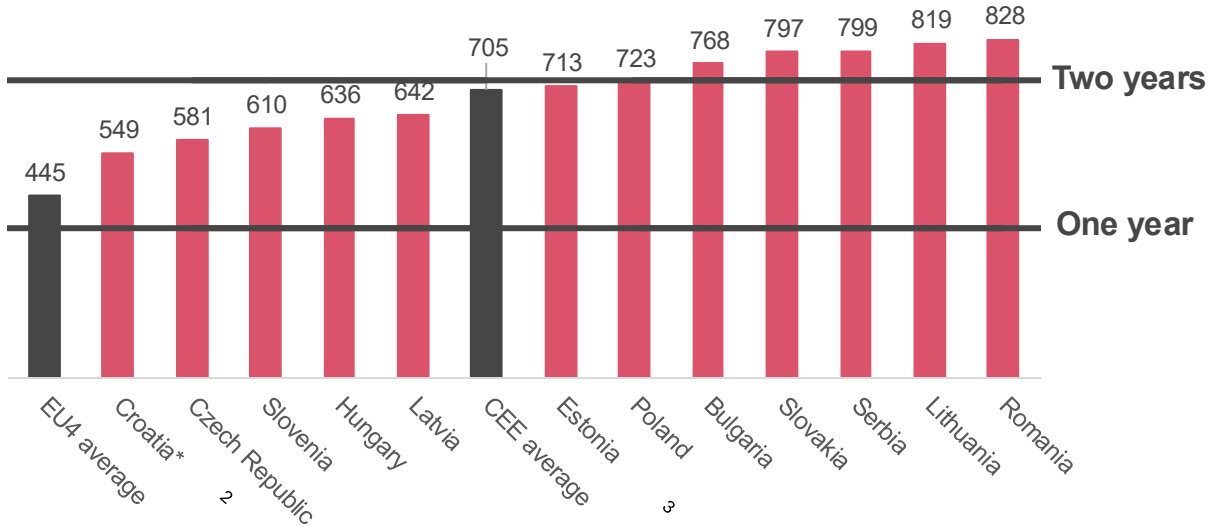

- The W.A.I.T. Indicator measures differences in time to reimbursement across Europe. A medicine is available on the market if patients can receive the medicine under a reimbursement scheme. The chart shows the number of new EMA-authorised medicines available to patients across Europe.
- Time to availability – The number of days between EMA market authorisation of a medicine and the date it becomes available to patients which, for most countries, is the point at which it gains access to the reimbursement list.
- Availability date –The first date when doctors can prescribe/hospitals can administer the medicine to patients in the country, who will be able to benefit from reimbursement conditions applicable in the country.

## Access profiles across CEE (2020–2023)

*Countries grouped based on deviation from the CEE average[3] in both availability (% of EMA-authorised drugs) and time to access.*

**Limited & delayed access:** Estonia, Romania, Slovakia, Lithuania, Serbia
**Delayed access:** Bulgaria, Poland
**Limited access:** Croatia, Hungary, Latvia
**Broad & timely access:** Czech Republic, Slovenia

**Time to availability for EMA approved drugs**
Days, 2020-2023




Source: EFPIA Patients W.A.I.T. Survey
1. By new medicines, we refer to medicines, including a substance that has not been previously available in Europe
2. The EU4 average is calculated based on data for Italy, Spain, France, and Germany. In Spain, the WAIT analysis does not identify those medicinal products being accessible earlier in conformity with Spain's Royal Decree 1015/2009 relating to Medicines in Special Situations.; For France, the time to availability (597 days, n=80 dates submitted) includes products under the Accès précoce system (n=4 dates submitted) for which the price negotiation process is usually longer.
3. The CEE average is calculated based on data for the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Bulgaria, Romania, Croatia, and Serbia.
*Croatia did not complete a full dataset and therefore availability may be unrepresentative.

# OOP play a major role in CEE health financing, leaving patients financially vulnerable

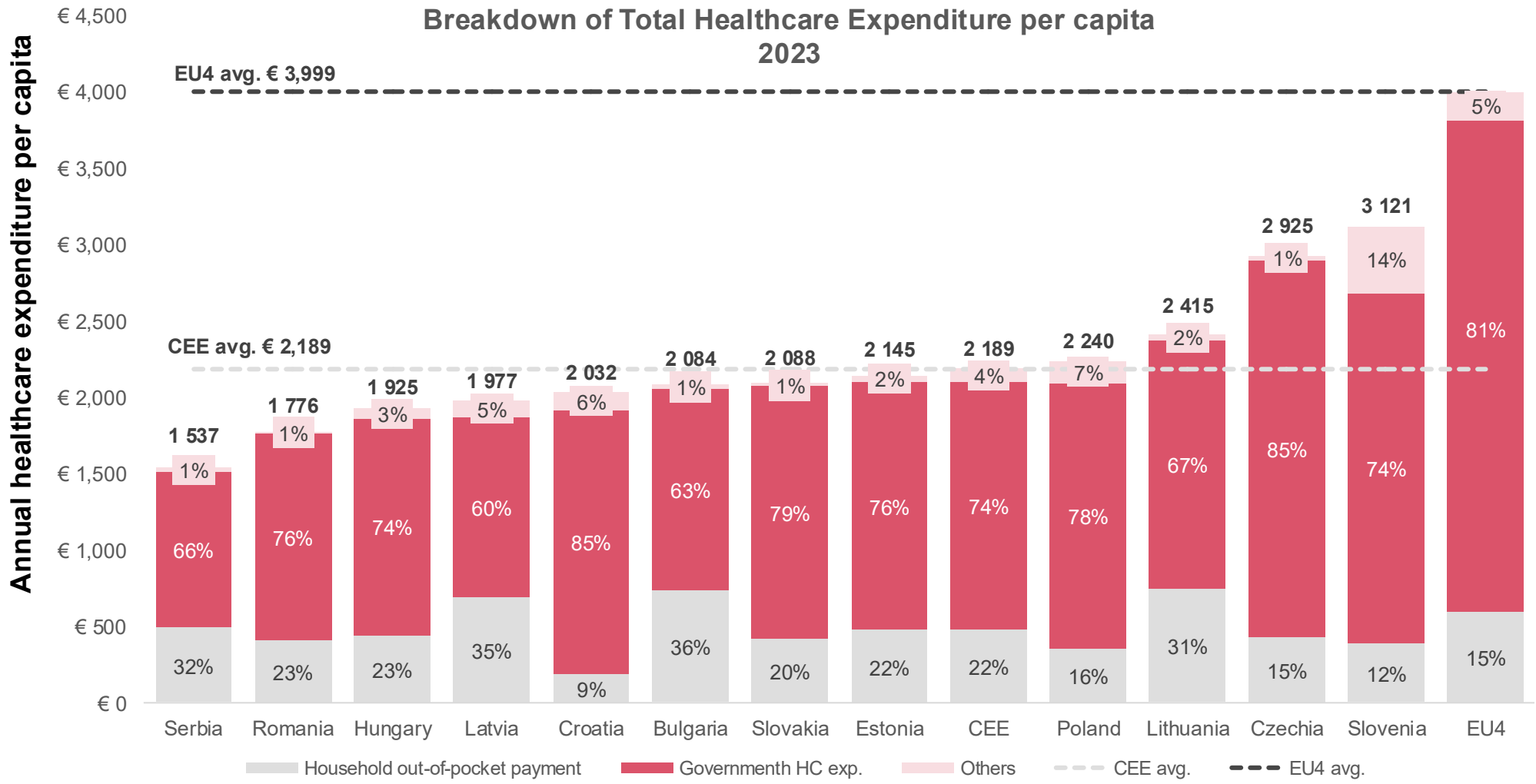
- **CEE remains structurally under-invested versus Western Europe, and households are being used to fill the gap.** Out-of-pocket (OOP) payments make up **22%** of total health spending in CEE, compared with **15%** in the EU4 - shifting the burden from pooled financing to patients.

- **This is not sustainable convergence.** While total spending in CEE is moving upward, a disproportionate share of the catch-up is being driven by OOP payments rather than strengthened public financing, with major cross-country differences.

- **WHO evidence is clear: high OOP is a predictable policy failure.** While controlled cost-sharing with appropriate safeguards can support efficiency, CEE's current OOP levels increase the risk of financial hardship and unmet need and are associated with worse health outcomes—exactly the pattern that must be reversed if CEE is to close the investment gap without transferring costs to households. Depending on the population’s economic capacity, a modest level of OOP payments may play a beneficial role in improving patient treatment adherence.

# Out-of-pocket expenditure makes up a significant proportion of total healthcare expenditure in the CEE countries

## High co-payments worsen health outcomes by financial hardship and unmet need[1]




- Out-of-pocket (OOP) healthcare expenditure is higher in the CEE compared to the EU4 (22% vs. 15%).
- Public healthcare expenditure is only 74% in the CEE compared to 81% in the EU4.

Public healthcare expenditure in Serbia, Latvia, Bulgaria and Lithuania is below the average in the CEE and the EU4.

Source: EUROSTAT, Health care expenditure by financing scheme, Total and Government schemes and compulsory contributory health care financing schemes, Household out-of-pocket payment, PPS per inhabitant

[1] Can people afford to pay for health care? Evidence on financial protection in 40 countries in Europe. WHO Regional Office for Europe; 2023; https://www.who.int/europe/publications/i/item/9789289060660

The CEE average health care expenditures are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia and Bulgaria.

The EU4 average health care expenditures are calculated based on data from Germany, Italy, Spain and France

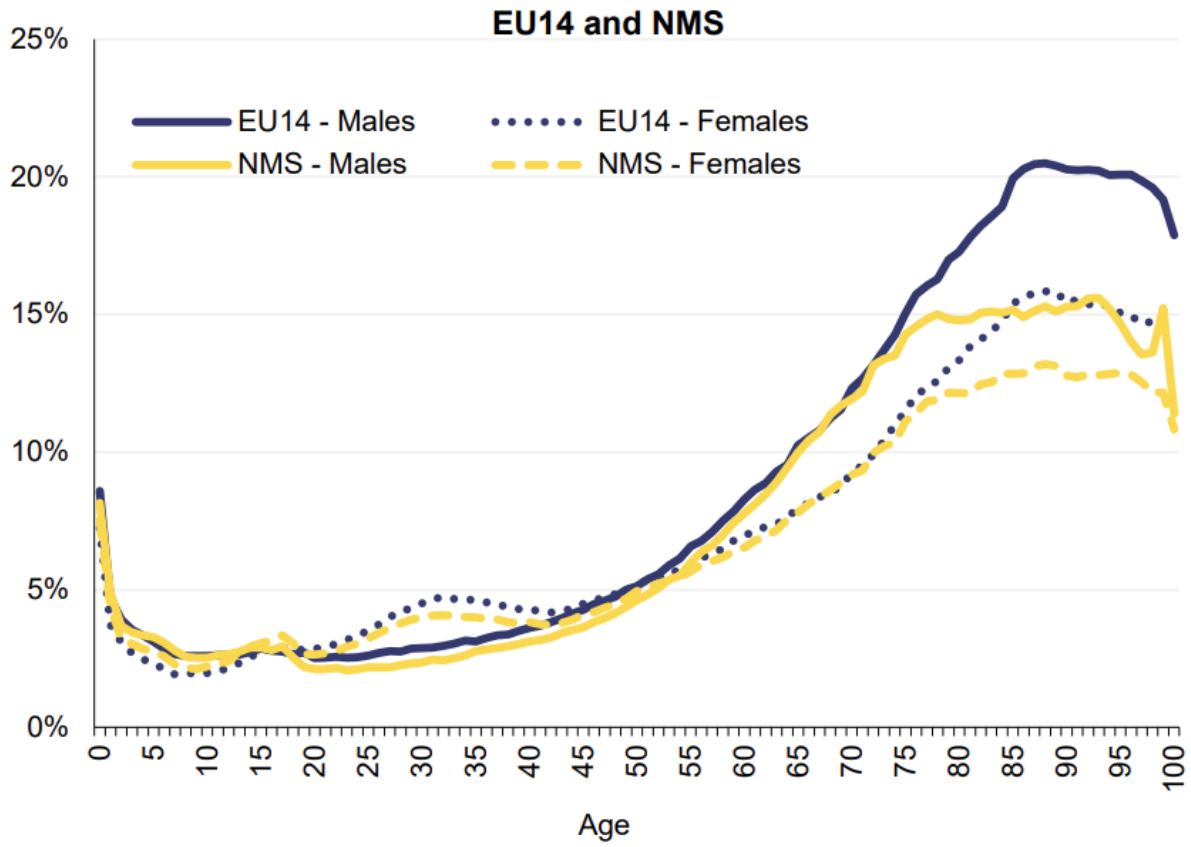
# Demographic erosion threatens fiscal sustainability

## Re-Shaping CEE's Healthcare Future

- Population aging sharply increases healthcare spending: Per-capita **health expenditure rises steadily with age** and accelerates after 55, with costs tripling between ages 55 and 85 due to higher prevalence of chronic conditions and multimorbidity. While NMS countries show slightly lower peak spending intensity (13-15% of GDP per capita) compared to EU14 (16-20%), this masks a critical disadvantage: NMS countries operate from much smaller economic bases, meaning they have dramatically less absolute resources per capita than EU14 countries to fund the same demographic transition.
- **The CEE workforce is shrinking rapidly:** By 2050, the working-age population (15-64) is projected to decline by 12.9 million (~20%), reducing labor supply and further straining public finances. The steepest workforce declines are concentrated in Latvia, Lithuania, and Bulgaria, creating an unprecedented fiscal crisis across the CEE region.
- **Fiscal sustainability under pressure:** CEE will lose €14.6 billion in annual income tax revenues by 2050 as consequence of the shrinking working age population with Latvia being the most affected with 31% loss of the workforce. By comparison, France and Italy incur larger absolute fiscal losses (€10.8bn and €38.8bn, respectively), despite much smaller projected workforce decline of 4% and 16%, respectively. While France and Italy manage gradual adjustment, the combined effect of rising age-related healthcare needs and a collapsing workforce creates a growing fiscal squeeze across CEE.

# The relationship between the age of individuals and their use of health care: An aging population increases pressure on healthcare spending

**Age-related healthcare spending per capita as proportion of GDP per capita** %, 2022



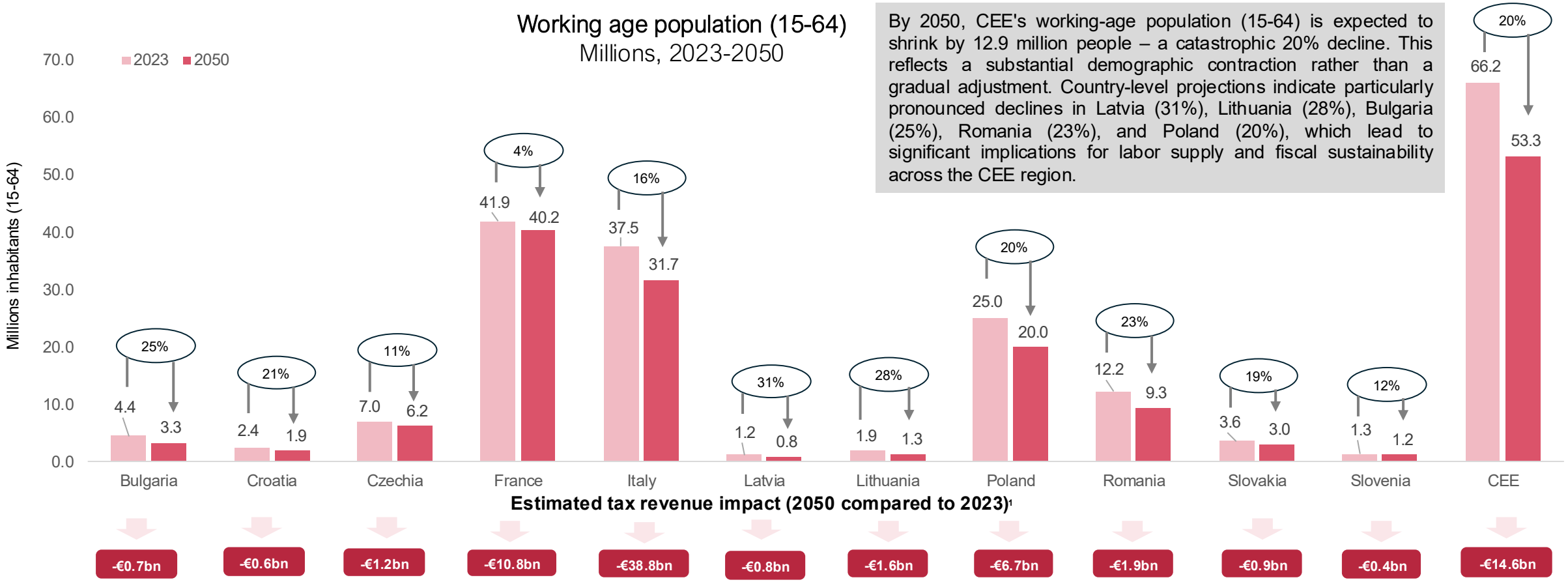

According to the European Commission, per-capita public health expenditure in CEE countries rises steadily with age and accelerates sharply after 55. This trend reflects the growing prevalence of chronic conditions and multimorbidity, which require more intensive and costly care. Between ages 55 and 85, average healthcare spending per person increases roughly threefold, underscoring the strong link between population aging and higher healthcare expenditure.

The chart shows that age-related healthcare spending in NMS and EU14 follows comparable trajectories, with expenditure rising steeply between ages 55 and 85 in both regions. Peak spending corresponds to approximately 13-15% of GDP per capita in NMS and 16-20% in EU14. Although these proportions appear similar, they translate into substantially different absolute spending levels, as GDP per capita is markedly lower in NMS countries. Consequently, as the population share in older age groups (75-85 years) increases, NMS health systems face significantly greater budgetary pressure relative to available resources than EU14 systems.

Source: The 2024 Ageing Report. Economic & Budgetary Projections for the EU Member States (2022-2070)
The EU14 aggregate includes the profiles of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Sweden.
The NMS aggregate includes Bulgaria, Croatia, Czechia, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovakia and Slovenia. Romania did not provide an age-cost profile. It was imputed as the average cost profile of NMS.

# The working age population is projected to fall by 12.9m in CEE so reducing labor supply and tax revenue

## This would reduce annual income tax revenue by an estimated €14.6bn by 2050 across CEE




By 2050, CEE's working-age population (15-64) is expected to shrink by 12.9 million people – a catastrophic 20% decline. This reflects a substantial demographic contraction rather than a gradual adjustment. Country-level projections indicate particularly pronounced declines in Latvia (31%), Lithuania (28%), Bulgaria (25%), Romania (23%), and Poland (20%), which lead to significant implications for labor supply and fiscal sustainability across the CEE region.

The fiscal impact demonstrates CEE's unique vulnerability. CEE countries will lose €14.6 billion in annual income tax revenues by 2050, with the largest losses in Poland (-€6.7bn), Romania (-€1.9bn), and Lithuania (-€1.6bn). By comparison, France (€-10.8bn) and Italy (€-38.8bn) face larger fiscal losses with smaller workforce reductions (4% and 16%), compared with an average decline in working age population of around 20% in the CEE region. While France and Italy manage gradual adjustment, CEE faces fiscal catastrophe.

Source: Analysis of Eurostat data for income tax and population projections
1. This is the difference between annual tax revenue in 2023 and annual tax revenue in 2050. We assume tax paid per working age person remains constant between 2023 and 2050. Income tax is from salaries/wages 'individual or household income.
2. There is missing tax revenue data for Hungary, Estonia, Germany, Spain and EU4 + UK.

# The pharmaceutical industry is often a “hidden payer” through paybacks

## In 2023 the industry contribution reaches 1/5 to 1/3 of the public pharmaceutical expenditure

**Hungary (30%)**, **Romania (26%)**, **Bulgaria (23%)** and **Croatia (23%) are the CEE countries with the highest** industry contribution in 2023. Additionally, Bulgaria has one of the highest 5-year CAGR of the industry contribution -> +29.88%. **Significant increase in industry contribution** is observed across Slovenia **(+36.02%)**, Serbia **(+30.77%)** and Poland **(+17.76%)**.

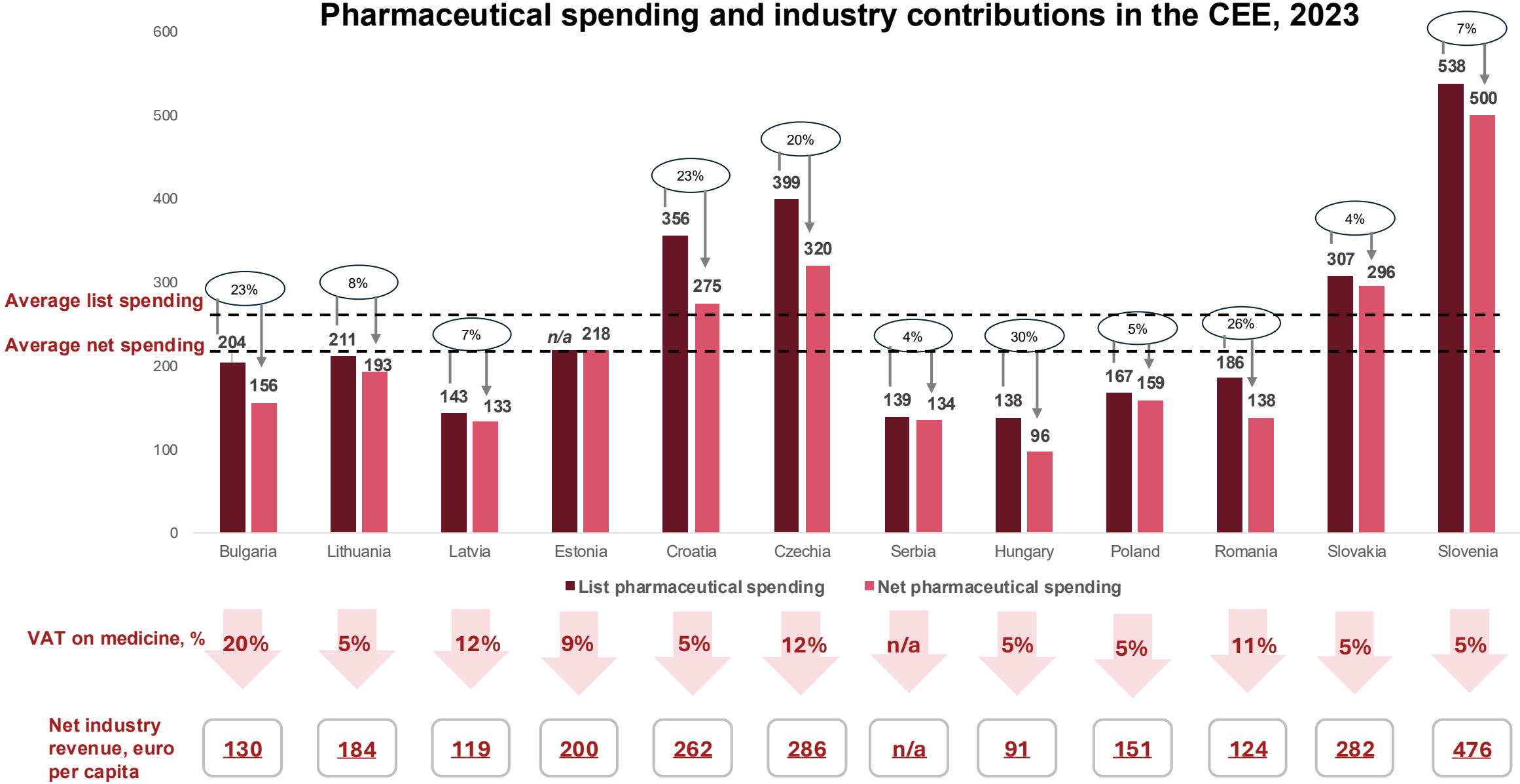
Public pharmaceutical budgets remain structurally low across much of CEE. Governments increasingly rely on **high clawbacks and mandatory rebates** to contain overspending. This practice effectively shifts the financing of public health systems from the state to private pharmaceutical companies, turning the industry into a **de facto “hidden payer.”**

While patient demand is rising and healthcare systems depend more than ever on innovative medicines, the portion of spending that truly funds research, development, manufacturing, and future breakthroughs is being compressed. Mandatory paybacks and clawbacks may provide short-term budget relief but structurally relying on increasing industry contributions is not a sustainable financing model. It introduces unpredictability, discourages long-term investment, and risks weakening the life sciences ecosystem. If we want resilient healthcare systems and continued medical innovation, we must shift from reactive clawbacks to predictable, sustainable funding frameworks. The real question is not how much we spend on medicines — but how much of that spending actually supports innovation.”

## Impact on the patient

As financial pressure on pharmaceutical companies intensifies, the probability of **deferred product launches, limited volumes, or reduced portfolio breadth** increases. This directly affects patients, who may experience **slower access to innovative and life-saving therapies** compared with EU4 countries, where higher public investment reduces reliance on punitive paybacks.

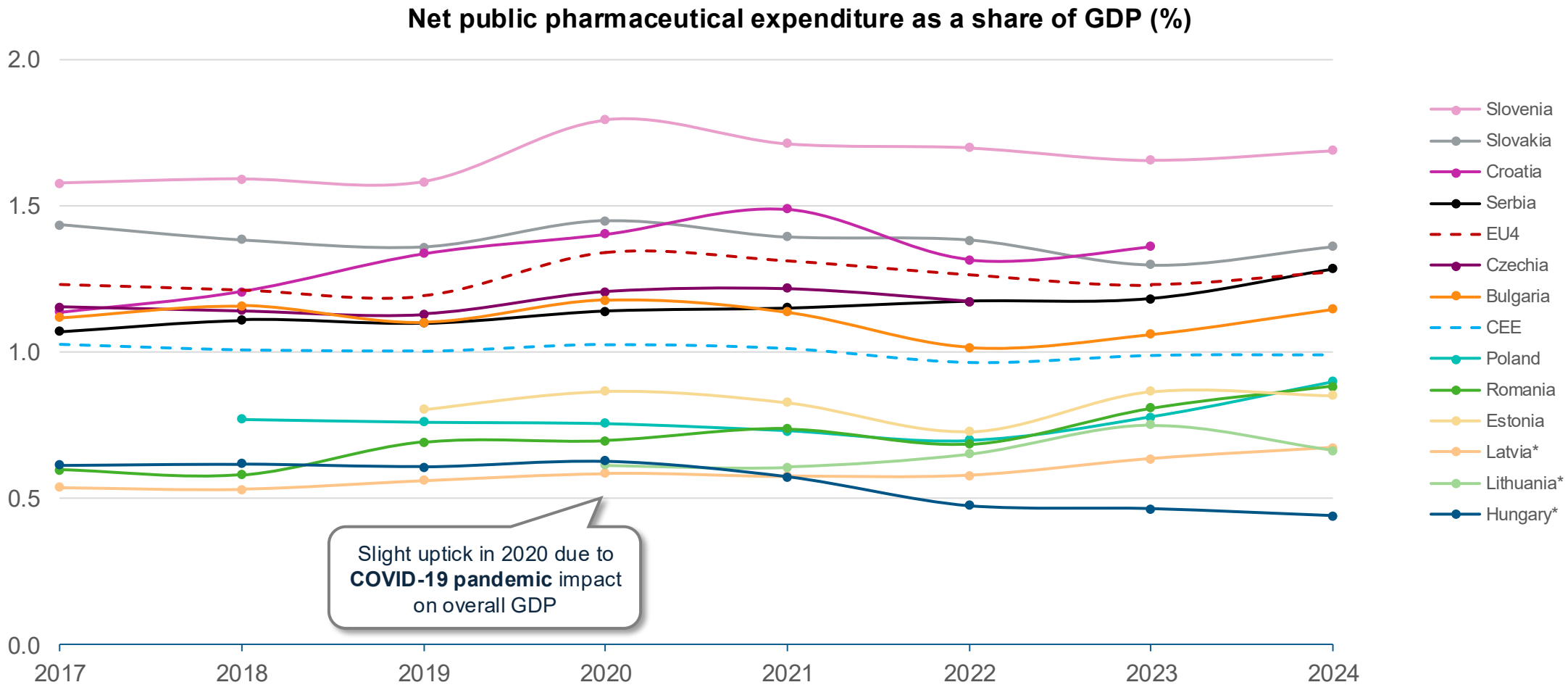
# Pharmaceutical spending and industry contributions in the CEE, 2023




Source: IQVIA, Industry contribution in 2023 shown as euro per capita and pharmaceutical expenditure shown as euro per capita. Public spending in Czechia: Data from 2022. Hungary data shows only retail net industry revenue as hospital revenue is not officially published.

# Net public pharmaceutical expenditure remains at ~1% of GDP across CEE — below EU4 levels in most countries

## The CEE average has remained 20–30% below EU4 levels throughout 2017–2024, with no sign of convergence




*Analysis of retail expenditure only

Source: Source: WorldBank GDP (current LCU) (https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.MKTP.CN&country=OED)

The CEE average health care investments are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland,Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia* and Bulgaria.

The EU4 average health care investments are calculated based on data from Germany, Italy, Spain and France

# Health investment drives productivity and growth

The evidence is consistent: **health spending is a productive public investment, not a discretionary cost.** When health systems are underfunded, the economy pays through lower labour supply, more absenteeism, early exits from work, and rising disability and social protection costs—making **stronger public healthcare financing** a growth and fiscal policy lever.

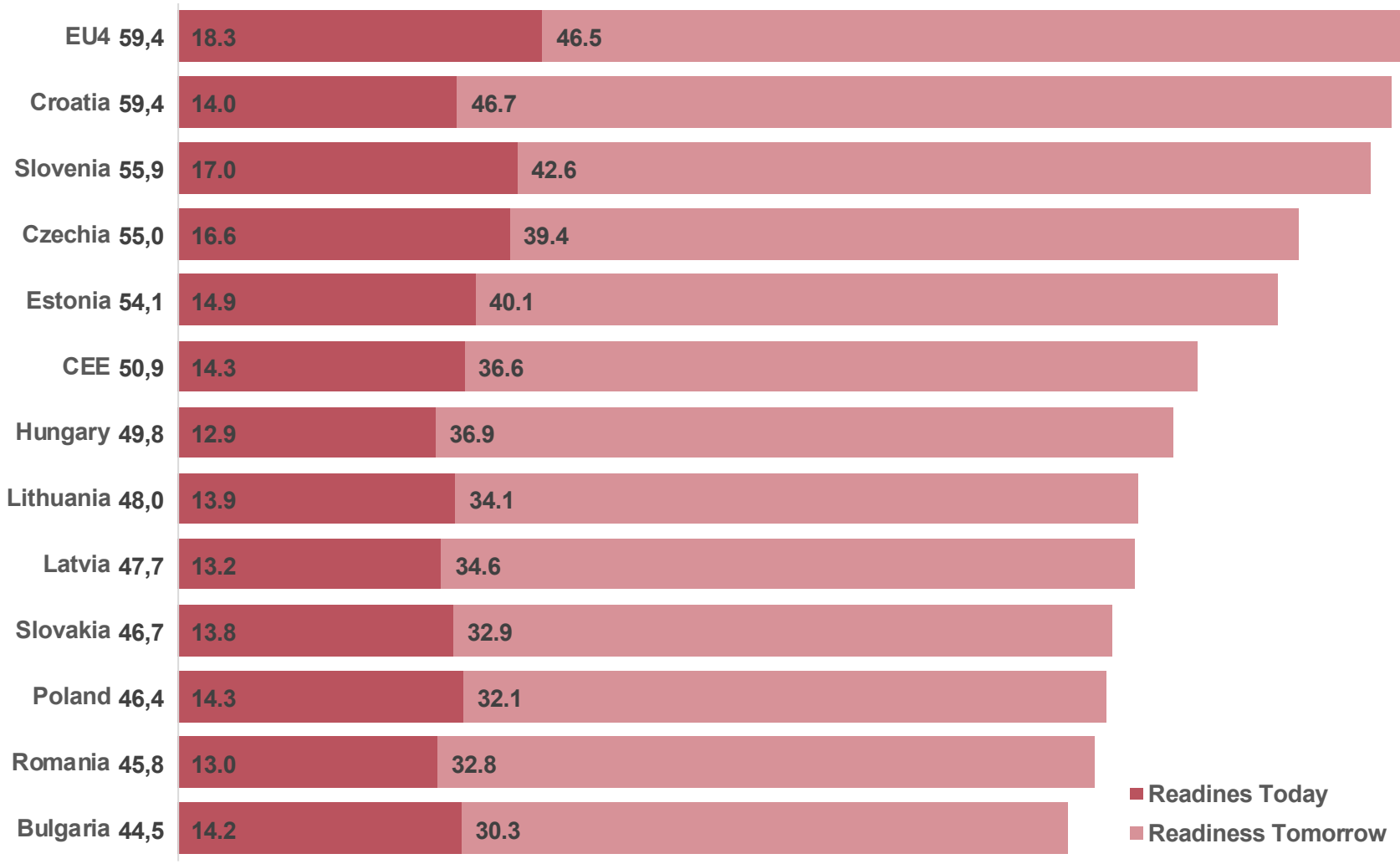
This investment gap is visible in system performance metrics: **the GLOBSEC Healthcare Readiness Index (2024) scores CEE at 50.9 versus 59.4 in the EU4—around a 14% gap.** The shortfall is structural, with CEE scoring **22% lower on "Readiness Today" (14.3 vs 18.3)** and **21% lower on "Readiness Tomorrow" (36.6 vs 46.5)**, reinforcing the case for sustained public investment.

For CEE—where the working-age population is shrinking—**maintaining a smaller workforce in good health is no longer optional.** Increasing and sustaining public healthcare spending should prioritise high-return areas: prevention and early detection, stronger primary care, and timely access to effective medicines and care pathways that reduce avoidable hospitalisations. **Not all spending delivers the same impact**, but shifting budgets toward high-value interventions—paired with accountability and efficient implementation—can make higher public health expenditure both affordable and fiscally sustainable over the medium term.

Source: GLOBSEC Healthcare Readiness Index 2024

# Healthcare readiness index 2024

## Healthcare expenditure as long-term investment, rather than a short-term cost




CEE countries lag behind EU4 in overall healthcare readiness, scoring notably lower on both today's system performance and future preparedness, highlighting the need for sustained investment to close the readiness gap.

**HRI** (**Healthcare readiness index**) is a composite ranking that combines "Readiness Today" and "Readiness Tomorrow" indicators to show how prepared national healthcare systems are for current and future challenges. It enables straightforward comparison between countries, highlighting both strengths and gaps in their healthcare readiness

Source: GLOBSEC, Healthcare Readiness Index 2024

The CEE average are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania and Bulgaria.

The EU4 average are calculated based on data from Germany, Italy, Spain and France

# Good practices in CEE: drivers of healthcare innovation

## Institutional governance and collaboration

- **HTA empowerment**: Integration into decision-making
- **Trust-based partnerships**: Transparent industry-agency dialogue
- **Stakeholder alliances**: Collaborative orphan drug pathways

## Sustainable funding and innovative pricing

- **Outcomes-based models**: Individualized, non-linear contracts
- **Budget safeguards**: "Expensive Drugs List" and no-payback growth
- **Risk-sharing**: Use of price confidentiality and negotiations

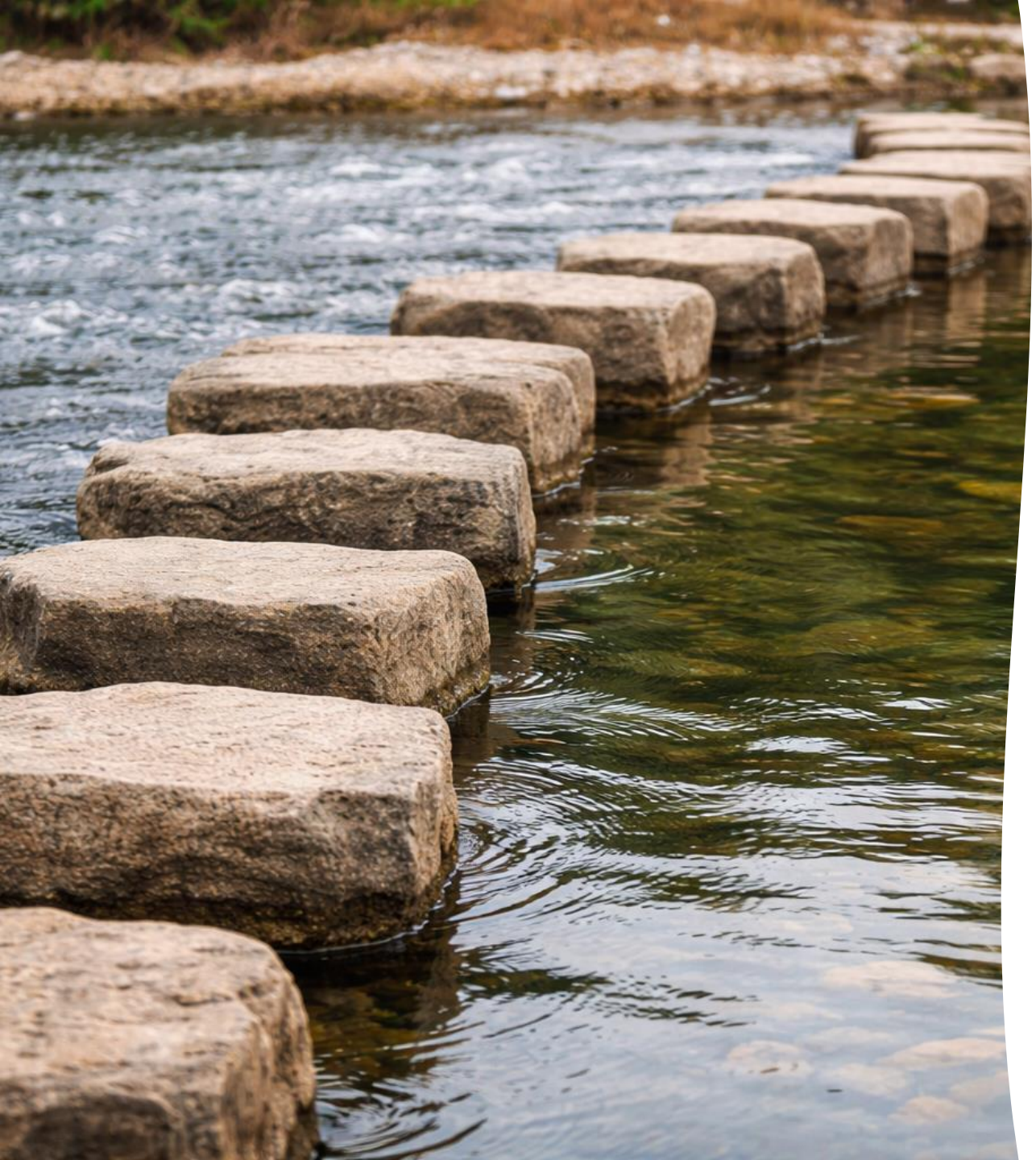
## Specialized health and advocacy programs

- **Rare disease infrastructure**: National registries and expanded screening
- **Dedicated vaccine HTA**: New evaluation process for voluntary vaccines
- **Value advocacy**: Impactful public awareness campaign

## Operational efficiency and access

- **Timeline optimization**: P&R process reduced from 600 to 180 days
- **Care decentralization**: Moving oncology care to regional centers
- **Primary care expansion**: Relaxed GP prescribing criteria

Poland Slovenia Croatia Czech Republic



# What should the next steps for CEE be?

CEE countries are making meaningful progress in strengthening their health systems. Health and pharmaceutical spending is **rising faster than in the EU4**, and several countries are gradually converging toward EU4 levels of investment, access, and system performance. **The trend must be sustained because..**

A significant effect of innovative medicines offsets risk factors (rebound effect); therefore, it is necessary to put strong emphasis on reducing risk factors such as smoking, obesity, and alcohol consumption in order to increase the net impact of health investments.

To convert current momentum into lasting convergence, CEE governments need to position health as a **strategic, long-term investment** in human capital and economic resilience. This requires sustained public funding, a reduced reliance on out-of-pocket spending, and **faster, value-based access to effective care and innovation**. Strengthening collaboration across all healthcare stakeholders – including public institutions, providers, payers, and industry – will be essential.

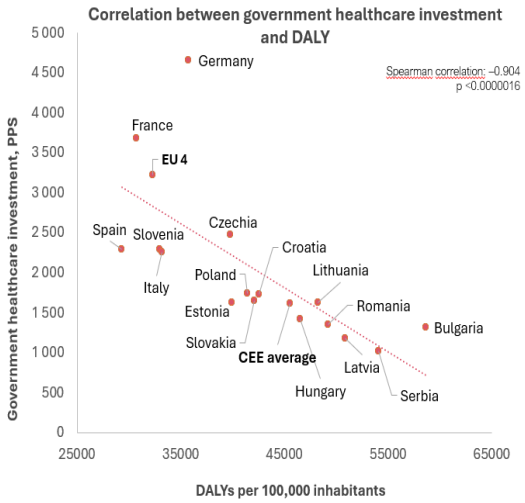
**With these steps, today's health investments can help CEE countries close the gap, support economic growth, and deliver meaningful improvements in population health and well-being**.

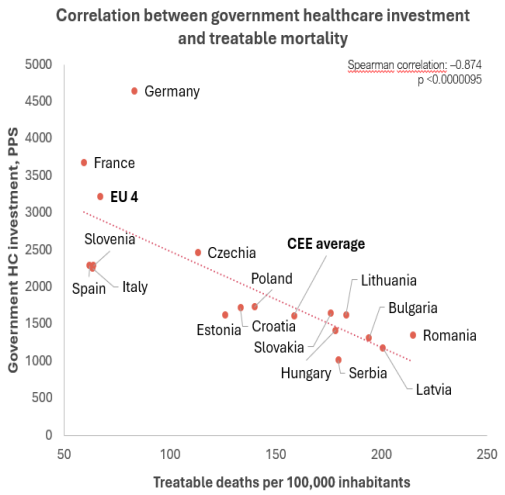
# Underinvestment in CEE healthcare is actively costing lives. Governments must close the EU4 funding gap now or accept a future defined by higher mortality, poorer outcomes, and systemic decline.

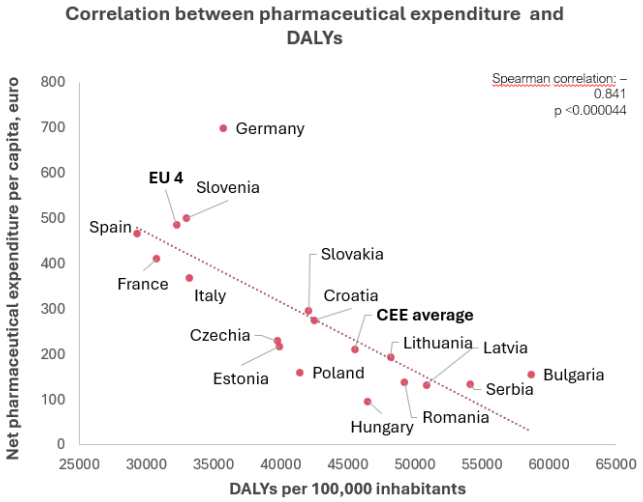
# The cost of „*doing nothing*“

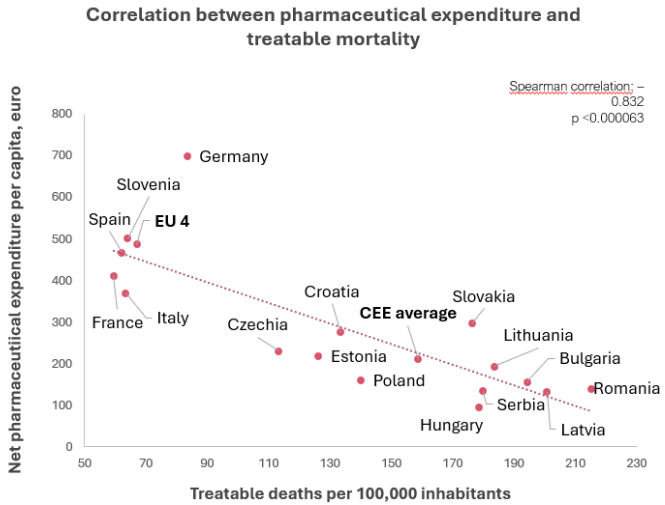
If CEE countries fail to increase healthcare investment, the region will accumulate **>49M DALYs** and experience **>176K preventable deaths** per annum.

By contrast, catching up to EU4 investment levels as early as **tomorrow** could avert **>13M DALYs** and save **>101K lives** from treatable causes. With an average GDP per capita of 21 800 euro in the CEE, the potential economic impact in terms of savings reached **300 billion euro.**




**The data indicate that CEE healthcare systems - built predominantly on public funding - are no longer able to sustain the economic burden of „doing nothing“.**

Projections regarding averted Disability-Adjusted Life Years (DALYs) and reductions in preventable mortality are provided to illustrate the potential costs of maintaining the status quo. However, these projections are preliminary rather than methodologically robust; they are extrapolated from ecological correlations between health investments and outcomes in Western European countries and thus remain limited by potential multi-variable confounding.

# Key Policy Recommendations

1. **Strengthen the sustainability and efficiency of health financing to improve population outcomes.** CEE governments should prioritise health spending reforms that improve allocative efficiency, system performance, and long-term fiscal sustainability.

a) Increase efficiency and effectiveness of health spending through modernizing governance and system integration.

b) Enhance predictability of pharmaceutical financing and reduce distortionary payback mechanisms.

2. **Reduce structural barriers to timely access and availability to innovative medicines**. Delayed access to effective therapies remains a major contributor to health inequality across Europe. On average, CEE patients gain reimbursed access to only around one-third of new EMA-authorised medicines, with delays exceeding 600 days. Addressing these gaps requires coordinated reforms in pricing, reimbursement, and system capacity.

a) Align financing with long-term value. Traditional siloed budgets often fail to capture the broader system savings generated by effective treatments. CEE countries should explore integrated budgeting, outcomes-based payment models, and multi-year funding approaches to improve resource allocation and better reflect the long-term economic benefits of reducing disease burden and avoidable hospitalization.

b) Strengthen HTA frameworks through broader value and real-world evidence. HTA should evolve toward value-based decision making by incorporating real-world data, patient-reported outcomes, and wider societal and productivity impacts. Faster and more proportionate assessment pathways for high-unmet-need therapies can support more efficient purchasing decisions while improving equity of access across the region.

c) Member States should leverage the outputs of the Joint Clinical Assessment (JCA) by using the JCA report at national level and not duplicating data requests and analyses in the JCA submission dossier. JCA outputs should be seamlessly integrated in national HTA and P&R procedures, leading to faster and more robust decisions at national level.

3. **Embed prevention and risk-factor reduction as a core complement to health investment.** The long-term health and economic returns of healthcare spending and pharmaceutical innovation are maximised when combined with stronger prevention policies, incl. vaccines, targeting major modifiable risk factors. CEE countries should scale up tobacco control, obesity and nutrition strategies, alcohol harm reduction, and early detection programmes, particularly given ageing populations and the rising burden of chronic disease.