The most advanced health systems are still failing to prevent chronic diseases

Acting too late costs suffering and lives

With the publication of the white paper "Acting Early on Non-Communicable Diseases: A Framework for Health System Transformation"(1) in January 2026, the World Economic Forum (WEF), in collaboration with the Partnership for Health System Sustainability and Resilience (PHSSR), presents an unsparing diagnosis (2). The analysis follows a research framework developed at the London School of Economics and Political Science (LSE); the PHSSR steering committee is co-chaired by Alistair McGuire, Professor of Health Economics and Chair of LSE Health. Eight highly developed health systems were examined – Canada, France, Germany, Greece, Italy, Japan, Poland and Spain. The results reveal a deep gulf between medical knowledge and political action and, almost in passing, expose a paradox of the world's most advanced health systems: people are living ever longer, but are increasingly spending the years gained in the grip of chronic diseases. The main burden is borne by non-communicable diseases (NCDs) such as cancer, cardiovascular disease, diabetes, chronic kidney disease and chronic respiratory disease.

>> Despite extensive evidence that early interventions improve health outcomes, reduce costs and lessen the environmental burden, even the best-resourced systems remain stuck in reactive repair medicine. Shyam Bishen, Head of the Centre for Health and Healthcare and member of the Executive Committee of the World Economic Forum, warns emphatically that without profound reforms, NCDs will overwhelm health systems, erode human capital and tie up valuable resources. The study quantifies the global rise: in 2021, NCDs were responsible for an estimated 43.8 million deaths, around 75% of all deaths outside of pandemics. In light of these figures, the UN Secretary-General also warns in his 2025 progress report that Sustainable Development Goal SDG 3.4 – reducing premature NCD mortality by one third by 2030 – will be missed without radical course corrections. Bishen and McGuire write in the foreword to the study: "Non-communicable diseases are already threatening the sustainability and resilience of health systems, and the window for corrective action is closing." The white paper itself states: "Transforming health systems from reactive to preventive care is one of the most critical challenges – and opportunities – in healthcare."

The findings show that progress in prevention remains limited. Although all eight countries have reduced their age-standardized NCD mortality, the pace has slowed dramatically: the average annual decline in the mortality rate fell from 1.78% in 2000 to 2010 to 0.98% in the period 2010 to 2021 – a 45% slowdown that affects even the best-performing nations. While age-adjusted rates are falling, the absolute burden of disease (measured in disability-adjusted life years, DALYs) is rising in all countries due to aging populations. More people are reaching an age at which lifelong risk factors manifest as chronic diseases.

Diabetes

The trend in diabetes mellitus is alarming. Between 2011 and 2021, unadjusted diabetes DALYs rose in all countries examined, in several by more than 30%: Canada +35.1%, Poland +34.5%, Greece +32.6%; followed by Japan at +27.4% and Germany at +26.9%, then Spain (+15.7%), France (+12.1%) and Italy (+6.7%).

Age-adjusted figures also show a considerable increase: seven of the eight countries recorded a real increase despite medical progress – with Germany leading this trend (+22.5%), followed by Canada (+21.3%), Greece (+18.6%), Poland (+16.2%), Japan (+14.8%), Spain (+3.1%) and France (+2.4%). Italy is the only country with a decline (–4.7%). The systemic weakness visible here is also reflected in diabetes-related amputation rates, which range from 2.5 per 100,000 inhabitants in Italy to 8.5 in Germany.

CKD

Chronic kidney disease (CKD), which is directly linked to diabetes and hypertension, suffers from a glaring diagnostic deficit. In France, 95.5% of stage 3 CKD cases go undetected. The consequence: 25% of patients start hemodialysis under emergency conditions – a situation that would be largely avoidable through simple and inexpensive tests in primary care (urinalysis, eGFR measurement). Greece recorded an unadjusted increase in CKD DALYs of 134% between 2011 and 2021, which the report authors – the Greek report is led by Kostas Athanasakis, Professor of Health Economics at the University of West Attica – attribute mainly to improved recording rather than to an actual deterioration.

Cancer

Cancer is now the largest driver of DALYs in six of the eight countries, having overtaken cardiovascular disease. Here, the timing of diagnosis decides between life and death: in Canada, the five-year survival rate is over 89% for breast cancer but 22% for lung cancer. The reason is the stage at diagnosis – breast cancer is usually detected at stage 1, lung cancer mostly only at stage 4.

The reports give specific five-year survival rates for two countries. For Canada, in addition to the figures mentioned: prostate cancer 91%, uterine cancer 82%, bladder cancer 77%. For Spain: prostate cancer 89.8%, breast cancer 85.5%; lung cancer survival is strongly sex-specific and reflects historical smoking patterns – 17.6% in women, 12.7% in men. For the remaining six countries (Germany, France, Italy, Japan, Greece and Poland), the reports contain comprehensive

data on the burden of disease and early detection rates, but no specific percentages for five-year survival rates.

COPD and asthma

Chronic respiratory diseases such as chronic obstructive pulmonary disease (COPD) and asthma reveal deep cracks in outpatient care. Since many exacerbations could be avoided through consistent, early outpatient treatment, the corresponding hospital admission rates are considered a sensitive indicator of primary care performance. The gap is extreme: Italy reduced its admission rate from 109 to 23 cases per 100,000 inhabitants between 2011 and 2021 – a decline of around 79%. Germany, by contrast, has the highest reported rate in the country comparison at 193 admissions per 100,000 inhabitants, well above the OECD average of 129. For comparison: Poland reduced its rate from 281 to 83 cases.

Behind these unequal hospitalization rates lies a massive deficit in early detection: international studies estimate that two thirds of people with airway obstruction are undiagnosed and therefore remain untreated. Country-specific approaches aggravate the problem. Only Poland runs an organized COPD screening program using spirometry in line with the GOLD guidelines, albeit with limited reach. France limits its examinations to high-risk groups with occupational or environmental exposure, thereby overlooking large parts of the smoking population; the remaining six countries – including Germany – have not established any systematic early detection at all.

"An implementation gap, not a knowledge gap"

A detailed look at the social and environmental determinants supports the thesis of an implementation gap rather than a knowledge gap. Modifiable risk factors such as tobacco use, unbalanced diet, physical inactivity and obesity are by no means evenly distributed but cluster systematically along lines of socioeconomic disadvantage. Germany illustrates this very clearly: smoking rates in groups with low educational attainment are twice as high as in highly educated groups. Obesity affects more than a quarter of people in some population groups, with factory workers showing a 50% higher rate than managers. Physical inactivity remains a mass phenomenon, although it is well established that even moderate physical activity significantly reduces NCD risk.

That health and social inequalities do not level out but become entrenched after the onset of a chronic disease is a pattern running through all the countries studied. The data for France are particularly vivid: a 13-year difference in life expectancy between the richest and poorest 5% of men, eight years among women. The disparity, which had actually narrowed since the Industrial Revolution, is widening again – a development that the French report authors led by Zeynep Or, Research Director at the Institut de recherche et documentation en économie de la santé (IRDES), link to sedentary lifestyles and the unequal influence of commercial determinants of health. Once a chronic diagnosis has been made, the life expectancy gap between the richest and poorest income deciles grows from four to six years.

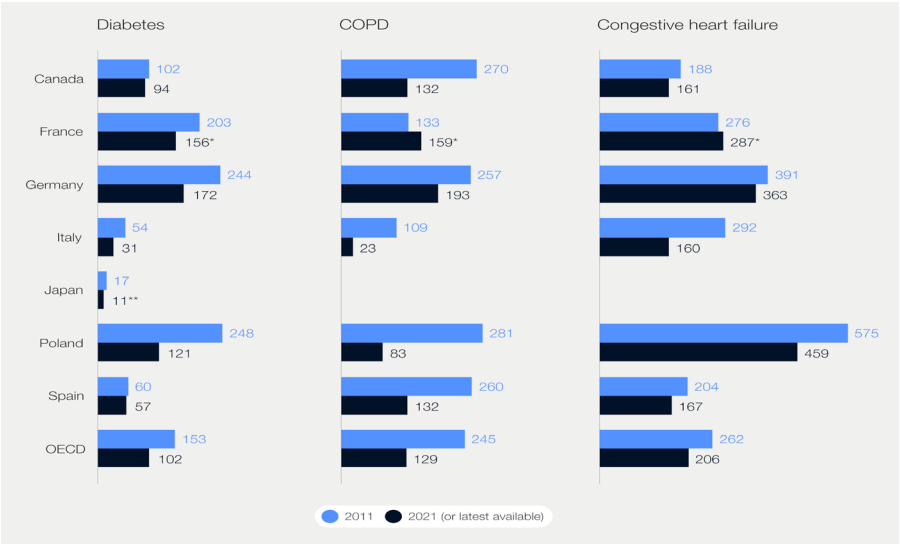


Fig. 1: Hospital admissions for heart failure, diabetes and COPD (adults per 100,000). Source: own illustration. Adapted from: Organisation for Economic Co-operation and Development (OECD). (2023). Health at a glance 2023: OECD indicators. OECD Publishing, Paris. Source: "Acting Early on Non-Communicable Diseases: A Framework for Health System Transformation"

Facts on the sociodemographic reality in Germany:

- Disease risk before diagnosis: In Germany, the lowest income quintile – the poorest 20% of the population – is 1.6 times more likely to develop a chronic disease than the highest income quintile.
- Clustering of risk factors: Tobacco use and unhealthy diets are systematically concentrated along educational lines; the smoking rate in groups with low educational attainment is twice as high as in highly educated groups. Over decades, this creates a cumulative burden that manifests clinically in old age.
- The demographic toll among women: Germany is seeing a significant increase in COPD deaths, specifically among women – a late consequence of historical smoking behavior that contributes substantially to the noticeable slowdown in overall life expectancy gains.

In addition, geographic disadvantages exacerbate inequality in all countries studied, regardless of the system model. Rural populations face long travel distances, suffer from a shortage of specialists and bear considerable travel costs – challenges that take on extreme dimensions, particularly in the remote regions of Canada or on the widely scattered islands of Greece. Notably, the variance in screening coverage and specialist access within individual countries often exceeds the differences between countries.

For Germany, the reports contain no regionally broken-down screening rates such as those available for Italy (14-fold regional variance in colorectal cancer screening). The structural disparities, however, are documented in great detail:

- **Rural physician quota in 11 of 16 federal states:** To counter the shortage of GPs in rural areas, 11 of the 16 federal states have introduced a statutory "rural physician quota." Medical students are given

preference for a university place if they contractually commit to practicing as a GP in an underserved rural region for at least ten years after completing their specialist training.

- **Decline in GPs:** The share of general practitioners among all physicians working in outpatient care fell from 37.6% in 2014 to 35.9% in 2024. This aggravates rural undersupply, as older rural doctors retire without successors.
- **Regional variation in the specialist guarantee:** Through its appointment service centers, Germany guarantees a specialist appointment within four weeks. However, the authors stress that actual waiting times vary greatly by region and specialty and that the guarantee only covers the initial consultation, not time-critical follow-up diagnostics.
- **National check-up rate of only 24%:** Only 24% of eligible adults take part each year in the cardiovascular check-ups fully funded by the health insurance funds.
- **Federal fragmentation:** According to the study, the strong autonomy of the federal states and decentralized strategic planning make nationally uniform prevention and care standards more difficult.

The problem of misallocation

Many of these figures reflect problems in the distribution of staff and infrastructure, characterized by a worsening shortage of general practitioners and weak primary care structures. The appeal of general practice and preventive specialties is declining, while medical education continues to focus on highly specialized acute medicine. Graduates are prepared for cutting-edge medicine, even though the everyday work of many physicians will consist of caring for multimorbid patients over decades.

The imbalance is particularly drastic in Greece: the country has the highest density of physicians in the EU but at the same time the lowest density of nurses. Only 6% of Greek physicians work in general practice, compared with an EU average of 21%. The result is a system without an effective gatekeeping function: patients bypass primary care and use expensive specialist care for routine complaints. Poland has increased the number of medical school places by 92.3% but suffers from an aging physician workforce and extreme geographic inequality: specialists are concentrated in Warsaw, Kraków and Gdańsk, while rural voivodeships do not even reach half the specialist density.

Germany, too, is struggling with a shortage of new GPs and is trying to redistribute workloads by expanding the tasks of medical assistants (task shifting) – according to the analyses by Miriam Blümel of Technische Universität Berlin. But as long as fee-for-service remuneration sets the wrong incentives, the necessary closer coordination is hampered: what is paid for is moving patients through, not the time-consuming coordination of care for the chronically ill. The average consultation time in a German GP practice is eight minutes – too short for comprehensive patient education, structured prevention and relationship-building with multimorbid patients.

Waiting times and barriers

The transitions from primary care to specialists are important gaps in the patient pathway. While Spain has established the GP as gatekeeper and Germany promises specialist appointments within four weeks – with compliance varying greatly by region and specialty – Japan operates entirely without standardized referral criteria. There, the judgment of the individual physician determines the further pathway, making outcomes opaque and variable. Geographic hurdles aggravate inequality: in the vast expanses of Canada or on the Greek islands, patients have to travel by ship or plane to reach specialized NCD care.

A central problem, in the view of the study authors, is that the health systems examined suffer from "temporal misalignment." Investments in prevention require immediate spending, while their benefits only materialize after decades – far beyond legislative cycles and annual budget debates. Policymakers shy away from the risk, as savings usually benefit subsequent governments. In none of the countries studied does more than 5% of health expenditure go to prevention; Greece has at least increased its share from 1.3% (2019) to 4.5% (2022) – albeit largely with temporary EU structural funds.

At the same time, multimorbidity is increasing. Medical reality has long been shaped by patients who suffer simultaneously from diabetes, kidney failure and heart failure. Yet not a single one of the countries examined has comprehensive clinical guidelines for the management of multimorbidity. Physicians make complex decisions without sound guidance and fall back on treating individual diseases in isolation, which increases the risk of harmful interactions and dangerous polypharmacy.

Added to this is growing social injustice, which manifests itself in financial hardship. Despite nominally universal coverage, NCDs are driving patients into poverty. In Italy, out-of-pocket expenditure rose to EUR 40.6 billion in 2023, growing faster than household incomes. This "financial toxicity" is measurable and deadly: in Italy, cancer patients suffering financial hardship have a 1.2-fold higher risk of death. In Greece, the poorest households spend 9% of their expenditure on medicines alone, the richest only 2.7%. Out-of-pocket health services account for 3.2% of private household consumption in Germany – more than in France (2.2%) and Poland (2.3%), less than in Spain (4.0%) and Greece (4.6%).

Extreme heat waves on top

In addition, climate change acts as a risk amplifier for NCD patients. Extreme heat worsens cardiovascular and respiratory diseases: in Japan, deaths from heatstroke increased fivefold between 1995 and 2023, and 83.3% of the victims were over 65 years old. Although common cardiovascular drugs require dose adjustments in extreme heat, there are virtually no NCD-specific heat protocols in clinical guidelines. Air pollution in France claims around 48,000 lives a year, with the most disadvantaged areas exposed to a tenfold higher risk. Despite the heat warning systems introduced after the 2003 disaster, the number of heat-related deaths in France rose by 60% between the periods 2000 to 2004 and 2018 to 2022 – evidence that warnings without structural adjustments in NCD management have little effect.

Separate silos instead of integrated screening

Another problem is the failure to integrate screening structures for pathophysiologically related conditions. Cardiovascular disease, chronic kidney damage and metabolic disea-

ses such as diabetes have close biological interactions and fuel one another – yet early detection remains stuck in separate silos. Diabetes damages the renal blood vessels, hypertension destroys the heart and kidneys alike, and obesity promotes numerous types of cancer. Coordinated, risk-stratified screening, as called for by cardiology and nephrology societies in recent recommendations, hardly takes place.

Germany's neighbor Poland demonstrates this separation particularly clearly: although COPD screening includes chest imaging, no systematic lung cancer screening follows for these high-risk smokers. This leaves unused the opportunity to detect two of the deadliest respiratory diseases early with a single radiological modality. And although international commitments – such as the 2025 World Health Assembly resolution on lung health – call for integrated strategies, implementation is lagging behind.

In Germany, the gap between international aspirations and national reality is particularly wide. The study data point to four deficits:

1 Lack of systematic early detection. Germany is one of the six countries without organized screening for chronic respiratory diseases. While Poland at least runs spirometry-based COPD screening, in Germany a diagnosis is usually only made when irreversible damage or severe symptoms are present.

2 High number of undetected cases. In line with international findings, it can be assumed that around two thirds of all people with airway obstruction are undiagnosed and remain untreated until their condition deteriorates acutely.

3 Hospital admissions as a symptom of weak outpatient management. In 2021, Germany recorded 193 COPD and asthma admissions per 100,000 adults – far above the OECD average of 129 and more than eight times as many as Italy with 23 cases.

4 Fragmented disease management programs (DMPs). Germany introduced structured DMPs in 2002; programs for asthma and COPD were added later. In practice, they show structural shortcomings: they are tailored to individual conditions and offer no cross-specialty guidelines for multimorbid patients; GPs criticize the administrative burden and lack of flexibility; and the eight minutes an average consultation lasts are not enough for inhaler training, patient education and preventive counseling.

This pattern continues in primary care. Effective screening requires not only programs but the targeted removal of barriers to participation. Poland's transition from the "Prevention 40 PLUS" program – which achieved only 20% participation despite massive advertising campaigns – to the expanded "My Health" program illustrates the dilemma: expanding eligibility without addressing concrete obstacles such as lack of time, low health literacy, mistrust or lack of perceived relevance merely perpetuates non-participation on a broader front. Even in countries with supposedly perfect access – Japan with its Specific Health Check-Ups, Germany with its insurance-funded check-ups – rates remain stuck at 58.1% and 24%, respectively. Modern prevention policy must take into account people's psychological and social realities instead of merely administering services.

Solutions do exist

The measures proposed in the studies focus primarily on remuneration, care delivery and prevention. First and foremost is the reform of remuneration systems: away from the volume-driven logic of fee-for-service toward population-based or bundled budgets (capitation). Only if primary care providers are financially rewarded for keeping a defined patient population healthy and for managing care can chronic disease progression be mitigated.

An important example of structured approaches is provided by the German DMPs, which since 2002 have cared for millions of patients with chronic conditions such as type 2 diabetes or coronary heart disease. Evaluations show successes, such as improved HbA1c control and fewer hospital admissions for cardiovascular disease. Nevertheless, they suffer from bureaucratic hurdles, limited scope for individualization and regional variation in uptake. Italy is taking a further step with the "DM77 reform" launched in 2022: Community Health Centres as integrated centers with multidisciplinary teams. However, the reform is still at an early stage.

Greater involvement of nurses and pharmacists could also relieve the burden on care (task shifting). In many places, professional resistance and outdated regulation block modernization, even though well-trained pharmacists and specialized nurses could independently monitor stable chronic diseases and adjust medication plans. In addition, early detection programs must move from rigid, age-based criteria to systematic risk stratification.

European bottlenecks

At the European level, weakening pharmaceutical innovation and approval delays add to the problem. Clinical trial activity in Europe is declining, and the share of new active substances approved by the European Medicines Agency (EMA) plummeted from 71% in 2018 to 30% in 2024. In 2023, the four largest EU member states recorded the lowest number of new launches since 2014 – a widening gap compared with the USA. Although the Joint Clinical Assessment (JCA), a coordinated EU-wide assessment, was introduced for two oncology products in 2024, this instrument is still in its infancy.

There are also marked differences in access to new medicines. With a median of 52 days between approval and actual availability, Germany leads the comparison countries, while in France high-priority medicines take a median of 523 days and in Greece the process drags on for more than 600 days. Outside the EU, Japan is an extreme case: between 2016 and 2020, 72.4% of drugs approved in the USA or the EU were not available there.

Besides access to medicines, a lack of interoperability between digital systems blocks coordinated care. In Spain, 99% of primary care providers have introduced electronic health records, but only 8 of the 17 autonomous regions can actually exchange data. In Italy, fragmentation is so great that patients carry paper documents from doctor to doctor despite digital records. There are also marked differences in digital health literacy: in Japan, 50.9% of people over 70 are unfamiliar with smartphones, and in Spain 78% of chronically ill people over 70 lack digital autonomy. Digital health applications such as the 44 DiGA approved in Germany therefore face considerable hurdles in practice.

Reform agenda for Germany

The analysis – for Germany led by Miriam Blümel of Technische Universität Berlin

– identifies four key health policy areas for action:

First: Overcome sectoral boundaries and fee-for-service remuneration. That German GPs can spend an average of only eight minutes per consultation is the result of a system that rewards rapid throughput and financially penalizes preventive conversations and coordination work. What is needed is a transition to capitation-based remuneration that offers planning certainty and creates incentives for long-term health maintenance.

Second: Consistently reduce avoidable hospital admissions. The fact that Germany is far above the OECD average for heart failure and COPD, and that its diabetes amputation rate of 8.5 per 100,000 inhabitants is more than three times the Italian figure (2.5), points to deficits in outpatient care.

Third: Increase participation in early detection examinations. Although the health insurance funds fully finance cardiovascular check-ups, only 24% of those eligible take part each year. Being free of charge is not enough; what is needed is an active, structured invitation system that specifically removes barriers such as lack of time, low health literacy and social disadvantage.

Fourth: Reduce bureaucracy in DMPs and develop them further. The programs have proven their medical effectiveness but tie up valuable treatment time and are too fragmented for patients with multiple conditions. What is needed is greater flexibility that better integrates the care of patients with several diseases.

Conclusion

The reports, especially the "Acting Early" study, conclude: "Despite evidence of what works in the fight against chronic diseases, consistent implementation remains elusive even in the most advanced health systems. Success requires integrated action, not piecemeal reforms." The failure is not a knowledge gap but an implementation gap. Inertia of political institutions, short-term budget cycles and particular professional interests prevent the necessary transformation.

The variance within countries shows that better outcomes are achievable with existing resources – it is a question of prioritization, organization and consistent reallocation in favor of preventive strategies. When regions in Italy differ by a factor of 14 in colorectal cancer screening, or when Spain achieves over 80% in breast cancer screening while Poland remains stuck at 15.7% in cervical cancer screening, this is not due to money but to organizational quality and political will.

The transition from reactive disease management to a forward-looking, health-promoting and climate-resilient system is therefore no longer a purely technical or economic option. According to the reports by the WEF, PHSSR and LSE, there is "a moral and financial imperative to transform health and social systems to effectively tackle NCDs". A system that permanently keeps prevention below the five-percent mark of health expenditure and channels the vast majority of its resources into treating late-stage damage is, in the authors' reading, neither ethically nor economically sustainable. For millions of people, these reforms are a matter of life and death, because "the way forward requires political courage, sustained commitment and the recognition that acting early is not only cost-effective but a moral obligation". For policymakers, this results in a clear choice: "The choice is between maintaining delayed interventions or promoting structural reforms that achieve earlier, coordinated and equitable care." <<

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