The economic impact of industry clinical trials across Europe

A report for the European Federation of Pharmaceutical Industries and Associations (EFPIA)

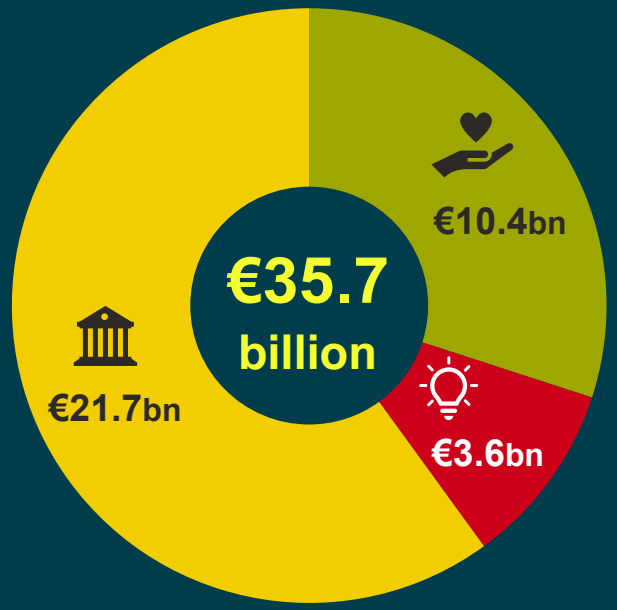
February 2026

Contents

Industry clinical trials deliver significant value to the European economy, contributing to €35.7 billion in Gross Value Added across Europe each year

Clinical trials are vital in supporting the development of healthcare innovations, including new medicines and vaccines. Clinical trials create benefits for patients, healthcare systems and the economy. Frontier Economics was commissioned by the European Federation of Pharmaceutical Industries and Associations (EFPIA) to explore the value of industry clinical trials to the European economy and society.

Gross Value Added (GVA) created by industry clinical trials across the European Economic Area (EEA) in 2025



Industry clinical trials generate **€21.7 billion of GVA** across the EEA each year.

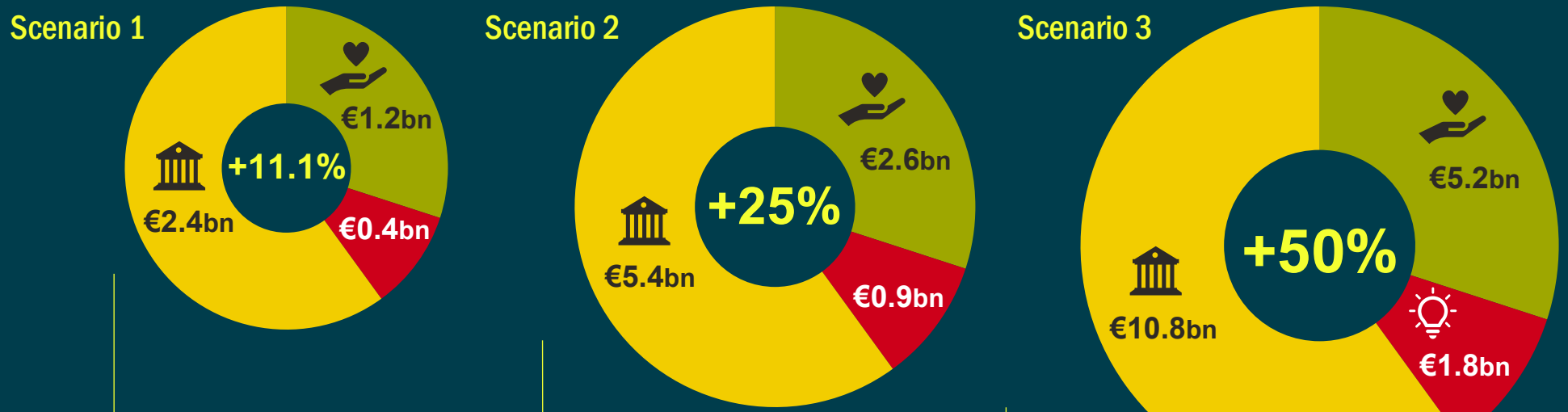
This activity supported over **165,000 jobs** across Europe, including over **45,000** clinical research jobs and over **120,000 jobs** associated with indirect and induced impacts.

Industry clinical trials help prevent **26.9 million sick days**, worth **€10.4 billion of GVA**.

R&D spillover benefits from clinical research generate an additional **€3.6 billion of GVA**.

Industry clinical trials could contribute €4.0 – 17.9 billion more in GVA if the number of trials increases

We model 3 alternative 'what if' scenarios of increasing the number of clinical trials by **11.1%** (in line with the EMA target[1]), **25%** (increasing back to the 2013 level) and **50%** (to 'catch up' with growth in China and North America).



Incremental benefits	Scenario 1	Scenario 2	Scenario 3
	+ 35,000 trial participants	+ 79,000 trial participants	+ 158,000 trial participants
European economy – GVA	€2.4 billion	€5.4 billion	€10.8 billion
European economy – jobs	18,000 jobs	41,000 jobs	82,000 jobs
R&D spillovers	€400 million	€900 million	€1.8 billion
Workforce productivity	€1.2 billion	€2.6 billion	€5.2 billion
	€4.0 billion	**€8.9 billion**	**€17.9 billion**

1 See slide 14 for additional information regarding these scenarios. Scenario 1 based on European Medicines Agency (2025). *New targets for clinical trials in Europe, 23 September 2025.* https://www.ema.europa.eu/en/news/new-targets-clinical-trials-europe

Introduction

Clinical trials across Europe

Industry clinical trials are a cornerstone of medical innovation, enabling the development of new medicines and vaccines while delivering tangible benefits for patients, healthcare systems and Europe's economy (EFPIA 2025a):

- **Patients**: early access to new medicines, typically 5-10 years before launch;
- **Healthcare systems**: €1-1.5 billion annual in savings and research-related revenue, alongside improved workforce retention;
- **The economy**: high-value employment, investment and innovation.

Across Europe, in the 3 years to January 2025 **a total of 8,521 clinical trials** were authorised (European Commission 2025), of which:

- **3,236** were multi-national industry (commercial) trials; and
- **1,291** were mono-national industry (commercial) trials.

In 2023, over **315,000 patients were enrolled** on industry clinical trials which either involved an EEA country (over 225,000 patients) or were EEA-only trials (over 89,000 patients) (IQVIA 2024).

Despite this strong base, Europe's global position has weakened. While the number of industry clinical trials worldwide increased by 38% between 2013 and 2023, **Europe's share fell from 22% to 12%** (IQVIA 2024).

Against this backdrop, EFPIA commissioned Frontier Economics to assess the economic and societal value of industry clinical trials in Europe.

Industry clinical trials across Europe

4,527 industry clinical trials in 3 years 2022-2025

315,000 patients enrolled on industry clinical trials in 2023

12% European share of global trials in 2023, down from **22% in 2013**

Introduction

Why the location of clinical trials matters

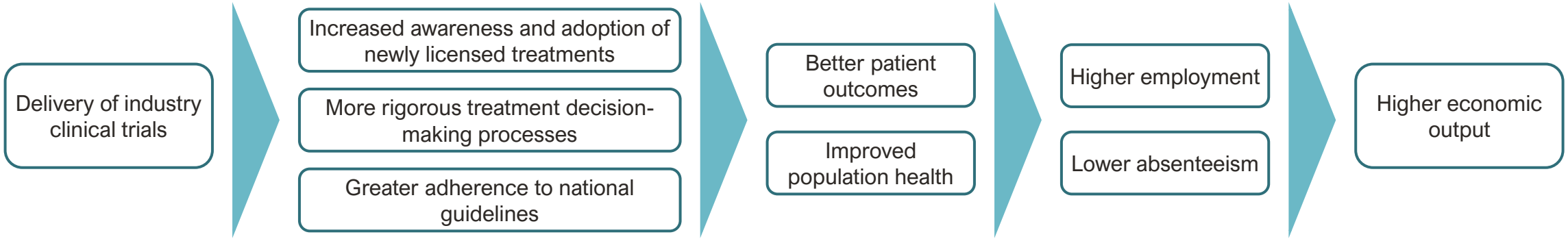
Where industry clinical trials are conducted matters. Trials conducted in Europe benefit patients through earlier access to innovative treatments, while also generating direct economic value and strengthening healthcare systems and the wider life sciences ecosystem.

Evidence shows that hospitals engaged in clinical research achieve better patient outcomes, while clinicians involved in research demonstrate greater awareness and faster adoption of newly licensed treatments (Royal College of Physicians 2021; Lublóy 2014). The benefits of research activity also extend beyond individual trial sites: research-active clinicians foster a culture of innovation, supporting more rigorous treatment decision-making across healthcare systems (Majumdar et al. 2008; Downing et al. 2017).

These findings are reinforced by a systematic review of 86 studies across 12 countries, which found largely positive effects of research engagement on healthcare outcomes for patients (Boaz et al. 2024).

Taken together, the evidence highlights how delivering industry clinical trials in Europe contributes to better health outcomes, improved workforce productivity and, ultimately, higher economic output.

Benefits of delivering industry clinical trials to local healthcare systems and populations



Introduction

Overview of analysis

This work explored four economic impacts of industry clinical trials:

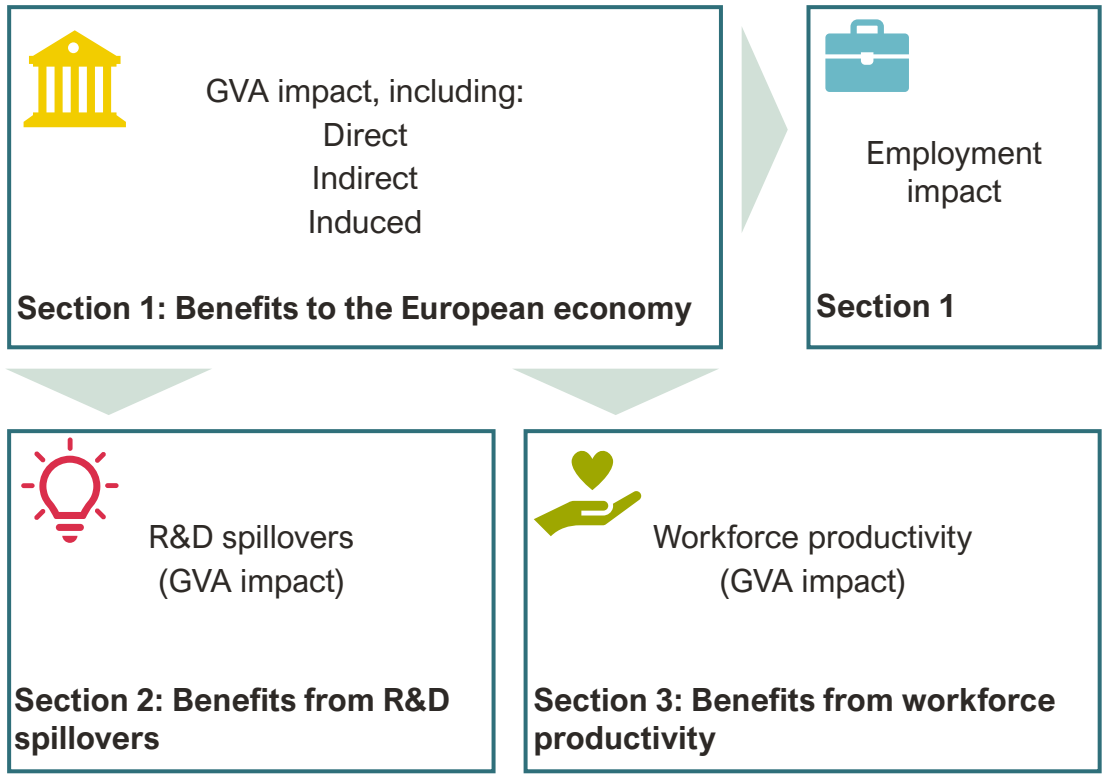
- **Gross value added (GVA) impact**, including investment directly in clinical research (**direct impact**), related impacts on demand for the supply chain supporting this research (**indirect impact**) and the impact of knock-on increases in the level of household income, some of which will be re-spent on goods and services (**induced impact**).
- **Employment impact**, due to additional jobs created by the GVA impact.
- **Research and Development (R&D) spillover impact**, due to clinical research activities creating knowledge, products, and processes which can be used by other companies.
- **Workforce productivity impact**, due to new medicines and vaccines improving people's health.

Beyond today's impact, the report explores three forward-looking scenarios for increasing trial activity: in line with the EMA target (+11.1%), returning to 2013 levels (+25%), and rising further to help Europe keep pace with China and North America (+50%).

This report complements previous work demonstrating the economic impact of clinical trials and the pharmaceutical sector such as Ostwald et al (2020), Haaf and Sale (2025).[1]

The work was carried out between November 2025 and January 2026.

Economic impacts considered in this report



1 This report also complements and builds upon a previous study conducted by Frontier Economics (2024) for the Association of the British Pharmaceutical Industry (ABPI), which quantified the economic value of clinical trials in the UK.

1: Benefits to the European economy

Despite the decline in recent years, industry clinical trials contributed €21.7 billion of GVA in 2025

While Europe remains a strong player in global clinical research, its share of trials has halved over the past decade, from 22% in 2013 to 12% in 2023 (IQVIA 2024).

Despite this decline, **industry clinical trials continue to deliver significant benefits, including Gross Value Added (GVA), high-quality job creation, and knowledge and skills spillovers**.

Across the European Economic Area, we estimate that **clinical trials created €10.1 billion in direct GVA, and €21.7 billion in total GVA** in 2025, once indirect and induced effects are taken into account.

Within the EEA, Germany has the highest GVA due to clinical trial activity, with over €3 billion direct GVA and almost €6.3 billion in total GVA. Outside the EEA, Switzerland and the UK each have clinical trial activity of a similar size to Germany.

Full country-by-country results are provided in the Technical Annexe.

Benefits to the European economy – GVA in 2025

Country	Direct GVA (€ million)	Total GVA (€ million)
European Economic Area	**10,129.5**	**21,687.0**
Selected countries:		
Belgium	1,727.5	3,144.0
France	1,802.6	3,749.5
Germany	3,033.6	6,279.6
Italy	611.1	1,961.5
Poland	464.4	1,281.8
Spain	439.4	1,357.6
Switzerland (non-EEA)	2,798.1	6,183.7
United Kingdom (non-EEA)	3,110.3	6,624.9

1: Benefits to the European economy

Approach, assumptions and limitations

Approach

An **'income approach'** is used to measure Gross Value Added (GVA). This assumes that the **labour costs** correspond to the value added in activity.

The first step is to estimate **labour costs in pharmaceutical R&D.** This is estimated using published EFPIA estimates of pharmaceutical R&D expenditure and applying a labour cost share assumption from Eurostat BERD data. Together with a 2% profit share assumption, this gives an estimate of overall **pharmaceutical R&D direct GVA**.

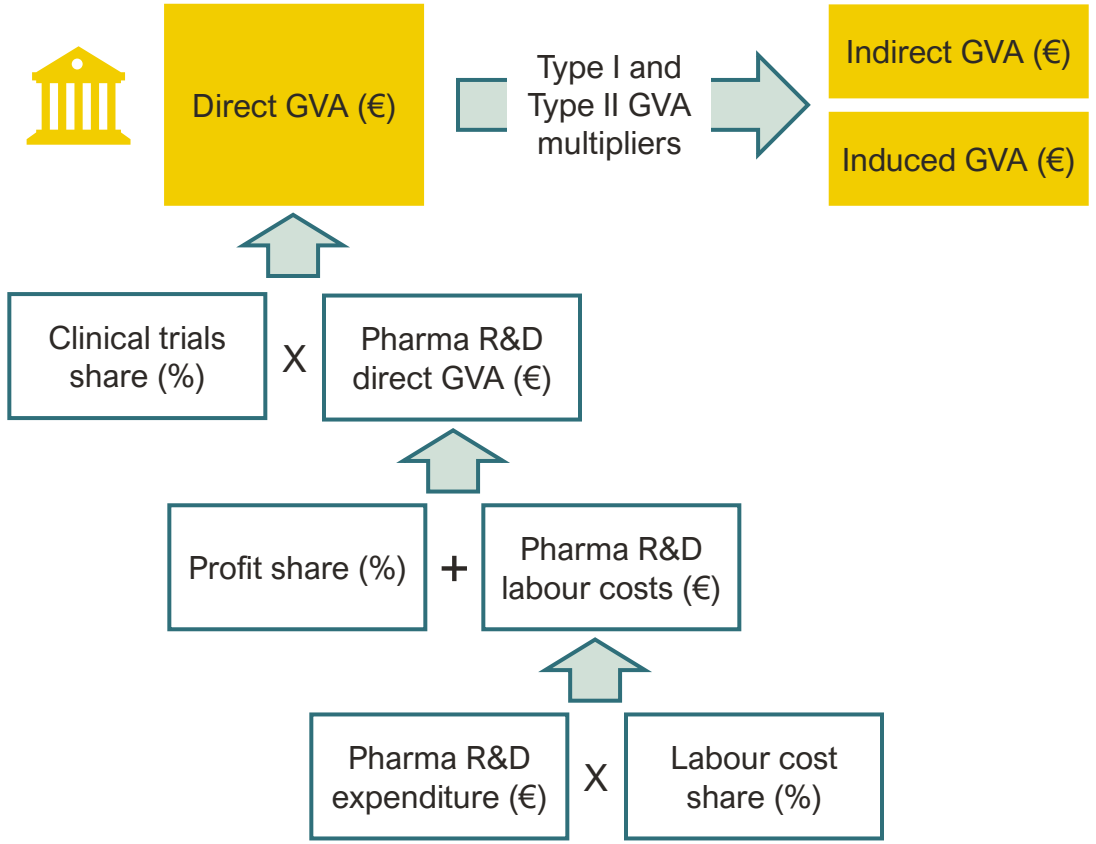
Not all pharmaceutical R&D is related to clinical trials. Data from the PhRMA (2025) members survey on the nature of R&D expenditure suggests a **clinical trials share** of all R&D expenditure of around 55%.[1] This is applied to give a measure of **direct GVA** specific to clinical trials R&D.

We then apply multipliers to account for: **indirect GVA** from activity and output supported in the supply chain, and **induced GVA** due to employees spending their earnings elsewhere in the economy.

Assumptions and limitations

Estimates for the EEA exclude Liechtenstein, Lithuania and Luxembourg, due to pharmaceutical production and R&D expenditure data not being available. Pharmaceutical R&D for Estonia and Latvia are imputed using country-level production data and European average R&D per production ratios.

Benefits to the European economy – GVA calculation



1 This data also suggests that the breakdown of R&D expenditure by stage is approximately 14% for Phase I, 18% for Phase II, 50% for Phase III and 19% for approval and Phase IV.

1: Benefits to the European economy – job creation

Industry clinical trials supported 165,000 jobs across Europe in 2025

We estimate that clinical trial activity directly employed around 45,000 people across the European Economic Area in 2025. This rises to **165,000 jobs in total** when in including the wider supply chain and induced effects. Outside the EEA, Switzerland and the UK together add around 21,000 in direct employment, and 123,000 in total employment.

The creation of jobs in clinical research supports the upskilling of the European workforce, drives up the standard of living for European workers, and increases the global competitiveness of Europe's life sciences sector.

Approach

The employment calculation follows a similar structure to that of GVA. The starting point is EFPIA (2025b) estimates of the **pharmaceutical R&D workforce** by country. The same 55% **clinical trials share** assumption is then applied, giving a measure of **direct employment in clinical trials R&D**. Employment multipliers are then applied, to account for indirect employment further up the supply chain and induced employment elsewhere in the economy.

Assumptions and limitations

Our EEA estimates exclude Croatia, Cyprus, Latvia, Liechtenstein, Luxembourg, Malta and Slovakia due to pharmaceutical R&D employment data not being available.

Benefits to the European economy – job creation in 2025

Country	Direct employment (000s)	Total employment (000s)
European Economic Area	**45.2**	**165.3**
Selected countries:		
Belgium	3.7	11.5
France	6.4	27.5
Germany	10.1	37.8
Italy	3.9	16.9
Poland	1.2	2.9
Spain	3.3	16.6
Switzerland (non-EEA)	5.4	25.3
United Kingdom (non-EEA)	15.8	97.4

2: Benefits from R&D spillovers

Industry clinical trials created spillover benefits worth €3.6 billion across Europe in 2025

We estimate that the **Gross Value Added associated with R&D spillovers is substantial, at around €3.6 billion for the EEA**. These spillovers are estimated to exceed €1 billion in Germany and €600 million in Belgium and France.

These spillovers represent a benefit to the wider European economy from clinical research. This supports innovation and economic growth across the whole life sciences sector and beyond.

Approach

Spillover benefits due to R&D activity are social benefits not captured by private investors. As with other R&D, clinical trials give rise to the creation of knowledge that can be used by other companies. This stimulates economic activity and a higher-skilled workforce, who can benefit other companies when they move job, either within or outside the sector. The broader economic return is therefore wider than the 'private' economic return to the company undertaking the R&D.

Many previous studies have estimated the rate of return on R&D and the spillovers. A meta-study by Frontier Economics (2023) finds central estimates for a private rate of return to R&D of 20% and a social rate of return of 40%, with the difference between the two interpreted as the spillover.

This 20% spillover parameter is applied to the value of R&D expenditure, multiplied by the 55% clinical trial share assumption.

Benefits from R&D spillovers in 2025

Country	R&D spillovers GVA (€ million)
European Economic Area	**3,621.9**
Selected countries:	
Belgium	617.7
France	644.5
Germany	1,084.7
Italy	218.5
Poland	166.1
Spain	157.1
Switzerland (non-EEA)	1,000.5
United Kingdom (non-EEA)	1,112.1

3: Benefits from workforce productivity

Industry clinical trials avoided 26.9 million sick days across Europe, equivalent to €10.4 billion of GVA, in 2025

We estimate there were **26.9 million avoided sick days** due to faster uptake of new treatments developed in industry clinical trials across the EEA in 2025, equivalent to **€10.4 billion of GVA each year**. Germany receives the largest productivity benefit, with an estimated 9.1 million avoided sick days, equivalent to €3.8 billion of GVA. This reflects its large population and high uptake of innovative medicines (IQVIA 2025).

A healthier workforce leads to higher productivity, greater economic output and improved living standards.

Approach

The general approach followed Chen and Goldman (2018), who assessed increases in productivity attributed to new treatments. This increase in workforce productivity was combined with the incremental uptake in innovative medicines attributed to innovative hospitals, and the proportion of clinical trials that are industry-sponsored. This resulted in the impact of faster uptake of new treatments developed during industry trials in research hospitals.

Further details on the method and assumptions used for the calculation are included in the Technical Annexe.

Assumptions and limitations

Our estimates exclude Liechtenstein and Luxembourg due to insufficient data.

Benefits from workforce productivity in 2025

Country	Avoided sick days (million)	Avoided lost GVA (€ million)
European Economic Area	**26.9**	**10,427.8**
Selected countries:		
Belgium	0.4	277.2
France	4.8	1,758.1
Germany	9.1	3,783.6
Italy	1.1	423.8
Poland	1.0	235.2
Spain	3.4	1,018.7
Switzerland (non-EEA)	1.0	363.3
United Kingdom (non-EEA)	2.8	1,061.2

4: Summary of benefits

Industry clinical trials contributed to €35.7 billion in GVA across Europe in 2025

Benefits to the European economy (GVA) from clinical research activity, R&D spillovers and workforce productivity in 2025

Country	Total GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	Total GVA Impact (€ million) (A + B + C)
European Economic Area	**21,687.0**	**3,621.9**	**165.3**	**10,427.8**	**35,736.7**
Selected countries:					
Belgium	3,144.0	617.7	11.5	277.2	4,038.8
France	3,749.5	644.5	27.5	1,758.1	6,152.1
Germany	6,279.6	1,084.7	37.8	3,783.6	11,147.9
Italy	1,961.5	218.5	16.9	423.8	2,603.8
Poland	1,281.8	166.1	2.9	235.2	1,683.0
Spain	1,357.6	157.1	16.6	1,018.7	2,533.4
Switzerland (non-EEA)	6,183.7	1,000.5	25.3	363.3	7,547.5
United Kingdom (non-EEA)	6,624.9	1,112.1	97.4	1,061.2	8,798.3

5: Potential benefits from increasing industry clinical trials

We model 3 alternative 'what if' scenarios for increasing the number of clinical trials in Europe each year

The analysis on previous slides was based on current clinical trials activity. We also considered the potential benefits from increasing this activity. We modelled 3 'what if' scenarios for increasing the number of clinical trials across Europe.

Approach

For each of our 3 'what if' scenarios, we scaled up our previous estimates for the impact of clinical research activity on GVA, R&D spillovers and workforce productivity. We have also calculated the increase in patients participating in trials (involving an EEA country and EEA-only trials) under each scenario, compared with the baseline of 315,000 in 2023 (IQVIA 2024).

Scenario 1: 11.1% increase (EMA target)

The European Commission, the Heads of Medicines Agencies and the EMA have jointly developed targets for additional clinical trials across Europe (EMA 2025). The aim is to add an **additional 100 multinational trials** authorised per year from a current average of 900, **an increase of 11.1%**.

Scenario 2: 25% increase (2013 level)

Between 2013 and 2023, the number of industry clinical trials increased globally by 38%, however the share of these trials in Europe declined from 22% to 12% in 2023 (IQVIA 2024). The absolute number of trial starts in the EEA reduced from 2,424 to 1,978 over this period.[1] We consider a scenario in which the **number of annual trials returns to the 2013 level, an increase of approximately 25%**.

Scenario 3: 50% increase (China/North America)

Since 2013, both China and North America have increased the total number of clinical trial starts. China's global share rose sharply from 8% in 2013 to 29% in 2023, while North America increased trial volumes while maintaining a broadly stable share of global starts at around 17%.[2] In 2023, the number of trials in North America was around 3,750, compared with more than 6,000 in China (IQVIA 2024).[3] To match these levels of activity would require a significant increase across Europe. We consider a more ambitious scenario in which the **number of trials in Europe each year increases by 50%.**

Assumptions and limitations

This analysis assumes that the additional clinical research activity would be similar, on average, to current activity. That may be:

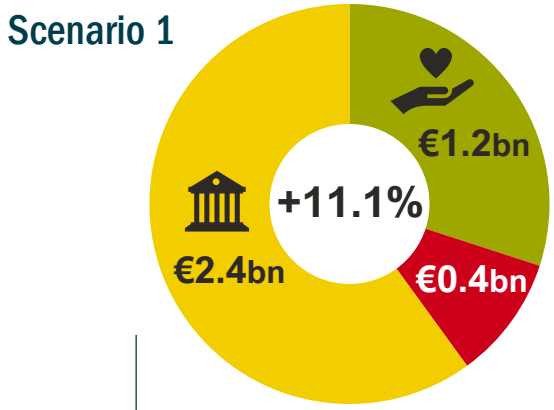
- an overestimate, if these more marginal research areas are less promising, on average, leading to fewer successful new medicines launches; or
- an underestimate, if there are further positive spillovers between current and incremental research activity (e.g. 'cross-pollination' of ideas) or quality improvements due to 'learning by doing' from undertaking greater clinical research activity.

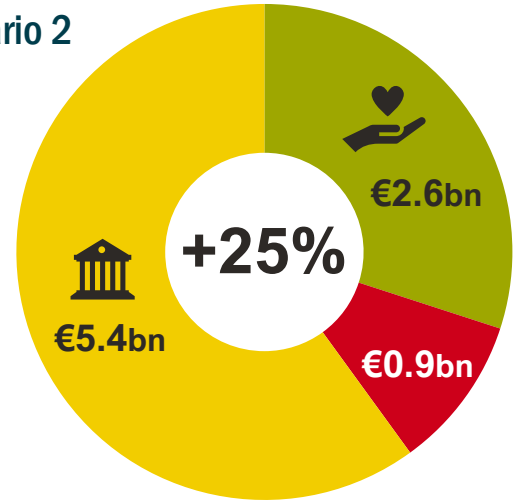
1,2,3 Figures refer to all clinical trials, not just industry clinical trials.

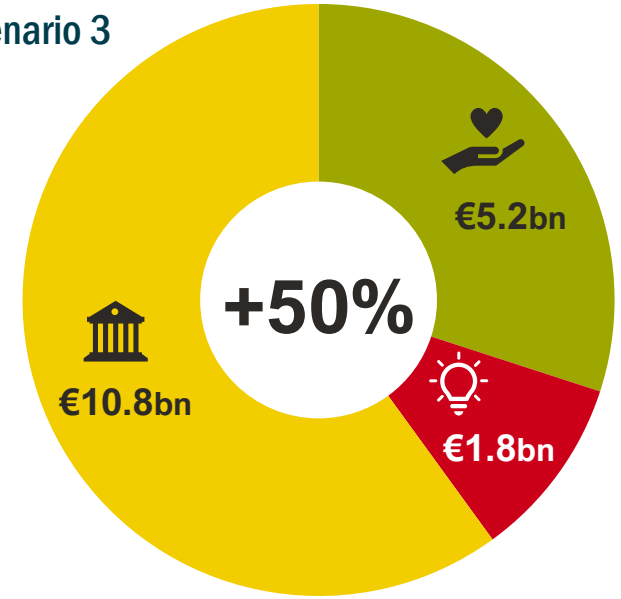
5: Potential benefits from increasing industry clinical trials

Industry clinical trials could contribute €4.0 – 17.9 billion more in GVA if the number of trials increases

The results for each of our 3 alternative 'what if' scenarios are shown below. These consider the impact of increasing the number of clinical trials by **11.1%** (in line with the EMA target), **25%** (increasing back to the 2013 level) and **50%** (to 'catch up' with growth in China and North America).







Incremental benefits	Scenario 1	Scenario 2	Scenario 3
	+ 35,000 trial participants	+ 79,000 trial participants	+ 158,000 trial participants
European economy – GVA	€2.4 billion	€5.4 billion	€10.8 billion
European economy – jobs	18,000 jobs	41,000 jobs	82,000 jobs
R&D spillovers	€400 million	€900 million	€1.8 billion
Workforce productivity	€1.2 billion	€2.6 billion	€5.2 billion
	€4.0 billion	**€8.9 billion**	**€17.9 billion**

5: Potential benefits from increasing industry clinical trials

Scenario 1: 11.1% increase

Potential benefits if the number of clinical trials increased by 11.1% (EMA target)

Country	Incremental GVA (€ million) (A)	Incremental R&D spillovers GVA (€ million) (B)	Incremental total employment (000s)	Incremental avoided lost GVA (€ million) (C)	Incremental total GVA (€m) (A+B+C)
European Economic Area	**2,409.7**	**402.4**	**18.4**	**1,158.6**	**3,970.7**
Selected countries:					
Belgium	349.3	68.6	1.3	30.8	**444.8**
France	416.6	71.6	3.1	195.3	**683.6**
Germany	697.7	120.5	4.2	420.4	**1,238.7**
Italy	217.9	24.3	1.9	47.1	**289.3**
Poland	142.4	18.5	0.3	26.1	**187.0**
Spain	150.8	17.5	1.8	113.2	**281.5**
Switzerland (non-EEA)	687.1	111.2	2.8	40.4	**838.6**
United Kingdom (non-EEA)	736.1	123.6	10.8	117.9	**977.6**

5: Potential benefits from increasing industry clinical trials

Scenario 2: 25% increase

Potential benefits if the number of clinical trials increased by 25% (2013 level)

Country	Incremental GVA (€ million) (A)	Incremental R&D spillovers GVA (€ million) (B)	Incremental total employment (000s)	Incremental avoided lost GVA (€ million) (C)	Incremental total GVA (€m) (A+B+C)
European Economic Area	**5,421.8**	**905.5**	**41.3**	**2,606.9**	**8,934.2**
Selected countries:					
Belgium	786.0	154.4	2.9	69.3	**1,009.7**
France	937.4	161.1	6.9	439.5	**1,538.0**
Germany	1,569.9	271.2	9.5	945.9	**2,787.0**
Italy	490.4	54.6	4.2	105.9	**650.9**
Poland	320.4	41.5	0.7	58.8	**420.7**
Spain	339.4	39.3	4.1	254.7	**633.3**
Switzerland (non-EEA)	1,545.9	250.1	6.3	90.8	**1,886.9**
United Kingdom (non-EEA)	1,656.2	278.0	24.4	265.3	**2,199.6**

5: Potential benefits from increasing industry clinical trials

Scenario 3: 50% increase

Potential benefits if the number of clinical trials increased by 50% (China/North America)

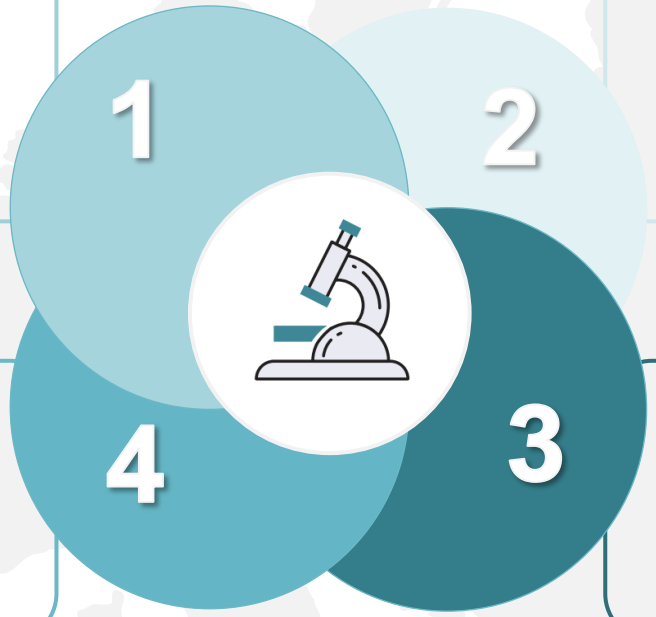
Country	Incremental GVA (€ million) (A)	Incremental R&D spillovers GVA (€ million) (B)	Incremental total employment (000s)	Incremental avoided lost GVA (€ million) (C)	Incremental total GVA (€m) (A+B+C)
European Economic Area	**10,843.5**	**1,811.0**	**82.6**	**5,213.9**	**17,868.4**
Selected countries:					
Belgium	1,572.0	308.8	5.8	138.6	**2,019.4**
France	1,874.7	322.3	13.8	879.0	**3,076.0**
Germany	3,139.8	542.3	18.9	1891.8	**5,573.9**
Italy	980.8	109.2	8.4	211.9	**1,301.9**
Poland	640.9	83.0	1.4	117.6	**841.5**
Spain	678.8	78.5	8.3	509.3	**1,266.7**
Switzerland (non-EEA)	3,091.8	500.2	12.7	181.6	**3,773.7**
United Kingdom (non-EEA)	3,312.5	556.1	48.7	530.6	**4,399.1**

Strengthening Europe's position in global life sciences innovation

Key actions EFPIA proposes to enable higher clinical trial activity in Europe

Accelerate timelines for clinical trial start-up and assessment, to support a globally competitive ecosystem.

Ensure a single, streamlined process for multi-country trials, without additional national requirements.



Invest in future innovation through sustained funding for clinical research infrastructure, strengthening EU trial sites, expert talent and digital tools.

Make CTIS work for users by ensuring the Clinical Trials Information System is simple, reliable, flexible, and user-friendly.

With the proposed EU Biotech Act, Europe has a unique opportunity to strengthen its clinical research ecosystem and regain global competitiveness in life sciences.

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Technical annexe

Technical annexe

Country-level results

Country	Gross Value Added (€m)				R&D spillovers GVA (€m)	Employment (000s)				Workforce productivity	
	Direct	Indirect	Induced	Total		Direct	Indirect	Induced	Total	Avoided sick days (m)	Avoided lost GVA (€m)
EEA	10,129.5	5,410.2	6,147.3	**21,687.0**	**3,621.9**	45.2	54.6	65.5	**165.3**	26.9	**10,427.8**
Belgium	1,727.5	794.6	621.9	**3,144.0**	**617.7**	3.7	4.7	3.2	**11.5**	0.4	**277.2**
France	1,802.6	883.3	1,063.6	**3,749.5**	**644.5**	6.4	9.7	11.4	**27.5**	4.8	**1,758.1**
Germany	3,033.6	1,547.1	1,698.8	**6,279.6**	**1,084.7**	10.1	12.7	15.0	**37.8**	9.1	**3,783.6**
Italy	611.1	513.3	837.2	**1,961.5**	**218.5**	3.9	4.6	8.4	**16.9**	1.1	**423.8**
Poland	464.4	399.4	418.0	**1,281.8**	**166.1**	1.2	0.8	0.9	**2.9**	1.0	**235.2**
Spain	439.4	355.9	562.4	**1,357.6**	**157.1**	3.3	5.1	8.2	**16.6**	3.4	**1,018.7**
Switzerland	2,798.1	1,678.8	1,706.8	**6,183.7**	**1,000.5**	5.4	7.1	12.8	**25.3**	1.0	**363.3**
United Kingdom	3,110.3	1,181.9	2,332.7	**6,624.9**	**1,112.1**	15.8	26.6	55.0	**97.4**	2.8	**1,061.2**
Austria	130.2	45.6	69.0	**244.7**	**46.5**	1.0	0.6	1.0	**2.6**	0.9	**418.4**
Bulgaria	30.9	17.0	23.8	**71.6**	**11.0**	0.4	0.2	0.4	**1.0**	0.1	**18.8**
Croatia	12.2	5.7	7.1	**25.1**	**4.4**	-	-	-	**-**	0.0	**6.5**
Cyprus	26.0	10.4	28.6	**64.9**	**9.3**	-	-	-	**-**	0.0	**9.1**
Czech	103.0	57.7	47.4	**208.0**	**36.8**	0.3	0.3	0.2	**0.9**	0.6	**160.1**
Denmark	541.1	140.7	162.3	**844.1**	**193.5**	4.1	4.3	4.2	**12.6**	0.5	**265.2**
Estonia	2.2	1.5	1.7	**5.4**	**0.8**	0.0	0.0	0.0	**0.1**	0.0	**9.7**

Technical annexe

Country-level results (continued)

	Gross Value Added (€m)				R&D spillovers GVA (€m)	Employment (000s)				Workforce productivity	
Country	Direct	Indirect	Induced	**Total**		Direct	Indirect	Induced	**Total**	Avoided sick days (m)	**Avoided lost GVA (€m)**
Finland	70.9	14.2	18.4	**103.5**	**25.3**	0.4	0.3	0.3	**1.0**	0.6	**241.7**
Greece	49.2	62.5	134.8	**246.4**	**17.6**	0.6	0.5	1.0	**2.1**	0.1	**20.2**
Hungary	91.0	25.5	31.9	**148.4**	**32.6**	3.6	2.5	3.7	**9.8**	0.2	**41.2**
Ireland	93.2	7.5	8.4	**109.0**	**33.3**	0.9	0.2	0.3	**1.3**	0.1	**110.5**
Latvia	11.9	4.3	6.2	**22.4**	**4.3**	-	-	-	**-**	0.0	**5.6**
Lithuania	-	-	-	**-**	**-**	0.0	0.0	0.1	**0.1**	0.0	**7.7**
Malta	7.5	5.8	3.8	**17.1**	**2.7**	-	-	-	**-**	0.0	**1.4**
Netherlands	275.0	82.5	66.0	**423.5**	**98.3**	1.2	1.0	1.0	**3.2**	1.6	**723.3**
Portugal	33.9	25.1	37.0	**96.0**	**12.1**	0.8	1.0	1.6	**3.4**	0.7	**132.5**
Romania	33.6	24.9	39.7	**98.1**	**12.0**	0.3	0.3	0.4	**1.0**	0.0	**6.3**
Slovakia	10.7	7.4	7.8	**25.9**	**3.8**	-	-	-	**-**	0.1	**30.6**
Slovenia	92.0	63.5	47.8	**203.2**	**32.9**	1.0	1.6	1.3	**3.9**	0.1	**24.7**
Sweden	361.7	278.5	159.2	**799.5**	**129.3**	1.6	3.6	2.0	**7.3**	0.8	**367.0**
Iceland	11.6	5.7	7.0	**24.2**	**4.1**	0.3	0.3	0.5	**1.1**	0.0	**5.2**
Norway	63.2	31.0	37.9	**132.1**	**22.6**	0.2	0.2	0.4	**0.8**	0.4	**325.6**
Turkey	137.9	67.6	82.8	**288.3**	**49.3**	1.0	1.2	1.6	**3.8**	-	**-**

Technical annexe

Country-level results (Scenario 1: 11.1% increase)

Country	Incremental impact				Incremental total GVA (€m)
	GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	
EEA	2,409.7	402.4	18.37	1,158.6	**3,970.7**
Belgium	349.3	68.6	1.28	30.8	**448.8**
France	416.6	71.6	3.06	195.3	**683.6**
Germany	697.7	120.5	4.20	420.4	**1,238.7**
Italy	217.9	24.3	1.87	47.1	**289.3**
Poland	142.4	18.5	0.32	26.1	**187.0**
Spain	150.8	17.5	1.84	113.2	**281.5**
Switzerland	687.1	111.2	2.82	40.4	**838.6**
United Kingdom	736.1	123.6	10.82	117.9	**977.6**
Austria	27.2	5.2	0.29	46.5	**78.9**
Bulgaria	8.0	1.2	0.11	2.1	**11.3**
Croatia	2.8	0.5	-	0.7	**4.0**
Cyprus	7.2	1.0	0.00	1.0	**9.3**
Czech	23.1	4.1	0.10	17.8	**45.0**
Denmark	93.8	21.5	1.40	29.5	**144.8**
Estonia	0.6	0.1	0.01	1.1	**1.8**

Country	Incremental impact				Incremental total GVA (€m)
	GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	
Finland	11.5	2.8	0.11	26.9	**41.2**
Greece	27.4	2.0	0.23	2.2	**31.6**
Hungary	16.5	3.6	1.09	4.6	**24.7**
Ireland	12.1	3.7	0.14	12.3	**28.1**
Latvia	2.5	0.5	-	0.6	**3.6**
Lithuania	-	-	0.02	-	**-**
Malta	1.9	0.3	-	0.2	**2.3**
Netherlands	47.1	10.9	0.35	80.4	**138.3**
Portugal	10.7	1.3	0.38	14.7	**26.7**
Romania	10.9	1.3	0.11	0.7	**12.9**
Slovakia	2.9	0.4	-	3.4	**6.7**
Slovenia	22.6	3.7	0.43	2.7	**29.0**
Sweden	88.8	14.4	0.81	40.8	**144.0**
Iceland	2.7	0.5	0.12	0.6	**3.7**
Norway	14.7	2.5	0.09	36.2	**53.4**
Turkey	32.0	5.5	0.42	-	**-**

Technical annexe

Country-level results (Scenario 2: 25% increase)

Country	Incremental impact				Incremental total GVA (€m)
	GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	
EEA	5,421.8	905.5	41.32	2,606.9	**8,934.2**
Belgium	786.0	154.4	2.88	69.3	**1,009.7**
France	937.4	161.1	6.88	439.5	**1,538.0**
Germany	1,569.9	271.2	9.46	945.9	**2,787.0**
Italy	490.4	54.6	4.22	105.9	**650.9**
Poland	320.4	41.5	0.71	58.8	**420.7**
Spain	339.4	39.3	4.14	254.7	**633.3**
Switzerland	1,545.9	250.1	6.33	90.8	**1,886.9**
United Kingdom	1,656.2	278.0	24.35	265.3	**2,199.6**
Austria	61.2	11.6	0.65	104.6	**177.4**
Bulgaria	17.9	2.8	0.26	4.7	**25.4**
Croatia	6.3	1.1	-	1.6	**9.0**
Cyprus	16.2	2.3	0.00	2.3	**20.8**
Czech	52.0	9.2	0.23	40.0	**101.2**
Denmark	211.0	48.4	3.16	66.3	**325.7**
Estonia	1.3	0.2	0.01	2.4	**4.0**

Country	Incremental impact				Incremental total GVA (€m)
	GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	
Finland	25.9	6.3	0.24	60.4	**92.6**
Greece	61.6	4.4	0.53	5.1	**71.1**
Hungary	37.1	8.1	2.45	10.3	**55.5**
Ireland	27.3	8.3	0.33	27.6	**63.2**
Latvia	5.6	1.1	-	1.4	**8.1**
Lithuania	-	-	0.04	-	**-**
Malta	4.3	0.7	-	0.3	**5.3**
Netherlands	105.9	24.6	0.79	180.8	**311.3**
Portugal	24.0	3.0	0.86	33.1	**60.1**
Romania	24.5	3.0	0.24	1.6	**29.1**
Slovakia	6.5	1.0	-	7.7	**15.1**
Slovenia	50.8	8.2	0.97	6.2	**65.2**
Sweden	199.9	32.3	1.82	91.8	**324.0**
Iceland	6.1	1.0	0.27	1.3	**8.4**
Norway	33.0	5.7	0.20	81.4	**120.1**
Turkey	72.1	12.3	0.94	-	**-**

Technical annexe

Country-level results (Scenario 3: 50% increase)

Country	Incremental impact				Incremental total GVA (€m)
	GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	
EEA	10,843.5	1,811.0	82.65	5,213.9	**17,868.4**
Belgium	1,572.0	308.8	5.77	138.6	**2,019.4**
France	1,874.7	322.3	13.75	879.0	**3,076.0**
Germany	3,139.8	542.3	18.92	1891.8	**5,573.9**
Italy	980.8	109.2	8.43	211.9	**1,301.9**
Poland	640.9	83.0	1.43	117.6	**841.5**
Spain	678.8	78.5	8.29	509.3	**1,266.7**
Switzerland	3,091.8	500.2	12.67	181.6	**3,773.7**
United Kingdom	3,312.5	556.1	48.71	530.6	**4,399.1**
Austria	122.3	23.3	1.30	209.2	**354.8**
Bulgaria	35.8	5.5	0.51	9.4	**50.7**
Croatia	12.5	2.2	-	3.2	**17.9**
Cyprus	32.5	4.6	0.00	4.6	**41.7**
Czech	104.0	18.4	0.45	80.1	**202.5**
Denmark	422.1	96.7	6.31	132.6	**651.4**
Estonia	2.7	0.4	0.03	4.9	**8.0**

Country	Incremental impact				Incremental total GVA (€m)
	GVA (€ million) (A)	R&D spillovers GVA (€ million) (B)	Total employment (000s)	Avoided lost GVA (€ million) (C)	
Finland	51.7	12.7	0.49	120.9	**185.3**
Greece	123.2	8.8	1.05	10.1	**142.1**
Hungary	74.2	16.3	4.90	20.6	**111.1**
Ireland	54.5	16.7	0.65	55.3	**126.4**
Latvia	11.2	2.1	-	2.8	**16.1**
Lithuania	-	-	0.07	-	**-**
Malta	8.5	1.3	-	0.7	**10.6**
Netherlands	211.7	49.2	1.58	361.7	**622.5**
Portugal	48.0	6.1	1.72	66.2	**120.3**
Romania	49.1	6.0	0.48	3.2	**58.2**
Slovakia	12.9	1.9	-	15.3	**30.2**
Slovenia	101.6	16.4	1.94	12.4	**130.4**
Sweden	399.7	64.7	3.64	183.5	**647.9**
Iceland	12.1	2.1	0.54	2.6	**16.8**
Norway	66.1	11.3	0.40	162.8	**240.2**
Turkey	144.1	24.7	1.88	-	**-**

Technical annexe

General assumptions

Recency of available data

All data is the most recent available at the time of analysis. Key input data relates to the following years:

- Pharmaceutical sector R&D expenditure data at country level relates to 2023.
- Eurostat employment data relates to 2024.
- Eurostat population data relates to 2025.

We have not adjusted pre-2025 data in estimating impacts. This is likely a conservative assumption, meaning the 'true' 2025 figures may be higher.

Geographical coverage

Analysis covers all countries in the European Economic Area wherever possible. However, due to unavailable data the analysis is missing for the following countries:

- Liechtenstein and Luxembourg is excluded from all analysis.
- GVA analysis and R&D spillover analysis excludes Lithuania.
- Employment analysis excludes Croatia, Cyprus, Latvia, Malta, Slovakia.

Technical annexe

GVA and employment calculations

Item of Calculation	Data Source	Notes
Pharmaceutical R&D expenditure	EFPIA (2025b). The Pharmaceutical Industry in Figures.	These values are calculated on a 'product' rather than 'sector' basis. This accounts for the fact that much activity towards pharmaceutical R&D will be carried out by companies in sectors other than pharmaceutical manufacturing and so figures only for the manufacturing sector will understate the amount of R&D activity undertaken.
Labour cost share	Eurostat (2025). Average RD_E_berdcostR2	This is only available on a pharmaceutical 'sector' basis. This assumption implies that the labour cost share is the same as that for pharmaceutical manufacturing. This is corroborated by some data sources that include both product and sector views, such as UK BERD.
Profit share	Deloitte (2025). Measuring the return from pharmaceutical innovation.	Deloitte estimate a profit rate of 2%
Clinical trial share of R&D	PhRMA (2025). 2025 PhRMA Annual Membership Survey. Also quoted in EFPIA (2025b).	55% is a 3-year average including Phases I/II/III/IV. While PhRMA is US-focused, no comparable European data source is available. This assumption implies European pharmaceutical R&D has a similar activity mix to US.
Multipliers of Indirect and Induced impacts	PwC (2024). Economic Footprint of the Pharmaceutical industry in Europe.	PwC estimate country-level multipliers for pharmaceutical sector, for both employment and GVA, both for indirect and induced effects. Other estimates are not available at country level, but these appear similar where they can be compared.
Pharmaceutical R&D employment	Internal EFPIA analysis	While these figures are not in the public domain, they are drawn from a mix of national statistics and industry figures.

Technical annexe

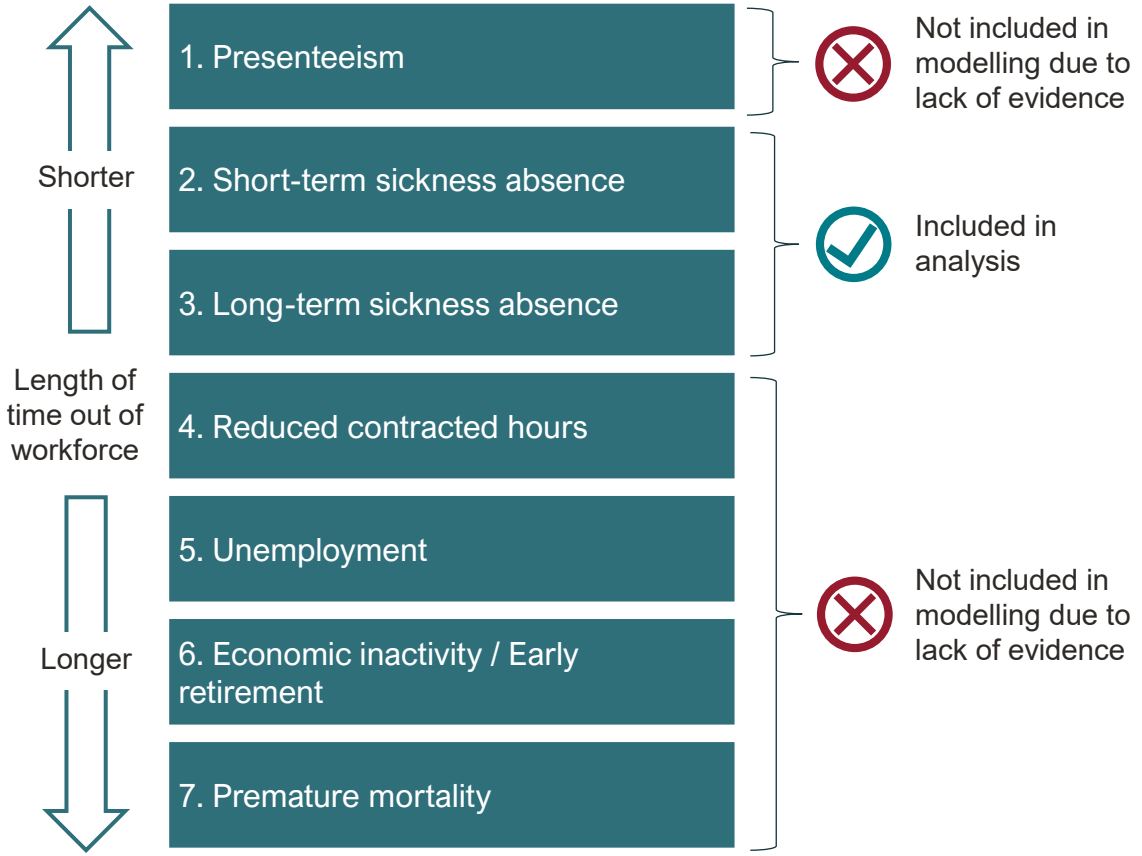
Workforce productivity – overview

Once new medicines developed through clinical trials become widely available, this improves the population's health. This helps to reduce productivity losses associated with poor health. These losses can occur through various channels, including:

- **Presenteeism**, which refers to workers not being as productive as they could be, per hour worked, due to ill health.
- **Short- and long-term sickness absences**, either due to ill health preventing individuals from working, or to attend medical appointments caused by ill health.
- **Reduced contracted hours or unemployment**, leading to individuals not contributing as much to the workforce as they could.
- **Economic inactivity, early retirement and premature mortality**, where individuals leave the workforce entirely.

Due to lack of robust evidence for other channels, our analysis focuses on the impact of clinical trials (via new medicines) on **reducing short- and long-term sickness absences**.

Workforce productivity losses associated with poor health

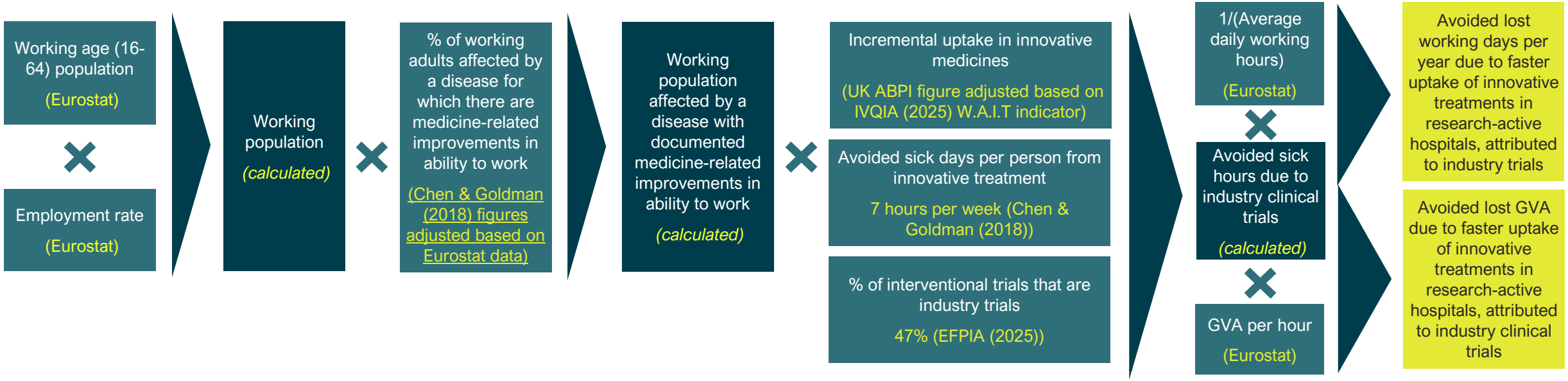


Technical annexe

Workforce productivity – calculation approach

Evidence from the UK's Royal of Physicians (2021) shows that hospitals involved in clinical research activities have better patient outcomes, and those who participate in clinical research have a greater awareness and adoption of new treatments once they have been licensed. This is supported by evidence from Boaz et al (2024) which reviewed 86 studies from 12 countries, which finds there are largely positive effects of research engagement on healthcare outcomes. This evidence implies the rate of uptake of innovative medicines is greater in hospitals involved in research, improving patient outcomes and resulting in higher employment, lower absenteeism, and higher economic output.

The approach used by Chen and Goldman (2018) was adapted to the European context to estimate the productivity impacts of new treatments.



Technical annexe

Workforce productivity – assumptions and limitations

US anchor for prevalence of long-term sickness: There is limited evidence in Europe on the proportion of working adults for whom there is a medicine-related improvement in ability to work. Chen and Goldman (2018) estimated 13.3% of working adults have a medicine-related improvement in ability to work using a meta-analysis of US-based RCTs. This figure will vary across regions due to differences in the prevalence of work-limiting sickness and the efficacy of medicines. The efficacy of medicines is assumed consistent across US and European populations, so the 13.3% figure is assumed to be representative of a total EEA average, and was used as a base point when estimating the figure for individual countries. In the EU (as a proxy for the EEA), 23.9% report 'some or severe long-standing limitations in their usual activities due to health problems', including 6.7% with 'severe' limitations (Eurostat). In the US, 12.4% report a 'work-limiting health condition or difficulty' (Bureau of Labor Statistics). As the US proportion of adults with a work-limiting condition is less than the EU, applying the US figure to the EEA is likely to be a conservative assumption. The 13.3% assumption was flexed to reflect variations around the EEA based on the proportion of the working population that has a long-term sickness or condition.

UK anchor for uptake of innovative medicines: In previous work for ABPI, Frontier multiplied the proportion of hospitals involved in clinical research (27%) with the proportion of individuals in these hospitals which receive innovative treatments (11%), resulting in 3% of individuals in the UK receiving innovative drugs in innovative hospitals. The same data is limited for the EEA. To overcome this, the 3% UK figure was scaled to European countries using the IQVIA W.A.I.T. survey which records the uptake of innovative drugs. The IQVIA survey does not report for the UK, so England was used as a proxy for the UK. This approach to determining the uptake of innovative medicines may be conservative as only the uptake of innovative medicines in hospitals is considered, and other innovative institutions are not included.

US assumption for improvement in productivity: There is no systematic EEA evidence for the productivity improvement caused by the uptake in innovative medicines. Chen and Goldman (2018) estimate this from US-based RCTs. We apply the US improvement in productivity to the EEA, which implies that productivity improvements are similar across the EEA and US.

EU assumption for proportion of interventional trials that are industry-sponsored: This calculation estimates the impact of new treatments from industry-sponsored trials on productivity. There is no standardised data on the proportion of trials that are industry-sponsored for all European countries, and there are inconsistencies across data from individual countries. The EU proportion of trials which are industry-sponsored was applied as an average to all individual EEA member countries.

Average actual working hours per week adjusted to average daily hours: Annual avoided sick hours were converted to avoided sick days. However, only data on average working hours per week is available. To convert this into average hours per day, it was assumed the working week is 5 days, so average weekly hours were divided by 5 to estimate average daily hours. All data is from Eurostat, except for UK which is from the ONS. Average working hours per week are calculated slightly differently across Eurostat and ONS.

Missing data: For Iceland and Switzerland, there was missing data in Eurostat (the proportion of working adults with a long-term illness for Iceland, and GVA per hour for Iceland and Switzerland). This data was estimated using a weighted average of all other EEA countries for Iceland and all other European countries for Switzerland, to keep consistency.