



This analysis models the health & economic benefits of enabling substantial improvement in secondary prevention of cardiovascular disease (CVD).

Increase in the uptake of 4 high impact but underused treatments is modelled.

3 ambition scenarios are considered: Step Change Improvement, Advanced Improvement and Full Uptake.

The headline table below shows the impact of achieving Step Change – defined as a realistic near-term improvement ambition.

Birmingham and Solihull ICB

Year 3 – Step Change Scenario

Events prevented: • 258 Heart attacks • 485 Strokes • 785 Heart failure admissions • 62 End stage kidney disease	1,590 events* ~ 12,123 bed days (excl ESKD) *Total events may not match due to rounding
Health/social care savings	£30 million
Productivity gains	£34 million
Benefit to cost ratio	3.9 (Over £3 saved for every £1 spent, with break-even for NHS in first year of Step Change)

For full report and detailed results for England and every ICB, visit:

www.into-action.health/impactreport

A realistic step change improvement in secondary prevention will prevent thousands of serious cardiovascular events, deliver huge savings in health and social care, and add £ billions to the national economy in 3 years.

The CVD Prevention Challenge

Secondary prevention – using medication to treat high risk conditions like blood pressure and cholesterol – is very effective at preventing cardiovascular disease. But under use of NICE recommended, high impact treatments that prevent CVD is substantial and longstanding – with little change over many years.

The CVD ACTION Health Economic Impact Model

- **4 high risk conditions:** high blood pressure, high cholesterol, chronic kidney disease and diabetes
- **4 high impact treatments** that are NICE recommended but substantially under-used (Blood pressure lowering, cholesterol lowering, renin angiotensin inhibitors, SGLT2 inhibitors)
- **4 major outcomes:** heart attack, stroke, heart failure, end stage kidney disease
- **3 scenarios:**
 1. **Step Change** as the minimum realistic near-term improvement level. For example, step change for blood pressure = 80% patients treated to target.
 2. **Advanced** (representing substantial improvement on the way to Full Uptake)
 3. **Full Uptake** (not fully achievable in practice as medicines will not be appropriate for every patient)
- **Modelled costs include** use of CVD ACTION, structured support for primary care transformation and increased medication use (>90% of the total costs).

CVD ACTION targets the HOW of optimising prevention in the real world, with 3 essential pillars to enable primary care teams to work differently:

1. **Smart data** - routinely detect patients who are not on optimal treatment, and prioritise for optimisation
2. **Structured support for transformation** enabling teams to adapt workforce and pathways to optimise at scale and within capacity
3. **Structured support for delivery** – supporting teams to set and achieve step-change objectives in secondary prevention

For more information on CVD ACTION contact Rosa@Into-Action.Health

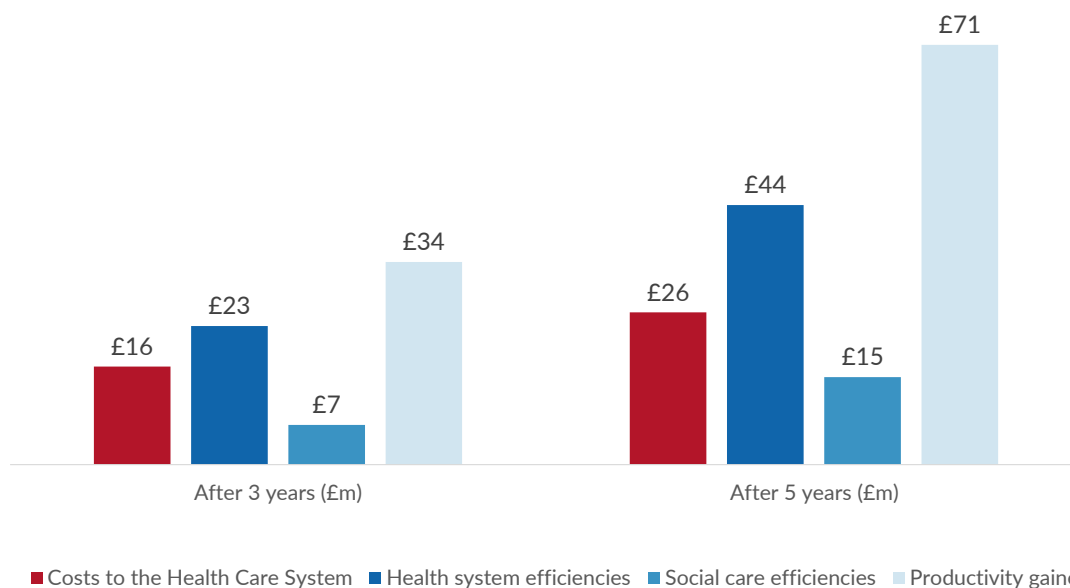


CVDACTION Modelled Impact (Step Change Scenario)

Headline Costs and Benefits

Location	Birmingham and Solihull Integrated Care Board
CVDACTION optimisation cohort	All
Number of patients optimised in year 1	60,601

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	258	422
Strokes (ischaemic)	485	784
Heart failure admissions	785	1,255
End stage kidney disease	62	99
Total	1,590	2,559
Costs to the Health Care System	£16m	£26m
Benefits		
Health system efficiencies	£23m	£44m
Social care efficiencies	£7m	£15m
Productivity gained	£34m	£71m
Total	£64m	£129m
Total Benefits to Costs Ratio (Gross)	3.9	5.0



All costs and benefits are discounted



CVDACTION: Costs and Benefits by Year

Location: Birmingham and Solihull Integrated Care Board

Scenario: Step Change

RESULTS (CUMULATIVE)

	After 1 year	After 2 years	After 3 years	After 4 years	After 5 years	After 10 years	After 15 years
Number avoided with CVDACTION							
Myocardial Infarctions	87	174	258	341	422	805	1,136
Strokes	166	327	485	635	784	1,463	2,052
Heart failure admissions	272	535	785	1,024	1,255	2,293	3,143
End stage kidney disease	21	42	62	81	99	183	252
Costs of CVDACTION and treatment (discounted)							
CVDACTION	£329,580	£329,580	£329,580	£329,580	£329,580	£329,580	£329,580
Transformation cost	£411,975	£411,975	£411,975	£411,975	£411,975	£411,975	£411,975
Treatment	£5,648,107	£10,816,953	£15,730,881	£20,404,761	£24,851,924	£44,106,551	£59,305,421
Total	£6,389,662	£11,558,508	£16,472,437	£21,146,317	£25,593,479	£44,848,106	£60,046,977
Value by economic category (discounted)							
Health costs avoided	£6,394,081	£14,258,893	£23,278,486	£33,109,981	£43,602,045	£100,542,077	£156,083,445
Social care costs avoided	£1,318,049	£3,587,980	£6,665,085	£10,406,950	£14,713,750	£41,455,263	£71,222,856
Informal care costs avoided	£7,092,974	£16,607,968	£28,178,931	£41,357,257	£55,963,403	£141,120,619	£231,673,725
Lost productivity avoided	£689,558	£2,722,395	£5,857,851	£9,867,331	£14,568,533	£44,083,464	£76,253,316
Total	£15,494,661	£37,177,236	£63,980,354	£94,741,519	£128,847,730	£327,201,423	£535,233,343
Value by clinical event (discounted)							
Myocardial Infarctions	£1,308,325	£2,955,557	£4,862,562	£6,986,181	£9,256,872	£21,939,700	£34,531,510
Strokes	£12,437,138	£28,721,505	£48,272,323	£70,350,020	£94,692,704	£235,316,548	£383,790,327
Heart failure admissions	£840,872	£2,746,423	£5,478,951	£8,837,795	£12,681,700	£35,520,622	£59,075,478
End stage kidney disease	£908,326	£2,753,751	£5,366,516	£8,567,522	£12,216,455	£34,424,554	£57,836,028
Total	£15,494,661	£37,177,236	£63,980,354	£94,741,519	£128,847,730	£327,201,423	£535,233,343
Benefit to cost ratio (Gross)							
Health costs avoided	1.0	1.2	1.4	1.6	1.7	2.2	2.6
Social care costs avoided	0.2	0.3	0.4	0.5	0.6	0.9	1.2
Informal care costs avoided	1.1	1.4	1.7	2.0	2.2	3.1	3.9
Lost productivity avoided	0.1	0.2	0.4	0.5	0.6	1.0	1.3
Total	2.4	3.2	3.9	4.5	5.0	7.3	8.9

*Numbers less than 10 suppressed



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CVDACTION Optimisation Cohorts Analysis After 3 Years

Location **Birmingham and Solihull Integrated Care Board**

Step Change Scenario After 3 Years

Optimisation Cohort	Heath System Costs	CVD Events Prevented ¹	Health System Efficiencies	Social Care Efficiencies	Informal Care Avoided	Productivity Gained	Total Benefits
Hypertension							
1. Blood pressure not treated to target	£784,663	613	£9,250,292	£3,543,139	£15,014,375	£2,085,658	£29,893,465
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£123,455	44	£849,612	£360,936	£1,529,481	£163,171	£2,903,201
3. CVD on suboptimal dose or intensity of statin	£281,774	62	£976,691	£292,913	£1,236,999	£208,873	£2,715,476
4. CVD on max statin but not treated to target	£590,274	25	£487,299	£156,253	£666,708	£92,521	£1,402,782
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£25,967	28	£568,166	£96,545	£415,261	£163,642	£1,243,614
6. SGLT2i indicated but not prescribed	£3,079,244	132	£1,117,796	£0	£0	£404,459	£1,522,255
7. CVD and Statin not prescribed	£27,967	18	£370,748	£160,144	£685,079	£66,366	£1,282,337
8. BP not treated to target	£39,380	58	£898,395	£349,128	£1,473,027	£203,684	£2,924,234
Diabetes							
9. RAA indicated but not prescribed	£321,041	231	£4,273,834	£784,355	£3,299,914	£1,236,660	£9,594,762
10. SGLT2i indicated but not prescribed	£11,030,984	234	£2,068,576	£0	£0	£700,681	£2,769,258
11. DM and HTN with BP not treated to target	£141,585	133	£2,176,556	£823,186	£3,445,036	£486,136	£6,930,914
12. DM with CVD not on LLT	£26,104	13	£240,521	£98,485	£413,049	£45,999	£798,055
Total	£16,472,437	1,591	£23,278,486	£6,665,085	£28,178,931	£5,857,851	£63,980,354

All costs and benefits are discounted

¹ Events include heart attacks, strokes, heart failure admissions and end stage kidney disease.