

POWERING THE PREVENTION SHIFT | THE CVDACTION IMPACT MODEL



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.

Bristol, North Somerset and South Gloucestershire ICB Year 3 – Step Change Scenario	
Events prevented: <ul style="list-style-type: none"> • 149 Heart attacks • 273 Strokes • 449 Heart failure admissions • 35 End stage kidney disease 	907 events* ~ 6,925 bed days (excl ESKD) <small>*Total events may not match due to rounding</small>
Health/social care savings	£17.0 million
Productivity gains	£19.2 million
Benefit to cost ratio	14.3 <small>(Over £14 saved for every £1 spent, with break-even for NHS in first year of Step Change)</small>

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:

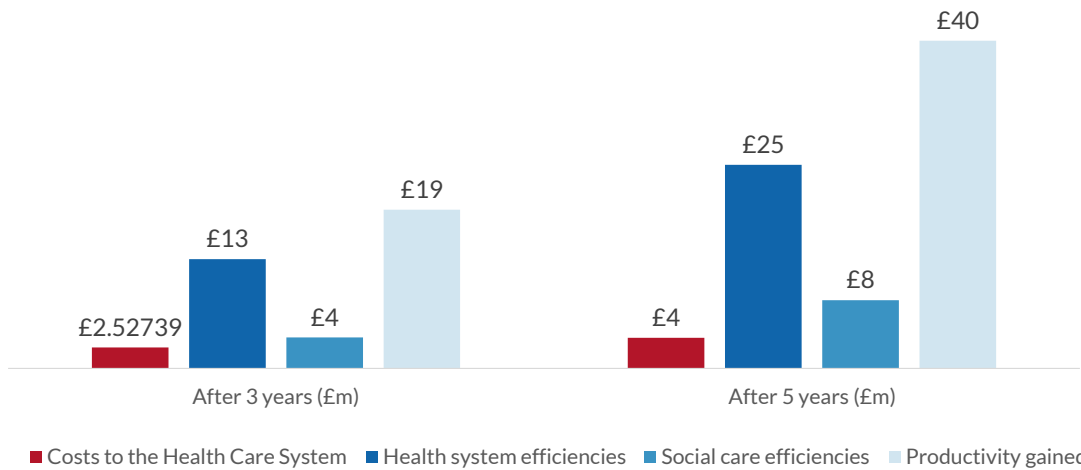
1. **Smart data** - routinely detect patients who are not on optimal treatment, and prioritise for optimisation
2. **Structured support for transformation** enabling teams to adapt workforce and pathways to optimise at scale and within capacity
3. **Partnership with primary care for step change** – supporting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

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

CVD ACTION Modelled Impact (Step Change Scenario) Headline Costs and Benefits

Location	Bristol, North Somerset and South Gloucestershire Integrated Care Board
CVD ACTION optimisation cohort	All
Number of patients optimised in year 1	35,129

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	149	243
Strokes (ischaemic)	273	441
Heart failure admissions	449	711
End stage kidney disease	35	56
Total	907	1,451
Costs to the Health Care System	£2.5m	£3.7m
Benefits		
Health system efficiencies	£13.2m	£24.6m
Social care efficiencies	£3.8m	£8.3m
Productivity gained	£19.2m	£39.7m
Total	£36.2m	£72.5m
Total Benefits to Costs Ratio (Gross)	14.3	19.6



All costs and benefits are discounted

CVD ACTION: Costs and Benefits by Year

Location:

Bristol, North Somerset and South Gloucestershire 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 CVD ACTION							
Myocardial Infarctions	51	101	149	197	243	460	646
Strokes	94	185	273	358	441	820	1,146
Heart failure admissions	157	307	449	583	711	1,275	1,722
End stage kidney disease	12	24	35	46	56	102	138
Costs of CVD ACTION and treatment (discounted)							
CVD ACTION	£219,366	£219,366	£219,366	£219,366	£219,366	£219,366	£219,366
Transformation cost	£274,208	£274,208	£274,208	£274,208	£274,208	£274,208	£274,208
Treatment	£729,746	£1,398,593	£2,033,814	£2,637,364	£3,211,038	£5,687,052	£7,630,049
Total	£1,223,321	£1,892,167	£2,527,389	£3,130,938	£3,704,613	£6,180,626	£8,123,624
Value by economic category (discounted)							
Health costs avoided	£3,649,118	£8,123,826	£13,228,541	£18,762,754	£24,635,913	£56,029,157	£86,066,028
Social care costs avoided	£744,808	£2,023,561	£3,752,364	£5,850,917	£8,262,186	£23,179,413	£39,700,868
Informal care costs avoided	£4,008,122	£9,373,008	£15,875,408	£23,268,375	£31,446,786	£78,946,301	£129,191,035
Lost productivity avoided	£393,532	£1,551,209	£3,325,283	£5,578,740	£8,204,088	£24,410,798	£41,728,975
Total	£8,795,580	£21,071,604	£36,181,596	£53,460,786	£72,548,973	£182,565,669	£296,686,906
Value by clinical event (discounted)							
Myocardial Infarctions	£759,487	£1,713,377	£2,818,383	£4,046,074	£5,357,979	£12,663,987	£19,892,640
Strokes	£7,028,021	£16,210,602	£27,197,670	£39,583,621	£53,213,994	£131,651,083	£214,030,406
Heart failure admissions	£485,664	£1,573,366	£3,115,186	£4,988,731	£7,109,792	£19,374,895	£31,643,611
End stage kidney disease	£522,408	£1,574,259	£3,050,357	£4,842,359	£6,867,208	£18,875,704	£31,120,250
Total	£8,795,580	£21,071,604	£36,181,596	£53,460,786	£72,548,973	£182,565,669	£296,686,906
Benefit to cost ratio (Gross)							
Health costs avoided	3.0	4.3	5.2	6.0	6.7	9.1	10.6
Social care costs avoided	0.6	1.1	1.5	1.9	2.2	3.8	4.9
Informal care costs avoided	3.3	5.0	6.3	7.4	8.5	12.8	15.9
Lost productivity avoided	0.3	0.8	1.3	1.8	2.2	3.9	5.1
Total	7.2	11.1	14.3	17.1	19.6	29.5	36.5

*Numbers less than 10 suppressed

CVD ACTION Optimisation Cohorts Analysis After 3 Years

Location Bristol, North Somerset and South Gloucestershire
Integrated Care Board

Step Change Scenario After 3 Years

Optimisation Cohort	Health 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	£435,331	321	£4,851,306	£1,858,196	£7,874,273	£1,093,821	£15,677,597
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£113,625	40	£759,890	£322,820	£1,367,961	£145,940	£2,596,610
3. CVD on suboptimal dose or intensity of statin	£226,520	47	£748,243	£224,401	£947,666	£160,018	£2,080,327
4. CVD on max statin but not treated to target	£454,585	19	£373,320	£119,706	£510,765	£70,880	£1,074,671
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£22,204	23	£468,746	£79,651	£342,597	£135,007	£1,026,002
6. SGLT2i indicated but not prescribed	£309,717	109	£922,200	£0	£0	£333,686	£1,255,885
7. CVD and Statin not prescribed	£23,786	15	£305,873	£132,121	£565,201	£54,753	£1,057,949
8. BP not treated to target	£28,121	39	£605,689	£235,379	£993,100	£137,322	£1,971,490
Diabetes							
9. RAA indicated but not prescribed	£166,824	116	£2,143,299	£393,349	£1,654,884	£620,176	£4,811,708
10. SGLT2i indicated but not prescribed	£671,809	117	£1,037,377	£0	£0	£351,387	£1,388,764
11. DM and HTN with BP not treated to target	£61,384	55	£891,979	£337,352	£1,411,818	£199,224	£2,840,374
12. DM with CVD not on LLT	£13,484	6	£120,620	£49,390	£207,141	£23,068	£400,219
Total	£2,527,389	907	£13,228,541	£3,752,364	£15,875,408	£3,325,283	£36,181,596

All costs and benefits are discounted

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