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.

Derby and Derbyshire ICB **Year 3 – Step Change Scenario**	
Events prevented: • 202 Heart attacks • 369 Strokes • 604 Heart failure admissions • 48 End stage kidney disease	**1,223 events*** **~ 9,332 bed days** (excl ESKD) *Total events may not match due to rounding
Health/social care savings	**£23 million**
Productivity gains	**£26 million**
Benefit to cost ratio	**3.8** (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

INTO-ACTION.HEALTH

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 CVDACTION 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 CVDACTION, structured support for primary care transformation and increased medication use (>90% of the total costs).

CVDACTION 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 CVDACTION contact Rosa@Into-Action.Health

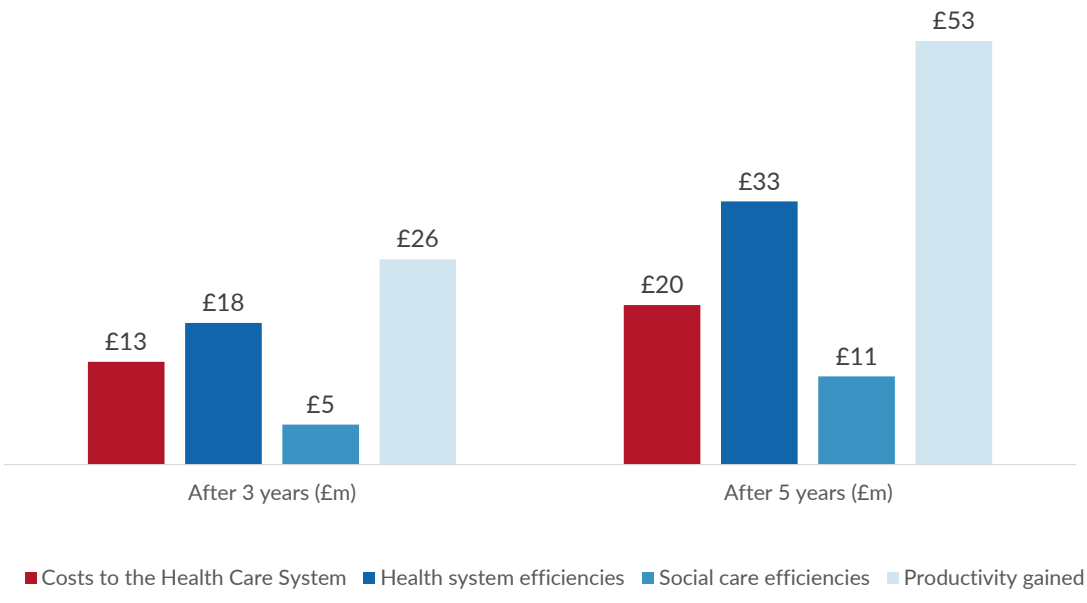
INTO-ACTION.HEALTH

CVDACTION Modelled Impact (Step Change Scenario)

Headline Costs and Benefits

Location	Derby and Derbyshire Integrated Care Board
CVDACTION optimisation cohort	All
Number of patients optimised in year 1	47,045

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	202	329
Strokes (ischaemic)	369	594
Heart failure admissions	604	954
End stage kidney disease	48	76
Total	**1,223**	**1,953**
Costs to the Health Care System	**£13m**	**£20m**
Benefits		
Health system efficiencies	£18m	£33m
Social care efficiencies	£5m	£11m
Productivity gained	£26m	£53m
Total	**£49m**	**£98m**
Total Benefits to Costs Ratio (Gross)	**3.8**	**4.9**



All costs and benefits are discounted

INTO-ACTION.HEALTH

CVDACTION: Costs and Benefits by Year

Location: Derby and Derbyshire 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	69	136	202	267	329	621	869
Strokes	127	249	369	483	594	1,102	1,538
Heart failure admissions	212	414	604	783	954	1,697	2,278
End stage kidney disease	17	33	48	62	76	137	185
Costs of CVDACTION and treatment (discounted)							
CVDACTION	£228,667	£228,667	£228,667	£228,667	£228,667	£228,667	£228,667
Transformation cost	£285,834	£285,834	£285,834	£285,834	£285,834	£285,834	£285,834
Treatment	£4,491,386	£8,569,055	£12,436,379	£16,106,443	£19,590,964	£34,596,565	£46,357,444
Total	**£5,005,886**	**£9,083,556**	**£12,950,879**	**£16,620,943**	**£20,105,465**	**£35,111,066**	**£46,871,945**
Value by economic category (discounted)							
Health costs avoided	£4,935,341	£10,976,455	£17,855,128	£25,296,355	£33,175,026	£75,014,041	£114,693,628
Social care costs avoided	£1,005,330	£2,729,061	£5,057,844	£7,882,650	£11,126,131	£31,156,526	£53,281,826
Informal care costs avoided	£5,410,101	£12,642,705	£21,401,624	£31,353,183	£42,353,140	£106,125,846	£173,401,052
Lost productivity avoided	£532,242	£2,095,194	£4,484,313	£7,510,884	£11,027,791	£32,583,789	£55,409,531
Total	**£11,883,014**	**£28,443,415**	**£48,798,909**	**£72,043,072**	**£97,682,088**	**£244,880,202**	**£396,786,037**
Value by clinical event (discounted)							
Myocardial Infarctions	£1,029,686	£2,321,209	£3,817,655	£5,479,210	£7,254,494	£17,120,819	£26,857,851
Strokes	£9,486,313	£21,865,859	£36,665,725	£53,338,282	£71,670,862	£176,978,216	£287,276,942
Heart failure admissions	£656,590	£2,120,310	£4,185,464	£6,683,075	£9,497,346	£25,571,889	£41,404,126
End stage kidney disease	£710,425	£2,136,037	£4,130,065	£6,542,505	£9,259,386	£25,209,279	£41,247,118
Total	**£11,883,014**	**£28,443,415**	**£48,798,909**	**£72,043,072**	**£97,682,088**	**£244,880,202**	**£396,786,037**
Benefit to cost ratio (Gross)							
Health costs avoided	1.0	1.2	1.4	1.5	1.7	2.1	2.4
Social care costs avoided	0.2	0.3	0.4	0.5	0.6	0.9	1.1
Informal care costs avoided	1.1	1.4	1.7	1.9	2.1	3.0	3.7
Lost productivity avoided	0.1	0.2	0.3	0.5	0.5	0.9	1.2
Total	**2.4**	**3.1**	**3.8**	**4.3**	**4.9**	**7.0**	**8.5**

*Numbers less than 10 suppressed

CVDACTION Optimisation Cohorts Analysis After 3 Years

INTO-ACTION.HEALTH

Location Derby and Derbyshire Integrated Care Board

Step Change Scenario After 3 Years

Optimisation Cohort	Heath System Costs	CVD Events Prevented[1]	Health System Efficiencies	*Social Care Efficencies*	*Informal Care Avoided*	*Productivity Gained*	*Total Benefits*
Hypertension							
1 .Blood pressure not treated to target	£495,331	404	£6,092,192	*£2,333,492*	*£9,888,386*	*£1,373,603*	*£19,687,674*
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£197,022	72	£1,384,750	*£588,276*	*£2,492,841*	*£265,946*	*£4,731,813*
3. CVD on suboptimal dose or intensity of statin	£281,992	64	£1,013,301	*£303,893*	*£1,283,367*	*£216,702*	*£2,817,263*
4. CVD on max statin but not treated to target	£610,093	26	£505,565	*£162,110*	*£691,699*	*£95,989*	*£1,455,363*
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£31,314	35	£703,553	*£119,550*	*£514,212*	*£202,636*	*£1,539,951*
6. SGLT2i indicated but not prescribed	£3,809,132	163	£1,384,152	*£0*	*£0*	*£500,837*	*£1,884,989*
7. CVD and Statin not prescribed	£33,863	22	£459,092	*£198,304*	*£848,325*	*£82,180*	*£1,587,901*
8. BP not treated to target	£37,568	58	£895,027	*£347,819*	*£1,467,504*	*£202,920*	*£2,913,270*
Diabetes							
9. RAA indicated but not prescribed	£203,277	150	£2,778,177	*£509,865*	*£2,145,087*	*£803,882*	*£6,237,010*
10. SGLT2i indicated but not prescribed	£7,163,712	152	£1,344,664	*£0*	*£0*	*£455,473*	*£1,800,137*
11. DM and HTN with BP not treated to target	£70,971	70	£1,138,307	*£430,514*	*£1,801,703*	*£254,242*	*£3,624,766*
12. DM with CVD not on LLT	£16,603	8	£156,349	*£64,020*	*£268,500*	*£29,902*	*£518,770*
Total	**£12,950,879**	**1,224**	**£17,855,128**	*£5,057,844*	*£21,401,624*	*£4,484,313*	*£48,798,909*

All costs and benefits are discounted

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