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.

Cheshire and Merseyside ICB **Year 3 – Step Change Scenario**	
Events prevented: • 515 Heart attacks • 1011 Strokes • 1492 Heart failure admissions • 108 End stage kidney disease	**3,126 events*** **~ 23,546 bed days** (excl ESKD) *Total events may not match due to rounding
Health/social care savings	**£60 million**
Productivity gains	**£70 million**
Benefit to cost ratio	**4.6** (Over £4 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

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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

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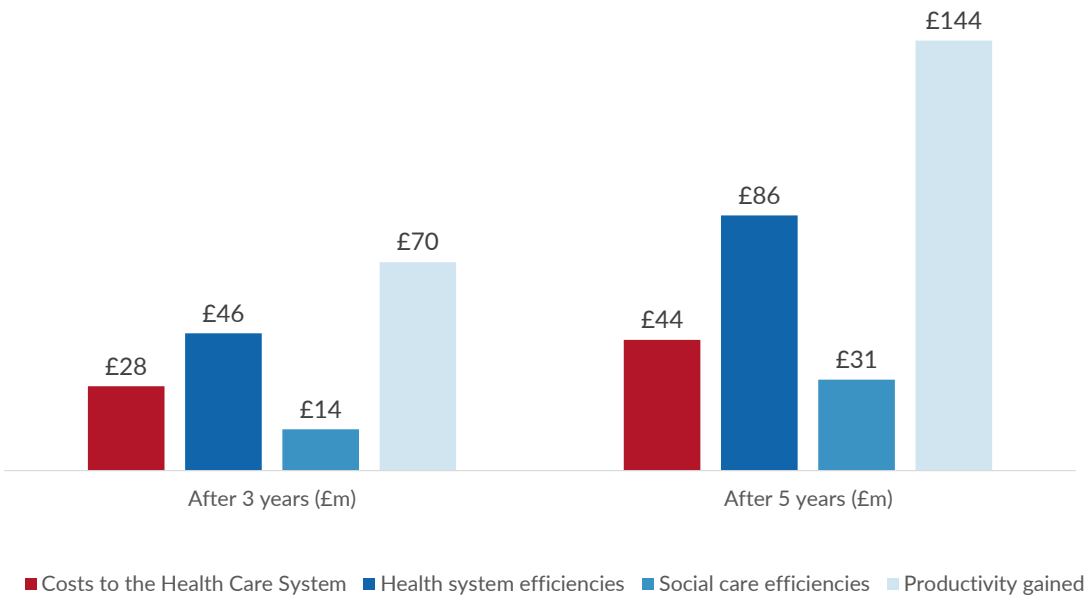
CVDACTION Modelled Impact (Step Change Scenario)

Headline Costs and Benefits

Location	Cheshire and Merseyside Integrated Care Board
CVDACTION optimisation cohort	All
Number of patients optimised in year 1	123,416

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	515	839
Strokes (ischaemic)	1,011	1,633
Heart failure admissions	1,492	2,376
End stage kidney disease	108	172
Total	**3,126**	**5,020**
Costs to the Health Care System	**£28m**	**£44m**
Benefits		
Health system efficiencies	£46m	£86m
Social care efficiencies	£14m	£31m
Productivity gained	£70m	£144m
Total	**£130m**	**£261m**
Total Benefits to Costs Ratio (Gross)	**4.6**	**5.9**



All costs and benefits are discounted

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CVDACTION: Costs and Benefits by Year

Location: Cheshire and Merseyside 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	174	347	515	680	839	1,597	2,253
Strokes	346	683	1,011	1,324	1,633	3,044	4,268
Heart failure admissions	520	1,019	1,492	1,943	2,376	4,314	5,891
End stage kidney disease	37	73	108	141	172	316	434
Costs of CVDACTION and treatment (discounted)							
CVDACTION	£560,676	£560,676	£560,676	£560,676	£560,676	£560,676	£560,676
Transformation cost	£700,846	£700,846	£700,846	£700,846	£700,846	£700,846	£700,846
Treatment	£9,757,745	£18,643,760	£27,078,488	£35,089,365	£42,701,008	£75,541,078	£101,342,260
Total	**£11,019,267**	**£19,905,281**	**£28,340,010**	**£36,350,887**	**£43,962,530**	**£76,802,600**	**£102,603,782**
Value by economic category (discounted)							
Health costs avoided	£12,824,038	£28,407,102	£46,133,421	£65,334,718	£85,753,209	£195,886,417	£303,210,658
Social care costs avoided	£2,748,780	£7,472,374	£13,869,470	£21,646,065	£30,595,697	£86,237,507	£148,392,481
Informal care costs avoided	£14,792,333	£34,615,342	£58,685,467	£86,080,975	£116,437,711	£293,587,523	£482,582,490
Lost productivity avoided	£1,382,984	£5,325,289	£11,358,957	£19,045,632	£28,040,748	£84,390,589	£146,001,647
Total	**£31,748,135**	**£75,820,107**	**£130,047,315**	**£192,107,390**	**£260,827,365**	**£660,102,036**	**£1,080,187,277**
Value by clinical event (discounted)							
Myocardial Infarctions	£2,616,776	£5,915,822	£9,747,268	£14,015,594	£18,590,359	£44,364,916	£70,313,856
Strokes	£25,937,539	£59,867,827	£100,540,938	£146,438,409	£197,032,247	£489,557,698	£799,418,797
Heart failure admissions	£1,606,433	£5,234,204	£10,421,035	£16,778,165	£24,040,271	£67,082,703	£111,657,099
End stage kidney disease	£1,587,386	£4,802,255	£9,338,073	£14,875,222	£21,164,488	£59,096,720	£98,797,525
Total	**£31,748,135**	**£75,820,107**	**£130,047,315**	**£192,107,390**	**£260,827,365**	**£660,102,036**	**£1,080,187,277**
Benefit to cost ratio (Gross)							
Health costs avoided	1.2	1.4	1.6	1.8	2.0	2.6	3.0
Social care costs avoided	0.2	0.4	0.5	0.6	0.7	1.1	1.4
Informal care costs avoided	1.3	1.7	2.1	2.4	2.6	3.8	4.7
Lost productivity avoided	0.1	0.3	0.4	0.5	0.6	1.1	1.4
Total	**2.9**	**3.8**	**4.6**	**5.3**	**5.9**	**8.6**	**10.5**

*Numbers less than 10 suppressed

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CVDACTION Optimisation Cohorts Analysis After 3 Years

Location Cheshire and Merseyside 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	£1,584,150	1,322	£19,958,721	*£7,644,788*	*£32,395,488*	*£4,500,082*	*£64,499,079*
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£415,362	155	£2,953,862	*£1,254,874*	*£5,317,573*	*£567,300*	*£10,093,609*
3. CVD on suboptimal dose or intensity of statin	£658,890	153	£2,416,344	*£724,670*	*£3,060,350*	*£516,754*	*£6,718,119*
4. CVD on max statin but not treated to target	£1,451,821	62	£1,205,583	*£386,573*	*£1,649,444*	*£228,898*	*£3,470,497*
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£57,960	65	£1,321,738	*£224,594*	*£966,031*	*£380,685*	*£2,893,049*
6. SGLT2i indicated but not prescribed	£7,152,092	306	£2,600,355	*£0*	*£0*	*£940,904*	*£3,541,259*
7. CVD and Statin not prescribed	£62,826	41	£862,480	*£372,547*	*£1,593,716*	*£154,389*	*£2,983,131*
8. BP not treated to target	£83,086	130	£2,028,863	*£788,443*	*£3,326,566*	*£459,983*	*£6,603,857*
Diabetes							
9. RAA indicated but not prescribed	£453,051	339	£6,283,793	*£1,153,233*	*£4,851,844*	*£1,818,254*	*£14,107,124*
10. SGLT2i indicated but not prescribed	£16,194,593	344	£3,041,416	*£0*	*£0*	*£1,030,208*	*£4,071,624*
11. DM and HTN with BP not treated to target	£189,079	190	£3,106,630	*£1,174,945*	*£4,917,149*	*£693,869*	*£9,892,593*
12. DM with CVD not on LLT	£37,100	18	£353,636	*£144,803*	*£607,304*	*£67,633*	*£1,173,375*
Total	**£28,340,010**	**3,125**	**£46,133,421**	*£13,869,470*	*£58,685,467*	*£11,358,957*	*£130,047,315*

All costs and benefits are discounted

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