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.

Herefordshire and Worcestershire ICB **Year 3 – Step Change Scenario**	
Events prevented: • 158 Heart attacks • 308 Strokes • 476 Heart failure admissions • 35 End stage kidney disease	**977 events*** **~ 7,416 bed days** (excl ESKD) *Total events may not match due to rounding
Health/social care savings	**£18 million**
Productivity gains	**£21 million**
Benefit to cost ratio	**4.3** (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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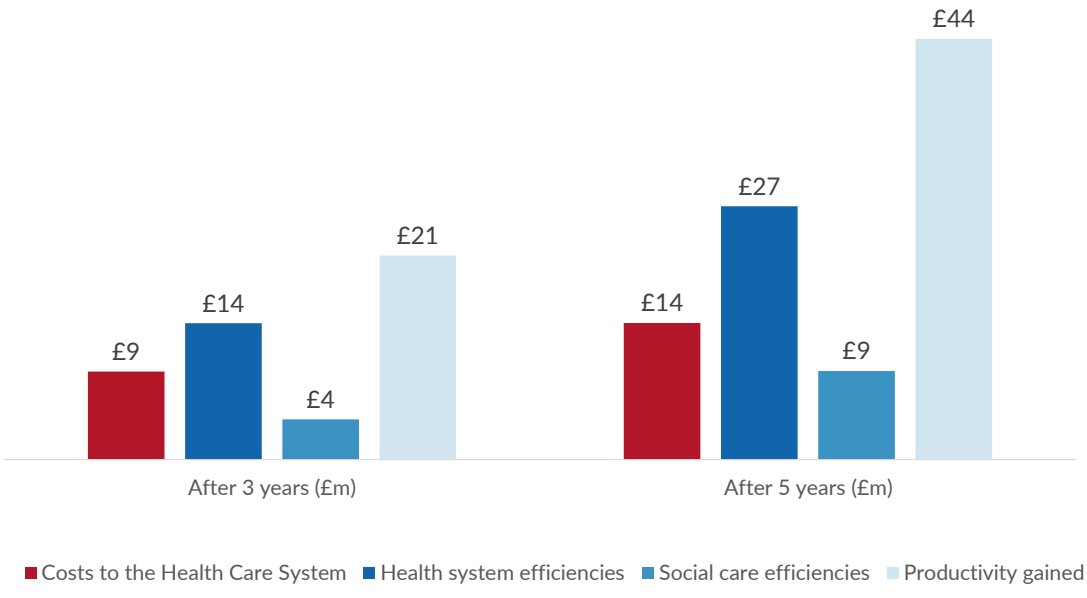
CVDACTION Modelled Impact (Step Change Scenario)

Headline Costs and Benefits

Location	Herefordshire and Worcestershire Integrated Care Board
CVDACTION optimisation cohort	All
Number of patients optimised in year 1	37,729

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	158	257
Strokes (ischaemic)	308	497
Heart failure admissions	476	755
End stage kidney disease	35	56
Total	**977**	**1,565**
Costs to the Health Care System	**£9m**	**£14m**
Benefits		
Health system efficiencies	£14m	£27m
Social care efficiencies	£4m	£9m
Productivity gained	£21m	£44m
Total	**£40m**	**£80m**
Total Benefits to Costs Ratio (Gross)	**4.3**	**5.6**



All costs and benefits are discounted

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CVDACTION: Costs and Benefits by Year

Location: Herefordshire and Worcestershire 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	53	106	158	208	257	488	687
Strokes	106	208	308	403	497	924	1,293
Heart failure admissions	167	326	476	618	755	1,357	1,837
End stage kidney disease	12	24	35	46	56	102	139
Costs of CVDACTION and treatment (discounted)							
CVDACTION	£166,721	£166,721	£166,721	£166,721	£166,721	£166,721	£166,721
Transformation cost	£208,402	£208,402	£208,402	£208,402	£208,402	£208,402	£208,402
Treatment	£3,201,622	£6,109,542	£8,867,732	£11,485,482	£13,971,117	£24,677,606	£33,071,519
Total	**£3,576,745**	**£6,484,664**	**£9,242,855**	**£11,860,605**	**£14,346,240**	**£25,052,729**	**£33,446,642**
Value by economic category (discounted)							
Health costs avoided	£3,971,763	£8,811,866	£14,318,786	£20,277,553	£26,600,775	£60,468,036	£93,112,149
Social care costs avoided	£838,173	£2,276,800	£4,223,133	£6,586,811	£9,304,384	£26,155,314	£44,904,458
Informal care costs avoided	£4,510,557	£10,547,786	£17,871,120	£26,198,077	£35,415,502	£89,063,716	£146,071,416
Lost productivity avoided	£428,327	£1,664,504	£3,554,479	£5,955,491	£8,755,930	£26,128,718	£44,881,056
Total	**£9,748,820**	**£23,300,956**	**£39,967,519**	**£59,017,932**	**£80,076,590**	**£201,815,784**	**£328,969,079**
Value by clinical event (discounted)							
Myocardial Infarctions	£802,907	£1,813,788	£2,986,519	£4,291,664	£5,688,897	£13,530,516	£21,380,457
Strokes	£7,909,013	£18,242,686	£30,617,466	£44,568,191	£59,930,240	£148,518,671	£241,983,190
Heart failure admissions	£514,873	£1,670,270	£3,311,633	£5,310,859	£7,580,318	£20,814,530	£34,250,593
End stage kidney disease	£522,027	£1,574,213	£3,051,901	£4,847,218	£6,877,135	£18,952,067	£31,354,839
Total	**£9,748,820**	**£23,300,956**	**£39,967,519**	**£59,017,932**	**£80,076,590**	**£201,815,784**	**£328,969,079**
Benefit to cost ratio (Gross)							
Health costs avoided	1.1	1.4	1.5	1.7	1.9	2.4	2.8
Social care costs avoided	0.2	0.4	0.5	0.6	0.6	1.0	1.3
Informal care costs avoided	1.3	1.6	1.9	2.2	2.5	3.6	4.4
Lost productivity avoided	0.1	0.3	0.4	0.5	0.6	1.0	1.3
Total	**2.7**	**3.6**	**4.3**	**5.0**	**5.6**	**8.1**	**9.8**

*Numbers less than 10 suppressed

CVDACTION Optimisation Cohorts Analysis After 3 Years

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Location Herefordshire and Worcestershire 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	£463,812	391	£5,899,734	*£2,259,775*	*£9,576,003*	*£1,330,210*	*£19,065,723*
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£127,195	48	£908,748	*£386,059*	*£1,635,938*	*£174,529*	*£3,105,274*
3. CVD on suboptimal dose or intensity of statin	£194,111	45	£717,630	*£215,220*	*£908,893*	*£153,471*	*£1,995,214*
4. CVD on max statin but not treated to target	£430,826	19	£358,046	*£114,808*	*£489,868*	*£67,980*	*£1,030,703*
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£21,620	24	£495,923	*£84,269*	*£362,460*	*£142,835*	*£1,085,486*
6. SGLT2i indicated but not prescribed	£2,682,916	115	£975,666	*£0*	*£0*	*£353,032*	*£1,328,698*
7. CVD and Statin not prescribed	£23,456	15	£323,607	*£139,781*	*£597,970*	*£57,927*	*£1,119,285*
8. BP not treated to target	£28,732	46	£708,501	*£275,333*	*£1,161,672*	*£160,631*	*£2,306,136*
Diabetes							
9. RAA indicated but not prescribed	£140,855	106	£1,965,050	*£360,636*	*£1,517,255*	*£568,599*	*£4,411,540*
10. SGLT2i indicated but not prescribed	£5,063,279	107	£951,103	*£0*	*£0*	*£322,164*	*£1,273,267*
11. DM and HTN with BP not treated to target	£54,507	55	£904,191	*£341,970*	*£1,431,146*	*£201,952*	*£2,879,259*
12. DM with CVD not on LLT	£11,546	6	£110,588	*£45,282*	*£189,914*	*£21,150*	*£366,935*
Total	**£9,242,855**	**977**	**£14,318,786**	*£4,223,133*	*£17,871,120*	*£3,554,479*	*£39,967,519*

All costs and benefits are discounted

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