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.

Staffordshire and Stoke-on-Trent ICB **Year 3 – Step Change Scenario**	
Events prevented: • 217 Heart attacks • 417 Strokes • 647 Heart failure admissions • 49 End stage kidney disease	**1,330 events*** **~ 10,087 bed days** (excl ESKD) *Total events may not match due to rounding
Health/social care savings	**£26 million**
Productivity gains	**£29 million**
Benefit to cost ratio	**4.2** (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

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

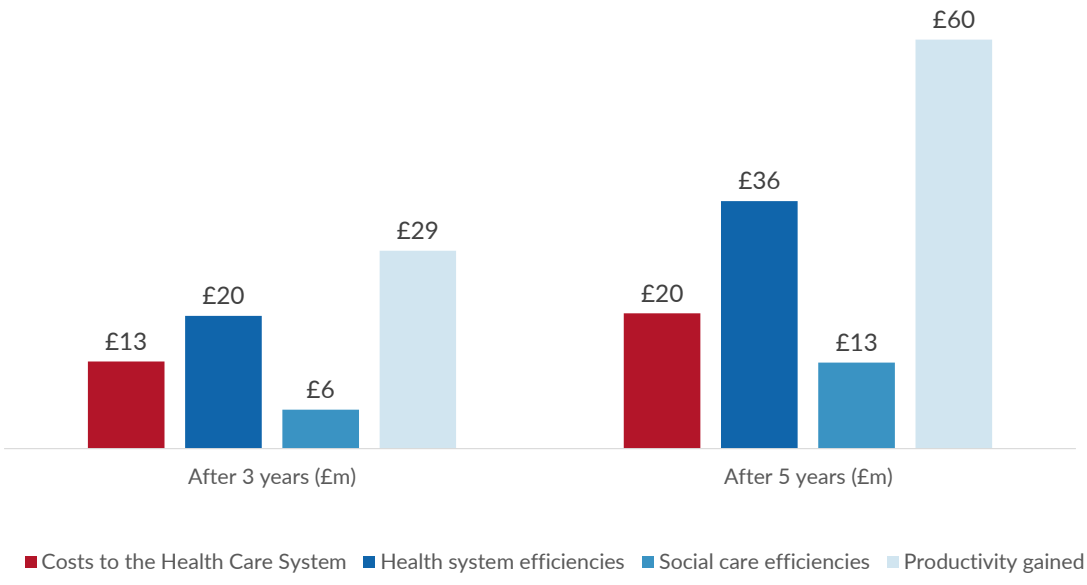
INTO-ACTION.HEALTH

CVDACTION Modelled Impact (Step Change Scenario)

Headline Costs and Benefits

Location	Staffordshire and Stoke-on-Trent Integrated Care Board
CVDACTION optimisation cohort	All
Number of patients optimised in year 1	51,855

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	217	353
Strokes (ischaemic)	417	674
Heart failure admissions	647	1,032
End stage kidney disease	49	78
Total	**1,330**	**2,137**
Costs to the Health Care System	**£13m**	**£20m**
Benefits		
Health system efficiencies	£20m	£36m
Social care efficiencies	£6m	£13m
Productivity gained	£29m	£60m
Total	**£54m**	**£109m**
Total Benefits to Costs Ratio (Gross)	**4.2**	**5.5**



All costs and benefits are discounted

INTO-ACTION.HEALTH

CVDACTION: Costs and Benefits by Year

Location: Staffordshire and Stoke-on-Trent 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	73	146	217	286	353	674	950
Strokes	143	282	417	547	674	1,257	1,763
Heart failure admissions	225	442	647	843	1,032	1,875	2,561
End stage kidney disease	17	33	49	63	78	142	196
Costs of CVDACTION and treatment (discounted)							
CVDACTION	£241,574	£241,574	£241,574	£241,574	£241,574	£241,574	£241,574
Transformation cost	£301,968	£301,968	£301,968	£301,968	£301,968	£301,968	£301,968
Treatment	£4,414,287	£8,440,041	£12,263,135	£15,895,741	£19,348,780	£34,262,746	£45,997,036
Total	**£4,957,829**	**£8,983,583**	**£12,806,676**	**£16,439,283**	**£19,892,321**	**£34,806,287**	**£46,540,578**
Value by economic category (discounted)							
Health costs avoided	£5,396,013	£11,991,071	£19,518,085	£27,690,834	£36,391,757	£83,393,095	£129,148,669
Social care costs avoided	£1,134,843	£3,086,371	£5,729,473	£8,942,459	£12,639,797	£35,609,873	£61,228,014
Informal care costs avoided	£6,107,063	£14,294,102	£24,237,625	£35,555,952	£48,097,391	£121,239,286	£199,152,753
Lost productivity avoided	£581,923	£2,268,384	£4,857,246	£8,158,844	£12,023,366	£36,216,116	£62,586,578
Total	**£13,219,841**	**£31,639,928**	**£54,342,428**	**£80,348,090**	**£109,152,312**	**£276,458,371**	**£452,116,015**
Value by clinical event (discounted)							
Myocardial Infarctions	£1,100,886	£2,488,096	£4,096,824	£5,888,271	£7,806,056	£18,572,539	£29,349,426
Strokes	£10,708,397	£24,721,320	£41,523,309	£60,485,540	£81,387,695	£202,168,777	£329,913,748
Heart failure admissions	£696,162	£2,268,679	£4,517,149	£7,273,268	£10,420,928	£29,050,101	£48,262,273
End stage kidney disease	£714,395	£2,161,832	£4,205,147	£6,701,011	£9,537,632	£26,666,953	£44,590,568
Total	**£13,219,841**	**£31,639,928**	**£54,342,428**	**£80,348,090**	**£109,152,312**	**£276,458,371**	**£452,116,015**
Benefit to cost ratio (Gross)							
Health costs avoided	1.1	1.3	1.5	1.7	1.8	2.4	2.8
Social care costs avoided	0.2	0.3	0.4	0.5	0.6	1.0	1.3
Informal care costs avoided	1.2	1.6	1.9	2.2	2.4	3.5	4.3
Lost productivity avoided	0.1	0.3	0.4	0.5	0.6	1.0	1.3
Total	**2.7**	**3.5**	**4.2**	**4.9**	**5.5**	**7.9**	**9.7**

*Numbers less than 10 suppressed

INTO-ACTION.HEALTH

CVDACTION Optimisation Cohorts Analysis After 3 Years

Location Staffordshire and Stoke-on-Trent 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	£661,643	547	£8,262,674	*£3,164,852*	*£13,411,348*	*£1,862,981*	*£26,701,854*
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£129,336	48	£915,832	*£389,068*	*£1,648,691*	*£175,889*	*£3,129,480*
3. CVD on suboptimal dose or intensity of statin	£267,555	62	£973,902	*£292,077*	*£1,233,467*	*£208,276*	*£2,707,721*
4. CVD on max statin but not treated to target	£585,597	25	£485,907	*£155,807*	*£664,804*	*£92,257*	*£1,398,775*
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£24,333	27	£551,885	*£93,778*	*£403,361*	*£158,953*	*£1,207,978*
6. SGLT2i indicated but not prescribed	£2,986,925	128	£1,085,765	*£0*	*£0*	*£392,869*	*£1,478,634*
7. CVD and Statin not prescribed	£26,353	17	£360,124	*£155,555*	*£665,448*	*£64,464*	*£1,245,591*
8. BP not treated to target	£33,566	52	£812,262	*£315,656*	*£1,331,801*	*£184,156*	*£2,643,874*
Diabetes							
9. RAA indicated but not prescribed	£218,429	163	£3,013,294	*£553,014*	*£2,326,625*	*£871,915*	*£6,764,848*
10. SGLT2i indicated but not prescribed	£7,767,360	165	£1,458,463	*£0*	*£0*	*£494,020*	*£1,952,483*
11. DM and HTN with BP not treated to target	£87,710	88	£1,428,398	*£540,228*	*£2,260,857*	*£319,034*	*£4,548,516*
12. DM with CVD not on LLT	£17,870	9	£169,581	*£69,438*	*£291,223*	*£32,432*	*£562,674*
Total	**£12,806,676**	**1,331**	**£19,518,085**	*£5,729,473*	*£24,237,625*	*£4,857,246*	*£54,342,428*

All costs and benefits are discounted

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