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.

North West London ICB Year 3 – Step Change Scenario	
Events prevented: • 322 Heart attacks • 538 Strokes • 960 Heart failure admissions • 84 End stage kidney disease	1,904 events* ~ 14,644 bed days (excl ESKD) *Total events may not match due to rounding
Health/social care savings	£35 million
Productivity gains	£38 million
Benefit to cost ratio	3.1 (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

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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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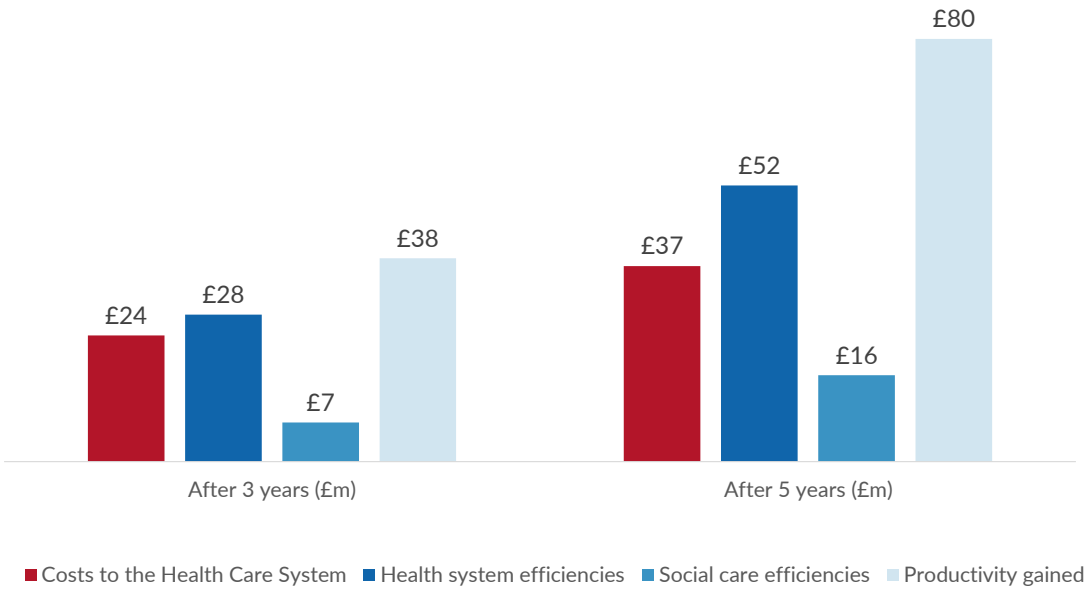
CVDACTION Modelled Impact (Step Change Scenario)

Headline Costs and Benefits

Location	North West London Integrated Care Board
CVDACTION optimisation cohort	All
Number of patients optimised in year 1	72,525

	After 3 years	After 5 years
Events Prevented		
Myocardial infarctions	322	526
Strokes (ischaemic)	538	870
Heart failure admissions	960	1,531
End stage kidney disease	84	134
Total	**1,904**	**3,061**
Costs to the Health Care System	**£24m**	**£37m**
Benefits		
Health system efficiencies	£28m	£52m
Social care efficiencies	£7m	£16m
Productivity gained	£38m	£80m
Total	**£74m**	**£148m**
Total Benefits to Costs Ratio (Gross)	**3.1**	**4.0**



All costs and benefits are discounted

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CVDACTION: Costs and Benefits by Year

Location: North West London 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	109	217	322	426	526	998	1,401
Strokes	185	364	538	705	870	1,622	2,271
Heart failure admissions	333	655	960	1,251	1,531	2,781	3,789
End stage kidney disease	29	57	84	110	134	246	336
Costs of CVDACTION and treatment (discounted)							
CVDACTION	£583,302	£583,302	£583,302	£583,302	£583,302	£583,302	£583,302
Transformation cost	£729,128	£729,128	£729,128	£729,128	£729,128	£729,128	£729,128
Treatment	£8,088,237	£15,500,289	£22,549,881	£29,257,887	£35,643,007	£63,315,290	£85,186,636
Total	**£9,400,668**	**£16,812,720**	**£23,862,312**	**£30,570,318**	**£36,955,437**	**£64,627,721**	**£86,499,067**
Value by economic category (discounted)							
Health costs avoided	£7,563,759	£16,958,630	£27,778,647	£39,601,662	£52,213,498	£120,270,304	£185,631,687
Social care costs avoided	£1,465,505	£3,988,746	£7,406,232	£11,557,957	£16,331,852	£45,851,396	£78,433,601
Informal care costs avoided	£7,886,495	£18,459,949	£31,304,735	£45,928,091	£62,120,503	£156,161,800	£255,326,396
Lost productivity avoided	£815,699	£3,295,972	£7,133,457	£12,034,893	£17,766,471	£53,374,069	£91,411,892
Total	**£17,731,458**	**£42,703,297**	**£73,623,071**	**£109,122,603**	**£148,432,325**	**£375,657,569**	**£610,803,576**
Value by clinical event (discounted)							
Myocardial Infarctions	£1,635,542	£3,683,776	£6,050,644	£8,679,293	£11,481,644	£26,900,708	£41,863,357
Strokes	£13,828,533	£31,923,756	£53,625,588	£78,124,499	£105,111,368	£260,415,279	£423,021,674
Heart failure admissions	£1,030,587	£3,354,840	£6,670,914	£10,724,754	£15,336,416	£42,253,633	£69,197,443
End stage kidney disease	£1,236,795	£3,740,926	£7,275,926	£11,594,057	£16,502,896	£46,087,949	£76,721,103
Total	**£17,731,458**	**£42,703,297**	**£73,623,071**	**£109,122,603**	**£148,432,325**	**£375,657,569**	**£610,803,576**
Benefit to cost ratio (Gross)							
Health costs avoided	0.8	1.0	1.2	1.3	1.4	1.9	2.1
Social care costs avoided	0.2	0.2	0.3	0.4	0.4	0.7	0.9
Informal care costs avoided	0.8	1.1	1.3	1.5	1.7	2.4	3.0
Lost productivity avoided	0.1	0.2	0.3	0.4	0.5	0.8	1.1
Total	**1.9**	**2.5**	**3.1**	**3.6**	**4.0**	**5.8**	**7.1**

*Numbers less than 10 suppressed

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CVDACTION Optimisation Cohorts Analysis After 3 Years

Location North West London 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	£845,013	556	£8,392,436	*£3,214,555*	*£13,621,968*	*£1,892,238*	*£27,121,197*
Cholesterol							
2. CVD not on Lipid Lowering Therapy (LLT)	£253,500	83	£1,594,868	*£677,539*	*£2,871,098*	*£306,300*	*£5,449,805*
3. CVD on suboptimal dose or intensity of statin	£453,408	86	£1,355,485	*£406,515*	*£1,716,750*	*£289,881*	*£3,768,630*
4. CVD on max statin but not treated to target	£833,108	35	£676,290	*£216,854*	*£925,280*	*£128,404*	*£1,946,828*
Chronic Kidney Disease							
5. RAA indicated but not prescribed	£36,856	35	£721,444	*£122,590*	*£527,288*	*£207,789*	*£1,579,111*
6. SGLT2i indicated but not prescribed	£3,927,771	167	£1,419,350	*£0*	*£0*	*£513,573*	*£1,932,922*
7. CVD and Statin not prescribed	£39,057	22	£470,767	*£203,347*	*£869,897*	*£84,270*	*£1,628,280*
8. BP not treated to target	£43,828	54	£839,391	*£326,199*	*£1,376,283*	*£190,306*	*£2,732,178*
Diabetes							
9. RAA indicated but not prescribed	£539,249	347	£6,427,409	*£1,179,590*	*£4,962,733*	*£1,859,810*	*£14,429,541*
10. SGLT2i indicated but not prescribed	£16,661,454	352	£3,110,927	*£0*	*£0*	*£1,053,753*	*£4,164,680*
11. DM and HTN with BP not treated to target	£186,001	148	£2,408,564	*£910,932*	*£3,812,256*	*£537,955*	*£7,669,707*
12. DM with CVD not on LLT	£43,067	19	£361,719	*£148,112*	*£621,184*	*£69,179*	*£1,200,193*
Total	**£23,862,312**	**1,904**	**£27,778,647**	*£7,406,232*	*£31,304,735*	*£7,133,457*	*£73,623,071*

All costs and benefits are discounted

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

Model by GtD SOCIAL IMPACT ANALYTICS

Economic analyiss by EBD.