Model results

Inputs submitted to the model:

Clinical Commissioning Group or Local Authority: NHS Sheffield

Number referred to intervention in one year: 1500

Intervention cost:

£350

Intervention uptake:

32%

Intervention effect:

25% lower

Time to return to baseline after intervention effect:

8 years

Key model outputs:

The key changes in your population given the input specification

Total Number of Interventions Given:

180

Year DPP recoups Intervention Costs:

12

Year DPP becomes Cost-Effective*:

6

Cumulative total 5-year NHS cost savings (excluding intervention cost):

£58,765

Cumulative total 5-year QALY gains:

3 3

Cumulative total 5-year reduction in number of diabetes diagnoses:

25.3

*(at a threshold of £20,000/QALY)

Incremental analysis

All the results in this report are the incremental results of providing the DPP intervention with your chosen input specification i.e. these are the differences in costs and health outcomes with the intervention, compared to a baseline scenario where no intervention is offered.

Introduction

This document contains the results of your selected scenario. For more details of how to use the DPP Return on Investment Tool and the modelling methodology behind it, please see the DPP Return on Investment Tool Technical Appendix and User Guide. Please contact healtheconomics@phe.gov.uk for any queries associated with the tool.

This report shows incremental (net) costs, savings and health benefits arising due to implementation of the DPP for a single year in your CCG or local authority, using your chosen inputs (shown above). The tool also shows a comparison of results from your locality with national results for England.

Results are presented as follows:

- 1. Summary
- 2. Disease outcomes for your locality
- 3. Cost savings for your locality
- 4. Health Economic Assessment
- 5. Detailed Model results for your locality
- 6. Comparison of results for NHS Sheffield with results from England

1) Summary

If 1500 individuals are offered the DPP intervention, of which 32% take it up, then on average 480 individuals will receive the DPP intervention, and the five year net cumulative reduction in diabetes cases will be 25.3.

The total intervention cost will be £168,000. The model estimates that savings to the NHS will outweigh initial intervention costs by year 12 following intervention implementation.

The model estimates that the DPP will be cost saving in your locality over 20 years following intervention implementation, using the NICE threshold of £20,000 per QALY.

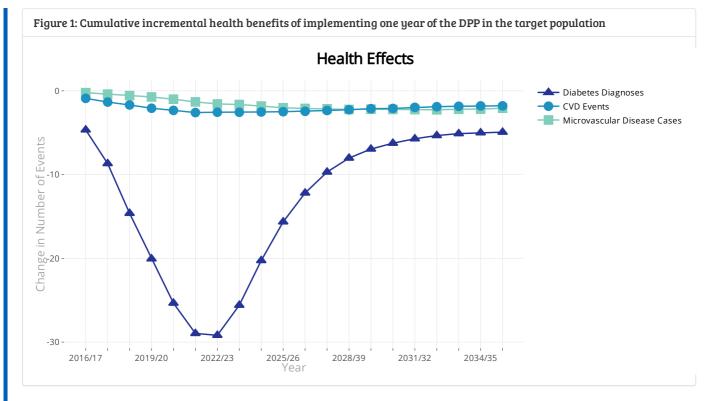
The model estimates that the total five year net monetary benefit of the DPP will be £92,844. This incorporates 3.3 QALYs valued at £60,000 each, and £105,156 of net total NHS costs and savings (including intervention costs).

2) Disease outcomes for your locality

If 1500 individuals are offered the DPP intervention, of which 32% take it up, then on average 480 individuals will receive the DPP intervention.

Table 1 and Figure 1 summarise the estimated effects of the DPP on the health of your local population. This summarises the reduction in diabetes diagnoses, cardiovascular disease (CVD) events (including stroke, myocardial infarction, angina and congestive heart failure) and microvascular events (complications of diabetes including leg ulcers, amputations, renal failure and retinopathy).

Table 1: Cumulative incrementa	Table 1: Cumulative incremental health benefits of implementing one year of the DPP in the target population												
	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36					
Diabetes Diagnoses	-4.7	-8.7	-14.6	-20.1	-25.3	-15.6	-6.3	-4.9					
CVD Events	-0.9	-1.3	-1.7	-2.1	-2.3	-2.5	-2.1	-1.8					
Microvascular Disease Cases	-0.2	-0.4	-0.6	-0.7	-1	-2	-2.2	-2.1					



The model estimates that for 480 individuals undergoing the intervention, the five year net cumulative reduction in diabetes cases will be 25.3. Although diabetes cases drop in the short term, they then start rising again after about 8 years following intervention implementation, as weight lost is assumed to have been regained. This indicates that diabetes is likely to be delayed by the intervention in most cases, rather than prevented entirely. A similar pattern is seen for CVD and microvascular disease.

3) Cost savings for your locality

Table 2 and Figure 2 summarise the estimated cumulative effects of the DPP on NHS cost savings over time. In Figure 2, the red line represents the total cost of the DPP intervention, and the top of the green shaded area represents the total savings to the NHS that are accrued following intervention implementation. The intervention becomes cost saving (recoups intervention costs) where the green shaded area reaches the red line. For the 480 individuals receiving the DPP, total intervention cost will be £168,000.

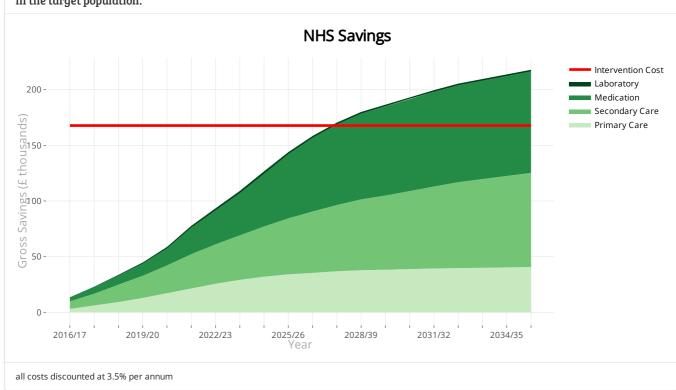
The model estimates that savings to the NHS will outweigh initial intervention costs by year 12 following intervention implementation.

Table 2: Detailed financial breakdown by service: cumulative incremental NHS savings of implementing one year of the DPP in the target population.

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
Total NHS Savings	£13,620	£23,071	£33,739	£44,790	£58,765	£143,845	£193,265	£217,789
Primary Care Savings	£3,174	£6,064	£9,322	£12,984	£17,054	£34,087	£38,888	£40,753
Secondary Care Savings	£6,763	£10,701	£15,374	£19,914	£25,125	£50,337	£70,185	£84,503
Cashable Savings*	£3,684	£6,307	£9,044	£11,892	£16,586	£59,420	£84,192	£92,533
Prescription/Medication Savings	£3,564	£5,965	£8,404	£10,875	£15,192	£57,531	£82,680	£91,013
Laboratory Test Savings	£119	£342	£639	£1,017	£1,393	£1,889	£1,512	£1,520
Social Care Savings	£289	£1,265	£2,034	£2,885	£3,797	£6,835	£8,054	£8,453

*cashable savings are planned resource savings which are reflected in ongoing reductions to budgets. For more information see the User Guide

Figure 2: Detailed financial breakdown by service: cumulative incremental NHS savings of implementing one year of the DPP in the target population.



Total NHS savings are broken down into primary care, secondary care and cashable savings. Cashable savings are estimated to be those that will directly release cash for the NHS, and include the costs of medications and laboratory tests which may no longer be required due to the DPP intervention. Primary and secondary care savings incorporate reduction in use of staff time, equipment and overheads, activities which may or may not be directly cash releasing, but if not, will provide benefit elsewhere in the NHS. All costs are discounted at 3.5%. The model estimates that the total five year savings to the NHS will be £58,765, of which £16,586 is estimated to be cashable.

Social care savings are shown separately in Table 2. These include costs of care after stroke and costs of care with osteoarthritis, but should not be considered to include the totality of social care costs associated with diabetes and its complications. Total five year social care savings are estimated to be £3,797.

Table 3 and Figure 3 also summarise the estimated effects of the DPP on NHS cost savings over time, but here the total savings generated to your local NHS are broken down by disease area.

These include diabetes treatment costs, costs of diagnosis for diabetes, hypertension and high cholesterol, cost of treatment with statins and antihypertensive medications, cardiovascular disease costs, microvascular disease costs, and costs of other complications that are exacerbated by diabetes and obesity including cancer, osteoarthritis and depression. These costs include primary and secondary care costs, plus costs of diagnostic tests and medications.

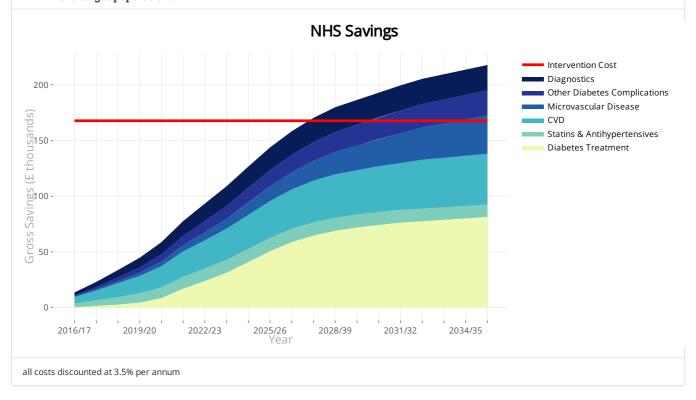
In Figure 3, the red line represents the total cost of the DPP intervention, and the top of the blue shaded area represents the total savings to the NHS that are accrued following intervention implementation. The intervention becomes cost saving (recoups intervention costs) where the blue shaded area reaches the red line. In Table 3, social care costs have also been subdivided into cardiovascular disease (stroke) and other complications (osteoarthritis).

Table 3: Detailed financial breakdown by disease area: cumulative incremental NHS savings of implementing one year of the DPP in the target population.

5								
	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
Total NHS Savings	£13,620	£23,071	£33,739	£44,790	£58,765	£143,845	£193,265	£217,789
Diabetes Treatment Savings	£356	£1,411	£2,750	£4,539	£8,612	£50,705	£74,238	£81,404
Diagnostics Savings	£2,672	£4,620	£6,637	£8,681	£10,902	£20,330	£22,423	£22,822
Statin/Antihypertensive Savings	£3,213	£5,018	£6,736	£8,310	£9,571	£11,934	£11,562	£11,19
Cardiovascular Savings	£5,963	£8,918	£12,488	£15,611	£19,079	£33,131	£41,200	£45,47
Nephropathy Savings	£57	£375	£767	£1,145	£1,650	£5,286	£11,609	£19,66
Retinopathy Savings	£243	£523	£846	£1,186	£1,627	£3,571	£4,187	£4,35
Neuropathy Savings	£122	£237	£294	£522	£791	£4,405	£8,479	£10,44
Cancer Savings*	£236	£383	£443	£539	£629	£593	£536	£49
Osteoarthritis Savings	£735	£1,511	£2,622	£3,997	£5,527	£12,864	£17,622	£20,40
Depression Savings	£24	£76	£157	£260	£377	£1,025	£1,411	£1,53
Total Social Care Savings	£289	£1,265	£2,034	£2,885	£3,797	£6,835	£8,054	£8,453
Stroke Savings	£236	£1,156	£1,844	£2,595	£3,396	£5,901	£6,775	£6,97
Osteoarthritis Savings	£53	£110	£190	£290	£401	£934	£1,279	£1,48

^{*} note that some areas can experience small increases in cancers costs in later years because cancer is a competing risk with CVD (i.e. patients who are prevented from dying from CVD die from cancer instead).

Figure 3: Detailed financial breakdown by disease area: cumulative incremental NHS savings of implementing one year of the DPP in the target population.



4) Health Economic Assessment

Quality Adjusted Life Year

The QALY is a measure of health that attempts to capture improvements to both quality and length of life. The impact of illness on a patient is measured in terms of health-related quality of life using a single scale between one (perfect health) and zero (death) QALYs are then calculated by multiplying the health-related quality of life value with the length of life spent in that health state, for example, 10 years at 0.5 produces 5 QALYs.

NICE perspective

Table 4 summarises the cumulative health economic results of implementing the DPP in your area from a NICE perspective. This includes incremental (net) quality-adjusted life-years (QALYs) gained, incremental (net) total NHS costs (intervention costs minus NHS savings), estimated cost-effectiveness measured using the incremental cost-effectiveness ratio (ICER), and net monetary henefit

The ICER is calculated using the following equation: Incremental Cost-Effectiveness Ratio (£/QALY) = Incremental costs (£) / Incremental QALYs

Interventions with ICERs below £20,000 per QALY are considered to be cost-effective by NICE.

In order to show a broader perspective, some social care costs (stroke and osteoarthritis-related) are also estimated by the model. The ICER including these costs is also shown.

The model estimates that the DPP will be cost saving in your locality over 20 years following intervention implementation, using the NICE threshold of £20,000 per QALY.

Table 4: Cumulative incremental QALY effect, net cost (intervention cost minus NHS savings), cost-effectiveness (at £20k per QALY) to the NHS and cost-effectiveness including some social care savings of implementing one year of the DPP in the target population

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
QALYs	0.2	0.6	1.2	2.1	3.3	11.3	18.4	22.6
Total Cost to NHS (Net)	£154,098	£144,647	£133,979	£122,929	£108,953	£23,873	-£25,547	-£50,071
Incremental Cost Effectiveness Ratio NHS costs only						•		-£2,218
Total Cost (Net) including social care*	£153,809	£143,382	£131,945	£120,043	£105,156	£17,038	-£33,601	-£58,524
ICER including social care*						,		-£2,592

^{*} social care savings relate to osteoarthritis and stroke only

Figure 4 plots the cost-effectiveness of the DPP on the cost-effectiveness plane, with the NICE threshold of £20,000 per QALY marked by the blue line. The circle indicates the total incremental costs and QALYs at year 20 following the intervention (the last year modelled). Points in the lower right quadrant are cost saving, whilst those in the upper right quadrant are cost-effective if below the threshold line, and not cost-effective if above it.

The point where the circles cross from the top left hand side of the blue line to the bottom right hand side, indicate the year in which the intervention becomes cost-effective at the NICE threshold of £20,000 per QALY.

The point where the circles cross below the x axis, indicate the year in which the intervention becomes cost-saving.

Figure 4: Cumulative incremental QALY effect, net cost (intervention cost minus NHS savings), cost-effectiveness (at £20k per QALY) to the NHS of implementing one year of the DPP in the target population

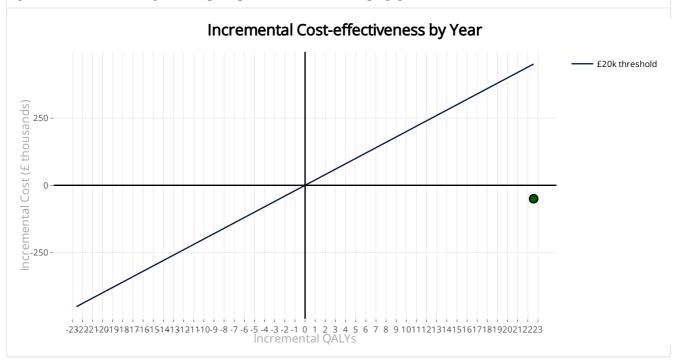


Table 5 contains a more detailed breakdown of the health economic assessment, using a Department of Health perspective to show how Net Monetary Benefit has been derived. The first four rows of the table show annual intervention costs, annual NHS cost and social care* savings, annual health benefits (QALYs) and the monetised equivalent of those annual health benefits, using the value of a QALY as £60,000. The next two rows show cumulative overall costs (intervention cost) and cumulative overall benefits (NHS and social care* cost savings plus the benefits gained from QALYs), and the final row shows the cumulative net benefit derived by subtracting the overall costs from the overall benefits.

The net monetary benefit shows the economic benefit generated by the programme and includes the costs of the intervention itself, savings to the NHS and social care*, and QALYs gained valued at £60,000 per QALY to reflect the Department of Health valuation approach. It is calculated using the following equation:

Net Monetary Benefit (£) = (Incremental QALYs*Value of a QALY) - Incremental Costs (£)

The model estimates that the total five year net monetary benefit of the DPP will be £92,844. This incorporates 3.3 QALYs valued at £60,000 each, and £105,156 of net total NHS costs and savings (including intervention costs).

2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
Annual Intervention	n Costs						,
£167,718	£0	£0	£0	£0	£0	£0	£
Annual Benefits (Co	ost Savings in the NH	S and social care*)					1
£13,909	£10,427	£11,437	£11,902	£14,887	£88,118	£50,640	£24,92
Annual Health Ben	efits (QALYs)						1
0.2	0.4	0.6	0.9	1.2	8.1	7.0	4.
Annual Monetised	Health Benefits (at £6	50k per QALY)					1
£12,895	£21,717	£35,567	£53,983	£71,758	£484,153	£422,422	£252,19
Cumulative Costs (of the intervention)						
£167,718	£167,718	£167,718	£167,718	£167,718	£167,718	£167,718	£167,71
Cumulative Benefit	s (NHS and social ca	re* cost savings plu	s monetised health	benefits)			1
£26,804	£58,949	£105,953	£171,837	£258,482	£830,753	£1,303,814	£1,580,93
Cumulative Net Be	nefit (Cost savings to	NHS and social care	e* plus monetised h	ealth benefits net o	f intervention cost)		1
-£140,914	-£108,770	-£61,766	£4,119	£90,764	£663,035	£1,136,096	£1,413,21

5) Detailed model results for your locality

This data can be downloaded to CSV from the website results page.

6) Comparison of results for NHS Sheffield with results from England

This section compares the results for NHS Sheffield using your chosen inputs, with average results at a national level for England. Your chosen assumptions were as follows:

Intervention Cost per person:

£350

Intervention Effect:

25% lower

Duration of Intervention Effect:

8 years

The national results are based on the following assumptions:

Intervention Cost per person:

£270

Intervention Effect:

Default

Duration of Intervention Effect:

5 years

To make the results comparable, both sets of outcomes have been presented per 1000 individuals receiving the DPP intervention.

Table 7 and Figure 5 compare the health benefits of the DPP in NHS Sheffield and in England per 1000 individuals receiving the intervention. These summarise the reduction in diabetes diagnoses, cardiovascular disease (CVD) events (including stroke, myocardial infarction, angina and congestive heart failure) and microvascular events (complications of diabetes including leg ulcers, amputations, renal failure and retinopathy). The model estimates that per 1000 individuals receiving the intervention, there will be 52.8 fewer diabetes cases in NHS Sheffield compared to 41.5 fewer diabetes cases in England.

Table 7: Comparing cumulative incremental health benefits of implementing one year of the DPP in the target population, per 1,000 people receiving intervention

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
Diabetes Diagnoses - local	-9.7	-18.1	-30.5	-41.8	-52.8	-32.6	-13	-10.3
Diabetes Diagnoses - England	-10.4	-20	-30	-37.9	-41.5	-18.1	-7.7	-6.5
CVD Events - local	-1.9	-2.8	-3.5	-4.3	-4.9	-5.2	-4.4	-3.7
CVD Events - England	-1.8	-2.7	-3.4	-4	-4.1	-3.9	-3.3	-2.8
Microvascular Disease Cases - local	-0.4	-0.8	-1.2	-1.5	-2.1	-4.2	-4.6	-4.3
Microvascular Disease Cases - England	-0.6	-1.2	-1.6	-2	-2.3	-3.5	-3.7	-3.6

Figure 5: Comparing cumulative incremental health benefits of implementing one year of the DPP in the target population, per 1,000 people receiving intervention **Health Effects - Local** Diabetes Diagnoses CVD Events Microvascular Disease Cases Change in Number of Events -60 2025/26 Year 2019/20 2028/39 2031/32 2034/35 2016/17 2022/23 **Health Effects - England** Diabetes Diagnoses CVD Events Microvascular Disease Cases Change in Number of Events

-60

2016/17

2022/23

2019/20

2025/26 Year 2028/39

2031/32

2034/35

Table 8 and Figure 6 compare NHS cost savings accruing from implementation of the DPP in your locality and in England per 1000 individuals receiving the intervention. Total NHS savings are broken down into primary care, secondary care and cashable savings. Cashable savings are estimated to be those that will directly release cash for the NHS, and include the costs of medications and laboratory tests which may no longer be required due to the DPP intervention. Primary and secondary care savings incorporate reduction in use of staff time, equipment and overheads, activities which are unlikely to be directly cash releasing, but will provide benefit elsewhere in the NHS. All costs are discounted at 3.5%. The model estimates that the total five year savings to the NHS per 1000 individuals given the intervention will be £122,427 in your locality, compared with £120,083 nationally, of which £34,554 is estimated to be cashable in your locality, compared with £32,429 nationally.

Table 8: Comparing detailed financial breakdown by service: cumulative incremental savings of implementing one year of the DPP in the target population, per 1,000 people receiving intervention

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
OCAL						'	,	
Total NHS Savings	£28,376	£48,065	£70,290	£93,312	£122,427	£299,677	£402,636	£453,7
Primary Care Savings	£6,612	£12,633	£19,421	£27,050	£35,529	£71,016	£81,018	£84,9
Secondary Care Savings	£14,089	£22,293	£32,029	£41,487	£52,345	£104,870	£146,219	£176,0
Cashable Savings*	£7,674	£13,139	£18,841	£24,775	£34,554	£123,792	£175,399	£192,
Prescription/Medication Savings	£7,425	£12,426	£17,509	£22,657	£31,651	£119,857	£172,250	£189,6
Laboratory Test Savings	£249	£712	£1,332	£2,118	£2,903	£3,935	£3,149	£3,
Social Care Savings	£602	£2,636	£4,237	£6,011	£7,910	£14,239	£16,780	£17,6
NGLAND								
Total NHS Savings	£30,301	£52,271	£74,566	£97,063	£120,083	£246,998	£312,990	£345,
Primary Care Savings	£8,279	£14,965	£21,995	£29,120	£35,845	£58,803	£66,005	£69,
Secondary Care Savings	£12,928	£22,414	£32,210	£42,811	£51,809	£91,959	£120,722	£139,
Cashable Savings*	£9,093	£14,892	£20,362	£25,132	£32,429	£96,235	£126,263	£136,
Prescription/Medication Savings	£8,815	£14,107	£18,959	£23,041	£29,774	£93,378	£123,880	£134,
Laboratory Test Savings	£278	£785	£1,403	£2,091	£2,655	£2,857	£2,383	£2,
Social Care Savings	£893	£2,230	£3,797	£5,463	£7,186	£13,652	£16,425	£17,

^{*}cashable savings are planned resource savings which are reflected in ongoing reductions to budgets For more information see the User Guide

In Figure 6, the red lines represent the total cost of the DPP intervention, and the top of the green shaded areas represent the total savings to the NHS that are accrued following intervention implementation. The intervention becomes cost saving (recoups intervention costs) where the green shaded areas reaches the red lines. For 1000 individuals receiving the DPP, total intervention cost will be £350,000, compared to £270,000 nationally.

The model estimates that savings to the NHS will outweigh initial intervention costs by year 12 following intervention implementation in your locality, compared with year 12 following intervention implementation nationally.

Figure 6: Comparing detailed financial breakdown by service: cumulative incremental savings of implementing one year of the DPP in the target population, per 1,000 people receiving intervention

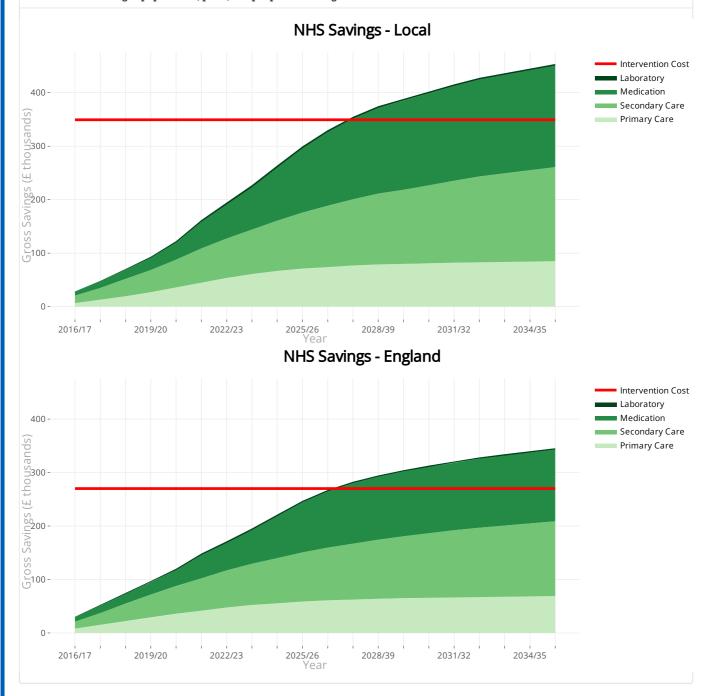


Table 9 and Figure 7 also compare the estimated effects of the DPP on NHS cost savings over time in your locality and nationally for 1000 individuals receiving the DPP, but here the total savings generated to your local NHS are broken down by disease area.

These include diabetes treatment costs, costs of diagnosis for diabetes, hypertension and high cholesterol, cost of treatment with statins and antihypertensive medications, cardiovascular disease costs, microvascular disease costs, and costs of other complications that are exacerbated by diabetes and obesity including cancer, osteoarthritis and depression. These costs include primary and secondary care costs, plus costs of diagnostic tests and medications.

In Table 9, social care costs have also been subdivided into cardiovascular disease (stroke) and other complications (osteoarthritis).

Table 9: Comparing detailed financial breakdown by disease area: cumulative incremental savings of implementing one year of the DPP in the target population, per 1,000 people receiving intervention

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
LOCAL								
LOCAL								
Total NHS Savings	£28,376	£48,065	£70,290	£93,312	£122,427	£299,677	£402,636	£453,727
Diabetes Treatment Savings	£741	£2,939	£5,730	£9,456	£17,942	£105,635	£154,662	£169,592
Diagnostics Savings	£5,567	£9,624	£13,827	£18,086	£22,713	£42,354	£46,714	£47,545

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
Statin/Antihypertensive Savings	£6,693	£10,454	£14,034	£17,312	£19,940	£24,862	£24,087	£23,31
Cardiovascular Savings	£12,424	£18,578	£26,016	£32,523	£39,747	£69,024	£85,833	£94,74
Nephropathy Savings	£119	£781	£1,597	£2,386	£3,437	£11,013	£24,185	£40,96
Retinopathy Savings	£505	£1,089	£1,762	£2,470	£3,391	£7,440	£8,723	£9,06
Neuropathy Savings	£255	£493	£613	£1,088	£1,648	£9,178	£17,664	£21,76
Cancer Savings	£491	£798	£923	£1,123	£1,310	£1,236	£1,117	£1,03
Osteoarthritis Savings	£1,531	£3,148	£5,462	£8,326	£11,515	£26,800	£36,713	£42,51
Depression Savings	£49	£159	£327	£542	£784	£2,136	£2,939	£3,19
Total Social Care Savings	£602	£2,636	£4,237	£6,011	£7,910	£14,239	£16,780	£17,61
Stroke Savings	£491	£2,408	£3,841	£5,407	£7,074	£12,294	£14,114	£14,52
Osteoarthritis Savings	£111	£229	£397	£605	£836	£1,946	£2,665	£3,08
GLAND								,
Total NHS Savings	£30,301	£52,271	£74,566	£97,063	£120,083	£246,998	£312,990	£345,42
Diabetes Treatment Savings	£796	£3,187	£6,082	£9,392	£16,525	£78,717	£106,173	£114,69
Diagnostics Savings	£6,939	£11,297	£15,426	£19,248	£22,646	£34,452	£37,207	£37,75
Statin/Antihypertensive Savings	£7,871	£11,789	£15,037	£17,323	£18,352	£20,060	£19,486	£18,92
Cardiovascular Savings	£11,190	£17,970	£24,889	£31,852	£37,097	£55,838	£64,652	£69,26
Nephropathy Savings	£232	£667	£1,357	£2,269	£3,443	£12,370	£23,652	£33,90
Retinopathy Savings	£696	£1,498	£2,121	£2,868	£3,541	£6,167	£7,390	£7,84
Neuropathy Savings	£291	£702	£1,271	£2,088	£2,996	£8,998	£14,753	£17,97
Cancer Savings	-£20	£469	£606	£766	£710	£413	£105	-£1
Osteoarthritis Savings	£2,244	£4,530	£7,474	£10,783	£14,106	£28,368	£37,513	£42,90
Depression Savings	£62	£161	£302	£474	£668	£1,615	£2,060	£2,18
Total Social Care Savings	£893	£2,230	£3,797	£5,463	£7,186	£13,652	£16,425	£17,52
Stroke Savings	£730	£1,901	£3,254	£4,680	£6,162	£11,592	£13,701	£14,40
Osteoarthritis Savings	£163	£329	£543	£783	£1,024	£2,060	£2,724	£3,11

Figure 7: Comparing detailed financial breakdown by disease area: cumulative incremental savings of implementing one year of the DPP in the target population, per 1,000 people receiving intervention **NHS Savings - Local** 500 Intervention Cost Diagnostics Other Diabetes Complications Gross Savings (£ thousands) Microvascular Disease CVD Statins & Antihypertensives Diabetes Treatment 2019/20 2025/26 Year 2028/39 2031/32 2034/35 2016/17 2022/23 NHS Savings - England 500 Intervention Cost Diagnostics Other Diabetes Complications Gross Savings (£ thousands) Microvascular Disease **CVD** Statins & Antihypertensives Diabetes Treatment 0 -

2031/32

2034/35

2025/26 Year

2028/39

2019/20

2022/23

2016/17

Table 10 compares the health economic results of implementing the DPP in your locality and nationally, including incremental (net) quality-adjusted life-years (QALYs) gained, incremental (net) total NHS costs (intervention costs minus NHS savings), estimated cost-effectiveness measured using the incremental cost-effectiveness ratio (ICER), and net monetary benefit. Interventions with ICERs below £20,000 per QALY are considered to be cost-effective by NICE. The net monetary benefit shows the economic benefit generated by the programme and includes the costs of the intervention itself, savings to the NHS, and QALYs gained valued at £60,000 per QALY to reflect the Department of Health valuation approach.

The model estimates that the total five year net monetary benefit for 1000 individuals receiving the DPP will be £285,573 in your locality compared with £ nationally.

The model estimates that the DPP will become cost-effective by year 12 following intervention implementation in your locality, compared with year 6 nationally, using the NICE threshold of £20,000 per QALY.

Table 10: Comparing cumulative incremental QALY effect, net cost (intervention cost minus NHS savings), cost-effectiveness (at £20k per QALY) to the NHS of implementing one year of the DPP in the target population, per 1,000 people receiving intervention

	2016/17	2017/18	2018/19	2019/20	2020/21	2025/26	2030/31	2035/36
CAL	'							
QALYs	0.4	1.2	2.4	4.3	6.8	23.6	38.3	
Total Cost to NHS (Net)	£321,037	£301,348	£279,123	£256,101	£226,986	£49,736	-£53,223	-£104,3
Incremental Cost Effectiveness Ratio NHS costs only						,	•	-£2,2
Total Cost (Net) including social care*	£320,435	£298,712	£274,885	£250,090	£219,075	£35,496	-£70,003	-£121,9
ICER including social care*						1	•	-£2,5
IGLAND								
QALYs	0.5	1.3	2.7	4.6	6.9	19.9	29.7	3
Total Cost to NHS (Net)	£239,746	£217,776	£195,480	£172,983	£149,964	£23,049	-£42,944	-£75,3
Incremental Cost Effectiveness Ratio NHS costs only						1	•	-£2,1
Total Cost (Net) including social care*	£238,853	£215,546	£191,684	£167,520	£142,778	£9,397	-£59,369	-£92,9
ICER including social care*						,	·	-£2,6

 $[\]ensuremath{^{\star}}$ social care savings relate to osteoarthritis and stroke only

Figure 8 plots the cost-effectiveness data in your locality and nationally on the cost-effectiveness plane, with the NICE threshold of £20,000 per QALY marked by the dotted line.

Circles represent data for your locality, whilst diamonds represent national data. Points in the lower right quadrant are cost saving. Points in the upper right quadrant are cost-effective if below the threshold line and not cost-effective if above it.

Each dataset forms a trajectory that shows how cost-effectiveness evolves over time. The point where the trajectory crosses from the top left hand side of the dotted line to the bottom right hand side, indicates the year in which the intervention becomes cost-effective at the NICE threshold of £20,000 per QALY, whilst the point where the trajectory crosses below the x axis, indicate the year in which the intervention becomes cost-saving.

Figure 8: Comparing health economic assessment from a NICE perspective (using a cost-effectiveness threshold of £20k per QALY), per 1,000 people receiving intervention

