X-PERT Audit Results

2023

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Contents

Introduction

At X-PERT Health, our aim is to provide members of the public and healthcare professionals with effective education that helps prevent or manage diabetes and other long-term health conditions associated with obesity. A person with diabetes spends on average, only three hours with a healthcare professional every year. For the remaining 8,757 hours they must manage their condition themselves. Structured education is therefore an integral part of care to help people self-manage or prevent long-term health conditions by giving them the skills, knowledge and confidence in order to do so.

Current guidelines recommend that every person with diabetes and/or their carer and those eligible for a lifestyle weight management service should be offered well-designed and well-implemented education. Whilst there has been an increase in the number of people offered education in recent years, nationwide attendance is still low. An improvement in attendance, engagement, and support of diabetes and lifestyle weight management education for adults is needed as they have been shown to:

- improve day-to-day self-management, which affects quality of life and engagement with care
- improve clinical markers such as body weight, blood glucose, blood pressure and blood lipid profile
- reduce the risk of developing other long-term health conditions and serious complications

X-PERT Health has developed a range of structured education programmes that meet nationally agreed criteria (NICE 2016/SIGN 2017). The X-PERT Diabetes Programme has been shown to be effective in improving health and quality of life outcomes in people with newly diagnosed and existing diabetes both in a randomised controlled trial (RCT) and in routine national implementation (Deakin et al, 2006 & 2011; Wheatley et al, 2021). The X-PERT Insulin, X-PERT Weight & Wellbeing and X-PERT Diabetes Digital Programmes were developed following the successes of this programme.

Self-management programmes have also been investigated and have shown to be cost effective, with one quality-adjusted life-year (QALY) gained costing less than €20,000 for the X-PERT Diabetes Programme (Jacobs-Van Der Bruggen, 2009).

Audit and reporting outcomes is specified in current guidance for implementing diabetes and lifestyle education. The X-PERT audit database was developed so that organisations can audit implementation against audit standards, which are based on the outcomes of the X-PERT RCT and national targets (see below) and can compare their effectiveness to the 'all centres' mean. It is crucial to assess whether implementation of the X-PERT Programmes results in the improvement to health and wellbeing that was seen in the published clinical trial.

The current audit report covers programmes that were run between 1st January 2021 and 31st December 2022. There were 53 organisations registered on the X-PERT audit database for this period. Thirty-three of these organisations (62%) entered sufficient data to be included in the 2023 national audit report.

Audit standards

The following audit standards have been used to benchmark the outcomes from X-PERT Programme implementation.

Outcome	Audit standard from RCT	Audit standard from national target
Number of participants per programme	----------	Structured education should be offered to every person and/or their carer at diagnosis. The audit standard is to deliver to at least 1,000 participants per year.
Participant attendance	≥ 80% complete	People will complete the programme if they feel they are benefitting from attending. If organisations experience poor attendance they should contact participants to investigate the reason for the poor attendance and how it could be improved.
Participant satisfaction	≥ 90%	NICE Quality Statements 2 & 3, Outcome: "patient satisfaction with ability to self-manage their diabetes after attending a structured education programme".
Participant empowerment	≥ 10% increase from baseline	NICE Quality Standard for adults with diabetes.

X-PERT AUDIT RESULTS 2023		
Glycated haemoglobin	≥ 4 mmol/mol reduction at 6 months and ≥ 6 mmol/mol reduction at 12 months	< 48 mmol/mol normoglycaemia < 53 mmol/mol good diabetes control < 58 mmol/mol QOF target
Body weight / BMI	No increase	4 kg or 5-10% weight loss
Waist circumference	≥ 2 cm reduction	< 80 cm females < 94 cm males
Systolic blood pressure	≥ 5 mmHg reduction (if relevant)	< 130 mmHg Type 1 and Type 2 with microvascular complications < 140 mmHg Type 2 (no complications)
Diastolic blood pressure	----------	< 90 mmHg
HDL cholesterol	----------	≥ 1.2 mmol/l females ≥ 1.0 mmol/l males
Total cholesterol to HDL	----------	----------
Triglycerides	----------	< 1.7 mmol/l
Triglyceride to HDL ratio	----------	< 0.87
Prescribed diabetes medication	50% of participants will have either reduced diabetes medication or have remained on the same dose.	----------

'All centres' results – data collected since launch (full mean data set)

The *'all centres'* report changes almost on a daily basis as organisations enter data, but the main outcomes have remained consistent for several years. All audit standards from the RCT have been met for the full data set, except for waist circumference, which fell slightly short of the ≥ 2 cm reduction target, and uptake (percentage who attended ≥ 1 session), which fell short of the 95% target at 80.9%.

*N.B. This report includes **matched participant data**, i.e. data is only included for each variable for participants who had the relevant data recorded at baseline **and** the stated post-programme time point. The 6 and 12 month results are not necessarily based on data from the same participants.*

X-PERT Programmes Report: All Localities (matched)- All Course Types- 01 Sep 2005 to 18 August 2023

Number of X-PERT programmes run in this period	14,610	
Total number participants registered	152,927	
Total number who attended 1 session	122,402	
Total percentage who attended 1 session	80%	
Total number who completed the programme	98,142	
Total percentage who completed the programme	80.2%	
Mean number of attendees per programme	8	
Attended Annual Update Module	20.9%	
Evaluation	**6 Weeks**	
Mean program evaluation score	94.4%	
No. (%) programmes with evaluation score	10,012 (68.5%)	
Empowerment	**Baseline:**	**6 Weeks:**
Participant Empowerment Score (1-5)	3.54	4.3
Participant Empowerment Score % Change		21.5%
No. (%) programmes with empowerment scores	9,660 (66.1%)	9,513 (65.1%)

Clinical Data	X-PERT AUDIT RESULTS 2023							
	6 months mean	**SD**	**6 months change from baseline**	**95% CI**	**12 months mean**	**SD**	**12 months change from baseline**	**95% CI**
Weight (Kg)	87.5	20.2	-2.2	-2.3, -2.2	85.5	20.1	-2.1	-2.1, -2.0
BMI (Kg/m²)	31.0	6.5	-0.7	-0.7, -0.7	30.6	6.3	-0.7	-0.7, -0.7
Waist Circumference (cm)	101.8	15.1	-1.9	-2.0, -1.8	102.6	14.5	-1.7	-1.8, -1.6
HbA1c (mmol/mol)	54.2	14.7	-7.6	-7.6, -7.6	55.0	15.1	-7.0	-7.0, -7.0
Fasting Blood Glucose (mmol/l)	7.3	2.5	-0.9	-1.0, -0.8	7.3	2.7	-0.8	-0.9, -0.7
Systolic Blood Pressure (mmHg)	132	13	-1	-1, -1	132	14	-1	-1, -1
Diastolic Blood Pressure (mmHg)	76	9	-2	-2, -2	76	9	-2	-2, -2
Total Cholesterol (mmol/l)	4.2	1.1	-0.3	-0.3, -0.3	4.2	1.0	-0.3	-0.3, -0.3
LDL Cholesterol (mmol/l)	2.3	0.9	-0.2	-0.2, -0.2	2.2	0.9	-0.3	-0.3, -0.3
HDL Cholesterol (mmol/l)	1.3	0.5	0.0	0.0, 0.0	1.3	0.5	0.0	-0.0, 0.0
Non HDL Cholesterol (mmol/l)	3.0	1.0	-0.3	-0.3, -0.3	2.9	1.0	-0.4	-0.4, -0.4
Total Cholesterol to HDL Ratio	3.5	1.4	-0.4	-0.4, -0.4	3.5	1.3	-0.4	-0.4, -0.4
Triglycerides (mmol/l)	1.5	1.3	-0.3	-0.3, -0.3	1.7	1.0	-0.2	-0.2, -0.2
Triglycerides to HDL Ratio	1.5	1.3	-0.3	-0.3, -0.3	1.5	1.4	-0.2	-0.2, -0.2

All centres mean results: 1st January 2021 to 31st December 2022

X-PERT Programmes Report: All Localities (matched)- X-PERT Diabetes 01 Jan 2021 to 31 Dec 2022

Number of X-PERT programmes run in this period	997	
Total number registered	7,612	
Total number who attended 1 session	4,685	
Total percentage who attended 1 session	61.5%	
Total number who completed the programme	3,935	
Total percentage who completed the programme	84%	
Mean number of attendees per programme	4	
Evaluation	**6 Weeks**	
Mean program evaluation score	94%	
No.(%) programmes with evaluation score	708 (71%)	
Empowerment	**Baseline**	**6 Weeks**
Participant Empowerment Score (1-5)	3.69	4.41
Participant Empowerment Score % Change		19.5%
No. (%) programmes with empowerment scores	774 (77.6%)	736 (73.8%)

Due to the COVID-19 pandemic, there have been 1,330 fewer programmes delivered in 2021-2022 compared to 2018-2019 (pre-COVID) resulting in 19,564 fewer patients being able to access structured education. With every challenge, there are opportunities, and it is now possible to increase the menu of delivery style options. In addition to in-person group sessions, virtual group sessions and self-directed learning via the digital programme are now possible.

	2018 – 2019	**2021-2022**	**Percentage change**
Number of programmes	2,327	997	-57%
Number of patients who attended at least 1 session	24,249	4,685	-81%

Clinical Data

	6 weeks mean	*6 weeks change from baseline*	*3 months mean*	*3 months change from baseline*	*6 months mean*	*6 months change from baseline*	*12 months mean*	*12 months change from baseline*
Weight (Kg)	89.5	-4.2	89.1	-4.1	89.4	-4.2	84.2	-2.9
BMI (Kg/m²)	31.6	-1.5	31.0	-1.5	31.3	-1.5	30.3	-1.0
Waist Circumference (cm)	101.5	-6.3	101.7	-7.3	98.4	-6.5	100.6	-4.8
HbA1c (mmol/mol)	50.7	-10.1	53.9	-11.1	52.5	-10.8	54.0	-8.3
Fasting Blood Glucose (mmol/l)	6.5	-2.6	7.1	-0.9	7.2	-0.4	7.7	-1.9
Systolic Blood Pressure (mmHg)	127.6	-5.7	127.3	-4.8	129.2	-2.7	127.7	-2.5
Diastolic Blood Pressure (mmHg)	77.3	-1.3	78.1	-2.1	78.1	-1.5	78	-1.5
Total Cholesterol (mmol/l)	4.2	-0.7	4.4	-0.3	4.3	-0.4	4.4	-0.3

X-PERT AUDIT RESULTS 2023								
	6 weeks mean	*6 weeks change from baseline*	*3 months mean*	*3 months change from baseline*	*6 months mean*	*6 months change from baseline*	*12 months mean*	*12 months change from baseline*
LDL Cholesterol (mmol/l)	2.7	-1.2	2.7	-0.1	2.4	-0.2	2.4	-0.2
HDL Cholesterol (mmol/l)	1.4	0.1	1.3	0.0	1.3	0.1	1.2	0.0
Non HDL Cholesterol (mmol/l)	2.9	-0.8	3.2	-0.3	3.1	-0.4	3.2	-0.4
Total Cholesterol to HDL Ratio	3.5	-0.9	3.8	-0.3	3.7	-0.4	3.8	-0.4
Triglyceride (mmol/l)	1.5	-1.0	1.8	-0.1	1.9	-0.3	2.1	-0.1
Triglyceride to HDL Ratio	1.4	-1.1	1.8	0.0	1.9	-0.4	2.0	-0.2

Comparison between the 2023 audit and previous audits

As stated above, the COVID-19 pandemic has impacted on the number of programmes delivered between 1st January 2021 and 31st December 2022 with 57% fewer programmes and 81% fewer patients than in the 2020 Audit Report.

Furthermore, the percentage of people taking up the opportunity to attend is 61.5%, which is lower than the full mean data set score of 80%. There is variation between organisations with some having a much better uptake than others. However, this also could be due to different audit methods. The number of people completing the programme has increased since the 2020 (pre COVID-19) Audit Report (76.4% to 84%), with the participant satisfaction score and the increase in empowerment remaining similar. The mean number of participants per programme has reduced and this could be linked with social distancing regulations that were in place during the audit period and the delivery of remote programmes.

This is the third year that organisations have been able to offer flexibility in the style of delivery with either group-based face-to-face (F2F) programmes, group-based virtual programmes (delivered via video conferencing using platforms such as MS Teams or Zoom) or self-directed learning with the X-PERT Diabetes Digital Programme with individual health coaching. We have compared these to the full audit report in the table below:

X-PERT AUDIT RESULTS 2023				
Comparison between all centres data with group F2F, group virtual and digital delivery styles – 1st Jan 2021 to 31st Dec 2022				
	All centre	Group F2F	Group Virtual	Self-Directed Digital
Number of X-PERT Programmes run in this period	997	455	542	N/A
Total number registered	7,612	3,183	3,760	669
Total number who attended 1 session	4,685	1,917	2,441	327
Total percentage who attended 1 session	61.5%	60.2%	64.9%	48.9%
Total number who completed the programme	3,935	1,708	2,044	183
Total percentage who completed the programme	84%	89.1%	83.7%	56%
Mean number of attendees per programme	4	4	5	---
Mean program evaluation score	94%	94.9%	92.9%	87.4%
Participant empowerment score % change	+19.5%	+21.5%	+17.6%	+11.9%

N.B. Attendance statistics for the self-directed digital programme are not comparable with the group programmes as participants undertake the programme in their own time (for up to one year) rather than over a six-week period.

Clinical Indicator comparison between delivery style and different time points

Six Weeks

Indicator (change from baseline)	All	Group F2F	Group Virtual	Self-Directed Digital
Weight (kg)	-4.2 (-4.6. -3.8)	-2.6 (-4.4, -0.8)	-4.5 (-5.0, -4.0)	-3.3 (-4.1, -2.5)
BMI (kg/m²)	-1.4 (-1.6, -1.1)	-0.7 (-1.5, +0.1)	-1,7 (-2.0, -1.4)	-1.0 (-1.6, -0.4)
Waist (cm)	-6.3 (-6.7, -5.9)	-3.0 (-3.0, -3.0)	-6.4 (-6.8, -6.0)	-6.6 (-7.7, -5.4)
HbA1c (HbA1c)	-10.1 (-10.7, -9.4)	-9.8 (-10.9, -8.7)	-10.2 (-11.0, -9.5)	-10.0 (-11.3, -8.7)

Three Months

Indicator (change from baseline)	All	Group F2F	Group Virtual	Self-Directed Digital
Weight (kg)	-4.1 (-4.5, -3.7)	-3.5 (-5.1, -1.9)	-4.0 (-4.5, -3.5)	-5.0 (-6.0, -4.0)
BMI (kg/m²)	-1.5 (-1.7, -1.3)	-1.2 (-2.1, -0.3)	-1.5 (-1.8, -1.2)	-2.1 (-2.1, -1.1)
Waist (cm)	-7.2 (-7.7, -6.7)	No data	-7.2 (-7.7, -6.7)	-8.6 (-10.1, -7.1)
HbA1c (HbA1c)	-11.1 (-11.5, -10.7)	-9.2 (-10.3, -8.1)	-11.0 (-11.5, -10.5)	-16.3 (-17.8, -14.8)

Six Months

Indicator (change from baseline)	All	Group F2F	Group Virtual	Self-Directed Digital
Weight (kg)	-4.4 (-4.6, -4.2)	-3.9 (-4.2, -3.6)	-4.4 (-4.6, -4.1)	-7.0 (-7.8, -6.2)
BMI (kg/m²)	-1.5 (-1.6, -1.4)	-1.4 (-1.6, -1.2)	-1.6 (-1.7, -1.5)	-2.4 (-2.8, -2.0)
Waist (cm)	-6.3 (-6.7, -5.9)	-1.1 (-1.8, -0.4)	-7.9 (-8.3, -7.5)	No data
HbA1c (HbA1c)	-10.9 (-11.0, -10.8)	-8.7 (-8.9, -8.5)	-11.8 (-12.0, -11.6)	-21.6 (-22.8, -20.5)

Twelve Months

Indicator (change from baseline)	All	Group F2F	Group Virtual	Self-Directed Digital
Weight (kg)	-2.7 (-2.9, -2.5)	-3.1 (-3.5, -2.7)	-2.5 (-2.8, -2.2)	-9.1 (-10.2, -8.0)
BMI (kg/m²)	-1.0 (-1.1, -0.9)	-1.0 (-1.2, -0.8)	-0.9 (-1.0, -0.8)	-3.4 (-4.0, -2.8)
Waist (cm)	-4.4 (-4.8, -4.0)	-1.3 (-1.9, -0.7)	-5.6 (-6.1, -5.1)	No data
HbA1c (HbA1c)	-8.9 (-9.1, -8.7)	-7.8 (-8.1, -7.5)	-9.3 (-9.5, -9.1)	-25.7 (-28.0, -23.3)

Summary and Interpretation

Each time point IS NOT comparable as the data will likely be mean values of different patient populations, but the overriding theme when observing the tables above is the positive impact of the programme in reducing body weight, BMI, waist circumference and HbA1c for each programme delivery method at each time point.

Virtual group delivery appears to be more effective than F2F group delivery across all time points, although at 12 months this no longer appears to be the case for body weight and BMI. Waist circumference reductions are significantly better for virtual group participants than F2F participants. It is possible that these measurements are self-reported rather than measured and techniques are not as robust.

The self-directed digital programme appears to be the most effective when observing the clinical outcomes above. However, one limitation is that within this date range only 183 participants have completed the digital programme and it is feasible that only motivated participants that have made substantial lifestyle changes disclose their follow-up results.

Comparison of individual organisation outcomes 1st January 2021 to 31st December 2022

The 2023 awards are for matched participant data entered between 1st January 2021 and 31st December 2022. The mean value for each outcome has been compared between organisations. **Data was only included if there was matched data for at least one participant (N.B. matched data means that a clinical indicator had been recorded for a patient at both baseline and post programme for the time point in question)**. The number of matched sets was taken into consideration for each health outcome award, i.e. outcomes were given greater weighting where they are based on a larger number of participants.

Organisations and abbreviations

Below is a table of the organisations and/or freelance educators (n=53) who are registered on the X-PERT Audit Database and the geographical location where they deliver. Organisations highlighted in yellow (n=33. 62%) are organisations that have entered data onto the audit database between 1st January 2021 and 31st December 2022. The organisations highlighted in blue (n=20, 38%) are licenced organisations who are delivering one or more X-PERT Programmes within their localities but haven't entered any audit data.

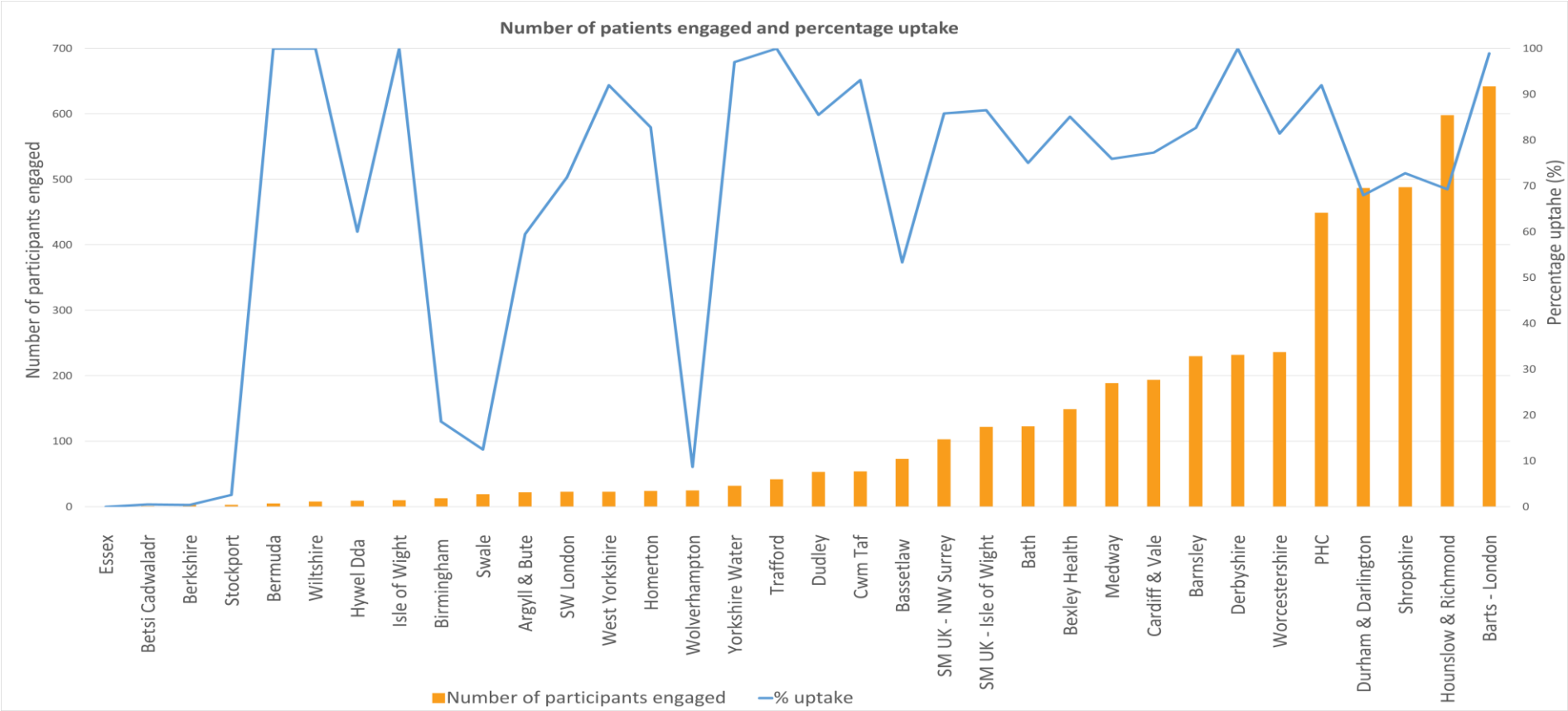
Full name of organisation	Location (for audit graphs)
Airedale NHS Foundation Trust	Airedale
Aneurin Bevan - Caerphilly	Caerphilly
Aneurin Bevan - Monmouthshire	Monmouthshire
Aneurin Bevan - Newport	Newport
Aneurin Bevan - Torfaen	Torfaen
Argyll & Bute Community Health Partnership	Argyll & Bute
Barnsley Hospital NHS Foundation Trust	Barnsley
Barts Health NHS Trust	Tower Hamlets
Nottinghamshire Healthcare NHS Foundation Trust	Bassetlaw
Berkshire Healthcare NHS Foundation Trust	Berkshire
Betsi Cadwaladr University Health Board	Betsi Cadwaladr
Bexley Health Neighbourhood Care CIC	Bexley
Birmingham Community Healthcare NHS Trust	Birmingham
Birmingham Community Healthcare - Heart of Birmingham	Heart of Birmingham
Blackthorn Trust	West Kent
Cardiff & Vale University Health Board	Cardiff
Cwm Taf Morgannwg University Health Board	Cwm Taf
Derbyshire Community Health Services - Derby & Derbyshire	Derbyshire
Dudley Group NHS Foundation Trust	Dudley
Durham & Darlington NHS Foundation Trust	Durham & Darlington
Essex Partnership University NHS Foundation Trust - West Essex	Essex
Everyone Health	Leicestershire
HCRG Care Group - Bath & NE Somerset	Bath
HCRG Care Group – Swale	Swale
Helen Chauhan	Australia
Homerton University Hospital NHS Foundation Trust - City & Hackney	City & Hackney
Hounslow and Richmond Community Healthcare NHS Trust	Hounslow & Richmond
Hywel Dda University Health Board	Hywel Dda
Island Nutrition and Fountain Health	Bermuda
Isle of Wight NHS Trust	Isle of Wight NHS

Kirklees Council	Huddersfield
Medway Community Healthcare	Medway
Pennine Care NHS FT - Bury	Bury
Public Health Collaboration	PHC
Powys Teaching Health Board	Powys
Salford Royal NHS Foundation Trust	Salford
Sandwell & West Birmingham Hospital NHS Trust	Sandwell & W Birmingham
Self Management UK - Isle of Wight	Isle of Wight SMUK
Self Management UK - North West Surrey	NW Surrey SMUK
Shropshire Community Health NHS Trust	Shropshire
Simon G	London
South West London	SW London
Stockport NHS	Stockport
Stoke-on-Trent City Council	Stoke-on-Trent
Swansea Bay University Health Board	Swansea Bay
Trafford Local Care Organisation	Trafford
University Hospitals Birmingham NHS Foundation Trust	Birmingham - Heart of England
University Hospitals Birmingham NHS Foundation Trust	Solihull
HCRG Care Group – Surrey	Surrey
Wiltshire Health & Care	Wiltshire
Wolverhampton Wanderers Foundation	Wolverhampton
Worcestershire Acute Hospitals NHS Trust	Worcestershire
Yorkshire Water	Yorkshire
X-PERT Health	West Yorkshire

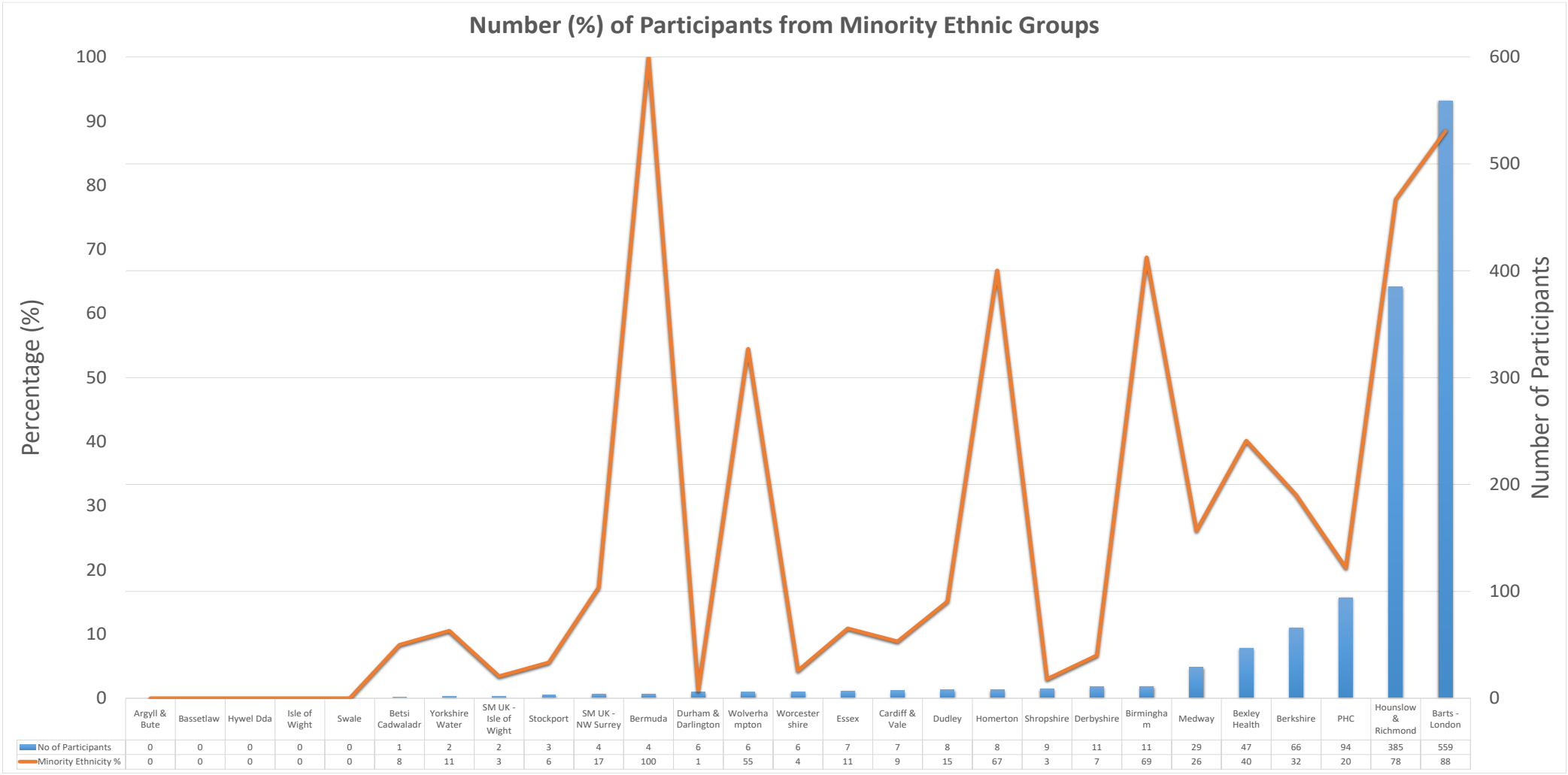
Award Category 1 - X-PERT Diabetes & Insulin - The best participant engagement

This award looked at the following criteria: number of participants engaged; percentage from ethnic minority groups; uptake (% attending at least one session); attendance (% attending four or more sessions); participant satisfaction changes and participant empowerment.

Number of participants and percentage uptake per organisation

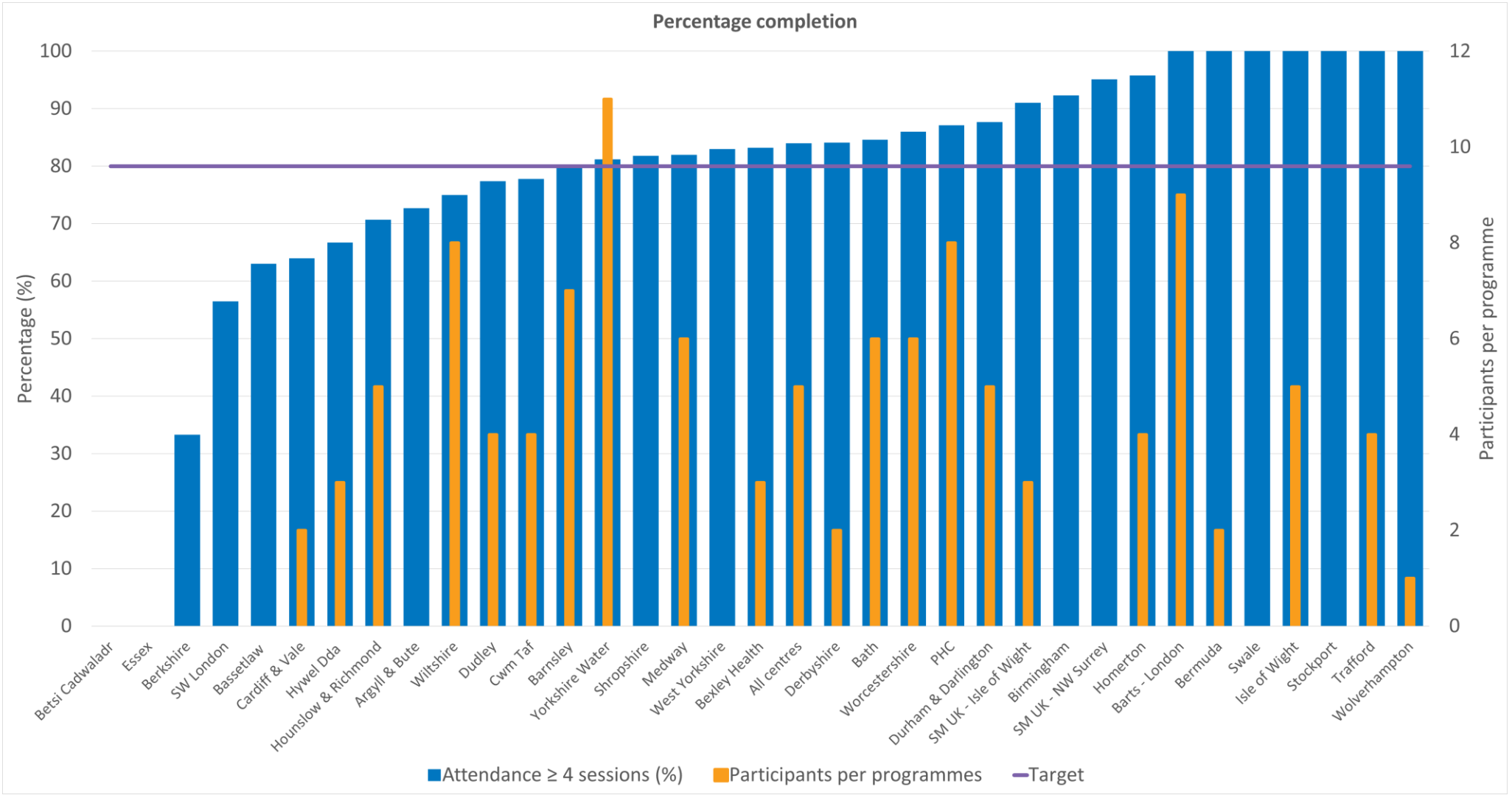


Ethnicity

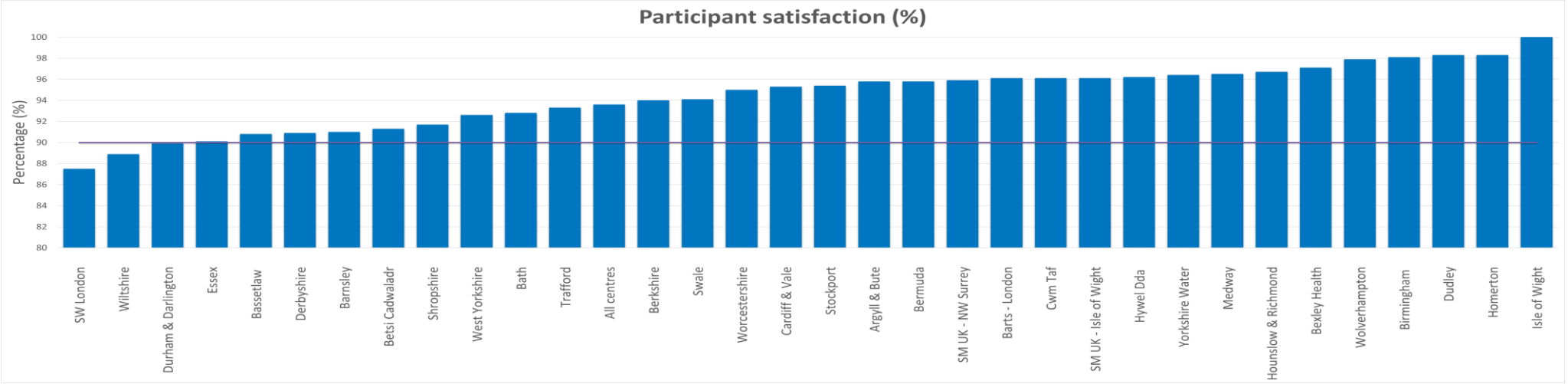


	Argyll & Bute	Bassetlaw	Hywel Dda	Isle of Wight	Swale	Betsi Cadwaladr	Yorkshire Water	SM UK - Isle of Wight	Stockport	SM UK - NW Surrey	Bermuda	Durham & Darlington	Wolverhampton	Worcestershire	Essex	Cardiff & Vale	Dudley	Homerton	Shropshire	Derbyshire	Birmingham	Medway	Bexley Health	Berkshire	PHC	Hounslow & Richmond	Barts - London
No of Participants	0	0	0	0	0	1	2	2	3	4	4	6	6	6	7	7	8	8	9	11	11	29	47	66	94	385	559
Minority Ethnicity %	0	0	0	0	0	8	11	3	6	17	100	1	55	4	11	9	15	67	3	7	69	26	40	32	20	78	88

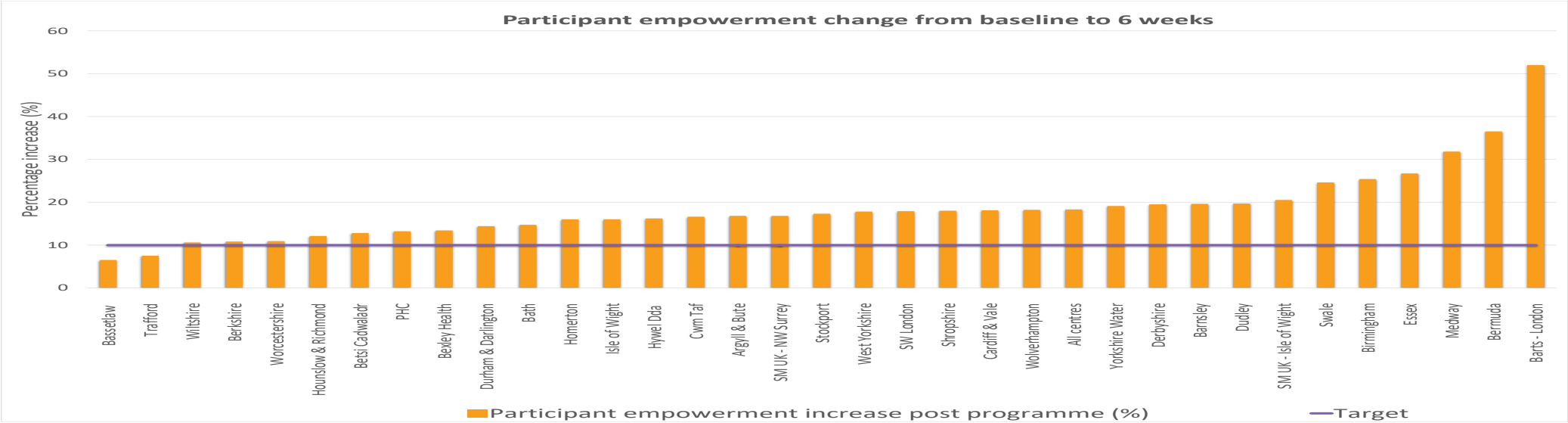
Participant attendance (with target completion)



Participant satisfaction



Increased participant empowerment



- **Winner: Barts Health NHS Trust (Tower Hamlets, London)**

Uptake 99%, 642 participants of which 559 (88%) from minority ethnic groups, 100% completion, 96% satisfaction and 52% increased empowerment.

Justification – Significant numbers entered onto the audit database. Excellent uptake amongst ethnic minority groups. Excellent overall uptake, completion, satisfaction and empowerment scores.

- **2nd Shropshire Community Health NHS Trust**

Uptake 73%, 488 participants (of which ethnicity has been recorded for 300), 82% completion, 92% satisfaction and 18% increased empowerment.

Justification – Significant numbers entered onto the audit database with excellent uptake, completion, satisfaction and empowerment.

- **3rd Durham & Darlington NHS Foundation Trust**

Uptake 68%, 487 participants (of which ethnicity had been recorded for 479), 88% completion, 90% satisfaction and 14% increased empowerment.

Justification – Significant numbers entered onto the audit database with excellent engagement but slightly lower scores than those awarded 1st & 2nd Place.

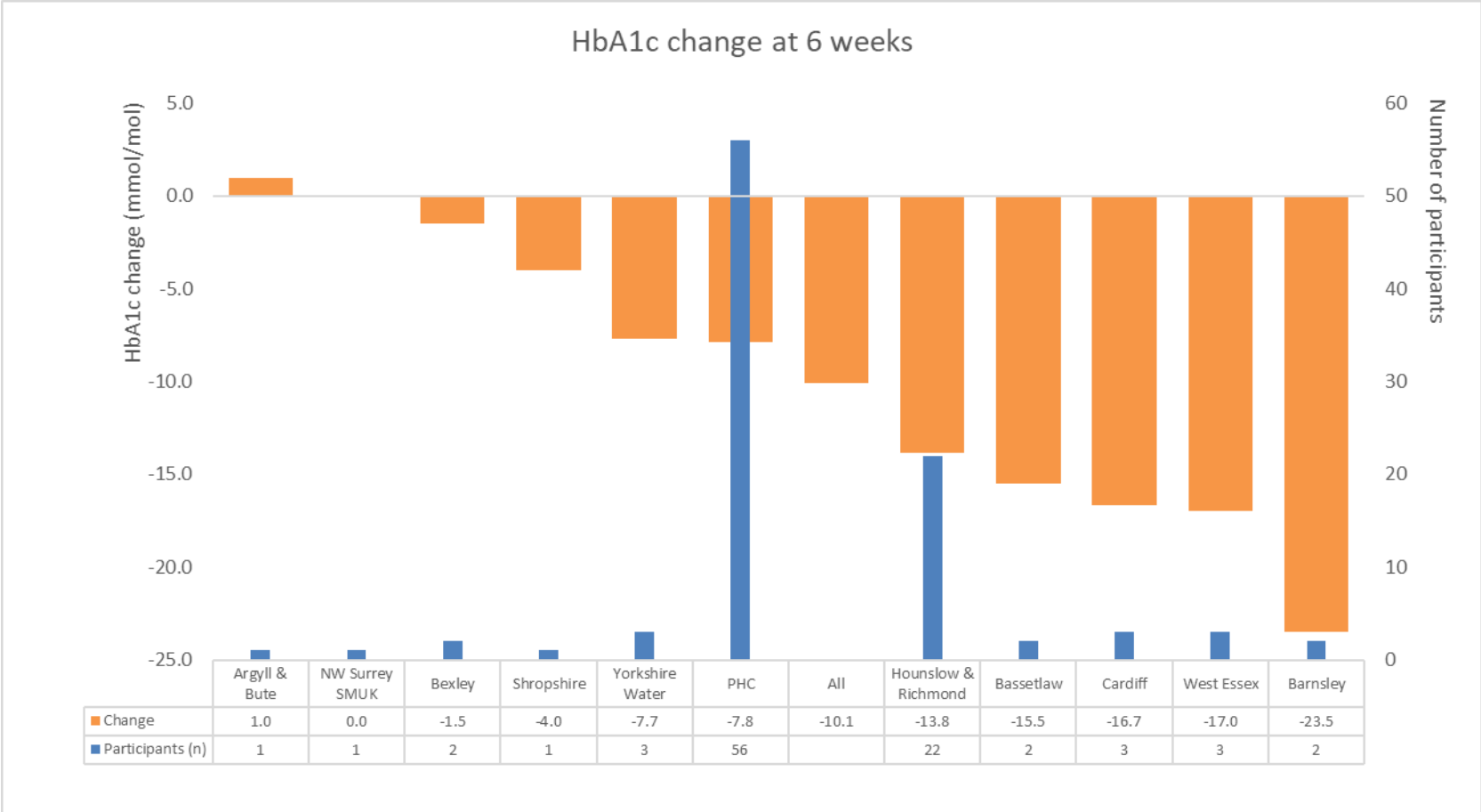
Commended: HRCH NHS Trust (Hounslow & Richmond, London)

Uptake 69%, 598 participants of which 385 (78%) from minority ethnic groups, 71% completion, 97% satisfaction and 12% increased empowerment.

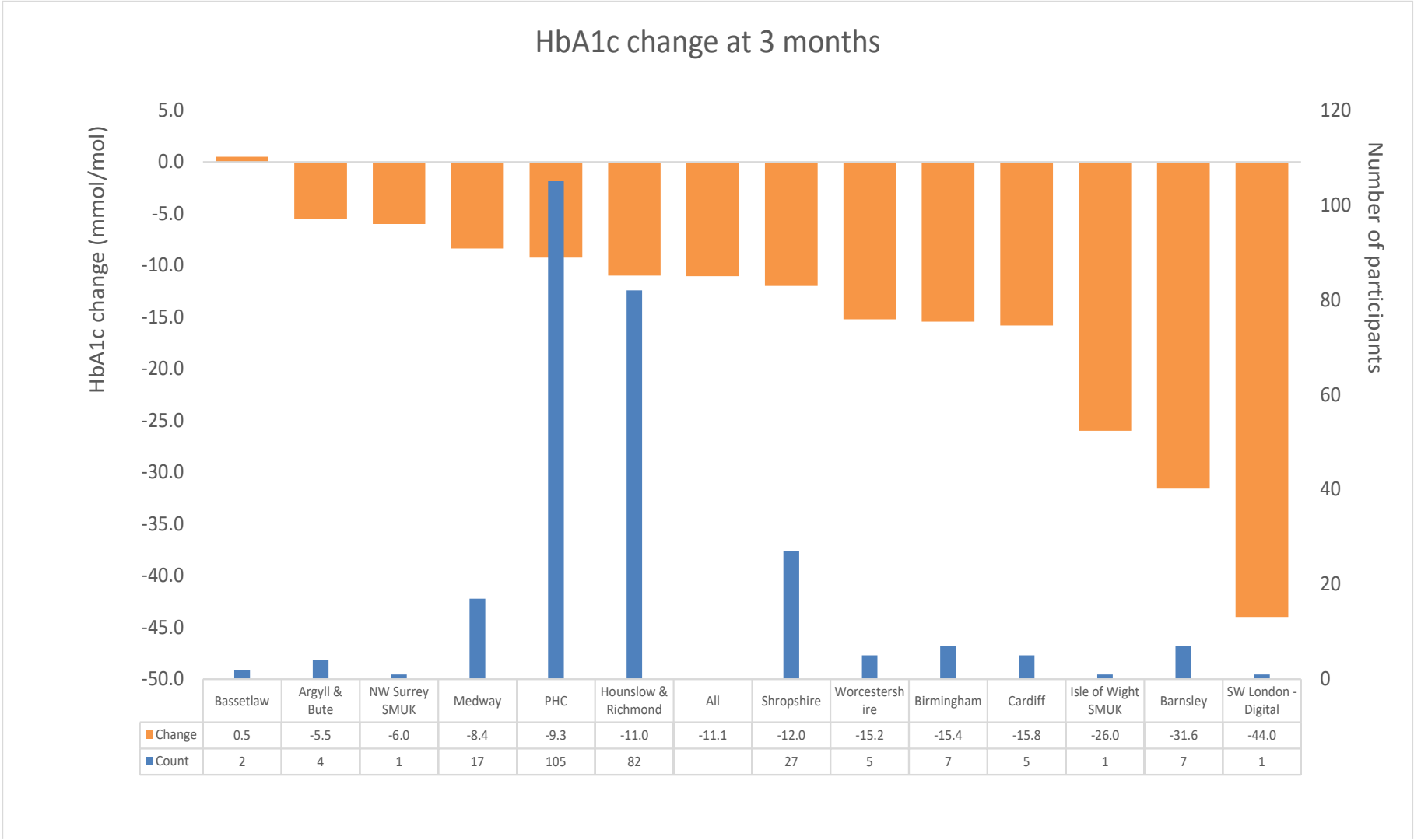
Justification – Good patient numbers and uptake amongst minority groups with overall good satisfaction and increased empowerment scores. However, lower uptake and completion compared to the winning organisations.

Award Category 2 - Greatest improvement in glycated haemoglobin (HbA1c)

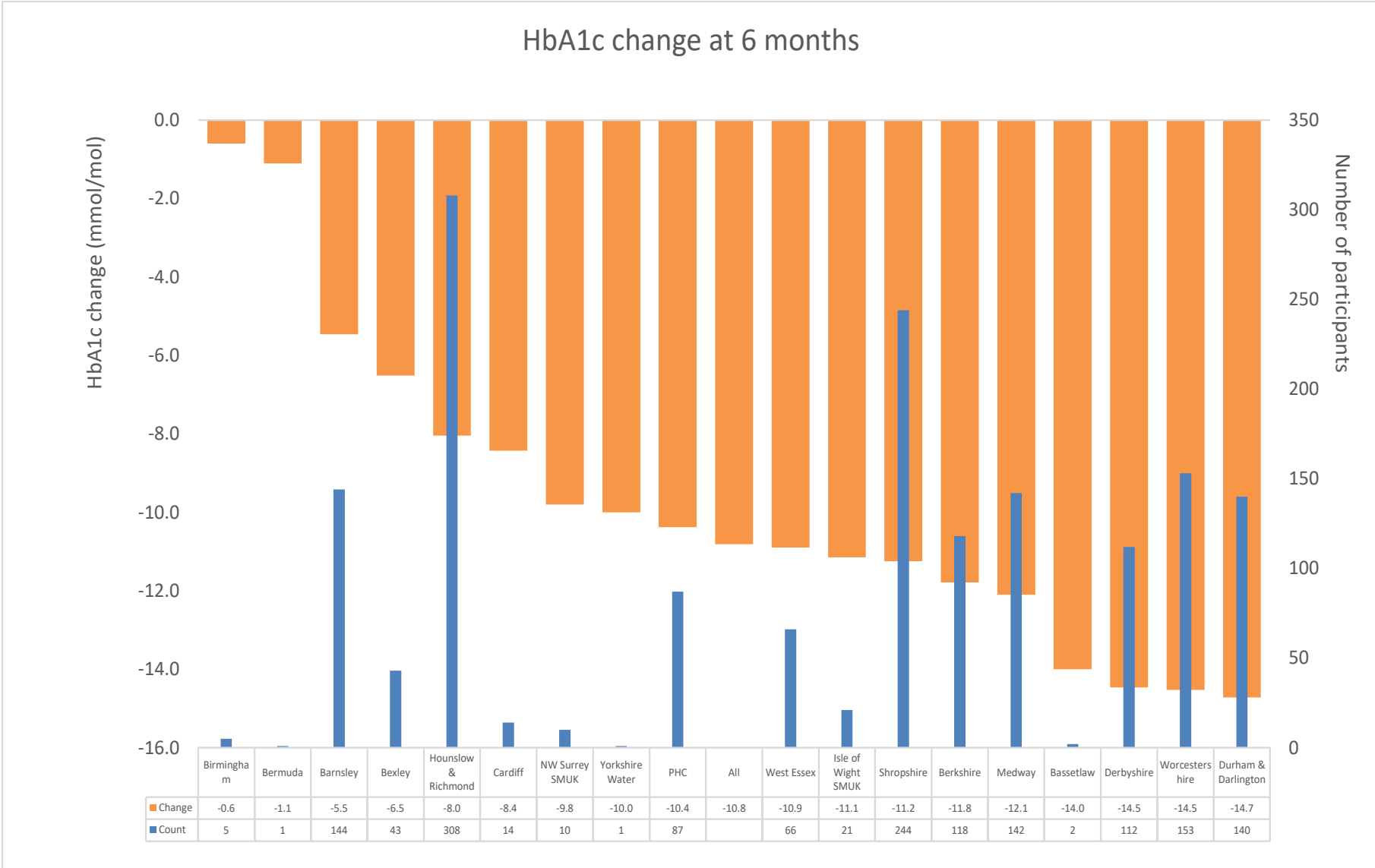
To be considered for an award the following criteria were taken into consideration: Longer-term HbA1c reduction i.e. at 6 and 12 month [N.B. 6 weeks and 3 month data included for interest only as any intervention tends to lead to a temporary improvement in outcomes but self-management of diabetes is demonstrated by improvement in longer-term outcomes]; number of participants for whom matched data had been entered; percentage of attendees that had matched data.



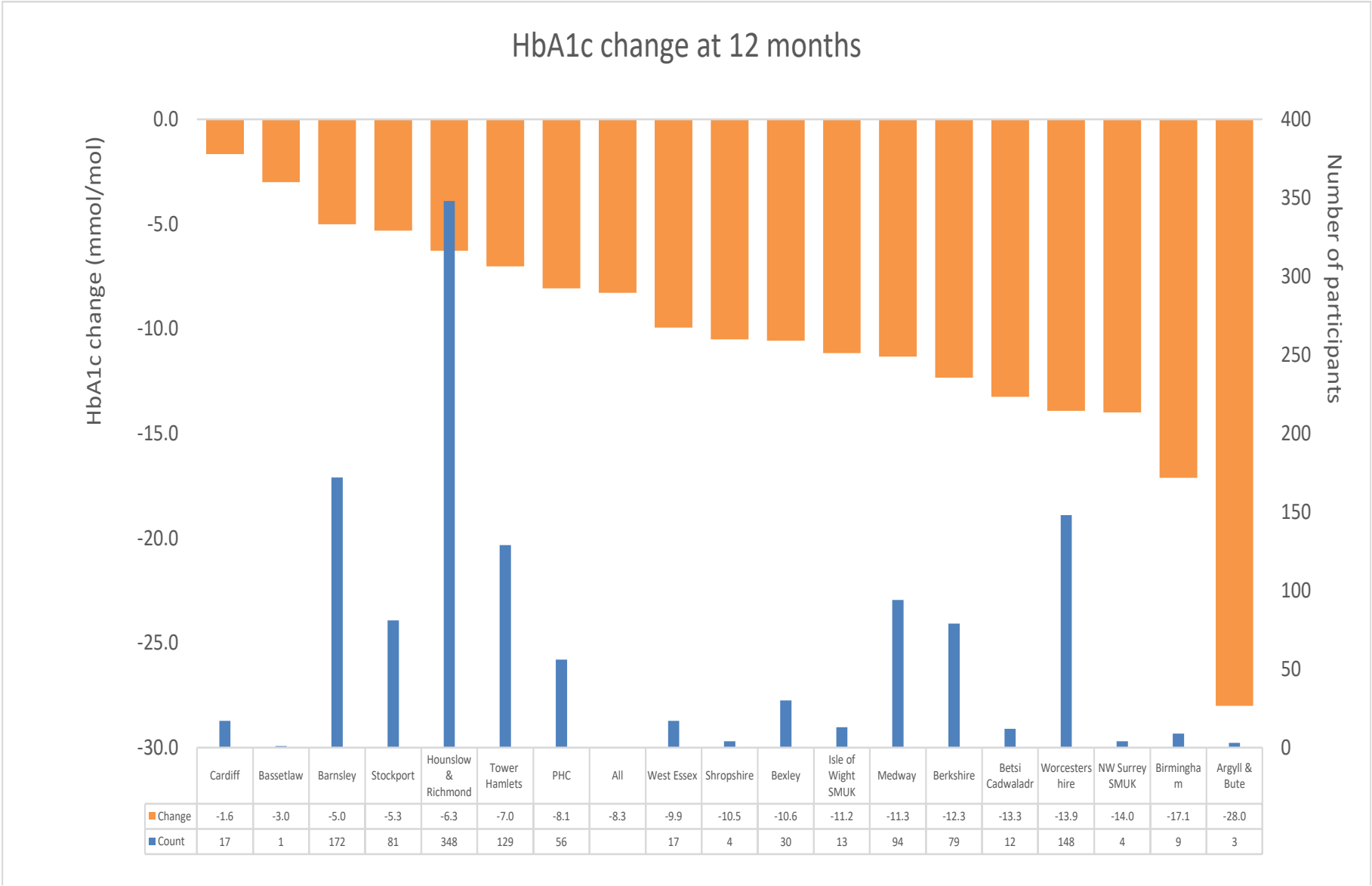
	Argyll & Bute	NW Surrey SMUK	Bexley	Shropshire	Yorkshire Water	PHC	All	Hounslow & Richmond	Bassetlaw	Cardiff	West Essex	Barnsley
Change	1.0	0.0	-1.5	-4.0	-7.7	-7.8	-10.1	-13.8	-15.5	-16.7	-17.0	-23.5
Participants (n)	1	1	2	1	3	56		22	2	3	3	2



	Bassetlaw	Argyll & Bute	NW Surrey SMUK	Medway	PHC	Hounslow & Richmond	All	Shropshire	Worcestershire	Birmingham	Cardiff	Isle of Wight SMUK	Barnsley	SW London - Digital
Change	0.5	-5.5	-6.0	-8.4	-9.3	-11.0	-11.1	-12.0	-15.2	-15.4	-15.8	-26.0	-31.6	-44.0
Count	2	4	1	17	105	82		27	5	7	5	1	7	1



	Birmingham	Bermuda	Barnsley	Bexley	Hounslow & Richmond	Cardiff	NW Surrey SMUK	Yorkshire Water	PHC	All	West Essex	Isle of Wight SMUK	Shropshire	Berkshire	Medway	Bassetlaw	Derbyshire	Worcestershire	Durham & Darlington
Change	-0.6	-1.1	-5.5	-6.5	-8.0	-8.4	-9.8	-10.0	-10.4	-10.8	-10.9	-11.1	-11.2	-11.8	-12.1	-14.0	-14.5	-14.5	-14.7
Count	5	1	144	43	308	14	10	1	87		66	21	244	118	142	2	112	153	140



	Cardiff	Bassetlaw	Barnsley	Stockport	Hounslow & Richmond	Tower Hamlets	PHC	All	West Essex	Shropshire	Bexley	Isle of Wight SMUK	Medway	Berkshire	Betsi Cadwaladr	Worcestershire	NW Surrey SMUK	Birmingham	Argyll & Bute
Change	-1.6	-3.0	-5.0	-5.3	-6.3	-7.0	-8.1	-8.3	-9.9	-10.5	-10.6	-11.2	-11.3	-12.3	-13.3	-13.9	-14.0	-17.1	-28.0
Count	17	1	172	81	348	129	56		17	4	30	13	94	79	12	148	4	9	3

- **Winner: Worcestershire Acute Hospitals NHS Trust**

6 months 14.5 mmol/mol reduction (154 matched patient records).

12 months 13.9 mmol/mol reduction (148 matched patient records).

Justification – Excellent HbA1c improvement with consistent and robust results.

- **2nd place: Medway Community Healthcare (Kent)**

6 months 12.1 mmol/mol reduction (142 matched patient records).

12 months 11.3 mmol/mol reduction (94 matched patient records).

- **3rd place: Berkshire Healthcare NHS Foundation Trust**

6 months 11.8 mmol/mol reduction (118 matched patient records).

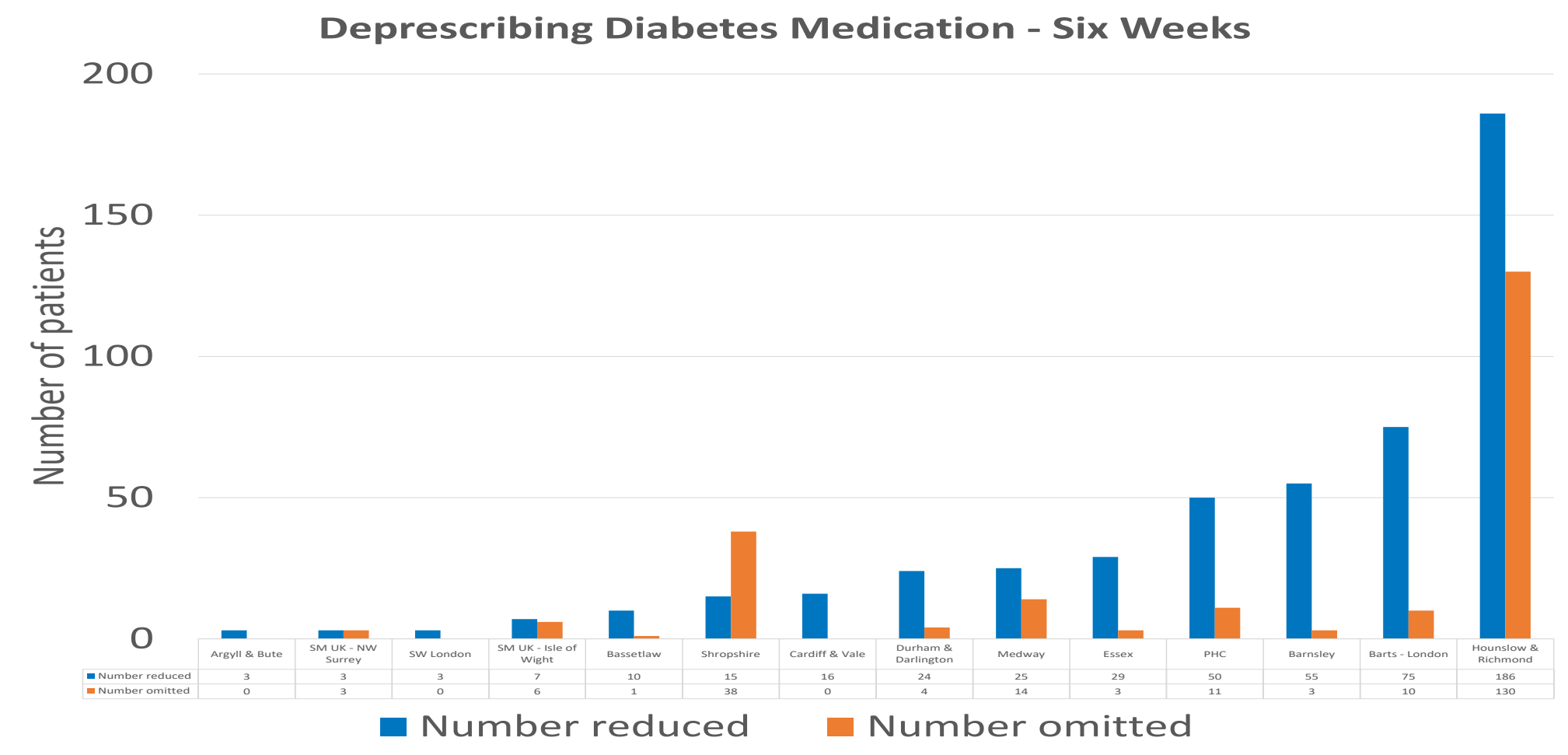
12 months 12.3 mmol/mol reduction (79 matched patient records).

Commendations

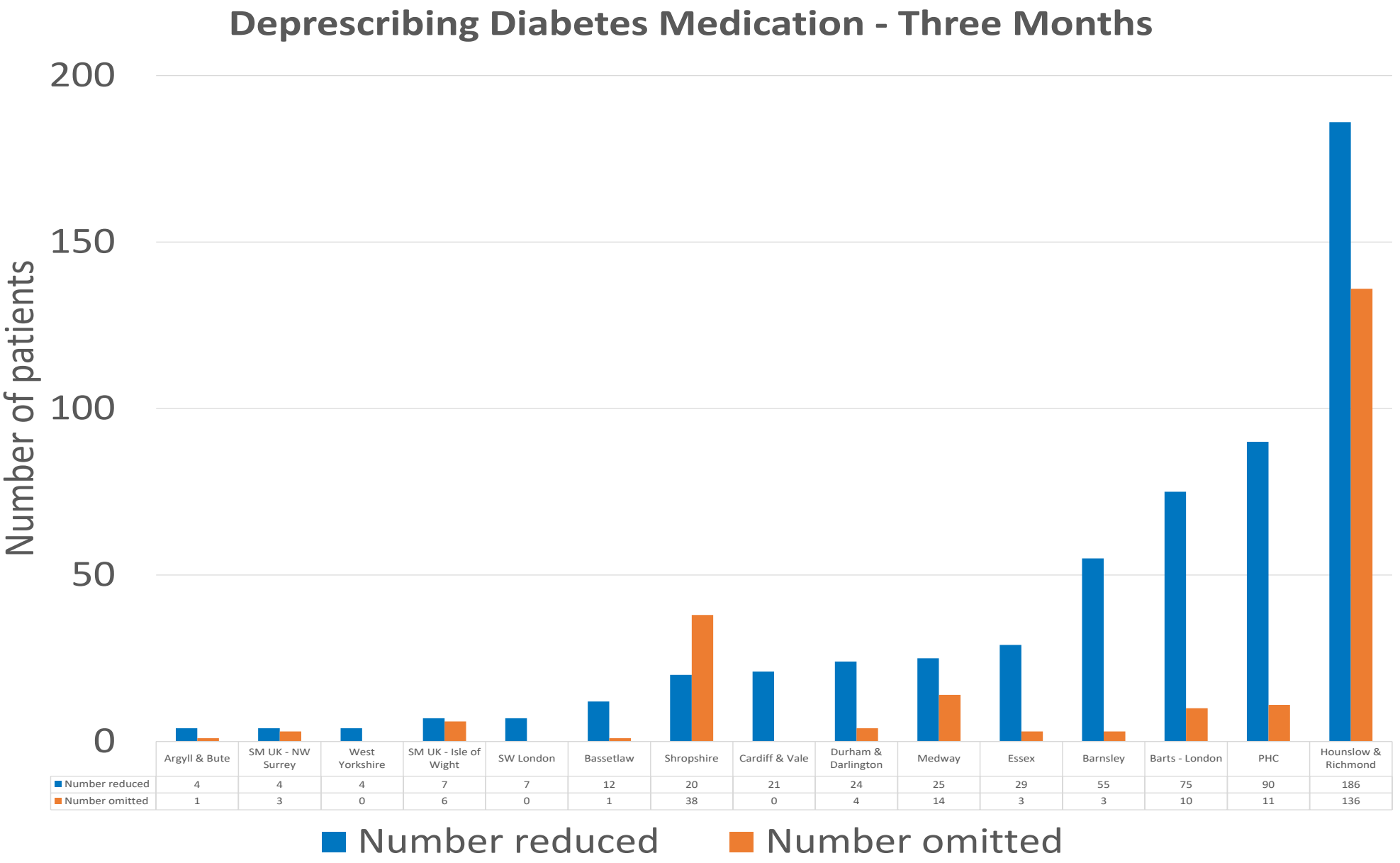
1. Commended for number of matched patient records at each time point with good HbA1c reduction at each time point (in addition to deprescribing, see page 26):
   Hounslow and Richmond Community Healthcare NHS Trust
2. Commended for 6 month data:
   - **Durham & Darlington NHS Foundation Trust**: reduction in HbA1c of 14.7 mmol/mol (140 matched patient records);
   - **Derbyshire Community Health Services - Derby & Derbyshire**: reduction of 14.5 mmol/mol (112 matched patient records);
   - **Shropshire Community Health NHS Trust**: reduction of 11.2 mmol/mol (244 matched patient records).

Award Category 3 - Deprescribing

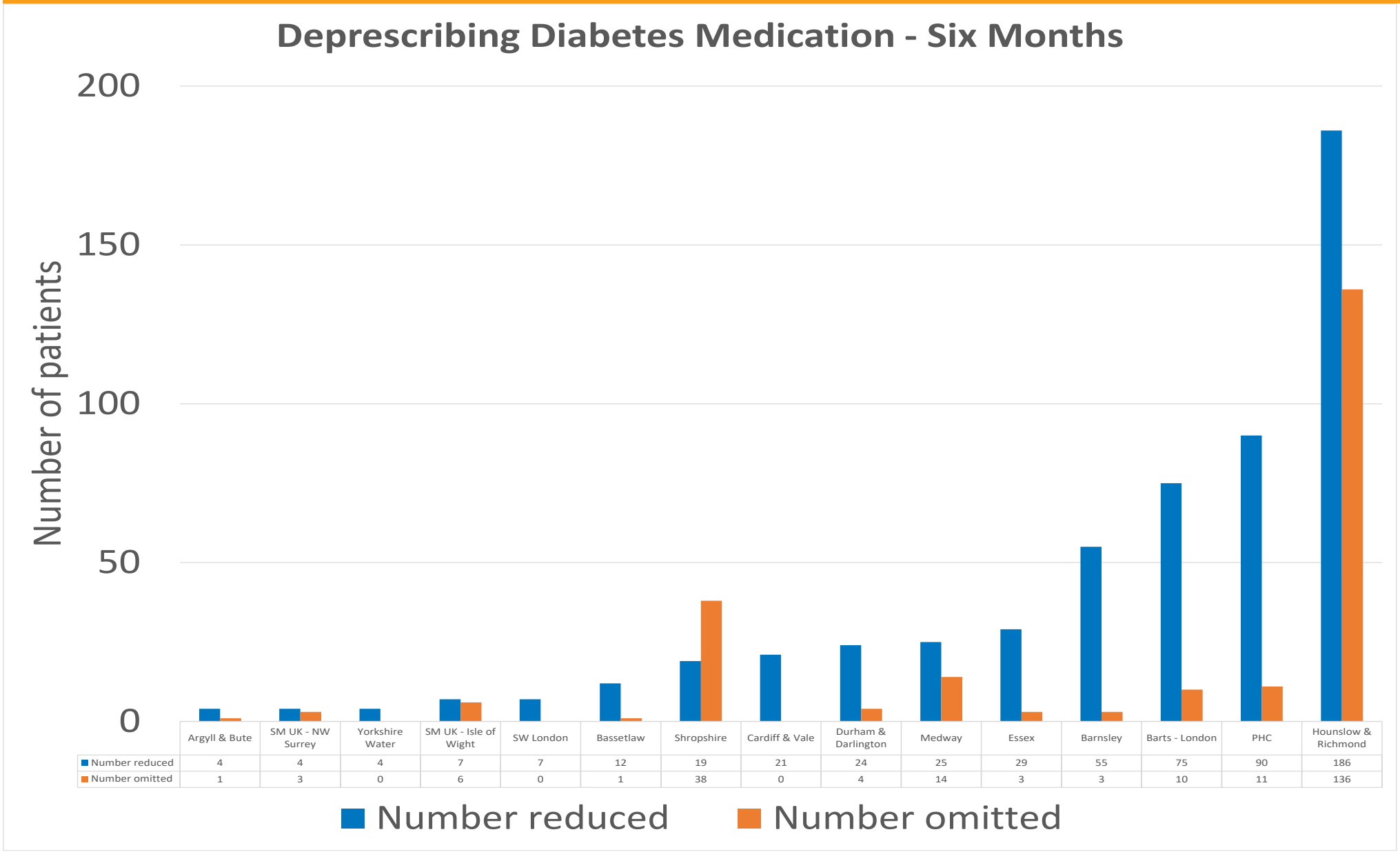
The following criteria were taken into consideration: number of participants reducing prescribed diabetes medication and number of participants omitting it at 6 months and 12 months [N.B. 6 weeks and 3 month data included for interest only as self-management of diabetes is demonstrated by improvement in longer-term outcomes].



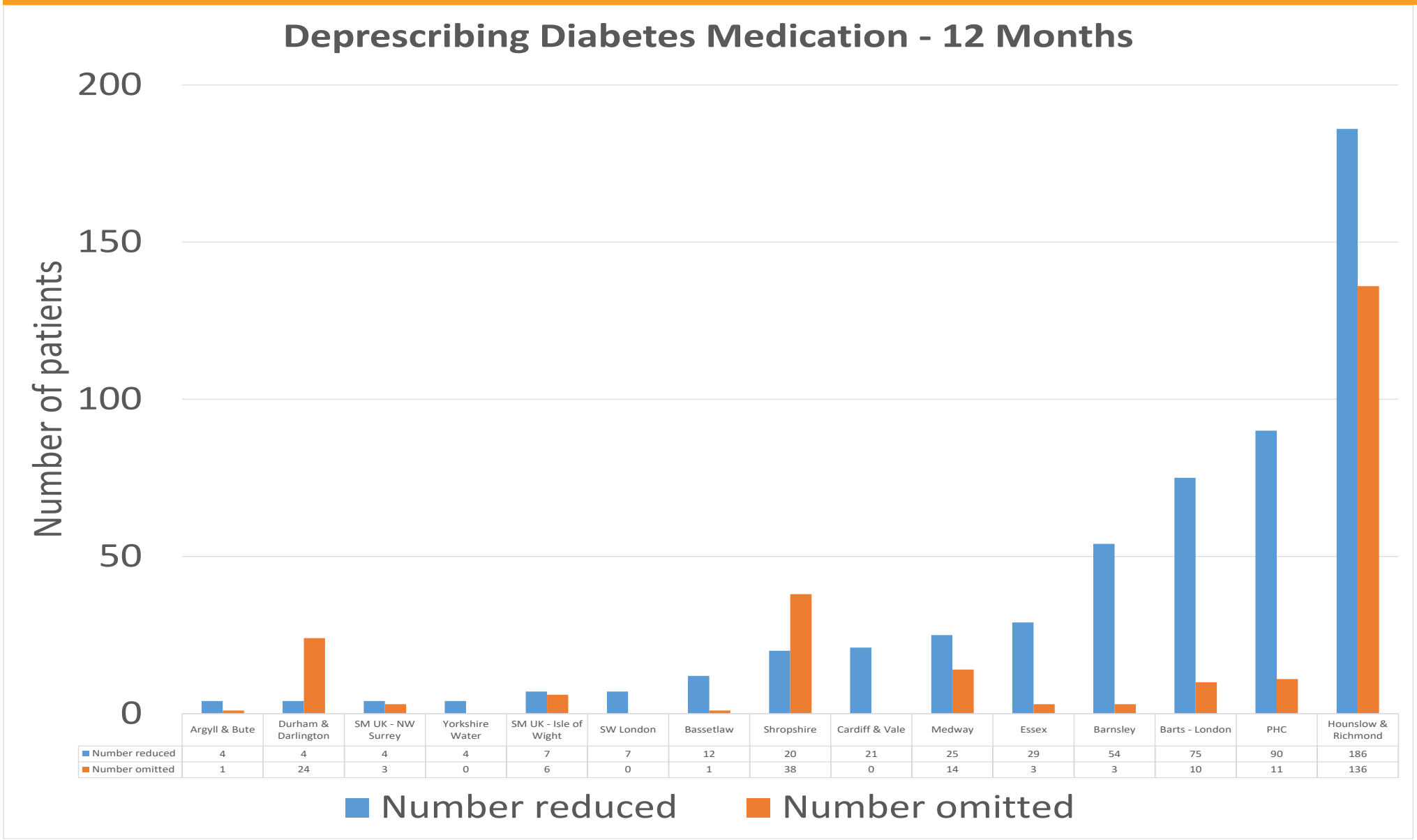
	Argyll & Bute	SM UK - NW Surrey	SW London	SM UK - Isle of Wight	Bassetlaw	Shropshire	Cardiff & Vale	Durham & Darlington	Medway	Essex	PHC	Barnsley	Barts - London	Hounslow & Richmond
Number reduced	3	3	3	7	10	15	16	24	25	29	50	55	75	186
Number omitted	0	3	0	6	1	38	0	4	14	3	11	3	10	130



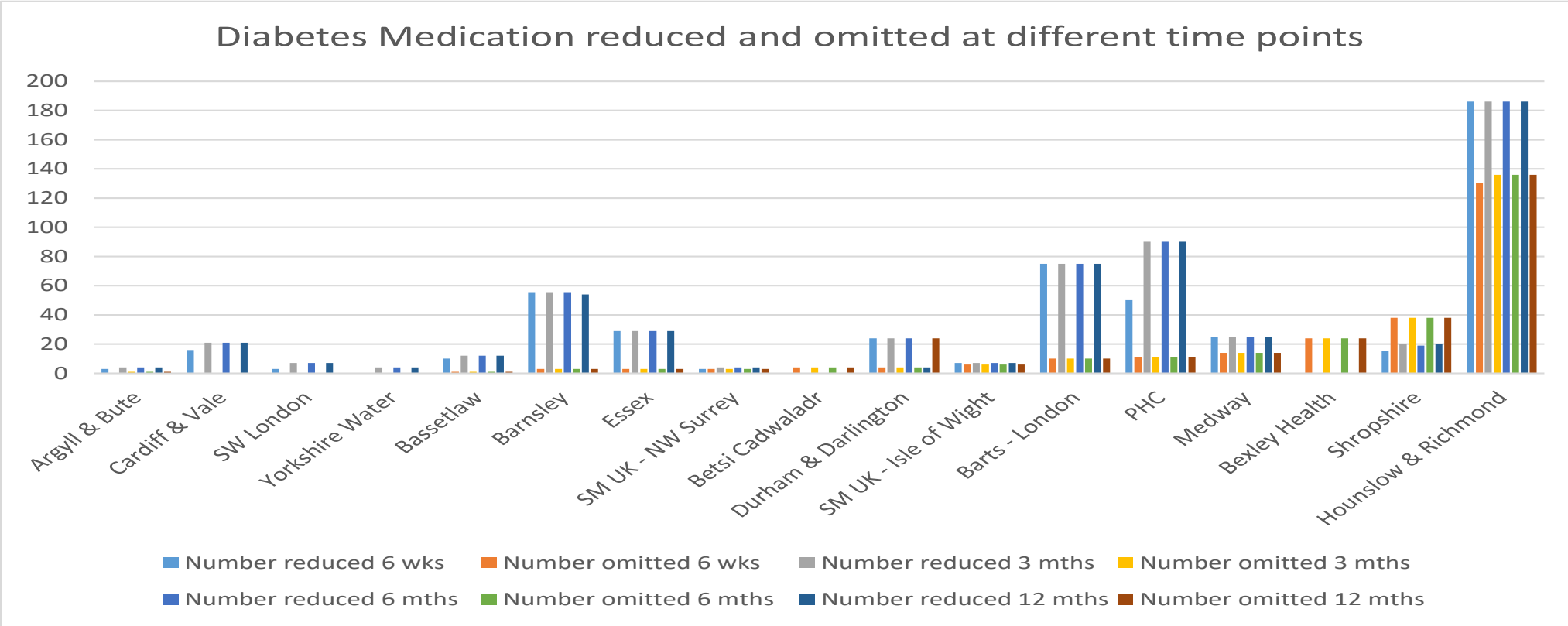
	Argyll & Bute	SM UK - NW Surrey	West Yorkshire	SM UK - Isle of Wight	SW London	Bassetlaw	Shropshire	Cardiff & Vale	Durham & Darlington	Medway	Essex	Barnsley	Barts - London	PHC	Hounslow & Richmond
Number reduced	4	4	4	7	7	12	20	21	24	25	29	55	75	90	186
Number omitted	1	3	0	6	0	1	38	0	4	14	3	3	10	11	136



	Argyll & Bute	SM UK - NW Surrey	Yorkshire Water	SM UK - Isle of Wight	SW London	Bassetlaw	Shropshire	Cardiff & Vale	Durham & Darlington	Medway	Essex	Barnsley	Barts - London	PHC	Hounslow & Richmond
Number reduced	4	4	4	7	7	12	19	21	24	25	29	55	75	90	186
Number omitted	1	3	0	6	0	1	38	0	4	14	3	3	10	11	136



	Argyll & Bute	Durham & Darlington	SM UK - NW Surrey	Yorkshire Water	SM UK - Isle of Wight	SW London	Bassetlaw	Shropshire	Cardiff & Vale	Medway	Essex	Barnsley	Barts - London	PHC	Hounslow & Richmond
Number reduced	4	4	4	4	7	7	12	20	21	25	29	54	75	90	186
Number omitted	1	24	3	0	6	0	1	38	0	14	3	3	10	11	136



- **Winner: Hounslow and Richmond Community Healthcare NHS Trust**

  6 months: 186 patients reduced medication and 136 omitted altogether.

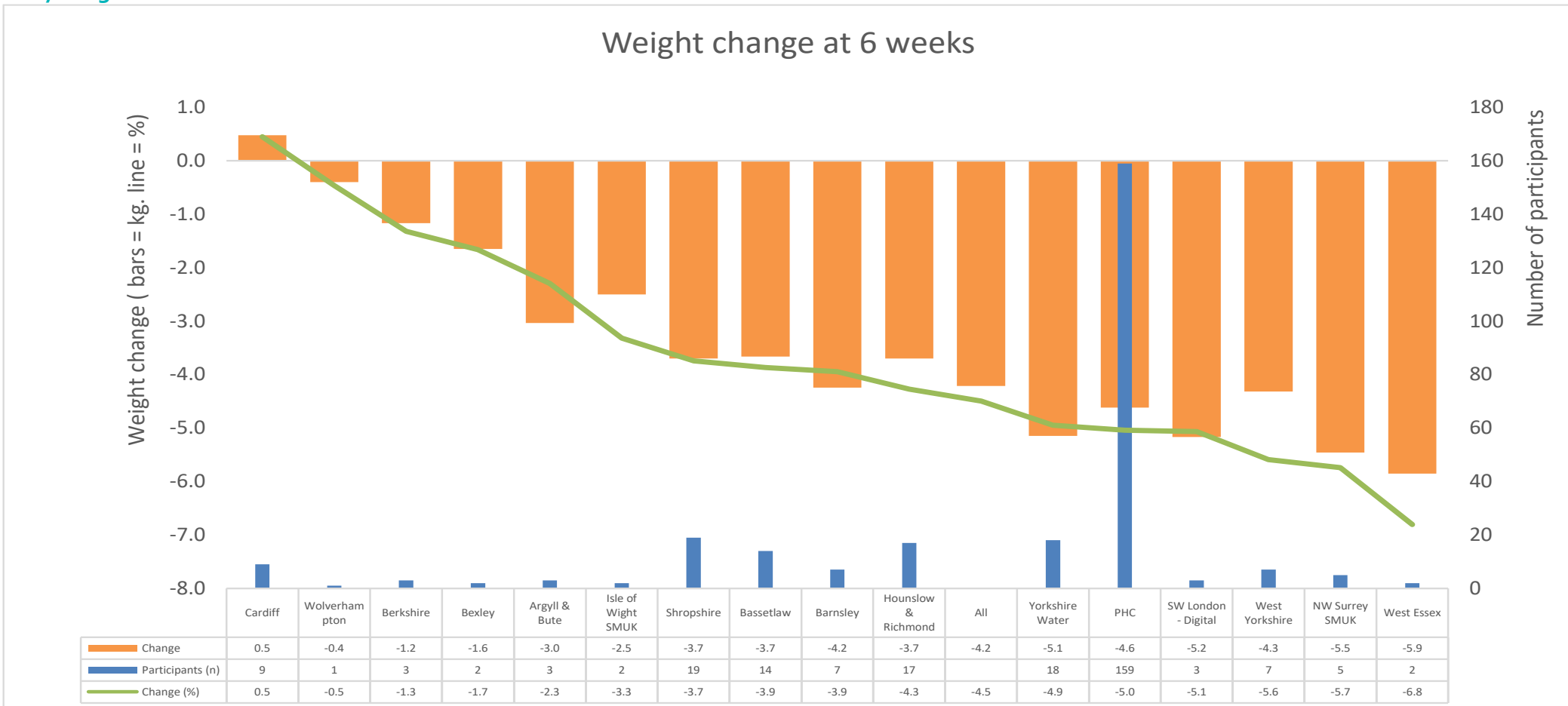
  12 months: 186 patients reduced medication and 136 omitted altogether.

- **Commended: Barts Health NHS Trust** and **Public Health Collaboration** for number of patients who had reduced diabetes medication and **Shropshire Community Health NHS Trust** for the number of patients who had omitted diabetes medication.

Award Category 4 - The largest impact on body weight and waist circumference

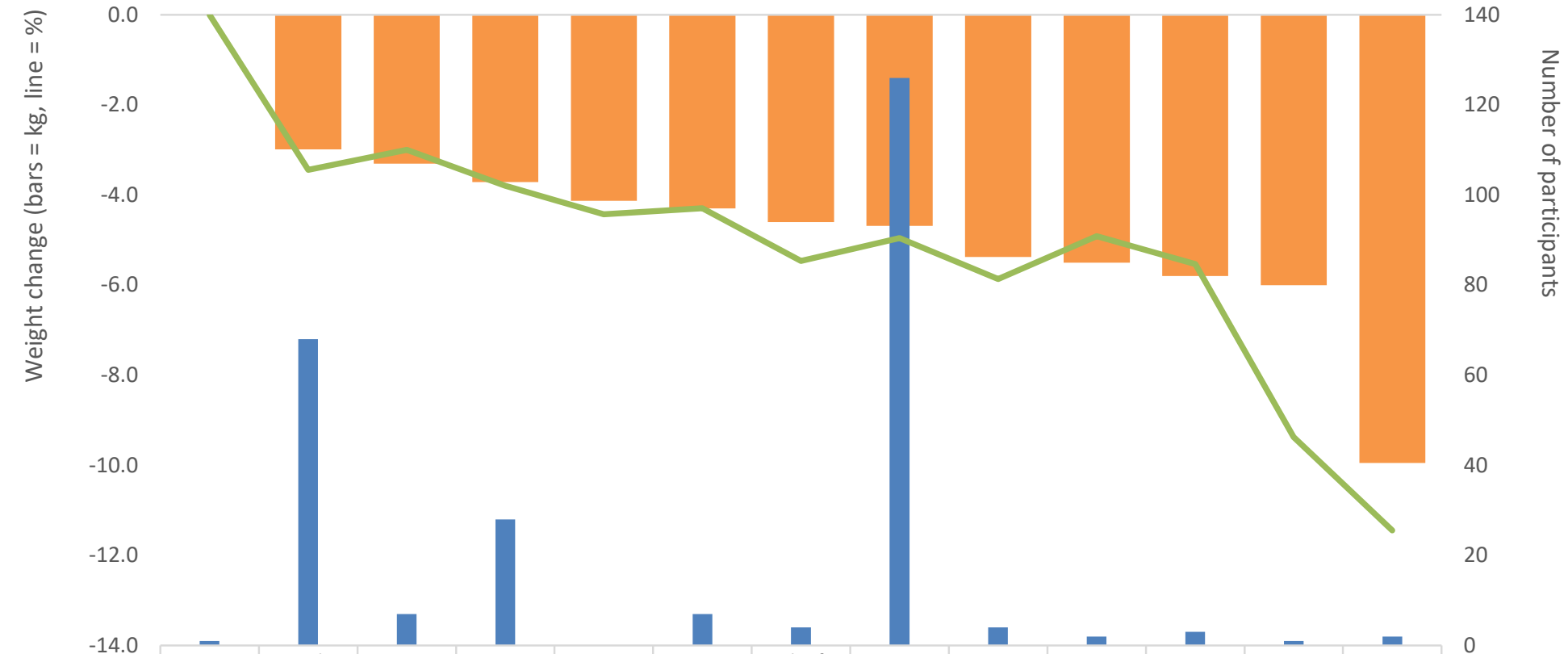
For the anthropometric award category, the following criteria were taken into consideration: body weight, BMI and waist circumference reduction at 6 months and 12 months. [N.B. 6 weeks and 3 month data included for interest]. For all time points, the number of participants for whom matched data was available and the total number of participants were taken into consideration.

Body weight

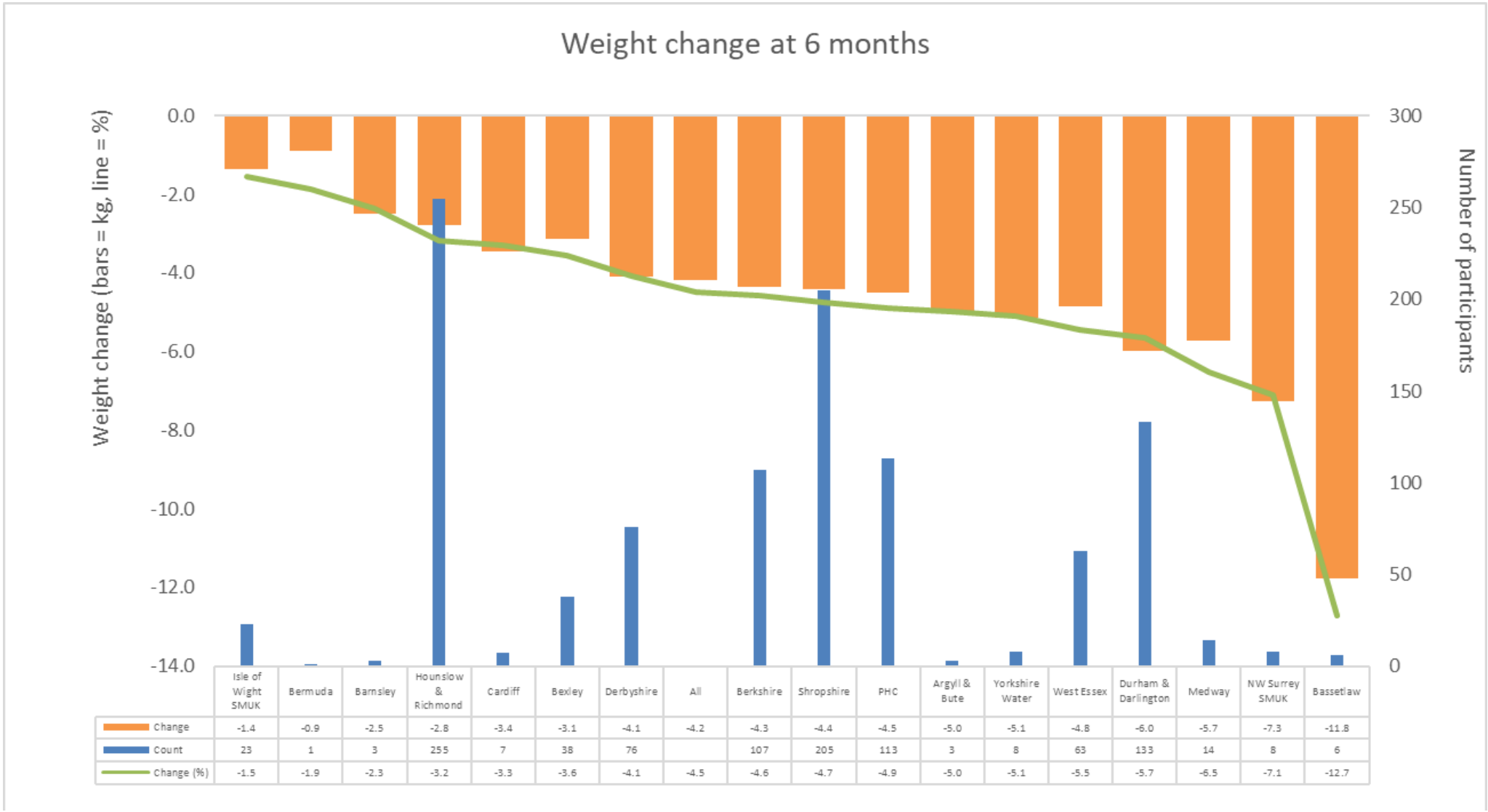


	Cardiff	Wolverhampton	Berkshire	Bexley	Argyll & Bute	Isle of Wight SMUK	Shropshire	Bassetlaw	Barnsley	Hounslow & Richmond	All	Yorkshire Water	PHC	SW London - Digital	West Yorkshire	NW Surrey SMUK	West Essex
Change	0.5	-0.4	-1.2	-1.6	-3.0	-2.5	-3.7	-3.7	-4.2	-3.7	-4.2	-5.1	-4.6	-5.2	-4.3	-5.5	-5.9
Participants (n)	9	1	3	2	3	2	19	14	7	17		18	159	3	7	5	2
Change (%)	0.5	-0.5	-1.3	-1.7	-2.3	-3.3	-3.7	-3.9	-3.9	-4.3	-4.5	-4.9	-5.0	-5.1	-5.6	-5.7	-6.8

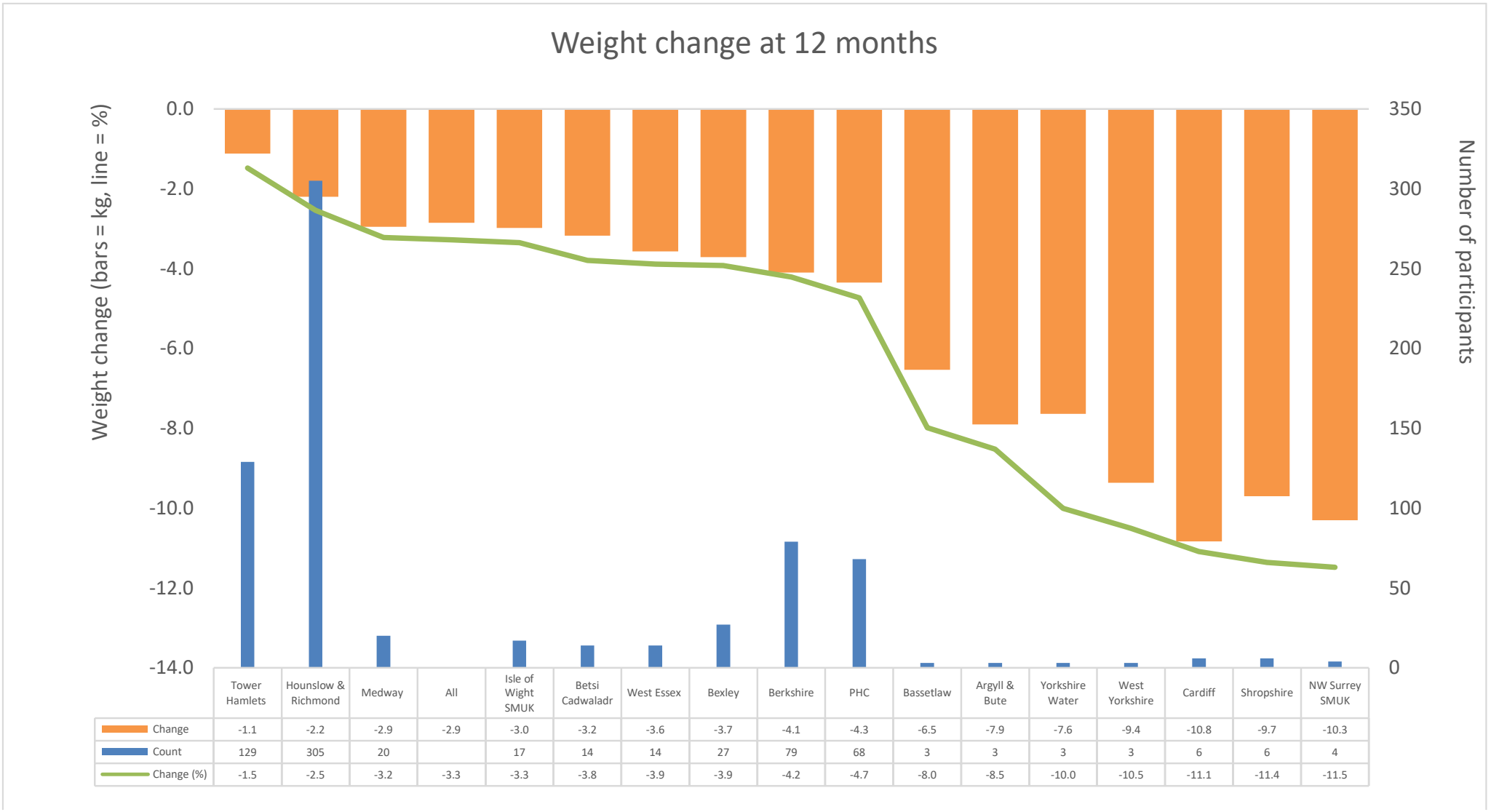
Weight change at 3 months



	Medway	Hounslow & Richmond	Cardiff	Shropshire	All	Argyll & Bute	Isle of Wight SMUK	PHC	Bassetlaw	SW London - Digital	NW Surrey SMUK	Barnsley	West Yorkshire
Change	0.0	-3.0	-3.3	-3.7	-4.1	-4.3	-4.6	-4.7	-5.4	-5.5	-5.8	-6.0	-10.0
Count	1	68	7	28		7	4	126	4	2	3	1	2
Change (%)	0.0	-3.4	-3.0	-3.8	-4.4	-4.3	-5.5	-5.0	-5.9	-4.9	-5.5	-9.4	-11.4

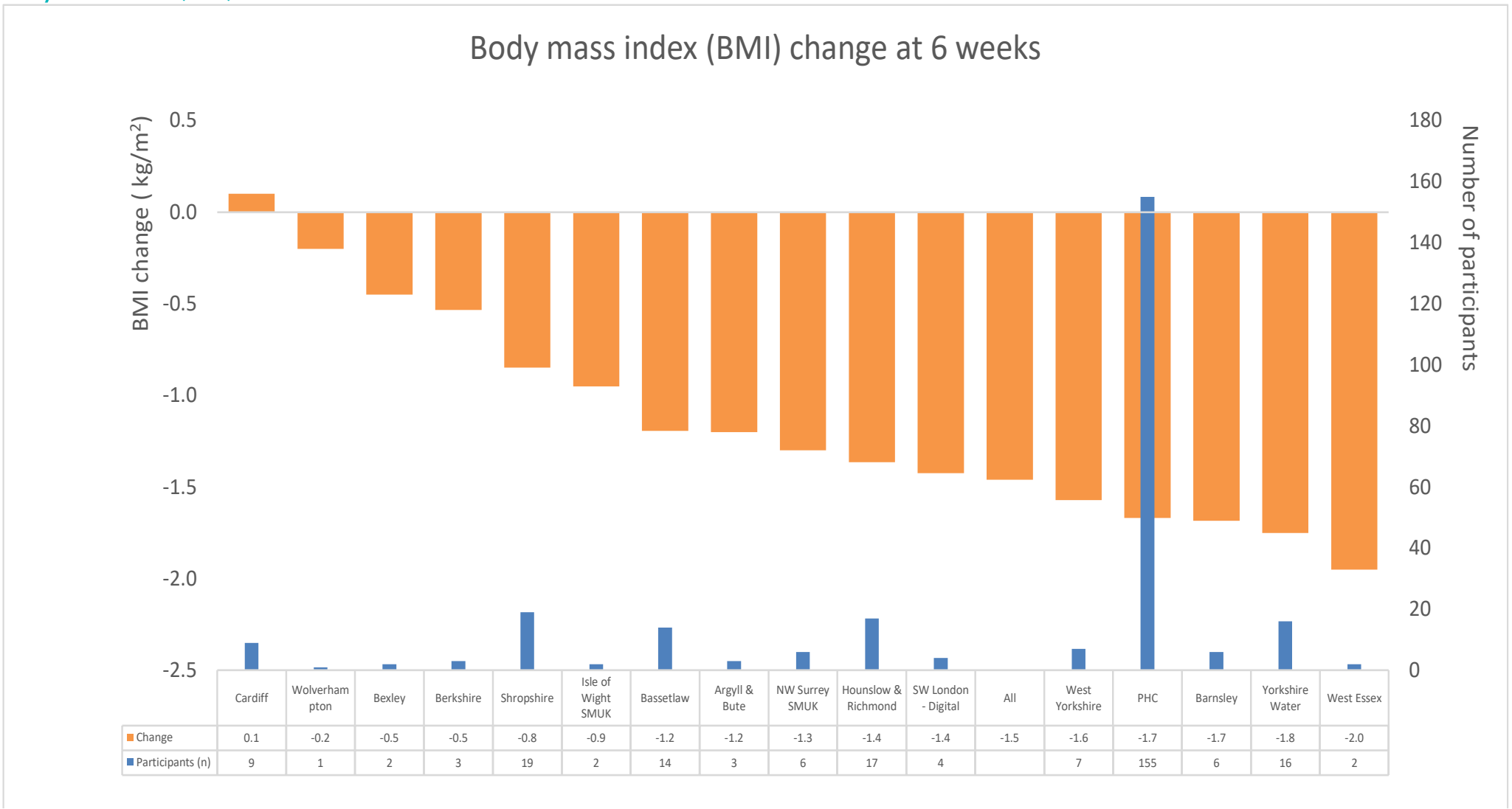


	Isle of Wight SMUK	Bermuda	Barnsley	Hounslow & Richmond	Cardiff	Bexley	Derbyshire	All	Berkshire	Shropshire	PHC	Argyll & Bute	Yorkshire Water	West Essex	Durham & Darlington	Medway	NW Surrey SMUK	Bassetlaw
Change	-1.4	-0.9	-2.5	-2.8	-3.4	-3.1	-4.1	-4.2	-4.3	-4.4	-4.5	-5.0	-5.1	-4.8	-6.0	-5.7	-7.3	-11.8
Count	23	1	3	255	7	38	76		107	205	113	3	8	63	133	14	8	6
Change (%)	-1.5	-1.9	-2.3	-3.2	-3.3	-3.6	-4.1	-4.5	-4.6	-4.7	-4.9	-5.0	-5.1	-5.5	-5.7	-6.5	-7.1	-12.7



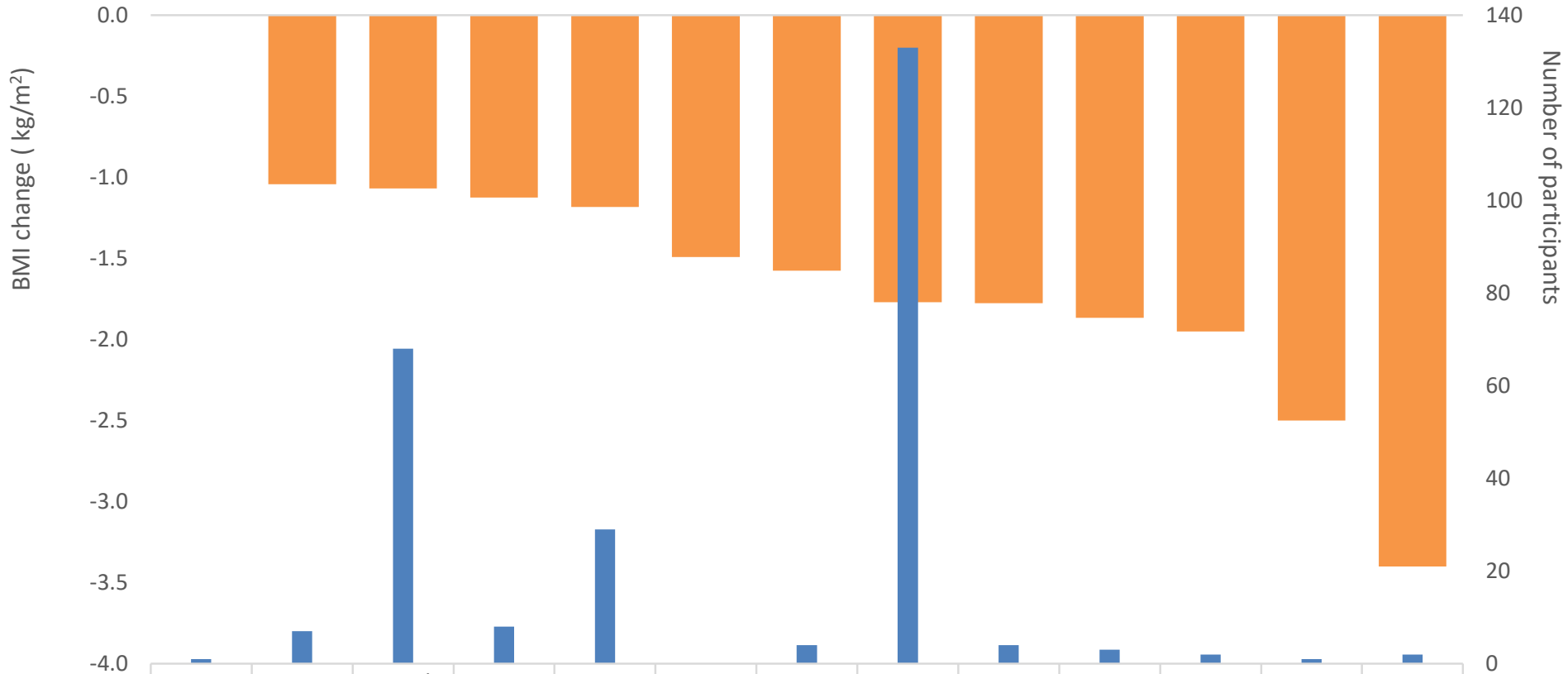
	Tower Hamlets	Hounslow & Richmond	Medway	All	Isle of Wight SMUK	Betsi Cadwaladr	West Essex	Bexley	Berkshire	PHC	Bassetlaw	Argyll & Bute	Yorkshire Water	West Yorkshire	Cardiff	Shropshire	NW Surrey SMUK
Change	-1.1	-2.2	-2.9	-2.9	-3.0	-3.2	-3.6	-3.7	-4.1	-4.3	-6.5	-7.9	-7.6	-9.4	-10.8	-9.7	-10.3
Count	129	305	20		17	14	14	27	79	68	3	3	3	3	6	6	4
Change (%)	-1.5	-2.5	-3.2	-3.3	-3.3	-3.8	-3.9	-3.9	-4.2	-4.7	-8.0	-8.5	-10.0	-10.5	-11.1	-11.4	-11.5

Body Mass Index (BMI)



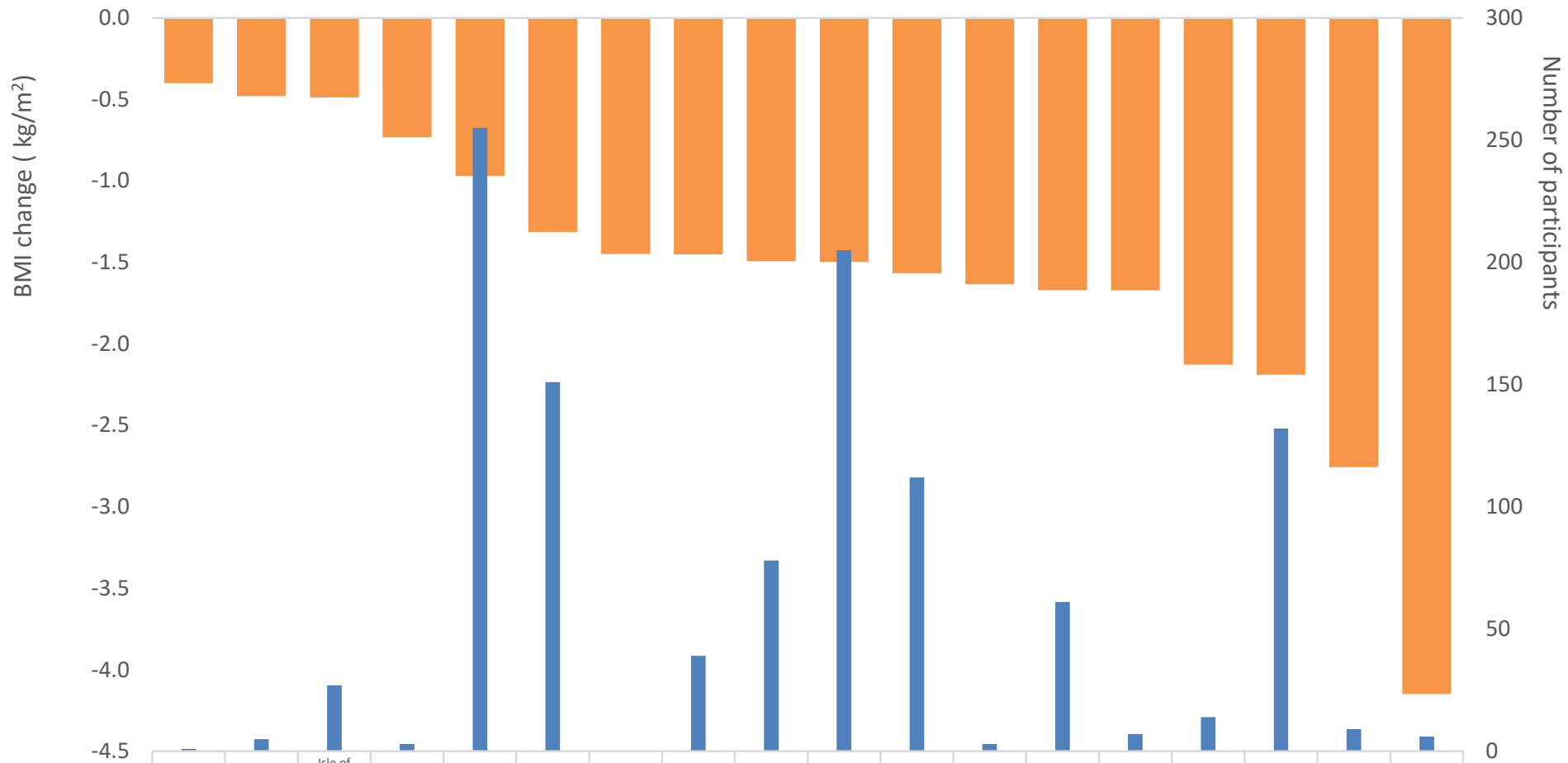
	Cardiff	Wolverhampton	Bexley	Berkshire	Shropshire	Isle of Wight SMUK	Bassetlaw	Argyll & Bute	NW Surrey SMUK	Hounslow & Richmond	SW London - Digital	All	West Yorkshire	PHC	Barnsley	Yorkshire Water	West Essex
Change	0.1	-0.2	-0.5	-0.5	-0.8	-0.9	-1.2	-1.2	-1.3	-1.4	-1.4	-1.5	-1.6	-1.7	-1.7	-1.8	-2.0
Participants (n)	9	1	2	3	19	2	14	3	6	17	4		7	155	6	16	2

Body mass index (BMI) change at 3 months



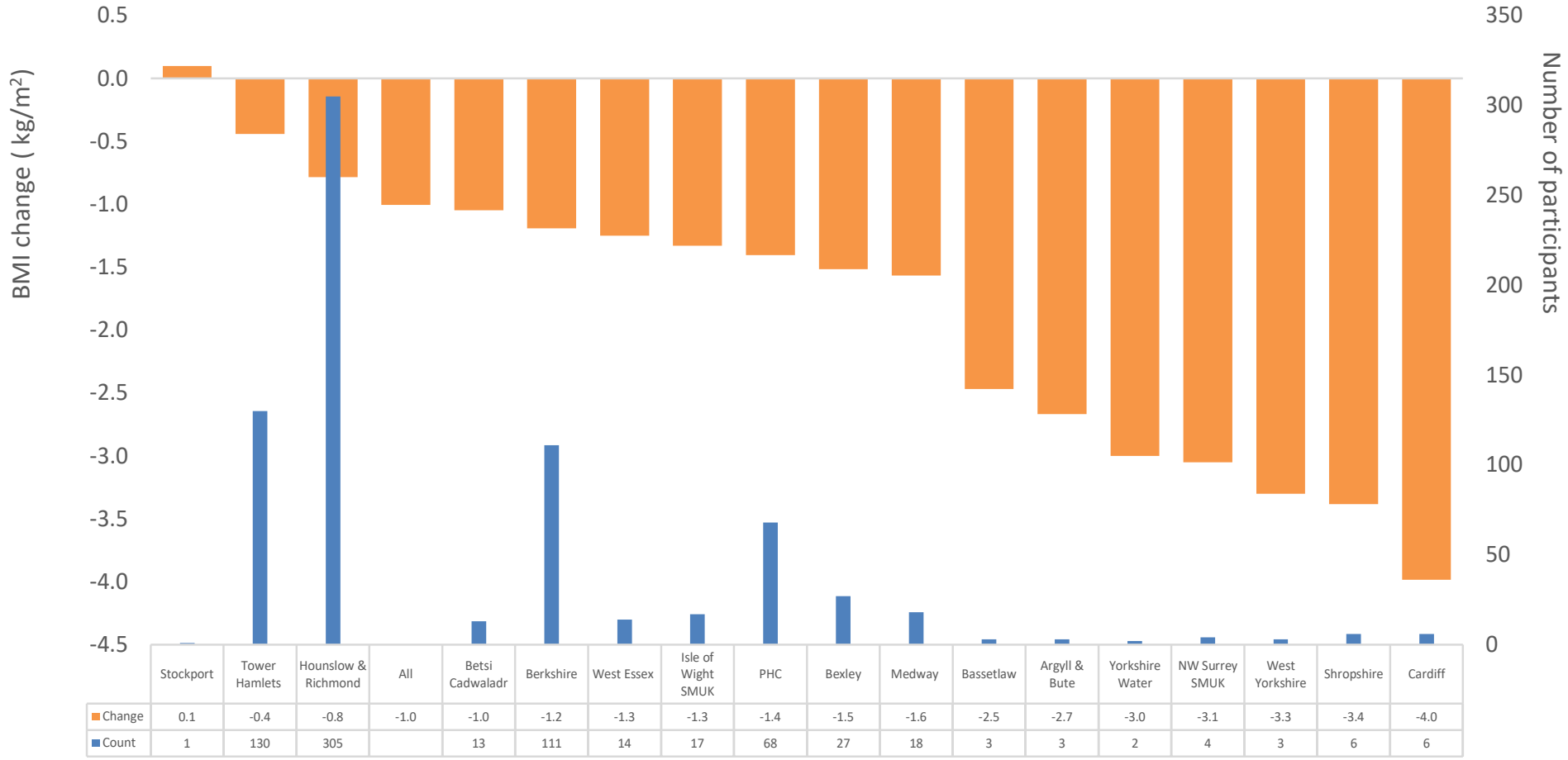
	Medway	Cardiff	Hounslow & Richmond	Argyll & Bute	Shropshire	All	Isle of Wight SMUK	PHC	Bassetlaw	NW Surrey SMUK	SW London - Digital	Barnsley	West Yorkshire
Change	0.0	-1.0	-1.1	-1.1	-1.2	-1.5	-1.6	-1.8	-1.8	-1.9	-2.0	-2.5	-3.4
Count	1	7	68	8	29		4	133	4	3	2	1	2

Body mass index (BMI) change at 6 months



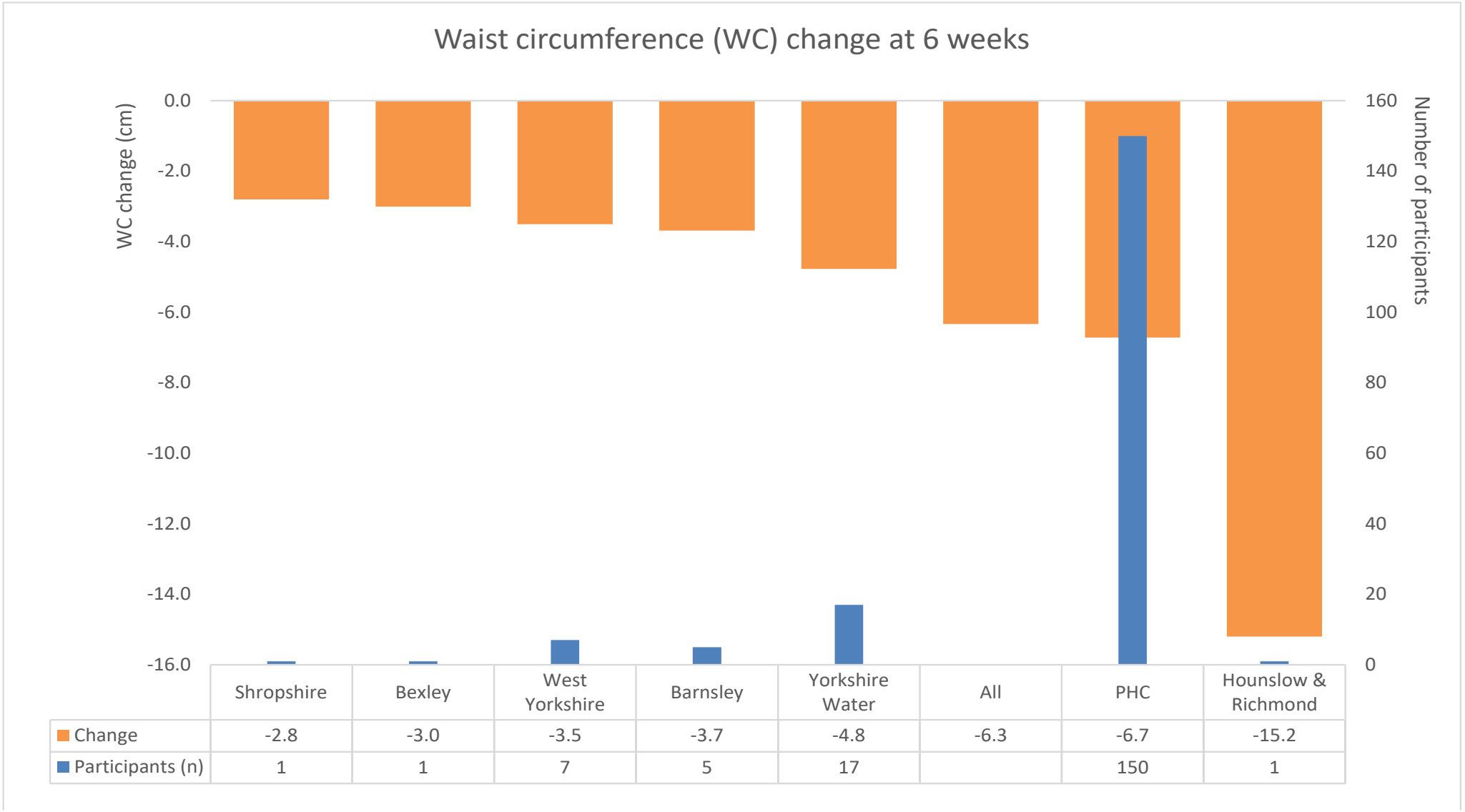
	Bermuda	Cardiff	Isle of Wight SMUK	Barnsley	Hounslow & Richmond	Berkshire	All	Bexley	Derbyshire	Shropshire	PHC	Argyll & Bute	West Essex	Yorkshire Water	Medway	Durham & Darlington	NW Surrey SMUK	Bassetlaw
Change	-0.4	-0.5	-0.5	-0.7	-1.0	-1.3	-1.5	-1.5	-1.5	-1.5	-1.6	-1.6	-1.7	-1.7	-2.1	-2.2	-2.8	-4.2
Count	1	5	27	3	255	151		39	78	205	112	3	61	7	14	132	9	6

Body mass index (BMI) change at 12 months



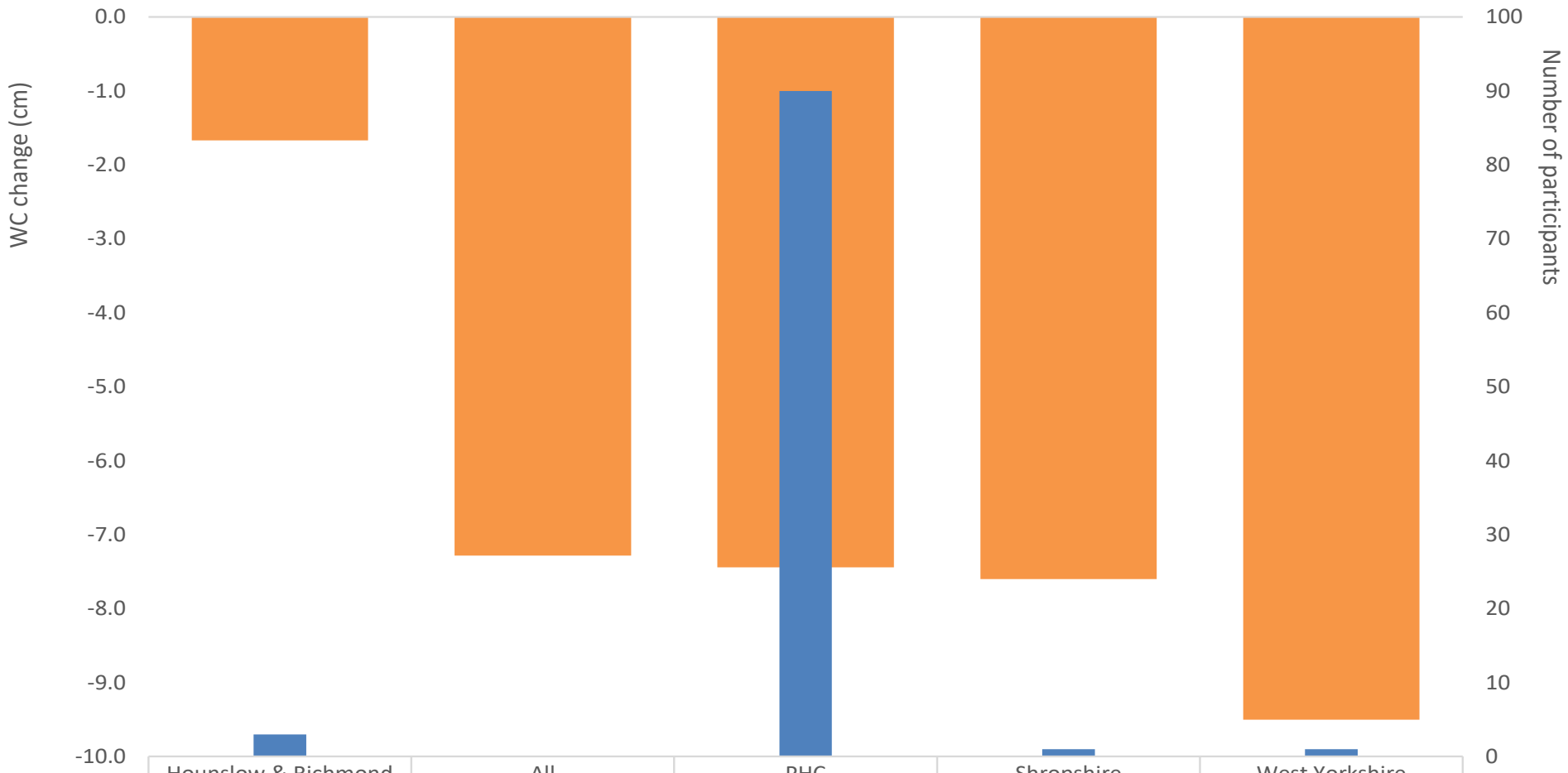
	Stockport	Tower Hamlets	Hounslow & Richmond	All	Betsi Cadwaladr	Berkshire	West Essex	Isle of Wight SMUK	PHC	Bexley	Medway	Bassetlaw	Argyll & Bute	Yorkshire Water	NW Surrey SMUK	West Yorkshire	Shropshire	Cardiff
Change	0.1	-0.4	-0.8	-1.0	-1.0	-1.2	-1.3	-1.3	-1.4	-1.5	-1.6	-2.5	-2.7	-3.0	-3.1	-3.3	-3.4	-4.0
Count	1	130	305		13	111	14	17	68	27	18	3	3	2	4	3	6	6

Waist circumference



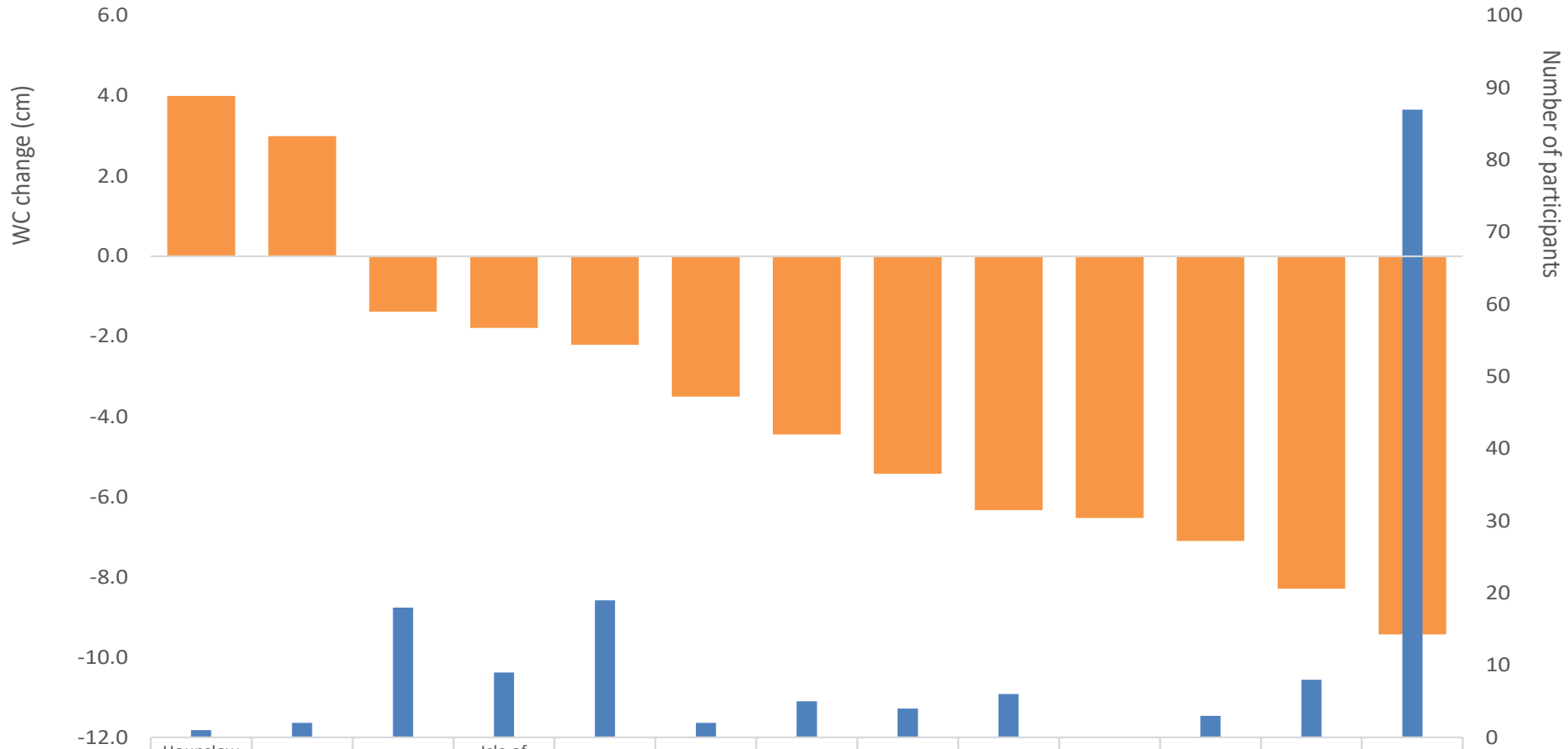
	Shropshire	Bexley	West Yorkshire	Barnsley	Yorkshire Water	All	PHC	Hounslow & Richmond
Change	-2.8	-3.0	-3.5	-3.7	-4.8	-6.3	-6.7	-15.2
Participants (n)	1	1	7	5	17		150	1

Waist circumference (WC) change at 3 months

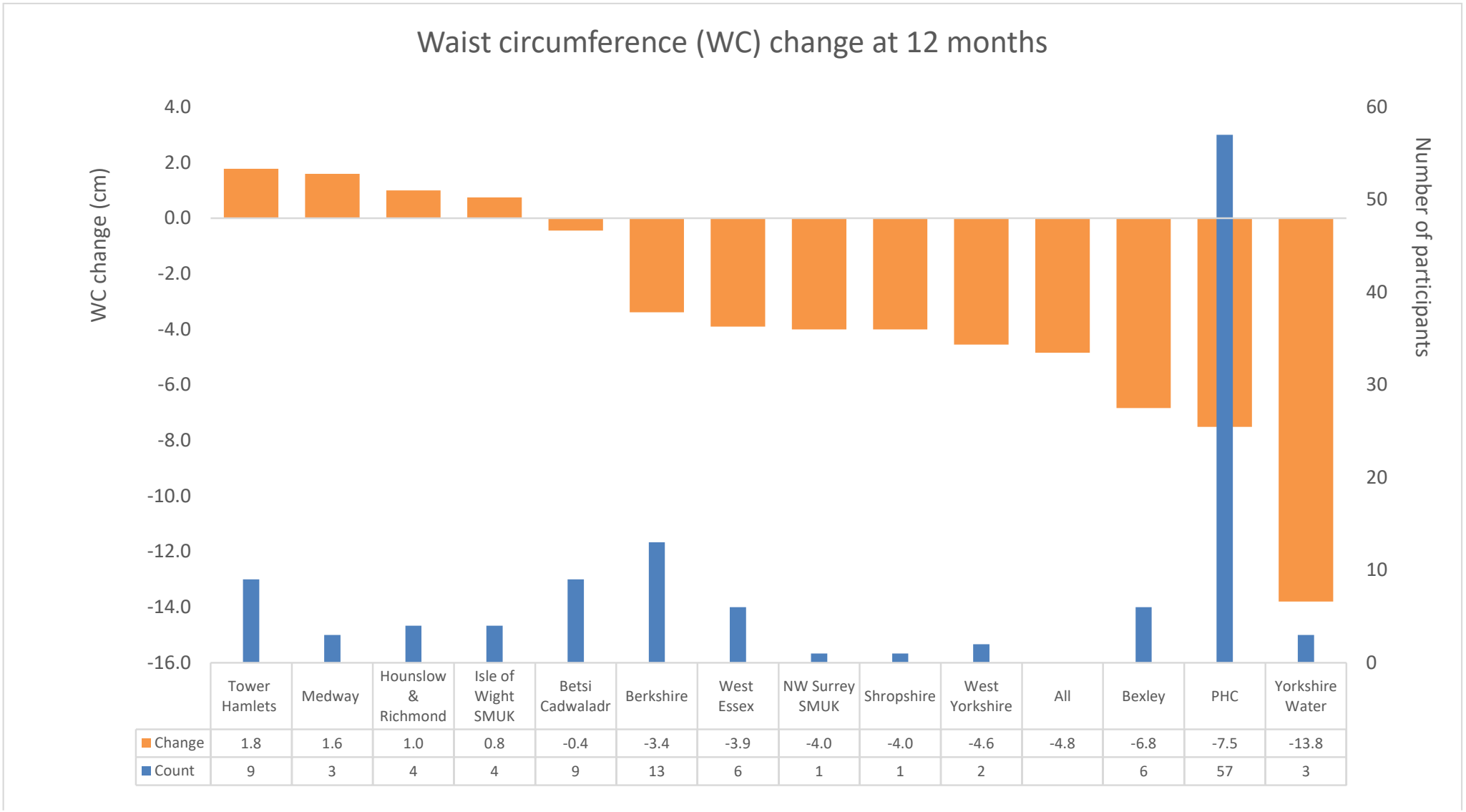


	Hounslow & Richmond	All	PHC	Shropshire	West Yorkshire
Change	-1.7	-7.3	-7.4	-7.6	-9.5
Count	3		90	1	1

Waist circumference (WC) change at 6 months



	Hounslow & Richmond	Derbyshire	West Essex	Isle of Wight SMUK	Berkshire	NW Surrey SMUK	Shropshire	Medway	Bexley	All	Barnsley	Yorkshire Water	PHC
Change	4.0	3.0	-1.4	-1.8	-2.2	-3.5	-4.4	-5.4	-6.3	-6.5	-7.1	-8.3	-9.4
Count	1	2	18	9	19	2	5	4	6		3	8	87



	Tower Hamlets	Medway	Hounslow & Richmond	Isle of Wight SMUK	Betsi Cadwaladr	Berkshire	West Essex	NW Surrey SMUK	Shropshire	West Yorkshire	All	Bexley	PHC	Yorkshire Water
Change	1.8	1.6	1.0	0.8	-0.4	-3.4	-3.9	-4.0	-4.0	-4.6	-4.8	-6.8	-7.5	-13.8
Count	9	3	4	4	9	13	6	1	1	2		6	57	3

- **Winner: Public Health Collaboration (PHC)**

Data reported as: weight loss kg & %; BMI kg/m²; waist cm; number of patient matched records (in brackets)

6 months: -4.5 kg [-4.9%] (113), -1.6 kg/m² (112), -9.4cm (87)

12months: -4.3 kg [-4.7%] (68), -1.4 kg/m² (68), -7.5 cm (57)

Justification - Consistent improvement in all anthropometric indicators throughout the different time points with good participant numbers

- **2nd place: Berkshire Healthcare NHS Foundation Trust**

Data reported as: weight loss kg & %; BMI kg/m²; waist cm; number of patient matched records (in brackets)

6 months: -4.3 kg [-4.6%] (107), -1.3 kg/m² (151), -2.2 cm (19)

12 months: -4.1 kg [-4.2%] (79), -1.2 kg/m² (111), -3.4 cm (13)

Justification - Almost identical body weight and BMI improvements as the winner with a similar number of matched patient records. However, less impact on Waist circumference reported with few number of matched patient records.

- **3rd place: Bexley Health Neighbourhood Care CIC**

Data reported as: weight loss kg & %; BMI kg/m²; waist cm; number of patient matched records (in brackets)

6 months: -3.1 kg [-3.6%] (38), -1.5 kg/m² (39), -6.3 cm (6)

12 months: -3.7 kg [-3.9%] (27), -1.5 kg/m² (27), -6.8 cm (6)

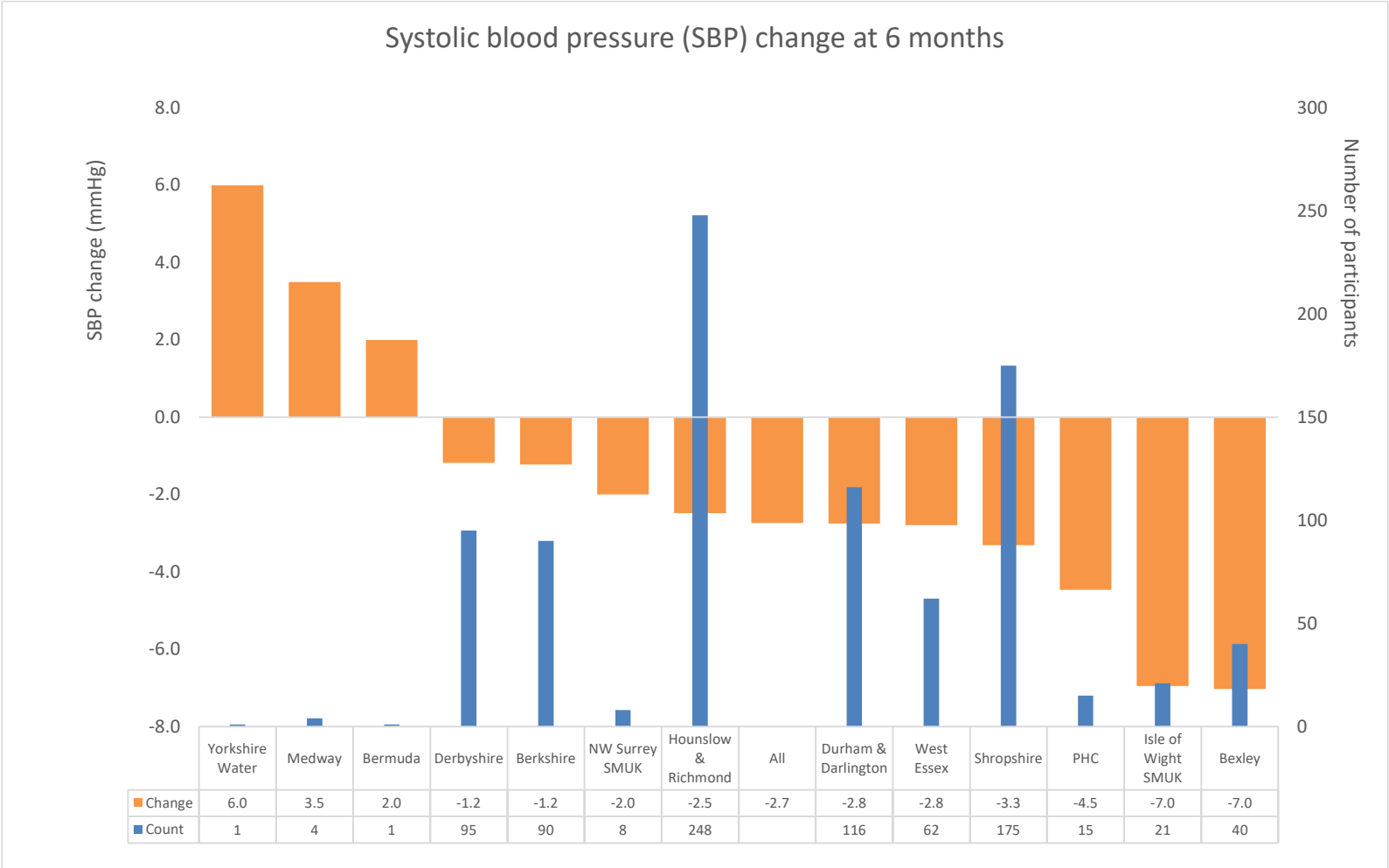
Justification - Good and consistent improvements over the time points. Fewer matched patient records compared to 1st and 2nd place.

Commended: Durham & Darlington NHS Foundation Trust for 6 month data although no 12 month data; **Shropshire Community Health NHS Trust** excellent and robust 6 month data but very small numbers at 12 months. **Barts Health NHS Trust** significant patient numbers but smaller improvements compared to the winners.

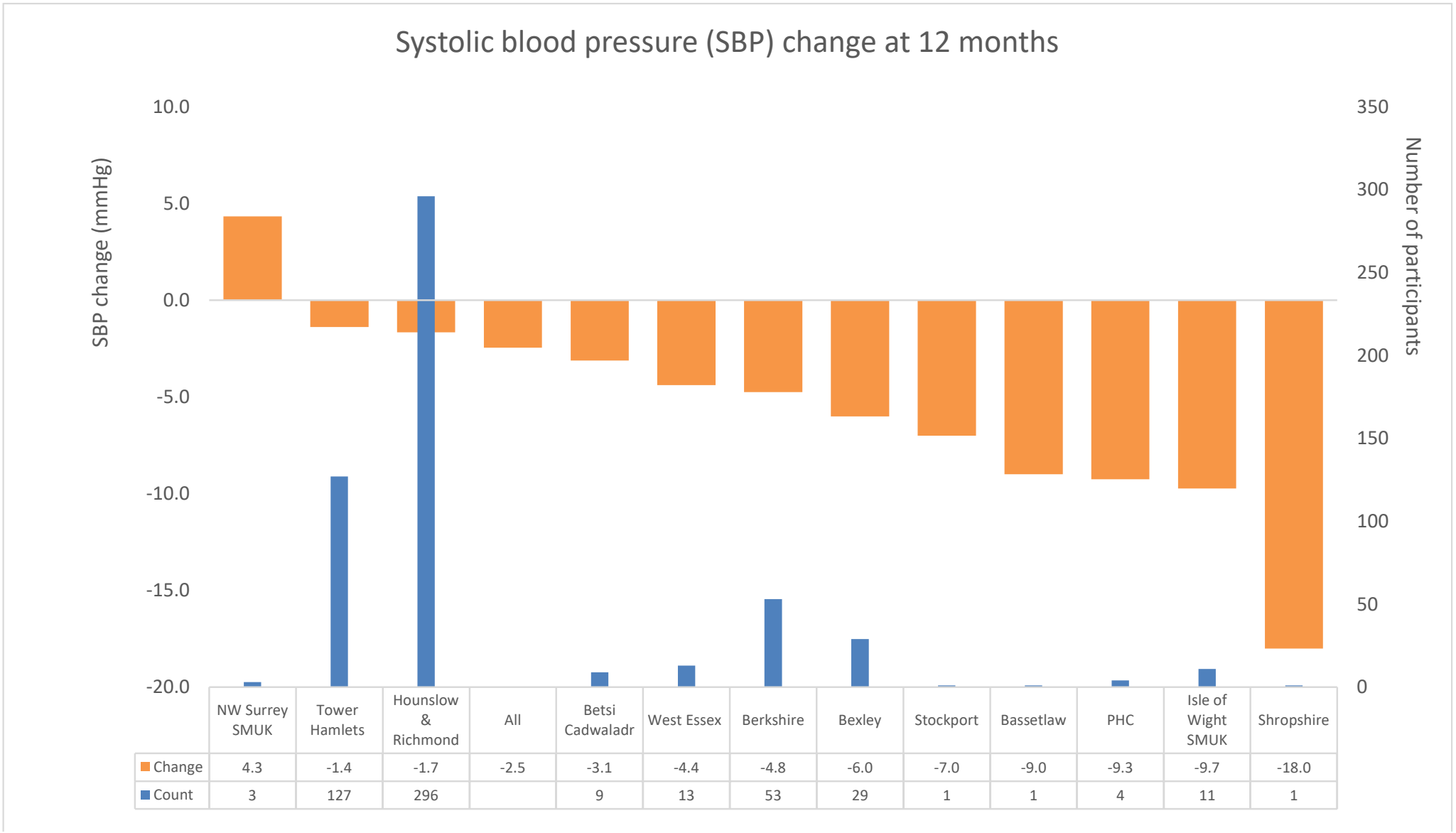
Award Category 5 - Cardiovascular disease (CVD) risk reduction

This award category considered the following criteria at 6 months and 12 months: reduction in systolic and diastolic blood pressure; reduction in total cholesterol to HDL ratio; reduction in triglyceride to HDL ratio; number of participants for whom matched data was available; robust 95% confidence intervals.

Systolic blood pressure

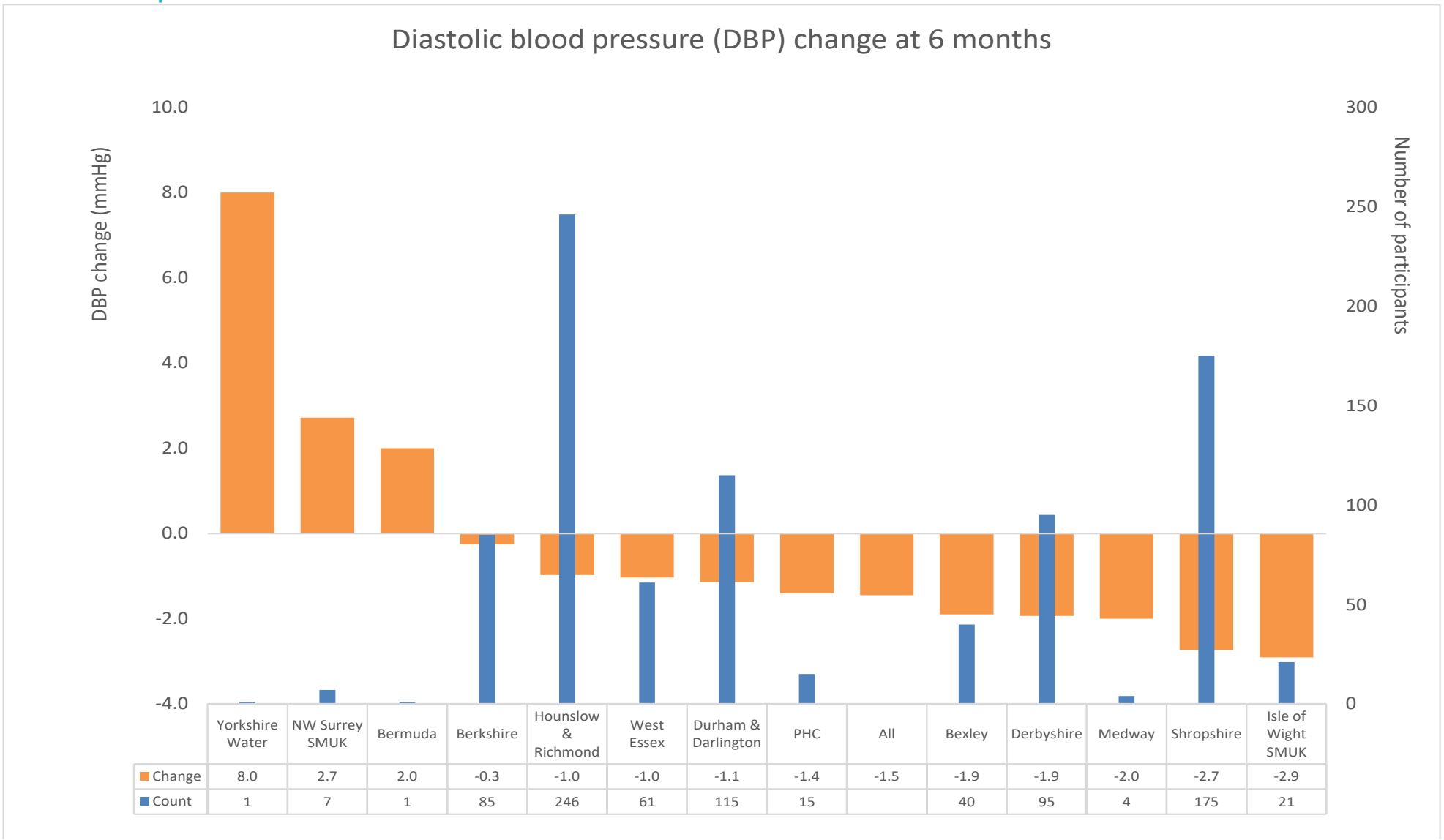


	Yorkshire Water	Medway	Bermuda	Derbyshire	Berkshire	NW Surrey SMUK	Hounslow & Richmond	All	Durham & Darlington	West Essex	Shropshire	PHC	Isle of Wight SMUK	Bexley
Change	6.0	3.5	2.0	-1.2	-1.2	-2.0	-2.5	-2.7	-2.8	-2.8	-3.3	-4.5	-7.0	-7.0
Count	1	4	1	95	90	8	248		116	62	175	15	21	40



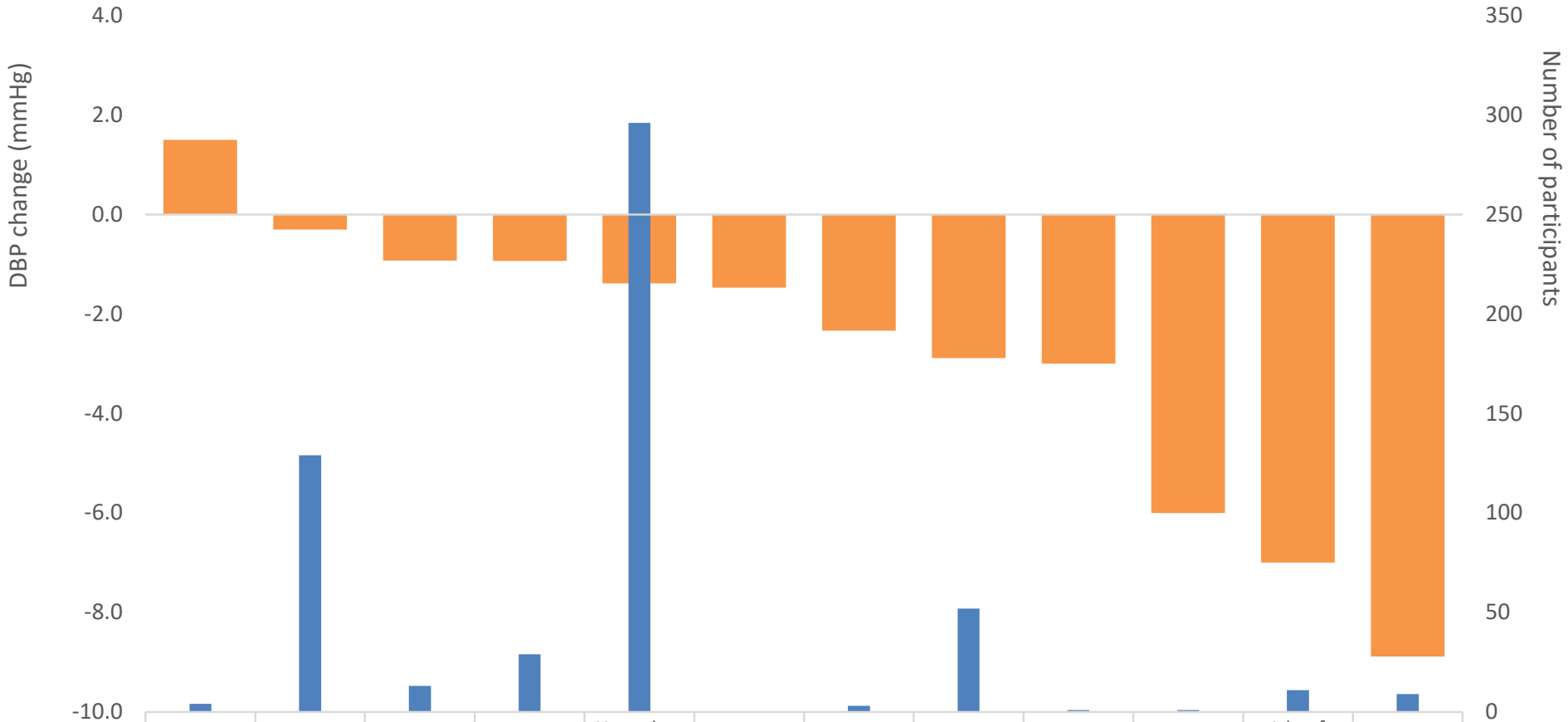
	NW Surrey SMUK	Tower Hamlets	Hounslow & Richmond	All	Betsi Cadwaladr	West Essex	Berkshire	Bexley	Stockport	Bassetlaw	PHC	Isle of Wight SMUK	Shropshire
Change	4.3	-1.4	-1.7	-2.5	-3.1	-4.4	-4.8	-6.0	-7.0	-9.0	-9.3	-9.7	-18.0
Count	3	127	296		9	13	53	29	1	1	4	11	1

Diastolic blood pressure



	Yorkshire Water	NW Surrey SMUK	Bermuda	Berkshire	Hounslow & Richmond	West Essex	Durham & Darlington	PHC	All	Bexley	Derbyshire	Medway	Shropshire	Isle of Wight SMUK
Change	8.0	2.7	2.0	-0.3	-1.0	-1.0	-1.1	-1.4	-1.5	-1.9	-1.9	-2.0	-2.7	-2.9
Count	1	7	1	85	246	61	115	15		40	95	4	175	21

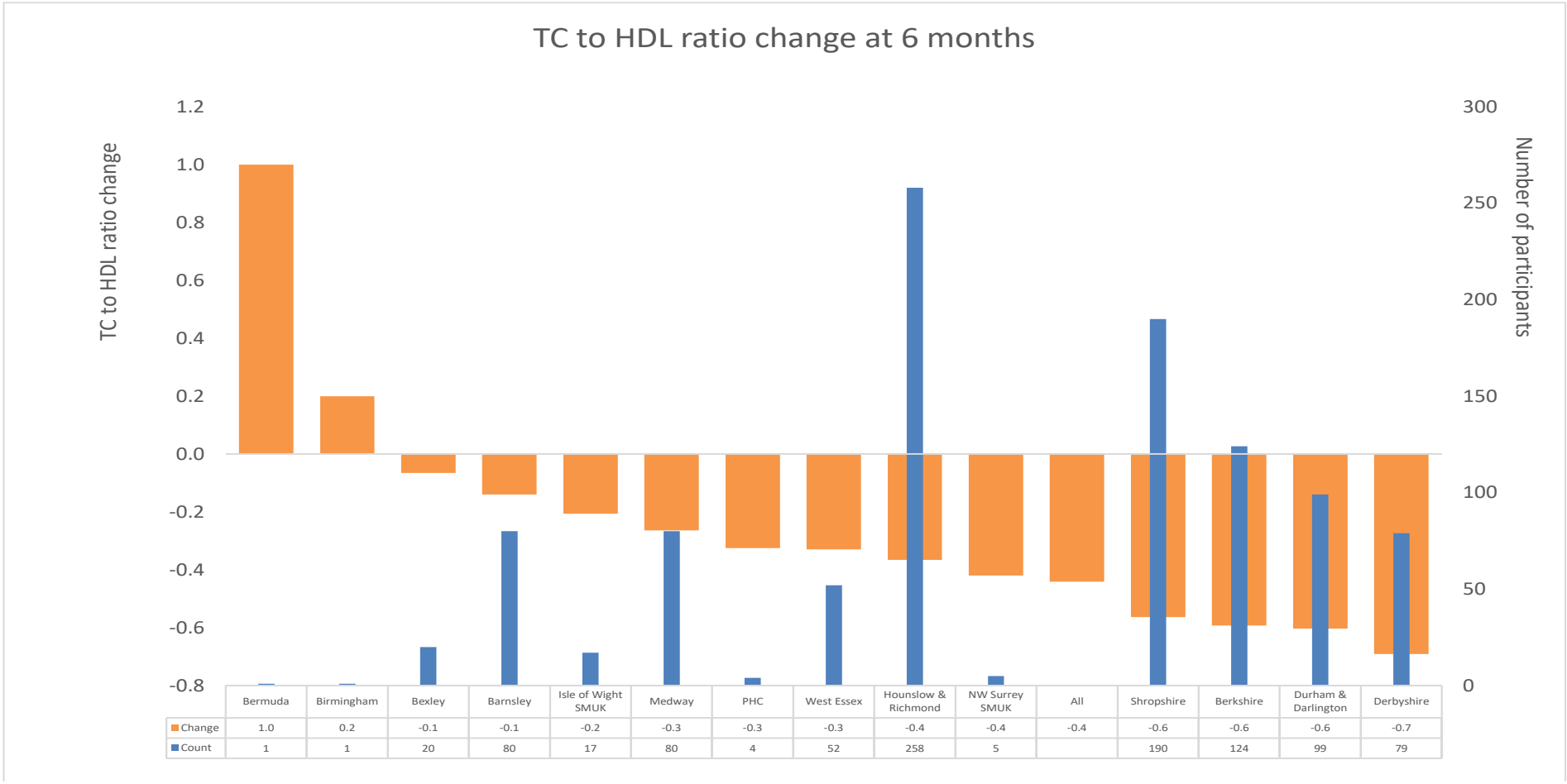
Diastolic blood pressure (DBP) change at 12 months



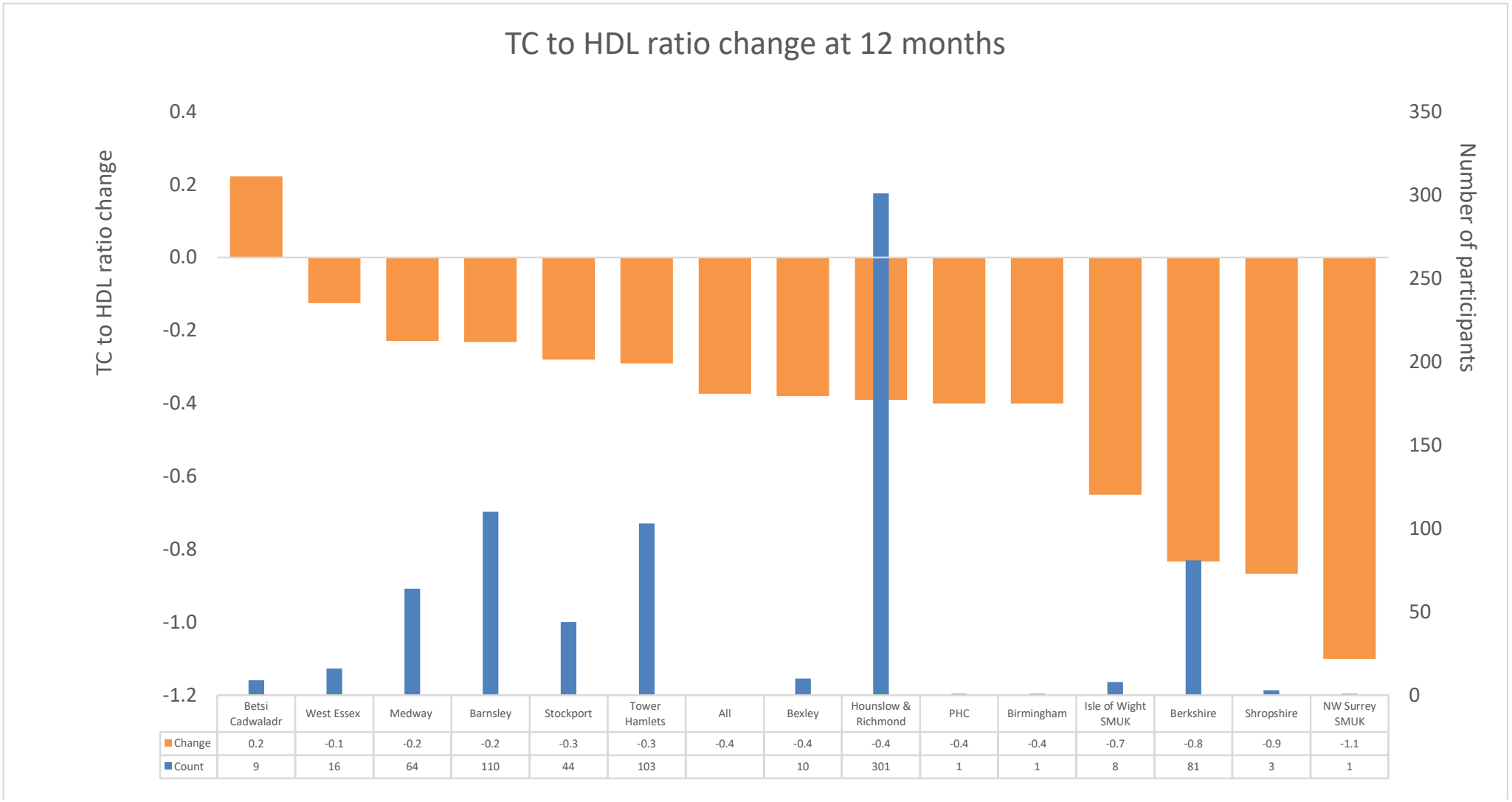
	PHC	Tower Hamlets	West Essex	Bexley	Hounslow & Richmond	All	NW Surrey SMUK	Berkshire	Shropshire	Stockport	Isle of Wight SMUK	Betsi Cadwaladr
Change	1.5	-0.3	-0.9	-0.9	-1.4	-1.5	-2.3	-2.9	-3.0	-6.0	-7.0	-8.9
Count	4	129	13	29	296		3	52	1	1	11	9

Total cholesterol to HDL cholesterol ratio

Total cholesterol to high-density lipoprotein (HDL) cholesterol ratio is a good predictor of cardiovascular risk. This ratio is calculated by dividing total cholesterol level by HDL. Ideally it should be below 4.5, with a higher ratio indicating an increased risk of heart disease.. Where organisations enter total cholesterol and HDL cholesterol into the X-PERT Audit Database this ratio is automatically calculated.



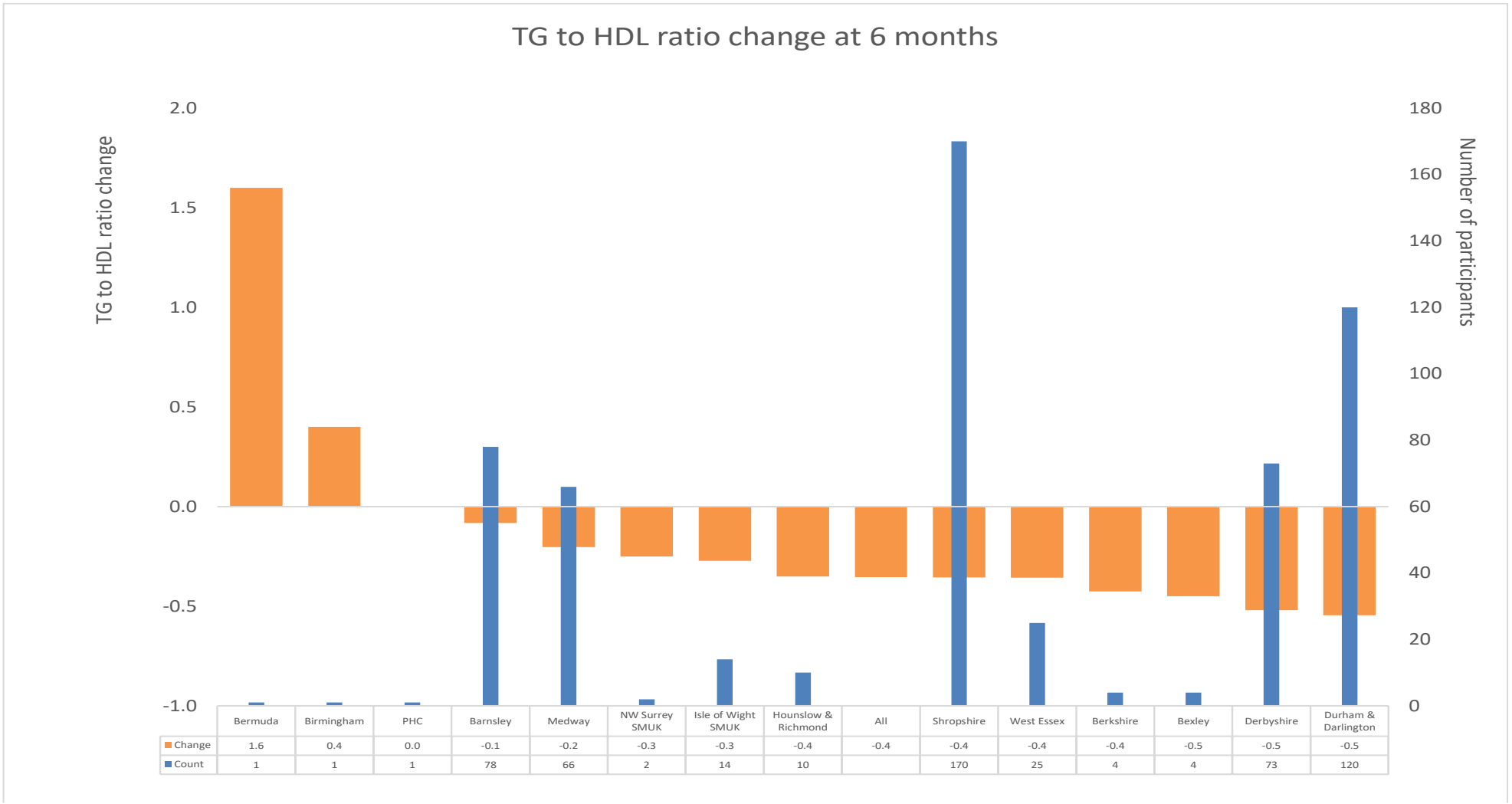
	Bermuda	Birmingham	Bexley	Barnsley	Isle of Wight SMUK	Medway	PHC	West Essex	Hounslow & Richmond	NW Surrey SMUK	All	Shropshire	Berkshire	Durham & Darlington	Derbyshire
Change	1.0	0.2	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.6	-0.6	-0.6	-0.7
Count	1	1	20	80	17	80	4	52	258	5		190	124	99	79



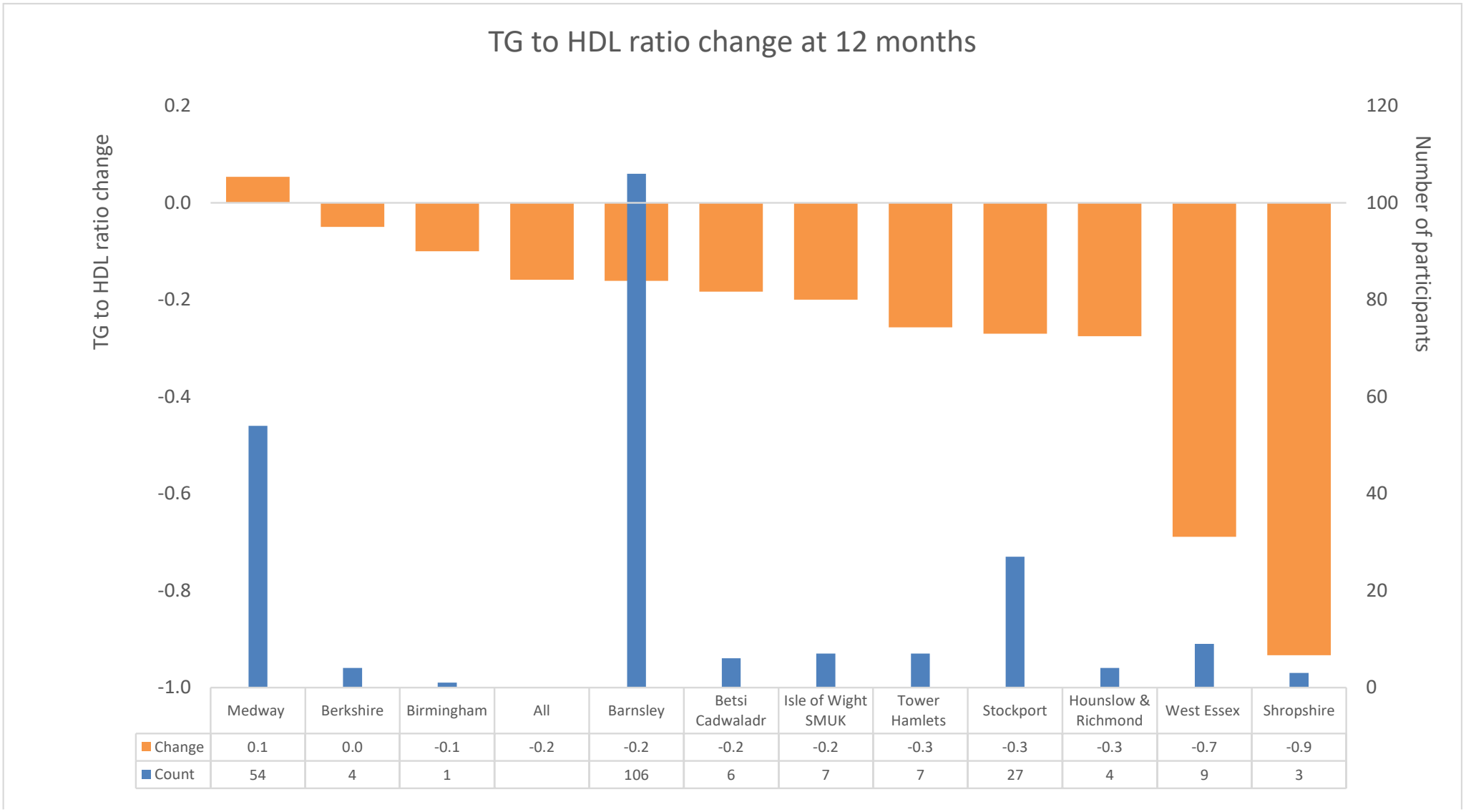
	Betsi Cadwaladr	West Essex	Medway	Barnsley	Stockport	Tower Hamlets	All	Bexley	Hounslow & Richmond	PHC	Birmingham	Isle of Wight SMUK	Berkshire	Shropshire	NW Surrey SMUK
Change	0.2	-0.1	-0.2	-0.2	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.7	-0.8	-0.9	-1.1
Count	9	16	64	110	44	103		10	301	1	1	8	81	3	1

Triglyceride to HDL cholesterol ratio

The triglyceride to HDL cholesterol ratio (TG:HDL-C ratio) correlates with CVD risk in both men and women. The ideal ratio is less than 0.87, with higher levels, especially those above 2.62, indicating increased risk. Where organisations enter triglyceride and HDL cholesterol into the X-PERT Audit Database this ratio is automatically calculated.



	Bermuda	Birmingham	PHC	Barnsley	Medway	NW Surrey SMUK	Isle of Wight SMUK	Hounslow & Richmond	All	Shropshire	West Essex	Berkshire	Bexley	Derbyshire	Durham & Darlington
Change	1.6	0.4	0.0	-0.1	-0.2	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5
Count	1	1	1	78	66	2	14	10		170	25	4	4	73	120



	Medway	Berkshire	Birmingham	All	Barnsley	Betsi Cadwaladr	Isle of Wight SMUK	Tower Hamlets	Stockport	Hounslow & Richmond	West Essex	Shropshire
Change	0.1	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.7	-0.9
Count	54	4	1		106	6	7	7	27	4	9	3

- **Winner: Hounslow and Richmond Community Healthcare NHS Trust**

Data reported as: SBP (mmHg); DBP (mmHg); TC:HDL ratio; TG:HDL ratio; number of patient matched records (in brackets)

6 months: -2 mmHg (248), -1 mmHg (246), -0.4 (258); -0.4 (10).

12 months: -2 mmHg (296), -1 mmHg (296), -0.4 (301); -0.3 (4).

Justification - Robust data for TC:HDL ratio and BP with significant risk reductions

- **2nd place: Berkshire Healthcare NHS Foundation Trust**

Data reported as: SBP (mmHg); DBP (mmHg); TC:HDL ratio; TG:HDL ratio; number of patient matched records (in brackets)

6 months: -1 mmHg (90), 0 mmHg (85), -0.6 (124); -0.4 (4).

12 months: -5 mmHg (53), -3 mmHg (52), -0.8 (81); -0.0 (4).

Justification - Excellent and robust reduction in Total cholesterol: HDL ratio at 6 and 12 months, excellent reduction in blood pressure at 12 months.

- **3rd place: Essex Partnership University NHS Foundation Trust - West Essex**

Data reported as: SBP (mmHg); DBP (mmHg); TC:HDL ratio; TG:HDL ratio; number of patient matched records (in brackets)

6 months: -3 mmHg (62), -1 mmHg (61), -0.3 (52); -0.4 (25).

12 months: -4 mmHg (13), -1 mmHg (13), -0.1 (16); -0.7 (7).

Justification - Demonstrating improved CVD risk factors but smaller number than 1st and 2nd place.

Highly commended for 6 month results:

- Shropshire Community Health NHS Trust.

Commended for 6 month results:

- Derbyshire Community Health Services - Derby & Derbyshire;
- Durham & Darlington NHS Foundation Trust;

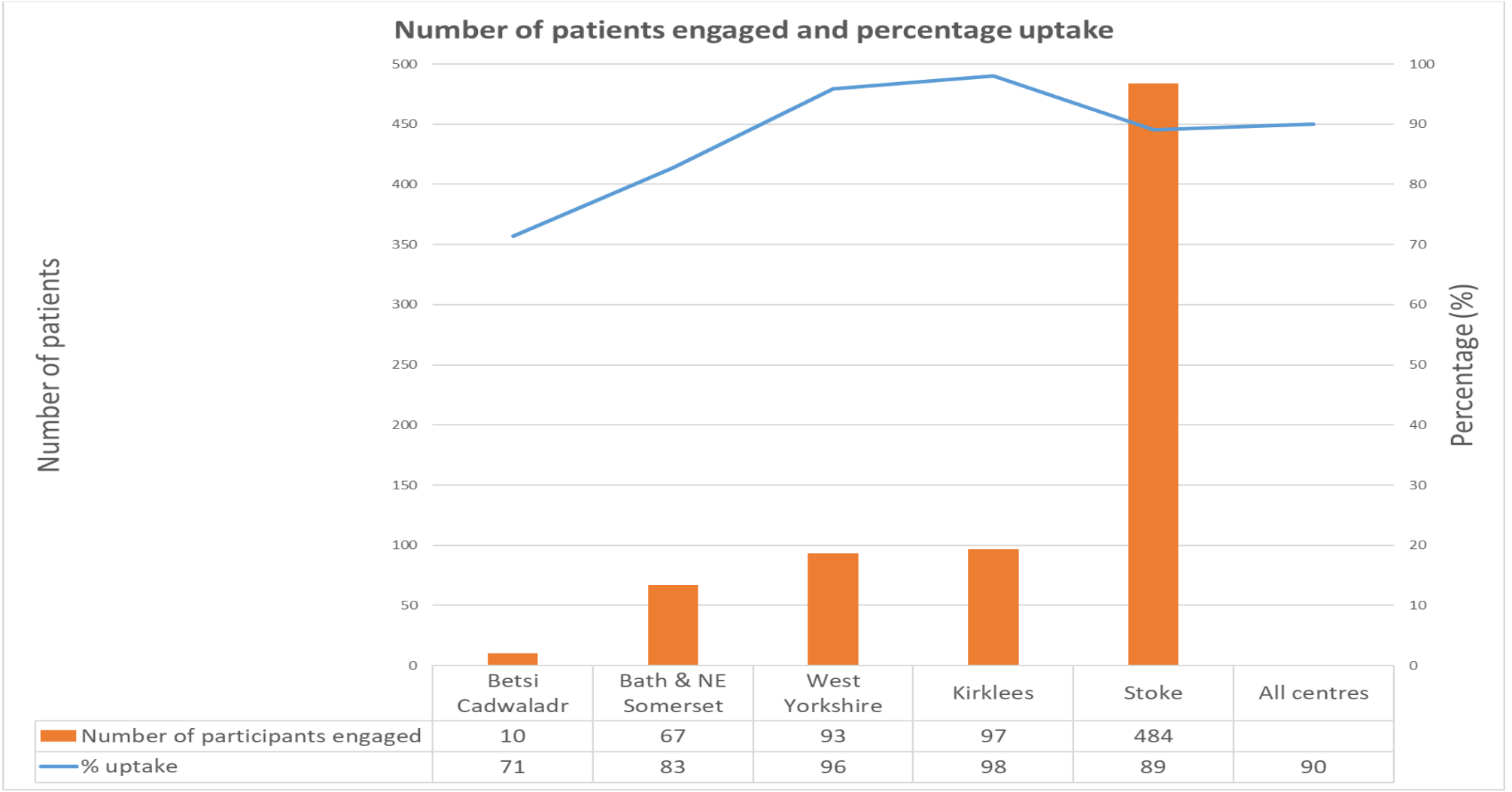
Commended for 12 month results:

- Barts Health NHS Trust (Tower Hamlets).

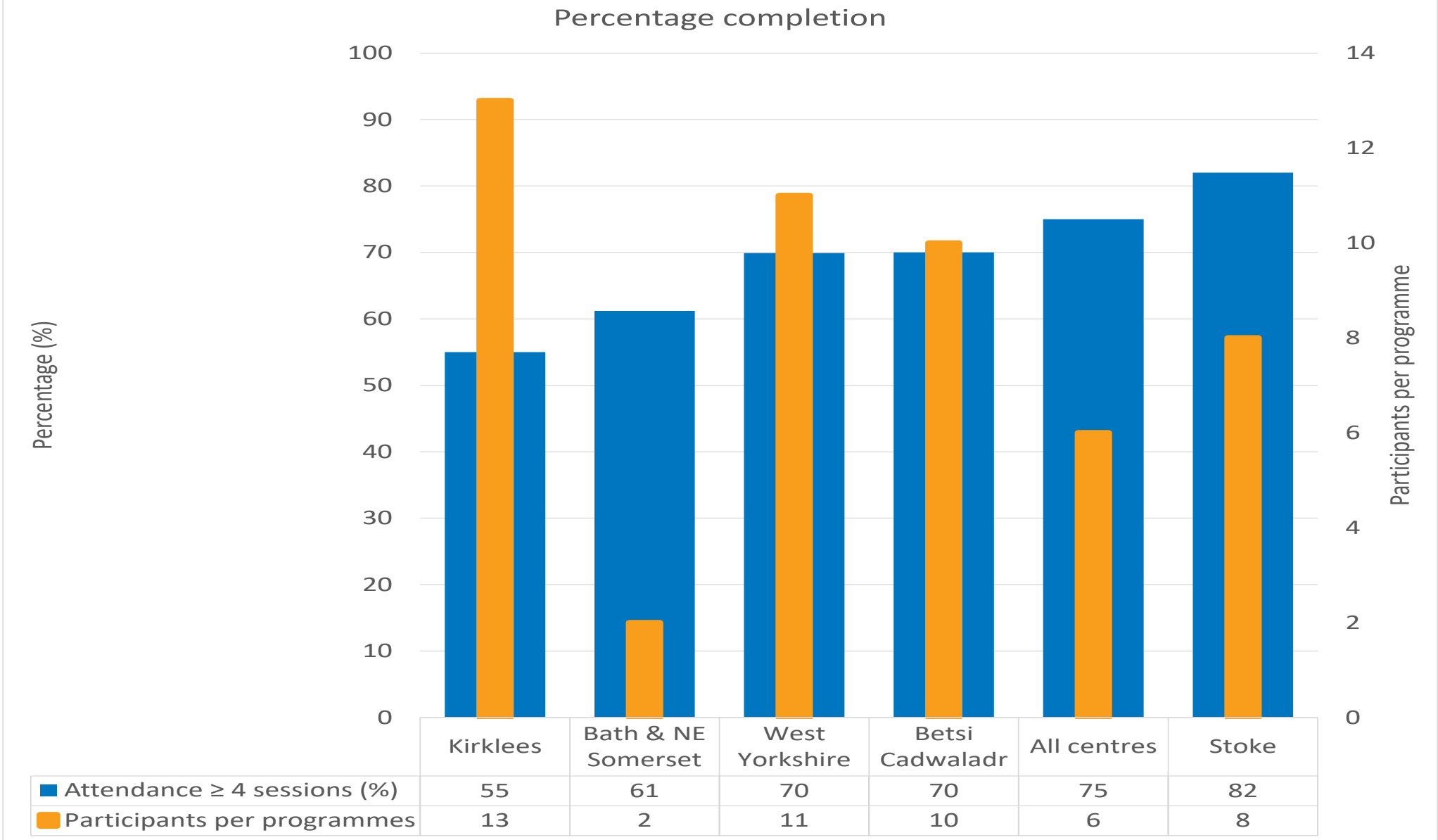
Commended for good improvements at 6 and 12 months but small numbers: Bexley Health Neighbourhood Care CIC and Self Management UK - Isle of Wight.

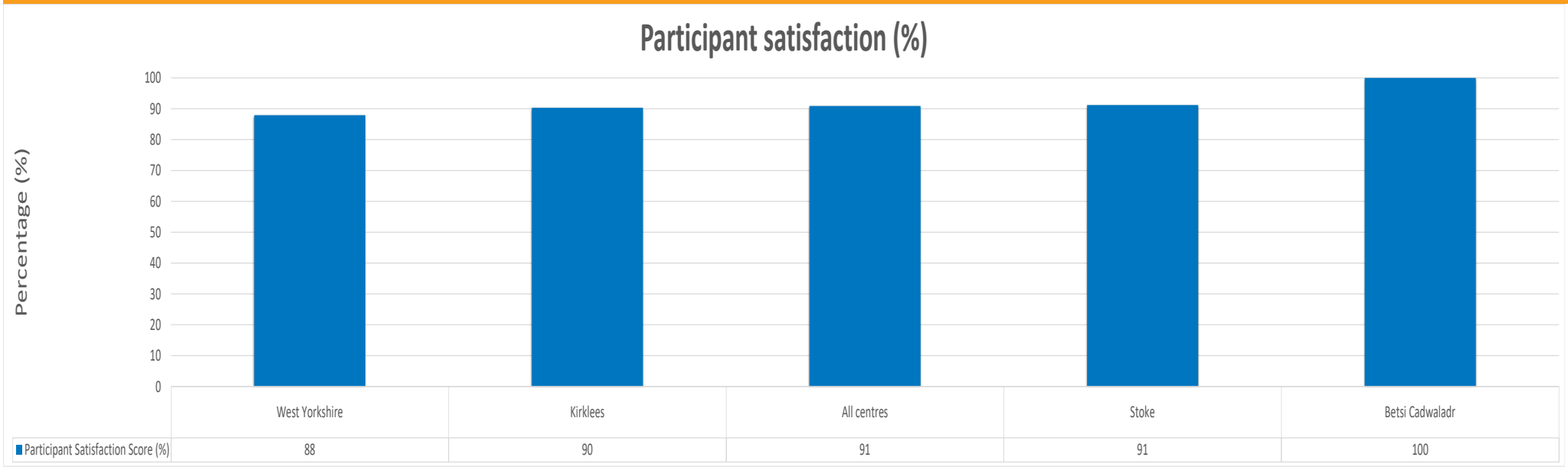
Award Category 6 - X-PERT Weight & Wellbeing – Implementation and anthropometric results

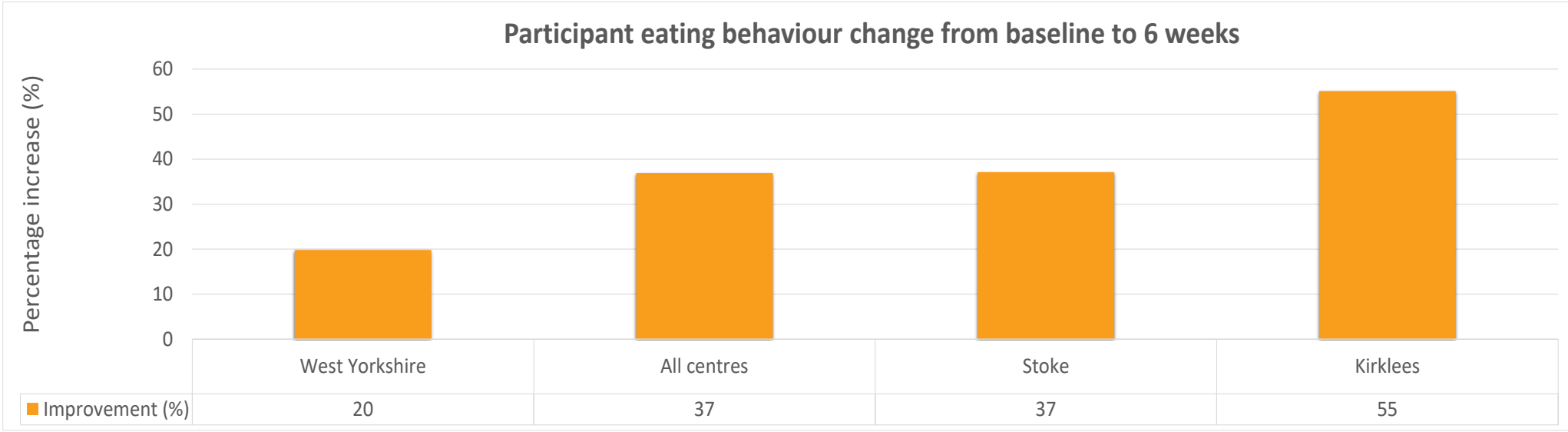
The following criteria were taken into consideration: number of participants; attendance; satisfaction; eating behaviour improvement; 3 months anthropometric outcomes.



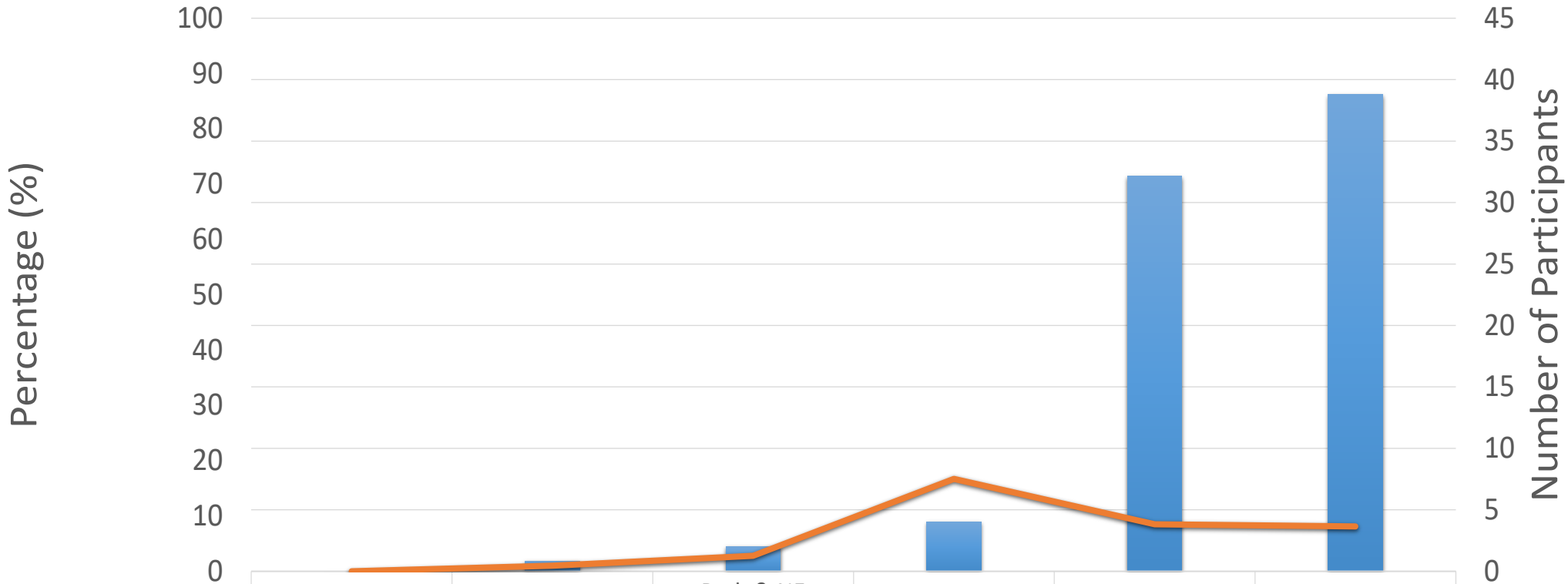
	Betsi Cadwaladr	Bath & NE Somerset	West Yorkshire	Kirklees	Stoke	All centres
Number of participants engaged	10	67	93	97	484	
% uptake	71	83	96	98	89	90


Percentage completion
Percentage (%)
Participants per programme
100
90
80
70
60
50
40
30
20
10
0
14
12
10
8
6
4
2
0
Kirklees
Bath & NE Somerset
West Yorkshire
Betsi Cadwaladr
All centres
Stoke
Attendance ≥ 4 sessions (%) 55 61 70 70 75 82
Participants per programmes 13 2 11 10 6 8


Participant satisfaction (%)
Percentage (%)
100
90
80
70
60
50
40
30
20
10
0
West Yorkshire
Kirklees
All centres
Stoke
Betsi Cadwaladr
Participant Satisfaction Score (%)
88
90
91
91
100

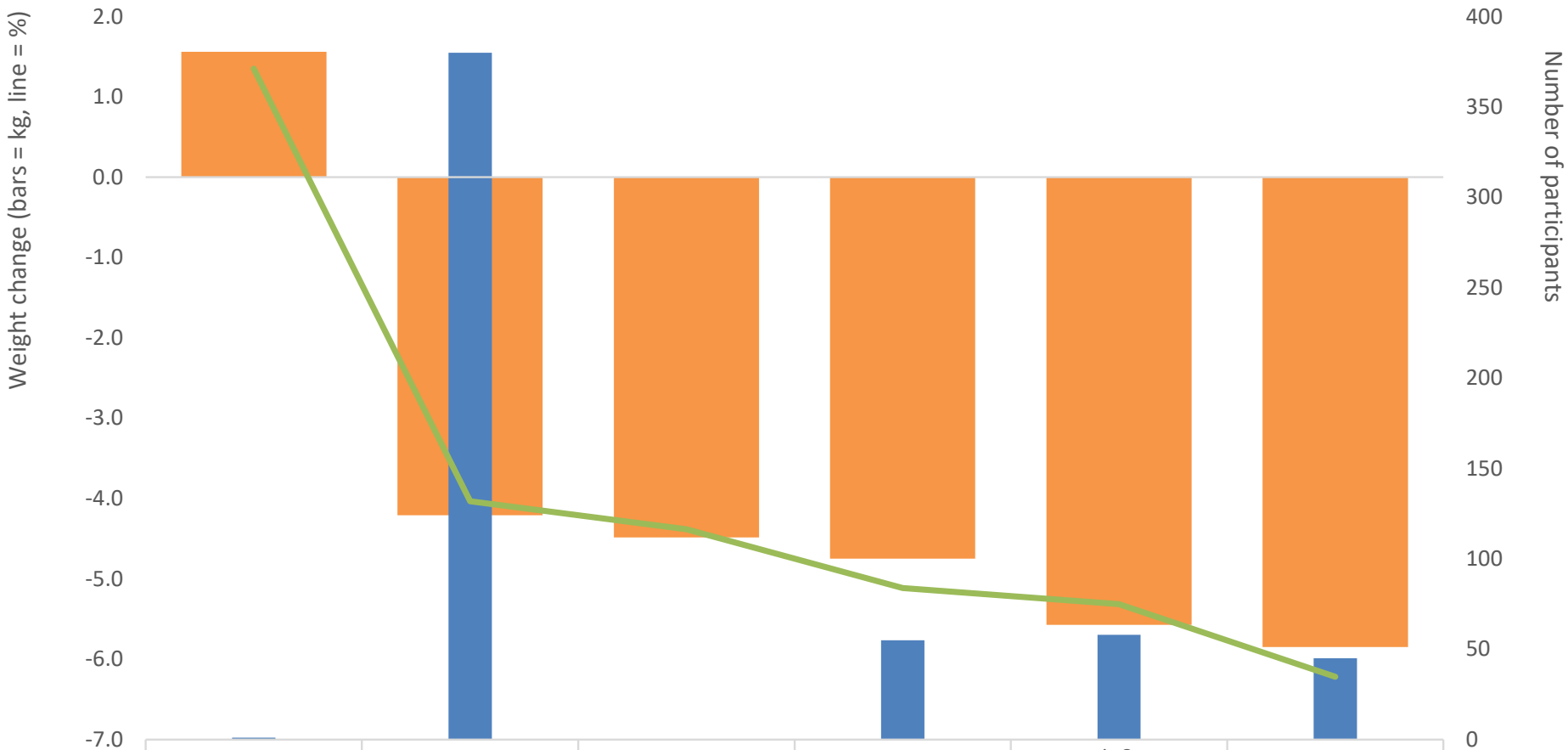

Participant eating behaviour change from baseline to 6 weeks
Percentage increase (%)
60
50
40
30
20
10
0
West Yorkshire
All centres
Stoke
Kirklees
Improvement (%)
20
37
37
55

Number (%) of Participants from Minority Ethnic Groups



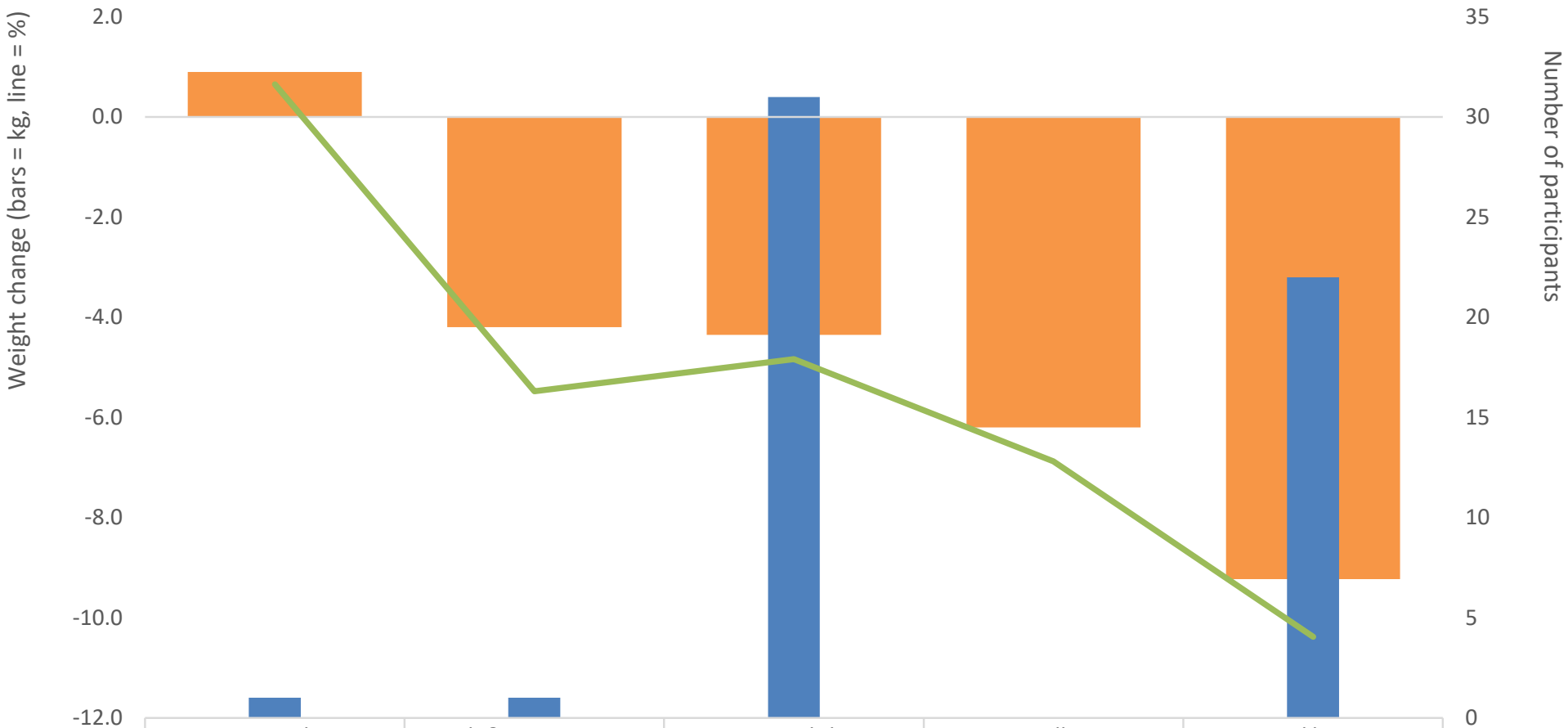
	Betsi Cadwaladr	West Yorkshire	Bath & NE Somerset	Kirklees	Stoke	All Centres
NO. of Participants	0	1	2	4	32	39
Minority Ethnicity %	0	1	3	17	9	8

Weight change at 3 months



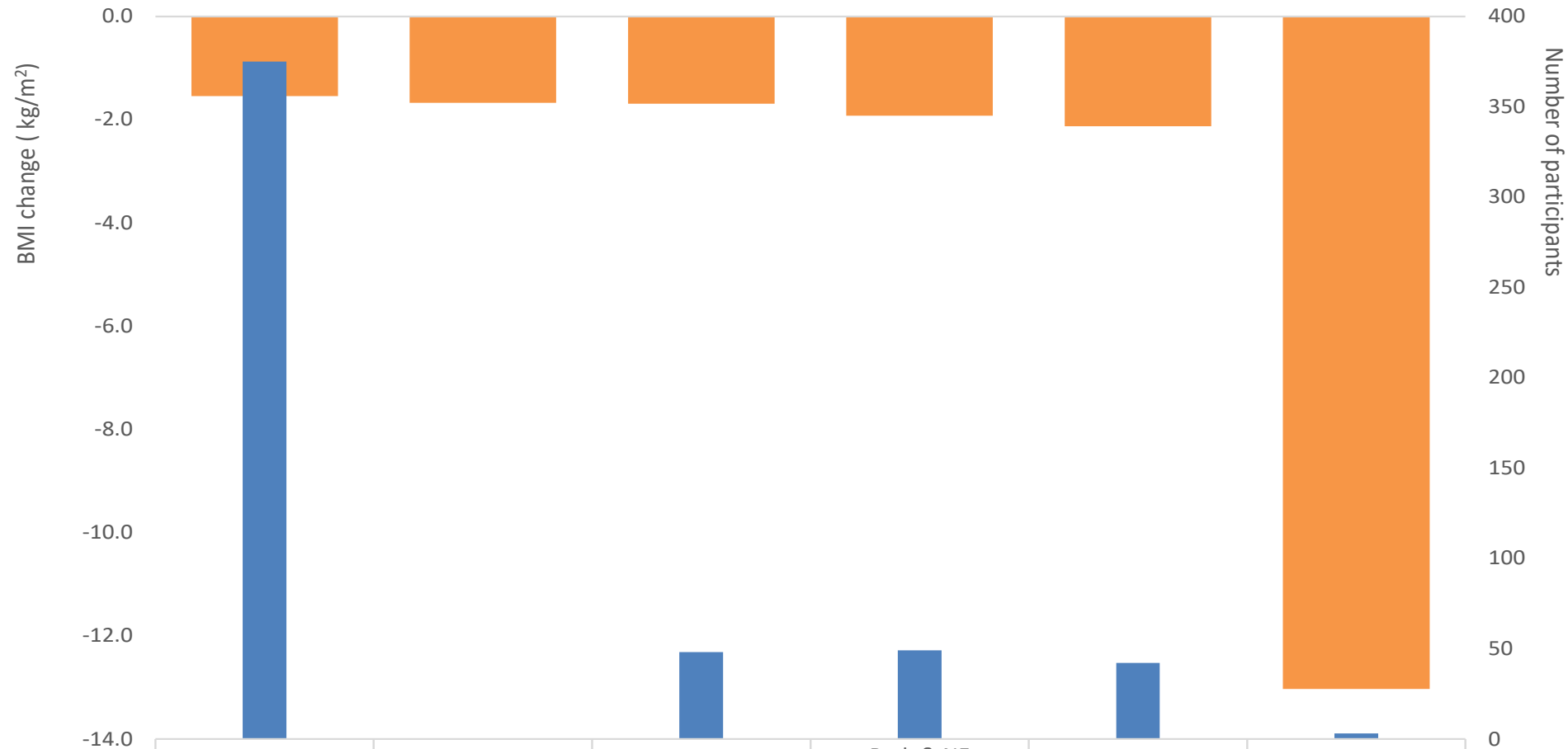
	Leicestershire	Stoke	All	West Yorkshire	Bath & NE Somerset	Kirklees
Change	1.6	-4.2	-4.5	-4.7	-5.6	-5.8
Participants	1	380		55	58	45
Change (%)	1.4	-4.0	-4.4	-5.1	-5.3	-6.2

Weight change at 6 months



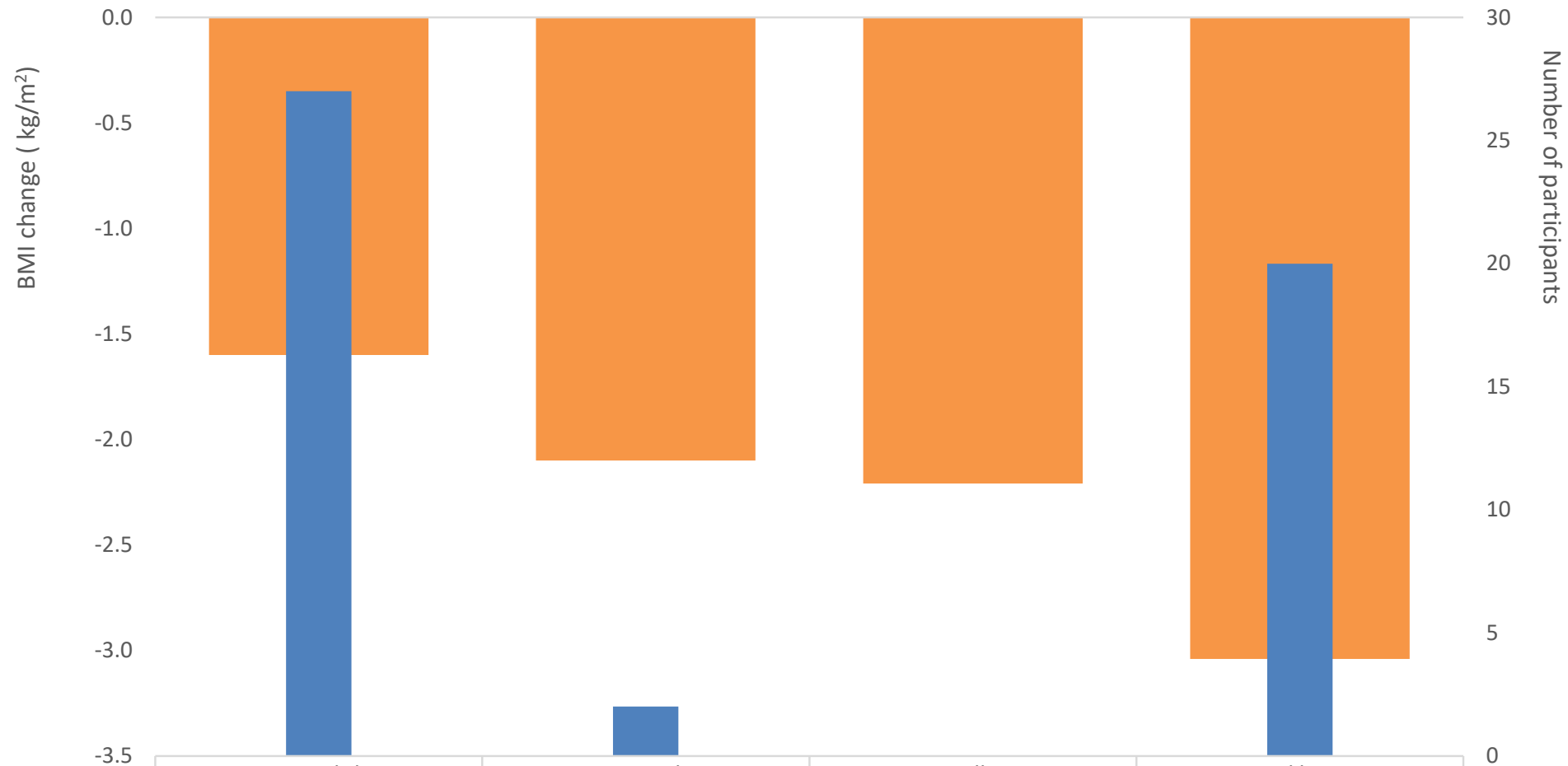
	Leicestershire	Bath & NE Somerset	West Yorkshire	All	Kirklees
Change	0.9	-4.2	-4.4	-6.2	-9.2
Participants	1	1	31		22
Change (%)	0.7	-5.5	-4.8	-6.9	-10.4

Body mass index (BMI) change at 3 months



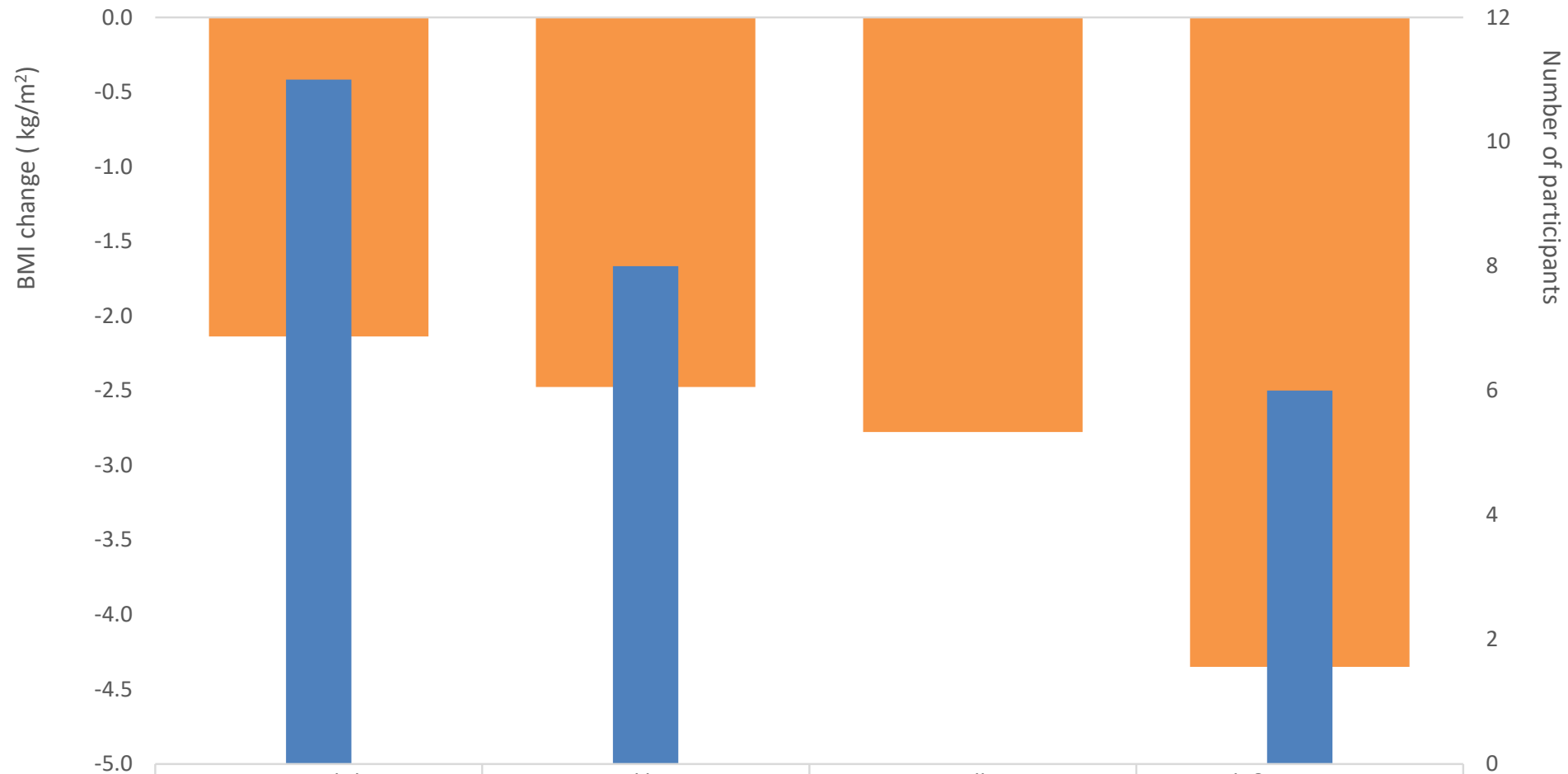
	Stoke	All	West Yorkshire	Bath & NE Somerset	Kirklees	Leicestershire
Change	-1.5	-1.7	-1.7	-1.9	-2.1	-13.0
Participants	375		48	49	42	3

Body mass index (BMI) change at 6 months

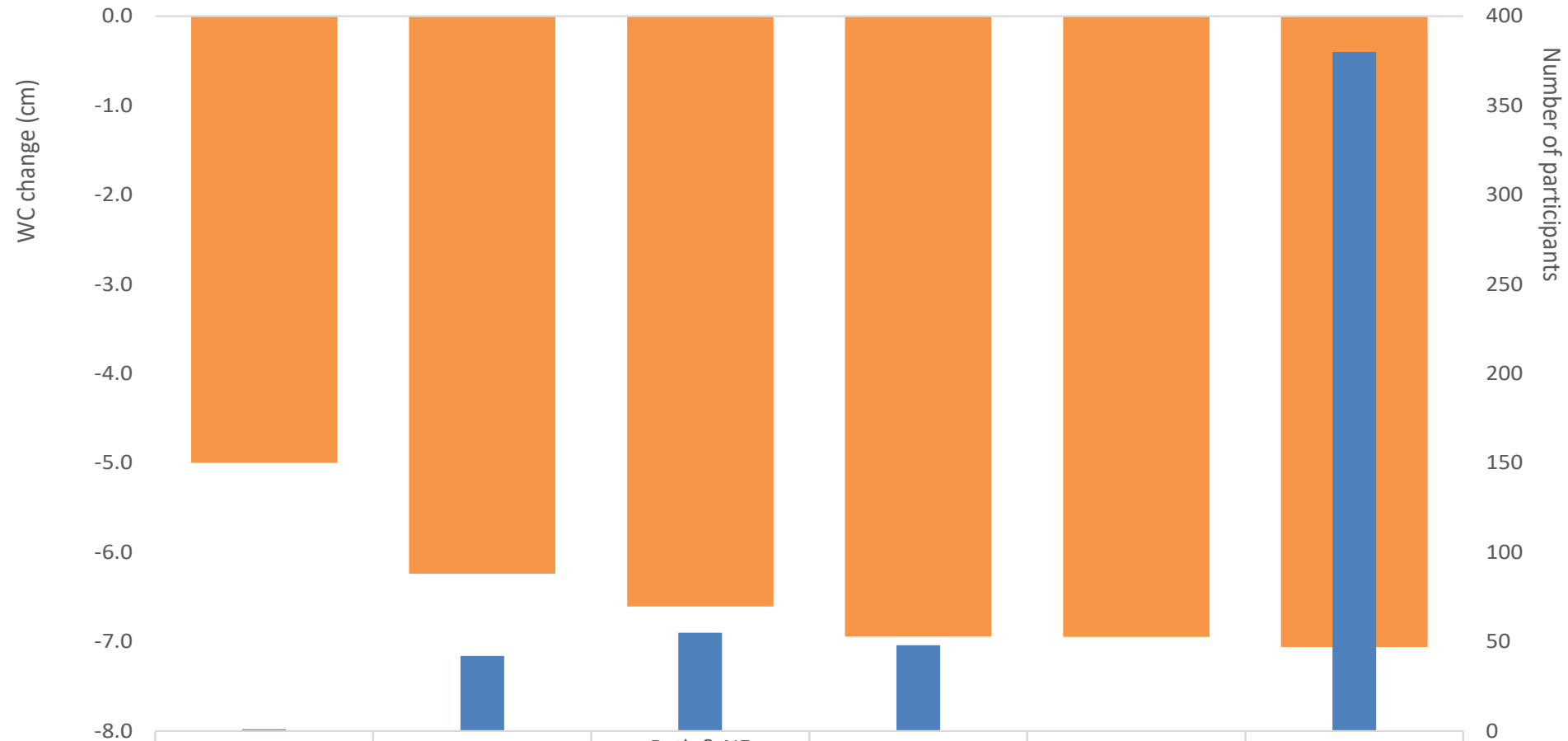


	West Yorkshire	Leicestershire	All	Kirklees
Change	-1.6	-2.1	-2.2	-3.0
Participants	27	2		20

Body mass index (BMI) change at 12 months

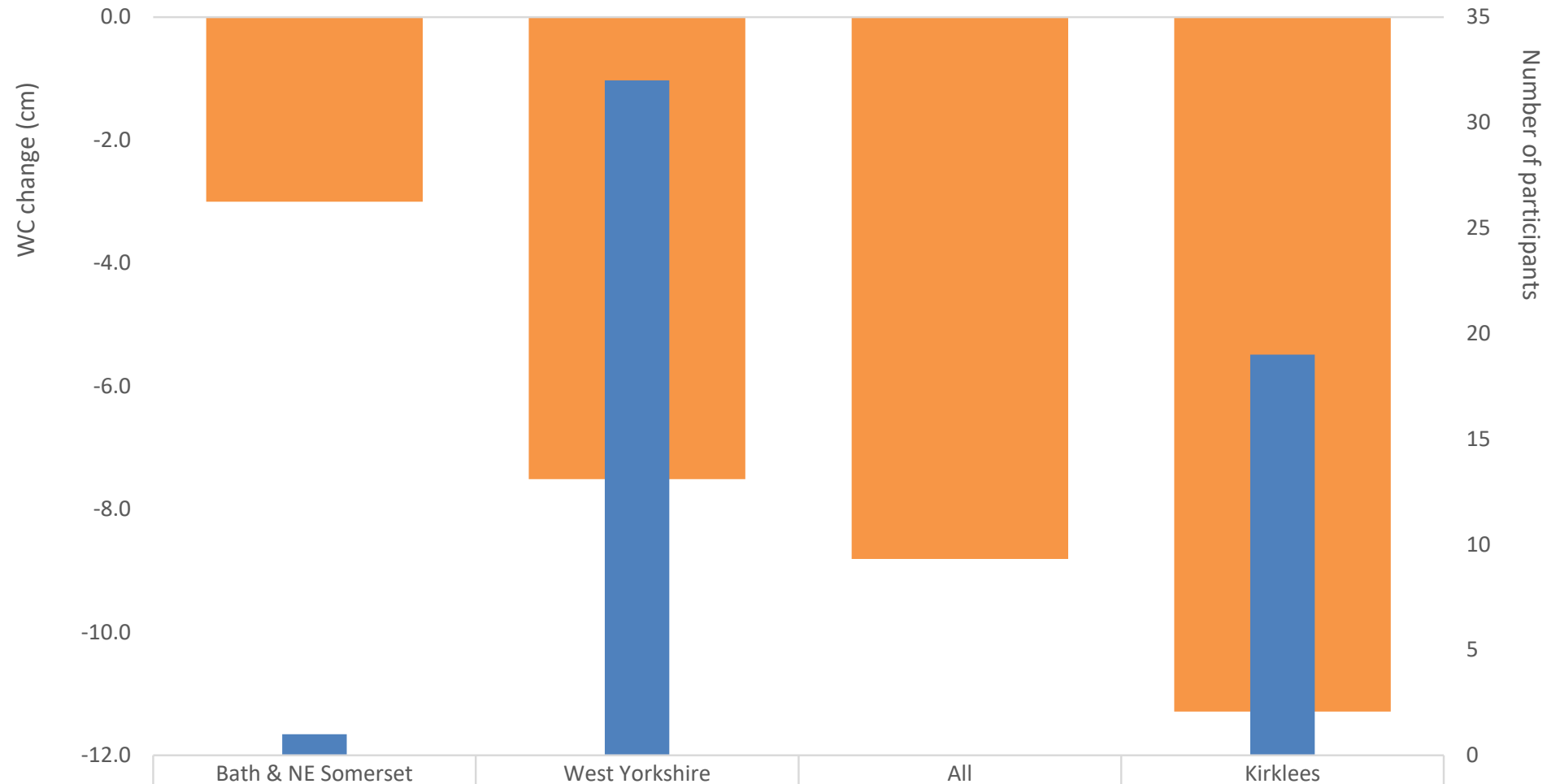


	West Yorkshire	Kirklees	All	Bath & NE Somerset
Change	-2.1	-2.5	-2.8	-4.3
Participants	11	8		6



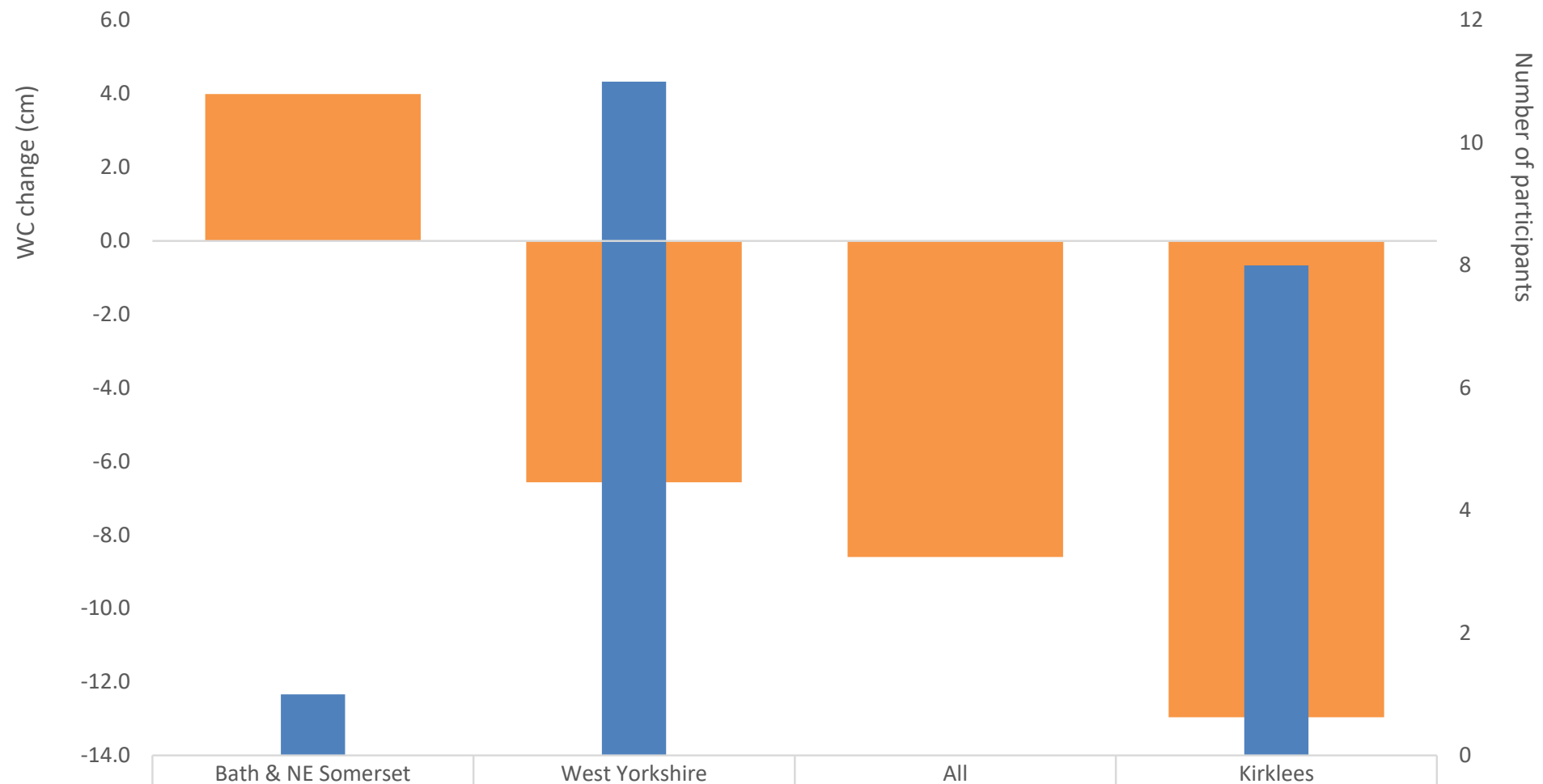
	Leicestershire	Kirklees	Bath & NE Somerset	West Yorkshire	All	Stoke
Change	-5.0	-6.2	-6.6	-6.9	-6.9	-7.1
Participants	1	42	55	48		380

Waist circumference (WC) change at 6 months



	Bath & NE Somerset	West Yorkshire	All	Kirklees
Change	-3.0	-7.5	-8.8	-11.3
Participants	1	32		19

Waist circumference (WC) change at 12 months



	Bath & NE Somerset	West Yorkshire	All	Kirklees
Change	4.0	-6.6	-8.6	-13.0
Participants	1	11		8

- **Winner: Stoke-on-Trent City Council**

Number patients engaged: 484 with 89% uptake

Completion: 82% Satisfaction: 91%

Improvement in eating behaviour: 37%

Minority ethnic groups: 9% Men: 15%

3 months weight loss: -4.2 kg, -4% (380 participants)

3 months BMI reduction: -1.5kg/m^2 (375 participants)

3 months waist circumference reduction: -7.1 cm (380 participants)

Justification - Significant participant numbers with excellent completion, satisfaction and eating behaviour improvement scores with good weight loss results.

- **2nd place: Kirklees Council (Huddersfield)**

Number patients engaged: 97 with 98% uptake

Completion: 55% Satisfaction: 90%

Improvement in eating behaviour: 55%

Minority ethnic groups: 17% Men: 11%

3 month weight loss: -5.8 kg, -6.2% (45 participants)

3 month BMI reduction: -2.1 kg/m^2 (42 participants)

3 month waist circumference reduction: -6.2 cm (42 participants)

Justification - Impressive weight loss with longer-term monitoring. Significant improvement in eating behaviour scores but poorer completion rate and fewer participants than the winner.

- **3rd place: HCRG Care Group (Bath & NE Somerset)**

Number patients engaged: 67 with 83% uptake

Completion: 61% Satisfaction: not recorded

Improvement in eating behaviour: not recorded

Minority ethnic groups: 2% Men: 18%

3 month weight loss: -5.6 kg, -5.3% (58 participants)

3 month BMI reduction: -1.9 kg/m^2 (49 participants)

3 month waist circumference reduction: -6.6 cm (55 participants)

Justification - Impressive weight loss result with longer-term monitoring. Participant satisfaction and eating behaviour not reported.

Overall Discussion

The evidence base demonstrating the success of the X-PERT Programme has already been established from the randomised controlled trial. The purpose of the audit is to benchmark the results from implementation against the published evidence base to determine whether national implementation is as effective as the clinical trial.

This year's results are encouraging and demonstrate that implementation of the X-PERT Programmes continues to be effective. However, there is evidence that challenges that arose as a result of the COVID-19 pandemic have continued to affect delivery and attendance. The extension of structured education options to include group-based virtual programmes and the self-directed digital programme with individual one-to-one health coaching, in addition to in-person group programmes, will hopefully increase patient engagement moving forwards.

The current menu of options includes:

1. In-person group-based programmes using the traditional magnetic boards and labels or use of the digital boards, projecting onto a screen or white wall.
2. Virtual group-based programmes via video conferencing platforms such as Microsoft Teams and Zoom utilising the digital boards that enable discovery learning using 'drag and drop' resources.
3. The X-PERT Diabetes Digital Programme where the content of the structured education programme can be accessed via a mobile phone, tablet or laptop in 15 different languages. This is both QISMET and ORCHA-accredited.

N.B. All the above options require an X-PERT Diabetes, X-PERT Insulin or X-PERT Weight & Wellbeing Handbook to be provided to each participant.

Audit is essential to assess whether programme implementation is effective, and so it is important that efforts are made to maximise the collection and entry of relevant data. The 2017-18 audit data was published (Wheatley et al, 2021) in a peer-reviewed journal.

Limitations

On-going audit does not have the same meticulous regulation as collecting data as part of a controlled trial, and as such there are several limitations. Principle amongst these is the lack of time available for healthcare professionals to follow up with participants and/or to enter data, especially during the COVID-19 pandemic. One advantage of the digital programme is that participants can enter their own data and this will be automatically transferred to the X-PERT Audit Database.

To maximise the validity of the presented data X-PERT only uses matched data as part of its audit process, in contrast to many other organisations who compare baseline and post-programme averages despite these averages being based on different sets of participants. This method does however also reduce the amount of data that is available. For example, some organisations have only entered baseline results and therefore no matched data is available. Other organisations have not entered sufficient follow-up data, meaning that the number of matched data sets is often limited with wide confidence intervals.

Many organisations are obtaining excellent results whilst others are struggling to meet the audit standards for some outcomes. Some organisations have greater obstacles in obtaining or entering the data. Educators need to scrutinise less favourable results to ascertain whether it is due to the small sample sizes at follow-up or due to programme delivery.

We have taken a number of steps over recent years to try and make the audit process quicker and easier for organisations. This includes the development of the X-PERT Bulk Upload tool. If you would like more information on this, or to discuss the use of the audit database further, please do not hesitate to get in touch.

This audit report should help to identify priorities for continuous quality improvement within organisations. X-PERT Health are happy to help and assist with this process.

Conclusion

X-PERT Health is happy to advise and support organisations in achieving audit standards and improving key performance indicators. Please contact admin@xperthealth.org.uk for more information. Attending regular X-PERT Educator Update Training and the annual X-PERT Awards Event also helps with the sharing of good practice to further drive quality improvement.

The results from the comprehensive audit of X-PERT implementation have demonstrated that it is feasible and practical to continue to evaluate the effectiveness of structured education outside a clinical research trial. Although the results of an audit are not as valid and robust as those published from a randomised controlled trial, the number of participants is greater, and it is more of a true reflection of real-life practice.

Overall, results demonstrate that national implementation of the X-PERT Programmes in the prevention and management of diabetes and obesity equips people with the skills to make informed decisions and take control of their condition, leading to improved health.

The audit will continue to be repeated annually and we strongly encourage educators to continue auditing implementation so that we can determine the content and impact of different delivery styles on uptake, completion, satisfaction, empowerment, clinical outcomes and prescribed medications.

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