X-PERT Health
2025 Audit Report

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Key points

- Attendance of X-PERT Programmes continues to lead to significant health improvements.
- Mean HbA1c reduction was 9.3mmol/mol at 6 months.
- 46.5% of participants were able to reduce or omit diabetes medication by 6 months.
- Body weight, BMI, waist circumference, systolic and diastolic blood pressure, total cholesterol to HDL ratio, and triglycerides to HDL ratio were all also improved.
- Participant empowerment score was increased by 20.5%.
- Results of the 2025 audit met or exceeded all the audit standards against which programme performance is benchmarked (these audit standards are derived from the outcomes of the original X-PERT clinical trial).

[Health results in these infographics are all based on 6-month data]

Introduction

More than 5.8 million people in the United Kingdom are believed to be living with type 2 diabetes, with approximately 90% of these having type 2 diabetes[1]. It is estimated that a further 6.3 million have prediabetes[1]. Given the elevated risk of physical and mental health complications in people with these conditions their effective management is essential.

Education programmes fulfil a vital role in addressing these issues, as they help people develop the knowledge, skills and confidence needed to help them manage their own health. Supporting this, structured diabetes education programmes have been shown to be effective[2-6] (and cost-effective[7,8]) in multiple studies.

X-PERT Health is a registered charity which has provided National Institute of Health and Care Excellence (NICE) compliant diabetes education to over 500,000 people. Our mission is to enable all people with (or at risk of) long-term conditions to receive good quality education that helps them self-manage their condition, leading to improved health and wellbeing.

As part of NICE criteria, as well as through an ongoing commitment to providing effective and evidence-based programmes, the outcomes of all X-PERT programmes are audited annually. The summary reports of these audits are accessible from https://www.xperthealth.org.uk/articles-and-evidence/evidence-base/. Results are benchmarked against the outcomes of the initial randomised clinical trial of the X-PERT Diabetes Programme[9]; see Appendix 1 for an overview of the X-PERT Audit Standards.

In addition to auditing overall impact, awards are given in a range of categories to the top performing organisations (and individuals) that are delivering X-PERT programmes. This provides an opportunity to acknowledge and celebrate the significant success many of these centres have in helping to address the needs of their populations.

Methods

The current report is an audit of data from participants who attended an X-PERT programme for people with, or at risk of, diabetes between 1st January 2023 and 31st December 2024. This includes X-PERT Diabetes, X-PERT Diabetes Digital, and X-PERT Insulin programmes. These will hereafter be collectively referred to as "programmes for people with diabetes", for brevity, and to reflect the fact that the majority of participants of these programmes have been diagnosed with diabetes.

Results from different programme types are combined, unless stated. As well as combining results from group programmes (i.e., X-PERT Diabetes and X-PERT Insulin) and digital programmes accessed on an individual basis (i.e., X-PERT Diabetes Digital), this includes combining results from face-to-face programmes and remote programmes (i.e., programmes delivered using video-conferencing software).

Baseline and post-programme data are entered into a secure database by authorised users at organisations licenced to deliver X-PERT programmes. Most of these organisations are part of the NHS. Data are collected as part of routine care, so additional ethical approval is not required. Participants are informed that their data are recorded for the purpose of audit and can opt out at any stage.

Programme-level data

Participant satisfaction and empowerment are recorded and presented on a programme level, i.e., average values are recorded for each programme rather than data being recorded for each participant individually.

Participant satisfaction is assessed using an eight-point questionnaire specifically developed for X-PERT Programmes. These are scored as a percentage, with 100% being the highest satisfaction score.

Patient empowerment is assessed at baseline and at the end of the programme using the validated Diabetes Empowerment Scale-Short Form (DES-SF) questionnaire[10]. This questionnaire returns a score out of five, with higher scores denoting greater perceived levels of self-empowerment.

Participant-level data

Time since diagnosis, age, gender, and ethnicity are recorded (where available) for individuals who are registered to attend a programme. Programme attendance and completion are also recorded on a participant level. Programme completion is defined as attending at least two-thirds of the available sessions (e.g., at least four sessions for programmes that are six sessions in length).

A range of health markers are recorded at baseline and various post-programme time points. These include height, body weight, body mass index (BMI), waist circumference (WC), glycated haemoglobin (HbA1c), systolic blood pressure (SBP), diastolic blood pressure (DBP), total cholesterol (TC), low-density lipoprotein-cholesterol (LDL-c), high-density lipoprotein-cholesterol (HDL-c), triglycerides (TG), TC to HDL ratio (calculated by dividing TC by HDL-c), and TG to HDL ratio (calculated by dividing TG by HDL-c). Changes in these health markers at 6 and 12 months are reported as part of the current audit.

Usage of diabetes medication is also recorded at baseline and various post-programme time points. This is used to assess changes in medication requirements, which are presented at 6 and 12 months in the current report. For simplicity and practicality, these outcomes are based solely on the number of medications taken, they do *not* take into account changes in dose, nor do they attempt to rank intensification of treatment based on the class(es) of medication used. The only exception to this is insulin, the use of which *is* classed as an intensification compared to the use of other classes of diabetes medication. Increases in the number of units of insulin taken *are* also classed as further intensification of treatment.

Medication usage can also be recorded in the audit database as a simple “yes” or “no”, without details regarding which medication(s) is/are being taken needing to be entered. This provides further information to support the evaluation of medication change, by allowing an assessment of when a participant has increased or omitted medication (i.e., has changed from “no” to “yes”, or “yes” to “no”, respectively). It does not however allow consideration of where an individual has reduced the amount of medication they are taking when they are still taking some or where they were already taking medication but have increased the number of medications they are taking.

X-PERT Awards

Awards are given to the best performing organisations (or individuals) in the following categories:

- Best participant engagement: This award considers a range of factors, including the number of participants who attended and completed a programme, participant satisfaction scores, and changes in participant empowerment.
- Greatest improvement in glycated haemoglobin (HbA1c)*: This award considers changes in blood glucose management, as indicated by a reduction in glycated haemoglobin (HbA1c). The number of participants for whom data are available is also considered.
- Greatest reduction in diabetes medication requirements*: This award considers the number and percentage of participants who were able to reduce their need for diabetes medication.
- Greatest improvement in body weight management*: This award considers improvements in body weight, BMI and WC. The number of participants for whom data are available is also considered.
- Greatest reduction in cardiovascular disease risk*: This award considers changes in SBP, DBP, TC to HDL ratio, and TG to HDL ratio. The number of participants for whom data are available is also considered.
- X-PERT Organisation of the Year**: This award is given to an organisation that has excelled through their delivery of X-PERT Programmes.
- The “Reaching Underserved Communities” award**: This award is given to an organisation that has excelled in engaging with a group (or groups) of people who have not traditionally been adequately provided for when it comes to healthcare (e.g., groups who are subject to health inequalities, such as ethnic minority groups, people living in deprived areas, and/or people living with disabilities).
- X-PERT Educator of the Year**: This award is given to an individual that has excelled through their delivery of X-PERT Programmes.

* Separate awards are given for the 6-month and 12-month time points for these categories.

** The winners of these awards are selected based on the content of any nominations received *and* any available audit data.

Results and Discussion

Programme Data

Data for programmes run for people with diabetes during this audit period are presented in Table 1.

A similar number of programmes were run in the period covered by the current audit to that covered by the 2024 report (1,194 *versus* 1,311). There were however significantly more participants registered to attend a programme in the current audit period (11,163 *versus* 9,512). The number who attended at least one session (8,799) and who completed a programme (7,477) were also higher than in the 2024 audit (6,677 and 5,733, respectively).

The rate of attendance was higher in the current report too (78.8% *versus* 70.2% in 2024), whilst completion rates were comparable (85.0% in 2025 *versus* 85.9% in 2024). Completion rate is one of the factors included in the X-PERT Audit Standards against which outcomes are benchmarked. Reassuringly, results for this variable continue to exceed the stated target of at least 80% completion amongst participants who attend a programme (see Appendix 1).

The mean evaluation score for the 2025 audit was very similar to the excellent outcome for this metric achieved in the 2024 audit (95.4% in 2025, compared to 95.2% in 2024), whilst the observed improvement in empowerment (+20.5%) exceeded the 2024 results (+19.9%). Importantly, the targets set in the X-PERT Audit Standards (a mean evaluation score of at least 90% and an increase in empowerment of at least 10%) were again exceeded for both of these outcomes.

Table 1. Programme-level data for programmes run for people with diabetes

Programmes	1,194
Participants registered to attend	11,163
Participants who attended a programme	8,799 (78.8% of those registered)
Participants who completed a programme	7,477 (85.0% of attendees)
Mean evaluation score	95.4%
Mean empowerment score change	+20.5% (from 3.70/5 to 4.46/5)

Participant characteristics

Table 2 summarises characteristics of people who were registered to attend a programme. The mean age of participants was 61 years, and the majority of participants (88.7%) were between the ages of 45 and 84 years. There were a similar number of male and female participants (48.7% *versus* 50.8%).

70.3% of participants had their ethnicity recorded as white, compared to 82% of people in England and Wales in the most recent census[11]. This suggests that organisations delivering X-PERT programmes were effectively able to engage with ethnic minority groups. This is important, as individuals from such populations have an increased risk of type 2 diabetes and the complications associated with it.

As previously stated, the majority of participants (95.0%) had been diagnosed with type 2 diabetes, with most of them (61.0%) having been diagnosed within the last year. This latter value reflects commissioning practices rather than guidance from X-PERT Health. Although it is important that people who are newly diagnosed receive quick and adequate support, it is the position of X-PERT Health that all people with type 2 diabetes, irrelevant of how long ago they received their diagnosis, can benefit from good quality education (and through making lifestyle changes that are suitable for them). It is therefore encouraging to see that there was also a considerable number of participants (n=1,132; 16.2% of those for whom relevant data were available) who had been diagnosed more than 10 years ago.

Table 2. Characteristics of participants registered to attend a programme for people with diabetes

		Number (percentage)
Age (n = 9,174)	Less than 25 years	10 (0.1%)
	25 - 34 years	151 (1.7%)
Mean: 61 years (SD = 12)	35 - 44 years	729 (8.0%)
	45 - 54 years	1,488 (16.2%)
	55 - 64 years	2,650 (28.9%)
	65 - 74 years	2,628 (28.7%)
	75 - 84 years	1,363 (14.9%)
	85 years and above	155 (1.7%)
Gender (n = 9,093)	Male	4,427 (48.7%)
	Female	4,621 (50.8%)
	Other	45 (0.5%)
Ethnicity (n = 6,940)	White	4,881 (70.3%)
	Black	330 (4.8%)
	Asian	1,381 (19.9%)
	Chinese	43 (0.6%)
	Mixed	109 (1.6%)
	Other	196 (2.8%)
Diabetes Type (n = 9,347)	Type 1 diabetes	17 (0.2%)
	Prediabetes	430 (4.6%)
	Type 2 diabetes	8,884 (95.0%)
	Other	16 (0.2%)
Diabetes Duration (n = 6,973)	Less than 1 years	4,256 (61.0%)
	1 - 5 years	845 (12.1%)
	6 - 9 years	740 (10.6%)
	10 years or more	1,132 (16.2%)

HbA1c improvements

Health results at 6 and 12 months are summarised in Table 3 and Table 4, respectively.

HbA1c was reduced by a clinically meaningful amount at both 6 months (-9.3mmol/mol) and 12 months (-7.3mmol/mol). It is important to note that the 12-month results are not necessarily based on the same participants for whom data are available at 6 months, thus the smaller magnitude of change at the later time point should **not** be interpreted as an increase in HbA1c between 6 and 12 months. This is also why the baseline values in Table 3 and Table 4 are different for any given variable.

Importantly, the improvements in HbA1c in the current audit exceed the targets set out in the X-PERT Audit Standards: to achieve a decrease in HbA1c of at least 4mmol/mol at 6 months and of at least 6mmol/mol at 12 months (see Appendix 1). This finding is consistent with that of previous audits, with the results from routine implementation of X-PERT programmes continuing to exceed those of the original X-PERT trial (from which the X-PERT Audit Standards are derived). These apparent improvements may be due to developments to the programmes over time, such as the inclusion of multiple dietary approaches to support patient choice and to acknowledge that one size does not fit all. Importantly, this change helps participants to identify lifestyle options that are right for them in the context of their own needs and preferences.

Previous research has found that a 1.0% decrease in HbA1c (in IFCC units, which corresponds to a reduction of approximately 11mmol/mol in the DCCT units now used in the UK) is associated with a 21% decrease in the risk of diabetes-related complications *and* in the risk of deaths related to diabetes[12]. Of those with relevant data available for the current audit, 818 (31.6%) achieved a reduction of at least 11mmol/mol at 6 months, and 850 (28.4%) achieved a reduction of at least this magnitude at 12 months. This suggests that a significant number of participants of X-PERT programmes will have a dramatically reduced risk of these negative outcomes.

It is also worth noting that achieving improvements in blood glucose management through making lifestyle changes may be superior to achieving comparable reductions in HbA1c through pharmaceutical intervention(s). This is because lifestyle changes are more likely to have beneficial effects on other elements of physical and mental health and wellbeing, whilst being less likely to result in unwanted side-effects. As explored subsequently, the evidence available from X-PERT audits suggests that the health improvements seen by X-PERT participants are likely due to lifestyle changes, rather than increased medication usage.

Changes in other health markers

Although HbA1c, as a marker of diabetes control, is the primary health-based outcome on which X-PERT programmes for people with diabetes are audited, it is also important to consider whether health improvements are being achieved more holistically. To this end, other relevant health results, including anthropometric markers and indicators of cardiovascular disease (CVD) risk, are considered as part of X-PERT audits too. These results are also shown in Table 3 and Table 4, for 6- and 12-month data respectively.

On this front, and as with previous years, meaningful reductions in body weight, BMI and WC were observed at both timepoints. As with the improvements in HbA1c, these changes exceeded those seen in the initial X-PERT clinical trial and therefore surpass the key targets set in the X-PERT Audit standards (see Appendix 1).

Further, and again as with previous audits, there were also improvements in a wide range of markers of CVD risk at both 6 months and 12 months. This includes reductions in TC to HDL ratio and TG to HDL ratio, which are useful indicators of the general health and balance of lipids and lipoproteins in the blood.

When considering the changes in CVD risk factors, it is worth noting that the mean levels for SBP and DBP were already below national targets at baseline for both the 6- and 12-month results. Reductions of a significant magnitude would not therefore be targeted or desired. Similar is true for HDL-cholesterol, where baseline levels already exceeded national targets, thus changes of a large magnitude would again not necessarily be expected.

Overall, and most importantly, the improvements observed in markers of CVD risk, alongside improvements in markers of body size and blood glucose control, are likely to contribute to a significant decrease in the risk of a range of long-term complications, as well as improvements in participants' quality of life.

Table 3. Health results for participants of programmes for people with diabetes at 6 months

	Baseline (mean ± SD)	**6 months (mean ± SD)**	**Difference (mean and 95%CIs)**
Body Weight (kg) [n = 1,502]	94.2 ± 22.2	91.0 ± 21.7	-3.2 (-3.4 to -3.0)
Body Mass Index (kg/m^2) [n = 1,512]	33.2 ± 7.0	32.1 ± 6.9	-1.1 (-1.2 to -1.0)
Waist Circumference (cm) [n = 112]	104.2 ± 15.1	97.6 ± 14.2	-6.6 (-7.0 to -6.2)
HbA1c (mmol/mol) [n = 2,592]	63.1 ± 18.7	53.8 ± 14.2	-9.3 (-9.4 to -9.2)
Systolic Blood Pressure (mmHg) [n = 1,373]	133 ± 14	130 ± 13	-3 (-3 to -3)
Diastolic Blood Pressure (mmHg) [n = 1,377]	79 ± 10	78 ± 9	-1 (-1 to -1)
Total Cholesterol (mmol/l) [n = 1,672]	4.6 ± 1.2	4.3 ± 1.1	-0.3 (-0.3 to -0.3)
LDL-cholesterol (mmol/l) [n = 603]	2.4 ± 1.0	2.3 ± 1.0	-0.1 (-0.2 to 0.0)
HDL-cholesterol (mmol/l) [n = 1,652]	1.2 ± 0.4	1.3 ± 0.4	0.1 (0.1 to 0.1)
Non-HDL cholesterol (mmol/l) [n = 1,605]	3.3 ± 1.2	3.0 ± 1.1	-0.3 (-0.3 to -0.3)
Triglycerides (mmol/l) [n = 1,418]	2.3 ± 1.6	1.9 ± 1.2	-0.4 (-0.5 to -0.3)
Total Cholesterol to HDL Ratio [n = 1,606]	3.9 ± 1.3	3.6 ± 1.1	-0.3 (-0.3 to -0.3)
Triglycerides to HDL Ratio [n = 1,366]	2.1 ± 1.7	1.7 ± 1.3	-0.4 (-0.5 to -0.3)

HbA1c = glycated haemoglobin; LDL = low-density lipoprotein; HDL = high-density lipoprotein; SD = standard deviation; 95%CIs = 95% confidence intervals.

Table 4. Health results for participants of programmes for people with diabetes at 12 months

	Baseline (mean ± SD)	12 months (mean ± SD)	Difference (mean and 95%CIs)
Body Weight (kg) [n = 1,817]	87.4 ± 21.4	84.9 ± 21.0	-2.5 (-2.6 to -2.4)
Body Mass Index (kg/m^2) [n = 1,808]	31.4 ± 6.7	30.5 ± 6.6	-0.9 (-1.0 to -0.8)
Waist Circumference (cm) [n = 67]	102.7 ± 14.6	99.5 ± 14.1	-3.2 (-3.7 to -2.7)
HbA1c (mmol/mol) [n = 2,992]	62.1 ± 18.2	54.8 ± 15.2	-7.3 (-7.4 to -7.2)
Systolic Blood Pressure (mmHg) [n = 1,758]	129 ± 14	128 ± 13	-1 (-1 to -1)
Diastolic Blood Pressure (mmHg) [n = 1,709]	79 ± 9	78 ± 8	-1 (-1 to -1)
Total Cholesterol (mmol/l) [n = 2,066]	4.6 ± 1.2	4.3 ± 1.1	-0.3 (-0.3 to -0.3)
LDL-cholesterol (mmol/l) [n = 674]	2.5 ± 1.0	2.3 ± 1.0	-0.2 (-0.3 to -0.1)
HDL-cholesterol (mmol/l) [n = 1,948]	1.2 ± 0.4	1.2 ± 0.3	0.0 (0.0 to 0.0)
Non-HDL cholesterol (mmol/l) [n = 1,917]	3.4 ± 1.2	3.1 ± 1.1	-0.3 (-0.3 to -0.3)
Triglycerides (mmol/l) [n = 1,029]	2.1 ± 1.4	1.8 ± 1.1	-0.3 (-0.4 to -0.2)
Total Cholesterol to HDL Ratio [n = 1,918]	4.1 ± 1.4	3.7 ± 1.2	-0.4 (-0.4 to -0.4)
Triglycerides to HDL Ratio [n = 989]	1.9 ± 1.6	1.6 ± 1.3	-0.3 (-0.4 to -0.2)

HbA1c = glycated haemoglobin; LDL = low-density lipoprotein; HDL = high-density lipoprotein;
SD = standard deviation; 95%CIs = 95% confidence intervals.

Changes in medication requirements

A summary of the change in medication usage at 6 and 12 months can be found in Table 5 and Table 6, respectively. For many people, the possibility of reducing the amount of medication they need to take can be a strong motivator to make lifestyle changes. Reducing medication requirements also helps to reduce the costs associated with managing type 2 diabetes. The cost of prescribed items used in the treatment of diabetes has doubled over the last decade, and now accounts for £1.92 billion (15% of the NHS' total prescribing costs) annually[13]. The median cost of diabetes medications was £502 per patient in 2024/25, up from £332 per patient in 2015/16[13].

In the current audit, 578 participants (46.5% of those with relevant data available) were able to reduce or omit the amount of diabetes medication they were taking at 6 months compared to baseline. There was no change in medication requirements for a further 487 participants (39.2% of those with available data), thus the total percentage who *did not increase* their medication requirements (85.7%) was significantly above the 50% target outlined in the X-PERT Audit Standards (see Appendix 1).

The majority of participants recorded as having "reduced or omitted" their medication at 6 months had been able to omit it entirely (472/578; 81.7%). Based on the average cost of diabetes medication per patient noted above, it would be expected that the NHS would save approximately £236,944 (i.e., 472 x £502) per year as a result of this. Further savings would be expected for those who reduced their medication but did not omit it entirely, though it is not possible to quantify this with the available data.

A significant number of participants were also able to reduce or omit their diabetes medication at 12 months (n=371; 21.5% of those with available data). As outlined previously, it is important to note that the participants with data available at 12 months are not necessarily the same participants for whom data were available at 6 months. These outcomes should **not** therefore be interpreted as medication needs being increased between 6 months and 12 months. As with the 6-month data, the total percentage of participants who did not need to increase their medication usage at 12 months (74.2%) exceeded the 50% target set in the X-PERT Audit standards.

Table 5. Change in use of diabetes medications after 6 months for participants of programmes for people with diabetes

	Number (percentage)
Increased medication	178 (14.3%)
Same/equivalent medication	487 (39.2%)
Reduced medication (but still taking some)	106 (8.5%)
Omitted medication entirely	472 (38.0%)
No increase (same/equivalent + reduced + omitted)	1,065 (85.7%)
Reduced *or* omitted medication	578 (46.5%)

Table 6. Change in use of diabetes medications after 12 months for participants of programmes for people with diabetes

	Number (percentage)
Increased medication	444 (25.8%)
Same/equivalent medication	908 (52.7%)
Reduced medication (but still taking some)	133 (7.7%)
Omitted medication entirely	238 (13.8%)
No increase (same/equivalent + reduced + omitted)	1,279 (74.2%)
Reduced *or* omitted medication	371 (21.5%)

Potential remission rates

Recent evidence has made it clear that it is possible for many people to place their type 2 diabetes into remission[14-18]. This is contrary to traditional perspectives on the nature of the condition, which considered it to be inevitably progressive. Importantly, this advancement allows a much more hopeful and optimistic tone to be taken with patient care and support.

Type 2 diabetes remission is generally considered to be when an individual achieves two HbA1c readings outside of a diabetic range (i.e., below 48mmol/mol), with at least three months between them, and with no diabetes medication being taken in order to achieve this[19]. Although the time-bound, repeated-measures element of this definition (i.e., two measurements with at least three months between them) cannot be assessed using the data available for the current audit, HbA1c readings and medication usage at post-programme time points can still be used to infer potential remission rates.

Of the 2,551 participants recorded as having type 2 diabetes at baseline *and* with HbA1c data available at 6 months, 1,007 (39.5%) had an HbA1c below 48mmol/mol at 6 months. Of these, 271 (10.6%) were recorded as taking no diabetes medication at 6 months, and a further 527 (20.7%) had an "unknown" medication status at 6 months. The diabetes remission rate at 6 months for those with relevant data available, notwithstanding the absence of repeated HbA1c tests (see above), would therefore be between 10.6% and 31.3%. For comparison, the estimated 6-month remission rate in the 2024 audit was between 4.9% and 31.6%.

For the 12-month data set, there were 2,992 participants recorded as having type 2 diabetes at baseline who also had HbA1c data available at 12 months. 1,077 (36.0%) of these had an HbA1c below 48mmol/mol at 12 months, of whom 249 (8.3%) were recorded as not taking any diabetes medication and 418 (14.0%) had their diabetes medication usage recorded as "unknown". The remission rate at 12 months (again, notwithstanding the absence of repeated HbA1c tests) would therefore be between 8.3% and 22.3%. For comparison, the estimate 12-month remission rate in the 2024 audit was between 7.6% and 21.4%.

Differences in outcomes based on mode of delivery

Since the COVID-19 pandemic, organisations have been able to offer X-PERT programmes remotely. Results are not presented separately for different modes of delivery during the current report as there were limited differences for most outcomes. A brief comparison is included here though.

Analyses of these different methods of delivery found that the mean age of participants was slightly younger for remote programmes than for face-to-face programmes (58.5 years *versus* 62.9 years at 6 months, and 56.6 years *versus* 61.2 years at 12 months). There were no clear and consistent differences between modes of delivery for the gender or ethnicity of participants.

Where differences were observed for health markers these tended to favour remotely delivered programmes. In particular, there was a notable difference between these modes of delivery for HbA1c change, where reductions were greater for remotely delivered programmes at both 6 months (-11.3mmol/mol *versus* -8.4mmol/mol) and 12 months (-9.9mmol/mol *versus* -6.3mmol/mol). Similar was observed in the 2024 audit. The mean reduction in waist circumference after 6 months was also greater for participants of remote programmes than for face-to-face programmes (-9.0cm *versus* -4.1cm), though there was no meaningful difference at 12 months. There were also relatively few participants with matched data for waist circumference at 6 months (n=58 and 54 for remote programmes and face-to-face programmes respectively), which reduces the ability to draw strong conclusions regarding this difference.

Overall, it would be premature to conclude that remotely delivered programmes are more effective. It is still noteworthy though that where there *were* differences they favoured remote delivery, particularly considering it is face-to-face programmes for which there is a more established evidence base. That similar outcomes have been observed in the current audit to last year's report somewhat strengthens the case for this being a true finding. It should however be noted that the audit process is based on the assessment of data over a rolling two-year period, and as such there is an overlap in the data used in these assessments (i.e., both the 2024 and 2025 audits include data from participants who attended a programme between 1st January 2023 and 31st December 2023). These two audits should not therefore be considered completely independent sources of evidence.

Further, although these preliminary findings are interesting, it remains X-PERT Health's position that education programmes should ideally be offered via a range of modalities (e.g., face-to-face, remotely, *and* through digital programmes accessed on an individual basis). Doing so increases the likelihood that patients will have the opportunity to access an option that they are willing and able to engage with. Providing a range of choices therefore increases accessibility, whereas any shift towards only offering a single option (e.g., only providing access to a digital programme) risks doing the opposite (and may even be discriminatory). We also emphasise the importance of offering programmes that have evidence of effectiveness and that meet NICE criteria. These subjects are explored further in our 2025 preprint paper[20], which can be accessed at http://dx.doi.org/10.2139/ssrn.5191501.

Strengths and limitations

Audits of the real-world implementation of programmes are, by nature, pragmatic processes that have notable strengths, but also important limitations. The primary strength is the ability to analyse relatively large amounts of data that are collected during routine practice. The data are also, arguably, a better reflection of true effectiveness than tightly controlled (and thus somewhat artificial) trials are.

X-PERT Audits also have the benefit of including a range of health markers, whereas other audits often have a narrower focus, which makes it harder to consider *why* changes have occurred. For example, it is not possible to draw conclusions as to *why* diabetes control has improved if changes in medication usage are not assessed. For the current audit, we can see that medication usage was reduced (or, at least, not increased) by a significant proportion of participants. It can therefore be inferred that the observed reductions in HbA1c are likely due to lifestyle changes made by the participants. Where medication usage is not reported or considered the same inferences cannot be made, so it cannot be ruled out that any apparent benefits may be due to increased medication usage (rather than the programme/intervention being truly effective).

Another strength of the X-PERT Audit is that only matched data are used, i.e., for each health marker participants are only included if they have baseline *and* post-programme data available. This is in contrast to the audit methods used by some other organisations, where *all* data available at baseline and *all* data available post-programme are used, irrelevant of whether the data are from the same participants at each time point. The X-PERT Audit is therefore a better representation of whether there have been meaningful changes in relevant health markers than some other audits are.

Important limitations of audits of this nature include a reliance on incomplete data collection and entry. For any given variable, the number of participants for whom there is "missing" data is significantly greater than would be the case for a high-quality trial. This risks introducing bias to the outcomes. For example, it is possible that data are more likely to be entered for participants who complete a programme, who may be more likely to have benefitted from attending than those who do not complete one.

The rigour of data collection is also lower than would be expected for a trial. This is particularly important for measures such as blood pressure and waist circumference, for which the results can be heavily influenced by measurement technique. Some of the data may also be self-reported, particularly for markers of body size. Although this is common practice in a real-world audit, it again increases the risk of bias and of lower quality data being included in analyses.

2025 Audit Award Winners

A list of award winners is included below. A brief overview of how the winners for each award were chosen can be found in Appendix 2.

- **Best Participant Engagement**
  1st: Barts Health NHS Trust - Tower Hamlets.
  2nd: Hounslow Community Diabetes Service.
  3rd: Derbyshire Community Health Service NHS Foundation Trust.

  Highly commended: Durham & Darlington NHS Foundation Trust.
  Commended: Public Health Collaboration.

- **Greatest Improvement in Glycated Haemoglobin (HbA1c) at 6 Months**
  =1st: Berkshire Healthcare NHS Foundation Trust.
  =1st: Worcestershire Acute Hospitals NHS Trust.
  3rd: Derbyshire Community Health Service NHS Foundation Trust.

  Highly commended: Durham & Darlington NHS Foundation Trust.
  Commended: Public Health Collaboration.

- **Greatest Improvement in Glycated Haemoglobin (HbA1c) at 12 Months**
  1st: Worcestershire Acute Hospitals NHS Trust.
  2nd: Berkshire Healthcare NHS Foundation Trust.
  3rd: Trafford Local Care Organisation.

  Highly commended: CSH Surrey.
  Commended: Derbyshire Community Health Service NHS Foundation Trust; Essex Partnership University NHS Foundation Trust – West Essex.

- **Greatest Reduction in Diabetes Medication Requirements at 6 Months**
  1st: Durham & Darlington NHS Foundation Trust.
  2nd: Shropshire Community Health NHS Trust.
  3rd: Cardiff & Vale University Health Board.

  Highly commended: Hounslow Community Diabetes Service.
  Commended: Public Health Collaboration; West Meads Surgery.

- **Greatest Reduction in Diabetes Medication Requirements at 12 Months**
  1st: Hounslow Community Diabetes Service.
  2nd: Shropshire Community Health NHS Trust.
  3rd: Cardiff & Vale University Health Board.

  Commended: Essex Partnership University NHS Foundation Trust – West Essex; Barts Health NHS Trust - Tower Hamlets; Stockport NHS Foundation Trust.

- **Greatest Improvement in Body Weight Management at 6 Months**
  1st: Public Health Collaboration.
  2nd: Berkshire Healthcare NHS Foundation Trust.
  3rd: Shropshire Community Health NHS Trust.

  Commended: Durham & Darlington NHS Foundation Trust; West Meads Surgery.

- **Greatest Improvement in Body Weight Management at 12 Months**
  1st: Essex Partnership University NHS Foundation Trust – West Essex.
  2nd: Hounslow Community Diabetes Service.
  3rd: Shropshire Community Health NHS Trust.

  Commended: Trafford Local Care Organisation; Stockport NHS Foundation Trust; Berkshire Healthcare NHS Foundation Trust.

- **Greatest Reduction in Cardiovascular Disease Risk at 6 Months**
  1st: Derbyshire Community Health Service NHS Foundation Trust.
  2nd: Durham & Darlington NHS FT.
  3rd: Berkshire Healthcare NHS Foundation Trust.

  Highly commended: Shropshire Community Health NHS Trust.
  Commended: Hounslow Community Diabetes Service.

- **Greatest Reduction in Cardiovascular Disease Risk at 12 Months**
  1st: Derbyshire Community Health Service NHS Foundation Trust.
  2nd: Trafford Local Care Organisation.
  3rd: Berkshire Healthcare NHS Foundation Trust.

  Highly commended: Hounslow Community Diabetes Service.
  Commended: Barts Health NHS Trust – Tower Hamlets.

- **X-PERT Organisation of the Year**
  Winner: Berkshire Healthcare NHS Foundation Trust.

- **The "Reaching Underserved Communities" Award**
  Winner: The Pembrokeshire Community Diabetes Team at Hywel Dda University Health Board

- **X-PERT Educator of the Year**
  1st: Jan Stuart (Shropshire Community Health NHS Trust).
  2nd: Emma Boothby (Durham & Darlington NHS Foundation Trust).
  3rd: Kirsten Bailkoski (Berkshire Healthcare NHS Foundation Trust).

  Commended:

  - Aisha Malik,
  - Gloria Simon,
  - Laura Jones (Hywel Dda University Health Board).

  We will be in touch with all educators who were nominated for the X-PERT Educator of the Year award to inform them that this was the case. This was a highly competitive category, and all nominees should be proud to have been nominated.

As with previous years, the selection of winners was difficult in many categories, with many organisations returning excellent results, and multiple high-quality nominations being received. Congratulations to all the award winners.

Lastly, we would like to thank all individuals and organisations involved with the delivery of X-PERT programmes for your continued effort and excellence. Whether amongst the award winners or not, you are all part of a collective effort that helps thousands of people every year to take control of their own health and wellbeing. The results presented within this report only scratch the surface of the true impact this has on people's lives. The significance of this should not be underestimated, and we hope to have you by our side striving to help many more people in the coming years.

Conclusions

Clinically meaningful improvements in a range of health markers were again observed in participants of X-PERT programmes, including significant improvements in blood glucose control. Other benefits of attending a programme include a reduced need for diabetes medication in a significant proportion of participants, improvements in participant empowerment, and meaningful reductions in body weight and cardiovascular disease risk. These findings suggest participants of X-PERT programmes are likely to have improved health and wellbeing, and a significantly reduced risk of health complications.

Importantly, the results of the 2025 annual audit met or exceeded all the X-PERT audit standards (derived from the original X-PERT clinical trial) against which programme performance is benchmarked.

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Appendices

Appendix 1. X-PERT Audit Standards

	Audit Standard from RCT
Participant attendance	At least 80% of participants who attend a programme to complete a programme
Participant satisfaction	At least 90%
Participant empowerment	An increase of at least 10% from baseline
Glycated haemoglobin	A decrease in HbA1c of at least 4mmol/mol at 6 months and at least 6mmol/mol at 12 months
Body weight/BMI	No increase
Waist circumference	A reduction of at least 2cm
Systolic blood pressure	A reduction (if relevant) of at least 5mmHg
Prescribed diabetes medication	At least 50% of participants to either reduce diabetes medication or to remain on the same dose

Appendix 2. Justification for Award winners

Best Participant Engagement: Barts Health NHS Trust – Tower Hamlets were amongst the organisations who ran the most programmes, who had the most participants attend a programme, and who had the most participants complete a programme. They also had an excellent mean evaluation score, and they had the greatest improvement in empowerment score of all organisations. Hounslow Community Diabetes Service were a very close second. They were also amongst the top performers for a range of relevant factors, though were ultimately placed just below Barts Health NHS Trust – Tower Hamlets, primarily due to their mean improvement in participant empowerment being slightly lower. Derbyshire Community Health Service NHS Foundation Trust came in third place.

Greatest Improvement in Glycated Haemoglobin (HbA1c) at 6 Months: This award was jointly given to Berkshire Healthcare NHS Foundation Trust and Worcestershire Acute Hospitals NHS Trust, as they both had the same mean reduction in HbA1c (-13.6mmol/mol) and had data for a very similar number of participants (n=150 and 145, respectively). It was not therefore possible to separate them. Third place was awarded to Derbyshire Community Health Service NHS Foundation Trust who had a slightly lower mean reduction (-12.9mmol/mol), though they did have matched data from the second highest number of participants of all organisations (n=562).

Greatest Improvement in Glycated Haemoglobin (HbA1c) at 12 Months: Worcestershire Acute Hospitals NHS Trust won this award with a mean HbA1c reduction of 12.8mmol/mol (n=166), with Berkshire Healthcare NHS Foundation Trust coming second with a mean reduction of 11.4mmol/mol (n=148). Trafford Local Care Organisation were placed third, as although they had an excellent mean reduction in HbA1c they did not have data for as many participants as the aforementioned organisations.

Greatest Reduction in Diabetes Medication Requirements at 6 Months: Durham & Darlington NHS Foundation Trust were a clear winner in this category, with the highest number of participants who were able to reduce or omit diabetes medication by some distance (n=253). Shropshire Community Health NHS Trust came second, with Cardiff & Vale University Health Board placing third.

Greatest Reduction in Diabetes Medication Requirements at 12 Months: Hounslow Community Diabetes Service were this year's winners in this category, as they were able to support one hundred of their participants to be able to reduce or omit diabetes medication by 12 months. Shropshire Community Health NHS Trust came second, and Cardiff & Value University Health Board came third.

Greatest Improvement in Body Weight Management at 6 Months: Public Health Collaboration were worthy winners here. Their body weight results (-11.8kg/-12.0%) were excellent, with a greater mean reduction than all other organisations, but it was the reduction in waist circumference that sealed them first spot. For this metric, they had the biggest reduction and the second highest number of matched records of all organisations. Berkshire Healthcare NHS Foundation Trust came second, with Shropshire Community Health NHS Trust placing in third.

Greatest Improvement in Body Weight Management at 12 Months: Essex Partnership University NHS Foundation Trust – West Essex won this award as they were amongst the top performers for weight loss (-3.4kg; n=83) and BMI (-1.3kg/m^2; n=83), *and* had the largest mean reduction in WC of all organisations (-3.8cm). Hounslow Community Diabetes Service came in second, with Shropshire Community Health NHS Trust in third.

Greatest Reduction in Cardiovascular Disease Risk at 6 Months: In a category that can be particularly difficult to decide due to the inclusion of a range of different health markers, Derbyshire Community Health Service NHS Foundation Trust were clear winners on this occasion. They were amongst the centres with the biggest reductions *and* with the most available data for SBP (-3.1mmHg, n=276), DBP (-1.4mmHg, n=274), TC to HDL ratio (-0.5, n=237) *and* TG to HDL ratio (-0.6; n=183). Durham & Darlington NHS Foundation Trust were runners up, as the magnitude of the improvements they achieved were just behind those achieved by Derbyshire for three of the four relevant health markers. Berkshire Healthcare NHS Foundation Trust achieved outstanding results for SBP, DBP and TC to HDL ratio, but had limited data available for TG to HDL ratio, which ultimately led to them being placed behind the aforementioned organisations.

Greatest Reduction in Cardiovascular Disease Risk at 12 Months: Derbyshire Community Health Service NHS Foundation Trust were the winners here too, to add to their 6 months award for the same outcomes. This was again a reflection of the fact they were amongst the top performers for all the relevant health markers. Trafford Local Care Organisation were runners up, as although they achieved some impressive reductions these were based on fewer participants than Derbyshire's outcomes. Berkshire Healthcare NHS Foundation Trust again came third.

X-PERT Organisation of the Year: Berkshire Healthcare NHS Foundation Trust were the winners of this year's X-PERT Organisation of the Year award. They were chosen due to their strong performance across a wide range of audit categories, which was demonstrated by the fact they received recognition in *six* separate award categories! They also achieved an excellent mean evaluation score, and they showed year-on-year improvement by placing higher in a number of award categories than they had in 2024 (e.g., they placed joint 1st for HbA1c reduction at 6 months, 2nd for HbA1c reduction at 12 months, and 3rd for CVD risk reduction at 6 months, having been commended in each of those categories last year). Taken together, these factors make them well deserving of the 2025 edition of this award.

The "Reaching Underserved Communities" Award: The Pembrokeshire Community Diabetes Team at Hywel Dda University Health Board identified a need to rethink how they were delivering diabetes education in order to better support hard-to-reach communities within their area, including ethnic minority groups, travelling communities, and individuals with low health literacy and/or mistrust of formal health systems. This change in approach involved pioneering a culturally sensitive, community-embedded service to reach populations that are often underserved by mainstream health provisions.

The overall goal was to bring diabetes education directly to the people who needed it most, in environments where they felt safe, respected, and understood. Specific steps that were taken to achieve this included:

- Mosque outreach in collaboration with local imams.
- The translation of resources into relevant languages.
- Partnering with liaison officers and community advocates to tailor services to meet the needs of travelling communities.
- The use of community roadshows to raise awareness of X-PERT programmes and to conduct risk assessments for interested individuals to support early intervention.
- An increased provision of virtual group programmes to increase accessibility.
- Enhanced use of a peer support model, including increasing links with Diabetes UK, Public Health Wales, and the National Exercise Referral Scheme.

These targeted programmes have received excellent evaluation scores and have resulted in significant improvements in patients' perceived empowerment, with lessons from them now being embedded into routine service delivery, helping to improve equity of access to diabetes education more broadly.

X-PERT Educator of the Year: As with previous years, this was a particularly difficult award to select a winner for. The challenge was increased by the fact there was significant variation in the amount of audit data available for different nominees, meaning the strength of the content of the nominations had to be weighed against the quality of the objective data available. This was not an easy balancing act. The winners ultimately excelled on both fronts.

This year's winner, Jan Stuart of Shropshire Community Health NHS Trust, received a superb nomination which clearly set out how kind and caring they are, and how they go above and beyond for their participants. Jan also had impressive audit data across a range of different metrics, including achieving an excellent mean evaluation score, significant improvements in participant empowerment, and clinically meaningful reductions in weight, waist size and HbA1c at both 6 months and 12 months. Jan also helped a significant number of their participants to be able to reduce or omit their diabetes medication at both 6 and 12 months. Further supporting their case, Jan has a long-standing record of being an excellent champion for X-PERT, including being able to keep programmes running in Shropshire in the face of significant challenges. Jan has continuously engaged well with X-PERT events and updates, and has provided invaluable feedback that has helped us to improve our resources and services on numerous occasions. Taken together, these points make Jan a well-deserving winner of this award.

This year's runner up, Emma Boothby of Durham & Darlington NHS Foundation Trust, also had outstanding audit results (particularly for weight loss, HbA1c, and the number of people who were able to reduce or omit diabetes medication at 6 months, for which Emma had the best results of all the nominees). Emma also received a comprehensive and incredibly complimentary nomination, which covered how they always go the extra mile for their participants and colleagues. In the face of incredibly tough competition, the absence of 12-month data was the primary differentiator between Emma and Jan when choosing this year's winner.

In third is Kirsten Bailkoski of Berkshire Healthcare NHS Foundation Trust. Kirsten is another great advocate of X-PERT who received a truly excellent nomination setting out the significant positive impact they have on their team and their participants. Kirsten's audit data also contained some excellent outcomes, including the mean evaluation score, improvement in patient empowerment, and reductions in body weight and HbA1c at 6 months that were achieved. In the end it was the magnitude of changes and the amount of data available across a range of audit outcomes which led to Kirsten just being pipped to the post by Jan and Emma this time round.

Commendations were awarded to Dr Aisha Malik, Gloria Simon, and Laura Jones. The nominations for all these educators were effusive in their praise and made strong cases for each, and any one of them would have been a worthy winner. With so many excellent candidates though they had to be separated somehow, and, as alluded to above, it was ultimately the quality (and quantity) of audit data available for each nominee that made the difference in the final rankings.