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Blood glucose performance test

Submission date	Recruitment status	[ ] Prospectively registered
10/02/2017	Recruiting	[ ] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
12/05/2017	Ongoing	[ ] Results
Last Edited	**Condition category**	[ ] Individual participant data
20/10/2026	Nutritional, Metabolic, Endocrine	[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Diabetes is a lifelong condition that causes a person's blood sugar (glucose) level to become too high. The aim of this study is to monitor the performance of blood glucose monitoring systems (blood glucose meters and test strips) designed for people with diabetes to test their blood glucose.

Who can participate?
Participants aged 16 and over with diabetes

What does the study involve?
Participation for the patient consists of one visit to the study site. The visit is expected to last about 5 to 20 minutes. The participant gives a blood sample either by venepuncture (the puncture of a vein) or by a fingerprick and the blood is tested using both the blood glucose monitoring system and the reference method. The accuracy and precision of the methods are compared.

What are the possible benefits and risks of participating?
There is no direct benefit to the participant for taking part in this study. However, the information gained from the results ensures the blood glucose monitoring systems provide reliable results. The only risks of participating in this study are associated with blood sample collection. These are small but could include pain, bruising, local infection and fainting.

Where is the study run from?
1. Ipswich Hospital (UK)
2. St James's University Hospital (UK)
3. North Manchester General Hospital (UK)
4. Windrush Medical Centre (UK)

When is the study starting and how long is it expected to run for?
February 2017 to December 2029 (updated 16/07/2019, previously: July 2027)

Who is funding the study?
Abbott Diabetes Care Ltd (UK)

Who is the main contact?
Dr Pamela Reid

Contact information

Type(s)
Public

Contact name
Dr Pamela Reid

Contact details
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Additional identifiers

Protocol serial number
ADC-UK-PMS-16030

Study information

Scientific Title
Blood glucose performance test: a multi-centre prospective single-arm study

Study objectives
Current study objectives as of 20/10/2026:

To assess the accuracy of blood glucose monitoring systems using capillary or venous whole blood samples from participants with diabetes and comparing the results to glucose readings obtained from a YSI analyser as a reference.

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Previous study objectives:

Assess the accuracy of blood glucose monitoring systems using capillary blood samples according to ISO 15197 and venous blood samples using the Consensus Error Grid.

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES Committee: London – Westminster Research Ethics Committee, 22/12/2016, ref: 16/LO/2217

Primary study design
Interventional

Study design
Multi-centre prospective single-arm study

Study type(s)
Diagnostic

Health condition(s) or problem(s) studied
Diabetes mellitus

Interventions
Current interventions as of 20/10/2026:

Whole blood obtained from the participant (venous whole blood from venepuncture or capillary whole blood from a fingerprick) will be tested on the blood glucose monitoring systems, the HemoCue analyser and the YSI analyser.

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Previous interventions:

Whole blood obtained from the subject (venous whole blood from venepuncture or capillary whole blood from a fingerstick) will be tested on the blood glucose monitoring systems, the HemoCue analyser and the YSI analyser.

Intervention Type
Device

Phase
Not Applicable

Drug/device/biological/vaccine name(s)
Blood glucose strips

Primary outcome(s)
Current primary outcome(s) as of 20/10/2026:

1. The accuracy of the blood glucose monitoring system(s) compared to the YSI reference analyser using fingerprick capillary or venous whole blood samples

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Previous primary outcome(s):

1. The accuracy of the blood glucose monitoring system compared to the YSI analyser using fingerstick capillary or venous whole blood samples:
1.1. Capillary: Percentage of replicates within ISO15197 2003 or 2015 system accuracy criteria
1.2. Venous: Percentage of responses within each zone of the Consensus Error Grid
Measured at the single study visit

Key secondary outcome(s)
1. Precision: Mean paired replicate coefficient of variation (Capillary/Venous)
2. Error grid analysis: Percentage of replicates within each zone of the Consensus Error Grid (Capillary)
Measured at the single study visit

Completion date
31/12/2029

Eligibility

Key inclusion criteria
1. Diagnosed with diabetes
2. ≥16 years of age

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
16 Years

Upper age limit
120 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
Current key exclusion criteria as of 20/10/2026:

1. Has already participated in the study event that day
2. Member of the site study team

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Previous key exclusion criteria:

1. Participated in the study event already
2. Member of the site study team

Date of first enrolment

01/02/2017

Date of final enrolment
31/12/2029

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Ipswich Hospital
Heath Road
Ipswich
England
IP4 5PD

Study participating centre
Leeds Teaching Hospitals NHS Trust
St. James's University Hospital
Beckett Street
Leeds
England
LS9 7TF

Study participating centre
North Manchester General Hospital
Delaunays Road
Crumpsall
Manchester
England
M8 5RB

Study participating centre
Windrush Medical Centre
Welch Way
Witney
England
OX28 6JS

Sponsor information

Organisation
Abbott Diabetes Care Ltd

ROR
https://ror.org/03wnay029

Funder(s)

Funder type
Industry

Funder Name
Abbott Diabetes Care Ltd

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from ADC_Witney_ClinicalAffairs@abbott.com.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No