

The CANTAB APP: Supporting Site and Participant Engagement

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IDEAFAST

Over ~24 weeks of the IDEA-FAST Clinical Observational Study the CANTAB app ran on each participant’s own smartphone — their daily touchpoint with the study — delivering high-frequency cognitive tests and e-diary ratings, and powering the reporting loop that kept participants and sites engaged

1,887

participants recruited

24 sites

In Europe

7 cohorts

NDD, IMID & healthy volunteers

24 weeks

4 visits
4 home-testing periods (TUPs)

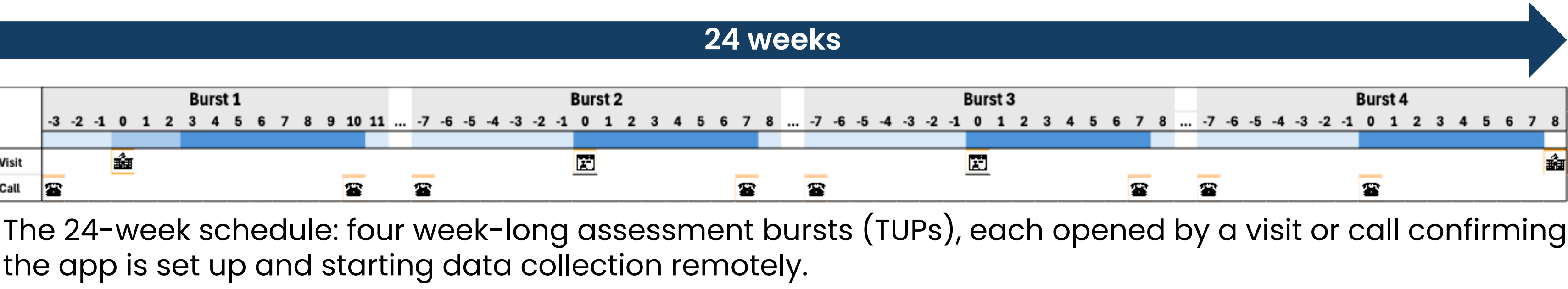
2 × daily

cognitive tests
PVT & DSST

3 × daily

e-diary
Fatigue, sleep, mood & more

Participant app experience



1

Before Visit 1: download & activate

- A priming call ~3 days before Visit 1 invites participants to download the app in advance.
- To activate, the in-app chatbot generates a code and the participant reads it out — at the site or over the phone.
- Site staff type it into the CANTAB web portal, binding the participant’s record to that app installation; from then on, everything the app captures syncs automatically to the Cambridge Cognition server whenever there’s a connection.

Download CANTAB App

Chatbot generates a code

Participant reads it out

Site staff type code into the portal to bind the app

Allow notifications

2

Visit 1: hands-on onboarding, then a settling-in buffer

- An in-clinic, practical walk-through of the app and devices emphasises the 3 × daily e-diary and 2 × daily cognitive tasks.
- The first home-testing period opens with a 3-day Technology Introduction Period, so participants get comfortable and resolve start-up issues before data counts.

CANTAB on the participant’s own phone

In-app chatbot guides set-up

3

Technology Use Periods: the app in daily life

- Reminders and an in-app chatbot guide every session:
 - PVT and DSST cognitive tests twice daily
 - E-diary ratings of fatigue, sleep quality, mood, anxiety, pain and activity three times daily
 - Weekly sleepiness and global-impression scales

Reminders prompt every session

Psychomotor Vigilance Test (PVT) 1 × daily

Digit Symbol Substitution Test (DSST) 1 × daily

Questionnaires 3× daily

4

Adaptive scheduling from in-app ratings

- Weekly fatigue ratings captured in the app feed the study dashboard and flexibly trigger the remote visits (V2 & V3): site staff simply shift the participant’s TUP start date in the portal, and the app picks it up at its next background sync.

5

Visit 4: Close-out & giving back

- Structured contacts wrap around every visit, with optional assistance calls throughout.
- Participants receive Start, General and End newsletters — and after Visit 4, individual feedback including their own study-journey overview.

Behind the scenes: site engagement

The CANTAB web portal — site study management

Site staff ran their side of the study at app.cantab.com:

- Bind each participant — type in the chatbot’s code; all app data then syncs to the Cambridge Cognition server
- Move a participant’s TUP start date remotely — the app picks it up during background sync
- Monitor each participant’s incoming assessments between visits

From an actual weekly report: compliance by site (%)

Site	Country	First burst (TUP 1)			Final burst (TUP 4)		
		QST	PVT	DSST	QST	PVT	DSST
Brescia	IT	85.5	86.4	90.9	80.5	81.2	89.4
Cambridge	UK	81.1	86.2	88.9	67.4	70.4	79.8
Cork	IR	72.2	72.8	83.1	67.5	61.9	77.6
Innsbruck	AT	79.0	81.1	83.8	77.7	80.4	87.0
Kiel	DE	82.3	83.7	87.9	76.5	76.3	86.3
Leeds	UK	65.3	60.3	75.0	60.0	71.4	64.3
Leiden	NL	82.5	81.4	85.4	78.9	82.1	84.5
Lisbon	PT	61.3	60.2	74.7	55.3	57.3	69.7
London Barts, QMUL	UK	56.5	72.2	60.8	78.6	82.1	89.3
London NW, St. Mark’s	UK	63.3	57.8	77.8	77.4	71.4	89.3
Madrid	ES	79.6	81.7	87.0	74.0	76.2	83.8
Muenster	DE	69.8	67.2	77.5	69.0	67.9	80.6
Newcastle upon Tyne	UK	83.1	83.7	89.8	79.0	80.1	87.6
Northern Care Alliance	UK	70.8	75.3	81.7	75.6	75.3	82.7
Rotterdam	NL	83.5	80.8	90.0	71.4	66.3	81.0
Royal Devon & Exeter	UK	74.1	74.8	83.6	71.4	66.7	78.1
Stavanger	NO	77.7	77.6	84.4	71.3	69.3	81.7
Warsaw	PO	59.9	51.9	53.7	—	—	—
AVERAGE		73.8	74.2	80.9	72.4	72.7	81.9

Excerpt from the weekly “CamCog IDEA-FAST – Compliance Report”: e-diary (QST) and CANTAB (PVT/DSST) compliance per site, first vs final burst. Aggregate views only; sites without app data omitted.

Weekly compliance reporting to sites

Alongside the aggregate views, each of the 50+ weekly reports gave sites a per-participant heatmap of completed vs missed sessions and a weekly fatigue tracker — showing exactly who needed a call, and when to trigger a remote visit.

ID	D1	D2	D3	D4	D5	D6	D7	Site action
P-014								On track — no action
P-019								Follow-up call
P-027								Assisted restart via portal

Illustrative reconstruction — the real subject-level view contains participant data and is not shown.

Weekly compliance-monitoring cycle

Factors supporting sustained engagement

Daily assessment schedule

2 × daily cognitive tests and 3 × daily e-diary ratings on the participant’s own phone made the CANTAB app each participant’s everyday touchpoint with the study.

Sustained adherence over 24 weeks

68.3% overall session coverage across four technology use periods (PVT 67.5%, DSST 77.0%; N = 977), with no significant difference between healthy volunteers and disease cohorts.

Data-informed site follow-up

50+ weekly compliance reports gave sites country-, cohort- and subject-level views to target follow-up — and weekly fatigue ratings scheduled remote visits automatically.

A transferable protocol

Priming, hands-on onboarding, a 3-day acclimatization buffer, structured support and individual feedback — a transferable model for remote decentralized studies.

Abbreviations

CANTAB, Cambridge Neuropsychological Test Automated Battery; DSST, Digit Symbol Substitution Test; IMID, immune-mediated inflammatory disease; NDD, neurodegenerative disease; PVT, Psychomotor Vigilance Test; TUP, Technology Use Period; VAS, visual analogue scale.

Disclosures

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Parkinson’s UK

imi

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