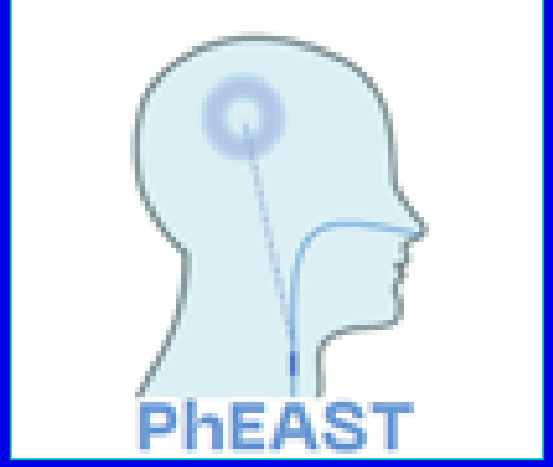


Pharyngeal electrical stimulation for Acute Stroke Trial (PhEAST)

Philip Bath, Chief Investigator

Stroke Association Professor of Stroke Medicine,
University of Nottingham

V8.0 22/11/2023

NIHR | National Institute for Health and Care Research

1. PhEAST: Background

University of Nottingham
UK | CHINA | MALAYSIA

Interventions for stroke

Hyperacute:

- Diagnosis
  - Brain scan CT/MRI
- Stroke Unit
- IS: Reperfusion
  - Thrombolysis
  - Thrombectomy
- ICH: BP lowering

Acute:

- Aspirin
- Hemicraniectomy
- VTE prevention
  - Heparin
  - Intermittent pneumatic compression

Sub-acute/chronic:

- Rehabilitation
  - Physiotherapy
  - Occupational therapy
  - Speech & language therapy
  - Dietetics
  - Social care
- Secondary prevention:
  - Life-style
  - Blood pressure lowering
  - Lipid lowering
  - Antithrombotics
  - Carotid endarterectomy

> But zero for dysphagia

University of Nottingham
UK | CHINA | MALAYSIA

Post-stroke dysphagia: Background

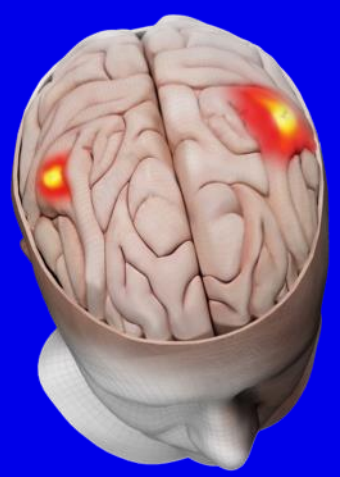
- 15 million strokes worldwide per year: 5M die, 5M left disabled
- Dysphagia (swallowing problem) common: 60% of patients on admission
- Natural history: Resolves in many patients but some need long-term enteral feed
- Associations: Age, severe stroke, recurrent stroke
- Prognostic marker for: Dependency, disability, death, malnutrition, weight loss, aspiration pneumonia
- Screening/diagnosis: Bed-side water tests, speech & language therapist, videofluoroscopy, FEES, …
- Patients often need feeding through a nasogastric tube (NGT) or percutaneous endoscopically-introduced gastrostomy tube (PEG) thereby prolonging hospital stays or causing long-term institutional care
- Used treatments: Behavioural therapy by Speech & Language Therapists (SLTs)
- Proven treatments: None
- Increased costs: length of stay, investigations, staff (nurses, SLTs)

Cohen *et al*. *Int J Stroke* 2016; 11: 399-411

University of Nottingham
UK | CHINA | MALAYSIA

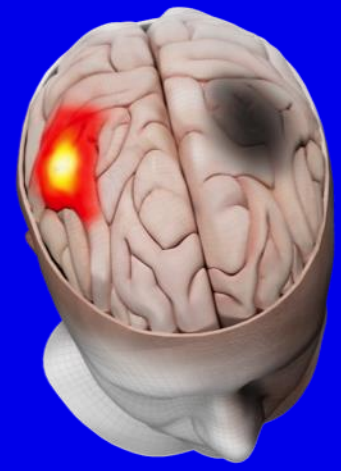
Restoration of swallow control after stroke

- Human swallowing has bilateral representation in the brain with a 'dominant' cortex (unrelated to handedness)
- Natural recovery process post stroke involves compensatory reorganisation in the motor cortex of the non-dominant hemisphere



Healthy brain
Both hemispheres active during swallowing but left hemisphere (could be right) dominates

Post Stroke
Lesion in left hemisphere (dysphagia dominant side) → patient presents with dysphagia



Recovery
Functional reorganisation of control to unaffected hemisphere

Hamdy *et al*. *Gastroenterology* 1998; 115: 1104-1112

University of Nottingham
UK | CHINA | MALAYSIA

Pharyngeal Electrical Stimulation (PES)

- Swallowing is dependent on afferent feedback via bulbar cranial nerves innervating the pharynx.

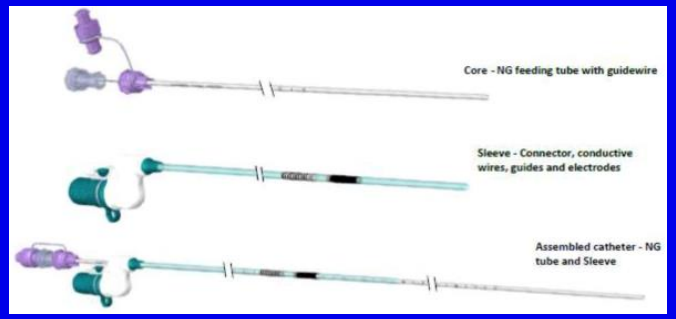
- Increased sensory input from the pharynx, delivered as PES, has been shown to drive long-term beneficial changes in the cortical control of swallowing with reorganisation of the swallowing cortex.

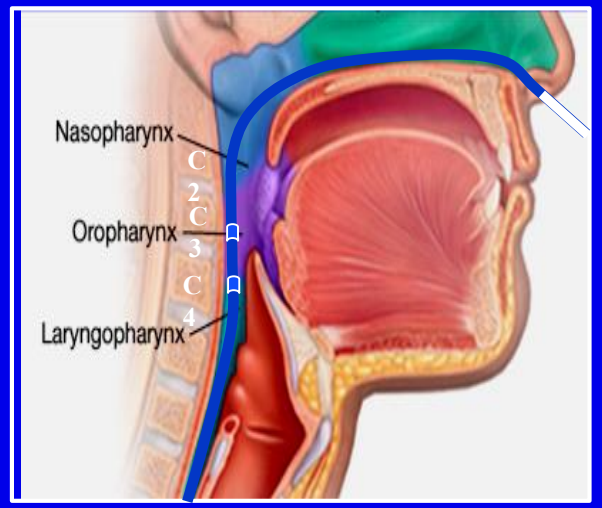
- PES has been developed academically by Prof Shaheen Hamdy and then commercially by a University of Manchester spin-out company, Phagenesis Ltd

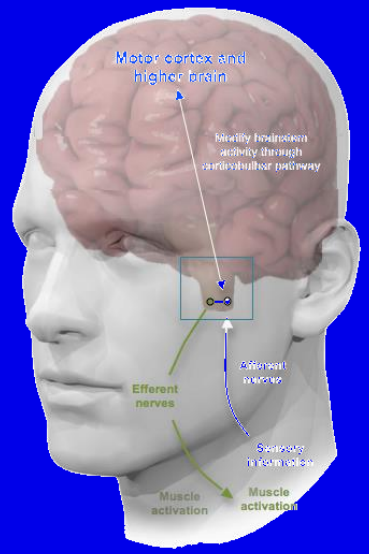
University of Nottingham
UK | CHINA | MALAYSIA

PhEAST: Pharyngeal electrical stimulation

- PES System is indicated for the treatment of neurogenic oropharyngeal dysphagia, which includes post-stroke dysphagia, and comprises a re-usable base-station and a single-use sterile disposable stimulation catheter
- The Base Station provides the user interface and generates, optimises and monitors the delivery of electrical stimulation.
- The catheter design is based on a NGT but incorporates electrodes with appropriate wiring and insulation for delivery of electrical stimulation to the pharyngeal mucosa.
- The Phagenyx system received CE Mark in 2012







Harvey *et al*, Phagenesis. PhEED CIP v1 2017

University of Nottingham
UK | CHINA | MALAYSIA

PES for PSD – Previous Trials

	Pilot trials x3	STEPS	PHAST-TRAC	PHADER	PhEED	PhEAST
Design	PROBE	Sham BE	Adaptive PROBE	Single arm BE	Adaptive PROBE	PROBE
Stroke N	73	162	69	85 of 245	3	800
Inclusion	PAS ≥4	PAS ≥3	Tracheotomy	DSRS ≥6	PAS ≥4	FOIS ≤3
VFS/FEES	VFS	VFS	FEES	No	VFS	No
OTR days	≤32	≤42	Subacute	Subacute	7-28	4-31
PES dose	x3	x3	x3/6	x3	x3	x6
Stimulation	/	14.8±7.9	33.6±8.3 mA	28.5±10.1 mA	27.6±6.6 mA	≥20 mA?
1ry @ day	PAS/DSRS	PAS @14	Decannulation @2	DSRS @90	PAS @02	DSRS @14
2ry @ day	/	DSRS @14	/	PAS @90	DSRS @07	FOIS @14
Effect, Aspiration	Improved	Neutral	/	Improved	N/A	(?)
Effect, Swallowing	Improved	Neutral	Improved	Improved	N/A	?

DSRS: dysphagia severity rating scale

A measure of swallowing impairment

DSRS total score = sum of 3 sub-scales

Score	Fluids	Score	Diet	Score	Supervision
4	No oral fluids	4	Non oral feeding	4	No oral feeding
3	IDDSI level 4	3	IDDSI level 4 and 5	3	Therapeutic feeding (SALT/trained staff)
2	IDDSI level 3	2	IDDSI level 6	2	Feeding by third party (untrained)
1	IDDSI level 1 and level 2	1	IDDSI level 7 easy to chew	1	Eating with supervision
0	IDDSI level 0	0	IDDSI level 7 regular	0	Eating independently

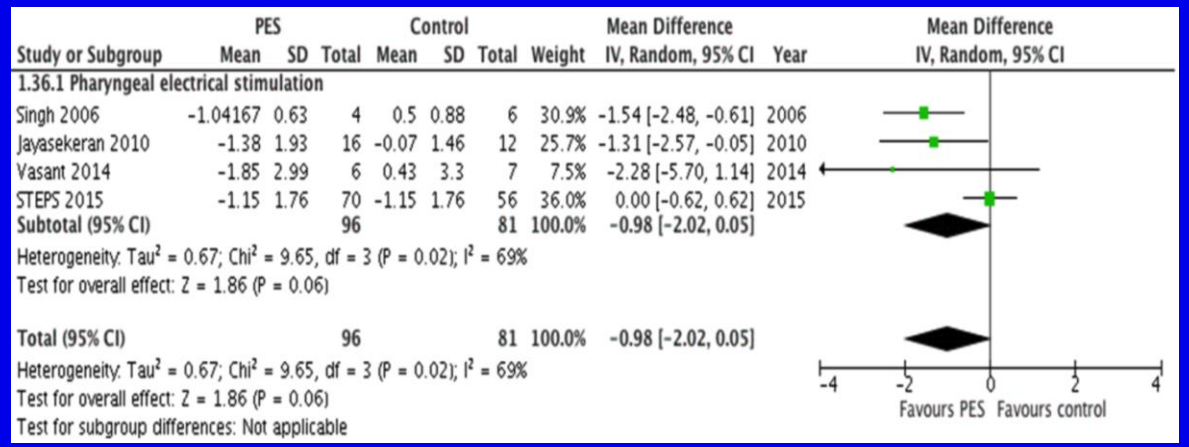
)SRS supervision score 3 is always chosen when a patient is on limited or consistent oral trials and still requires
NG/PEG tube.

Small vol. trials 443 = 11
Large vol. trials 343 = 10
Large vol. trials 434 = 10

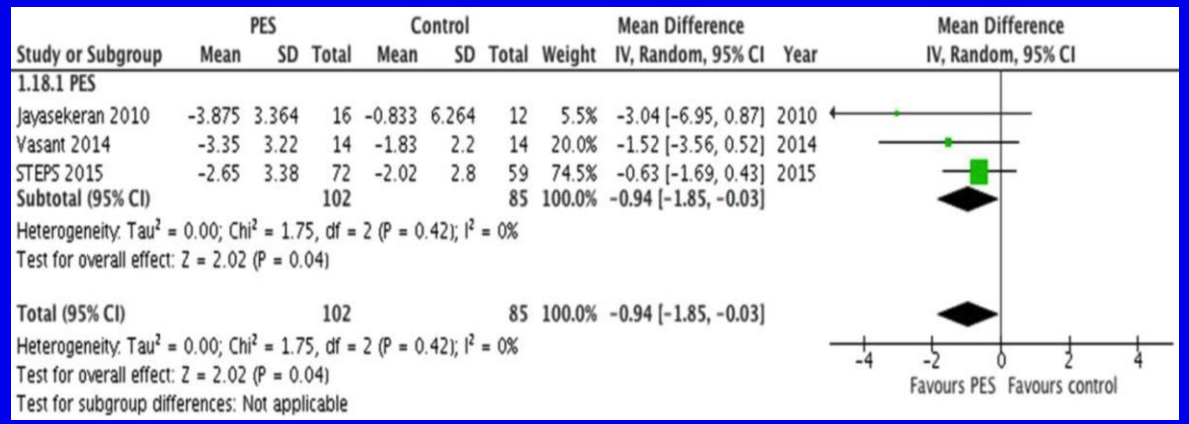
Jayasekeran *et al. Gastroenterology* 2010; 138: 1737-46
Everton *et al. Sci Rep* 2020 10: 7268

University of Nottingham
UK | CHINA | MALAYSIA

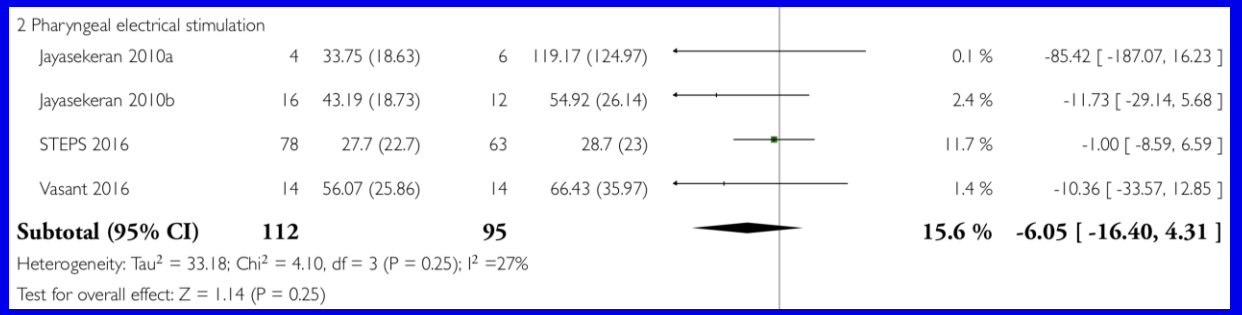
PES on PAS, DSRS & LoS: 3 pilot trials + STEPS



> *Tendency to less aspiration/penetration, PAS*



> *Significant improvement in swallowing, DSRS*



> *Tendency to shorter length of stay (LoS)*

> *More research needed*

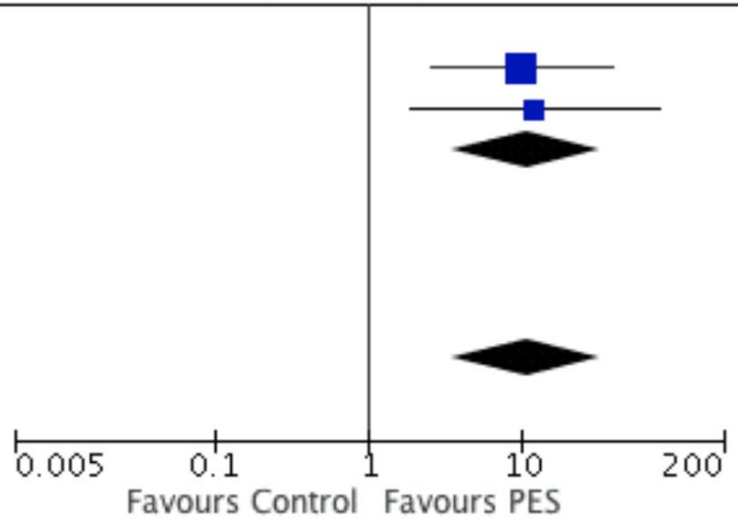
Bath *et al*. *Stroke* 2016;47:1562 N=162
Bath *et al*. *Cochrane Database Systematic Review* 2018; 10: CD000323

PHAST-TRAC Stroke RCT

Decannulation: Suntrup & PHAST-TRAC

Meta-analysis of trials of decannulation after ventilation in stroke patient

Study or Subgroup	PES Events	PES Total	Control Events	Control Total	Weight	Odds Ratio M-H, Random, 95% CI
1.1.1 Decannulation						
Dziewas 2017	17	35	3	34	65.0%	9.76 [2.51, 37.94]
Suntrup 2015	15	20	2	10	35.0%	12.00 [1.89, 76.38]
Subtotal (95% CI)		**55**		**44**	**100.0%**	**10.49 [3.51, 31.35]**
Total events	32		5			
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.03$, df = 1 (P = 0.86); $I^2 = 0\%$						
Test for overall effect: Z = 4.21 (P < 0.0001)						
Total (95% CI)		**55**		**44**	**100.0%**	**10.49 [3.51, 31.35]**
Total events	32		5			
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.03$, df = 1 (P = 0.86); $I^2 = 0\%$						
Test for overall effect: Z = 4.21 (P < 0.0001)						
Test for subgroup differences: Not applicable						



> PES increased readiness for decannulation in randomised (and subsequent open-label) phases

> No re-cannulations recorded

Suntrup *et al*. *Neuroimage* 2015; 104: 117-24 N=30

Dziewas *et al*. *Lancet Neurology* 2018; 28 August N=69

PHADER: DSRS

Real world phase IV single-arm (uncontrolled) study of PES in Austria, Germany, UK

	All	Stroke, not ventilated	Stroke, ventilated	Ventilator-related [a]	TBI	p
N		79	98	35	24	
DSRS (/12) [b]						
Baseline	236, 11·4 (1·7)	79, 10·9 (2·4)	98, 11·7 (1·2)	35, 11·9 (0·5)	24, 11·3 (1·8)	0·003
Day 5	229, 10·5 (2·6)	74, 9·9 (2·9)	97, 10·8 (2·4)	35, 10·8 (2·5)	23, 11·0 (2·5)	
Day 9	224, 8·6 (3·9)	70, 7·7 (4·1)	97, 8·9 (3·8)	35, 8·5 (4·1)	22, 10·4 (3·1)	
Day 92	174, 5·1 (4·9)	46, 4·2 (4·2)	78, 5·2 (5·0)	30, 5·3 (5·4)	20, 6·8 (4·8)	0·26
DIM (unpaired)	-6·3 (-7·0, -5·6)[c]	-6·7 (-7·8, -5·5)[c]	-6·5 (-7·6, -5·5)[c]	-6·6 (-8·4, -4·8)[c]	-4·5 (-6·6, -2·4)[c]	0·31
MD (paired)	174, -6·3 (-7·0, -5·6)	46, -6·5 (-7·9, -5·2)[c]	78, -6·5 (-7·6, -5·3)[c]	30, -6·6 (-8·5, -4·6)[c]	20, -4·7 (-6·8, -2·5)[c]	0·033

> Swallowing impairment improved more than expected from natural history in all 4 neurogenic dysphagia groups

> DSRS improved by 6.5 units over 90 days in unventilated stroke patients

Bath *et al. E Clin Med* 2020; 28: 100608

N=79

PHADER: Recovery of DSRS

Single arm study (no control group)

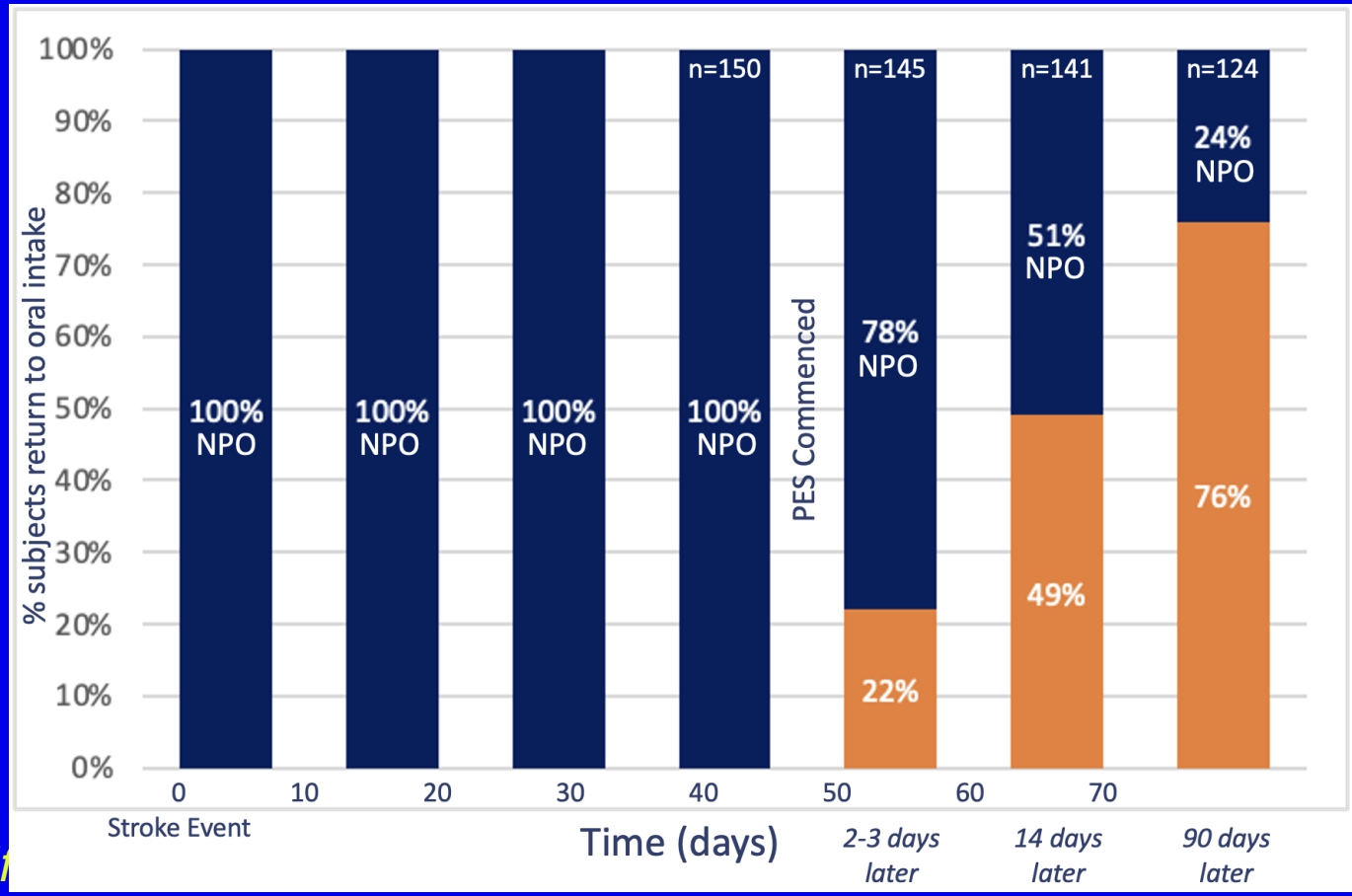
Evidence that recovery at least partly due to PES

1. Recover started rapidly after PES commenced (figure)
2. Adjusted comparison of stroke/no-ventilation with STEPS trial sham group

Relative to sham: DSRS -3.1 (1.4-7.3), p=0.008

So at least 50% of DSRS improvement is not natural history

→ Evidence that PES explains at least some, if not most, of recovery



2. PhEAST: Design

Objectives –

Purpose

- To assess whether PES is safe and effective at improving post-stroke dysphagia

Primary objective

- To assess whether 6 days of PES accelerates return to oral intake of food and drink as assessed using the dysphagia severity rating scale and blinded to treatment

Secondary objectives

To assess whether:

- PES improves swallowing and reduces pneumonia, antibiotic exposure, hospital length of stay, and disability
- PES increases quality-of-life and return to work
- PES is cost effective as compared to usual care
- Participant subgroups predict response to PES

Objectives - Cognition

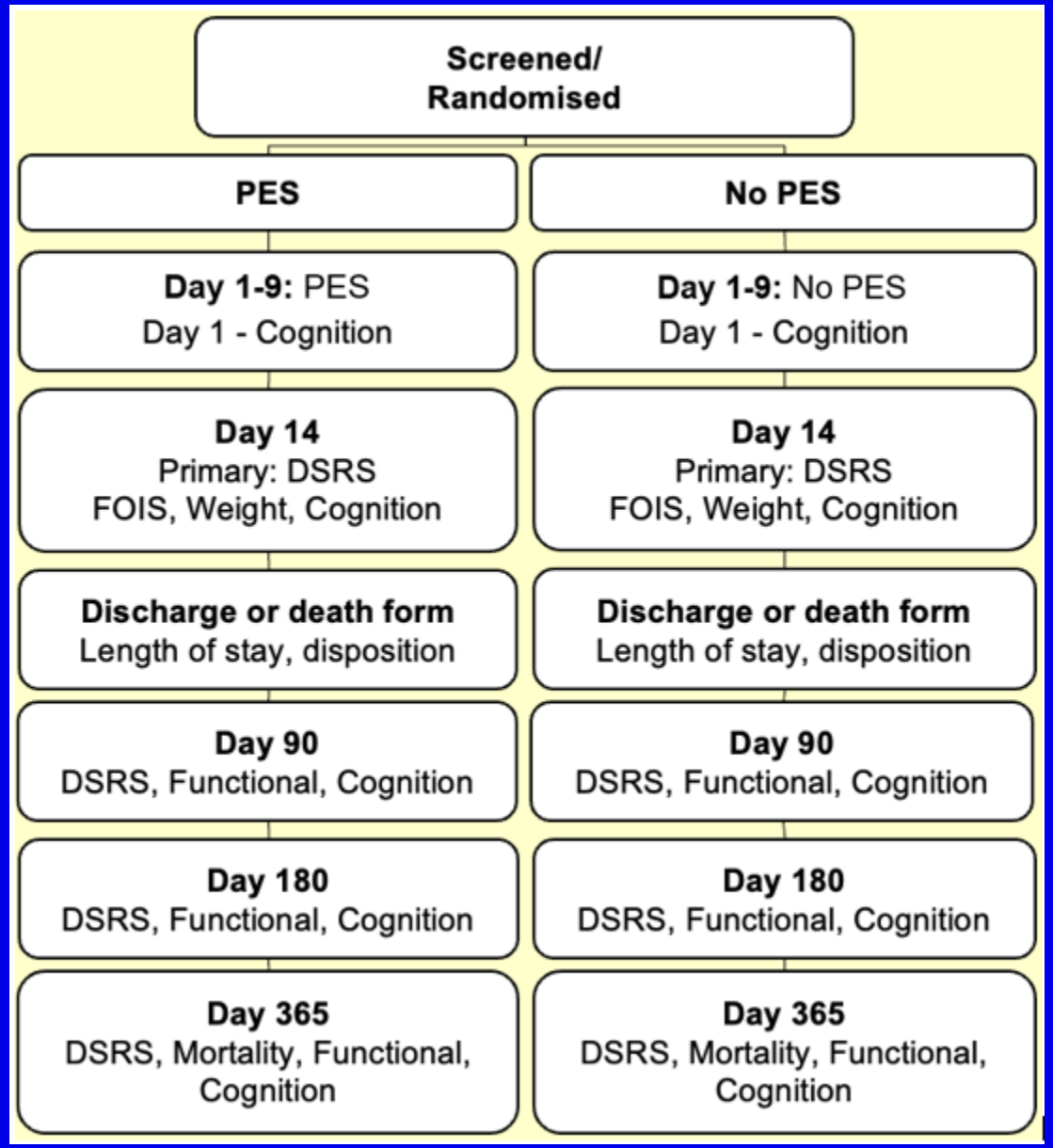
- Post-stroke cognitive impairment (PSCI) and post-stroke dementia (PSD) are common with rates up to 35% at 5 years.
- Adequate assessment of cognition and its temporal trajectory in patients with severe ischaemic stroke (IS) or intracerebral haemorrhage (ICH) is often not performed.
- The PhEAST cognition sub-study will assess cognition at baseline, day 14, day 90, day 180 and day 365 after randomisation
- Overall, the sub-study will provide information on cognition and its trajectory over the first year after severe stroke, a neglected research area and of considerable importance to this population and their family and carers. Additionally, the sub-study will enhance the main trial itself through providing extended follow-up information.
- The sub-study is embedded within the main protocol and is not an optional part of PhEAST

Design

- Investigator-initiated trial (not commercial)
- International
- Prospective randomised open-label blinded-endpoint (PROBE)
- Parallel group: PES vs control 1:1
- Superiority, i.e. test whether PES is superior to control
- Funded by NIHR HTA

- Participants: 800
- Consent: Written informed consent from participant, personal consultee or independent physician consultee (England & Wales) or a legal representative (Scotland)
- Intervention: PES on top of guideline-based standard-of-care. PES will be administered for 6 (ideally consecutive) days using a commercial catheter with integral feeding tube
- Comparator: Guideline-based standard-of-care

Flowchart



Site: Randomise

Site: Treatment for 6 days **("1-9" represents the possibility of a two-day treatment break).**

Site: Primary outcome at 14 (-1/+3) days

Site: Discharge/death information

Central: Follow-up at 90 days

Central: Follow-up at 180 days

Central: Follow up at 365 days

Eligibility – Inclusion criteria

- 800 adults
- Age >=18
- Recent stroke 2-31 days
  - *I.e. not too early/not too late*
- IS or ICH
- Anterior or posterior circulation
- Severe dysphagia: Tube fed
  - Functional oral intake scale (FOIS)
  - FOIS=1: nothing by mouth, feeding by NGT/PEG
  - FOIS=2: NGT/PEG-dependent with minimal attempts of food or liquids
  - FOIS =3 NGT/PEG-dependent with consistent attempts of food or liquids

Deliberately broad inclusion criteria

- We define a FOIS score of 2 (minimal attempts of food or liquid) as a person receiving no more than 15 teaspoons of any consistency within one day

- A FOIS score of 3 would be someone receiving more than 15 teaspoons per day, but still tube dependent

Eligibility – Exclusion criteria

- Non-stroke dysphagia: TBI, SAH, tumour, MS, head & neck cancer, PD, severe dementia
- Premorbid dysphagia
- Premorbid dependency mRS 4/5
- Ongoing/expected intubation/ventilation and/or tracheostomy
- Ongoing/expected electrical/magnetic stimulation, e.g., NMES, rTMS, TCDS for dysphagia
- Malignant middle cerebral artery syndrome
- Pacemaker
- >35% oxygen
- >=2 NGT pulled out unless nasal bridle in place
- Investigator feels participant will not tolerate PES catheter
- Expected to be discharged or transferred before the day 14 primary outcome
- Pregnancy if known at time of enrolment
- Participant on palliative pathway
- Known pharyngeal pouch
- Investigator believes dysphagia will be short-term.

NIHSS-1a. Level of Consciousness

Note:

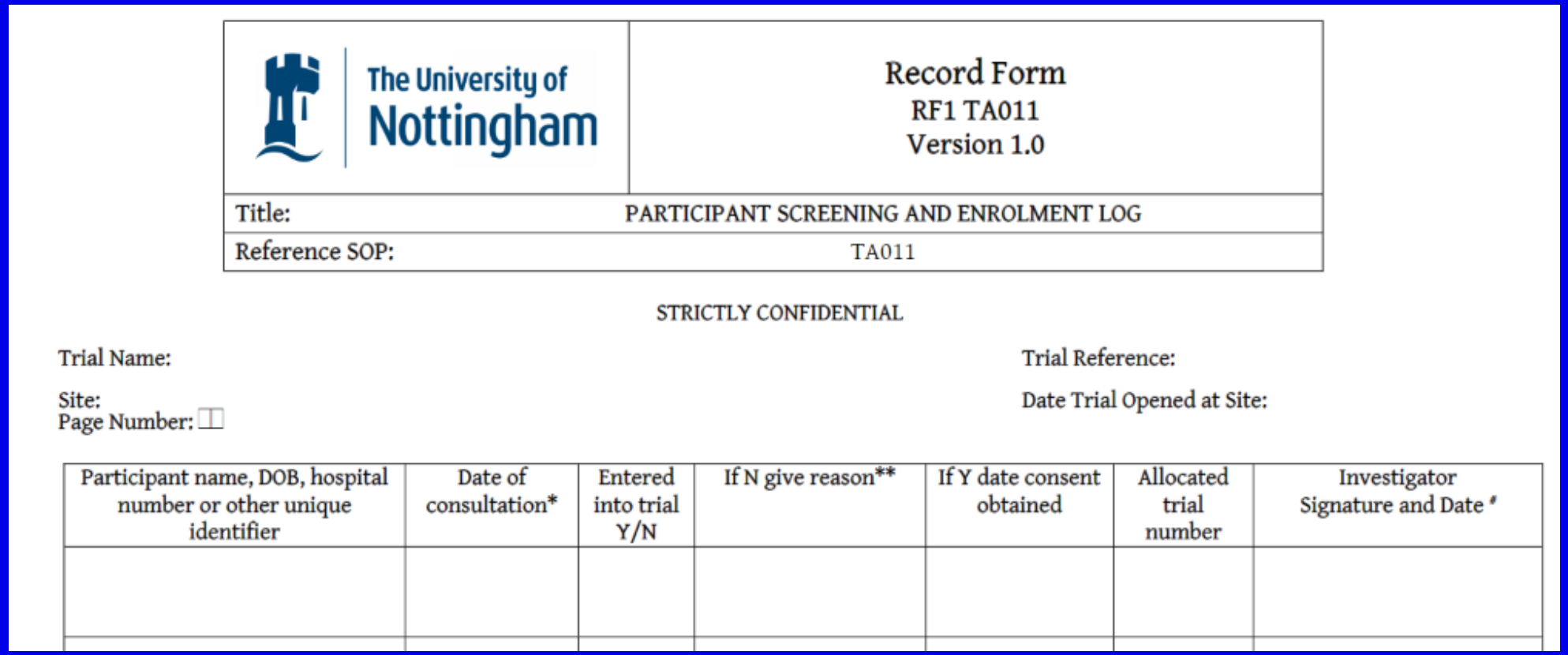
Score 0-1-2: *Must be alert (score 0), arouse to minor stimulation (score 1) or require repeated stimulation (score 2) to be eligible.*

Score 2-3: *Patients with only movements to pain (also score 2) or postures/unresponsive (score 3) are ineligible.*

Score 3: *The investigator must choose a response if a full evaluation is prevented by such obstacles as an endotracheal tube, language barrier, orotracheal trauma/bandages. A 3 is scored only if the patient makes no movement (other than reflexive posturing) in response to noxious stimulation.*

Participant Screening

- All patients should be screened using the inclusion and exclusion criteria
- Both recruited participants **and** screen failures should be recorded and signed off on the Participant Screening and Enrolment Log (RF1 TA011)
- We collect anonymised screening logs once a month



The University of Nottingham

Record Form
RF1 TA011
Version 1.0

Title:	PARTICIPANT SCREENING AND ENROLMENT LOG
Reference SOP:	TA011

STRICTLY CONFIDENTIAL

Trial Name:

Trial Reference:

Site:
Page Number:

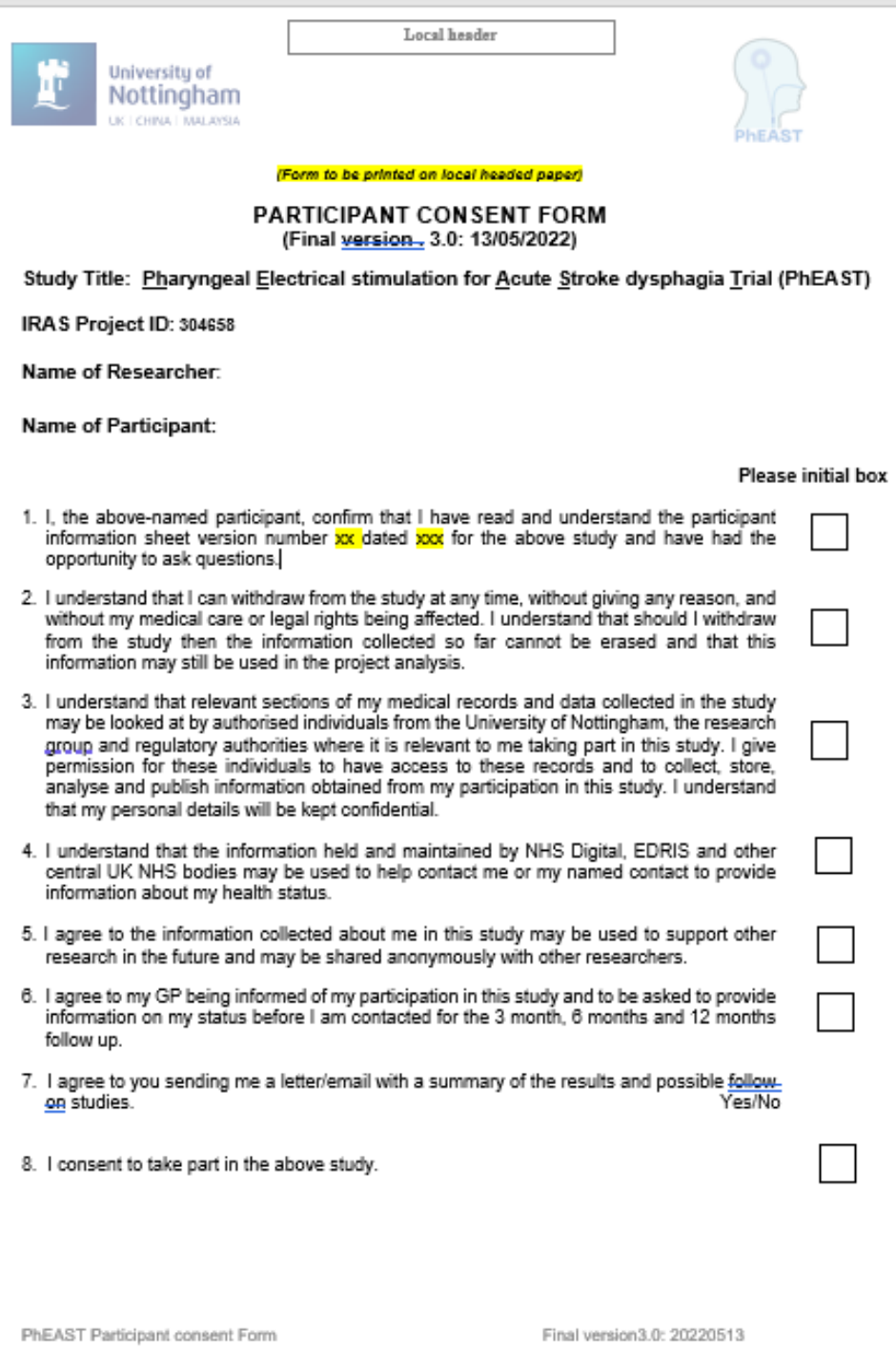
Date Trial Opened at Site:

Participant name, DOB, hospital number or other unique identifier	Date of consultation*	Entered into trial Y/N	If N give reason**	If Y date consent obtained	Allocated trial number	Investigator Signature and Date

3. PhEAST: CONSENT

Consent

- Written informed (signature, mark, witnessed oral)
- Approach the participant and take them through the participant information sheet
- They may want some time to think the trial over / discuss with relatives
- If unable to sign due to limb weakness then the whole consent process can be witnessed by someone not on the trial delegation log (e.g. ward nurse / HCA) and they can sign in the witness box on the participant's behalf



Local header

University of Nottingham
UK | CHINA | MALAYSIA

PhEAST

(Form to be printed on local headed paper)

PARTICIPANT CONSENT FORM
(Final version, 3.0: 13/05/2022)

Study Title: Pharyngeal Electrical stimulation for Acute Stroke dysphagia Trial (PhEAST)

IRAS Project ID: 304658

Name of Researcher:

Name of Participant:

Please initial box

1. I, the above-named participant, confirm that I have read and understand the participant information sheet version number xx dated xxx for the above study and have had the opportunity to ask questions. ☐
2. I understand that I can withdraw from the study at any time, without giving any reason, and without my medical care or legal rights being affected. I understand that should I withdraw from the study then the information collected so far cannot be erased and that this information may still be used in the project analysis. ☐
3. I understand that relevant sections of my medical records and data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group and regulatory authorities where it is relevant to me taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential. ☐
4. I understand that the information held and maintained by NHS Digital, EDRIS and other central UK NHS bodies may be used to help contact me or my named contact to provide information about my health status. ☐
5. I agree to the information collected about me in this study may be used to support other research in the future and may be shared anonymously with other researchers. ☐
6. I agree to my GP being informed of my participation in this study and to be asked to provide information on my status before I am contacted for the 3 month, 6 months and 12 months follow up. ☐
7. I agree to you sending me a letter/email with a summary of the results and possible follow on studies. Yes/No
8. I consent to take part in the above study. ☐

PhEAST Participant consent Form Final version3.0: 20220513

Consent

If lacks capacity, adapt to local consent rules:

- **England & Wales: Proxy consent (assent) from consultee (relative or independent physician if no NoK)**
- **Scotland: Consent from personal legal representative**
- Austria: Consent from personal legal representative or professional legal representative
- Denmark: Proxy consent (assent) from consultee (relative)
- Germany: Proxy consent (assent) from consultee (relative)

- **May be obtained remotely by tele/video if necessary, e.g., COVID lockdown – independent third party witness needed**

University of Nottingham
UK | CHINA | MALAYSIA

(Form to be printed on local headed paper)

Participant Information Sheet - CONSULTEE
(Final version 6.0: 28/03/2023)

IRAS Project ID: 304658

Title of Study: **Pharyngeal Electrical stimulation for Acute Stroke dysphagia Trial (PhEAST)**
Name of Chief Investigator: **Prof. Philip Bath**
Name of Researcher(s): XXXXXXXXXX

Invitation
Your relative (it could also be a close friend, but for brevity this document will use the term 'relative') is being invited to take part in a research study. If you are an independent physician acting on behalf of the patient, then you are being approached as a close friend or relative of the patient is not available to provide consent on their behalf. If you are the patient's professional carer, then you will not be able to provide consent on the patient's behalf for this study. Please let us know of any advance decisions they may have made about participating in research. These should take precedence. Before you decide whether you agree to their participation it is important for you to understand why the research is being done and what it will involve. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear or if you would like more information.

Who can act as a consultee?
Where people cannot take the decision to consent to be involved in a research project then a consultee must be appointed. A consultee can either be 'personal' or 'nominated'. A personal consultee is someone unconnected with the research who knows the potential research participant in a personal capacity and is able to advise on the person's wishes or feelings. This can be a friend, family member or court appointee. A 'nominated' consultee' is a physician unconnected with the research, appointed by the researcher, to advise the researcher about the person's wishes and feeling in relation to the project. Before a nominated consultee is appointed, the researcher will take all reasonable steps to identify a personal consultee.

What is the role of the consultee?
The consultee advises the researcher on what the participant's wishes and feelings would be if they were able to consent for themselves, and on whether they should take part. The consultee does not give consent, only advice. The responsibility to decide whether the participant should be entered into the research lies ultimately with the researcher. Consultees will be provided with information about the research project and will be given the opportunity to discuss it and their role as consultee. All consultees must be able to understand their role and be willing to undertake it.

What is the purpose of the study?
The purpose of this study is to find out whether a regular course of treatment of Pharyngeal Electrical Stimulation (PES), stimulation of nerves in the throat that may have been damaged by a stroke, can help recovery back to eating and drinking by mouth. In four previous studies of PES involving stroke patients, the treatment devices were found to be safe and good performance was achieved in over 200 patients with no device-related adverse events being observed. The PES treatment can therefore be described as "low risk". The study will also look at cognition and whether this is affected when you have had a stroke.

Consent: Participant regains capacity

Participant to be approached for continued participation in the trial with the:

England, Northern Ireland, Wales

- **Participant information sheet, and the participant re-consent form**

Scotland

- **Regained capacity information sheet, and the participant re-consent form**

Denmark

- Participant information sheet, and the participant re-consent form

Germany

- Participant information sheet, and the participant re-consent form

Austria

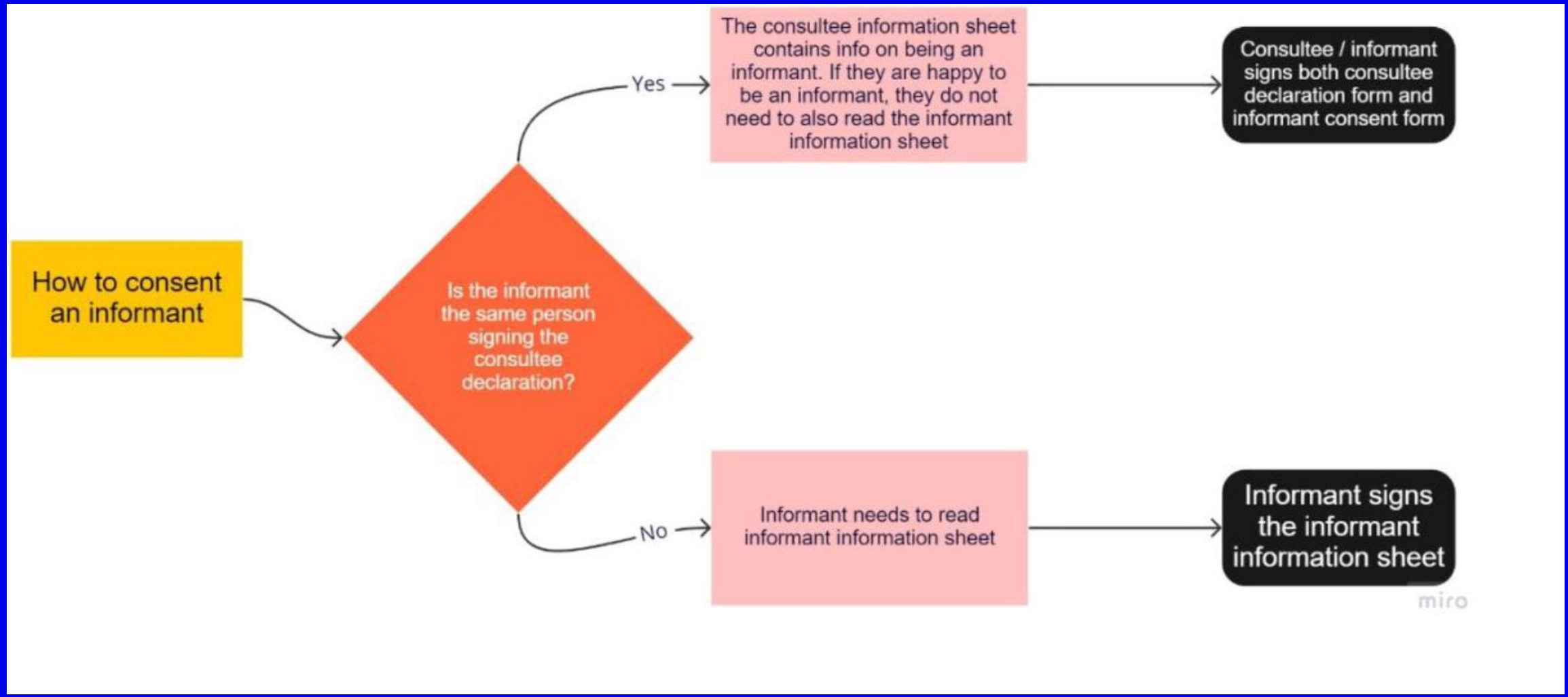
- Participant information sheet, and the participant re-consent form

ALL CONSENT PROCESSES NEED TO BE RECORDED IN THE PARTICIPANT'S MEDICAL NOTES.

Site to keep original consent form, upload a copy to to the database, give a copy to the participant / consultee, and file a copy in the medical notes.

Consent: Informant consent

As part of the cognition sub-study, we want to collect some information on the participants' cognition from their relative / next of kin.



4. PhEAST: RANDOMISATION

Randomisation Overview

- Patients who consent (individually, or by personal/professional legal representative) to participate in the trial will be randomised by a member of their local research team within **2 to 31 days** of stroke onset

- 1:1 treatment allocation (PES VS Standard Of Care)

- Done via bespoke, secure web-based system. Maintained by the central Stroke Trials Unit in Nottingham

Baseline data & randomisation

Baseline

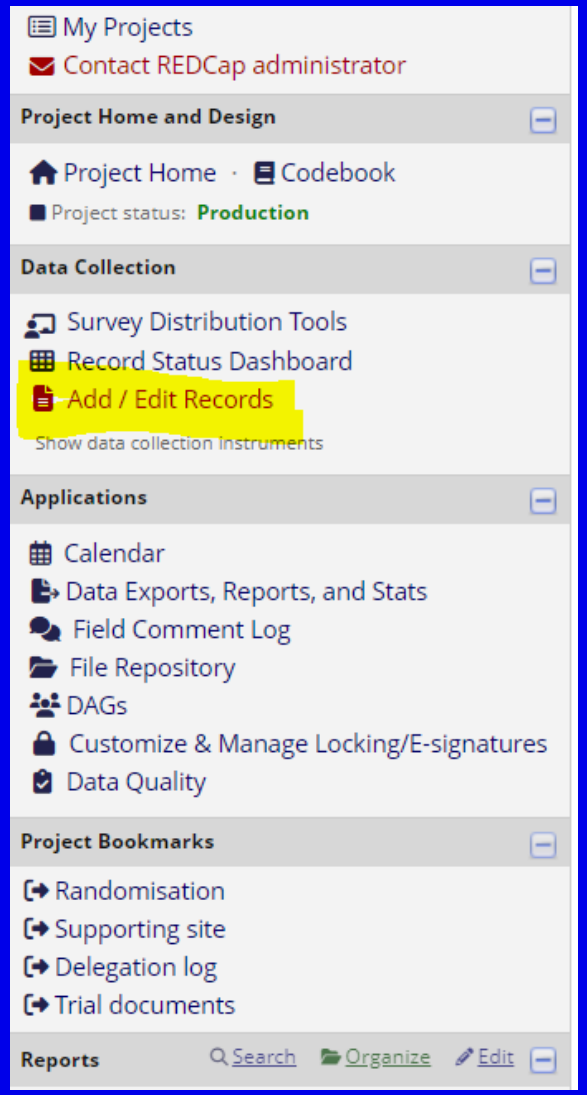
- Demographics: Age, sex, …
- Stroke: NIHSS, , type, mRS, …
- Dysphagia: DSRS, FOIS, EAT-10, FSS, …
- Hospital-based treatment: Alteplase, thrombectomy, ICU, ventilation, hemicraniectomy, carotid endarterectomy, …
- Infection at baseline
- mRS, BI, TICS, ZDS, home-time
- Global (Stroke Impact Scale)
- Cognition: MoCA, MMSE, semantic verbal fluency, phonemic verbal fluency, dementia diagnosis, IQCODE
- Frailty (CFI)

Randomisation

- On-line, secure internet, real time
- Stratification on:
  - Country
- Minimisation on:
  - Age (<75/75+)
  - Sex
  - DSRS (<12/12)
  - Impairment (NIHSS <15/15+)
  - Stroke type (ischaemic/haemorrhagic)
  - Time to randomisation (<15/15+ days)
  - 5% simple randomisation

Randomisation instructions, 1

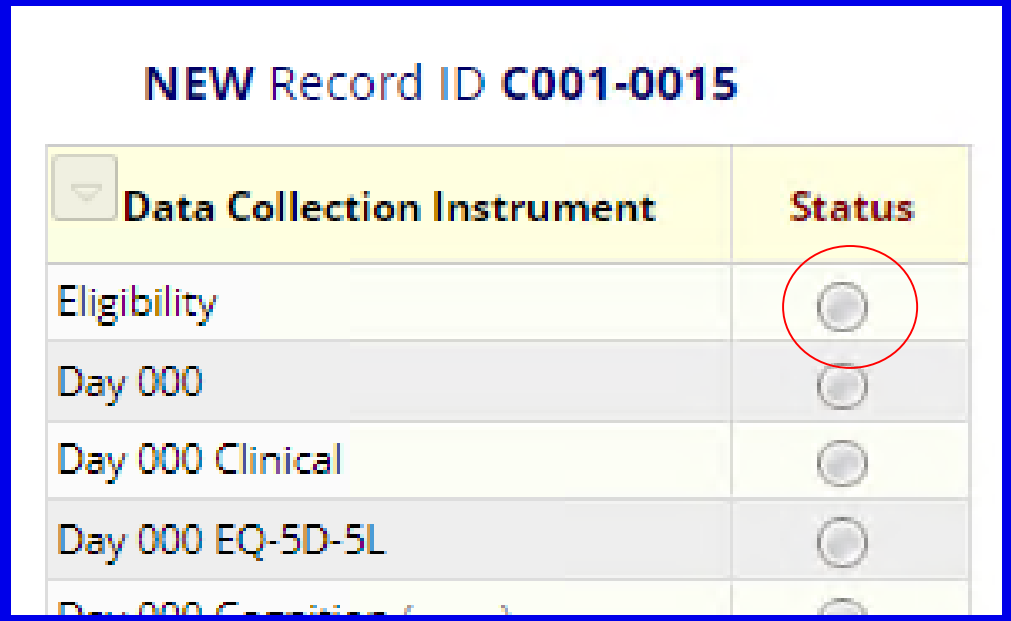
1. In REDCAP, select ‘Add / Edit records’



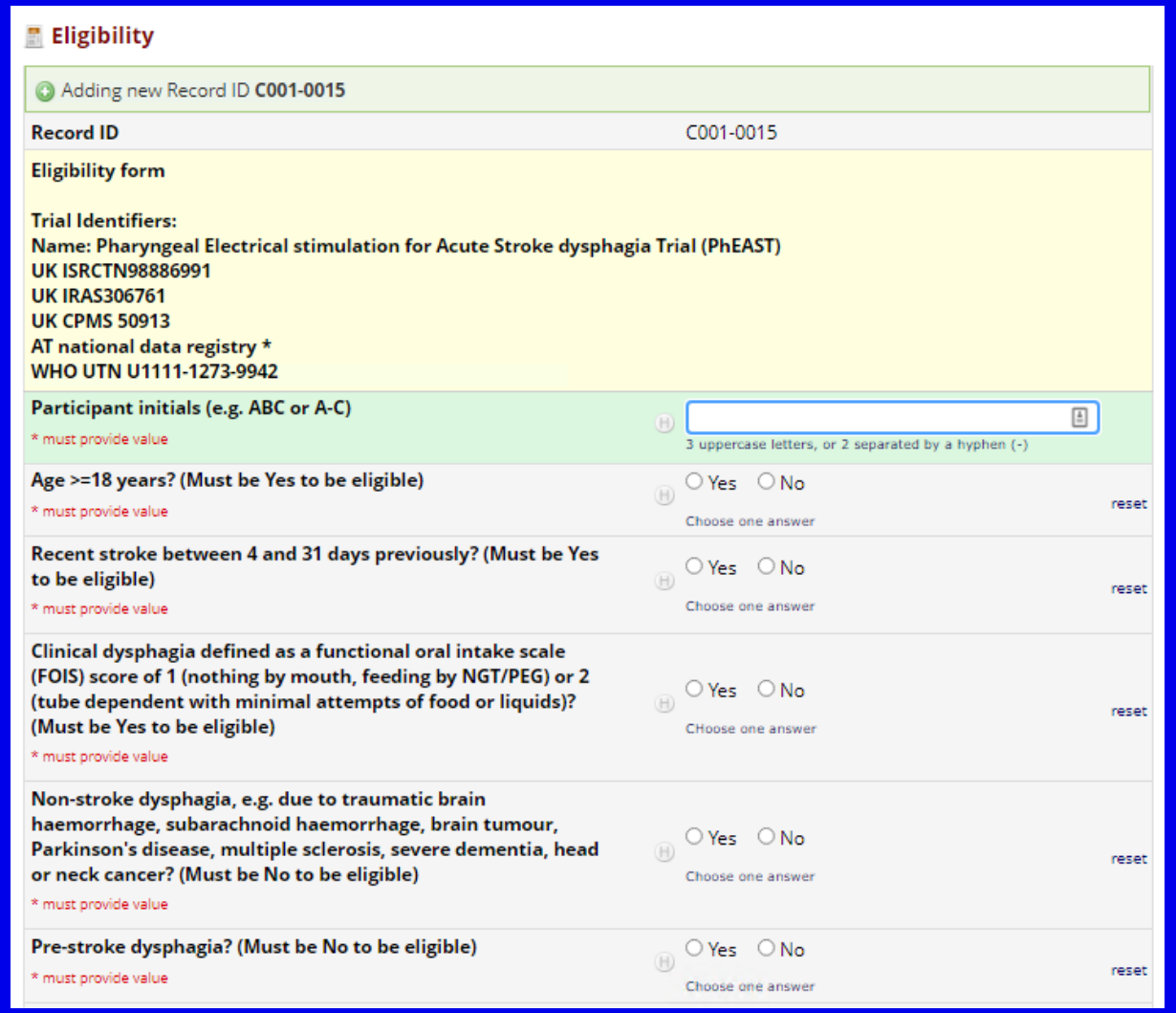
2. Add a new record

Randomisation instructions, 2

3. In the new data entry, select 'Eligibility'

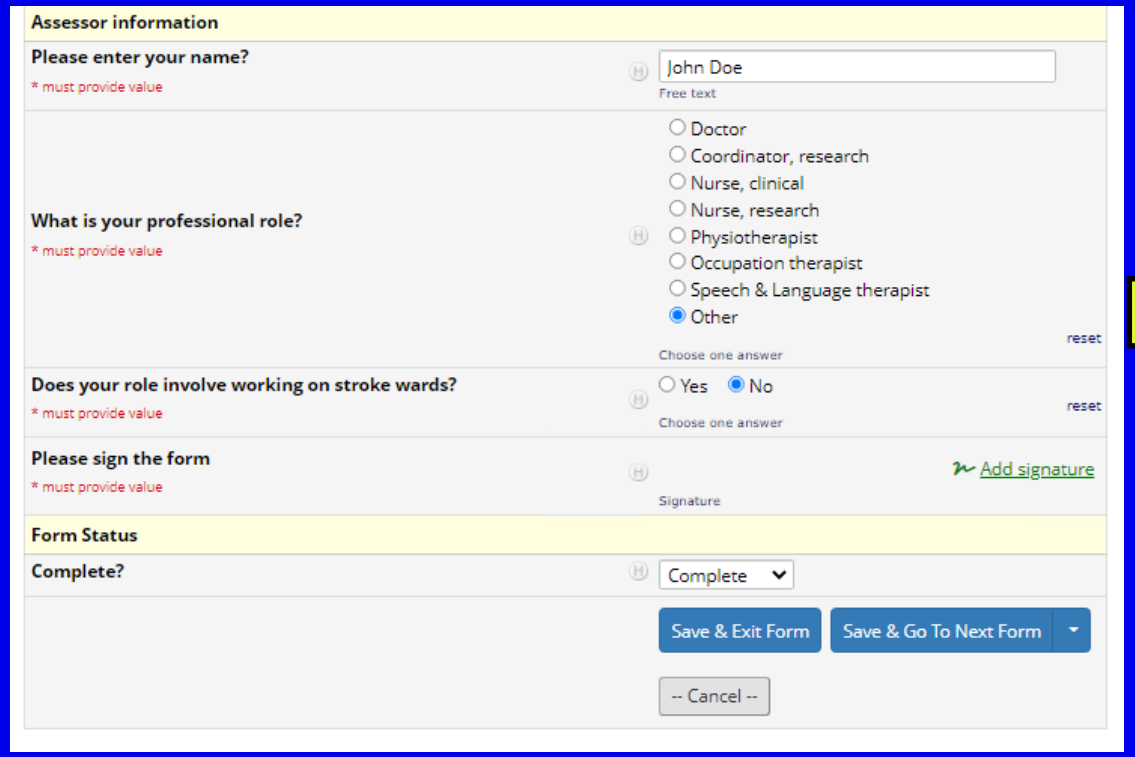


4. Complete the Eligibility form

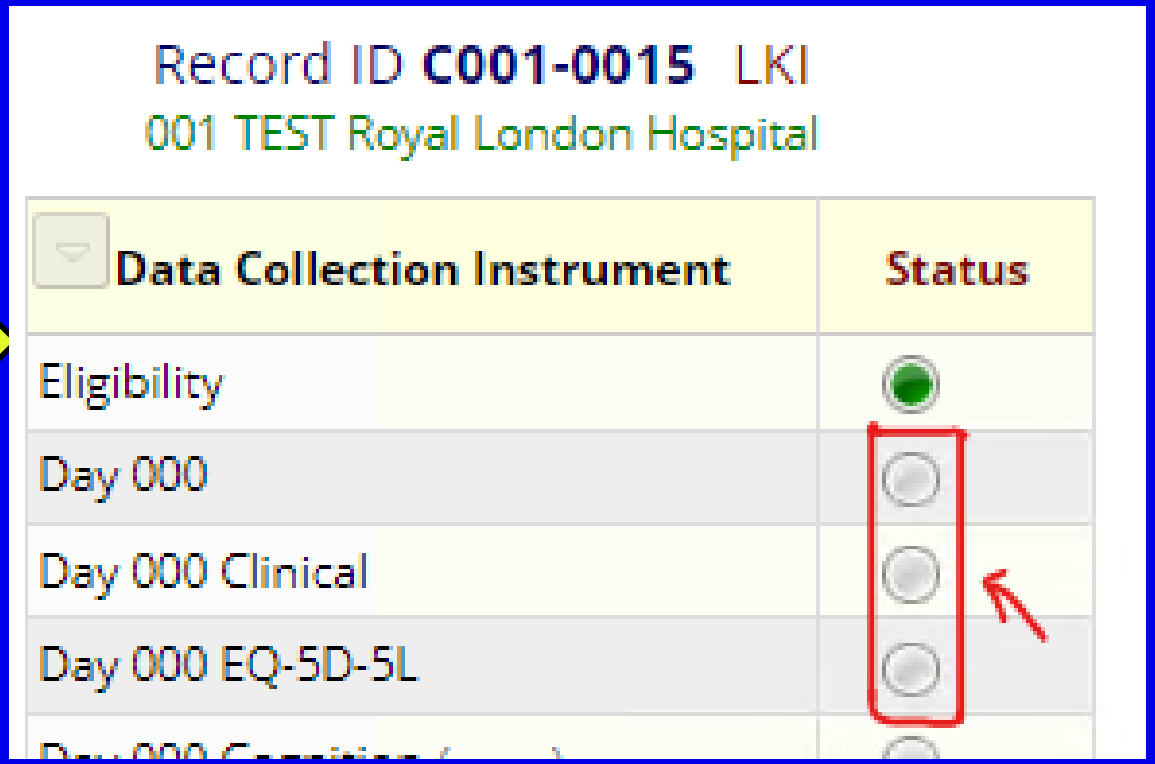


Randomisation instructions, 3

5. Once complete, click 'save and exit form'

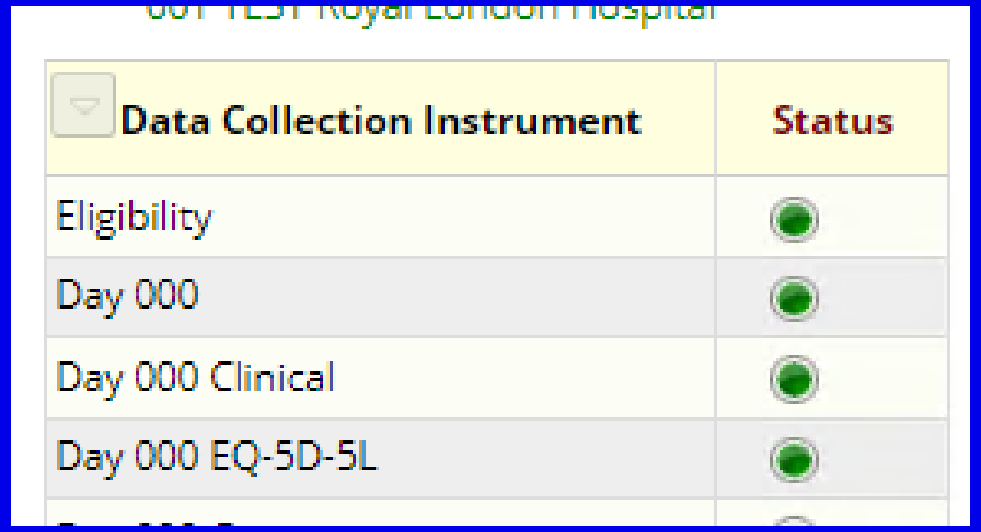


6. Open and complete the 'Day 000', 'Day 000 Clinical', and 'Day 000 EQ-5D-5L' form.

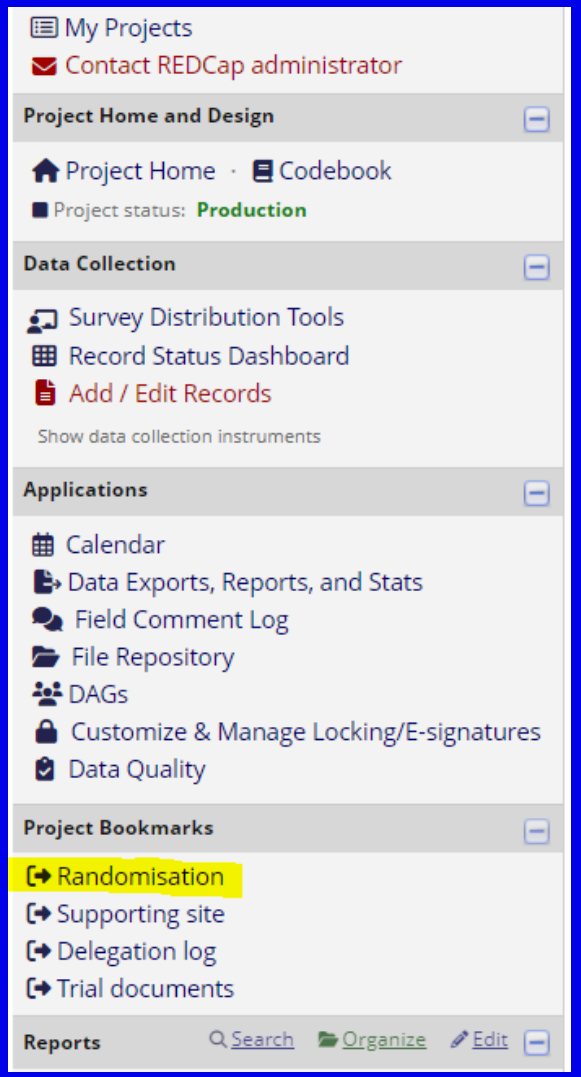


Randomisation instructions, 4

5. Once 'Eligibility', 'Day 000', 'Day 000 Clinical', and 'Day 000 EQ-5D-5L' forms are complete



6. Click the 'Randomisation' link under Project Bookmarks



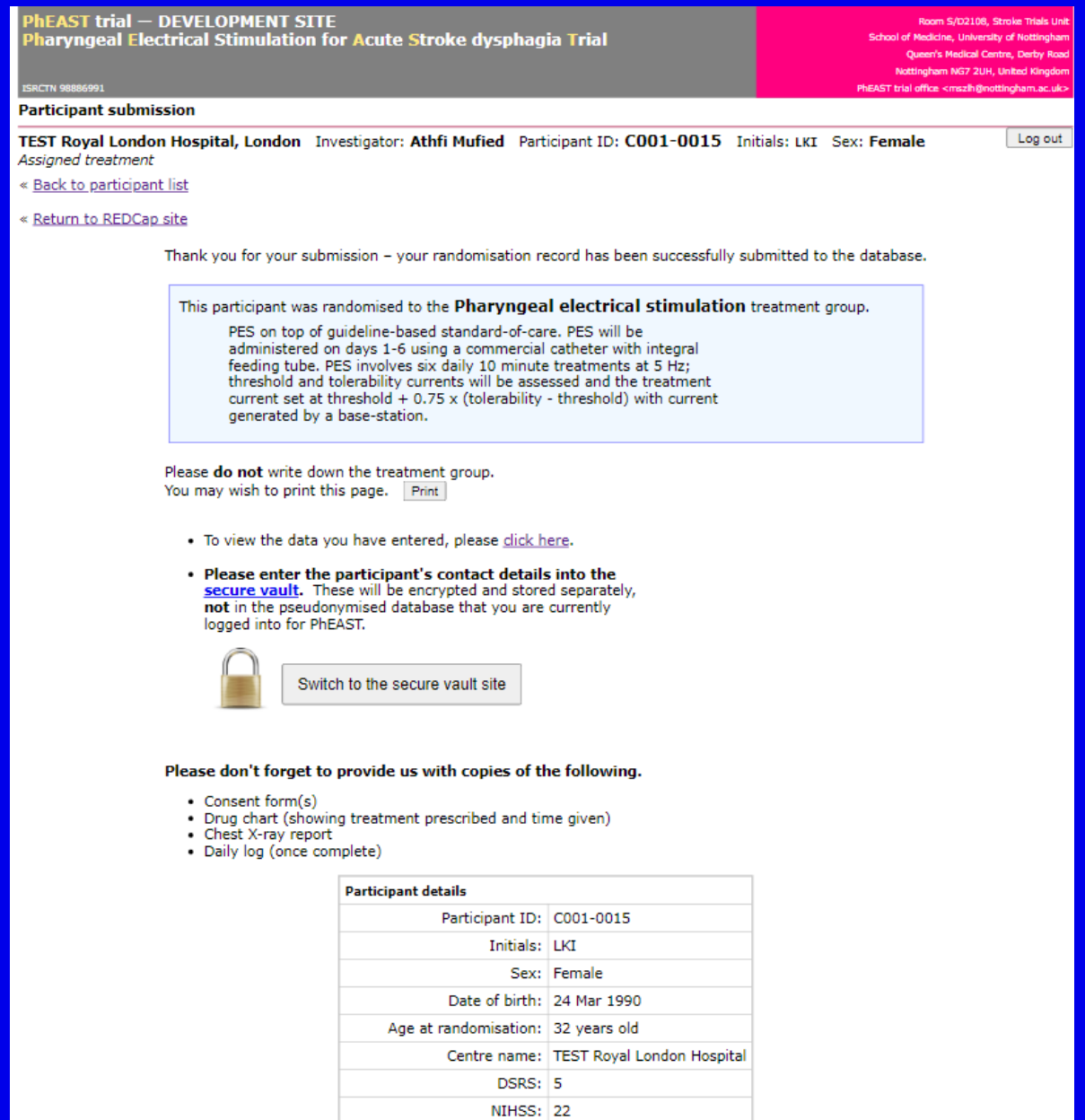
Randomisation instructions, 5

7. Check the information in the randomisation summary and then click ‘Randomise this participant’.

8. Once complete, the following page should appear:

9. Click the link to get to the ‘success page’.

Randomisation Instructions



PhEAST trial — DEVELOPMENT SITE
Pharyngeal Electrical Stimulation for Acute Stroke dysphagia Trial
ISRCTN 98886991

Room 5/D2108, Stroke Trials Unit
School of Medicine, University of Nottingham
Queen's Medical Centre, Derby Road
Nottingham NG7 2UH, United Kingdom
PhEAST trial office <mszh@nottingham.ac.uk>

Participant submission

TEST Royal London Hospital, London Investigator: **Athfi Mufied** Participant ID: **C001-0015** Initials: LKI Sex: **Female** Log out

Assigned treatment

« Back to participant list

« Return to REDCap site

Thank you for your submission – your randomisation record has been successfully submitted to the database.

This participant was randomised to the **Pharyngeal electrical stimulation** treatment group.

PES on top of guideline-based standard-of-care. PES will be administered on days 1-6 using a commercial catheter with integral feeding tube. PES involves six daily 10 minute treatments at 5 Hz; threshold and tolerability currents will be assessed and the treatment current set at threshold + 0.75 x (tolerability - threshold) with current generated by a base-station.

Please **do not** write down the treatment group.
You may wish to print this page. Print

- To view the data you have entered, please click here.
- **Please enter the participant's contact details into the secure vault.** These will be encrypted and stored separately, **not** in the pseudonymised database that you are currently logged into for PhEAST.

Switch to the secure vault site

Please don't forget to provide us with copies of the following.

- Consent form(s)
- Drug chart (showing treatment prescribed and time given)
- Chest X-ray report
- Daily log (once complete)

Participant details	
Participant ID:	C001-0015
Initials:	LKI
Sex:	Female
Date of birth:	24 Mar 1990
Age at randomisation:	32 years old
Centre name:	TEST Royal London Hospital
DSRS:	5
NIHSS:	22

10. The left page should be displayed, which shows a summary of all of the participant's randomisation information.

This shows:

- Participant's trial ID number
- The name of the randomising investigator
- Participant's their allocated treatment arm.

11. Click into the secure vault site to enter the participant's contact details, which will be required for follow-up.

12. Identifiable data will be kept separately in the secure vault, whereas all other data will be kept in the REDCap database.

Manual Randomisation

If the randomisation database is not working, please see the manual randomisation details found:

- On the trial website
- In WPD 003

In essence, call trial office during working hours, or CI or delegate.

Telephone numbers are listed in the trial protocol.

Blinding

- Whilst investigators, participants and their family will be unblinded, outcome assessors will be blinded to treatment. **Please ensure that outcome assessors are not inadvertently unblinded.**
- Trained treaters (researchers / SLTs) should administer the treatment over 6 days, on top of guideline-based standard of care / deliver guideline-based standard of care.
- A **blinded** SLT should then complete a day 14 bedside assessment. A verbal handover should be given from an unblinded SLT as any relevant history, current recommendations, any results of VFS / FEES etc.
- A blinded day 14 follow up should then be completed, with the participant and using the information from the day 14 bedside assessment (research team can take over at this point).
- Refer to WPD 008 for more advice on blinding in the PhEAST trial.

5. PhEAST : PHAGENESIS

Phagenesis device: Base station and catheter

DETAILS OF DEVICE

Manufacture

- Phagenyx® system manufactured by Phagenesis Ltd (Manchester UK).
- Has an EU CE Mark and FDA breakthrough device designation.
- Phagenesis will provide catheters and loan a base stations to each site, and training in their use without charge.
- If a site has an existing base station, this can be used.

Packaging and labelling

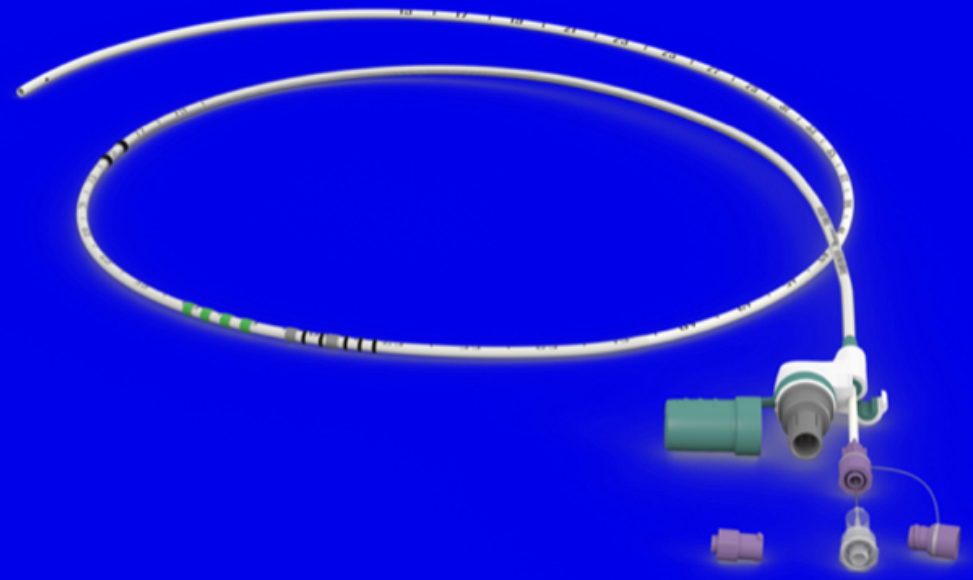
- The catheter is supplied by Phagenesis Ltd as a single-use sterile product.
- The catheter and accessories are supplied in a formed tray.
- The tray and contents are terminally sterilized using ethylene oxide.
- There are two accessory parts supplied with the catheter:
  - A Garment Clip to secure the external parts of the catheter to alleviate weight
  - A Transition Adaptor to enable standard connections for feeding delivery

Base Station

- The Base Station is used to generate, optimise and monitor the delivery of electrical stimulation.
- All devices are mains operated only.
- Please refer to your Phagenesis face-to-face training & handouts for further instructions.

Catheters

- Catheter combines a nasogastric feeding Tube (NGT) with electrodes with appropriate wiring and insulation for delivery of electrical stimulation to the lining of the pharynx.
- The catheter can be used as an NGT alongside its use for stimulation, delivering enteral nutrition to the patient as needed.
- Only one replacement catheter will be inserted, if pulled out before 3 treatments have been administered. If a second catheter is removed prior to completion of the treatment, no further catheters will be provided and treatment will stop.
- Please follow local policies and procedures for confirmation of NG/ catheter placement
- Anyone who is competent in inserting NG tubes can insert the trial catheter, they do not need to be on the delegation log or be GCP-trained.



How To Determine Treatment Level

1. THRESHOLD

The lowest stimulation level at which the participant can feel the PES in their throat.

Increment stimulation levels mA by mA until the participant feels the stimulation

2. TOLERABILITY

The highest level of stimulation that the participant can tolerate.

This is not the treatment stimulation level

3. STIMULATION

Base station calculates treatment stimulation level = threshold + 0.75 x (tolerability – threshold).

Avoid using a lower stimulation level unless participant conveys that they cannot tolerate treatment for 10 minutes. NB. The lower levels will reduce the effectiveness of PES.

Look for visual cues that the participant is uncomfortable

Intervention

- The treatment cycle should be 6 consecutive days.
- If this is not possible, a treatment cycle should not be less than 3 consecutive days.
- Only one break in treatments is allowed

For sites who do not work at weekends:

Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Wed
Day 1	2	3	4	5			6		
	Day 1	2	3	4			5	6	
		Day 1	2	3			4	5	6

Intervention

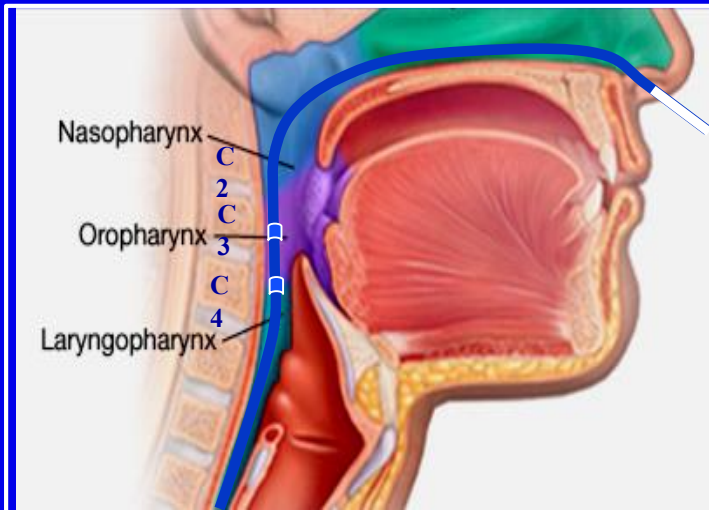
Active

- Randomised group starts with NGT
- PES on top of guideline-care
- 6 days, 10 mins per stimulation, 5 Hz

- Stop treatment early if participant ready for discharge
- If tube pulled out, replace x1
  - Use mittens, nasal bridle as necessary; assess/record deprivation of liberties

Comparator

- Randomised group starts with NGT
- No PES tube on top of guideline care
- Normal NGT left in place as necessary



Phagenesis Training

- All potential 'treaters' will have face-to-face training on the base station and catheters.
- This includes a competency assessment and a handout for future reference.
- Trial staff who will only be involved in the blinded outcomes do not need to attend this training, but are welcome to attend the session for information
- There is a 15 minute part of the training specifically about catheter insertion – it's useful if ward nurses can attend for this part of the session
- It is best practice to have both researchers and SLTs trained on the treatment delivery if possible

Study within a trial (SWAT)

- To ensure maximal stimulation on active PES group
- Sites will be randomised to enhanced support or normal support

Enhanced support

- If actual < calculated stimulation, 2 catheters pulled out, or <9 min 50 sec
- Trial SLT will contact site to retrain on treatment delivery

- Interim analysis
- If SWAT shows enhanced support group have higher PES stimulation, then all sites will receive it.

6. PhEAST : DATA COLLECTION

Data Collection Flow

	Screen	Baseline	Day 1-9	Day 14	Discharge or death	Day 90 †	Day 180 †	Day 365 †
Location	Hospital	Hospital	Hospital	Hosp. or outside	Hospital	Centrally	Centrally	Centrally
Eligibility	+							
Consent/proxy consent	+							
DSRS FOIS EAT-10 FSS		+		+		+	+	+
NIHSS, GCS		+		+				
Randomisation		+						
PES vs no PES			<>6 days					
Targeted outcomes: pneumonia			<	>				
All SAEs			<>					
Device-related (S)AEs			<	>				
Fatal SAEs			<	=	=	>		
All-cause mortality						+	+	+
Disposition					+	+	+	+
QoL: EQ-5D, EQ-VAS		+		+	+	+	+	+
mRS, BI, TICS, ZDS, home-time		+(mRS, BI)		+(mRS, BI)		+	+	+
Resource use					+	+		
Global (Stroke Impact Scale)		+		+		+	+	+
Cognition: MoCA, MMSE, semantic verbal fluency, phonemic verbal fluency, dementia diagnosis, IQCODE,		+		+		+	+	+
Frailty (CFI)		+		+		+	+	+

DSRS: The Dysphagia Severity Rating Scale
FOIS: The Functional Oral Intake Scale
EAT-10: Eating Assessment Tool
FSS: Feeding Status Scale
NIHSS: NIH Stroke Scale
mRS: Modified Rankin Scale
BI: Barthel Index
EQ-5D: EuroQoL Five Dimensional
EQ-VAS: EuroQoL Visual Analogue Scale
TICS: Telephone Interview for Cognitive Status
ZDS: Zung Depression Scale
MoCA: Montreal Cognition Assessment
MMSE: Mini mental state examination
IQCODE: Informant Questionnaire on Cognitive Decline in the. Elderly

Eligibility and Day 000 CRFs

- The eligibility, and baseline (day 000) forms must be complete and signed to proceed to randomisation

- The IQCODE and cognition should be completed before randomisation ideally, but if you are struggling for time please complete it as soon as possible after randomisation

Data Collection Instrument	Status
Eligibility	
Day 000	
Day 000 Clinical	
Day 000 EQ-5D-5L	
Day 000 IQCODE	
Day 000 Cognition	

Treatment eCRFs

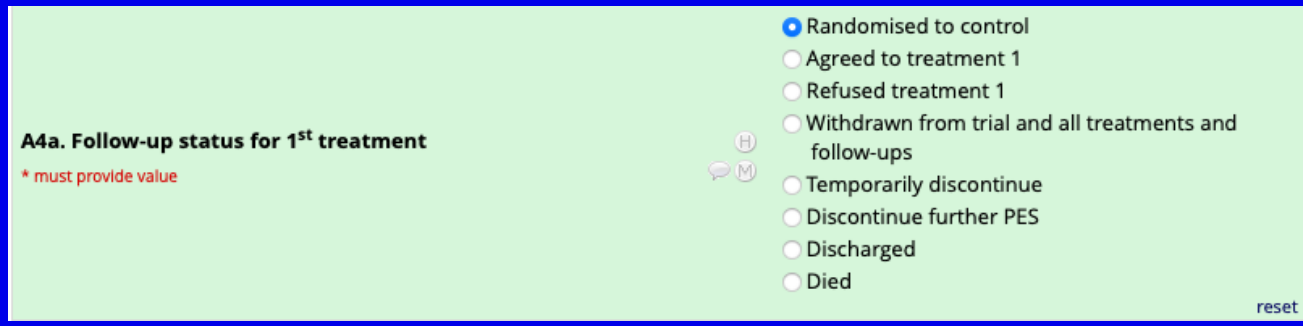
- A treatment eCRF form is filled out for each day of treatment, or equivalent in control group, as soon as possible
- By treater or equivalent

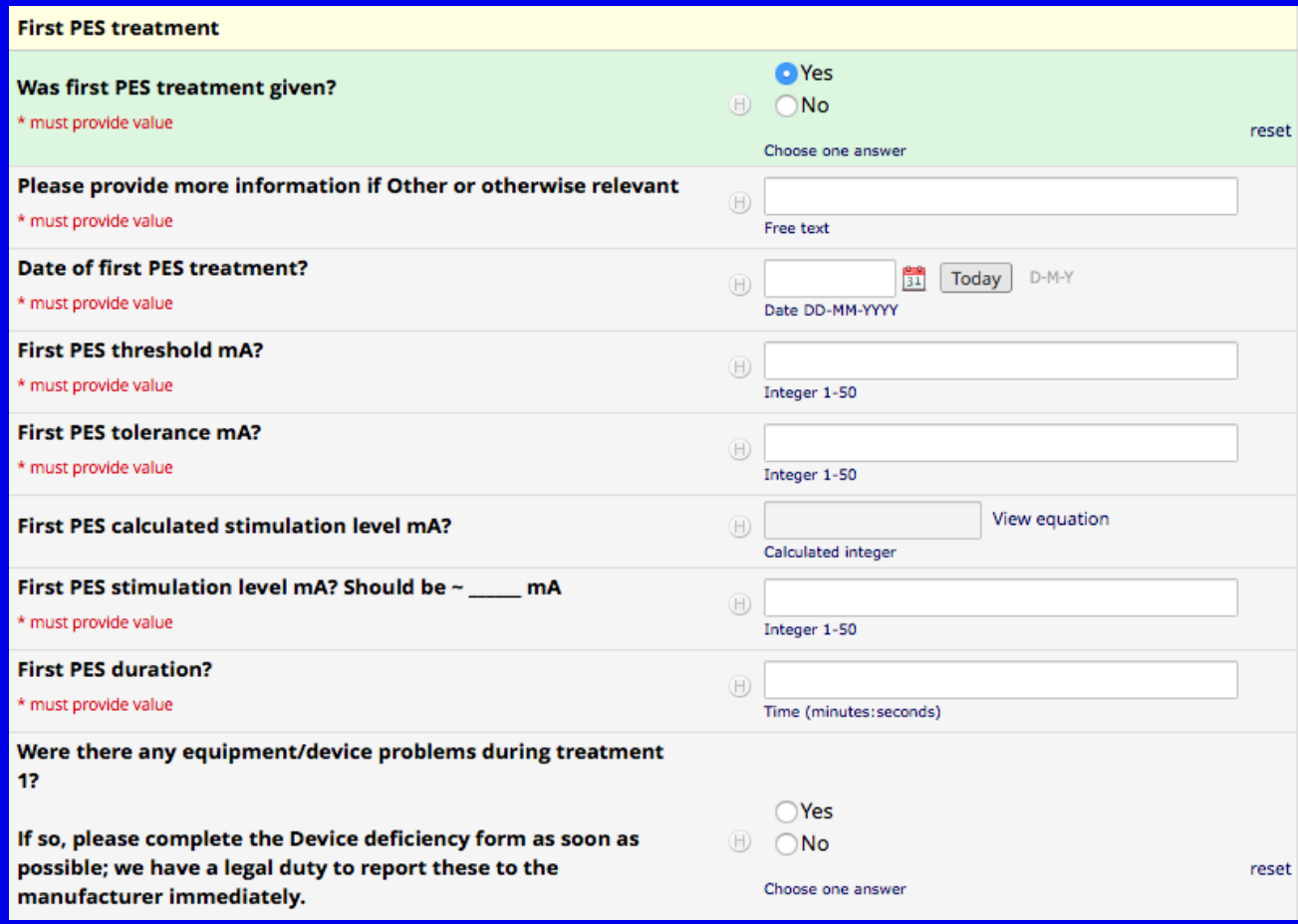
Data entered

- PES threshold
- PES tolerability
- Calculated PES stimulation
- Actual PES stimulation
- Catheters used
- Catheter LOT number; base station serial number

SWAT: The site may be contacted if:

- Actual PES stimulation < calculated, or
- Actual PES stimulation < 20 mA



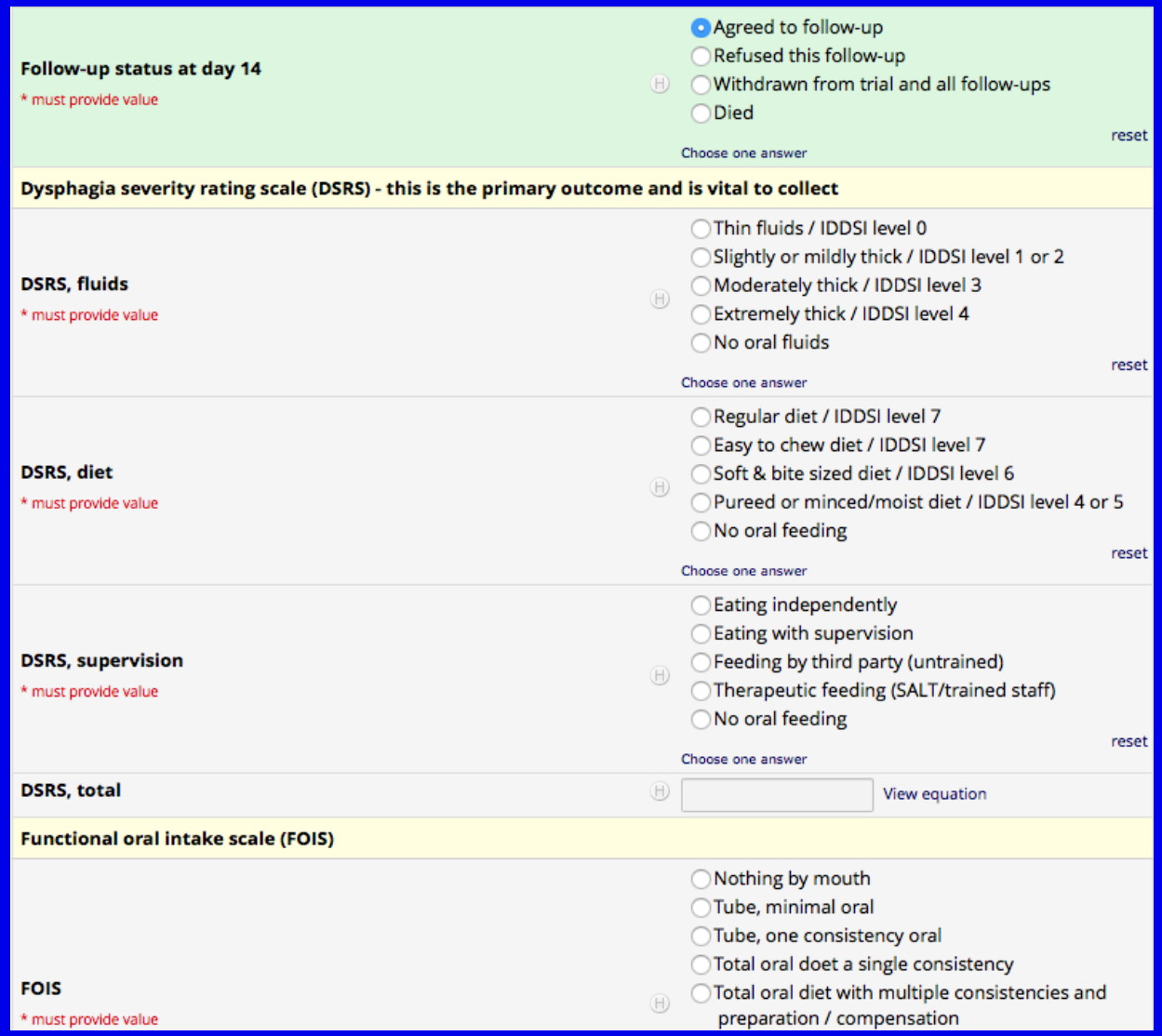


Day 14 Follow Up CRF

- Primary outcome: DSRS
  - Effect in subgroups: age, sex, NIHSS, DSRS, stroke type, anterior vs posterior circulation, time onset-randomisation
- Secondary outcomes:
  - DSRS <=4, FOIS, EAT-10, feeding status score (FSS); EQ-VAS; chest infection; antibiotic use; weight

It is vital that these are:

- Completed for each participant
- Done by a blinded SLT / researcher



Follow-up status at day 14
* must provide value
- (●) Agreed to follow-up
- ( ) Refused this follow-up
- ( ) Withdrawn from trial and all follow-ups
- ( ) Died

reset
Choose one answer

Dysphagia severity rating scale (DSRS) - this is the primary outcome and is vital to collect

DSRS, fluids
* must provide value
- ( ) Thin fluids / IDDSI level 0
- ( ) Slightly or mildly thick / IDDSI level 1 or 2
- ( ) Moderately thick / IDDSI level 3
- ( ) Extremely thick / IDDSI level 4
- ( ) No oral fluids

reset
Choose one answer

DSRS, diet
* must provide value
- ( ) Regular diet / IDDSI level 7
- ( ) Easy to chew diet / IDDSI level 7
- ( ) Soft & bite sized diet / IDDSI level 6
- ( ) Pureed or minced/moist diet / IDDSI level 4 or 5
- ( ) No oral feeding

reset
Choose one answer

DSRS, supervision
* must provide value
- ( ) Eating independently
- ( ) Eating with supervision
- ( ) Feeding by third party (untrained)
- ( ) Therapeutic feeding (SALT/trained staff)
- ( ) No oral feeding

reset
Choose one answer

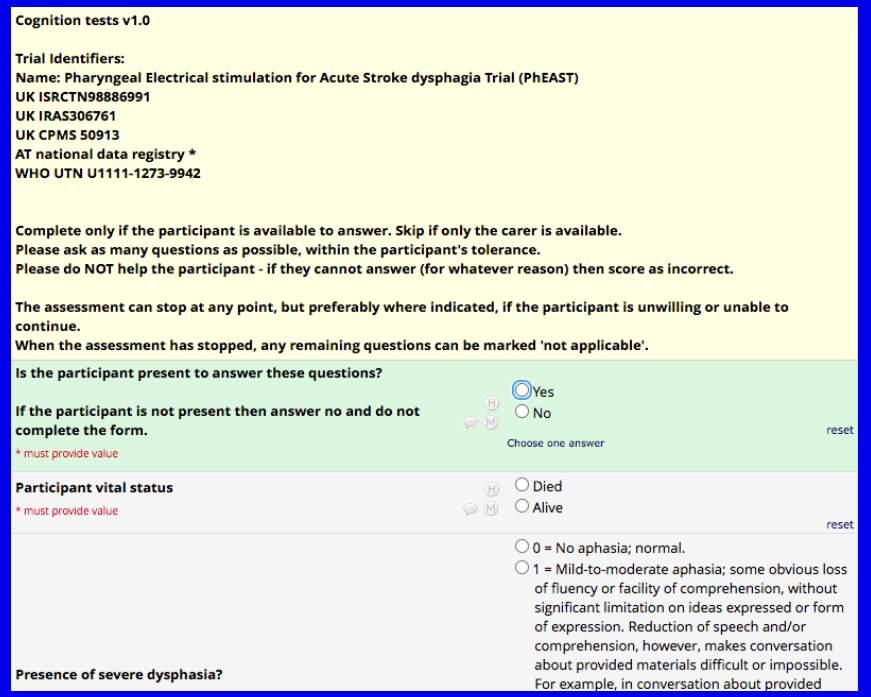
DSRS, total [ ] View equation

Functional oral intake scale (FOIS)

FOIS
* must provide value
- ( ) Nothing by mouth
- ( ) Tube, minimal oral
- ( ) Tube, one consistency oral
- ( ) Total oral doet a single consistency
- ( ) Total oral diet with multiple consistencies and preparation / compensation

Cognition CRFs

- The cognition CRFs contain the questions to ask the participant
- The IQCODE CRFs contain the questions to ask the informant. You must get informant consent in order to ask these questions.
- Do **not** complete the IQCODE if you have not gained informant consent.



Cognition tests v1.0

Trial Identifiers:
Name: Pharyngeal Electrical stimulation for Acute Stroke dysphagia Trial (PhEAST)
UK ISRCTN98886991
UK IRAS306761
UK CPMS 50913
AT national data registry *
WHO UTN U1111-1273-9942

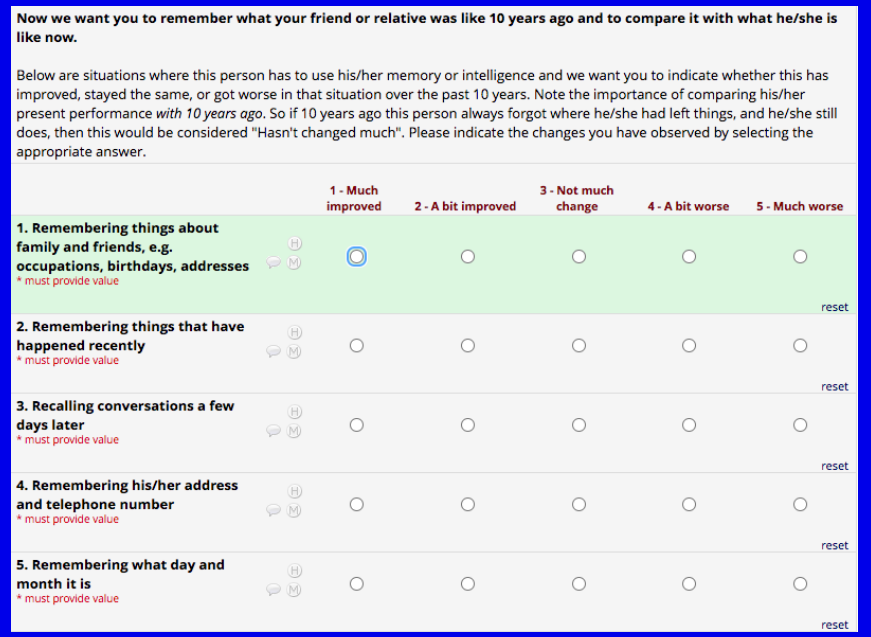
Complete only if the participant is available to answer. Skip if only the carer is available.
Please ask as many questions as possible, within the participant's tolerance.
Please do NOT help the participant - if they cannot answer (for whatever reason) then score as incorrect.

The assessment can stop at any point, but preferably where indicated, if the participant is unwilling or unable to continue.
When the assessment has stopped, any remaining questions can be marked 'not applicable'.

Is the participant present to answer these questions?
If the participant is not present then answer no and do not complete the form.
* must provide value
(•) Yes
( ) No
Choose one answer
reset

Participant vital status
* must provide value
( ) Died
( ) Alive
reset

Presence of severe dysphasia?
( ) 0 = No aphasia; normal.
( ) 1 = Mild-to-moderate aphasia; some obvious loss of fluency or facility of comprehension, without significant limitation on ideas expressed or form of expression. Reduction of speech and/or comprehension, however, makes conversation about provided materials difficult or impossible. For example, in conversation about provided



Now we want you to remember what your friend or relative was like 10 years ago and to compare it with what he/she is like now.

Below are situations where this person has to use his/her memory or intelligence and we want you to indicate whether this has improved, stayed the same, or got worse in that situation over the past 10 years. Note the importance of comparing his/her present performance *with 10 years ago*. So if 10 years ago this person always forgot where he/she had left things, and he/she still does, then this would be considered "Hasn't changed much". Please indicate the changes you have observed by selecting the appropriate answer.

	1 - Much improved	2 - A bit improved	3 - Not much change	4 - A bit worse	5 - Much worse
1. Remembering things about family and friends, e.g. occupations, birthdays, addresses * must provide value	(•)	( )	( )	( )	( )
2. Remembering things that have happened recently * must provide value	( )	( )	( )	( )	( )
3. Recalling conversations a few days later * must provide value	( )	( )	( )	( )	( )
4. Remembering his/her address and telephone number * must provide value	( )	( )	( )	( )	( )
5. Remembering what day and month it is * must provide value	( )	( )	( )	( )	( )

reset

University of Nottingham
UK | CHINA | MALAYSIA

DSRS: dysphagia severity rating scale

A measure of swallowing impairment

DSRS total score = sum of 3 sub-scales

Score	Fluids	Score	Diet	Score	Supervision
4	No oral fluids	4	Non oral feeding	4	No oral feeding
3	IDDSI level 4	3	IDDSI level 4 and 5	3	Therapeutic feeding (SALT/trained staff)
2	IDDSI level 3	2	IDDSI level 6	2	Feeding by third party (untrained)
1	IDDSI level 1 and level 2	1	IDDSI level 7 easy to chew	1	Eating with supervision
0	IDDSI level 0	0	IDDSI level 7 regular	0	Eating independently

)SRS supervision score 3 is always chosen when a patient is on limited or consistent oral trials and still requires
NG/ PEG tube.
)ral trials are scored from the fluid and diet subscales (i.e. 3 onwards) and can be either trials of food *or* fluid or
rials of food *and* fluids.

Small vol. trials 443 = 11
Large vol. trials 343 = 10
Large vol. trials 434 = 10

Jayasekeran *et al. Gastroenterology* 2010; 138: 1737-46
Everton *et al. Sci Rep* 2020 10: 7268

DSRS: dysphagia severity rating scale

- Oral trials of fluid and/or food are commonly recommended for patients with post-stroke dysphagia. Scoring the DSRS can feel more difficult with patients on oral trials. We suggest the following criteria:

Minimal amount trials

- This is equivalent to a score of 2 on the FOIS with no more than 15 teaspoons of any consistency within one day.
- Fluid and food items should be scored as 4, with a supervision score of 3 to indicate trials are taking place = DSRS 11 (4,4,3)
- e.g. 5 teaspoons of level 3 moderately thick fluids 3 times daily
- OR 3 teaspoons of level 4 puree yoghurt only 3 times daily

Consistent amount trials

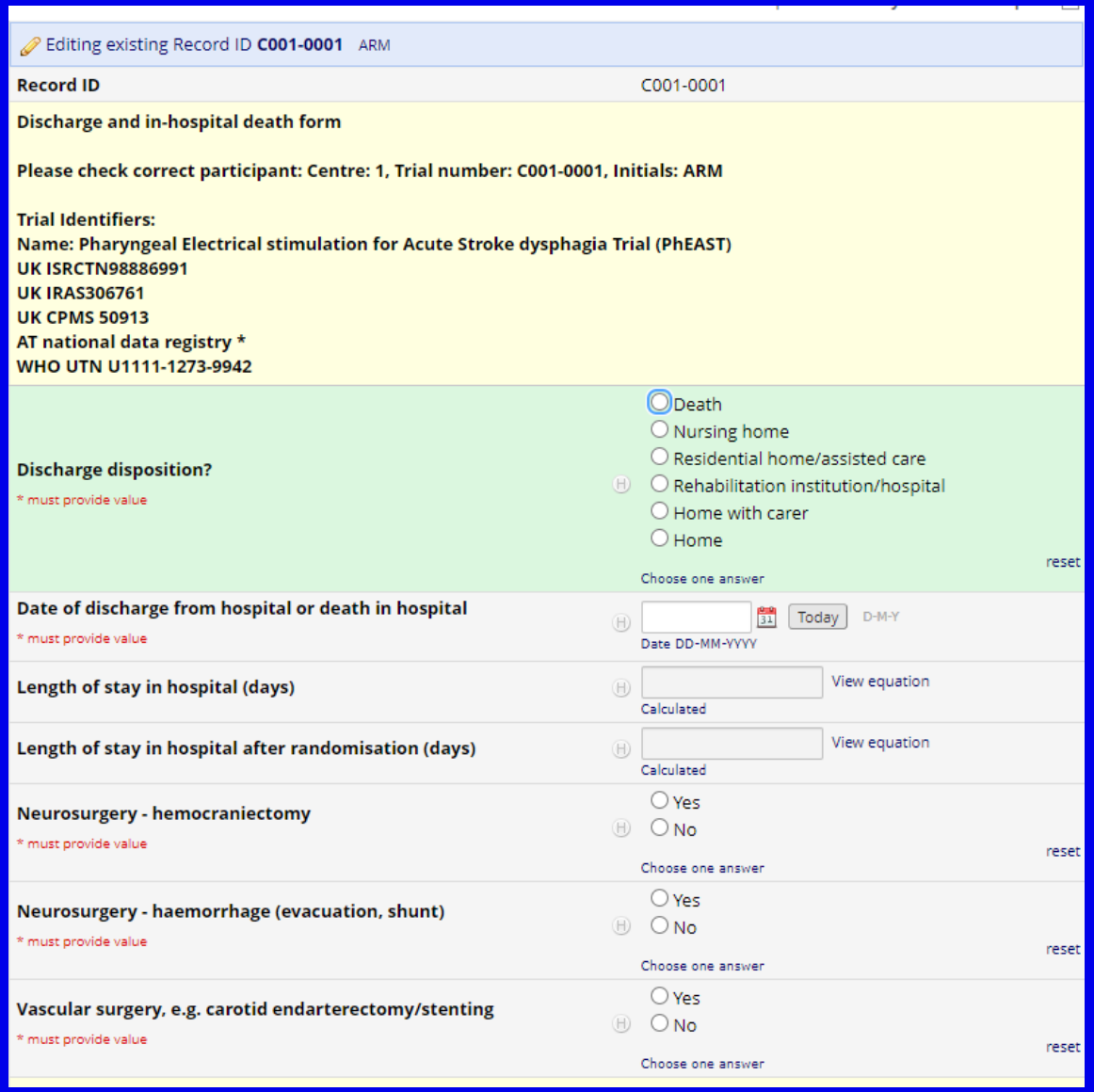
- This is equivalent to a score of 3 on the FOIS
- Fluid and food should be scored as per the consistency advised with a supervision score of 3 to indicate trials are taking place
- e.g. ½ portions of level 4 puree diet separate to 100mls of level 2 mildly thick fluids 3 times daily = DSRS 7
- OR 10 tspns of level 4 puree diet separate to up to 10 sips of level 1 slightly thick fluids 3 times daily = DSRS 7

Discharge / Death eCRF

All participants need a discharge / death CRF completed

This collects information on

- Discharge disposition: home, care home, nursing home, another hospital, death
- Length of stay
- Final diagnosis
- Time to removal of NGT /PEG
- Whether discharged with PEG
- Time in ICU, to intubation, disposition



Editing existing Record ID **C001-0001** ARM

Record ID	C001-0001
Discharge and in-hospital death form **Please check correct participant: Centre: 1, Trial number: C001-0001, Initials: ARM** **Trial Identifiers:** **Name: Pharyngeal Electrical stimulation for Acute Stroke dysphagia Trial (PhEAST)** **UK ISRCTN98886991** **UK IRAS306761** **UK CPMS 50913** **AT national data registry *** **WHO UTN U1111-1273-9942**	
Discharge disposition? * must provide value	○ Death ○ Nursing home ○ Residential home/assisted care ○ Rehabilitation institution/hospital ○ Home with carer ○ Home reset Choose one answer
Date of discharge from hospital or death in hospital * must provide value	Today D-M-Y Date DD-MM-YYYY
Length of stay in hospital (days)	View equation Calculated
Length of stay in hospital after randomisation (days)	View equation Calculated
Neurosurgery - hemocraniectomy * must provide value	○ Yes ○ No reset Choose one answer
Neurosurgery - haemorrhage (evacuation, shunt) * must provide value	○ Yes ○ No reset Choose one answer
Vascular surgery, e.g. carotid endarterectomy/stenting * must provide value	○ Yes ○ No reset Choose one answer

7. PhEAST : LOCAL SITE INFORMATION

Local Site File Contents

- Please see the PhEAST website where you can download an index page for the local investigator site file
- The coordinating centre will not send local (investigator) hardcopy site files in the post for reasons of sustainability and version control
- All documents will be available on the PhEAST website – if the local site want to print their own local site file then they must keep both the hardcopy and electronic site file up to date
- The coordinating centre will send any amendment notifications electronically with guidance of if any documents need superseding, we will then put the updated documentation on the PhEAST website

https://stroke.nottingham.ac.uk/pheast/docs

Delegation Log

- Anyone who is involved in the trial needs to be on the delegation log
- Includes nurses, doctors, speech and language therapists, administrators entering data onto online platform etc
- You can have as many people on the delegation log as required
- The training and roles delegated should be appropriate to the respective job role.

Local team members listed on the PhEAST delegation log need:

- Up to date CV
- Up to date GCP (unless SLT only completing blinded bedside assessments)
- Completion of trial training

It is the local PI's responsibility to check the CV and GCP are up to date (within previous 2 years) for each team member before they can be signed off on the delegation log

Online delegation log:

- Add new team members to the delegation log before they can start working on PhEAST
- Alter the record of departing team members: sign and date 'role finished' against their name

After SIV and Phagenesis training, complete as soon as possible to achieve green light

Document Prep / Upload

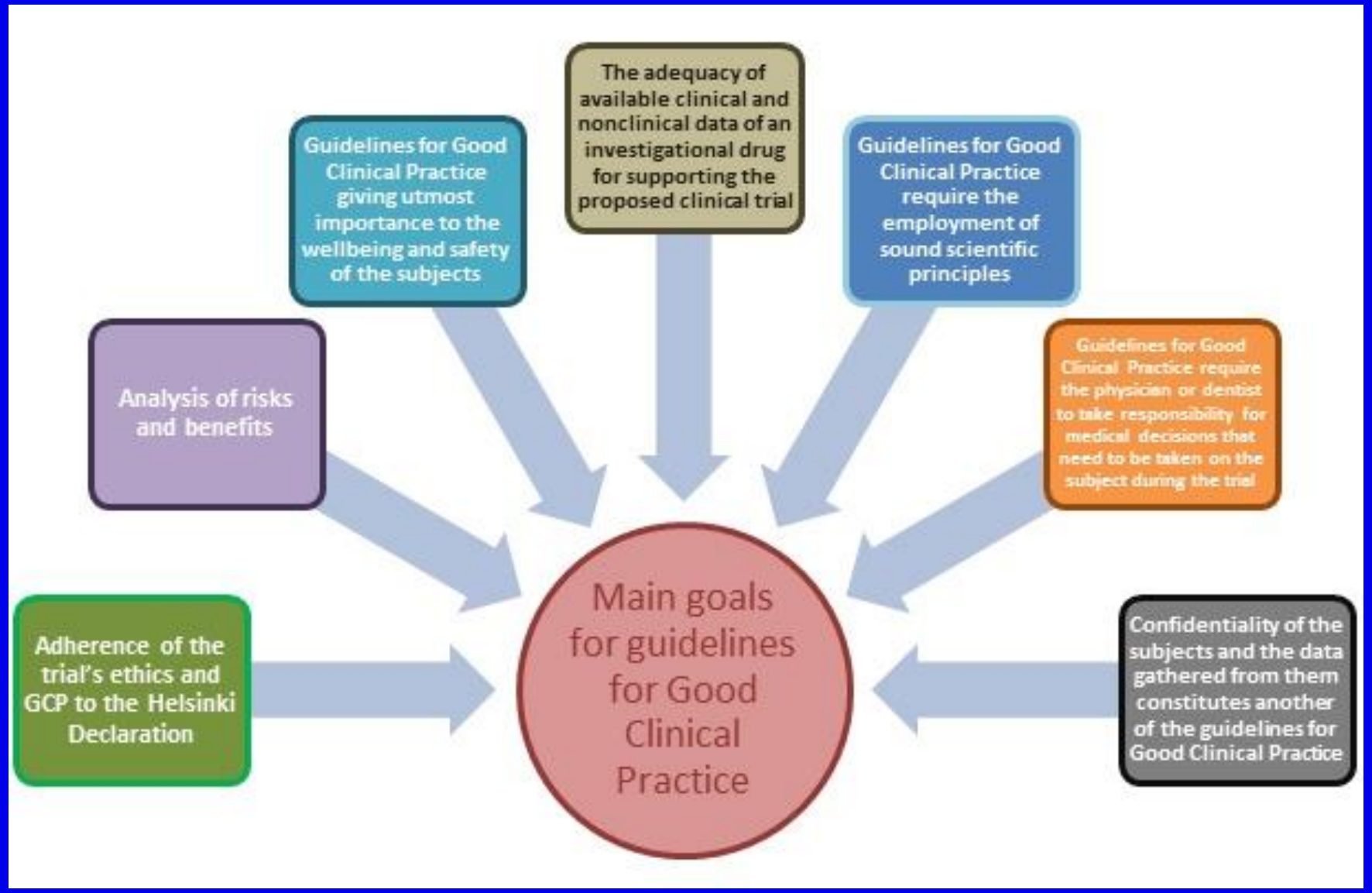
Document Prep:

- Please ensure you're using the current versions of all paperwork
- These can be found on the website
- There is a version control table you can download
- Please localise documents with your trust / hospital details (headers, and contact details in documents).
- **Please see WPD 009 for more details**

Document Uploading:

- Please upload consent forms (within one working day), GP letters, file notes and any signed SAE forms via the supporting site
- These will be reviewed and accepted / rejected by the trial team
- Please also upload the participant contact details ASAP so the trial team can carry out the central follow ups.
- **Please see WPD 010 for more details**

Good Clinical Practice (GCP)



Good Clinical Practice (GCP)

- Good Clinical Practice (GCP) is an international ethical and scientific quality standard for the design, conduct and record of research involving humans.
- There are 13 principles of GCP and compliance with GCP provides public assurance that the rights, safety and well-being of research subjects are protected and respected, in line with the principles enunciated in the Declaration of Helsinki and other internationally recognized ethical guidelines. It also ensures the integrity of research data.

- Further reading:
- https://learn.nihr.ac.uk/
- https://s3.eu-west-2.amazonaws.com/www.hra.nhs.uk/media/documents/ema-gcp-guidance.pdf
- https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/good-clinical-practice/

Associate PI Scheme (UK only)

PhEAST (CPMS ID: 50913) is registered for the Associate PI Scheme

This scheme is a great opportunity for doctors, nurses, SLTs and other healthcare professionals to gain knowledge about delivery of an NIHR portfolio trial

Six-month programme, and APIs work under the wing of their local PI

See the Associate PI scheme page on the NIHR website for more information.

Applicants may register to be Associate PIs for this study, having obtained approval from their local PI, using the NIHR Associate PI Scheme Applicant Registration Form

Please consider who might be an associate PI at your site

NIHR | National Institute for Health Research

8. PhEAST SAFETY REPORTING

SAFETY EVENTS

- The process for recording and reporting safety takes account that PES has an excellent safety record in previous trials, participants with PSD (who usually have severe stroke) are likely to have multiple adverse events and SAEs, and the trial is open-label in design. Hence, we will limit recording to:

- All SAEs over 0-9 days
- Procedure/device-related (serious) adverse device events, (S)ADEs, over days 10-14
- Fatal SAEs only over days 15-90
- All-cause mortality to day 365

ADEs, SADEs, USADEs

ADE = adverse device effect

- Adverse event related to the use of an investigational medical device (cf AE)
- Includes any adverse event resulting from insufficiencies or inadequacies in the instructions for use, the deployment, the implantation, the installation, the operation, or any malfunction of the investigational medical device
- Includes any event that is a result of a use error or intentional abnormal use of the investigational medical device.

SADE = serious adverse device effect (SADE)

- Adverse device effect that has resulted in any of the consequences characteristic of a serious adverse event (cf SAE)

USADE = unanticipated serious adverse device effect (cf SUSAR)

- Serious adverse device effect which by its nature, incidence, severity or outcome has not been identified in the current version of the risk analysis report (cf SUSAR)
- Must be entered into the database within 24 hours of knowledge of the event

SADEs and USADEs

- Will trigger an email sent directly to the CI, who will review the event

- Sites should record and monitor all SAEs / SADEs until resolution, stabilisation or until the AE has been found to **not** be caused by study treatment

Serious Adverse Event Reporting

- Any AE occurring following study mandated procedures, having received the treatment, that results in any of the following outcomes:

1. **Death**
2. **A life-threatening adverse event**
3. **Inpatient hospitalisation or prolongation of existing hospitalisation**
4. **A disability / incapacity**
5. **A congenital anomaly in the offspring of a participant**
6. **Medically important**
   - Events that jeopardise the participant and may require medical / surgical intervention to prevent one of the above criterion

Serious Adverse Event Reporting

- All SAEs will be assessed for causality using the following criteria:

1. **Not related / improbable** to device = SAE
2. **Unlikely** related to device = SAE
3. **Possibly** related to device = (U)SADE serious adverse device effect
4. **Probably** related to device = (U)SADE serious adverse device effect
5. **Definitely** related to device = (U)SADE serious adverse device effect

What to do in Case of Device Defect

ADEs/SADEs and device defects are not the same!

Report any device defect (relating to either the base station or the catheter) on RedCap using device deficiency form

Information:

- Item: base-station, catheter
- Timing: Before PES, during PES, after PES
- Failure type: e.g., cable, break, base-station, feeding port (photo)
- Associated SAE form
- Plan to return to Phagenesis

This information will be reported automatically to the manufacture (Phagenesis)

Pulling the catheter out, or attempting to, is not a device deficiency!

9. PhEAST : PROTOCOL VIOLATIONS

Protocol Violation

A protocol violation is a major variation in practice from the trial protocol, for example where a participant is enrolled in spite of not fulfilling all the inclusion and exclusion criteria, e.g.:

- Lack of consent.
- Randomisation before 2 days.
- Stimulation given >3 days after randomisation
- Or where deviations from the protocol could affect participant safety, the trial delivery or interpretation significantly

****Important to report any protocol violations to coordinating centre straight away****

All protocol violations must be reported to the Chief Investigator, via the form on redcap.

The CI will notify the Sponsor if a violation has an impact on participant safety or integrity of the trial data.

The Sponsor will advise on appropriate measures to address the occurrence, which may include reporting of a serious GCP breach, internal audit of the trial and seeking counsel of the trial committees

10. PhEAST : MONITORING

Site Monitoring Plan by Nottingham STU

Investigator Site File checklist

- This will check, but is not limited to:

1. Delegation & training logs in the ISF
2. Correct versions of patient-facing documents (PIS, RIS, GP letter, etc)
3. Ethical approval letters
4. Printed CRFs
5. SAE forms
6. Signed consent forms
7. CVs / GCPs

Patient File checklist

- This will check, but is not limited to:

1. Randomisation result and eligibility
2. Consent form and GP letter
3. Treatment levels
4. Adverse event log
5. Protocol violations affecting participant

Monitoring Plan

Entries on the eCRF will be verified by:

- Inspection against the source data.
- A small random sample of data entries will be checked on a regular basis for verification of all entries made.
- Central data analysis looking for outliers, digit preference, logic errors, non-normality etc.

- Monitoring will be completed remotely or face to face.

SDV will be done via:

1. Document uploading / sharing through secure vault.
2. Access on site

- Any discrepancies identified in the eCRF will be clarified with the site and resolved. Any changes to source data should be recorded, initialled and dated, as per GCP guidelines

Co-enrolment

Co-enrolment between certain trials is allowed

- An up-to-date list of trials that PhEAST can co-enroll with, and their respective time windows, will be given on the PhEAST website

Current list of trials	Delay to PhEAST
ENOS-2: IS/ICH	n/a
MAPS-2: IS/ICH	n/a
RECAST-3: IS	n/a
TICH-3: ICH	n/a
ProFATE	**>= 14 days**
MACE-ICH	**>= 14 days**

11. PhEAST: SUMMARY

PhEAST Key Points

Population

- Total 800 participants with recent stroke (2-31 days) with FOIS score of 1, 2 or 3

Intervention

- Six days of PES

Comparison

- Standard of care

Outcome

- DSRS (day 14) (primary)

12. PhEAST : CONTACT INFORMATION

PhEAST Trial Team

Name	Role	Contact Information email
Philip Bath	Chief Investigator	philip.bath@nottingham.ac.uk
Tiffany Hamilton	Senior Trial Manager	tiffany.Hamilton@nottingham.ac.uk
Cameron Skinner	Trial Manager	Cameron.skinner@nottingham.ac.uk
Sharon Ellender	Follow Up Coordinator	sharon.ellender1@nottingham.ac.uk
Kennedy Cadman	Research Coordinator	Kennedy.Cadman@nottingham.ac.uk

Trial Coordinating Centre contact information:

+44 115 823 1255

pheast@nottingham.ac.uk

Thanks – Q&A?

More information from:

pheast@nottingham.ac.uk