

MAC Clinical Research Sleep Laboratory



We conduct sleep assessments at our Care Quality Commission (CQC) registered sleep clinic, which has been tailored to conduct highly specialised sleep research studies and healthcare services.

Regulated by



We have state-of-the-art facilities to ensure we provide high quality diagnostic sleep analysis



Each room comes with complete soundproofing as well as a sleep research approved wooden bed and bed linen for a comfortable sleep



Ability for overnight PK measures with samples drawn external to the room to minimise sleep disturbance



Each room has an entrance lobby for sound and light pollution protection, with Melatonin Levels maintained by controlled colour changeable room lighting and windowless rooms



All rooms are monitored by a central nursing station by CCTV, with intercoms to communicate with occupants



Ability to house a patient and their carer, or a child and their guardian for paediatric studies

In addition to conducting studies, our sleep clinic helps patients referred by their GP; alleviating pressure from the NHS and allowing people to be diagnosed quicker

The sleep laboratory offers assessments for a wide range of research areas

- The regulation of human sleep by circadian rhythmicity
- The effects of light on sleep, performance and circadian rhythms
- Ageing, sleep and circadian rhythms
- Hypersomnia

- The effects of insufficient sleep on cognition, mood and metabolism
- Biomarkers of sleep and circadian rhythm
- Insomnia
- Sleep Apnoea

- Mathematical modelling of sleep and circadian rhythms
- Nocturia
- Excessive sleepiness
- Restless leg syndrome
- Neurodegeneration, sleep and circadian rhythms

Assessments & Techniques

➤ **Polysomnography (PSG)**

Used to diagnose a variety of sleep disorders through the study of sleep stages and cycles.

➤ **Multiple Sleep Latency Test (MSLT)**

Identifies any excessive daytime sleepiness and detects potential sleep disorders associated with increased hypersomnia, usually used in conjunction with an overnight PSG.

➤ **Routine Electroencephalogram (EEG)**

Monitors the electrical activity of the brain and is used to determine any abnormal brain waves.

➤ **Sleep deprived- Electroencephalogram (EEG)**

Records electrical activity produced by the brain whilst asleep and is most often used in the investigation of patients who have seizures (fits) or blackouts.

➤ **Ambulatory- Electroencephalogram (aEEG)**

Records up to 72 hours of brain activity within the home environment using a portable EEG recorder.

➤ **Maintenance of Wakefulness Test (MWT)**

Identifies the severity of symptoms in people experiencing sleep disorders such as narcolepsy and sleep apnoea to assess the success of current treatment.

MAC Sleep Unit Technologies and Equipment

- High definition Pan, Tilt & Zoom camera with infra-red
- Xltek Video EEG desktop recording system
- Specialist techniques including pharmacodynamic measures, lumbar punctures, and aseptic techniques to support complex procedures
- Xltek PSG system
 - ThermoCan thermistor & nasal cannula
 - Piezoelectric snore sensor
 - LNCS Adhesive oximetry sensor
 - XactTrace Abdomen & Chest Respiratory Band Kit with integrated ECG analysis
 - Option to record vital signs available alongside sleep waveforms
 - Xltek Brain Monitor with integrated pulse oximetry, EMG, EOG, respiratory and flow recording.
 - Leg electrodes to record movement for limb movement disorder (RAT and LAT)
 - Body position analysed by body position sensor and video

Sleep Research Senior Team



Jorge Costa

Head of Neuroscience



Bev Doyle

Clinical Research Nurse
Specialist



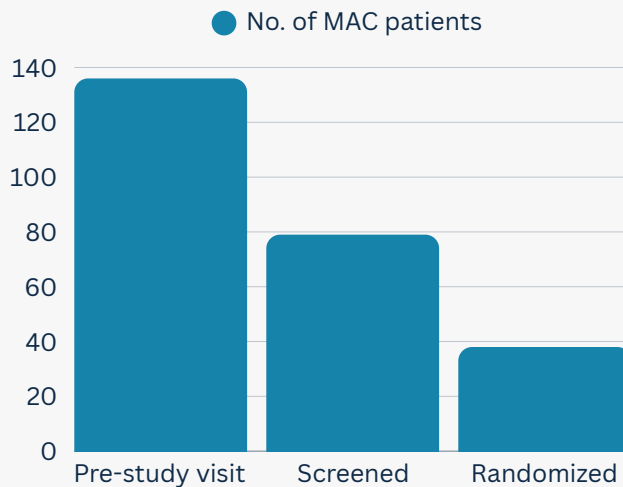
Teresa Cullen

Clinical Sciences Manager

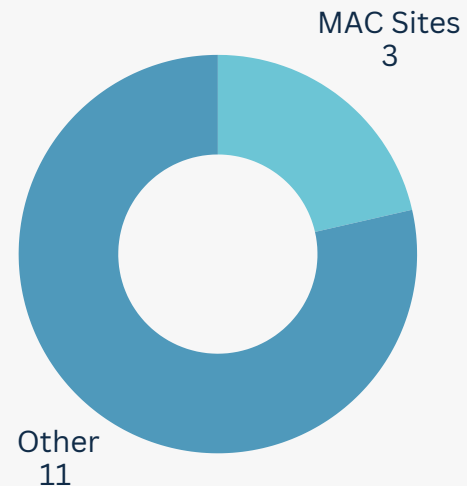
Case study

Sleep Study in Major Depressive Disorder - Phase III

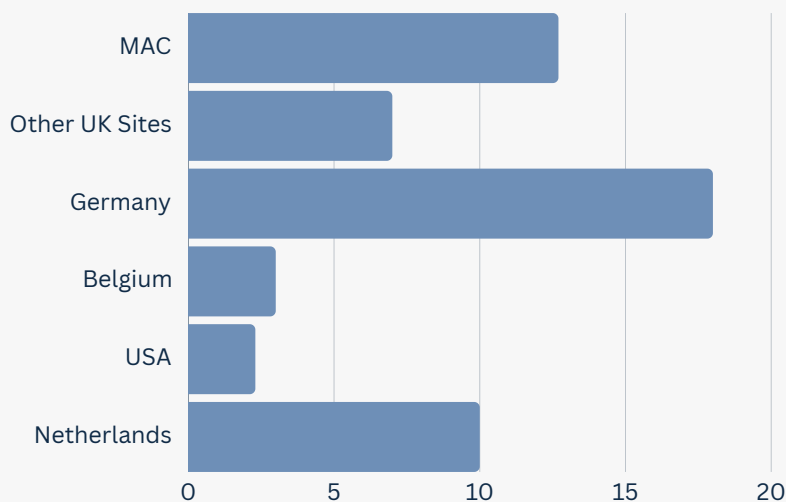
Recruited Patients



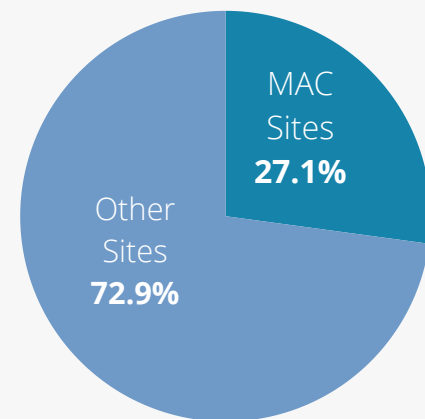
Number of Sites



Average volume of patients per Site



% of MAC recruited patients



MAC outperformed many other sites resulting in the UK being the top recruiting country for this study

MAC Clinical Research

- ✓ Over 30 years' experience in conducting clinical studies
- ✓ Full-service CRO with global reach
- ✓ 10 fully-owned research facilities in the UK
- ✓ Experts in healthy volunteer and patient recruitment



5-year summary

120+

SPONSORS

250+

STUDIES

50+

INDICATIONS

20+

FIH STUDIES

Our Services



CLINICAL RESEARCH SERVICES

Project Management

Clinical Operations

Site Monitoring
Site Management
Trial Feasibility

Pharmacovigilance

Regulatory Affairs

Biometrics

EDC
Data Management
SAS Programming
Biostatistics
Medical Writing

Vendor Management

Randomization and Trial Supply Management

Digital Solutions

Electronic Patient-Reported Outcomes (ePRO)
eConsent

Medical Monitoring



SITE & PATIENT SERVICES

Participant Recruitment

Participant Retention

Global Investigator Sites

Network of Fully-Owned Investigator Sites

Sleep Laboratory
Early Phase Unit
Psychedelic Testing Suites
Phase I - IV Research Facilities
Memory Assessment Research Centre



SCIENTIFIC SOLUTIONS

Human Models of Disease

Scientific and Endpoint Assessments

Cardiovascular Assessments
Cognitive and Neuropsychological Assessments
Dermatology Assessments
Imaging Assessments
Neurophysiology Assessments
Pain Assessments
Other Assessments
Rare diseases

Sleep Assessments

Psychedelics

Training



PHARMACEUTICAL SERVICES

GMP Manufacturing

In-House Pharmacy

Global Clinical Supplies

QP Release

IMP Management & Distribution

Controlled Drug Services

Laboratory Services

Clinical Pathology
Bioanalytical Services



STRATEGIC CONSULTANCY

Therapeutic Area Expertise & Study Development

Scientific Solutions & Pharmacodynamics

Clinical Science & Development

Medical Strategy, Input & Expertise

Statistical Analysis, Planning & Advice

Medical Writing

Laboratory Study Design, Methods & Conduct

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