

**Report to the Meeting of the**

**Oxford Health NHS Foundation Trust**

**Board of Directors**

**25 March 2020**

**Research and Development Report**

**For information**

**Executive Summary**

The last six months has seen National Institute of Health Research (NIHR) responses to the following annual infrastructure award reports;

* Oxford Health Biomedical Research Centre (BRC)
* Oxford Cognitive Clinical Research Facility (CRF)
* Oxford NIHR Collaboration in Leadership in Applied Health Research and Care (CLAHRC)
* NIHR Community Healthcare MedTech and IVD Co-operative (MIC)

In all cases the NIHR were happy with progress. A few small areas were identified for action which will be addressed

The Applied Research Collaboration Oxford and Thames Valley (OxTV) (ARC) commenced on 1st October (£9m over five years). This effectively replaced the Oxford NIHR Collaboration in Leadership in Applied Health Research and Care (CLAHRC) which came to an end in September. Both of these awards were\are led by Professor Richard Hobbs.

The Research Management Group is proving a value asset in steering the strategic and scientific direction of research undertaken within OHFT and its partners by bringing together key stakeholders from the various NIHR infrastructures, AHSC, AHSN, University of Oxford, Oxford Brookes University and the clinical services

The Trust continues to provide robust research support to enable researcher to conduct studies within OHFT, with regular pipeline meetings to establish feasibility for each study taking into consideration scientific and strategic importance to patients, the organisations and its partners.

R&D are forecasting a £95k favorable variance for FY20

OHFT contributed to the Oxford Academic Health Science Centre renewal application and continues to support the Oxford Academic Health Science Network with developments in Mental Health

OHFT are meeting bi-monthly with the NIHR as part on their Intellectual Property management process.

**Governance Route/Approval Process**

The is a biannual update report to the Board for Research and Development taking place or being hosted within the Trust and is for information

**Statutory or Regulatory responsibilities**

Research and Development is aligned to its regulatory responsibilities in undertaking research and is compliant with contractual obligations

**Recommendation**

The Board is asked to note the report.

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1. ***Strategic Objectives*** *– this report relates to or provides assurance and evidence against the following Strategic Objective(s) of the Trust [OR N/A – no Strategic Objectives apply] (****please delete as appropriate****):*

*1) Driving Quality Improvement*

*(Goals: patients will be safe from harm; patients will achieve the clinical outcomes they want; and patients and carers will have an excellent experience)*

*2) Delivering Operational Excellence*

*(Goals: our services will be effective and efficient; information will be translated into knowledge; and our planned surplus will be delivered)*

*3) Delivering Innovation, Learning and Teaching*

*(Goals: the impact of the AHSN, AHSC and CLAHRC will be maximised; we will collaborate in research and innovation; and we will deliver high quality teaching)*

*4) Developing Our Business through Collaboration and Partnerships*

*(Goals: we will work in collaborative partnerships; we will maintain and grow our services where we add value; and we will have strong relationship with our stakeholders)*

*5) Developing Leadership, People and Culture*

*(Goals: staff satisfaction will be in the top 20% of Trusts nationally; our staff and teams will be high-performing; and we will recruit and retain an excellent workforce)*

*6) Getting the most out of Technology*

*(Goals: our patients and staff will have the right technology available; our workforce will have the necessary IT skills to do their jobs well; and an outstanding IT service will be delivered)*

*7) Using our Estate efficiently*

*(Goals: patients and staff will benefit from safe and appropriate environments; our estate will be sustainable and environmentally-friendly; and our estate will be cost-effective)*

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# Introduction

Participation in research produces widespread benefits for patients and, more generally, improvements in quality of care. Oxford Health NHS FT (OHFT) is a leading research-active mental and community trust with strong strategic research links to both the University of Oxford, which is the top-rated University in the THE World University Rankings and Oxford Brookes University.

# Strategy

The draft OHFT research strategy has the key objective of “Oxford Health to be recognised as a leading research organisation, attracting the best staff and providing staff and patients with access to high quality research opportunities”

The following seven key areas have been identified to support this;

* Developing the Research Culture
* Increasing research opportunities for patients
* Exploiting existing, identifying and developing new research opportunities
* Active leadership and management
* Developing a Research active workforce
* Building collaborations
* Maximising Digital opportunities

This report has been restructured to reflect these areas, as has the reporting to the Research Management Group (RMG) and Quality Effectiveness sub-committee reporting.

# Research Culture

## Staff Survey

Three research related questions were included in the 2018 staff survey, where over 85% of respondents thought research was important in improving the outcomes for our patients. Work needs to be undertaken to increase the knowledge of research within the Trust (38.2% have no knowledge). This will be addressed by a communications strategy and ongoing engagement work.

## Communications

Over the last six months our communications and engagement activity for R&D has built on the foundations laid in the first half of 2019. Working closely with colleagues in the communications team, BRC, R&D and the University Department of Psychiatry, we have continued to develop and execute research communications with the twin objectives of demonstrating the groundbreaking impact of our research and promoting research engagement within the trust.

Collaborations with other research centres in Oxford have presented valuable opportunities to amplify the reach of our communications and, over the last six months, we have been active participants in two NIHR communications projects led by the TVSM CRN.

The first of these projects is a new public facing magazine on health research - *Research & You*. The magazine is jointly created by the CRN, Thames Valley ARC and the two Oxford based BRCs. It will be published twice a year on an ongoing basis. In the first edition 5 out of 12 pages featured Oxford Health research, including the only double page spread in the publication and the front cover image. The magazine is available online via the trust website and has been distributed in hard copy across Oxford Health, partner organisations, GP surgeries and other public buildings in the Thames Valley. The next edition is scheduled for publication in June.

The second collaboration is a photographic exhibition *The Body Unlocked: how research is changing lives*. Produced by the same group of NIHR funded organisations as the magazine, this exhibition of 12 photographic panels showcases NIHR research taking place in the region and will tour public and community venues. The exhibition features three panels related to Oxford Health research and opened on 18th February in the Covered Market in central Oxford. A small press launch event generated substantial coverage in the local media and the exhibition will remain in Oxford until mid April when it is expected to move to Didcot Civic Hall.

This collaborative approach to communications will continue over the next months as we plan our first joint open day with the Oxford BRC. This will be held in Oxford Town Hall on 24th June and will include a morning session for schools and an afternoon session open to the public. This joint event will enable us share resource with the Oxford BRC and demonstrate our joined-up approach to mental and physical health research.

In the run up to the BRC midterm review in October there was a focus on updating the BRC’s website to ensure it fully represented the achievements of the previous two and a half years. Following the review, work on the website has continued in order to improve user experience and update its appearance in line with changes to the NIHR’s visual identity guidelines. A new events and training section has been added to the site to showcase the wide range of activities supported by the BRC including patient involvement, public engagement and training. Also on the BRC website we have been working with theme leads and their teams to develop microsites for individual NIHR funded labs and projects. These are located in the new ‘Our work’ section of the site which currently includes sub sites for the Brain Health Centre and Oxford Precision Psychiatry Lab and is expected to be expanded over time.

The achievements and ongoing aims of the BRC’s communication and engagement work were presented at the BRC mid term review and comments offered by the reviewers have been incorporated into the communications strategy for the second half of the BRC’s funding cycle. With additional input from internal stakeholders, our communications and engagement strategy for the next two years has been documented and is currently with senior management for review and approval. The strategy identifies key areas for development including embedding a more robust pipeline for media stories and producing a range of multimedia content for use online and across our social media platforms.

Internal communications to support research engagement within Oxford Health has been a communications priority over the last six months and a new quarterly *Focus on Research* bulletin for staff was launched in September to supplement the newly redeveloped R&D intranet pages. *Focus on Research* brings together research news from the previous three months and includes updates on research opportunities and resources. The third edition will be published on the intranet in March and publicised to all staff in the trust weekly email. Research and development was also featured prominently in the trust’s *Insight* magazine. The magazine, which is distributed to staff, patients and the public and is also available in an electronic edition via the trust website, featured the Blue Ice app as its cover story.

We have also continued to provide a range of communications support for specific events and projects including the BRC’s flagship OxCEMM course and nursing research events taking place as part of the trust’s 70@70 programme.

## Research Management Group (RMG)

The Research Management Group (RMG) is a high-level committee established to drive the collaborative research strategy across the Trust and local areas. It is responsible for the strategic and scientific direction of the research undertaken with or in partnership with OHFT.

The meetings bring together academics and clinical services with mutual interest in particular projects or work streams to increase engagement between clinical services and research for open discussion about the synergistic and collaborative working to deliver patient benefit through research endeavors.

The RMG receives information and assurances from the various research activities undertaken in conjunction with OHFT, including the OHFT BRC, CRF, CLAHRC, DEC, TV&SM CRN, Case Records Interactive Search (CRIS), Research Feasibility, Set-Up, Delivery and Management (including quality assurance), Pharmacy and Research Finance.

A summary of these reports is submitted to the Quality Sub Committee: Effectiveness on a quarterly basis.

# Research opportunities for Patients

## Consent to discuss participation in research (Lead Professor Andrea Cipriani)

Within OHFT, patients generally rely on finding out about research opportunities via their clinical care teams. This can mean that only research engaged clinicians communicate research study opportunities to patients, which can lead to inequitable standards of care in terms of research participation opportunities. As a consequence of this, in 2018 OHFT piloted an initiative to increase the proportion of patients who were offered opportunities to take part in research. The pilot was conducted in two memory clinics, an adult mental health team and an acute adult ward and aimed to documents patients’ research consent within the Trust’s electronic patient record (EPR) system so they could be contacted about research opportunities. However, the pilot found that clinical pressures and a lack of clinician engagement meant that minimal patients (11%) were being offered opportunities to participate in research.

As a result, alternative strategies for informing patients about research opportunities were considered. Within NHS Trusts across England, two main approaches to this are used. One is a clinician-led ‘opt-in’ approach and the other is an ‘opt-out’ approach. We wanted to explore which of these approaches would be best suited for implementation at OHFT. Therefore, in 2019 a Quality Improvement project with this aim was initiated, consisting of the following components:

* Appreciative Inquiry at four other NHS Trusts in England: AWP, Devon Partnership, SLaM, Sussex Partnership
* Online survey with OHFT staff
* Online survey with the OHFT membership group
* Focus groups with patients
* Focus groups with staff

**Key Findings**

* OHFT patients want to be given the opportunity to hear about research opportunities
* Most OHFT staff agree that all patients should be given the opportunity to hear about research that is relevant to their care
* Currently, most OHFT patients do not hear about research opportunities that are relevant to their care
* There is considerable variance across the Trust regarding levels of staff confidence in discussing research with patients
* Almost all of the membership group, patients and staff are supportive of OHFT adopting an ‘opt-out’ approach to informing patients about research opportunities
* Other NHS Trusts in England have demonstrated that an ‘opt-out’ approach to research information provision ***is*** General Data Protection Regulation (GDPR) compliant

**Recommendations:**

1. Anyone using OHFT services should be given the opportunity to participate in relevant research studies, in accordance with the NHS constitution. To facilitate this, OHFT should move to an ‘opt-out’ approach to enable more patients to be informed about research opportunities. This approach is GDPR compliant and has the potential to greatly increase research engagement and awareness amongst staff, patients and the public.
2. The Research and Development (R&D) department should work with the Trust’s Information Governance (IG) lead to ensure that GDPR regulations are followed and ‘opt-out’ procedures are clearly established.
3. A Data Protection Impact Assessment (DPIA) should be undertaken within OHFT, prior to an ‘opt-out’ method being implemented. This should be completed in consultation with the Trust’s IG Lead.
4. The implementation of an ‘opt-out’ approach should be fully aligned with the Trust’s strategy for compliance with the National data opt-out. Consultation with the Trust’s IG Lead is fundamental to this.
5. A move to an ‘opt-out’ approach should be accompanied by a comprehensive, Trust-wide communications plan as detailed below

A range of planned communications activity will support the move over to opt-out consent for research contact. The messaging in our communications will emphasise that the main motivation for this change is to be more inclusive by making the opportunity to participate in research available to all our patients. This change represents a real opportunity for research communications. It will provide a platform to raise the profile of research among our patient and public audiences during a campaign that will extend over several months.

The communications plan will include:

* Press release to local media
* News stories on Oxford Health website (an initial announcement followed up by case study examples)
* News stories in the trust’s publications including Insight magazine
* A patient facing leaflet to be made widely available across the trust
* An ongoing campaign across trust social media channels
* An information campaign within the trust via the intranet and all staff email to inform staff of the change and equip them to answer questions from patients
* Updated branding highlighting Oxford Health as a research active trust

It will also be necessary to update key documents to reflect the change including:

* The trust privacy statement
* Headers and footers on trust correspondence
* Relevant policy documents

A decision will also need to be made about whether it is necessary to write to all 29,000 of the trust’s current patients informing them of the change.

In February these recommendations were presented to a group which included the Chief Executive, Medical Director and Head of Information Governance. This group supported the ‘opt-out’ proposal being presented to the Trust executive for consideration in March.

## NIHR Clinical Research Network (CRN) based performance

Nationally, whilst over 520,000 have been recruited YTD in 2019/20, this signals a likely slow-down on the prior year when a record breaking 870,250 participants took part in NIHR CRN supported clinical research studies.  The 2019/20 full year data will be available in May 2020.

LCRN recruitment across the Thames Valley & South Midlands (TV&SM) region remains strong. The 2019/20 full year target of 50,000 has already been met and the CRN may come close to matching its 2018/19 recruitment of 63,000 by the year end.  The TV&SM is currently the highest recruiting network per head of population.  However, recruitment to Dementias and Neurodegeneration (DeNDRoN) studies is struggling with only c750 recruits YTD against a full year target of 1,550.

In 2018/18 Oxford Health were ranked 4th highest Mental Health Trust in 18/19 in terms of both the number of studies running and the number of participants recruited.

At the end of January 2020 Oxford Health were ranked 3rd highest Mental Health Trust in terms of both the number of studies running and the number of participants recruited.

|  |  |  |
| --- | --- | --- |
| **Mental Health Trust** | **Studies** | **Participants** |
| South London and Maudsley NHS FT | 78 | 12,573 |
| Midlands Partnership NHS FT | 64 | 3,583 |
| **Oxford Health NHS FT** | **57** | **2,150** |

Note: Midlands Partnership NHS FT reported 24 muscular skeletal studies with 414 recruits and 1 Oral and Dental study with 1,687 recruits

## Equality, Diversity and Inclusion (EDI)

A group has been formed to look at improving access to research for all groups.

The initial key focus areas are;

* Staffing, the mix of staff within the R&D function
* Research participation, creating a baseline position regarding the mix of participants
* Patient and Public Involvement, identifying geographic areas of interest and running community events

The work here will link with the BRC and CRF PPI functions and will be reported to the BRC steering committee and Research Management Group

# Exploit existing, identify and develop new research opportunities

## NIHR Biomedical Research Centre (BRC)

The Oxford Health Biomedical Research Centre (OH-BRC), a partnership between OHFT and the University of Oxford commenced in April 2017 with funding of £12.8m (Apr 2017–Mar 2022). An additional one-off £1m was awarded in FY19 to provide a sustainable solution to UK-CRIS.

The hub of the new centre is at the Warneford Hospital site which also houses the University of Oxford’s Department of Psychiatry with associated research centers and facilities, and a Clinical Research Facility (CRF) hosting a wide portfolio of active studies for the OH-BRC, the TRUST and the University.

The OH-BRC is a strategic collaboration designed to identify and support the best science to understand the complex problems facing research into mental disorders and dementia, with the aim to translate this understanding into actual, scalable solutions to improve healthcare and to transform our discovery science into new treatments and diagnostic tools, delivering precision care that is strongly informed by patient involvement, ethical and economic considerations.

### Overview of Activity

**Short –term objectives**

* Establish the OH-BRC with effective management structure and cross-theme collaboration, ensuring that infrastructure is developed to facilitate conduct of externally funded research.
* Deliver a fully developed Patient & Public Involvement strategy
* Establish an effective clinical interface for the OH-BRC between basic research and clinical care

**Progress towards short term objectives:**

* The OH-BRC Steering Committee includes strong patient involvement and continues to provide strategic direction and oversight.
* Planned an externally-chaired, peer-reviewed, mid-term review to ensure the OH-BRC continues to deliver world class research meeting mental health research priorities
* Regular OH-BRC Theme Leaders meetings where to identify collaboration opportunities and facilitate cross-theme funding of staff delivering high levels of efficiency and value for money.
* The BRC supported 156 studies in year 2 (83 in year 1), the submission of 23 (£11.6m) approved grants in year 2 (36 in year 1) and leveraged £15.8m of project funding in year 2 (£16,3m in year 1) as a result of the infrastructure and vision provided by the BRC
* The BRC has continued to support initiatives within the **NIHR Oxford cognitive health CRF** (CRF), including the development of **Treatment Resistant Depression** (TRD) clinics to increase opportunities for patients to become involved in translational research
* The BRC has worked with the CRF to increase the services provided within the CRF to include IV infusions for experimental immunotherapy of psychosis
* The BRC Director has helped to create and is the deputy chair of the new **Mental Health Translational Research Collaborative** (TRC) with the aim of which is to drive effective collaboration in experimental medicine across the UK via the NIHR BRC and CRF network and similar infrastructure in Wales and Scotland.
* The BRC provided the project lead (Dr Michael Browning) for Treatment Resistant Depression as part of the **Mental Health Translational Research Collaborative** (TRC)
* The BRC contributed to the Psychosis element of the **Mental Health Translational Research Collaborative** (TRC)

**Longer term objectives**

Longer term objectives include realizing the vision of a Brain Health Centre on the Warneford site and we have made significant progress towards the opening of the Brain Health Centre as a joint clinical-research service in Year 3.

### BRC Themes

#### **Adult Mental Health: Innovation in Diagnosis and Treatment (Theme Lead: Prof Paul Harrison)**

**Progress against objectives;**

• Adopted 8 new research studies (making a total of 30). Studies have received support in various forms, including ethics and R&D applications, lab assays, tasks set-up and analysis, encapsulation, and neuroimaging data analysis;

• Provided pilot funding for 2 new studies;

• Published 18 papers, including many in leading journals such as Lancet Psychiatry, Molecular Psychiatry and Biological Psychiatry;

• Produced 3 new standard operating procedures (SOPs), making a total of 19 SOPs currently in place, with 3 additional SOPs in development;

• Continued to work closely with the Patient and Public Involvement (PPI) theme: from all the OH BRC studies that have officially embedded PPI in their research, 40% (i.e. 12 studies out of 30) are from this theme;

• Completed our flagship ‘OxCAMS’ experimental medicine study of a calcium channel blocker for mood instability, and are in the process of data analysis;

• Made good progress on the underlying discovery science of calcium channels, with a major paper published in a top journal, and with an introductory piece on the BRC website;

• Supported a forthcoming international conference on the use of ketamine for depression, to be held in Oxford and led by Rupert McShane (an OH consultant psychiatrist, and part-funded by this BRC theme);

• Created a research assistant post to work on existing theme-funded studies to facilitate data analysis and impact;

• Appointed a replacement BRC lab manager, who works closely with all key staff within the BRC and the CRF.

**Plans for the coming year**

Our objectives for the remainder of the current BRC were revised as part of the mid-term review in October 2019, with a view to positioning ourselves for renewal. Reflecting these agreed changes, in the coming year:

• We have created a research fellow post in psychiatric drug discovery; interviews are to be held next month. The theme will also interact closely with the Davys Chair in Neuroscience, which focuses on a similar area, and which is to be refilled in the coming months;

• We will be convening and contributing to meetings on multi-morbidity, which will be a major priority of the next BRC;

• We are supporting projects and staff after the end of the MRC Pathfinder grant, in collaboration with the Digital and Aging themes; this includes support for True Colours;

• We will continue to contribute fully to the Translational Research Collaboration for Mental Health (TRC-MH), and co-fund the TRC-MH manager;

• Our major new study is the NIHR EME-funded PAX-D clinical trial (of pramipexole for treatment-resistant depression), which is led from Oxford and is due to commence shortly. We will also be supporting PAX-BD (pramipexole for bipolar depression), with Oxford being one of the centres, and also due to start recruitment soon;

• The Oxford Brain Health Centre has become a reality for patients with dementia (See Aging theme). We will explore how the concept and the practicalities can be extended to include aspects of adult mental health;

• We hope to be part of anticipated large-scale initiatives on first-episode psychosis, building on the local expertise of the first episode service and the academic leadership of Professor Belinda Lennox. At present it is unclear how the funding opportunities will develop, but we will continue to be proactive in this important area;

• We will continue to work closely with, and hold regular meetings with, the Experimental Medicine and Digital themes, in addition to the broader Theme Leader meetings. Progress against objectives

#### **Older adults and dementia (Theme Lead: Professor Clare Mackay)**

**Progress against objectives;**

**Brain Health Centre:**

The pilot of our integrated clinical-research service for memory clinic patients is on track to start spring 2020. We have:

* Developed a database to track the clinical pathway and provide an electronic case report form
* Installed the clinical pathway database within the OH IT system
* Developed the research database (within the University IT system) to manage research data and the registry of patients for recontact
* Developed optimized assessments, including imaging, cognitive tests and questionnaires, with the Cognitive Neuroscience and Neuroimaging theme
* Established the workflow for MR safety and reporting by OUH neuroradiology, including a standardized in-depth radiology report template
* Submitted the ethical application and data access policies to set up the BHC research database and attended the REC meeting
* Expanded the team by establishing an operational team that will run the BHC service, including clinical coordinators and clinical research assistants
* Expanded the PPI advisory group (details below)
* Provided training on the use and potential for MRI in the memory clinic, by presenting to Old Age Psychiatry CPD meetings and Older Adults Clinical Psychology teams
* Launched the BHC website

**Pharmacological interventions:**

* Follow-up assessment is ongoing for the PREVENT study and is nearing completion for the European Prevention of Alzheimer’s Disease (EPAD) study.
* The Deep and Frequent Phenotyping (DFP) study has screened its first participants, who will be recruited to the year-long study
* The Dementias Platform UK (DPUK) celebrated it’s 5-year anniversary, and hosted a number of datathons across the UK
* Several new large-scale projects are currently being set up, including a DPUK funded study of Tau PET and the ‘Brain Helath through Action on Insulin resistance’ ‘Amyloid Imaging in PREVENT’ (AIP), (sub-set of the PREVENT participants to undergo PET-CT), and ‘Microglial CSF1R in Alzheimer’s Disease’ (MICAD), - an RCT to characterise the biomarker effects of a CSF-1 receptor agonist in participants with MCI.

**Non-pharmacological interventions:**

* Data collection is now completed for the REtirement in ACTion (REACT) MRI sub-study, with results under embargo until completion of the full trial. The DISCO study produced significant improvements in sleep and subjective cognitive functioning following online CBT for insomnia (paper in preparation).
* The LifeBrain consortium’s qualitative assessment of adults understanding of concepts of brain health and preventative adoption of lifestyle changes has now led to the international ‘Global Brain Health Survey’
* A number of studies in preparation last year have now opened recruitment, including the Heart-Brain study and the Mobile Technologies for Assessment of Cognition (MTAC) PREVENT sub-study
* Several new projects investigating modifiable factors on later life brain health are in preparation, including a PREVENT sub-study looking at entorhinal cortex and hippocampal circuit in relation to spatial navigation and dementia risk.

**Patient and Public Involvement (PPI; further details in PPIE section of report):**

* The BHC has continued to develop its PPI advisory panel, adding patients and relatives that have been through the current OH memory clinic service to the group of people living with dementia, carers and interested members of the public. In 2019-20, the BHC advisory panel contributed to a grant application, provided feedback on BHC appointment letters and information sheets, and taken part in ‘dry runs’ to provide feedback on the BHC patient journey. The BHC advisory group also co-developed a poster about PPI and the BHC, which was presented at the Alzheimer’s Society conference in May 2019
* The Friends of OxDARE (Oxford Ageing and Dementia Research) registry continues to support ongoing research studies in this and other BRC themes, and the team recently won the Department of Psychiatry’s public engagement award.

#### **Precision Psychological Treatments (Theme Lead: Professor Anke Ehlers)**

**Progress against objectives**

**Virtual reality (VR) lab and digital platform for psychological therapies**

* The BRC-funded **virtual reality** Laboratory (Dr. Avitor Rovira) facilitates the use of VR in the treatment of psychological problems. Current projects include Freeman’s work on VR in paranoia, Stein’s work on parental training, Stein and Bowes’ work on bullying, and Murphy’s work on binge eating.
* Recruitment of a web developer for the **development of a digital platform** for psychological treatments has not been possible due to lack of qualified applicants. We have therefore worked with two IT companies (FRY-IT and Whiskered Wizard) to create a generic version of the online treatment programmes developed by Clark and Ehlers in Wellcome Trust funded research, now used for several projects. Current studies focus on online psychological therapies for PTSD, social anxiety disorder, prolonged grief and perinatal anxiety and depression.

**Development of novel internet implementations of psychological therapies**

We have made good progress with developing a range of new online treatments:

* A **therapist-assisted** **internet-delivered cognitive therapy programme for social anxiety disorder in adolescents** (Clark and Leigh) and a stand-alone **digital CBT for binge eating disorder** (Murphy and Fairburn)were developed and successfully piloted. The binge eating programme has been extended to allow therapists to view the content of the patients’ entries.
* Freeman’s group worked with patients to design a new VR automated treatment for patients with **psychosis** who have withdrawn from everyday activities, which will be tested in a large multi-centre trial, funded by the NIHR i4i programme.
* Stein and Rovira are working on the development of a VR programme for parents with **depression or anxiety in the perinatal period** that is designed to enhance their responses to infant facial expressions. Stein’s group have also developed an online version of their behavioural activation manual and materials for perinatal **depression**.
* **Internet-delivered cognitive therapy for prolonged grief disorder** (Ehlers and Smith), **Internet-delivered cognitive therapy for PTSD in military populations** (Ehlers, Murray and Wild) are in development.
* Kuyken’s group are developing a series of **digital resources on mindfulness for young people** to communicate what mindfulness is and how it might be used to support mental health and wellbeing to young people.
* Creswell’s group are adapting their online parent-led CBT for child anxiety disorders for delivery within school settings.

**Randomised controlled trials (RCTs)**

The theme supported several RCTs of digital interventions:

* Freeman’s group completed a trial of virtual reality (VR) therapy of **height phobia** (Freeman et al., 2018), which showed large treatment effects.
* Clark and Thew’s trial found that therapist-assisted digital cognitive therapy for **social anxiety disorder** is as effective in an Asian cultural context (Hong-Kong) as in a previous UK-based trial. A new study is planned for a Japanese translation.
* Leigh and Clark are conducting a RCT of **therapist-assisted digital cognitive therapy for** **social anxiety disorder for adolescents.**
* Espie’s group completed the DIALS trial of online treatment for **insomnia** (Espie et al., 2018).
* Freeman’s group started a VR treatment trial (THRIVE) of automated therapy for patients with **psychosis** who have persecutory delusions, focusing on dropping defence behaviours in social situations.
* Another trial recruiting patients with **psychosis** (GAMECHANGE) aims to increase patients’ confidence in everyday life with automated VR treatment.
* Ehlers’s STOP-PTSD trial compares the efficacy of internet-delivered cognitive therapy for **PTSD**, internet-delivered stress management therapy for PTSD, and a wait-list condition.
* Kuyken’s trial is investigating the effects of low intensity **mindfulness training** (Finding Peace in a Frantic World) on student mental health and wellbeing.
* Wild’s PREVENT-PTSD trial investigates the efficacy of a new **online resilience training** the prevention of PTSD and depression in paramedics.
* Stein’s Insika Yomama cluster randomised trial investigates whether the combined intervention of behavioural activation and a parenting programme for HIV-positive mothers with **perinatal depression** leads to reductions in depression and improved infant cognitive development

**Analyses to identify moderators and mediators of outcomes:**

* Kuyken’s group is analysing data from the MYRIAD Trial to examine the role of school-level factors (such as school climate and quality, school-level deprivation, school size and school support for personal, social, health and economic education) on changes in mental health over a 1-year follow-up period.
* Ehlers and Clark’s group are investigating processes of change in cognitive therapy for social anxiety disorder and PTSD.

**Development of internet-based therapist training**

* Clark’s and Ehlers’s groups are developing an online training site for the implementation of effective treatments for **anxiety disorders** (<https://oxcadatresources.com>). So far, 6333 therapists from 110 countries have signed up for the website.

**New PIs and training the next generation of clinical academic**

* **Professor Cathy Creswell** and **Professor Paul Salkovskis** have joined the theme. This strengthen the theme’s expertise and research activity in the treatment of children and adolescents and obsessive-compulsive disorder and health anxiety.
* **Professor Cathy Creswell** has just been nominated NIHR Senior Investigator 2020.
* The theme created a new **Clinical Academic** post, which is partly funded by the BRC and partly by the Trust’s Improving Access to Psychological Therapies Services. **Dr Graham Thew** was appointed.
* **Dr Felicity Waite** was awarded a prestigious Wellcome Trust DPhil Training Fellowship to continue her work on improving confidence in psychosis in the VR lab.
* The theme has supported three further promising clinicians who have submitted/ are about to submit fellowship applications: Dr Rebecca Murphy, Dr Kirsten Smith and Dr Jennifer Wild.
  + 1. **BRC Cross Cutting Themes**

#### **Informatics/digital health (Theme Lead: Professor Andrea Cipriani)**

**Progress against objectives**

The overall aim of the Informatics and Digital Health theme is to develop advanced analytics approaches to support BRC research themes as well as developing data driven initiatives of its own. Between January and July 2019, the theme carried out a critical review and redesign of its organisational structure, content and programme aims, which we outline below together with some of the themes key achievements.

*Organisation:*

* A change in leadership presented an opportunity to redefine clear lines of responsibility for the overall theme and subthemes.
* A theme coordinator was recruited.
* Subtheme leads were defined.
* We established a more balanced representation of trust and departmental personnel.

*Content:*

The core team reviewed the projects adopted by the theme andmade the decision to focus on fewer but high impact projects, which met a well-considered selection of BRC **relevant criteria**, most importantly: Innovation based on original work; Oxford style leadership expression; Alignment with our trust digital strategy.

Five projects were selected to be the initial focus of the theme’s work (**Flagship Projects**), and these were presented to the trust digital strategy board:

* PETRUSHKA: Personalise antidEpressant TReatment for Unipolar depreSsion combining individual cHoices, risKs and big datA.
* Risk Stratification: applying AI to real-world data for structured risk assessment, to stratify patients at risk of suicide with proposed intervention.
* EMOTIVE: accuratE MOod profiling/forecasTIng from multi-modal 3D face data (Video) strEams.
* iSAM: informatics Solution for Adolescent Mental Health – enabling a platform with the aim to prevent and reduce mental health problems
* Biomarkers: – blood-based biomarker to detect the earliest stage of AD at much lower cost than current techniques

In order to understand the theme’s **cross-cutting objectives**, in the Summer of 2019we conducted a **market place** and invited each of the other themes to discuss the digital aspects of their work. This was an opportunity to identify the support we could offer to the other themes, but also to present the work of the digital theme.

*Programme aims:*

The outcome of the review process described above and the redefined program me (plans and approach) were presented during the BRC’s mid term review in October 2019, during which the Informatics and Digital Health theme received helpful and positive feedback. The new focus of the theme is to plan ahead for the renewal application in 2021, which involves:

* continuous review of the projects supported by the theme;
* plans to work with international world-class partners (University of Toronto and CAMH);
* actively seeking industry partners that could benefit progress and increase opportunities;
* Integration of the 3 subthemes (real-world data, informatics, digital phenotyping), whereby the combined value should exceed the sum of the separate subthemes, working towards a personalised care approach.

*Key achievements:*

* The **UKCRIS** initiative progressed in scaling the collaboration network, augmenting the data set, and sustainability. 12 NHS Trusts are now in partnership with 2.8m de-identified records. A team was established to enhance data management and data science, 3 research studies are approved with UK Biobank, and integration is completed with IAPT data and HIC acute data at OUH BRC. Work is underway to link with True Colours and a national primary care database. A sustainability model has been developed to enable long-term value proposition for the NHS, in partnership with industry, and academia. CRIStal Health Ltd was incorporated in May 2019 with private sector investment. A launch of the company’s new brand ‘Akrivia Health’ was held in December 2019.
* The BRC continues to lead development of True Colours in both research and service contexts. Despite more than 30000 users, and being shortlisted for a BMJ digital innovation award, True Colours lacked a sustainability model. However, after a 6-month programme led by Mike Denis, the relevant stakeholders committed to resourcing True Colours sustainably, involving both Oxford NHS Trusts, with a potential long-term outcome of a spinoff company. A new joint leadership team has been established, with members from the trust and the Department of Psychiatry.
* We are developing an internet-based system to help doctors and patients choose the best antidepressant (PETRUSHKA). With advanced analysis of existing data, considering efficacy, adverse events, and patient specifics and preferences, we will tailor the choice of medication to the individual. We have developed innovative statistical and artificial intelligence approaches to analyse the data and are linking relevant observational datasets: CRIS and QResearch. We have published the protocol of the project and explored qualitatively the value of the digital decision support tool.
* The long-term aim of the eMOTIVE project is to develop personalised intervention and management tools for patients with mood disorders, incorporating automated analysis of passive data collected from facial expressions and speech. We have developed both an experimental task and a mobile phone app to capture 3D data on mood whilst preserving privacy. We are currently collecting multi-modal data from patients and healthy volunteers, whilst working with the Alan Turing Institute to develop techniques to extract structured information on mood that can inform accurate diagnosis and personalised care. This study (protocol name APFEMA) has CRN portfolio adoption and has already attracted other external funding.
* iSAM is developing a platform of real-world data from children and adolescents, with the long-term aim to prevent and reduce mental health problems. We are working with Oxford Health NHS Foundation Trust to link several data sources to facilitate both research and patient care. We have also collected online survey data from 4450 school pupils in 2019 to inform our understanding of mental health needs in Oxfordshire, have secured external support from Public Health at Oxfordshire County Council to rerun and develop the survey in 2020 and 2021, and are already working with 3 other local authorities to align with their pupil surveys and make the similar data from 4 counties accessible for analysis on a platform.
* We are currently using machine learning to further validate blood biomarkers that identify dementia prior to the onset of symptoms. The biomarker has already been successful in 2 independent datasets. Current plans are to test the biomarker in samples collected during past clinical trials, to assess the efficacy of the biomarker as a predictor of treatment response. If successful, the biomarker could be incorporated in future clinical trials, as a measure of the biological response to drug treatment.
* Other key achievements involve our close collaboration with the trust digital strategy board, strengthening the link between state-of-the-art research and patient care. This collaboration has led to a critical review of the trust’s policy for inviting patients to participate in research, and better trust alignment for the theme’s flagship projects. The theme has also recruited a new clinical academic - Dan Joyce - who is currently in the process of applying for funding and seeking support from the trust to develop his own ideas for improving patient care, using clinician-facing and patient-facing apps to structure and visualise clinical data in a meaningful way.

#### **Neuroimaging and Cognitive Neuroscience (Theme Lead: Professor Kia Nobre)**

**Progress against objectives**

* **Development of a suite of sensitive fine-grained cognitive and imaging measures of brain structure and function:**

The theme continued to develop and refine sensitive cognitive measures of spatial memory, sustained attention, emotional deficits, and timing, which have or will shortly be applied in a range of patient populations. The new program of work developing virtual reality platforms for cognitive phenotyping is well underway.

The Heart-Brain study, part of Sana Suri’s Alzheimer’s Society Fellowship has opened recruitment and will investigate the association of mid-life cardiovascular health with brain health in later life. This work aims to evaluate novel MRI biomarkers for dementia clinical trials and inform personalised strategies for managing cardiovascular health to delay dementia.

* **Establish an apps- and web-based platform for cognitive testing:**

A set of online cognitive assessments developed within the theme is currently being tested via an online study.

A standardized battery of sensitive cognitive measures for the Brain Health Centre (BHC) has been developed, and has had received PPI feedback. This battery will used in the upcoming BHC pilot, and will eventually be hosted online, which will facilitate ‘waiting-list’ assessment and remote follow-ups for BHC patients, and remote testing of large numbers of research participants more generally.

* **Apply magnetoencephalography (MEG) methods for charactering functional connectivity in brain networks and dynamics of brain states:**

MEG has continued to be applied in clinical populations with mood disorders, Parkinson’s disease, motor neuron disease, and Alzheimer’s disease. The New Therapeutics in Alzheimer’s Disease study, which will use MEG to identify reliable, sensitive and tractable biomarkers of abnormal brain activity in Alzheimer’s, is in the final pilot stage and will open recruitment in the next few weeks.

Work is ongoing to establish novel MEG analysis methods to explore changes in spontaneous and task-modulated neuronal oscillations in a range of clinical disorders. We have published a tutorial paper detailing the analysis pipeline for dynamic functional connectivity analysis (Quinn et al., 2018), which has since been applied to a range of clinical datasets including the Oxford contribution to the BioFIND project and the COMET project on mood-instability.

* **Applying cognitive-phenotyping tests to large populations for validation and for identification of cognitive markers of risk and of progression of disorders of mental health**

Cognitive-phenotyping tests characterising changes with age developed by this theme have been applied to over 2000 participants from the NIHR BioResources using tablet-based tests.

Work on cognitive phenotyping of genetic susceptibly for Alzheimer’s disease (Zokaei et al., 2018, 2019) is being expanded in a new project testing a large sample from the Oxford Biobank with mobile phone-based tests of working memory and long-term memory.

* **Establishing a pipeline for integrating imaging measures into clinically relevant tools**

The theme developed the BHC’s MRI imaging protocol, which will be aligned with the UK Biobank (UKB) to facilitate use of the existing large cohort as normative population data. The ethical application to scan a number of healthy volunteers at the BHC to facilitate harmonization between BHC patient scans and the UKB normative scans is due to be submitted in the next few weeks.

Collaboration with colleagues in OUH Neuroradiolgy and the NIHR Oxford BRC Imaging Cross-Cutting theme has led to the development of a standardized reporting template that will go on the NHS CRIS image reporting IT system, and will be used for patients coming to the BHC. Ongoing collaboration will develop this report to include quantitative brain information.

Ongoing work with colleagues in the NIHR Oxford BRC Imaging Cross-cutting theme on harmonisation of MRI measures in the Dementias Platform UK (DPUK) will facilitate large-scale analyses of combined cohort data.

The installation of the new TRIUX neo MEG scanner at OHBA is now complete. The University of Oxford is the first in Europe to acquire this latest technology in functional brain imaging. The new scanner also includes an integrated closed loop helium recycler, completely avoiding helium loss, addressing environmental issues and concerns for future finite supplies of helium.

#### **Clinical research infrastructure and experimental medicine (Theme Lead: Prof Catherine Harmer)**

Progress against objectives

* In the last year, we have developed our **experimental medicine capability** by:

The appointment of a neuroimaging support specialist for experimental medicine studies who has also developed structures for open science, archiving and sharing code, sequences and paradigms, using the open science framework resources to facilitate transparency and reproducibility. We have set up fortnightly ‘drop-in’ analysis clinics and started a new journal club (translational neuroimaging) to facilitate collaboration between preclinical and clinical imaging applications and to ensure our clinical studies in patients are based on the best discovery science. This has resulted in an increase in expertise in neuroimaging techniques and the quality of our translational work.

Funding a statistician dedicated to experimental medicine and early clinical trials (Milensu Shanyinde). This has helped to leverage funding including our recent successful bid for a MRC Experimental Medicine Challenge Grant (1.2M).

Adopting 23 studies in the experimental medicine theme, and these have been supported by our project manager including the development and use of standard operating procedures for good practice in experimental medicine.

Increasing the capacity of our pharmacy: 5 BRC medicines trials are currently open (2 CTIMPs and 3 non-CTIMPS); four of which are dispensed from the pharmacy. These are single site studies; all lead pharmacy site activities take place locally. Pharmacy has also supported planning for two 2 large CTIMPs in preparation (PAX-D and ATP).

* **Validate experimental medicine models of established pharmacological and psychological treatments across mood disorders, psychosis, cognitive impairment, insomnia and anxiety.**

In February 2019, awarded a 1.2M joint grant from MRC and J&J to develop experimental medicine models for fast acting antidepressant treatments. Current models for screening new treatments in depression are based on the effects of SSRI antidepressants which take time before they improve symptoms, whereas emerging work supports a new generation of treatments which work much faster. This programme of work will validate new markers for use in screening programmes of novel fast acting agents.

Completed phase 1 of the UCB grant developing novel experimental medicine markers for cognitive impairment in Parkinson’s Disease and are in the planning stage of applying these models to new molecule discovery programmes with UCB, Belgium.

During this first year of the BRC award developed a new model to explore the effects of established and novel agents on markers of stress. This new task validated in Oxford has now been incorporated into a J&J Phase 1 study for novel compound development and the results are being presented at the British Association for Psychopharmacology meeting 2019.

* **Work with the Precision Psychological Therapies theme to support the collection of cognitive measures of efficacy and response prediction within on-line data capture platforms**

Our objective was to reduce the division between psychological and pharmacological treatment research across disorders and to harmonise frameworks and methods for assessment, thereby building a foundation for the future generation of joint treatment approaches.

We have collaborated and supplied experimental medicine markers for a large online trial of CBT for insomnia (Kyle; Espie); as well as a marker of relapse prevention in depression with mindfulness treatment (Kuyken). We have completed a study exploring the potential for a positive psychological intervention (Kaltenboek) and in the combination of pharmacological and psychological treatments for anxiety (Reinecke)

#### **Patient and Public Involvement and Ethics (Theme Lead: Professor Ilina Singh)**

Progress against objectives set out in the [Patient and Public Involvement and Engagement Strategy](https://oxfordhealthbrc.nihr.ac.uk/patient-and-public-involvement/ppi-strategy/).

Delivery of the strategy is supported by our Patients and Research Group (PAR). PAR has ten patient, carer and public members and six research staff members. It is co-chaired by a patient/carer member and a staff member, with support from the PPI Manager and PPI Theme Lead.

In November 2019 we held an Away Day with the PAR group to review priorities for the second half of the BRC and have identified the following focus areas for 2020/21: increasing diversity within PPI; embedding PPI at an organisational level; evaluating the impact of the PPI Theme.

Key activities in the last period have included:

**Objective 1: Support**

* Between April 2019 and January 2020, the PPI Theme has provided direct PPI support to 31 projects and engaged around 40 patient and public involvement contributors. We ran a feedback survey with our PPI contributors (December 2019) to ask about their experience, training needs and how we could improve our PPI.
* We launched a series of PPI Research Meetings to facilitate the involvement of PPI contributors in the development of research projects. These were co-developed with PPI contributors and research staff. The first meeting took place on 29 November 2019. It was attended by 10 PPI contributors and two researchers presented their projects for discussion. Positive feedback was received from all meeting contributors, and comments from researchers included:
  + - *I was able to gain insight into public perception surrounding depression, dementia and pharmacological interventions. This has changed the idea of my future work and I think for the better.*
    - *I would definitely recommend these meetings for other researchers. Not only is it an excellent structure for getting PPI input but also a really nice environment to develop public engagement skills.*
* The PPI Small Grants Programme received reports from projects it funded in March 2019. PPI has delivered learning that will influence the design of studies including how and where studies are advertised, the information that is included on Participant Information Sheets, the wording of questionnaires, the order of study tasks and the information provided to participants about study tasks.

**Objective 2: Training**

* Since November 2019, we have delivered 3 workshops for PPI contributors to support their understanding and confidence in the research process. Our partners in delivering these were the Oxford BRC and ARC (Applied Research Collaboration) Oxford and Thames Valley. Topics have included service user led research (December 2019) and digital health (January 2020). Each workshop has been attended by around 25 PPI contributors. An [evaluation report](http://oxfordhealthbrc.nihr.ac.uk/wp-content/uploads/2020/02/PPI-Workshops-2019-Report.pdf) on the last series of these events (Jan – Aug 2019) was published in October 2019 and is available on the BRC website.
* We have delivered 2 involvement workshops for PPI contributors and staff members on ‘Recording and impact’ (September 2019) and ‘Working with the seldom heard’ (November 2019). Our partners in delivering these were the Oxford AHSN (Academic Health Sciences Network), CRN (Clinical Research Network) Thames Valley and South Midlands, Oxford BRC and ARC Oxford and Thames Valley. Both events were attended by around 3 people.
* We delivered 1 PPI workshop on for research staff, co-delivered with 6 PPI contributors and focused on how to work with patients and the public. This was attended by 45 researchers (December 2019). Our partners in delivering this were the Research Design Service South Central, Oxford BRC and ARC Oxford and Thames Valley.
* We delivered a PPI session as part of the BRC’s Oxford Short Course in Experimental Medicine for Mental Health (January 2020).

**Objective 3: Outreach**

* We have developed a ‘Widening Diversity and Participation Framework’ and will be holding a community engagement event with the Oxford Asian Cultural Centre on International Women’s Day, 8 March 2020, to raise awareness of mental health research.
* The [NEUROSEC Young Person’s Advisory Group](https://begoodeie.com/ypag/) has recruited 23 new members from 12 schools in Oxfordshire. We attended the Oxfordshire Youth in Mind Conference and are running a survey to explore attitudes to involvement in research with schools.
* We have attended Oxford Health events to share opportunities to get involved in research (HealthFest September 2019, and Carers Conference June 2019). We attended a Board Meeting of the Oxford Mental Health Partnership to share opportunities to get involved in and take part in research (July 2019).

**Objective 4: Clinical Research Facility**

* ENGAGE, the CRF PPI group, continues to meet bi-monthly. It has provided feedback on two research projects and on a series of posters to promote research and contributed to devising a new approach to collecting feedback from CRF service users.
* A PPI representative from the CRF attended the national CRF conference (June 2019).

**Objective 5: Governance**

* The Patient/Carer Representative role has continued to sit on the OH BRC Steering Committee, In May 2019 it was agreed this role would be extended to also sit on the CRF Board.
* The PPI Manager attends the OHFT R&D Pipeline Meetings.
* PPI staff links from the 6 BRC research themes continue to meet quarterly with the PPI Manager to ensure PPI activity is coordinated and supported across the BRC’s activity.

**Objective 6: Research**

* Patient, carer and public members of the PAR Strategy Group contributed to a [NEUROSEC](https://www.psych.ox.ac.uk/research/neuroscience-ethics-and-society) paper on ‘Ethics in Participatory Research in Psychiatry’.
* The patient/carer and staff co-chairs of the PAR Strategy Group were co-authors, with researchers from the PPI Theme, in ‘[Co-Production: An Ethical Model for Mental Health Research](https://www.tandfonline.com/doi/full/10.1080/15265161.2019.1619877)’ published in the American Journal of Bioethics (Volume 19, Issue 8).

#### **Education and Training (Theme Lead: Professor Elizabeth Tunbridge)**

Our priority in the last year has been to establish the bespoke training courses that form the core of the capacity development plans outlined in our application and which were highly commended by the panel. These are the Oxford Course in Experimental Medicine for Mental Health (OxCEMM) and the MSc in Translational Neuroscience. We have been successful in establishing both of these: OxCEMM ran for the first time in January 2019, and again in January 2002, and the first intake of the MSc in Translational Neuroscience will begin the course in October 2019.

OxCEMM is a short course designed to provide attendees with the practical information they need to design, conduct and analyse experimental medicine studies. Our aim was to attract attendees with diverse backgrounds, and from across the UK. We were successful in achieving both of these aims: our 37 attendees came from a range of backgrounds, including psychiatrists, nurses, pharmacists, other allied health professionals and basic scientists, and from across England (including other parts of the NIHR infrastructure). Given its success, we plan to rerun OxCEMM, essentially unchanged, although are considering whether it should be run annually or biennially, alternating with additional bespoke courses.

Our plans for the coming year are to develop additional bespoke courses in response to identified needs. These will include a version of OxCEMM targeted towards PPI contributors, as well as writing workshops for groups of researchers with specific needs. An area of active development is enhancing support for grant applications, particularly for former OxCEMM attendees, since this is an area raised by a number of alumni. We will continue to collaborate with OUH BRC (for example, by running joint writing retreats for research nurses and appointing BRC-funded Senior Research Fellows), as well as with other relevant local parties (notably, Oxford Brookes, with whom we are in discussion about how we might best support trainee nurses and allied health professionals).

Being a new and relatively small BRC, we continue to have relatively few Academy Members, although numbers are beginning to grow. Most notably, we have successfully established a new doctoral studentship jointly funded by our BRC and Wolfson College, Oxford. Our first student on this programme started his DPhil studies in October 2018.

## NIHR Oxford cognitive health Clinical Research Facility (CRF)

CRF provides a flexible and integrated neuroscience resource that facilitates the efficient and timely conduct of experimental neuroscience research including high intensity early phase experimental medicine research and early phase clinical trials. The CRF’s aim is to be fully aligned with the strategy of OH-BRC and that of OHFT to enable, encourage and facilitate high intensity research working with principal investigators and commercial partners both established and new to achieve this aim.

The primary objective of the CRF is to deliver novel therapies tailored to individual patient needs by breaking down disciplinary boundaries, capitalising on scientific, technical and infrastructural capabilities that cut across disorders.

* **Short-term objectives**: To build further our capability in translational neuroscience, to facilitate the objectives of OH-BRC and strengthen our collaboration
* **Medium-term objectives**: To realise plans for purpose built integrated and coordinated neuroscience research and clinical facilities across Oxford. Work has been initiated for a joint University-NHS Masterplan to develop the Warneford as a Brain Health Centre for translational neuroscience. This strengthened alliance will lead to increased research opportunities for OHFT patients, as well as cementing the research culture in clinical practice.
* **Long-term objective:** To deliver an efficient translational pipeline fueled by Oxford’s unrivalled scientific infrastructure and expertise and deploying the very best science to deliver new therapies for patients’ mental, cognitive and neurological disorders. We aim to do so by exploiting existing, identifying and developing new research opportunities

### Outputs

Between Sept 2019 and Mar 2020, 26 studies were undertaken on the CRF.

The NIHR funded CRF provides specialist facilities to undertake high intensity clinical studies in mental health and cognition, including dementia, focusing on an experimental medicine design. Most studies are non-commercially sponsored.

The CRF has developed to enable several specialist activities including undertaking intensive psychiatric rating scales, physical monitoring, lumbar punctures and, more recently, IV infusions.

Studies range from an experimental medicine design testing novel compounds (late Phase 1/Phase 2, not ‘first-in-man) and clinical trials to longitudinal cohort studies.

### Open Studies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Study** | **Full name** | **Funding** | **Disease area** | **BRC** | **Phase** |
| EPAD | European Prevention of Alzheimer’s Dementia (EPAD) Longitudinal Cohort Study (LCS) | IMI Joint Undertaking | Alzheimer’s Dementia | Yes | Experimental medicine |
| PREVENT | PREVention of dementia by ENvironmental intervention and Therapy | Alzheimer's Society | Alzheimer’s Dementia | Yes | Experimental medicine |
| Restart | The effects of PF-04995274 on emotional processing in treatment-resistant, medicated, depressed patients | Medical Research Council | Treatment Resistant Depression | Yes | Experimental medicine |
| Restand | The effects of PF-04995274 on emotional processing in un-medicated depressed patients | Medical Research Council | Depression | Yes | Experimental medicine |
| OxCams | The Oxford Study of Calcium Channel Antagonism, Cognition, Mood Instability and Sleep | Wellcome Trust and OH BRC | Mood Instability | Yes | Experimental medicine |
| Esketamine 3008 | An Open-label Long-term Extension Safety Study of Intranasal Esketamine in | Janssen | Treatment resistant depression | No | Phase 3 |
| LQD | A trial comparing the clinical and cost effectiveness of lithium and quetiapine augmentation in treatment resistant depression | NIHR Health Technology Assessment (HTA) | Treatment resistant depression | No | Phase 4 |
| Alkermes | A trial to Evaluate the Effect of ALKS 3831 Compared to Olanzapine on Body Weight in Young Adults with Schizophrenia, Schizophreniform, or Bipolar I Disorder Who are Early in Their Illness | Alkermes | Schizophrenia, Schizophreniform and Bipolar I | No | Phase 3 |
| BI-Cact | A trial to examine the efficacy and safety of BI 425809 with adjunctive Computerized Cognitive Training treatment period in patients with schizophrenia | Boehringer Ingelheim | Schizophrenia | No | Experimental medicine |
| SINAPPS2 | A trial of intravenous immunoglobulins and rituximab in patients with antibody-associated psychosis. Recruiting takes place in OUH, but intravenous immunoglobulin/placebo infusions are delivered at the CRF | Medical Research Council | Treatment resistant psychosis | Yes | Trial |
| NTAD | New therapeutics in Alzheimer’s disease: MEG biomarker platform development | DPUK and ARUK | Alzheimer’s Disease/MCI | Yes | Observational |
| DFP | Deep and Frequent Phenotyping; Combinatorial Biomarkers for Dementia Experimental Medicine | MRC and NIHR | Dementia | Yes | Experimental medicine |
| PAX-BD | A trial of pramipexole in addition to mood stabilisers for patients with treatment resistant bipolar depression | NIHR Health Technology Assessment | Bipolar disorder (treatment resistant bipolar depression) | Yes | Experimental medicine |
| APFEMA | Analysing patients’ facial expressions to improve mood assessments for people with bipolar disorder or treatment resistant depression | Medical Research Council | Mood Disorders | Yes | Observational |
| SPEAR | A study of participant’s experience of Alzheimer’s disease – sub-study of EPAD | IMI Joint Undertaking | Alzheimer’s Disease | No | Observational |
| The ENCRYPT study | Study aiming to identify the initial brain dysfunction in AD by investigating the entorhinal cortex and hippocampus for participants in the PREVENT study | Alzheimer’s Society | Alzheimer’s Disease | Yes | Observational |
| DPUK | Assessing models of AD risk and progression in Existing Cohorts using Tau PET imaging in combination with prospective follow-up | Medical Research Council | Alzheimer’s Disease | Yes | Observational |

### Studies in Set-up

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Study** | **Full name** | **Funding** | **Disease area** | **BRC** | **Phase** |
| ATP | A trial of the efficacy of a novel CNS-penetrant P2X7 receptor antagonist, in people  with major depressive disorder | Wellcome Trust and Janssen | Treatment resistant depression | Tbc | Experimental medicine |
| MICAD | A study to characterise the biomarker effects of the CSF-1 receptor antagonist JNJ-40346527 in participants with mild cognitive impairment | Wellcome and Janssen | Alzheimer’s Disease | Yes | Experimental medicine |
| PAX-D | A trial evaluating the efficacy and mechanism of pramipexole as add-on treatment for people with treatment resistant depression | NIHR EME | Treatment resistant depression | Yes | Experimental medicine |
| CIAS | A trial to Evaluate the Safety and Efficacy of BIIB104 in Subjects with Cognitive Impairment Associated with Schizophrenia | Biogen Idec | Schizophrenia | No | Phase 2 |

### Other activity

The CRF hosts two sleep studies which take place overnight and at weekends.

It is also now running the following research studies at the Whiteleaf centre in Aylesbury which provides greater opportunities for staff and patients in Buckinghamshire to get involved in research.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Study** | **Full name** | **Funding** | **Disease area** | **BRC** | **Phase** |
| Mission AD | A 24-Month Study to Evaluate the Efficacy and Safety of E2609 in Subjects with Early Alzheimer’s Disease | Eisai Ltd | Alzheimer’s dementia | No | Phase 3 |
| Alkermes | A trial to Evaluate the Effect of ALKS 3831 Compared to Olanzapine on Body Weight in Young Adults with Schizophrenia, Schizophreniform, or Bipolar I Disorder Who are Early in Their Illness | Alkermes | Schizophrenia, Schizophreniform and Bipolar I | No | Phase 3 |
| BI-Cact | A trial to examine the efficacy and safety of BI 425809 with adjunctive Computerized Cognitive Training treatment period in patients with schizophrenia | Boehringer Ingelheim | Schizophrenia | No | Experimental medicine / Phase 2 |

### Occupancy

The last six months (Sep19-Mar20) occupancy at the Warneford was 56% (with previous six months at 61%).  The current lower occupancy is a result of staff recruitment difficulties and studies not having started as expected.  There are several studies in the pipeline due to start next financial year.

Occupancy at the OHCRF is reviewed and planned each month to ensure best use of available resources.

### CRF strategy

The current award of £3.7m (Apr17–Mar22) included funding to develop CRF activity at OUH but an appropriate location has not been identified, therefore funding has been reallocated to the Acute Vascular Imaging Centre (AVIC) at the JR.

Professor John Geddes initiated the set-up of the CRF in 2011, led the two successful NIHR funding applications and has provided leadership as the CRF Director since 2012. Professor Geddes has now stepped down from this role and Professor Andrea Cipriani has been appointed as the new CRF Director.

Professor Cipriani, along with other team members, is in the process of reviewing the management and staffing structure of the unit. A mid-term review has been planned and will take place in the beginning of March 2020. A refreshed strategy will be developed by Prof Cipriani and the CRF management team, which will set the direction of travel for the final two and half years of the current award and the renewal.

### CRF contracting

At the time of the first application the CRF contract was between the NIHR and Oxford University Hospitals (OUH) with Oxford Health managing the award. Following agreement between OUH and OH approval has been sought and agreed from the NIHR to move the contact from OUH to OH. This is expected to happen as from 1st March.

## NIHR Collaboration in Leadership in Applied Health Research and Care (CLAHRC)

In its comments on the CLAHRC report to March 2019 indicated NIHR:

* Satisfaction with the achievements overall
* Clarity of reporting and evidence of response to previous feedback eg improved effort to engage with industry
* Effectiveness of continued work such as iBEST, OPTiMSE, DROPLET and iSAM
* Links with other NIHR infrastructure
* PPIE embedding and focus on new UK Standards for Public Involvement to support and drive improvement

The signed final report for the CLAHRC will be submitted by 10 March 2020.

## NIHR Applied Research Collaboration Oxford and Thames Valley (OxTV)

Applied Research Collaborations (ARCs) will deliver new research evidence and support the implementation of such research into practice, making tangible improvements for NHS services, patients and the public.

ARCs aim to deliver a ‘step change’ in national level research impact and are mapped to the 15 AHSN Regions, with local partnerships with Sustainability and Transformation Partnerships, evolving Integrated Care Systems, and working in national partnerships across the different regions.

The NIHR investment of £150m over five years requires ARCs to establish enduring partnerships with a range of local organisations including NHS services, HEIs, charities and industry.

The research of the ARC will focus on a range of interventions to improve outcomes for people with mulitmorbidity, mental health problems, understanding key needs of these groups. By harnessing innovation and developing novel solutions that can be implemented across the region and more widely, ARC will address the NHS [Forward View](https://www.england.nhs.uk/five-year-forward-view/) and [Long Term Plan](https://www.longtermplan.nhs.uk/).

The OxTV ARC plans to significantly enhance academic capacity for applied health research through its development and training opportunities for researchers, clinicians and allied health professionals

* Research Studentships (pre-doctoral) in each research theme
* Provision of supervision for MSc candidates who choose to do their dissertation on evaluation- or implementation- related research projects

The ARC Strategy Board, chaired by [Stuart Bell CBE](https://www.oxfordahsn.org/about-us/our-people/stuart-bell-cbe-2/), Chief Executive of the host NHS Trust and representative of all themes, public health and social care ARC member organisations will oversee programme strategies.

The ARC Programme Director is [Prof Richard Hobbs](https://www.phc.ox.ac.uk/team/richard-hobbs) and the Implementation lead is [Prof Gary Ford](https://www.oxfordahsn.org/about-us/our-people/professor-gary-ford-cbe/)

The ARC Management Group reports into the Strategy Board and is responsible for overseeing the operations of the ARC according to the guidance provided in the ARC Operations Framework. It includes ARC Managers, functional leads and supporting staff.

* + 1. **Research Themes**

The research themes (see below) are supported by an implementation workstream working closely with the AHSN to deliver ARC outputs into practice across the Region, in partnership with BOB STP, local CCGs and trusts, local authority public health and social care directorates, and OTV HEIs, and through national programmes, supported by the regional ARCs and AHSNs.

OxTV ARC research outputs that are of high value to our regional partners will be prioritised for implementation. In particular, those with potential to be spread in partnership with other ARCs and national implementation structures, especially our AHSN Network, with whom we have a close existing partnership and whose partners include BOB STP, Frimley STP, Milton Keynes in BLMK ICS/STP), Rightcare, and Getting It Right first Time programme. For national implementation, we will work in partnership with other ARCs to lead and support research implementation programmes in primary care, cardiovascular disease and mental health, and with the AHSN Network and NIHR Dissemination Centre, to develop evidence based programmes of high-value research outputs that become NHSE-commissioned, AHSN-supported national programmes.

Five major research themes were selected from 16 areas submitted for competition for inclusion in the [OxTV ARC](https://www.arc-oxtv.nihr.ac.uk/) - all themes are led by national research leaders in the thematic area

**Disease Prevention through Health Behavioral Change (Theme Lead:** [**Prof Susan Jebb**](https://www.phc.ox.ac.uk/team/susan-jebb)**)**

Testing novel implementation interventions at the population level to improve the health of the public and prevent disease and multimorbidity through workstreams to:

* Produce a step change in weight management in the community, adapting those to the groups at highest need
* Improve the nutritional quality of food purchases

**Patient Self-Management (Theme Lead:** [**Prof Richard McManus**](https://www.phc.ox.ac.uk/team/richard-mcmanus)**)**

Using extensive applied research in cardiovascular disease as an exemplar, this theme will develop and test a series of new interventions in patient self-management and prevention of chronic disease. Workstreams include:

* Optimisation of the NHS Health Check in the Thames Valley: combining Oxford’s intervention development expertise with regional Public Health experience to widen participation in cardiovascular risk reduction.
* Commercialisation of a self-monitoring/management app for the general hypertensive population
* Stepped wedge design cluster randomised implementation trial in 32 practices across the Thames Valley.
* Development of an NHS digital intervention to promote self-management in cardiometabolic morbidity in pregnancy to promote self-management in cardiovascular morbidity.
* Pilot trial of the self-management in pregnancy digital intervention.

**Mental Health across the Life Course (Theme Lead: Prof Cathy Creswell)**

Linking the new Oxford Mental Health BRC with Reading’s excellence and leadership in child and adolescent mental health research. This theme will enable local and national mental health service providers to provide rapid, effective support for mental health problems through development and evaluation of psychological interventions and by establishing innovative and scalable clinical decision support tools

* Evaluation of online parent-led treatment for child anxiety disorders in routine settings.
* Expansion and evaluation of the online parent-led platform to other common mental health conditions in CYP (initially childhood OCD) and mixed-methods usability testing.
* Clinical decision support tool to personalise internet-delivered cognitive-behavioral therapy (iCBT) for depression.
* Development of an internet-based system to help individual patients and clinicians choose the best intervention by considering the efficacy and adverse effects of pharmacological and psychological interventions.
* Risk assessment. Review prognostic models in CYP and synthesise current clinical prediction rules following self-harm and suicidal ideation. Model the impact of integrating risk assessment tools compared to usual practice. We will work closely with local Future in Mind teams across the region to develop to further support this local public health priority area (self-harm)
* Establish how best to target care for comorbid mental illness in older medical inpatients by describing prevalence and associations of depression, anxiety and cognitive impairment, frequency of referrals to liaison psychiatry, and the implementation, cost-effectiveness and, if resources allow, social care outcomes of a targeted intervention (building on the NIHR-funded HOME Study).

**Community Health and Social Care Improvement (Theme Lead:** [**Prof Ray Fitzpatrick**](https://www.ndph.ox.ac.uk/team/raymond-fitzpatrick)**)**

This theme brings together three research teams with expertise in population health, healthcare improvement and musculoskeletal conditions improvement and in the investigation and evaluation of long term conditions. Its overarching aims; to alleviate the burden of disability and health inequality and to investigate the impact of clusters of disease involving the musculoskeletal system conditions in the profile of multi-morbidity of older people

* Supporting carers of individuals with cognitive impairments or dementia. We have been working with memory clinics in the Thames Valley to explore the role of quality of life assessment for both patients and carers
* Evaluation of a new family safe-guarding service piloted by Oxfordshire County Council Childrens’ Services to protect vulnerable children.
* Care and support planning for long term conditions with key component of the Buckinghamshire Integrated Care System will be extending use and impact of care planning.
* Falls prevention feasibility study for older people. ‘Dance to Health’ is a community-based charity (Arts Enterprise with a Social Purpose).
* Outcomes-based service development using the Long Term Conditions Questionnaire, developed and evaluated jointly with Personal Social Services Research Unit (PSSRU) to assess perceived needs and well-being across health and social care. Co-ordinating and supporting a learning set of users (clinicians, managers, commissioners) of this and related tools to establish targeted methods of assessment and outcome evaluation in routine clinical practice.

**Applied Digital Health (Theme Lead:** [**Prof John Powell**](https://www.phc.ox.ac.uk/team/john-powell)**)**

A new theme for OxTV ARC, to be based on a major new investment and complement the existing Big Data Institute. It will develop and evaluate tools to reduce the variation in healthcare performance by modelling predictive associations between multimorbidity and outcomes to target interventions including:

* Improve prescribing The EBM DataLab team will develop and evaluate their evolving portfolio of digital tools through collaborative working of clinicians, researchers, software engineers, and patients, aiming to reduce unwarranted variations in prescribing practice.
* Prediction tools to inform service planning. The CPRD team will use primary care record data to examine ten-year trends in complexity and consultation indices and develop tools to estimate and predict health service utilisation and clinical outcomes. This work will be significantly strengthened by the recent migration of QResearch (EMIS data) to Oxford.
* Vigilance for patient safety following surgery The Baroness Cumberlege review and high profile safety concerns, such as those with vaginal mesh implants, require there to be more evidence, improved vigilance and better long term follow up for patients with surgical and other interventional procedures. This work stream responds to patient concerns and will have a direct impact on national policy through our strong links to the NICE Interventional Procedures programme.
* Crosscutting work with research and implementation themes This includes work with self-management and mental health on the development, evaluations and local implementation of patient-facing digital health tools. This is an area of huge interest to public health in local councils. Further to this we will support and collaborate with Oxfordshire Council in its application to the Social Care Digital Innovation Programme for a bid around older people and self-care.

**Novel Methods to Aid and Evaluate Implementation (Theme Lead:** [**Prof Rafael Perera-Salazar**](https://www.phc.ox.ac.uk/team/rafael-perera)**)**

A cross cutting theme will provide access to expertise in health economics, medical statistics, computing science and qualitative methods across the ARC. In addition it will

* Develop or tailor new methods to deliver or evaluate the implementation of interventions, service delivery or new tools (e.g. POC test, digital tools, etc.) through statisticians, data scientists, software engineers, and health economists working collaboratively with clinicians, other health practitioners, and patients.
* Consolidate our position as a centre for excellence in developing and tailoring new methods to support and improve NIHR infrastructure and the NHS.

All themes are getting underway, details of specific projects are being collated but contracting between the Trust and the University of Oxford is still pending.

NIHR will be making a site visit to the OxTV ARC on the morning of 30 April 2020.

**Staffing**

The following staffing changes have or will be taking place;

* Dr Claire Schwarz (formerly theme manager for Self-Management in the CLAHRC) has joined the ARC core admin team to support Programme Management and PPI
* Dr Paula Wray (currently at INVOLVE) joins as Senior Manager on 1 April
* Sarah Brown (orthoptist and experienced manager) joins as Implementation Manager on 1 April

**National Priorities**

ARCs will collaborate at a supra-regional and national level on key NHS priorities. [Professor Susan Jebb](https://www.phc.ox.ac.uk/team/susan-jebb) (theme 1 lead) is national lead for the cross-ARC collaboration on Behavioural Science

OxTV is currently contributing to;

* Mental Health and Wellbeing
* Multimorbidity
* Child health
* Applied Health Informatics
* Urgent and Emergency Care

**Additional funding bids**

Feb 2020 Richard Hobbs and Gary Ford (in collaboration with several other ARCs nationally) submitted a bid to the closed call under the Patient centred, integrated care priority.

The proposal describes a national role out of patient self-management of hypertension, in collaboration with NHSE and AHSNs. This differs somewhat from the specification and there is competition internally among ARCs for the remaining £15m. Decisions expected end March or a six month start up phase (during which time full costs and plans will be developed). Main work will then ensure from 1 October 2020 for 2 further years.

Feb Rafael Perera-Salazar and a team of co-investigators in Population Health, Psychiatry, Experimental Medicine and NDORMs at the University submitted an outline proposal to the MRC, UKRI and NIHR combined call for Tackling Multimorbidity at Scale. This sits well alongside the ARC. Hobbs, Ford and Bhui are listed as senior advisors. Decisions expected March or April for a full proposal deadline in late May and commencement in October 2020

## NIHR MedTech and In Vitro Diagnostic Co-operatives (MIC)

**Industry consultations**

The NIHR Community Healthcare MedTech and IVD Co-operative engaged with more than 13 companies regarding diagnostics or medical technologies over the last six months. Engagement has ranged from specific discussions at meetings to more formal teleconferences and face to face consultations. The MIC has also established a dialogue with Enterprise Singapore, who are working with UK PLC to introduce diagnostics and MedTech to the UK market and are looking for potential evaluation/verification partners; following on from the initial meeting with Enterprise Singapore, the MIC is now in talks with Credo Biomedical regarding the possibility of the evaluation of the low-cost Credo Flu A/B test for use with patients in acute paediatric settings.

**Selected Publications**

* Edwards G, Freeman K, Llewelyn MJ, Hayward G. What diagnostic strategies can help differentiate cellulitis from other causes of red legs in primary care? BMJ (Clinical research ed). 2020;368:m54.
* Fanshawe TR, Glogowska M, Edwards G, Turner PJ, Smith I, Steele R, et al. Pre-analytical error for three point of care venous blood testing platforms in acute ambulatory settings: A mixed methods service evaluation. PloS one. 2020;15(2):e0228687.
* Knight T, Malyon A, Fritz Z, Subbe C, Cooksley T, Holland M, et al. Advance care planning in patients referred to hospital for acute medical care: Results of a national day of care survey. EClinicalMedicine. 2020;19:100235-.
* Lee JJ, Verbakel JY, Goyder CR, Ananthakumar T, Tan PS, Turner PJ, et al. The Clinical Utility of Point of-Care Tests for Influenza in Ambulatory Care: A Systematic Review and Meta-analysis. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America. 2019;69(1):24-33.

**Selected Events / Engagement**

* Dr Joseph Butler and Dr Simone de Cassan presented the Oxford Health hosted CARMEN (CArdiovascular Risk in MEntal IllNess) project to clinical staff of Oxford Health Foundation Trust. CARMEN is a Trust/MIC service improvement and evaluation project which was embedded in the EIS and outreach teams of Oxford Health FT, and focussed on the improvement of completion of annual health checks in patients with severe mental illness through the introduction of point-of-care diagnostic tests which require finger-prick blood samples and which yield immediate results.
* Dr Philip Turner represented the MIC at the NHS Health and Care Expo 2019 in Manchester at the official NIHR stand, where he provided and overview of the MIC offer and current projects to visitors.
* Between the 8th and 10th of October, the MIC held the annual Diagnostic Evidence Workshops at Worcester College Oxford. The Workshops consist of an introduction to the evaluation of diagnostic tests with subsequent days which focus specifically on health economic and statistical methods for evaluation of diagnostics. The workshop attracted attendees from across the globe, with students attending from as far afield as India and Australia. The MIC was able to support the attendance of 16 students through bursaries provided through funds awarded to the MIC from the MRC Proximity to Discovery fund. Each day of the course was fully subscribed.
* Professor Hayward, Dr Yang, Dr Fanshawe and Dr Turner attended and delivered a workshop at the UK Diagnostics Summit in Manchester in November. The MIC team worked through a number of prepared vignettes with attendees which related to different elements of the evidence generation cycle for diagnostics. Professor Hayward was a member of a panel which explored challenges to the implementation of diagnostics more widely.
* Dr Turner attended the EIT Health Summit in Paris in December to present the EIT Health-funded ADVANCE project, which concerns the refinement and evaluation of a novel rapid diagnostic test for urinary tract infection. The ADVANCE project will take place in general practices in the Oxford area during 2020.
* Dr Turner continues to attend meetings of the British In-Vitro Diagnostics Association, particularly those convened by the Near Patient Testing and AMR working parties.
* The MIC recently attended an event organised by The Hill in Oxford (Research Collaborations for Healthcare Innovations) which focussed on research infrastructure engagement with start-ups and SMEs who are largely focussed on digital/AI-based healthcare solutions. The MIC provided an overview of the MIC offer to industry and was involved in an industry ‘speed dating’ engagement activity. The MIC will pursue a number of potential collaborations with attendees.

**Recent funding / bids**

* The MIC supported a bid for NIHR i4i Connect funding by KroniKare to carry out a health economic evaluation related to the KroniKare AI wound scanner for the management of chronic wounds.
* The MIC supported a collaborative bid for ISCF funding with colleagues from Population Health and Oxford Brain Diagnostics to quantify the potential impact of early detection of dementia (including Alzheimer’s Disease).
* The MIC together with collaborators in the Department of Engineering and OUH have just been awarded a grant from the EPSRC to continue work on the development of device for the collection of urine samples from paediatric patients (more information below).

**Selected Projects**

* Working with Care UK (a large UK provider of primary and urgent healthcare), the MIC is exploring the impact of the introduction of point-of-care CRP blood testing for the management of acute infection on the prescription of antibiotics across a number of Care UK out of hours units. MIC researchers are mapping antibiotic prescription across care UK test and control sites prior to and following the introduction of POC CRP testing. The evaluation period has now concluded and the MIC team is collating the final datasets in preparation for analysis.
* During 2019, the MIC Acute Paediatrics clinical theme hosted a stakeholder workshop to discuss the development of a solution (device) for the collection of uncontaminated urine samples from paediatric patients. Suspected urinary tract infection is a common presentation in paediatric emergency medicine, with the diagnostic work-up largely dependent on the availability of a suitable urine sample from patients. Unfortunately obtaining a sample can be difficult from non-compliant younger children and neonates, and sample contamination from skin flora and faecal matter is common. MIC researchers are collaborating with colleagues from the Department of Engineering and from the microbiology laboratories of OUH to develop and validate a device to assist with the collection of urine samples from this challenging patient group. Colleagues in Engineering have developed an early prototype device with financial support from MIC pump-priming funds. Further development work will be supported by an EPSRC grant which has been awarded to the team.

# Leadership and Management

## Board report \ seminars feedback

Prof John Geddes (Director of R&D), Prof Andrea Cipriani (Associate Director of R&D) and Bill Wells (Head of R&D) attended a board seminar if November 2020. The key outcome was for OHFT to strategically plan for combined clinical academic consultant posts.

## Staffing

Key staff changes over the past six months are;

* After successfully leading the Oxford Health Clinical Research Facility (CRF) for almost 10 years, Professor John Geddes stepped down as CRF Director and was replaced by Professor Andrea Cipriani
* Marco Pontecorvi has joined as BRC Manager

## Research Set Up and Sponsorship

## Set Up

This year, our goal has been to ensure studies take no longer than 4 weeks to set up (calculated from the date a full set of documents are provided to the date our teams are clear to start recruitment); We are currently delivering that target. This, along with the hard work of individuals across the department, has resulted in nearly 27% more studies already being set up this year in comparison to FY2018/2019.

|  |  |
| --- | --- |
| Year | Number of Studies |
| Opened 2017-2018 | 34 |
| Opened 2018-2019 | 41 |
| Opened 2019-2020 | 52 |
| *Currently in Set-up* | 33 |

## Sponsorship

As a Trust we are currently only sponsoring low risk studies which could not be sponsored elsewhere. This includes student work and staff projects where appropriate.

|  |  |
| --- | --- |
| Type | Total |
| Student | 1 |
| Staff | 2 |

## 

## NIHR Clinical Research Network (CRN) High Level Objectives (HLOs)

The Local CRN is measured against a set-of high-level performance objectives. OHFT’s contribution to the these are shown below.

| **HLO Objective** | **2018/2019** | **2019/2020**  **YTD** | **%** *Change* |
| --- | --- | --- | --- |
| 1A: Increase the total number of research participants recruited. | 2891 | 2727 | 106% |
| 1B: Increase the number of commercial research participants. | 3 | 23 | 767% |
| 2A: Increase the proportion of research studies funded by life sciences companies that are delivered in line with the study’s planned participant. (met target) | 100% | 100% | n/a |
| 2B: Increase the proportion of studies funded by non-commercial organisations that are delivered in line with the study’s planned participant recruitment target and delivery time. (met target) | 76% | 70% | -6% |
| 3A: Increase the number of studies funded by life sciences companies which are supported by the CRN. (portfolio) | 80% | 100% | +20% |
| 3B: Increase the proportion of new studies funded by life sciences companies which have received clinical trial authorisation. | n/a | n/a | n/a |
| 6A: Increase the proportion of NHS Trusts which are active in research\* | n/a | n/a | n/a |
| 6B: Increase the proportion of NHS Trusts which are active in research funded by life sciences companies\* | n/a | n/a | n/a |
| 7: Increase the number of participants involved in research into dementias | 26 studies | 26 studies | none |
| 8: Number of NIHR CRN Portfolio study participants responding to the Participant in Research Experience Survey\* | 27 | 106 | +293% |
| 9A: Reduce the median time it takes to set up research studies funded by life sciences companies by 5% | 8-12 weeks | 3-4 weeks | 5-8 weeks |
| 9B: Reduce the median time it takes to set up research studies funded by non-commercial organisations by 5% | 8-12 weeks | 3-4 weeks | 5-8 weeks |

## Contracts

The various types of contract signed provides an indication of industry engagement and complexity of research collaboration. The table below shows contract activity this year.

| Type | BRC \ CRF | Signed | In Progress |
| --- | --- | --- | --- |
| CDA’s | NDAs | 9 | 5 |
| Contracts | model trial agreements | 10 |  |
| Collaboration Agreements |  | 3 | 8 |
| Funding Agreements |  | 6 |  |
| Data Transfer |  | 2 |  |
| Service Agreement |  | 1 |  |
| SLAs |  |  | 4 |
| PIC Agreement |  |  | 1 |
| Amendments to agreements |  |  | 3 |

OHFT outsource their management of research contracts to OH. OHFT’s approach to unlimited liability in confidentiality agreements has led to longer than the industry standard set-up time. We are aware of two instances where we have lost out on potential commercial trials due to this position.

## Finance

**Research Income**

Over the last ten years, OHFT income generated from research activity has grown from just under £2m in FY10 to an FY20 budget of £11.7m.

Income is forecast to drop to £9.7m in FY22 due to a number of grants coming to an end.

**Infrastructure and key award funding Timeframes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Award** | **Director/PI** | **FY 20** | **FY21** | **FY22** |
|  |  | **£'000's** | **£'000's** | **£'000's** |
| Biomedical Research Centre (BRC) | Prof John Geddes (Dept of Psychiatry) | 2,850 | 2,816 | 2,818 |
| Clinical Research Facility (CRF) | Prof Andrea Cipriani (Dept of Psychiatry) | 748 | 751 | 755 |
| Applied Research Collaborations (ARC) | Prof Richard Hobbs (Dept of Primary Care) | 824 | 1,647 | 1,647 |
| Medtech and In Vitro diagnostic Co-operative (MIC) | Prof Christopher Butler (Dept of Primary Care) | 249 | 249 | 249 |
| Collaboration in Leadership in Applied Health Research & Care (CLAHRC) | Prof Richard Hobbs (Dept of Primary Care) | 1,000 | - | - |
| Gamechanger (I4I) | Prof Daniel Freeman (Dept of Psychiatry) | 1,295 | 1,384 | 232 |
| Development and evaluation of a pathway from 'Universal screening' to online intervention for children with anxiety problems | Prof Cathy Creswell (Dept of Experimental Psychology) | 439 | 531 | 466 |
| Preventing psychosis in young people at ultra-high-risk attending NHS mental health services: a feasibility study of a novel intervention target | Dr Felicity Waite (Dept of Psychiatry) | 30 | 118 | 103 |
| Fractures in people with intellectual disabilities | Dr Valeria Frighi (Dept of Psychiatry) | 53 | 27 | - |
| A comparison of usual care versus usual care plus a smartphone self-harm prevention app (Blue Ice) in Young Adolescents aged 12-17 who self harm | Prof Paul Stallard (University of Bath) | 66 | 130 | 119 |
| Optimising the monitoring and management of raised blood pressure during and after pregnancy | Prof Richard McManus (Dept of Primary Care) | 536 | 689 | - |
| Supporting people with type 2 diabetes in effective use of their medicine through a system comprising mobile health technology integrated with clinical care | Prof Andrew Farmer (Dept of Primary Care) | 470 | 517 | 483 |
| Safety netting in Primary Care: A realistic review of the contexts and mechanisms on its effectiveness | Dr Claire Friedmann-Smith (Dept of Primary Care) | 42 | 108 | - |
| Identifying, explaining and addressing unwarranted variation in GP prescribing behaviour: a mixed methods programme with low cost RCTs | Dr Ben Goldacre (Dept of Primary Care) | 30 | 95 | 25 |
| **Total** |  | **8,631** | **9,061** | **6,896** |

**FY20 Income Budget**

The FY20 Income budget of £11.7m is made-up as follows:

|  |  |
| --- | --- |
| **FY20 Income Budget** | **Total** |
| **National Institute for Health Research** | **£k** |
| Biomedical Research Centre (BRC) | 2,846 |
| Collaboration in Leadership in Applied Health Research & Care (CLAHRC) | 1,000 |
| Applied Research Collaboration (ARC) | 824 |
| Research Capability Funding (RCF) | 1,428 |
| Grant Income | 1,586 |
| Clinical Research Facility (CRF) | 748 |
| Gamechanger (I4I) | 1,234 |
| Medtech and InVitro Diagnostic Co-Operative (MIC) | 249 |
| **National Institute for Health Research** | **9,915** |
| Clinical Research Network : Core Funding | 830 |
| Clinical Research Network : Hosting of Primary Care Research Partnership | 390 |
| Study Delivery | 91 |
| Other Grants | 483 |
| **Other** | **1,794** |
| **Grand Total** | **11,709** |

**FY20 Performance**

As at Month 10 in FY20 expenditure was £44k, compared to expected costs of £181k, generating a favourable variance of £137k. Currently the expectation is that R&D will generate a £95k favourable variance at the year end.

**Clinical Research Network: Thames Valley and South Midlands (CRN)**

The FY20 core CRN budget of £830k funds Service Support Activity (primarily patient recruitment). It is currently predicted that only £805k will be utilised by OHFT with the balance being returned to the CRN.

CRN Network staff such as the Thames Valley Primary Care Research Partnership are hosted by the Trust but not under the management of the R&D Senior Management Team. their costs are recovered on a direct cost basis from the CRN (FY20 budget £329k).

The CRN also supported, the Oxford Health project, to involve more Consultants in Research. This funded 1 session per week of 4 Consultants, for 9 months, this ended on 31 December 2019.

**Research Capability Funding (RCF)**

Research active NHS organisations receive RCF to enable them to meet some, or all, of the research-related component of the salary of their researchers and research support staff. The annual RCF allocation combines a percentage of NIHR funding received in the previous calendar year with a allowance for each Senior Investigator associated with Trust.

The FY20 RCF allocation of £1,428m showed an increase of £223k on FY19. This was generated from an additional Senior Investigator Award (Prof Anke Ehlers) £75k, the full year effect of the BRC funding £111k and additional Grant Income £37k. The FY20 award was split between the Trust & Department of Psychiatry (including CLAHRC) £767k and the Department of Primary Care £661k.

Following a review of RCF by the Department of Health (DH), the amounts based on Infrastructure awards will reduce over the coming years, the Senior Investigators element will be removed. The grants element remains unchanged.

There was an expectation that RCF would increase to £1.6m in FY21, however due to delays in Gamechanger collaboration, payments were withheld from the NIHR, meaning that only £1.2m will be received in FY21. The delayed payments from Gamechanger, will increase RCF in FY22, to £1.4m. RCF is only expected to be £800k in FY23, as the current NIHR Grants reduce.

**Excess treatment costs (ETC)**

All Trusts must meet a threshold before they receive ETC. This is 0.1% of its operating income which for OHFT in FY20 is £32k. In the first nine months of FY20, ETC’s of £35k were calculated as being incurred which will generate income from the Local CRN of £3k. OHFT meet the ETC threshold.

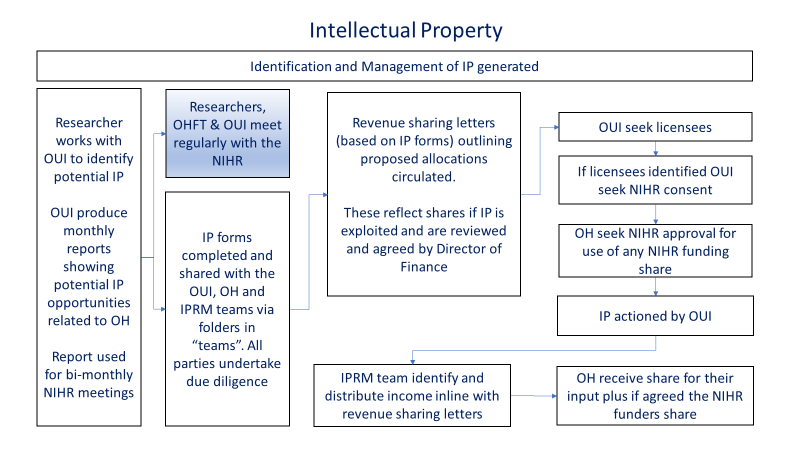
**Oxford Academic Health Science Network (OAHSN)**

In FY20 the Anxiety and Depression network was funded by the AHSN & others £132k and the CLAHRC £27k. A further £62k is available from the AHSN in FY21. Any funds not spent will be carried forward to support the Network in FY21.

## Intellectual Property (IP) Management

OHFT is developing an IP Policy which is under the control of the Director of Finance.

The management process is shown below



For potential IP opportunities arising from NIHR funding OHFT meet with OUI, the NIHR, NIHR infrastructure managers and researchers on a bi-monthly basis. These meetings will provide the NIHR with an update on previously identified projects and outline newly identified opportunities. They also allow the NIHR to indicate if they are likely to provide consent to exploit any IP arising

Management of IP is assisted by Oxford University Innovations (OUI) in line with the IP Framework Intellectual Property Agreement.

The process has three core elements cores elements;

* **Contracting**, which is undertaken by OUH contracts under a service level agreement
* **Identification and Management**, which involves the Head of R&D
* **Exploitation**, which is manage by Oxford University Innovations under the Framework Intellectual Property Agreement (FIPA)

## Estates

Following expansion to cover key roles R&D’s need for more space at the Warneford is becoming urgent. There is an immediate short-term problem and a longer strategic pressure in relation to the new build. Communication is on-going with the Estates department.

# Research Active Workforce

**NIHR 70@70**

Dr Cathy Henshall’s NIHR 70@70 award commenced in May 19 and since then a number of 70@70 initiatives have been undertaken.

These include:

* Establishment of Oxford Nursing and Allied Health Professionals Clinical Academic Pathway Development working group. Commitment from Oxford BRC Directors and Chief Nurses at OUH and OHFT. First meeting held in Jan 2020, with stakeholders from OxINMAHR, OHFT, OUH and the NIHR ARC and BRCs.
* Establishment of Academic Writing Retreats for Nurses. These are co-funded by the OHFT and Oxford BRCs, CRF and OxINMAHR. The first retreat was held in Sept 2019 and resulted in >12 publications being submitted to academic journals. The second is planned for March 2019 and 15 spaces have been filled.
* Development of an online and face-to-face ‘Research Support Package’ for nurses and AHPs in underway and is due to launch in Sept 2020. This will be available staff via OHFT Learning and Development and will include an introduction to research design and development, grant writing workshops, principal investigator essentials sessions and systematic review workshops. The package is being developed in collaboration with the Oxford BRCs.
* Collaboration with 70@70 nurses at Kent, Leicestershire and Northumbria NHS Trusts to work in partnership with the James Lind Alliance to undertake a priority setting partnership in community nursing. Support for the process established from OHFT, NIHR ARCs and other national stakeholders. Funding for project is currently being explored. Potential to drive forward research priorities in this area, promote retention and recruitment in community nursing, increase patient care outcomes and service efficiency and increase staff training and development opportunities.
* Increase in empirical research opportunities for Masters Nursing student dissertations and support with writing for publication. Currently six OBU students are undertaking empirical research projects. For the next academic year, project ideas have been sought from the OHFT clinical teams. This will ensure that the research projects undertaken increase the research engagement of clinical staff and that the research is of benefit to clinical teams.

# Research Informatics

The research informatics function includes CRIS, Data linkage projects, Information governance, GPDR and Data Management

**Case Records Interactive Search (CRIS)**

The Oxford team includes a CRIS Data Administrator who supports new users of CRIS to set up their user accounts, projects and conducts the audits and 2 CRIS Academic Support and Data Analysts who provide support to CRIS researchers in framing their CRIS question and running more complex searches and extracting relevant data for users to subsequently analyse.

**Oxford CRIS Oversight Group**

The Oxford CRIS Oversight Group is made up of two groups. The CRIS Operational Oversight Group which is a virtual group and they review all CRIS research applications prior to approval. The second group is the CRIS Strategic Oversight Groupthis group sit on four fixed dates over the year with discussions being more strategic in nature and these meetings include updates on Akrivia Health, The National Governance Group, CRIS activity and includes a presentation from a CRIS researcher of a projects progress.

The groups are chaired by the Medical Director and Caldicott Guardian and the voting members include the Head of Information Governance, Patient and Public Involvement (PPI), Clinical Service Representation and members from the IAPT service where IAPT applications are submitted

To date the CRIS have received appropriate approvals to conduct 72 UK CRIS applications, 37 research questions, 13 service evaluation, 22 clinical audit questions. We currently have 27 active CRIS searches and 68 active CRIS users.

**Cristal Health and Akrivia Health**

Oxford Health NHS FT has been using the CRIS system since 2015 as a tool to access and interrogate clinical records for research proposals, service evaluations and clinical audits. During this time the system has been provided by the University of Oxford and funded by various research awards.

The National Institute for Health Research (NIHR) provided £1m over the period April 18 to March 19 for the Oxford Health BRC to identify options for a sustainable platform for CRIS.

The option recommended was a spin-out which became Cristal Health Ltd which was established in May 2019. At the same time the NIHR gave consent to license the Technology developed to Cristal Health Ltd

In September 2019 a supply of services contract was signed by the OHFT Director of Finance for Cristal Health to provide services to OHFT.

In the early autumn of 2019, an overarching Services Agreement relating to services provided by Oxford Health was agreed in principle. Over the same period discussions took place regarding a specific commissioned work package to be provided by OHFT at a commercial rate. The requirements for this work package were agreed and the detail was included in the pre-agreed Services Agreement. The agreement for this specific work package was signed in October 2019 by the OHFT Medical Director.

In December 2019 took on the trading name of Akrivia Health (Cristal Health Ltd remains the company) and the OHFT Director of Finance accepted a seat on the Board of Akrivia Health.

in January 2020 the first work package was completed, and a meeting of lessons learned took place.

Akrivia wish to continue to access the high level of expertise within the CRIS group at OHFT and we are working with them to identify areas of common interest which will benefit OHFT. These currently fall into three areas;

1. Training - OHFT already provides ad-hoc support to other Trusts.
2. Platform Development - OHFT will have a vested interest in how the system develops in the future. Involvement here will help provide advanced notice of future developments, allowing the consideration of potential impacts.
3. Consultancy Work – after delivery of the first work package OHFT would consider future commissions on a case by case basis to ensure that we only accept those case where we can accrue some benefit

OHFT is already seen nationally as a lead site in relation to CRIS and reputationally it is in its interest to have an awareness to Akrivia Health’s activity.

The areas mentioned above would increase opportunities for OHFT staff, help provide advanced notice of future developments and provide an additional income stream

**Specific elements of the work include:**

* **Natural Language Processing (NLP) work** - This provides CRIS users with an automatic text reading facility for extracting and providing the context for relevant data currently only available within the free text fields of a medical record.

Work continues in locating all mentions of drugs within the clinical notes and whether they are being prescribed, mentioned or ‘PRN’ along with their dose. Akrivia Health are also now working on a number of additional concepts which will be made available to the whole CRIS Network. These concepts include Medications, Diagnosis including the severity, Health Scores, Adverse Effects, Symptoms,

* **Virtual Desktop Environment** – CRIS researchers have now moved onto the Swansea University - UK Secure Research Platform (UK SeRP) facility where they can securely conduct their searches and store their extracts. This facility also provides additional analysis and NLP tools.

We continue to offer an additional Microsoft Azure virtual desktop facility, created by Oxford Health Trust IT department, for our NLP scientists which has adequate resource to support their work.

* **Consent for re-contact –** The Research Informatics team will play a key role in taking this forward
* **Linkage –** This includes work with the Health Information Collaborative (HIC) which looks to develop linked datasets
* **UK Biobank** - CRIS data is linked to the UK Biobank and a static set of Improving Access to Psychological Therapies (IAPT) data, providing further opportunities for additional collaborations and larger de-identified data sets to be analysed. There are further ongoing collaborations taking place to link CRIS data in Oxford with National Cancer Registry (NCR) data held by Public Health England as well as a research data base held at Oxford University Hospitals called the ORCHARD Project. All linkage projects require approval by the CRIS Oversight Group as well as a Data Protection Impact Assessment (DPIA) and relevant Data Sharing Agreements to be put in place.
* IMG – the monitoring of all research data assets is undertaken by the Head of Research Informatics

reported to the Trust Information Management Group

* **GDPR –** The implications and requirements of GDPR in relation to research data are still evolving. This is a significant piece of work which is led Head of Research Informatics who attends the GDPR Future Forwards workshops and supports the Research staff with training and support on how personal data in research should be managed in accordance with the GDPR regulations.
* **Data Management** – The R&D Data Manager is responsible for a number of research systems including those for administering clinical research studies, project and portfolio management and the national performance. This role has the responsibility for producing all the data required for the BRC and CRF annual reports

# Collaborations and Impact

## Oxford Academic Health Sciences Centre (AHSC)

The ASHC will submit a separate report to the Board regarding activity across the four-partner organization in Oxford. These reports will be on a biannual basis

## Oxford Academic Health Science Network (OAHSN)

Oxford Academic Health Science Network (AHSN) maintains a significant focus of Mental Health within its programmes and we highlight below Mental Health work that is either hosted within Oxford Health NHS Foundation Trust (OHFT) or of relevance to the trust.

**Oxford AHSN Anxiety and Depression (A&D) Network**

The A&D Network is hosted by OHFT. Professor David Clark is Clinical Lead, Ineke Wolsey is the Network Manager and all IAPT (Improving Access to Psychological Therapies) services across Thames Valley and Milton Keynes are active members. The overarching objective of the network is to continuously improve patient outcomes, working very closely with its active Patient Forum. Building on the last report to the Board, when much detail was provided on various projects that the Anxiety and Depression Network is driving forward, this report will provide an update on some of the most recently initiated projects which have a strong focus on the following:

1**. Relapse prevention/ staying well after patients have been discharged**

* **A new step 2 (Guided Self-help) Staying Well protocol:** Piloting of this new integrated relapse prevention/ staying well protocol has now started and staff feedback, albeit anecdotally to date, is very positive. User experience and impact evaluations to be completed in the next 6 months.
* **The Paddle therapy support app**: Building on the detailed description of this initiative for the last report Paddle is now piloted across Thames Valley by a small group of champions within each of the services. A user experience and impact evaluation will be completed within the next 6 months. More information can be found here: <https://www.paddleapp.org/> .

**2. Identifying patients who don’t do well in IAPT services:** This is anexploration of what needs are not met, how services might be able to change their treatment, and support options to meet these patients’ needs**.** Thenetwork has started some work on the above in collaboration with UCL. National data has been analysed to identify the profile of patients who do not do well in IAPT services (i.e. do not achieve recovery and often discontinue treatment). We are currently looking at local data to understand if this is replicated locally, and if so, next steps will be looking at how the treatment options may need to be adapted to help this group of patients.

**3. Looking for ways to utilise dual trained staff more flexibly and improve patient outcomes and experience:** many of the staff within IAPT services are dual trained i.e. they first trained as a step 2 Psychological Wellbeing Practitioner and then went on to train as a step 3 High Intensity Therapist. Currently steps 2 and 3 are separate entities, each with their own, exclusive treatment protocols. Sometimes patients are ‘stepped up’ from 2 to 3 when they are thought to need more intensive treatment and this can involve a wait between finishing step 2 and starting step 3 treatment which, patients let us know, they find distressing and unhelpful. We are carefully (as fidelity to the model and the evidence-based treatments is of utmost importance) looking at finding a blended solution for some of the patients, which would mean a more fluid transition between the two treatment steps, no waits and continuing to work with the same therapist.

4. **Improving Access to Psychological therapies for older adults:** Building on the detailed description of this initiative in the last report, the Oxford AHSN has now set up an ‘Improving Access to Psychological therapies for older adults’ network. Members include all IAPT services across Thames Valley, secondary care older adult psychology staff, third sector representation and care home links. The group has met twice in the past 6 months, and members are working in partnership to improve on the current low numbers of older adults accessing psychological therapies. The first two projects include firstly maximising the current national awareness raising campaign to increase number of referrals, and secondly an awareness raising and educational initiative which is aimed at older adults (to reduce stigma and encourage self-referral) and Health Care Professionals (especially in primary care), to encourage the latter to have a conversation about mental health with older adults when needed and to sign post them if helpful.

**Dementia**

Some dementia work continues within the AHSN, though the Dementia Clinical Network no longer exists in its previous form.

**Best practice network for Care homes health in-reach teams** This network has been in place for almost four years and supports the health teams (including OHFT’s Care Home Support Service) that in-reach into care homes, helping care homes to provide better care to people living with dementia. The network holds quarterly meetings for sharing of best practice and CPD for these teams. In October the network held a well-received meeting focusing on dementia in people with learning disabilities, with an excellent presentation given by Rachel Evered and Jules McKim from OHFT. They spoke about how assessment of dementia in people with learning disabilities is carried out, about matters to consider for younger people with learning disabilities in dementia care homes and about training which is offered to care homes staff and health in-reach teams by the trust’s Learning Disabilities team.

**Mental Health Care for Emergency Department Frequent Attenders - Regional Collaborative**

This was a Health Foundation funded Thames Valley-wide project which explored different aspects of high intensity use of emergency departments. In one of our initiatives, we developed with service users a psycho-social form which we hope can be used to understand better the driving factors in frequent attendance in the emergency department. We have been trialling this form with the help of research nurses. Our website which we developed to report on the project as a whole has more details <https://www.thamesvalleystarlingcollaborative.net> .

**Integrated mental health care and policing teams**

This is a national programme being rolled out by AHSNs, in which police are integrated within a mental health team to work with high impact users of services, helping them towards safer and healthier lives. Locally there has been particular interest in the model in place in Hampshire and a similar version to this is now being developed in Oxford. The AHSN has contributed to the initial cost of the police officer who is working proactively alongside care coordinators with mental health service users.

**Sleepio**

Innovate UK has funded a collaborative partnership which has enabled free direct access to Sleepio, an evidence-based sleep improvement programme, for the 2.7 million adults living and working within the Oxford AHSN footprint. This project (the ‘Sleepio project’) is jointly delivered by Oxford AHSN and Big Health, and is supported by NHS England. The AHSN is working in partnership with Big Health to explore the best ways for people experiencing insomnia to access the online cognitive behavioural therapy-based digital therapeutic Sleepio. Since the launch of the project on World Mental Health Day (10 October 2018) over 11,000 people have engaged with Sleepio via the link [www.sleepio.com/nhs](http://www.sleepio.com/nhs) . Oxford AHSN is working with GPs, and primary and mental health NHS staff, local employers, and third sector organisations, to explore how the NHS can expand the provision of digital medicines, like Sleepio, at scale.

Since the project began, over 13,000 individuals have engaged with Sleepio across the Thames Valley. Around 40% of those engaging recently have begun the Cognitive Behavioural Therapy for Insomnia-based (CBTi) element of the programme. On average, those that do are enjoying 5.5 hours additional sleep per week. Using GAD2 and PHQ2 indicators, users also report reductions in symptoms of Anxiety (-64%) and Depression (-69%), as well as reductions in Stress (62%).

A health economic evaluation will be conducted at the end of the project. A variety of large organisations - including Unipart, Thames Water, University of Oxford, Oxfordshire County Council, West Berkshire Council, and Buckinghamshire Healthcare NHS Trust - have now rolled-out Sleepio to their staff and contacts. A Public Health-style campaign is being arranged for launch on World Sleep Day (13 March) 2020.

**Industry**

The Strategic and Industry Partnerships element of the AHSN supports the development of partnerships between academia, industry and the NHS across the development pathway for new products and services. In practice this covers new medicines, diagnostics, medtech and digital health innovations. This includes supporting new products and services which have potential to improve mental health services.

**Oversight of the AHSN’s Mental Health Programme – Steering Group**

To ensure oversight by our stakeholders, we have created a steering group with members from our three main mental health providers, Berkshire Healthcare, Oxford Health and Central and North West London. This steering group, which we set up to inform the work of the AHSN Mental Health Programme, has had its first meeting and had a wide-ranging discussion about the priorities and challenges for mental health providers.

**NIHR ARC and the Oxford AHSN**

Oxford Health hosts the NIHR Oxford and Thames Valley ARC which followed the previous CLAHRC programme of work. New areas of focus for the ARC are expanding public health and social care research capacity and developing closer working with the AHSN and regional partners to achieve more rapid implementation of research outputs of value to the NHS and social care system. Professor Ford, CEO of the Oxford AHSN, is the Implementation Lead for the ARC. An implementation manager has been appointed to commence in post April 2020 and will work across the ARC research programmes and AHSN Clinical Innovation Adoption team to optimise the development of research outputs that are ready for implementation in the regional health and social care system and more widely.

Additionally, Oxford Health is a member of the R&D group, represented by Bill Wells (Head of R&D), which discusses topics of common interest to Universities and NHS Trusts across the AHSN region.

## Oxford Institute of Nursing, Midwifery and Allied Health Research

**Background**

The Oxford Institute of Nursing, Midwifery and Allied Health Research (OxINMAHR) is a unique research institute in the UK. OxINMAHR comprises three research centres and four additional research groups and includes 8 Professors, 9 senior researchers/fellows and over 45 other research academics. These include research experts in health research, physiotherapy, nutrition, nursing, exercise science, physiology, biology, movement science, midwifery, social care, occupational therapy and psychology

**OxINMAHR redefined aims 2020**

Over the past year, OxINMAHR has redefined its remit, structures and activities. The key aims are to:

* Produce world-class research which aligns with government and international health and social care priorities.
* Build a community of inter-disciplinary research scholars to facilitate integration and maximise impact.
* Develop research capacity within and across professions, disciplines and departments.
* Develop sustainable research collaborations with world-class partners.

**Our 2019 Annual Report has been published (**[www.brookes.ac.uk/oxinmahr/](https://www.brookes.ac.uk/oxinmahr/))

The highlights include that our researchers have:

* Secured 36 grants totaling £1.4 million (including grants from NIHR, Cancer UK, British Heart Foundation, Health Education England, Action Medical Research Charities and a number of other charities)
* Managed a total research portfolio of over £2.3 million
* Published 106 papers in peer-reviewed high impact journals (an of 11% increase from the previous year)
* Conferred 7 Doctoral degrees, recruited 20 new Doctoral students and continued to supervise an additional 44 Doctoral students
* Contributed 25-30 (numbers to be finalised) staff submissions to REF2021 Unit of Assessment 3 (a four-fold increase on REF 2014)

Some impact case study synopses:

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| **Improving the quality of life of people living with and beyond a diagnosis of cancer**  **Professor Eila Watson** |
| With earlier diagnosis, improved treatments and an ageing population, the prevalence of cancer survivors in the UK is rapidly increasing. Understanding how quality of life can be maximised is therefore increasingly important. This research focusses on understanding the experiences and needs of people following a cancer diagnosis especially in relation to a) men with prostate cancer b) patients with pancreatic cancer and c) patients who have had radiotherapy to the pelvic area. The research has impact on the shaping cancer policy and service development, at both national and local level. |

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| **Supporting people with impairments to live healthier lives through exercise and physical activity**  **Professor Helen Dawes and Dr Johnny Collett** |
| This research has nationally and internationally influenced how exercise and physical activity is supported and delivered for adults and young people with long-term neurological conditions. The team have produced an extensive amount of evidence informing exercise and participation in activity in these populations. The benefits have now been established and exercise is seen has an essential part of managing conditions where it had been previously discouraged. The team have produced evidence to improve understanding and support the specific needs of these individuals. The evidence has also been incorporated into accessible programs and training materials. |

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| **Children and Families**  **Professor Jane Appleton and Dr Ethel Burns** |  |
| This research has three related programmes of research which influence and change health care professional practice. “Think Baby” is an e-learning tool developed specifically for trainee health visitors to help them develop their skills in observing and assessing mother-infant interactions. Think baby has been rolled out to Universities running the health visitor programme across the UK. “Was Not Brought” is a project arising from UK health care policy to encourage healthcare professionals to take a proactive and child centred stance in ensuring the wellbeing and safety of children who miss appointments. “Labouring in water and water birth” focuses on the care option of a birth pool facility in which women can labour and/or give birth. This work has reached the clinical and clinical-academic audience across the UK and internationally. | |

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| **Improving identification and support of individuals with handwriting and movement difficulties through development of assessment tools**  **Professor Anna Barnett** |
| This research focusses on the development of a suite of assessment tools has provided health and education professionals worldwide with the means to improve identification of and support for individuals with movement and handwriting difficulties. Impact of the Movement ABC-2 Test and Checklist and two handwriting tests (DASH and DASH17+) is evidenced by their specific recommendation in national and international guidelines. International sales figures, the number of translations and training events evidence their worldwide use by health and educational professionals. Testimonials from practitioners and parents show how these new tools have enabled individuals with movement and handwriting difficulties to gain access to support to help achieve their potential. |

Other relevant recent activities:

* Carding chairing a forum on an Oxford-wide Clinical Academic Pathway for NAHPs (to report in April 2020)
* Two OxINMAHR and OXTV ARC research priority workshops
* Successful NIHR Research Incubator award (Carding CI)
* Oxford-wide application for the competition 'UK Research and Innovation strength in places fund: Wave 2 EoI” focusing on digital health (outcome June 2020)
* NIHR workshop entitled “Capitalising on NIHR opportunities for non-medics” on January 10 2020.
* Oxford Academic Health Science Centre re-application
* Establishing an OxINMAHR/BRC post-Doctoral fellowship (early discussions)
* Re-advertisement of Professor of Nursing, Health and Social Care (April 2020)
* Development of 2020-2025 Research Strategy under the following main headings:
  + Leadership and Governance
  + Performance evaluation and review
  + People development
  + Partnership building
  + Funding and Publication
  + Dissemination and Impact

## Berkshire Healthcare

Over the last year OH have developed a relationship with Berkshire Healthcare. We are reviewing where we have similar objectives or complementary interests and are looking to put ourselves in a position to exploit any joint opportunities. This is at a very early stage but already Berkshire Healthcare have agreed to be a patient identification Centre for one of OHs studies and we will be providing training for their staff.

A research governance policy has also been exchanged to share learning and prevent duplication of effort and a joint meeting was held to discuss how we might better work with GP’s to identify research participants. We have also shared specific research participant recruitment strategies which we believe will lead to increased recruitment.

This collaboration is endorsed by the Thames Valley Clinical Research Network with the potential to represent the Thames Valley in certain areas.

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Bill Wells, Head of R&D

Dr Mark Hancock, Medical Director

**Lead Executive Director:** Dr Mark Hancock

1. *A risk assessment has been undertaken around the legal issues that this paper presents and there are no issues that need to be referred to the Trust Solicitors.*
2. *This paper (including all appendices) has been assessed against the Freedom of Information Act and the following applies:*

* *THIS PAPER MAY BE PUBLISHED UNDER FOI*

1. *This paper provides assurance and evidence against various Care Quality Commission Outcomes*