

NIHR APPLIED RESEARCH COLLABORATIONS (ARCs)

**Annual Report
(1 April 2020 to 31 March 2021)**

Note: The accompanying *NIHR ARC – Guidance on Completion of Annual Report for Period 01 April 2020 to 31 March 2021* contains essential guidance on the information you need to provide when completing this document.

**Please complete the form using a font size no smaller than 10 point (Arial).
Please submit as a Word Document.**

1. NIHR ARC Details

Name of the NIHR Applied Research Collaborations (ARC): NIHR ARC South London

Name, job title, address, email and telephone number of an individual to whom any queries on this Progress Report will be referred:

Name: Dr Jane Stafford

Job Title: Associate Director of Operations

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2. Declarations and Signatures

Name and address of the NHS Organisation administering the NIHR ARC award:

Name: King's College Hospital NHS Foundation Trust

Address: : Denmark Hill, London, SE5 9RS

Name of the Chief Executive of the NHS organisation: Professor Clive Kay

I hereby confirm, as Chief Executive of the NHS organisation administering the NIHR Applied Research Collaboration award, that this Progress Report has been completed in accordance with the guidance issued by the Department of Health and Social Care and provides an accurate representation of the activities of the NIHR ARC; and hereby assign all Intellectual Property rights to which I am/we are legally entitled in the Reports defined in the Contract for this award between myself/ourselves and the Secretary of State for Health and Social Care to the Secretary of State for Health and Social Care on behalf of the Crown:

Signature of Chief Executive:[]..... **Date:**[].....

3. Overview of Activities (no more than 1500 words)

Since October 2019, the ARC has recruited 28,200 participants to studies, leveraged £13m of external research funding, carried forward £36m in CLAHRC-adopted external research funding, and published 297 peer-reviewed papers. The ARC is also co-leading three national ARC networks: palliative and end life care, and the two national mental health priority networks.

Projects taken forward from the CLAHRC and developed under the ARC are having a direct impact on local and national services and people. Highlights include:

- The POPPIE trial led by the maternity and perinatal mental health theme on continuity of care models for women with risk factors for preterm birth informed NHS England guidance for scale-up of continuity of midwife care in the NHS Long Term Plan.
- The Children and Young People's Health Partnership (CYPHP), a new model of care designed to deliver better health and care outcomes for children and young people. The CYPHP model has been prioritised by the Integrated Care System for south-east London as an exemplar service. We are working with NHS England on featuring CYPHP as a case study on the NHS Futures website.

In this reporting year (1 April 2020 to 31 March 2021), the ARC South London has made excellent progress against its short-term objectives (1-2 years), as set out below.

Objective 1: Identifying research project milestones and pathways to impact (completed)

All core ARC research themes have identified project milestones and pathways to impact.

Objective 2: Establishing the ARC's governance and management structures (completed)

- Our core governance structures, the ARC Executive and Board are established, and our core management structures are in place.
- There has been a change in leadership of the ARC's Board. Professor Julia Wendon, Executive Medical Director at King's College Hospital NHS Foundation Trust (KCH), has stepped down to take on a role at KCH managing the Covid-19 response. Dr Leonie Penna, Chief Medical Officer, KCH, is the new co-chair, working alongside Dr Adrian McLachlan, GP Clinical Lead at South East London CCG.
- The Centre for Implementation Science (CIS) Executive is chaired by Professor Sevdalis (CIS Director) and reports to the ARC Executive. The CIS Executive oversees coordination and development of the cross-cutting and methodological aspects of the ARC.

Objective 3: Achieving first-year theme milestones and deliverable (completed)

All ARC themes have successfully delivered their milestones and deliverables for the first year, recruiting high-calibre research staff and co-ordinating core projects.

Objective 4: Demonstrating specific mechanisms to ensure the ARC addresses the needs of the local population and health and social care system (completed)

The ARC has developed a range of mechanisms to ensure that we address the changing needs of the local population and health and social care system. Our ability to respond to local need has been demonstrated by our rapid response to the Covid-19 pandemic.

- We have initiated 62 new Covid-related research projects and activities, co-produced with local and national partner organisations, with strong participation from our public and patient partners.
- This includes a focus on [palliative and end of life care, social care, maternity and perinatal mental health, applied informatics and public health.](#)
- We held an online event in April 2020 to understand the initial impacts of the pandemic on our local communities and under-served groups. [A report](#) was submitted to UK Parliamentary Women & Equalities Committee and [published in the BMJ.](#)
- We established an [equality, diversity and inclusion working group](#) (co-chaired by the EDI Lead and the ARC Director) in June 2020 to ensure that community representation and oversight of the work of the ARC reflects the diversity of the local population.
- Building on the recommendations of an external review of patient and public involvement and engagement (PPIE), we have worked with more than 100 people, including local people from diverse backgrounds, user groups and researchers to co-design a new [Involvement Strategy](#) (see section 6).
- We have undertaken extensive work to support greater equality, diversity and inclusion at ARC South London: appointing a [diverse public research panel](#); implementing a diversity monitoring framework for ARC

South London's Board and Executive; and collecting ethnicity data in relation to participation in ARC research (see section 6).

- The ARC's implementation research theme launched a series of online conversations between [implementors and evaluators of NHS and social care service transformations that took place as a result of the pandemic crisis](#). Organised with our AHSN, the Health Innovation Network (HIN) these events were supported by a guide developed with the HIN and King's Health Partners (KHP) on [how to implement and evaluate rapid service transformations](#).

Our research themes hold regular meetings with members of the local community to ensure that our research is designed around their needs. For example:

- Our palliative and end of life care theme engaged with local patients, carers, family and public to understand Covid-19 experiences and identify research priorities, via its [online public forum](#).
- Our maternity and perinatal mental health theme held [online engagement in research events in June 2020](#), with local women from diverse backgrounds and community groups.

Objective 5: Establishing a thematic symposium series across the ARC to ensure active collaboration between all themes by the end of year 2 (completed)

We have established our annual [thematic symposium series](#) engaging diverse communities in our research, and working closely with ARC themes. More than 80 diverse members of the public, health and social care practitioners, and researchers attended the first seminar in March 2021. Feedback was very positive:

- 80% of people thought the event was 'good' or 'very good'.

The second seminar (16 June) focused on people living with multiple long-term conditions.

Objective 6: Establishing regular meetings with health and social care delivery partners in south London (completed)

- Our monthly Executive meeting includes our theme leads and representatives from our health and care delivery partners in south London, including: South London and Maudsley NHS Foundation Trust, King's College Hospital and King's Health Partners.
- The Executive is accountable to the Board, which includes representatives from each ARC partner, Health Education England, local public health leads, and patient and service user representatives.
- The Board meets four times a year. Our co-chair (McLachlan) is an active member of the South East London CCG and his co-chair is linked to the KCH Board (Penna).
- King's Improvement Science meets with the KHP Directors of Strategy and presents our progress at the KHP Joint Board with the ARC Director.

Our research themes meet regularly with health and social care delivery partners. For example:

- Our implementation science theme, applied informatics theme, and King's Improvement Science have met regularly with local providers as part of their work to evaluate the [impact of a rapid shift to remote consultations in mental health](#) in a new learning health system initiative with NHS England (London). They are working with south London trusts, SLaM, NHS London, HIN, [disseminating early findings](#) – shaping plans for south London and are in discussion with north London.
- Our social care theme meets with partners including: the boroughs of Bexley, Kingston, Richmond, Lewisham and Southwark, King's College Hospital social work team, the Methodist Mission Deptford, Lewisham Pensioners' Forum and Age UK London. It has worked with local care providers and PPI members to co-produce resources for managers of day centres to safely re-open after lockdown.
- Our public health and multimorbidity theme established a Pandemic Ethics Virtual Group to offer guidance on healthcare prioritisation, advising NHS England and the Faculty of Intensive Care Medicine on ICU triage.
- They are also part of the SE London Ethical Oversight Group, with clinicians, managers, patients, ethicists and lawyers, providing guidance on decision-making with vulnerable patients and developing [a decision support resource for GPs](#) providing care in virtual clinical contexts.
- They are working with Lambeth Council to support community members and health practitioners to identify Covid-19 response, recovery strategies and locally identified community priorities.

Prioritising research for implementation to improve services and health outcomes

- The ARC's implementation and involvement (I&I) team (co-led by Zoe Lelliott and Dr Natasha Curran, (HIN)) selected two ARC projects for implementation support across south London, addressing palliative care and alcohol addiction. This work was paused due to the pandemic, but will now be reviewed following changes to projects.
- The team has supported work relevant to the pandemic, including working on the collaborative project to evaluate remote consultations at three south London mental health trusts.
- An implementation and involvement (I&I) manager has been recruited to begin in Q1 2021/22.

• The I&I team are developing tools that can be used to facilitate conversations, as well as to assess each ARC project for implementability (with input from across ARC themes).

• **Objective 7:** We have recruited implementation champions for each research theme. They will work with the I&I team to help themes consider implementation issues for all projects (**completed**).

Progress against medium-term aims (years 3-4)

• **Objective 8:** We are on track with plans for implementation science week. In June-July 2021, we are holding the international [Implementation Science Conference](#) and [Masterclass](#) online.

• **Objective 9:** We are on track with developing our online educational offering in implementation science to be offered in the 2021/22 academic year.

4. Progress Made in Each Research & Cross-cutting Themes (no more than 500 words per theme)

Alcohol theme

The theme lead is Professor Drummond and deputy theme lead is Dr Deluca (both King's College London).

Project 1: Alcohol interventions to reduce alcohol harm in acute alcoholic liver disease

• Developed links with hospitals and liver specialists, developed a research protocol for an RCT and submitted it for NIHR funding and started groundwork for PPI involvement (on track to complete objective 1, by September 2021)

• However, due to Covid-19 restrictions these activities were delayed (April – September 2020). PPI work is on track for May 2021 and completion of the feasibility work by the end of 2021.

• Completing a systematic review on 'the efficacy of psychosocial interventions to reduce alcohol harm in patients presenting a comorbidity of alcohol dependence and alcoholic liver disease'. On track (July 2021).

Project 2: Utility, acceptability and efficacy of wearable transdermal alcohol monitoring

• Our work conducting validation testing of a novel alcohol transdermal sensor and focus groups for acceptability was delayed due to Covid-19 restrictions.

• We are completing a systematic review of the acceptability and accuracy of alcohol transdermal sensors, which is on track for July 2021 (short-term objective 2. Years 1-2).

• Currently unable to test the transdermal sensors within our original timescale. However, we are expecting to receive them in June 2021 and are planning to conduct face-to-face (or online) focus groups in August/September 2021, to gather initial evidence on acceptability and feasibility of these devices.

• A PhD student started working on projects 1 and 2 in October 2020 and core activities have resumed, albeit with further delays due to national restrictions in research activities. Work now on track (medium-term objective 4. Years 3-4).

• We have 3 PhDs linked to the ARC work: a qualitative study of social networks in Alcohol Assertive Outreach Treatment (AAOT), a study on the health economic outcomes of the AAOT trial and a study on the impact of addiction service changes on hospital admissions and mortality in alcohol dependence.

• Work now on track to meet all medium-term objectives in Years 3-4.

New areas of research

• We have redeployed internal resources to develop Covid-19-related research (completing short-term objective 3). We have conducted, with colleagues, a national online survey of people drinking at harmful levels to examine how the pandemic impacted on their alcohol use and their help-seeking (SACCO study).

• We are involved in a study of London homeless people, who have been housed in hotels, to investigate service/help provision and emerging needs.

Highlights

• The Minimum Unit Pricing of Alcohol in Scotland completed data collection in A&E and Sexual Health Clinics. Data have been analysed, a report submitted to NIHR in August and two papers have been submitted.

• [Lancet Liver Commission paper was published](#) (March) and a launch was held at the Royal Academy (April 2021) where Drummond spoke on the need for more integrated care for alcohol-related liver disease.

• The adopted project on the impact of addiction service changes on hospital admissions and mortality in alcohol dependence is complete. Findings published in: [Lancet Regional Health Europe](#) and [BMJ Open](#).

Applied informatics (cross-cutting theme)

The theme lead is Professor Fiona Gaughran, South London and Maudsley NHS Foundation Trust (SLaM) and King's College London (KCL). The deputy leads are Professors Richard Dobson and Rob Stewart, KCL.

The theme is on track with its aims and objectives. It has initiated a substantial strand of Covid-related applied informatics research (see section 5, impact).

Aim 1: Create an Applied Informatics Hub (AIH) to support use of digital innovations in health and social care research (complete)

- The [AIH launched in January 2021](#) completing this aim. The Hub provides a single south London data resource for applied researchers, bringing together 40+ digital innovations in health and social care research to enable researchers rapid access to the latest tools.
- The [AIH is divided into five areas](#): electronic health and care records, approved digital linkages, mobile health resources, digital tools and virtual reality, and PPI resources.
- The AIH has been disseminated online, and with the NIHR ARC Applied Digital National network, the national network for NIHR ARCs, the Health Innovation Network (AHSN), and King's Health Partners.
- The Hub is updated with new resources (eg [Health Data Research Innovation Gateway](#)).

Aim 2: Evaluate the implementation and effectiveness of actionable analytics in clinical practice (on track)

- On track with aim (Sept 2021) to investigate inequality in practice in the management of anti-coagulation for atrial fibrillation. We have conducted preliminary searches in local primary care platforms to find the rate of anticoagulation treatments. A systematic review is underway on anti-coagulation for atrial fibrillation in people with severe mental illness. A PhD student started in October 2020.
- On track with evaluation (Sept 2021) of digital dysglycaemia management decision support in a mental health trust (SLaM) and initiated a systematic review on electronic management of diabetes. We are using [CogStack](#) to host a real-time alerting electronic clinical decision-support system linked to SLaM.
- On track with aim (ongoing) of employing computerised in silico strategies to evaluate the external validity and economic aspects of new (digital and non-digital) approaches to care.
- We are assessing the external validity of standard RCTs using observational data. We are using a simulated cardiovascular trial to determine a method of finding eligible participants within electronic health records. The aim is to create an algorithm for automated searching for eligible trial participants.
- We are on track with aim (Sept 2021) of using electronic records interfaces to determine the prevalence and outcomes of physical and mental health multimorbidity. Our work has addressed Covid-19, including publications on how ethnicity, medication and cardiometabolic risk can impact on outcomes.

Aim 3: Developing novel mechanisms for public, patient and staff involvement alongside the One London Local Health Care Records Exemplar (LHCRE) (on track)

- We have recruited a group of public members with lived experience of applied informatics, who meet as part of the theme's monthly meeting and help develop projects ([completing aim 3](#)).
- These PPI members have links to other informatics groups including LHCRE, Centre for Translational Informatics, and Health Data Research UK.
- We are developing links with the other London ARCs ([on track with aim 4, Sept 2023](#)).

Children and young people's theme

The theme lead is Dr Ingrid Wolfe, at King's College London (KCL) and Evelina London Children's Healthcare. The deputy theme lead is Dr Julia Forman, KCL. The theme is on track with its aims and objectives.

Project 1: Improving care for children with complex needs and disabilities (INCLUDE)

We will develop, implement and evaluate the effectiveness and cost-effectiveness of a coordinated model of care for children and young people with disability / multimorbidities.

- We have mapped need, care provision and resources in south London for CYP with long-term health conditions ([completing objective 1](#)). Our interactive digital map of services is [on ARC website](#).
- We are on track to co-develop evidence-based screening tools and interventions with families and professionals by June 2022 ([objective 2](#)).

- Dr Ghotane has tested a tool for selecting evidence for a systematic review of interventions for CYP with complex care needs, and completed systematic review protocol.
- Systematic review is underway, having experienced some delays due to Covid and exploring adoption by Cochrane Review. We expect to finish the review by June 2021.
- We are on track to shortlist interventions for CYP with complex care needs by June 2021.
- We are working on a new systematic review assessing the impact of incorporating community health workers into care teams for children with special healthcare needs.
- We have met with the Evelina London community paediatrics team and the complex paediatrics service team to explore co-developing tools and interventions.

Project 2: Identify family needs for support, prevention and risk reduction (INSPIRE)

We are co-producing, piloting, and validating a child and family school-entry screening tool, to identify unmet needs and risk factors, and provide tailored care.

- We have completed systems mapping (objective 1, see above).
- We are on track to co-develop evidence-based screening tools and interventions with families and professionals by June 2022 (objective 2).
- We have carried out an extensive literature scanning to understand early years screening landscape in the UK and internationally, and school outcomes. This has led to a focus on social-emotional development. We expect to complete a systematic review by June 2021.
- We have met with local stakeholders, including health visitors to understand the delivery of early years screening, and populations and families invited for screening. This has helped to confirm findings from literature scanning, and to refine our research questions.
- We are designing our patient, public, involvement and engagement (PPIE) strategy for the co-development work, and have mapped local PPIE groups.

Adopted project: Children and young people's health partnership (CYPHP)

- CYPHP has been commissioned in Lambeth and Southwark, with evaluation showing reductions in acute service use, and improvements in health and healthcare.
- Following discussions with south-east London Integrated Care System, CYPHP model has been prioritised within south-east London as an exemplar service. We are also working with NHS England and Improvement on featuring CYPHP as a case study on NHS Futures website.
- We completed recruitment to the trial in December 2020, recruiting more than 1,700 children, young people and their families. Full trial expected by end of 2021.

Economics and biostatistics (cross-cutting) theme

The theme is led by Professor Landau and Dr Healey. The deputy theme lead is Dr Bakolis. The theme is on track with its aims and objectives.

Project 1. Use economic evaluation to harness clinical, epidemiological and economic evidence to identify population and health and social care system impacts and cost-effectiveness

- Completed early phase economic evaluation of physical health clinic for inpatients at SLaM – part of IMPHS programme in collaboration with SLaM and implementation science theme (short-term objective 1 completed).
- DESiGN economic evaluation. Analysis complete and working on journal submission.
- Collaborating with the Policy Institute at KCL on two new projects (What Works in Children's Social Care and Homelessness Placements. Input to trial protocol completed).
- Appointed a postdoctoral research fellow in health and social care economics.
- Completed material for online module in implementation science on health economic evaluation. (Long-term objective 3 completed) (see section 7).
- Exploration of the impact of long-term conditions in end-of-life care on social care resource use and costs (medium/long-term objective – ongoing).
- Cost-effectiveness of scaling-up Health-Arts Programmes (see below): Protocol submitted to *British Journal of Psychiatry* (collaboration with implementation science theme) (medium-term objective 2, ongoing).

Project 2. Collaborate with the ARC's themes in applying statistical methodologies to test the feasibility and evaluate the clinical impact of interventions, novel health care pathways and implementation strategies in health and social care

- PREP-Kids: Design and analysis of an international cohort study to evaluate the impact of the pandemic and associated lockdown intervention on emergency psychiatric presentations for self-harm of children and adolescents, published in ECAP (short-term objective 2, completed).

- Network project (with applied informatics theme): Quasi-experimental evaluation of the impact of the start and lifting of Covid-19 lockdown policy on mental health service use and mortality in ten UK sites submitted (short-term objective 2, completed).
- All-cause mortality in people with severe and complex mental disorders before and during the pandemic: a UK cohort study, submitted (collaboration with applied informatics theme, short-term objective 2, on track by March 2022)
- Elixir project – Incidence of domestic violence before, during and after the pandemic – a regression discontinuity design (with maternity and perinatal mental health theme (short-term objective 2, on track August 2021)
- Scaling-up Health-Arts Programmes: largest study in the world bringing arts-based mental health interventions into a national health service. Protocol submitted to *British Journal of Psychiatry* (with implementation science theme) (medium-term objective 2, ongoing)
- NHS CHECK: protocol for a cohort study investigating the psychosocial impact of the pandemic on healthcare workers. Protocol submitted to *BMJ Open* (with applied informatics theme) (short-term objective 2, completed).
- Set up of SPARKLE trial of app-delivered Parent Positive ([Families under Pressure](#)) nested in [CO-SPACE study](#) of families mental health during Covid. On track for December 2022.
- Appointed statistician to work on evaluating health policies or care pathways investigated by ARC themes (long-term objective 4, completed).

Impact

- Mortality data from the network project were reported to NHS England and Public Health England.
- NHS check study is providing ongoing data on the psychosocial impact of the pandemic on healthcare workers.

Implementation science research theme (cross-cutting) theme

The theme is led by Professor Sevdalis. Professor Boaz has moved to a role at LSHTM but is involved in the capacity building work (as of 01.01.2021). Professor Jones joined the team (01.01.2021) as deputy theme lead jointly with Dr Hull. The theme is on track with its aims and objectives.

- **Short-term objective 1** (completed). Reviewed ARC themes implementation science methodologies. Collaborated on pandemic-related projects and new research bids.
- **Short-term objective 2** (on track, by 12/2021)
- Worked with the ARC PPI panel to design the national CoVAccS study and the LISTEN trial, submitted to the NIHR Long COVID call.
- Consulted with the ARC PPI and D&I leads on how to introduce a PPI advisory panel into methodological studies.
- **Short-term objective 3** (on track, by 12/2021)
- Developed an options document with the UK Implementation Society in 2020. Due to the pandemic, implementation postponed until 2021 (contract in set-up with SGUL).
- **Short-term objective 4**. Launch biannual Implementation Research Seed Funding (up to £10k to turn innovative implementation ideas into research bids). This objective requires review, due to pandemic pressures, with the ARC leadership by Dec 2021, for launch in 2022.
- **Short-term objective 5** (on track by 12/2021)
- Coordinated with ARC cross-cutting themes to provide methodological support to health research themes on implementation methodology. Advice clinics/embedded research approaches offered from June 2021.
- Worked with Implementation and Involvement (I&I) and capacity building themes to develop a prioritisation checklist for ARC projects that are ready for scale-up – has been used to identify projects for support.
- **Short-term objective 6** (completed). Held the Annual Implementation Science Research Conference online in July 2020, jointly organised with capacity building theme (completed). Attended by 180 delegates from 16 countries (see 7.3 impact). The Implementation Science Masterclass was cancelled in 2020 due to Covid-19. We have planned an online Masterclass for June 2021.
- **Short-term objective 7** (on track). Working with biostatistics and economics theme to develop a series of ARC workshops, including global experts, on use of 'hybrid' evaluation designs in applied health research. Launch in September 2021.

Engagement activities

- Held series of online conversations between [implementors and evaluators of NHS and social care service transformations that took place due to the pandemic](#).

Impact

- The Implementation Research Development (ImpRes) tool adopted by the Swiss Patient Safety Foundation (Jan 2021) to support patient safety intervention implementation projects in Swiss healthcare.

Highlights

- Developed an ImpRes-based [interactive resource on how to implement and evaluate rapid service transformations](#).
- Developed the Implementation Outcomes repository (with ARC EoE and our co-funders), an open web-based repository of quantitative implementation outcome instruments for use in physical healthcare (launch in June 2021).
- Developed novel research and evaluation bids with other ARC themes through NIHR national schemes: the Mental Health Implementation Network (with the alcohol and public health themes, and ARC EoE); and the cross-ARC prevention consortium on implementation of domestic violence advisors in maternity services.

Adopted projects

Six projects adopted by the theme (see finance and activity report).

Maternity and perinatal mental health

The theme lead is Professor Sandall and deputy theme lead is Professor Howard. Dr Easter has been appointed deputy theme with Professor Howard. Professor Sandall is seconded part-time to NHSE&I as Head of Midwifery Research. The theme is on track with its aims and objectives.

Short-term objectives

- Convened a PPI advisory group and consulted with PPI stakeholders to ensure the voices of women and families are central to our work (objective 1 completed)
- Convene stakeholder advisory group and consolidate engagement strategy, identify and collaborate with implementation champions in NHS trusts, local and regional maternity structures (objective 2 initiated and ongoing throughout programme)
- Dissemination through peer-reviewed publications, conferences, and social media (medium-term objective ongoing).

Project 1: Models of maternity care for women living in areas of ethnic diversity and social disadvantage in south-east London (short-term objectives 1–3, on track)

- eLIXIR prospective cohort study using linked routine maternity data records in south London research approval form approved (July 2020)
- Data extracted on approximately 33,000 pregnancies and births. Data analysis is ongoing and due for completion by September 2021
- KCL research ethics for local stakeholders approved and NHS Research Ethics with minor amendments. Core project developed with key stakeholders and materials discussed at theme PPIE meetings (May 2021).

Project 2: Factors surrounding severe maternal morbidity and mortality among women with mental illness

- Three workstreams related to the second core project underway (short-term objectives 1–3 – on track for Oct 2021)

1. Obstetric near misses among women with serious mental illness

- Data analysis of linked electronic healthcare records completed. Findings published in *British Journal of Psychiatry Open* (Jan, 2021)

2. ASPEN Study: Attempted Suicide during the Perinatal Period

- Ethical approval achieved (March 2021) for a grounded theory study of women and significant other's experiences and needs following attempted suicide in perinatal period.

3. Near fatal self-harm admissions in the perinatal period

- Historical cohort study using linked routine hospital episode data and mental health records in south London to investigate the factors surrounding near fatal self-harm admissions (on track, complete by Sept 2021)

Highlights - National cross-ARC research projects

- Two proposals by Easter and Howard have been adopted nationally (i) to evaluate the implementation and scale up of maternal mental health services (National Cross-ARC Priority Child Health & Maternity Programme.)

(ii) to evaluate models of health-based Independent Domestic Violence Advisor provision within maternity settings, cross-ARC: Children's health and Maternity and Prevention. Project planning underway (short-term objective 3 – on track for year 3).

External funding for PhD studentship – (short-term objective 4, completed.)

- Williams, postdoctoral NIHR SPHR Fellow, a five-month training placement on health inequalities.
- De Baker continues cross NIHR ARC Fellowship with ARC East of England on adapted COVID-19 studies and ASPEN study ([blog](#)).
- Rayment-Jones completed NIHR PhD Fellowship on Project 2020 models of care for women with social complexity.
- Fernandez-Turienzo completed PhD on POPPIE pilot trial on continuity of care for women at high risk of preterm birth funding (Iolanthe Trust.)

New research (short-term objective 6 completed)

Four new studies underway in response to Covid-19 – see finance and activity.

Palliative and end of life care theme

Led by Professor Higginson, with deputy leads Professor Gao and Dr Maddocks (King's College London). No changes to the theme's objectives (on track), except addition of Covid-19 research.

Project 1: Understanding multimorbidity, complexity, and variation in health and social care

- On track with objective 1 to understand clusters of multimorbidity, their geographical variation, relationships to health, social care and costs, using routine patient data.
- Initiated new study [CovPall-Connect](#), drawing on UK wide datasets to explore the relationship between regional Covid-19 PEoLC responses and Covid-19 prevalence, mortality, admissions, discharges, business and social impacts (objective 1).
- We are analysing mental health services data from the Hospital Episode Statistics Database to identify characteristics of end-of-life hospitalisations for patients with serious mental illness. We [published a paper](#) in the *Public Health Journal*.
- We published a [paper](#) and blog [Where you live and where people die](#) exploring regional variations in access to inpatient hospices. We argue commissioners and policymakers should ensure home death is not due to limited geographic access to inpatient hospice care.
- Collaborating with the ARC's economic and biostatistics, health informatics, and social care themes to enhance cross-disciplinary working (objective 4).
- Initiated research to [assess primary care service use](#) at end of life during the pandemic.

Project 2: Outcomes, health and social care costs, symptom management and prevention

- On track with objective 2, expanding our PEoLC outcomes action collaborative and embedding outcome measurement into routine practice.
- Held an Outcomes Action Collaborative (OAC) meeting in August 2020. Task groups were formed to improve measure format and scoring, and identify new funding.
- Held a Palliative care Outcome Scale (POS) workshop with 77 delegates, covering new concepts and directions in patient-centred measurement in clinical practice and research.
- Professor Higginson led an [Action Plan for Better Palliative Care](#), which emphasises importance of patient-reported outcomes.
- Mev Hocaoglu joined the Patient Outcomes Committee at King's College Hospital NHS Foundation Trust to lead on implementation of services based on outcomes that matter to patients.
- Completed a rapid review of patient-reported outcome measures in Covid-19.

Project 3: New models of care for multimorbidity bridging health and social care

- On track with objective 3, to develop, evaluate and implement new PEoLC models attuned to multimorbidity.

- Submitted a report and paper to the WHO on common elements of effective delivery models for older populations with advanced disease to inform policy ([objective 3](#)).
- Jo Bayly awarded an NIHR Development and Skills Enhancement Award on design and conduct of effectiveness trials for rehabilitation in PEO LC ([objectives 3 and 8](#)).
- Created an [evidence-based resource](#) to support self-management of breathlessness at home during Covid-19 used by south London GP networks, the National PEO LC ARC, and the [European Lung Foundation](#).

Patient and public involvement

- PPI groups are active across all adopted research projects. Held PPI workshops throughout the year, including a workshop on 'large dataset research in palliative care' with [editorial](#)
- CovPall study findings on 'Ethnic minority groups and palliative care services during the pandemic' presented at the [ARC South London Inside Research seminar](#) in March.

Adopted projects

Three new studies were adopted (see Finance & Activity).

Patient and public involvement research theme

Professor Mary Chambers, Kingston University and St George's, University of London is the research theme lead. The deputy theme lead is Dr Stan Papoulias, King's College London. The theme is on track with its aims and objectives.

Project 1: A mixed-methods study to identify existing approaches to PPI in health and social care commissioning

This project aims to identify existing approaches to PPI in health and social care commissioning decision-making, and develop an intervention (tool-kit) to facilitate public contributions to decision-making processes. It contributes to the work of the public health and multimorbidity theme.

- We are [on track with our objectives](#) and developed the research protocol ([completing objective 4](#)).
- Despite delays due to Covid-19, we have Health Research Authority approval and are [on track with objectives 1 and 2](#). We have confirmed members of the advisory group and are finalising arrangements with other members. One Clinical Commissioning Group (CCG) study site has confirmed participation. CCGs have been coping with heavy Covid-19 related workloads, and as a result we have not been able to confirm the other two sites, but are in discussions.
- We have developed our qualitative and quantitative data collection tools: observation data collection tool, interview and focus group topic guides, and survey.
- We have progressed our collaboration with ARC Kent, Surrey and Sussex, and we have collaborated with PenARC preparing a research bid for THIS Institute, Cambridge. We are developing links with the identified borough-level boards within the confirmed CCG.

Project 2: Qualitative study of the role of PPI leads / practitioners in research

This project aims to study the challenges and enabling conditions for the work of PPI leads in NIHR-funded research. It has been co-designed with contributions from PPI leads and service users from across the ARCs.

- Ten out of twenty phase one interviews conducted. Mapping to identify phase two case studies is underway.
- Dr Papoulias is lead author of a paper on [ethnographies of PPI in research](#) in *Health Expectations* (March 2021); senior author of an [analysis of the evolution of PPI](#) at NIHR Maudsley BRC in *BMC Research Involvement and Engagement* (April 2020); and a co-author of [a commentary on the dark side of co-production in research](#) in *Health Research Policy and Systems* (May 2020) (contributing to objective 5).
- Dr Papoulias has contributed to the co-design of the ARC's involvement strategy and works with the cross-ARC public involvement community and the NIHR Centre for Public Engagement to identify ways of building capacity and raising the visibility of PPIE work across the NIHR infrastructure (supporting objectives 1 and 3).

Adopted project: Therapeutic Engagement Questionnaire (TEQ) (see value-added case study)

- The TEQ has been fully implemented in the adult acute wards of four NHS Mental Health Trusts in England and a further three are implementing the tool.

- Implementation has demonstrated the value of the TEQ in highlighting the role of registered mental health nurses in therapeutic engagement activity and in identifying practice variations within wards.

Public health and multimorbidities theme

The theme lead is Professor Peter Littlejohns, King's College London, and the deputy lead is Professor Peter Whincup, St George's, University of London. The theme is on track with its aims and objectives.

Diabetes research

- We are on track with our aim to improve the prevention and management of type 2 diabetes (T2D) complications in primary and secondary care across south London's diverse population.
- We are supporting the implementation of the HEAL-D programme for management of T2D in local African and Caribbean communities across south London.
- We have evaluated a cereal fibre supplement intervention in children.
- We have explored providing culturally sensitive diabetes self-management support for Black African and Caribbean communities.
- We have developed a plan for large-scale implementation of a cereal fibre supplement.
- We are collecting follow-up data on SOUL-D participants (examining links between depression and diabetes). This data will underpin algorithms and screening tools identifying T2D patients at risk of multimorbidity, supporting our aims.

Public health research

- Due to restructure within KCL's School of Population Health, we have revised our medium-term aim around air pollution to focus on implementing a new co-produced population health intervention in response to local needs identified during the pandemic.
- Our work with an embedded researcher in Lambeth Council has been paused due to the pandemic. However, we are working with Lambeth to co-design a project with Lambeth Early Action Partnership exploring post-lockdown recovery needs of parents of young children in marginalised communities.
- With the Elton John AIDS Foundation and KCL Business School, we are evaluating the South London Zero HIV Social Impact Bond to generate insights on how multi-agency collaborations are driving innovations around HIV testing.
- Based on methodology developed under CLAHRC, a new project will assess how major institutional change in bodies responsible for public health has impacted on England's pandemic response.

Vascular research

- We use the South London Stroke Register and a vascular register to estimate risks and outcomes in the context of multimorbidity. We have registered 100 stroke survivors and have produced 12 papers in stroke. Our vascular study is in set up.
- We have worked with NHS England on their Long-Term Plan stroke pathway and published their evidence gap review.
- We are working with HDR UK, developing the 'phenomics' methodology and e-trial platform, which hosts around 400 phenotype definitions.

Smoking research

- We are on track to identify barriers and facilitators to tobacco dependence treatment delivery and uptake in local NHS settings. We have interviewed 20 hospital patients, 13 patients from substance use settings and 8 tobacco dependence treatment advisers.
- Following a delay due to Covid, we are on track with aim to evaluate a CCG-commissioned tobacco dependence treatment pathway in acute medical care settings, beginning data extraction.
- We supported delivery of tobacco harm reduction and staff training in emergency hotels for people experiencing homelessness during the pandemic and are evaluating resident and staff experiences.
- We are co-designing a tobacco harm reduction toolkit for people accessing homeless services.
- Analysing data from SLaM, we are examining the association between smoking and Covid-19 infection among mental health patients.

Social care theme

Theme lead: Professor Jill Manthorpe; Deputy theme lead: Dr Kritika Samsi (both King's College London). The theme is on track with its aims and objectives.

Project 1. Mapping and community engagement (MACE)

Aim: To design and implement sustainable community capacity among day services for adults accessing care and support, we:

- Mapped pre-Covid South London (SL) day centres completing ([short-term objective 1](#)). Our report is prefaced by the London Association of Directors of Adult Social Services.
- Reviewed SL day centres for homeless people during Covid; submitted paper for publication; and to interested stakeholders, eg Ministry for Housing, Communities and Local Government.
- Met DHSC policymakers (March 2021) to discuss '*Helping adult day centres to unlock lockdown*' (July 2020), later reissued by the Social Care Institute for Excellence as DHSC guidance. Implications for dementia services published in November 2020. Local day centre providers and PPI informed both.

Project 2. Setting and responding to priorities (SARP)

Aim: To co-produce research and development priorities for SL social care communities (including day centres), we:

- Undertook a priority project for ADASS London to synthesise London's Safeguarding Reviews on mental health social care. Our report has been well received.
- Are supporting the implementation of 'Proud to Care', the major recruitment and retention in social care initiative, now pan-London. We presented at the National ADASS Seminar (April 2021). This is our major vehicle for engaging with home care providers who are now open to contact, ([completing short-term objective 2.](#))
- Are identifying priorities amongst SL day centre sector by survey and consultation. This work will inform the development of tools that day centres may use for self-auditing and outcomes ([short-term objective 3, on track](#)).
- Are working with Lewisham Pensioners Forum to debate their ideas about post-Covid rebuilding
- Appointed two postdoctoral researchers (Orellana and Green) to carry out this work.

Highlights/engagement activities

- Collected international responses in social care to Covid (requested by DHSC) contributing to the LTC Covid database. [International Policy Responses and Early Management of Threats Posed by the SARS-CoV-2 Pandemic to Social Care. Journal of Long-Term Care](#)
- Our Day Centre Research Forum is held online with increasing attendance.
- Contributed to the ARC capacity building Winter School 2020 and presented *Unlocking Lockdown* at ARC SL's Covid-19 symposium with our PPI representative.
- Holding a PPI consultation event on multiple long-term conditions with other ARC SL themes.
- Working with the economics and biostatistics and palliative and end-of-life care themes on palliative social care.
- Working with the NIHR National Priorities Programme on Adult Social Care on its priorities and on an RCT, funded by the Ageing, Frailty and Dementia National Priorities Programme on care home falls.
- Our research on [Covid-19 impact on schools and child protection is published, Journal of Integrated Care](#)
- A social care postdoctoral researchers network across all ARC SL themes has been set up; meeting regularly and liaising with the capacity building theme about development opportunities.

Adopted projects

During this period six new studies were adopted from across NIHR SCCR, HS&DR, PRP and RfSC programmes (see Finance & Activity for details).

5. Impact on Healthcare Provision and Public Health (no more than 500 words)

Using applied informatics to inform the Covid-19 response

- The ARC's applied informatics researchers are analysing SLaM clinical records and service data using novel text-mining techniques to monitor the response of mental health services in south London during the pandemic, along with mortality data to inform decision making in south London and NHS England.
- They have produced a [series of reports](#) highlighting the mortality increase in mental health service users, and inequalities in mortality (eg by ethnic group), and changes in mental healthcare delivery.
- They are working with 10 mental healthcare providers to provide definitive descriptions of how mental healthcare changed during the first lockdown.
- Working with Public Health England and NHS England, these findings played a key role in a decision to prioritise vaccination of people with serious mental illness and learning difficulties.
- This work informed a decision to include people with SMI in the Covid Oximetry @home service.

- A document giving advice to services to help support those with a diagnosis of SMI who get Covid-19 has been disseminated by the Royal College of Psychiatrists, the AHSN network and the NHS National Deterioration group.
- Analysis of Covid-19 mortality and learning disability has fed the recommendation to the Sage working group for more assertive outreach to target this group.

Our maternity and perinatal mental health theme research has informed the development of vital resources and government policy

- An adopted study (Howard) led to the co-development of [online preconception resources for women with serious mental illness](#) and a healthcare guide and tool for professionals.
- NHSE guidance for scale-up of continuity of midwife care in NHS Long-Term Plan was informed by findings from POPPIE (Fernandez-Turienzo) and Project 2020 (Rayment-Jones).

Our social care theme produced a resource (July 2020) to support managers or volunteer coordinators of day centres. [‘Helping adult day centres to ‘unlock lockdown’](#)

- The resource was produced with local providers and PPI involvement.
- The team worked with the Social Care Institute for Excellence (SCIE) to produce their DHSC commissioned guidance [‘Delivering safe, face-to-face adult day care’](#) which draws on their research. SCIE credits our work. The team are delivering webinars in relation to this resource. The resource is signposted in The Care Provider Alliance and Local Government Agency's briefing [‘Day services and Covid-19’](#)
- It has been widely shared with a range of local and national networks and included in newsletters and social media including: NHS Evidence Search, NICE and Social Care Online (SCIE).

Children and young people’s health partnership (CYPHP)

- CYPHP has been commissioned in Lambeth and Southwark, with evaluation showing reductions in acute service use, and improvements in health and healthcare.
- Following discussions with south-east London Integrated Care System, CYPHP model has been prioritised within south-east London as an exemplar service. The team are working with NHS England and Improvement on featuring CYPHP as a case study on NHS Futures website.
- Completed recruitment to the trial in December 2020, recruiting more than 1,700 children, young people and their families. Full trial expected by end of 2021.

6. Public and Community Involvement, Engagement and Participation (PCIEP) (no more than 1000 words)

6.1 Progress in implementing ARC’s Involvement Strategy

ARC-wide activity

During 2020-21, ARC South London brought together patients, service users, carers, research staff and members of local communities to produce an [Involvement Strategy](#), while involving local people in various themes and cross-ARC activities against the background of the pandemic. This built on our existing commitment to involving people in health and social care research across themes and drew on an earlier external review of involvement, engagement and diversity and inclusion. With public involvement in governance and capturing and reporting on impact, this has been a central element of this work.

Diversity and inclusion have been important aspects throughout, especially since south London is so diverse and affected by longstanding health inequalities linked with social inequality. In April 2020, an online listening event was organised to identify key issues for ARC and beyond arising from the unequal impact of the pandemic, including on black and minority ethnic communities, disabled people, pregnant women and lesbian, gay, bisexual and transgender people; what emerged was widely shared. Equality, diversity and inclusion (EDI) was a key theme in [guidance](#) from the Implementation and Involvement team on why and how to involve patients and the public during the pandemic, issued in June.

A [Public Research Panel](#) (initially focused on Covid-19) was recruited by the EDI lead (assisted by public health theme) and launched later in 2020-21, to enable diverse communities to have a greater say – one of the new structures included in the Involvement Strategy. Panel members had input in February to the first of a series of [‘Inside research’ seminars](#), through which engagement could tie-in with involvement.

This was developed using questionnaires, an online [Active Involvement in Research Day](#) and workshops on the strategy and accompanying structures, in summer and autumn 2020, followed by meetings of a working party bringing together public contributors and staff and further dialogue.

Three core principles were identified:

- i. Equality, diversity and inclusion
- ii. Relationship building (ties-in with the standard of working together, also reflected in the strategy development process), and
- iii. Willingness to change.

Actions were agreed to put these into practice across widely varying themes and projects, with a timescale. Over 100 people, including patients, service users, carers, research staff, members of the public and workers and volunteers from partner organisations, took part in co-designing the Strategy, adopted by the ARC Executive and Board in March 2021.

Measures to strengthen public involvement in governance included more consistent representation of diverse contributors in theme leadership groups and appointment of public contributors to the Executive and Board. These would include representatives of an Involvement Advisory Group. An Involvement Learning Network would assist in support and learning; meanwhile the Involvement Coordinator continued to share links to resources and learning opportunities through a network of theme-based involvement champions and provide one-to-one support as required.

The Advisory Group would assist in establishing a robust measurement and evaluation framework for capturing and reporting on impact, including quantitative measures, but with an emphasis on quality, including gathering multiple perspectives and learning from what went well and where there was scope for improvement. The approach piloted in [April online event, to incorporate the perspective of communities across a range of protected characteristics in addressing health inequalities and imbalances in care during the pandemic](#), attracted wide interest (for instance a [BMJ article by EDI lead Dr Josephine Ocloo](#) and international webinar presentation to people from 18 countries) and may be adapted for use elsewhere in England and internationally.

Communications have included [news items](#) and [comment pieces](#) on the website on aspects of involvement, promoting awareness and reflection, along with the ongoing [quarterly involvement e-newsletter](#) circulated to a wide range of local individuals and groups (500+).

Involvement within themes

To give just a few examples, during 2020-21:

- the maternity and perinatal mental health theme established a Public, Patient and Involvement Group and Network, which led to several [co-produced blogs](#) and one research article, and worked on a [Maternity and Perinatal Mental Health Strategy](#) for involving the public in research;
- the palliative and end of life care theme, with others in the Cicely Saunders Institute at KCL, completed and launched [a new co-produced patient and public involvement strategy](#), building on co-produced evaluation work and a series of co-production events; and, to support the national palliative care response to Covid-19 and ensure inclusion of voices of people with serious illness, collaborated with teams from Hull, Bristol and Sheffield on a rapid virtual consultation with involvement networks to hear their experiences, concerns and priorities for palliative care research;
- the social care theme worked closely with local providers, service users and the public to produce a new resource to [support managers of day centres reopening after lockdown](#) and with the Social Care Institute for Excellence to produce national guidance.

6.2 Please highlight any significant challenges or barriers experienced, and identify any areas where you would like further support or information.

The pandemic has presented a significant challenge, making it harder to involve new people who cannot easily access the internet (though phone as well as online methods could be used for many already involved) but also because so many south Londoners were focused just on survival or grieving. However, it also became clear that, for example, for some disabled people, remote involvement was easier, hence the potential value of varied approaches in future. Resources for involvement remain an issue, especially since additional research was undertaken in response to the pandemic, meaning that existing resources have been more thinly stretched: though involving people is integral to ARC work, at a time when there is so much more public awareness of research, it would be helpful to have the funding to build on this.

7. Academic Career Development (formerly Training) (no more than 1000 words)

Academic Career Development (formerly Training) (no more than 1000 words)

7.1 Progress.

Research capacity building:

7.1.1 (Short-term objective/ milestone 1 completed) Completed development of our online implementation science module, which will be incorporated into our academic offer in 2021/22. A standalone iteration for researchers nationally and internationally will launch in 2022.

In December 2020 we delivered an online two-day Applied Research Winter School for 49 PhD students, including content tailored to researchers in public health and social care.

We are delivering a programme on writing for research publications, targeted at postdoctoral researchers. Workshops in Autumn 2021 will focus on thesis writing, with support from a Royal Literary Fund fellow.

The St George's, University of London (SGUL) 'Research Aware' skills and methods series of workshops is open to all. Content under development includes a course in Design Thinking for Health and Social Care by SGUL and a course in Patient, Service User, Carer & Public Involvement.

Taught postgraduate content for 2020/21 academic year includes the PgCert in Healthcare Research Skills & Methods and the MRes Clin Research, SGUL. Modules are also provided to HEE Research Interns and predoctoral bridging fellows, in preparation for NIHR Clinical Doctoral Research Fellowship applications or as part of NIHR Predoctoral Clinical Academic Fellowship (PCAF) awards (short-term objective 3 completed).

7.1.2 (Short-term objective 4 completed/milestone 2). We have evolved the CLAHRC's annual Implementation Science Masterclass and Implementation Science Research conference into virtual events in June and July 2021, working with the implementation science research theme (short-term objective 3 – complete). Over 250 places on these courses and the Winter School.

7.1.3 We have accelerated plans to develop and deliver a programme of 'research ready' workshops; a pilot programme of workshops designed in collaboration with the Health Innovation Network (HIN) is being delivered to recipients of 2021 HIN Innovation awards. We will undertake a smaller needs analysis incorporating our findings from this pilot by March 2022 (milestone 3 in progress).

7.1.4 We work closely with the implementation research theme to facilitate research Advice Clinics, the Implementation Science Conference and Masterclass and our 'Research Ready' workshop programme. We are developing resources with our ARC Patient, Service User, Carer and Public Involvement co-ordinator and will work with the applied informatics theme to consider resources for research trainees (milestone 3 completed).

NIHR Academy members (short-term objective 2 completed)

7.1.5 We provide integrated support including workshops, mentorship and mock interview panels to individuals applying for NIHR PCAF and CDRF awards. In 2020/21, we mentored three successful NIHR PCAF applicants and three doctoral-level award applicants, including the NIHR/Wellbeing of Women Doctoral Research Fellowship award.

7.1.6 (Short-term objective 4 completed) Five PhD students have been appointed with partial funding from the NIHR ARC.

7.1.7 Feedback from the review panel requested we consider support for additional social care postdoctoral fellows and increasing capacity in public health. Four postdoctoral fellows in social care have been funded in 2020/21 and we have established a cross-theme peer network support network. Social care and public health research themes are represented in the capacity building steering group. Dr Samsi is a member of the NIHR SSCR capacity building committee.

7.1.8 Objectives for 2021/22:

1. Successful delivery of 2021 Implementation Science Conference and PhD Winter School.
2. Establishing our South London Applied Research Academy, providing mentorship and networking support for researchers, including NIHR academy members and associates.
3. Recruit four further postdoctoral fellows in social care, working within social care, economics and biostatistics themes.

7.2 Deviations

Due to Covid-19 pressures, we paused the needs analysis intended to inform development of a 'research ready' workshop programme. We have since accelerated our plans, working with the HIN to develop and deliver a pilot workshop programme to their innovation award recipients (April – Sept 2021).

7.3 Impact

Our workshops and support lead to successful applications for personal/career funding (see above). Our training lead delivers a programme for HEE research internship and predoctoral bridging fellowships. Two NIHR doctoral awards were mentored through this scheme. The link between our ARC and the research internship and predoctoral bridging fellowships has worked effectively, bringing aspiring clinical researchers into contact with the ARC support infrastructure.

Our 2020 online 'Winter School' for PhD students attracted a larger number of participants than previous in-person events and received 100% positive feedback. We will consider a blended approach for future events with online resources available to participants after the event.

7.4 Collaborations

- Development and delivery of our research ready workshops to enhance research capability for non-researchers is in collaboration with the HIN.
- Our online module in implementation science has been developed in partnership between South London ARC academic partners and University of East Anglia.
- Places on our Applied Research Winter School 2020 were available to students in other ARCs and NIHR infrastructure.
- We are exploring with ARC North East & East Cumbria opportunities to collaborate and share capacity building resources.
- Our Implementation Science Masterclass 2021 is being delivered over three days in collaboration with expert faculty from partner institutions in the UK, Sweden, Denmark, USA and Canada.
- Our Implementation Science Conference 2021 is developed in collaboration with UK Implementation Science Society, and a range of other partners, including LSHTM. Delivered over two days, it will feature five plenary speakers from UCL, University of Oxford, UNSW Sydney, Urban Dandelion CIC and the NHS Race and Health Observatory. There will also be 10 international experts, from eight institutions from countries including USA, Australia and Sweden delivering meet the expert sessions.

7.5 Sharing best practice

We have enhanced the flexibility of our training resources to accommodate a variety of researchers and non-researchers. The pandemic has necessitated the use of online delivery for the majority of our training. Interactive learning within a digital environment has led to increased participation, indicating the potential to reach a wider audience, with participants able to access resources after the events.

7.6 Expenditure on training

- Salary costs for two postdoctoral fellows in social care – £71,353.33
- PhD stipends and tuition fees for 5 students – £81,921.78
- Expenses for PhD winter school – £270
- Expenses for writing workshop programme – £2,070 + VAT

8. Links with NIHR Infrastructure and the wider innovation landscape (no more than 500 words)

We have extensive links and collaborations with NIHR infrastructure and wider landscape. For example:

- Implementation and involvement team are developing an implementation strategy for prioritised interventions for National ARC Mental Health Network.
- ARC South London is on the South London CRN board
- Implementation research theme and informatics theme have worked on the London-wide and national pandemic response, through the NHS England (NHSE) / Improvement London Evaluation Cell (London ARCs and AHSNs) and the Beneficial Changes Network (all ARCs and AHSNs in England). They are developing a learning health system in remote mental health consulting.
- ARC South London works with NIHR Mental Health PRU (Henderson, Howard, Gaughran) and Social Care PRU (Manthorpe)
- Maternity and perinatal mental health theme have two studies selected by ARC National networks: 'Evaluation of the effectiveness and implementation of maternal mental health services' and 'Evaluating models of health-based Independent Domestic Violence Advisor (IDVA) provision'.
- Maternity and perinatal mental health engages across the NIHR and wider sector including: NIHR Advanced Fellowship Funding Panel, NIHR Senior Investigators and Research Professors Network, NIHR Incubator for Nursing and Midwifery, NIHR Incubator for Mental Health, NHSE & Improvement Maternity Programme, NHSE Perinatal Mental Health Programme, South East London Local Maternity System, and ARCs East of England, West Midlands, Yorkshire & Humber.
- Economics and biostatistics theme works with NIHR School of Social Care Research
- Louise Goff (public health) is a member of the NIHR DART collaboration, established to increase research conducted across the country in relation to diet, nutrition, and physical activity.
- Josephine Ocloo (I&I team) has contributed to national work led by NIHR Centre for Evidence and Dissemination, feeding into their Race Equality Public Action Group. She sits on the national NHSE Mental Health Equalities Committee and the Patient and Carer Race Equalities Framework Committee.
- Jill Manthorpe worked with NIHR and British Association of Social Workers roundtable event (Sept 2020). Social care theme are part of the ARC National Social Care and Social Work Network.
- Palliative and end of life care theme collaborate with NIHR CRNs in North London, South London and Kent, Surrey and Sussex for their EMBED Care study. They are part of the NIHR BRC Care Home Research Network.
- Peter Littlejohns is a member of four ARC national networks (reducing inequalities, prevention, multimorbidity and mental health).
- Our smoking researchers are part of an NHSE group supporting the national roll out of hospital-initiated tobacco dependence treatment services, as part of NHS Long Term Plan. They are also part of an ARC national priorities bid on hospital-initiated smoking cessation.
- ARC Director, Graham Thornicroft contributes to the ARC mental health networks (co-chair of advisory board) and sits on the HIN board
- Implementation science research theme are part of a national ARC group of implementation scientists
- Economics and biostatistics theme are members of the national NIHR ARC economics network and collaborate with Maudsley BRC
- Applied informatics theme works with Maudsley BRC, Guy's and St Thomas' BRC and other NIHR ARCs through the Applied Digital National network.

9. Links with Industry (no more than 1000 words)

9.1 Please describe your Centre engagement with industry

Working with pharmaceuticals and biotechnology companies

Vascular researchers in the ARC's public health and multimorbidity theme have worked with a range of pharmaceutical and biotechnology companies during the reporting period. This includes:

- Metadvice, a global healthcare technology company specialising in clinical decision support. With Metadvice, they have received an Innovate UK SMART grant to develop a decision support system for cardiovascular, renal and metabolic diseases. Metadvice are also sponsoring two PhD studentships (50%) under King's College London's Centre for Doctoral Training in Data-Driven Health to undertake research

related to the ARC's work on "Use of machine learning and clinical phenotyping to identify determinants and predict cardiovascular, renal and metabolic diseases risk using data from registries and electronic medical records" and "Advancing explainable human in the loop NLP analytics for clinical applications".

- GSK have funded three PhD studentships (50%) as part of King's College London's Centre for Doctoral Training in Data-Driven Health.
- Imosphere, a health data analytics company, on a joint European Health Data & Evidence Network grant on converting the South London Stroke Registry and Lambeth Data Net to the Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM) standard.

Working with medtech / devices companies

Our alcohol researchers are working with SmartStart Inc, the developers of the alcohol transdermal sensor (BARE). They are setting up a research agreement to use early release devices for the validation and feasibility studies in their study to validate and evaluate different wearable transdermal alcohol sensors and associated apps. Development work on these devices has been delayed by Covid-19. However, the researchers have reached an agreement to use ten alcohol transdermal devices (prototypes). A formal research agreement is pending. They have also identified an alternative product and supplier (BACtrack by Skyn) which could be used if SmartStart do not deliver their devices in June.

Non-life science companies

Our social care researchers work with a range of social care providers, including those from the private sector, to share outcomes from research and to facilitate new research opportunities. For example, private sector providers regularly attend the quarterly [Margaret Butterworth Care Home Forum](#) chaired by Dr Kritika Samsi – research is shared with an audience of care home staff, carers and others with an interest in care homes and improving the quality of care and life for people with dementia.

9.2 Key examples of working with small and medium enterprises (SMEs)

Our social care research theme works with a range of social care providers, including private SMEs. During the reporting period, social care researchers have worked with six UK-based SMEs:

- Barchester Care – a care home manager from this company is a member of the social care theme's advisory group for its adopted study of ancillary workers in care homes.
- Investor Publishing Ltd – the publisher of the *Journal of Dementia Care*. It also support the theme's research by publicising calls for participants and publishing our findings (eg Unlocking Lockdown).
- Liquid Personnel – a major social care locum / agency. Researchers in the social care them have undertaken webinars for Liquid Personnel on social work with adults.
- Angel Human Resources and Care Outlook Ltd – our social care theme's work with Proud to Care campaign started by London ADASS involves working with these two home care providers.
- Chinara Enterprises Ltd – a business training company. During the first lockdown our social care team worked with Chinara Enterprises to provide bespoke training to social workers interested in re-joining the workforce.

9.3 Strategic partnerships during the financial year 2020/2021

i) New strategic partnership –

Our alcohol researchers have begun one new strategic partnership with Skyn, producers of the wearable alcohol monitoring device BACtrak Skyn.

ii) Ongoing strategic partnerships –

Our alcohol theme had a strategic partnership with Merck Serono Ltd and Lloyds pharmacies (Selicio Ltd) during the reporting period as part of the Alcohol Dependence and Adherence to Medications (ADAM) trial, which is now complete. The alcohol theme has an ongoing strategic partnership with Codeface Ltd, for the ADAM trials and for a survey of emergency department attenders for the minimum unit pricing project.

9.4 Please provide brief details of key examples of studies active in financial year 2020/2021, as follows:

- 1. Contract commercial trials;**
- 2. Industry collaborative research studies; and**
- 3. Other academic commercial research.**

There were none during this reporting period.

9.5 Please provide the number and key examples (including name of funder/grant scheme) of any partnerships or studies with industry which have led to further industry, public or charity research funding, including as part of consortia.

There were none during this reporting period.

9.6 Please provide brief details of key examples of agreements signed with industry including:

- 1. Non-Disclosure Agreements;**
- 2. Model Trial Agreements, including mICRA and mCTAs.**

There were none during this reporting period.

10. Co-Funding (no more than 500 words)

Within the reporting period the total amount of co-funding received by NIHR ARC South London was £1,759,330, in comparison to the NIHR ARC award of £1,669,599.00, providing a 105% co-funding equivalent. The co-funding received from health and social care member organisations was £641,123, which was 38% of the NIHR award and the contribution from university member organisations was £1,118,207. Our predicted co-funding for the life of the ARC now stands at £8,796,314 over five years. This equates to 98% of the level of funding provided by the NIHR.

King's Health Partners

The King's Health Partners (KHP) organisations (Guy's and St Thomas' NHS Foundation Trust, King's College London, King's College Hospitals NHS Foundation Trust, and South London and Maudsley NHS Foundation Trust) have committed to provide £125,000 in cash and £100,000 in kind per partner for each of the five years of the NIHR ARC programme to support research and implementation activities.

This contribution to the NIHR ARC South London's Centre for Implementation Science is enabling us to develop as a multidisciplinary team, specialising in all aspects of implementation and improvement science (research and implementation). The funding has supported King's Improvement Science, which is located within the Centre for Implementation Science. It comprises a specialist team of researchers who support health professionals and NHS managers who want to use recognised quality improvement methods for health service improvement in south-east London. The dedicated team of specialist implementation and improvement scientists and senior researchers also support NIHR ARC South London researchers to embed implementation and improvement science into their work.

ARC South London collaborating organisations

The in-kind contributions of £1,198,040.16 (£204,832.69 healthcare and £993,207.47 universities) from each of our partner organisations (St George's, University of London, St George's University Hospitals NHS Foundation Trust, Kingston University, Guy's and St Thomas' NHS Foundation Trust, King's College London, King's College Hospitals NHS Foundation Trust, and South London and Maudsley NHS Foundation Trust) has supported 86 administrative and research staff working across research and cross-cutting themes or core activities to support delivery of their work, to ensure that all ARC-related resources are used to provide the very best possible value for money in driving the agreed outputs and outcomes.

Our local Academic Health Science Network, the Health Innovation Network (HIN), has provided £61,290.74 during the reporting period. The contributions include strategic leadership, with members represented at Board and Executive-level, business support, and Sustainability and Transformation Partnership (STP) engagement. The HIN's Deputy Chief Executive, Zoe Lelliott and medical director, Dr Natasha Curran work as ARC Implementation Leads and have led the engagement and implementation function for the ARC.

There were no new partners or co-funding commitments during the reporting period.

11. Forward Look (no more than one page)

Our work in the context of Covid-19

The Covid-19 pandemic has highlighted the need to improve care for vulnerable and older populations, to support people living with multiple health conditions, to address health inequalities, and to work more closely with social care services – all priorities that drive the ARC’s research.

In response to the pandemic, the ARC has initiated 62 new Covid-related research projects and activities, co-produced with local and national partner organisations, the public, and patients.

Some of these projects may attract media interest, for example:

- Our team of applied informatics researchers, in collaboration with the Health Innovation Network and King’s Improvement Science are [leading the evaluation of the implementation and impact of remote consultations](#) and other service changes that have taken place in response to the Covid-19 pandemic, across three mental health trusts in south London: South London and Maudsley, Oxleas and South West London & St George’s.
- The ARC’s palliative and end of life care team undertook a large international study of the palliative care response to Covid-19. In 2021, this project was selected by Health Data Research UK as one of the twelve projects to accelerate use of data for vital Covid-19 research. With the new funding, the new study [CovPall-Connect](#) will explore the relationship between regional Covid-19 palliative care responses and Covid-19 prevalence, mortality, admissions, discharges, as well as business and social impacts, drawing on datasets from across the UK.

National priorities leadership work – addressing unmet mental health needs in England

ARC South London leads the National Mental Health Priority Network. Through this network we are working closely with ARC East of England and other ARCs, key national and local stakeholders to drive service change in mental health, with the goal of improving the lives of service users and carers. In April 2020, the Network [launched a scoping exercise](#) to identify specific areas of mental health care in England where there is unmet need, and which could be addressed through existing evidence-based solutions at scale. This was reduced to four prioritised solutions at a workshop in June 2021. The network will then begin working with partner and national organisations to help support these solutions into wider practice.

Beneficial Change Networks (BCNs)

As part of our involvement in the BCNs, we are supporting evaluation of the many service changes and innovations being introduced in response to the Covid-19 pandemic, to inform which to maintain and which to end. In the next year we will be focusing on three priority areas for further in-depth evaluation:

- i) Remote consultations
- ii) Self-management and remote monitoring
- iii) Integrated service models in palliative care.

ARC South London’s diversity and inclusion working group carried out an equality monitoring exercise to examine the diversity of the ARC Board and Executive in 2021. The exercise indicated a need to address under-representation of staff, public and community groups on the Board and Executive, particularly from Black, Asian and minoritised groups and those with disabilities. In the next year, the group will undertake work to increase the diversity of the Board and Executive, introducing structural changes to ensure a greater diversity of people from the south London community are involved in the ARC’s governance, and to address under-representation of staff from key groups.

Planned initiatives – new module in implementation science

Our capacity building theme have developed an **online module in implementation science** (a partnership between ARC South London’s academic partners (King’s College London, Kingston University and St George’s, University of London) and the University of East Anglia. This will provide a valuable resource to inform implementation of applied research and is intended for local, national and international delivery. This course is due to launch in September 2021.

12. National Priority Areas (where applicable, no more than 500 words)

Please describe any developments or updates regarding the NIHR ARC National Priority Area(s).

ARC South London, working with ARC East of England, leads the National Priority Programme in mental health, including children and young people's mental health, which we have named the Mental Health Implementation Network (MHIN).

We have established governance arrangements, and have set up an executive committee, which is chaired by programme lead Professor Colin Drummond and meets monthly. We have also set up an advisory board, which meets quarterly and is co-chaired by Professor Sir Graham Thornicroft, director of NIHR ARC South London, and Professor Peter Jones, director of NIHR ARC East of England.

We have embedded patient and community involvement, engagement and participation throughout the governance structures and workstreams. We are in the process of appointing a patient and carer involvement engagement and participation (PCIEP) lead and a national PCIEP coordinator.

The MHIN [launched a scoping exercise in April](#) 2021 to identify specific areas of mental health care in England where there is a high level of unmet need, and which could be addressed through existing evidence-based solutions at scale. There was an excellent response to the scoping exercise, with mental health trusts, charities, social and educational services, and research organisations, helping to identify more than 90 mental health needs in England.

MHIN researchers then aligned these needs with those identified by other studies in England since 2015 and a review of national policy documents. Using this approach, the researchers have identified seven broad areas of mental health need and their accompanying solutions in England. Working under the seven areas, the researchers then identified 22 mental health solutions that meet the needs of patients and health systems, may be ready for implementation, and are supported by evidence of effectiveness, including NICE guidance. We have also engaged with NHS England, Academic Health Science Networks and other stakeholders nationally in identifying priority mental health interventions that are likely to receiving national support for implementation.

The team invited a wide range of stakeholders in mental health to rate these solutions on how well they are likely to deliver on a series of objectives, which support national and NIHR priorities. A decision workshop was held with national stakeholders on 9 June which identified four priority solutions for implementation based on the criteria of effectiveness, patient involvement, reducing inequalities and implementability.

ARC South London, working with ARC East of England, in their joint mental health leadership role, has held three Mental Health and Wellbeing Collaboration meetings with representation from all ARCs. We now have a distribution list of more than 140 members and have recruited six PPI members into the collaboration.

The Collaboration has been involved in the development of the ARC national priorities programme for mental health and representatives from the collaboration sit on the Mental Health Implementation Network executive group. The collaboration has also supported the development and delivery of nationally important, collaborative co-produced research in mental health and wellbeing, including the [NHS CHECK study](#) and the [BASIL](#) study.

13. Beneficial Change Network (BCN) (no more than 200 words)

Please provide an overview of activities describing any developments of working together with the local AHSN on regional priority requests.

In June 2020, London's Regional Medical Director established the "evaluation cell" (reporting to Gold Command) involving London's 3 ARCs and 3 AHSNs. This group considered how to evaluate the many service changes and innovations being introduced in response to the pandemic – to inform which to maintain and which to cease, following the pandemic.

The Evaluation Cell has three objectives:

1. To identify 3 priorities and develop detailed "research grade evaluation" plans

2. To move towards a “learning health system” approach
3. To build strong, collaborative relationships between the London Region, ARCs and AHSNs

An iterative process considered regional priorities alongside evidence and service evaluations, utilising agreed criteria. Three priorities were identified for further evaluation:

- I. Remote Consultations
- II. Self-management and remote monitoring
- III. Integrated service models in palliative care.

The ARC South London (Professor Irene Higginson) provided academic leadership for palliative care, where a number of recommendations were made for care homes ahead of the winter wave of the pandemic. In addition, the ARC has worked on a major project with the AHSN and all 3 south London mental health trusts to evaluate the impact of remote consultations and make recommendations to inform future practice and service design.

The completed Finance and Activity Report must be submitted via email to the CCF Infrastructure mailbox (ccf-infrastructure-team@nihr.ac.uk) copying in the NIHR ARC Senior Research Manager, (ana.gomes@nihr.ac.uk) no later than **1 pm on 27 May 2021**.

The Finance and Activity Report will be reviewed by CCF and returned to Centres for resolving queries. The ARCs will have time from the **14 June 2021** for reviewing and finalising the data - please ensure the relevant staff are available during this period. The final Finance and Activity Report should be returned by **1 pm on 24 June 2021**.

The completed Narrative Report and Added Value Examples must be submitted via email to the CCF Infrastructure mailbox (ccf-infrastructure-team@nihr.ac.uk) copying in the NIHR ARC Senior Research Manager, (ana.gomes@nihr.ac.uk) no later than **1 pm on 28 June 2021**.

The Director and the Chief Executive of the NHS Organisation are required to sign off (electronically) the Annual Report on behalf of the NHS Organisation and confirm that the information provided in the Narrative and F&A reports is accurate since this is required by the Department of Health and Social Care. NIHR CCF will send the relevant documents (Docu-sign) to the Director and/or Chief Executive to sign after receiving both reports.

The key NIHR CCF contact for the NIHR 2020/2021 Annual Report, to whom all queries should be addressed (copying in ccf-infrastructure-team@nihr.ac.uk) is:

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