

## SPARC Round 4 Case Studies



**Name:** Robert Pierzycki

**Professional background:** Research Scientist (Post-doctoral)

**Twitter handle:** @RobertPierzycki

**Placement date:** April – May 2018

**Home institution:** Nottingham BRC

<https://nottinghambrc.nihr.ac.uk/>

**Placement host:** Manchester BRC

<https://www.manchesterbrc.nihr.ac.uk/>

**Placement title:** “Advancing collaborations, methodological expertise and high-impact publication output towards establishing leadership in a personal research area.”

*‘This was a very productive time and a successful placement. It also opened up new career opportunities for me. I’d definitely recommend this scheme to my colleagues’.*

### What I did:

- Learned to program, process, visualise and analyse data in R statistical package.
- Learned methods for the analyses of epidemiological data.
- Studied materials from the ‘Hearing Loss’ module at the University of Manchester, supported by course tutors.
- Observed the clinical management of patients and discussed their experiences of living with profound and unilateral hearing loss.
- Identified research questions and developed analysis codes.
- Presented at a ManCad (Manchester Centre for Audiology and Deafness) research seminar.

### Its impact:

- Developing new methodological skills which will be invaluable in future research projects.
- Invited to a new collaboration between the Manchester Auditory Brainstem Implantation service and the Nottingham BRC.

- Becoming a named collaborator on UK Biobank projects with the Manchester BRC.
- Establishing myself as a lead researcher in the epidemiology of hearing loss at the Nottingham BRC.
- Leading external collaborations for future projects, including predicting outcomes for cochlear implantation for tinnitus.
- Moving towards becoming a more senior and independent researcher, leading to new grant applications and papers.

**Outputs:**

- Completing papers on epidemiology and the impact of single-sided deafness and inter-aural asymmetry in hearing function for high-impact journals.

**Name:** Naiomh McMahon

**Professional Background:** Physiotherapist  
(PhD student)

**Placement Date:** April – May 2018

**Home institution:** CLAHRC North West Coast

[www.clahrc-nwc.nihr.ac.uk/index.php](http://www.clahrc-nwc.nihr.ac.uk/index.php)

**Placement host:** NIHR School for Public Health  
Research <http://sphr.nihr.ac.uk/>



**Placement title:** “Putting theory into practice: A short placement with Fuse, the Centre for Translational Research in Public Health.”

*‘The placement provided an excellent opportunity to get to know and work with a new team.’*

#### **What I did:**

- Worked with a new team with a specific focus on public health.
- Met public health specialists who combine research expertise and practical skills in different public health settings.
- Led an umbrella review of systematic reviews on prevention and harm reduction interventions for gambling and related harm.
- Prepared the manuscript of findings as primary author.
- Attended the Fuse@10 celebration event and a Fuse Quarterly Research Meeting on interventions related to diet and alcohol for young people.

#### **Its impact:**

- Opportunities to network and collaborate with international experts in knowledge translation in public health.
- Establishing relationships to facilitate future collaborative partnerships, including funding proposals.
- Learned a new evidence synthesis technique (the umbrella review).
- Received feedback on my writing style from senior academics.

#### **Outputs:**

- A manuscript in preparation for an addiction focused journal.
- Future funding proposals.



**Name:** David Lunn

**Professional background:** Clinical Biomechanist (Post-doctoral)

**Twitter handle:** @DavidLunn86

**Placement date:** September 2018 – January 2019

**Home institution:** Leeds BRC

<http://leedsbrc.nihr.ac.uk/>

**Placement host:** Newcastle BRC

<https://www.newcastlebrc.nihr.ac.uk/>

**Placement title:** “New measurement techniques and use of a pre-existing data set to evaluate functional outcomes of patients”

*‘Having this experience will help me in my future career endeavours when leading teams’.*

#### **What I did:**

- Spent 5 weeks at Newcastle BRC
- Assisted in collecting gait data from patients suffering from Parkinson’s disease and healthy controls.
- Began to understand the impact of cognition and attention on gait performance.
- Formulated a research question.
- Learned a new statistical analysis technique and used it to analyse the data.

#### **Its impact:**

- Learned new assessment techniques to allow me to evaluate patients in a more holistic way.
- Broadened my knowledge of and skills in data collection, processing and analysis for the benefit of future research proposals.
- Enhanced my CV beyond the grant income of a competitive award.
- Demonstrated how different research team structures can work.

#### **Ouputs:**

- Presenting my own and the wider BRC’s research at research seminars.
- Preparing an abstract for international conference presentation.
- Potential for a future a manuscript for publication in a peer reviewed journal.

**Name:** Mable Nakubulwa

**Professional background:** Chartered Psychologist,  
Statistician (Post-doctoral)

**Twitter handle:** @MableNakubulwa

**Placement date:** July 2018 – February 2019

**Home institution:** CLAHRC North West London

<http://clahrc-northwestlondon.nihr.ac.uk/>

**Placement host:** CLAHRC West Midlands

<https://warwick.ac.uk/fac/sci/med/about/centres/clahrc/>



**Placement title:** “Exploring methods of evaluating the impact of complex service delivery interventions in health care.”

*‘The support I received made learning a more positive experience.’*

#### **What I did:**

- Worked with a colleague to develop new statistical approaches to evaluate a complex healthcare intervention.
- Pre-processed the data ready for analysis.
- Explored ways of visually presenting the data to determine patterns before building models for further computation.
- Began to build models for the computation (regression modelling approach).

#### **Its impact:**

- Broadening my knowledge and understanding of data cleaning and pre-processing, specifically around missing data.
- Gaining unique programming skills and proficiencies in novel data visualisation.
- Developing skills in breaking down complex research questions for computational purposes.
- Establishing and developing a collaboration with another CLAHRC.
- Developing my research network for dissemination of research results.
- Increasing my confidence in evaluating big datasets.

- Ongoing collaborations.

**Outputs:**

- Preparing a manuscript for publication in a peer reviewed journal, once computational modelling is complete
- Disseminating the results at future collaborative meetings and conferences.



**Placement title:** “Empathy in general practice: an exploration of ethnographic data.”

**Name:** Doug Hardman

**Professional background:** Academic psychology (PhD student)

**Placement date:** October 2018 – January 2019

**Home institution:** SPCR, University of Southampton

[https://www.southampton.ac.uk/candid/primary\\_care\\_staff/primary\\_care\\_research.page](https://www.southampton.ac.uk/candid/primary_care_staff/primary_care_research.page)

**Placement host:** SPCR, University of Oxford

<https://www.phc.ox.ac.uk/>

*‘I have new skills and experience and the confidence to build networks with programmes outside my current institution. I would really encourage people to apply!’*

### What I did:

- Gained a better understanding of the Oxford Empathy Programme and its scope of work.
- Worked on two projects.
- Considered how to refine the proposed project to ensure the data collected was appropriate.
- Decided to explore empathy in the wider context of person-centred care in general practice to inform the ethnographic data.
- Conducted an exploration of empathy using existing ethnographic data.
- Researched the relationship between therapeutic empathy and person-centred care, and the ethics of empathy.

### Its impact:

- Gained experience of different methods of working and research.
- Experience of working in a world-leading programme.
- Expanded my professional network.
- Cemented a nascent relationship.
- Set up a fruitful and ongoing collaboration.

### Outputs:

- A peer reviewed journal publication.
- Ongoing collaborations.
- Future peer reviewed publications.

**Name:** Gemma Spiers

**Professional background:** Health & Social Care Researcher (PhD student)

**Twitter handle:** @GFSpiers

**Placement date:** June 2018 – March 2019

**Home institution:** NIHR School for Primary Care Research (SPCR), Newcastle

<https://research.ncl.ac.uk/napcr/people/primarycareresearchers/training/>

**Placement host:** Personal Social Services Research Unit, NIHR School for Social Care Research (PSSRU, SSCR), London School of Economics

<http://www.lse.ac.uk/LSEHealthAndSocialCare/aboutUs/NIHRSSCR/home.aspx>



**Placement title:** “Exploring the interface between health and social care research in the NIHR Schools.”

*“It has added another dimension to my developing areas of expertise and research interests.”*

**What I did:**

- Met with key experts in the fields of social care research to discuss respective research interests.
- A critical scoping review of measures of socioeconomic status in older populations.
- Attended a seminar about the determinants of wellbeing in England.
- Attended a lecture about healthy ageing in low socioeconomic groups.
- Gave a seminar about my PhD research.

**Its impact:**

- Learning about the broader landscape of social care research and the work carried out by the PSSRU, SSCR.
- Developing a deeper understanding of the approaches to measuring wealth in older populations that were then applied to my PhD research.
- Making links for future research opportunities.
- Gaining invaluable feedback on my research.

- Adding another dimension to developing areas of expertise and research interests.

**Outputs:**

- An additional chapter within my PhD thesis.
- A manuscript for submission to a peer reviewed journal.
- Links for future collaborations.



**Name:** Laura Swaites

**Professional background:** Physiotherapist (PhD student)

**Twitter handle:** @marsh\_lauram

**Placement date:** June 2018 – February 2019

**Home institution:** CLAHRC West Midlands (based at Keele University)

<https://warwick.ac.uk/fac/sci/med/about/centres/clahrc/>

**Placement host:** Wider NIHR (Centre for Clinical and Health Research, UWE Bristol)

<https://www1.uwe.ac.uk/hls/research/healthandclinicalresearch/arch.aspx>

**Placement title:** “Broadening horizons of knowledge mobilisation in primary care”

*‘Learning from others was a central part of the placement and I was able to contribute to other PhD students’ work and share my knowledge and skills.’*

#### **What I did:**

- Gained a different perspective on knowledge mobilisation (KM).
- Completed a Masters module in KM.
- Spent time with a range of experts.
- Worked closely with public health colleagues and gained exposure to real-time evidence and evaluation challenges within an NHS commissioning environment.
- Worked with teams using different approaches to implementation research.
- Organised and hosted a national KM event, at which I presented my PhD work.

#### **Its impact:**

- Enhanced my skills in evaluation and service-informed research.
- Significantly enhanced my professional networks.
- Shaped earlier chapters of my thesis, developed my thinking about the theoretical perspectives of my work and enhanced my critical evaluation skills.
- Broadened my knowledge of KM in the real world and encouraged me to consider innovative ways of getting KM into primary care practice.

- Informed the development of our new team strategy.
- Bolstered my CV in several areas, including training, publications, skills and grant applications.
- Developed my area of expertise and professional identity.

**Outputs:**

- Hosting a national KM event.
- Sharing placement outputs at local training events and national conferences.
- Collaboration on two (submitted) grant applications – one with the Chartered Society of Physiotherapy (CSP) and the other for the Versus Arthritis Pushing Frontiers award.
- The preparation of a manuscript for publication in a peer reviewed journal (in progress).
- Collaboration on an NIHR Advanced Fellowship application - in progress.

**Name:** Mark Turner

**Professional background:** Basic scientist (Post-doctoral)

**Twitter handle:** @MarkC\_Turner

**Placement date:** August – October 2018

**Home institution:** Leicester BRC

<https://www.leicesterbrc.nihr.ac.uk/>

**Placement host:** Oxford Health BRC

<https://oxfordhealthbrc.nihr.ac.uk/>



**Placement title:** “Investigating the effects of ectopic fat deposition on lipid metabolism in human hepatocyte and skeletal muscle cells using stable isotope methodologies.”

*‘The placement and collaborations have had a significant (and long-term) impact upon my research, training and CV.’*

#### **What I did:**

- Conducted experiments using an *in vitro* liver model to investigate the effects of carbohydrate mixtures (glucose and fructose) upon *de novo* lipogenesis.
- Used stable isotopes (heavy water) to investigate if the exposure to fatty acids would affect the lipid profile in human skeletal muscle cells.
- Developed a method for investigating hepatocyte gluconeogenesis.
- Developed an immunolabelling protocol for imaging proteins which are important regulators of lipid droplet formation.

#### **Its impact:**

- Gained insights into lipid partitioning in hepatocytes cultured with glucose and fructose.
- Development of a more physiological *in vitro* skeletal muscle model.
- Learnt and used a new technique (stable isotope tracers and mass spectrometry) to investigate lipid metabolism in cell culture models.
- Broadened the scope of analysis to apply to my own research.
- Expanded my skills through Involvement with other projects.
- Made long-term collaborations within a well-established and reputable research group and institution.

**Ouputs:**

- Further experiments to investigate trends in skeletal muscle cell data.
- Potential publication as an independent body of work or in conjunction with other experiments conducted within the group.
- Potential publication of the data within a short-communication.
- Potential joint grant application.



**Name:** Rhiannon Macefield

**Professional background:** Health Services Researcher (PhD)

**Twitter handle:** @CSR\_Bris @BristolBRC

**Placement date:** April 2018 – April 2019

**Home institution:** NIHR Bristol BRC

<http://www.uhbristol.nhs.uk/research-innovation/our-research/nihrbristolbrc/about-nihr-bristol-brc/>

**Placement host:** Manchester BRC/ CLAHRC Greater Manchester/ NIHR Cochrane Wounds

<https://www.manchesterbrc.nihr.ac.uk/>

<https://www.clahrc-gm.nihr.ac.uk/>

<https://wounds.cochrane.org/about-us>

**Placement title:** “Developing advanced evidence synthesis skills to inform rapid and focused surgical innovation: a training placement between the Bristol BRC (Surgical Innovation theme) and the Manchester BRC (Dermatology theme), Greater Manchester CLAHRC and Cochrane Wounds.”

*‘The scheme has been a fantastic opportunity to establish and strengthen collaborations between BRCs, and an excellent opportunity for professional development for an early career researcher.’*

#### **What I did:**

- Worked on a priority update Cochrane systematic review on tissue adhesives for the closure of surgical wounds.
- Received advanced, one to one guidance and specialist training in systematic reviewing skills (including GRADE assessment and the use of Cochrane-related software systems).
- Spent protected time working at the Wounds Research Group at the University of Manchester.
- Completed an online interactive Cochrane learning course in ‘Conducting an Intervention Review’.

#### **Its impact:**

- Consolidated and broadened existing knowledge in wound research, including wound closure methods, trial design and methodology.
- Enhanced my skills in conducting evidence syntheses and systematic reviews.
- Broadened knowledge of ongoing work and projects relevant to wound care and innovation in another research group and institution.
- Strengthened and built collaborations with colleagues.
- Provided an opportunity to establish new independent collaborations with other experts in wound care, including an invitation to join the National Wound Care Strategy Programme as a member of the Surgical and Research Enabler workstreams.
- Received lots of great advice relevant to my own research and future career

**Outputs:**

- Generated data for the updated Cochrane systematic review on tissue adhesives for the closure of surgical wounds
- Future publication on completion of the review
- Development of a collaborative piece for the Manchester and Bristol BRC newsletters / websites.
- Continued collaboration beyond the official placement period in shared areas of interest in innovation and wound research.
- Developed ideas for a future grant application.