SESSION E2

E2.1 Pump prime funding for patient engagement in research grant development

Dr Ian Simcock[1,2], Mrs Jessica Eaton[1], Deirdre Leyden[1,2], Dr Celine Lewis[2], Dr Harriet Shannon[2], Dr Susan C Shelmerdine[1,2], Prof Owen J Arthurs[1,2]

[1]Great Ormond Street Hospital For Children NHS Foundation Trust, London, United Kingdom, [2]Institute of Child Health / UCL / National Institute for Health and Care Research Great Ormond Street Hospital Biomedical Research Centre, London, United Kingdom

Background Engaging patients and their families in active partnerships is critical in healthcare research, known as Patient and Public Involvement and Engagement (PPIE). PPIE means that members of the public can help influence and shape research throughout the project lifecycle, from project development to dissemination, but this does require careful planning. To enable early PPIE, funding is now available from the National Institute for Health and Care Research (NIHR), Research Support Service (RSS) in England which can support a variety of activities including funding public attendance at research meetings, travel, childcare, refreshments costs.

Purpose This poster aims to share examples of RSS funding impact, through early PPIE on a variety of grant applications to provide more focussed and engaged grant applications.

Summary of Content The presentation will include the development of aims and research questions, modification of recruitment strategies, development of dissemination outputs and the formation of project steering groups. Also included will be challenges to engaging patients and the public in research, managing expectations, using easy to understand language, and discussing difficult subject matter.

We describe the positive benefits of early PPIE incorporation into successful grant applications and acknowledge that researchers gain by developing group facilitation skills and develop a better understanding of the lived experiences of patients and their families.

Heightening awareness of the opportunity for clinical staff to engage in these funding calls will provide more targeted and better designed research grants, allowing increased success for funding calls and research with participants at its core.

E2.2 A Patient and Public Involvement (PPI) co-designed Patient Reported Experience Measure (PREM) of receiving X-ray results

Mr Paul Lockwood[1]

[1]Canterbury Christ Church University, Canterbury, United Kingdom

From October 2023, NHS England[1] required GPs to improve the patient experience through access to online electronic health records (EHR). Empowering patients by benefiting from reading their clinical records and test results. Historically, radiology (X-ray) reports were designed to communicate diagnoses and recommendations to the doctor, not the patient. Thus, the medical language and format may not be patient-friendly and accessible. There have been many published research studies to improve the reporting of radiology reports to patients; many, if not most, have evolved around radiologists[2,3,] general practitioners[4], AI[5,6] or structured templating[7].

This presentation will discuss the active and inclusive collaboration of a Patient Public Involvement (PPI) participatory research activity, learning what members of the public 'valued' in the experience of receiving X-ray results, what was negative about the experience, what they understood from the information (how it was given to them), if it affected their decision making on future management and treatment, and what could have been improved8. PPI involvement (unlike patients as research study participants) has been underrepresented in published radiography studies[9–11].

The public involvement and consultation ensured a broad social perspective, and viewpoint was included when gathering the key 'themes' that patients' valued' in the experience. These were then used to co-design and develop a Patient Reported Experience Measure (PREM) tool (Delphi survey). The PPI groups consulted upon two rounds of the online Delphi survey to assess the themes, consolidate the themes and terminology and rank to pare down the themes into a final Delphi tool.

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E2.3 A systematic review of clinical decision support systems (CDSSs) and the key clinical features used by radiologists in prostate MRI scans

Eric Nduka Onwuharine[1], Professor Jonathan Hill[2], Dr Matthew Dimmock[3]
[1]University Hospitals Of North Midlands, Stoke On Trent, United Kingdom, [2]Keele University, Keele, United Kingdom, [3]Keele University, Keele, United Kingdom

Background: The international Prostate Imaging – Reporting and Data System (PI-RADS) steering committee has recommended the implementation of on-table radiologist monitoring during prostate MRI to reduce both Gadolinium-based contrast agent (GBCA) injections and delayed follow-up metastatic imaging appointments (Schoots et al., 2021). However, the feasibility of this recommendation is hindered by a shortage of radiologists worldwide (Jeon et al., 2023; Sanjay Jeganathan, 2023). Radiographers already monitor patients on-table for image quality and anatomical coverage as part of their roles (Swinburne, 1971). Using a computerised clinical decision support system (CDSS) to support radiographers in implementing this PI-RADS recommended patient pathway could facilitate advanced practice, improving patient experience and outcomes.
Review question: For people undergoing prostate MRI, what CDSSs are used for image analysis and what were the significant clinical variables used in their implementation?
Purpose: Identify CDSSs in prostate MRI analysis and their clinical variables.
Summary of the content: Eligibility criteria- Encompasses studies implementing/evaluating CDSSs for prostate MRI, including RCTs, feasibility, and pilot studies.
Information sources- Search in MEDLINE, Scopus, Web of Science, PubMed, CINAHL, Embase, ProQuest, and The Cochrane Library.
Risk of bias- We will evaluate the risk of bias by using QUADAS-2 tool for multivariable prediction studies.
Synthesis of results- We will present a narrative synthesis categorizing CDSSs, methods, usability, clinical features, disease conditions, modality types, and target professionals.
Reporting- Follow PRISMA 2020 guidelines.
Funding- NIHR303584 (The systematic review will be conducted as part of the project for my NIHR Doctoral Clinical and Practitioner Academic Fellowship award).

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E2.4 Incidence of contrast induced AKI and its correlation with common comorbidities

Burak Sahinoglu[1], Pranav Ramesh[2], Dr Nadia Benhebil[2], Jamal Ali Abdulkarim[2]
[1]University Hospitals Of Leicester NHS Trust, Leicester, United Kingdom, [2]Kettering General Hospital NHS Foundation Trust, Kettering, United Kingdom

Background: There has been a debate about whether iodine-based contrast agents cause any clinically significant kidney injury. The last national RCR audit[1] showed that the CI-AKI incidence was ~0.9%. We conducted a large audit in our hospital to find CI-AKI incidence and its relationship with Type 2 DM, hypertension, and CKD.
Method: Patients' creatinine levels were collated before and 2-7 days after the CT scan. Their correlation with comorbidities analyzed. Linear regression was performed, and the assumptions were checked beforehand. Two-tailed P value of <0.05 was deemed statistically significant.
Results: Details of data related to CI-AKI incidence are demonstrated in Table 1.
Post-CT creatinine was found to be higher in the cohort with hypertension (n=152; compared to the cohort without hypertension, albeit not statistically significant (129 versus 119,p =0.365).

Presence of diabetes alone was significantly associated with a higher Post-CT creatinine (B=22.2, 95% CI (7.41 to 37.02), p=0.003). The presence of diabetes and CKD was associated with a higher post-CT creatinine than the presence of diabetes alone (p<0.001).
Chronic kidney disease alone is not significantly associated with higher rates of CI-AKI in this cohort (P=0.916)
Conclusion: There is a considerable risk of kidney injury after the use of contrast agents. Diabetes is associated with higher post-CT creatinine values. Those with diabetes and CKD have higher post-CT creatinine compared to those with diabetes alone.
Post-CT creatinine is higher in those who have hypertension(p=0.365).
The main study limitation was the lack of creatinine measurements post-CT scan in almost 40% of the patients.

Table

	Total	Excluded	Included in Study	Cr Increased by at least 25% but remains in the reference range	Cr Increased by 25-50% and developed AKI	Cr Increased by at least 50% and developed AKI
Number of Patients	2244	944	1300	54	53	34
Ratio				4.1%	4.0%	2.6%

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E2.5 The CT venogram in traumatic brain injury - does it change clinical management?

Ahmed Mostafa[1], *Dr James Green*[1], *Dr Neil Limaye*[1], *Dr Khadijah Ghaznavi*[1], *Mr Kevin Tsang*[1]
[1]*Imperial College NHS Foundation Trust, London, United Kingdom*

Background In traumatic brain injury (TBI) with a skull fracture adjacent to a cerebral venous sinus (CVS), CVS thrombosis (CVST) is found in 26.2% of patients1. Traumatic CVST is associated with higher rates of in-hospital mortality and a variety of complications2. While CT Venogram (CTV) is the imaging modality of choice, there is no consensus regarding the optimal timing or the impact on clinical management.
Method A retrospective explorative study was performed in a UK-based tertiary Neurosurgery referral centre to answer 2 questions: 1) Does performing CTVs change clinical management? 2) When are CTVs being performed?
All CTVs performed in trauma patients between June 2022 and June 2023 were recorded from PACS. Data was collected regarding CTV timing, results, and management of thrombi.
Results 56 trauma patients had a CTV in this time-period. Mean time between initial CT Head and CTV was 5.16 hours (SEM=0.857), with 17/56 (30.4%) happening at the same time. 22/56 (39.3%) were found to have a thrombus. Only 3/22 (13.6%) received treatment for their thrombus (warfarin, rivaroxaban and aspirin). 8/22 patients with a thrombus (36.4%) had a repeat CTV at a mean time of 5.13 days (SEM = 1.23). One patient was followed-up 6 months after discharge.
Conclusion This exploratory study showed that doing 56 CTVs changed management in only 3/56 patients (5.4%), questioning the clinical benefit of performing CTVs in this cohort. CTVs were performed early, risking any delayed cases of CVST being missed3. Further research is needed to allow development of local protocols.

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E2.6 Developing a research strategy for your radiography department - the obstacles and opportunities

Dr Amy Hancock[1], *Rebecca Stride*[1], *Daniel Hutton*[2], *Dr Martine Mallinson*[3]
[1]*University of Exeter, Exeter, United Kingdom,* [2]*Northwest Radiotherapy Operational Delivery NetworkUnited Kingdom,* [3]*Medical Imaging Department, Mid Yorkshire Hospitals NHS TrustUnited Kingdom*

Background A strong research culture in a healthcare organisation increases the likelihood that treatment and care is delivered based on the best available evidence(1) and that research questions are developed and investigated relating to

the specific health care setting and the requirements of the population they serve[2]. Engaging in research and having a knowledge of research practice is a mandated standard of proficiency for professional registration[3]. A clear and well thought out strategy supports providers and practitioners in aligning practice to their values and delivering the organisational vision. In practice this means supporting radiographers to engage in research, improve clinical services and patient outcomes and achieve their vision for local research[1].

Purpose A recent College of Radiography Industry Partnership Scheme (CoRIPS) funded survey of radiotherapy and medical imaging departments has demonstrated that despite radiography departments acknowledging the necessity and benefits of a local research strategy few have managed to develop their own as part of embedding a research culture. With case examples, the potential ways in which we might increase radiography engagement and confidence with setting and achieving research ambitions will be explored.

Summary of content The presentation will discuss some of the complexities of research across the radiography disciplines, different sectors and organisational structures. We will present success stories emerging from recent research and examine both the barriers and enablers to local research strategy provided by radiographers in the field.

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