VOLUME. 1
MARCH 2025

NIHR | HealthTech Research Centre Devices, digital and robotics

MD-TEC Medical Devices Testing and Evaluation Centre

TECHTALK

WITH HRC-DDR

SPRING EDITION

- Welcome to our spring newsletter. We hope you find the information helpful and informative.
- Should you have any questions please do not hesitate to get in touch with the team.

Welcome to our new quarterly newsletter

The vision of the NIHR HRC in Devices, Digital and Robotics is to be a national centre of excellence to support the safe, effective and efficient translation of new healthcare technologies into routine care for NHS patients and follow-on social care. This will be achieved through a coherent, integrated set of themes led by experts in their fields.

HealthTechDDR@uhb.nhs.uk www.hrc-devices.nihr.ac.uk @DDRHRC

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A MESSAGE FROM TOM...

Over the past 11 years, it has been a tremendous privilege to serve as the Clinical Director of NIHR-funded HealthTech infrastructure, hosted by University Hospitals Birmingham NHS Foundation Trust in close partnership with the University of Birmingham.

The latest phase of this work began last April when we became one of the 14 NIHR HealthTech Research Centres (HRCs), securing five years of funding. Our centre—the NIHR HRC in Devices, Digital, and Robotics (HRC-DDR)—reflects the breadth of health and social care technologies we support.

HealthTech is expanding rapidly in both health and social care, increasing in variety and complexity. The full potential of technologies such as wearables, implantables, robotic-assisted systems, and Artificial Intelligence will take many years to fully realize.

Working in partnership with the Medical Devices Testing & Evaluation Centre (MD-TEC), the HRC-DDR provides a range of support to UK-based SMEs, clinicians, academics, and patients. Our specialized expertise in pre-regulatory usability studies and first-in-human clinical investigations is in high demand.

Our success—both now and in the future—is entirely dependent on a cohesive, experienced, and dedicated team. The addition of full-time Patient and Public Involvement & Engagement (PPIE) and Health Economics specialists has further strengthened our ability to support the translation of a wide range of HealthTech innovations.

We also rely heavily on the invaluable “in-kind” contributions of our theme leads, who bring internationally recognized clinical and academic expertise.

As we slowly emerge from the depths of winter into spring, the variety and complexity of projects already underway—and those yet to come—will bring both challenges and rewards.

Tom Clutton-Brock

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MEET THE CORE TEAM

- Tom Clutton-Brock- NIHR HRC-DDR Director
- Olivia Brookes - HRC-DDR Programme Manager
- Amy Smith - Portfolio Manager
- Jeffrey Faint - Project Research Officer
- Charlotte Whitehouse - Project Research Officer
- Amrita Cheema - Project Support Officer
- Sian Dunning - MD-Tech Programme Manager
- Hannah Rooney - PPIE Manager
- Kulli Kuningas - Project Manager
- Lola Afelumo - Research Fellow
- Sandra Remsing - Project Research Officer

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PATIENT AND PUBLIC INVOLVEMENT AND ENGAGEMENT

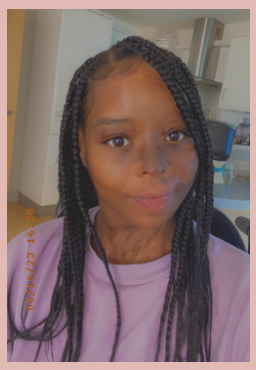
We would like to introduce you to our new Patient and Public Involvement & Engagement Manager for the NIHR HRC-DDR, Hannah Rooney. Hannah's role is to ensure diverse insights and perspectives from patients and members of the public shape the work of the centre, with the aim of improving health technology accessibility and inclusion. Hannah facilitates the centre's public involvement group and community engagement activities whilst also providing advice and guidance on inclusive public involvement and public-facing communications. Hannah has a special interest in addressing barriers to health and care for underserved people and communities.

Do you know someone who would like to join our PPI Group?

Please contact Hannah on:
07483 335 476
h.rooney@bham.ac.uk

JOIN OUR TEAM

Get to know our Public Involvement Contributors



Josefina Vilela

What motivated you to join the HRC PPIE Group?
I was introduced to Burn Aid, the burns charity, which sparked my passion for contributing to healthcare research and ensuring that patient and public perspectives are valued. Over the years, the HRC has given me the opportunity to be involved in numerous groundbreaking studies. One particularly fascinating project was the development of a see-through plaster, which allows healthcare professionals to monitor the skin of burns patients without needing to remove it. Another remarkable study was the integration of Artificial Intelligence (AI) into the medical field to identify healthy cells, which can be invaluable for cancer research. AI can detect details that the human eye might miss, revolutionising diagnostics and treatment planning.

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HUMAN FACTORS & USABILITY

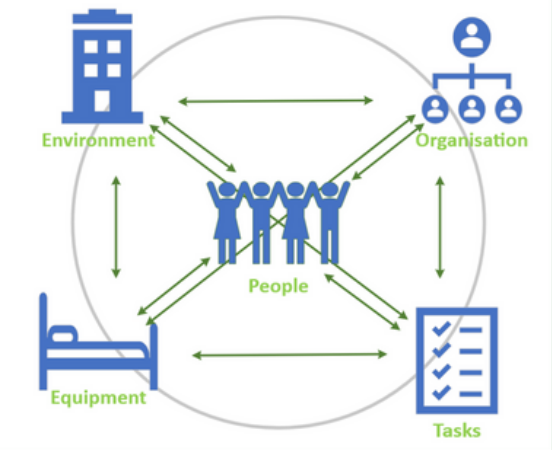
So... what IS Human Factors?

As a discipline, Human Factors (HF) centres around optimising human wellbeing as well as overall system performance. With the human at the centre, HF examines human abilities and capabilities, limitations, behaviours, and best practice to inform systems with human-centred design. For example, HF practices are implemented well across manual handling jobs (physical ergonomics), yet HF itself extends to many other areas including Medical Device Usability Testing which is our specific area of expertise.

Usability testing is a form of HF testing. This framework recognises that for any piece of equipment to be adopted, it needs to be safe, intuitive, and efficient at the job it is designed to do. This is particularly pertinent within healthcare technologies, where the development cycle from inception to deployment averages 10 years and often at a cost of millions of pounds. User-acceptability is paramount to successful adoption, ensuring a device is safe and efficient. If users find a technology tedious or cumbersome to use, users simply won't use it!

Within the HRC DDR and the Medical Devices Testing and Evaluation Centre (MD-TEC), our team works with HealthTech companies early in the development cycle to gain user feedback on the acceptability and overall usability of their prototypes.

The aim is to inform an iterative process of design suited to the needs and practices of the end-users themselves. The HRC-DDR conduct all usability work in line with IEC 62366 (an international standard) which covers the application of usability engineering to medical devices.



Although human-centred design is central to most innovation processes, it is a fairly new discipline across healthcare. The Human Factors Community of Practice network exists to connect people, increase awareness, knowledge and application of Human Factors within healthcare settings.

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UPCOMING FUNDING OPPORTUNITIES

NIHR Invention for Innovation (i4i)

i4i Fast Award: runs once a year focusing on a specific theme.
Current Theme: Development of health technologies to reduce community and hospital waiting lists for children and young people, including those with learning disabilities, seeking mental healthcare or neurodevelopmental assessment.

- Opens: 11/03/2025. Deadline: 16/04/2025

i4i Product Development Award: operates a two-stage application process - PDA 1 and PDA2, and runs twice a year.

PDA Call 30:

- Stage 1 opens: 09/04/2025. Deadline: 28/05/2025
- Draft application deadline to the HRC-DDR: 27/04/2025

Defence and Security Accelerator (DASA)

DASA has launched a new Market Exploration called **'Non-Compressible Haemorrhage – Novel Technologies.'** This Market Exploration is being run on behalf of Research and Clinical Innovation (RCI) Research, Surgeon General's Department.

- Deadline: 15/04/2025

Innovate UK

- There is a pause to the Innovate UK Smart Grant scheme currently
- Further funding opportunities due to be released in Spring 2025

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TEAM SUCCESS

A big thank you ...

The team recently spent the day at **Heartlands Hospital** conducting a usability study investigating the use of an inner ear pulse oximeter with our very special training simulator, Anne. A big thank you to all of our participants and the team at Heartlands for organising the day. We hope to see you all again soon and please keep and ear out for any upcoming opportunities.

Innovate UK - Unmet Clinical Need & Challenges

Olivia, Amy & Tom recently attended the Innovate UK event exploring the Unmet Clinical Needs and Challenges for patients with Multiple Long-Term Conditions in Loughborough. The event highlighted key topics and areas of discussion within specific clinical areas and gave the team an opportunity to network with potential collaborators and industry partners.

Tom also chaired the session exploring unmet clinical needs within clinical practice and presented his own experience of these challenges within intensive care.

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TEAM SUCCESS

NIHR Visit

The NIHR Senior Leadership Team recently visited the Institute of Translational Medicine to hear about leading research in Birmingham. The HRC-DDR Team presented our ongoing activity and our aims and objectives moving forwards. NIHR colleagues also enjoyed a tour of our centre showcasing our facility and some of our current projects.

Jeff Faint (Project Research Officer) and Kulli Kuningas (Project Manager) delivered demonstrations of 2 new technologies we are currently supporting, promoting lots of interesting points of discussion and interest.

New Casestudy working with Vision Engineering Ltd

The team have recently launched a new case study in collaboration with Vision Engineering Ltd outlining our work to evaluate a 3D camera system developed for use on healthcare binocular microscopes.

The HRC-DDR team on applications for grant funding for product development, provided regulatory and commercialisation support, and delivered human factors validation (formative usability) studies of the technology.

AVAILABLE NOW

Check out our website for further details!

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UPCOMING EVENTS

HRC Accelerated Surgical Care - SurgTech Conference

Location: The Queens Hotel, City Square, Leeds

Date: 3rd-4th April 2025

UHB Research Showcase

Location: Queen Elizabeth University Hospitals, Atrium

Date: 20th May 2025

Digital Health World Congress

Location: Kensington Conference Centre, London

Date: 29th-30th May 2025

Med-Tech Innovation Expo (MTI)

Location: NEC Birmingham, UK
Date: 4th-5th June 2025

https://med-techexpo.com/newfront

TALK TO US

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SCAN ME