

Progress report: NMAHP Research at Imperial College Healthcare NHS Trust (2022)

Table of Contents

Foreword.....	2
Highlights 2022.....	3
Research leads.....	4
Current doctoral and post-doctoral NMAHPs.....	5
Research impact.....	5
Recruitment and Retention.....	5
Research and service improvement activity.....	6
Research in tone.....	6
Research capacity and capability building.....	7
Research Delivery.....	9
Equality Diversity and Inclusivity.....	9
Research stories from front line staff.....	9
Conclusions and next steps.....	11
Appendix 1.....	13
2022 Publications by NMAHP Research fellows, Consultant NMAHPs and Pharmacy staff	13
Appendix 2.....	23
Fellowships awarded in 2022.....	23

Foreword

We are delighted to share the 2022 Imperial College Healthcare NHS Trust (ICH) report of the research activities of our Nurses, Midwives, Allied Health Professionals, Healthcare Scientists², Pharmacy staff and Psychologists (NMAHPs). This report captures our diverse research activities and brings together a range of achievements that have contributed to our NMAHP research strategic plan 'Research is everyone's business' and the Trust's overall strategy.

Our achievements have been supported through collaborations with many funders and partners. We particularly acknowledge and thank the following for their contribution and support:

NHR Imperial Biomedical Research Centre (IRC)
Imperial College Academic Health Science Centre Clinical Academic Training Office (CAIO)
Imperial Health Charity (IH)
ICH Divisional Research Management Teams, led by Scott Mulaney (MIC), Donna Copeland (SC) and Ella Johnson (VCS)
Imperial College Academic Health Science Centre (AHC)
Imperial Patient Experience Research Centre (PERC)
Imperial College London (The College)
National Institute of Health Research (NIHR)
Royal Marsden Partners (RMP)

This year we particularly focus on the impact of NMAHP research activity.

²There are 14 registered Allied Health Professions: Art Therapists, Dance therapists, Music therapists, Chiropodists/podiatrists, Dietitians, Occupational therapists, Operating Department Practitioners, Orthoptists, Osteopaths, Paramedics, Physiotherapists, Prosthetists and Orthotists, Radiographers and Speech and language therapists.

³There are over 50 healthcare science specialisms that fall under four broad areas: laboratory sciences, physiological sciences, medical physics and clinical engineering/bioinformatics.

Highlights 2022

An NHR Advanced Fellowship was awarded to Dr Margaret Goffey (SUJ)
An NHR Development, Skills and Enhancement fellowship was awarded to Dr Gemma Curie (SUJ)
An NHR doctoral fellowship was awarded to Layla Bolton Saghdoui (Nurse)
An NHR pre-doctoral fellowship was awarded to Kelly Wade McBane (Dietitian)
BRCARD CAIO funding was secured to enable 9 post-doc staff to have one to two days' protected research time within their clinical role
Jerry Gow (OU), James Close (PI) and Lilet Albert (midwife) started their PhDs
Dr Varia Oliveira (Nurse), Dr Gemma Curie (SUJ) and Dr Huw Woodbridge (PI) were awarded their PhDs by Imperial College London
Four further pre-doctoral fellowships funded by Imperial BRCARD and Imperial Healthcare Charity were awarded. The research fellows are conducting a range of work involving treatment of people with infectious diseases, dementia and spinal cord injury
Lisa Newington, a post-doctoral physiotherapist funded by NHR Imperial BRCARD and Imperial Healthcare Charity, developed and piloted an NMAHP academic activity impact capture tool
Two midwives were co-applicants on an awarded NHR Health Services & Delivery (HS&D) grant related to continuity of care (Tina Bendeville and Susan Barry)
Our Lead Nurse for Practice Development and Innovation was a co-applicant on an awarded NHR HS&D grant on staffing models in ICU (Claire Leon Villapalos)
Our Lead Nurse for the Clinical Research Delivery Workforce (Dr Helen Jones) was awarded (with Dr Chris Millington - anaesthetist) a BMA Wesleyan grant to study the impact of airborne PPE on physical and mental wellbeing
Dr Margaret Goffey was awarded an Honorary MBE for services to Speech and Language Therapy
Professor Mary Wells became a theme co-lead for the 'Influencing patient and healthcare worker behaviours to optimise safety and minimise risk' theme within the NHR Imperial Patient Safety Research Centre
We ran our 3 day Starting Out in Research course for the fourth time, in person at Imperial College, London. This was attended by 36 NMAHPs from across the AHBCARD and was extremely well evaluated
The Researcher Development Course was run online over four days, enabling internal and external candidates to attend. Evaluations were also very positive
Our post-doctoral midwife (Lucia Ramirez Montesinos) started a Maternity Research Group which meets monthly
We started (in March 2022) a monthlon

Introduction

Dr Helen Jones is the Trust's lead nurse for the Clinical Research Delivery Workforce. She is supported by the Imperial BRC

Current doctoral and post-doctoral NMAHPs

Our numbers of doctoral students and post-doctoral NMAHP staff across the Trust fluctuate from year to year. Currently we have 9 NMAHPs undertaking PhDs, two nurses undertaking Professional Doctorates and 13 Healthcare Scientists undertaking the Higher Specialist Scientific Training Programme (HSS), which includes completion of a professional doctorate. Across our workforce, we have 6 nurses, 1 Midwife, 9 Allied Health Professionals, 4 Pharmacists and 23 Healthcare Scientists with healthcare related doctorates. This year Prof Alexander and Wells have continued to

of the 40 AHP participants from NCH. The "Research and Development Course", facilitated through the Continuous Professional Development Team, was successfully run in Oct and Nov 2022. Eleven internal participants were awarded an Imperial BRC grant to pay for this 4 day course. Other CMO events delivered by Profs Alexander and Wells included 'Starting and growing your research career', 'Preparing a pre-doctoral fellowship', 'Preparing a PhD application. Our post-doctoral senior clinical academics for occupational therapy (Dr Kennedy) and dietetics (Dr Jhansra) led 'Maximising the impact of your masters' and a new event called 'Expand your potential: Networking, resilience and critical thinking' respectively. Our events were fully attended and continue to receive exceptional feedback, with some of the participants going onto apply for fellowships in the 2022 rounds.

We collaborate closely with the Imperial College Library, who run regular 'bite size' training workshops and 1:1 sessions on topics such as 'How to read a paper', 'Literature searching', 'Writing for publication'. Our monthly Trust-wide Research Skills Workshops (advertised on LEARN) were again fully attended, gaining excellent feedback- these provide a wide variety of skills training delivered by our AHP post-doctoral staff, enabling them to teach and share their skills to build research capability amongst our clinical workforce while progressing their own training skills.

Every September we hold the North West London Research Symposium, attended by approximately 100 delegates, with poster presentations, plenary and research journey talks, and a range of

students gain the ability to understand research, gain transferable skills and may recognise it as an area they would like to pursue in the future”

The publications listed in Appendix 2 are from staff we know publish regularly (mainly research fellows and consultant NMAHP staff). Other staff have also published papers this year but we do not have a mechanism for collecting these systematically. Examples of these include:

Helen Dawson, a specialist physiotherapist treating people in pain was not only awarded Apprentice of the Year but is an author with in a multi-professional group of a paper titled

Report compiled by Caroline Alexander and Mary Wells with support from Helen Innes, Byron Dean Franklin and Emma Walker:

Appendix 1

2022 Publications by NMAHP Research fellows, Consultant NMAHPs and Pharmacy

of exercise for people with symptomatic hypomobility? 2022 BMC Musculoskeletal Disorders 231 101186/s12891-022-05540-1

Thirudakudi AK, Rie A, Goodall D, Levy S, Bice S, Dr E JME, Evans N, Opalla D, Thomas N, Wellsted D, Johansson L, Wilton M, Brown EA Prevalence of frailty and cognitive impairment in older transplant candidates - a preview to the Kidney Transplantation in Older People (KIOP): impact of frailty on outcomes study 2022 BMC Nephrology 231 101186/s12882-022-02900-w

Battelli L, Thales E, Leister N, McGout C, Boniari M, Rocca Landro L. What are the strategies for implementing primary care nodes in maternity? A systematic review on midwifery units 2022 BMC Pregnancy and Childbirth 221 101186/s12884-022-0410-x

Saggi RK, Barlow P, Butler J, Ghem Mghani S, Hughes C, Laggen P, McGee AH, Shaw C, Wells M Considerations for multimodal rehabilitation in women with gynaecological cancers: a scoping review using realist principles 2022 BMC Women's Health 221 101186/s12905-022-01882-z

Chu A, Kumar A, Depooter G, Franklin BD, Mead M Learning from electronic prescribing errors: An in-depth study of junior doctors' perceptions of training and individualised feedback data 2022 BMC Open 12/12 101136/bnjopen 2021-05321

Hill H, Dhuga Y, Yan Zheng C, Curie G, Joyce E, McNair H, McGee AH Patient and practitioner perspectives on the design of a simulated affective touch device to reduce procedural anxiety associated with radiotherapy: A qualitative study 2022 BMC Open 12/3 101136/bnjopen 2021-050288

Maang Van De Mheen P J, Bowne JP, Thomas EJ, Franklin BD Grand Rounds in Methodology: A

Rothie S, Fitzgerald E, Bady GC, Roe JWG. The role of the speech and language therapist in the rehabilitation of speech, swallowing voice and trismus in people diagnosed with head and neck cancer 2022 *British Dental Journal* 2339 801-805 10.1098/s1441502251452

ME, Maurice R, Pakzad Shahabi L, Chen J, Ho A, Williams M. Deep learning based quantification of temporalis muscle has prognostic value in patients with glioblastoma 2022 *British Journal of Cancer* 1262 196-203 10.1098/s14416021-015909

Simpson M, Mleick Y, Gidder Hadd L, Higginbotham K, Wittingham K, Masters J, Barton C. Developing the Heart Failure Specialist Nurse Competency Framework 2022 *British Journal of Nursing* 31 14 732-737 10.12988/bjon.2022.31.14.732

Caruso E, Cella D, Velikova G, Hamer V, Schumacher-Wulf E, Rihari J, Casas A, Hildebrand N. Quality of life methodology in hormone receptor-positive advanced breast cancer: Current tools and perspectives for the future 2022 *Cancer Treatment Reviews* 102 101016 10.1016/j.ctrv.2021.102321

Ramirez CAM, Stringfellow H, Naki R, Goshie EJ, Paraskevasi M, Rehman IU, Martin Hsieh P. Infrared Spectroscopy of Urine for the Non-Invasive Detection of Endometrial Cancer 2022 *Cancers* 14 2010390/cancers14205015

Savic L, Arden Jones M, Avery A, Cook T, Deman S, Farooque S, Gatez T, Gold R, Jay N, Kishra MT, Leech S, McKibben S, Nasser S, Penchard N, Sanbe J, Sredbn J, Warner A. BSAI guideline for the set-up of periodic allergy de-labeling services by non-allergists working in a hospital setting 2022 *Clinical and Experimental Allergy* 52 10 1135-1141 10.1111/cea.14217

Wilkes EH. A Practical Guide to Bayesian Statistics in Laboratory Medicine 2022 *Clinical Chemistry* 68 7 898-905 10.1093/clinchem/hnac09

Rutroy S, Kochak G, Forall A, Hulston R. Are mindfulness groups more mindful face to face or online? A comparison of delivering an mindfulness based well-being group for parents of children with a chronic health condition 2022 *Clinical Child Psychology and Psychiatry* 10.1177/13591045221125617

Tsonparaki E, Therapiom K, Papatheodridi M, Parilth P, Chota de Lima Y, Tsohatzis EA. Systematic Review and Meta-analysis: The Role of Diet in the Development of Nonalcoholic Fatty Liver Disease 2022 *Clinical Gastroenterology and Hepatology* 10.1016/j.cgh.2021.11.036

Zhu NJ, Rawson TM, Muckjee S, Rice JR, Davies E, Otter J, Aylin P, Hope R, Gilchrist M, Shering Y, Hibnes A. Changing Patterns of Bloodstream Infections in the Community and Acute Care Across 2 Coronavirus Disease 2019 Epidemic Waves: A Retrospective Analysis Using Data Linkage 2022 *Clinical Infectious Diseases* 75 1 E1082-E1091 10.1093/cid/ciab89

Ioerica A, Wells M, Fulton-Lieuw T, Narkivell P, Mehanna H, Jepson M, Karvath A, Main B, Birch C, Gaurt C, Geases C, Moore D, Watson E, Glucos G, Ozalini G, Wolsterholme J, Detzke J, Bett J, Duda J, Matheson L, Chenill L-R, Cakert M, Kely P, Gaurt P, Cherbunmoong S, Mittal S, Thomas S, Winter S, Wong W, FEINCK2 Research Team. Clinicians' Views of Patient-initiated Follow-up in Head and Neck Cancer: a Qualitative Study to Inform the FEINCK2 Trial 2022 *Clinical Oncology* 34 4 230-240 10.1016/j.clon.2021.11.010

Ruhari MJ, Morley I, Lovell L, Roe J, Devabalan Y, Edghe R, Sandhu G, Al-Yaghchi C. Assessment of swallow function pre and post endoscopic CO₂ laser medial arytenoidectomy: a case series 2022 *Clinical Otolaryngology* 47 2 347-350 10.1111/coa.13886

Celik A, Forde R, Racau S, Forbes A, Sturt J The Impact of Type 2 Diabetes on Women's Health and Well-being During Their Reproductive Years *AMed methods Systematic Review* 2022 *Current Diabetes Reviews* 18:2 10.2174/157339817366210118144743

Racau S, Bolton-Saghaoui L, Roy-Choudhury J, Wells M, Davies AH Offloading treatment in people with diabetic foot disease: A systematic scoping review on adherence to foot offloading 2022 *Diabetes and Metabolic Syndrome: Clinical Research and Reviews* 16:5 10.1016/j.dsx.2022.102498

Distaso W, Malik MMAH, Senere S, Al-Hkani A, Alexander EC, Hani D, Shah RJ, Siba K, Mekdrie V, Nik ezi A, Oliver N, Spada M, Salem V Diabetes self-management during the COVID-19 pandemic and its associations with COVID-19 anxiety syndrome, depression and health anxiety 2022 *Diabetic Medicine* 39:10 10.1111/dme.14911

Sutherland A, Jones MD, Hewlett M, Arenas Lopez S, Patel A, Franklin BD Developing Strategic Recommendations for Implementing Smart Pumps in Advanced Healthcare Systems to Improve Intravenous Medication Safety 2022 *Drug Safety* 45:888-899 10.1007/s40261-022-01203-1

Allen JE, Curie G, Ma JK-Y, Coffey M, Winkler K, Richmond S, Lowell SY, Volkmer A Translating Ultrasound into Clinical Practice for the Assessment of Swallowing and Laryngeal Function: A Speech and Language Pathology Led Consensus Study 2022 *Dysphagia* 37:6 1586-1598 10.1007/s00455-022-10413-9

Miles A, McAra J, Curie G, Gillvan Murphy P, Inamoto Y, Kalf H, Flay M, Rowall S, Ratcliffe P, Richard T, Robinson U, Wallace S, Boddy MB An International Commentary on Dysphagia and Dysphonia During the COVID-19 Pandemic 2022 *Dysphagia* 37:6 1349-1374 10.1007/s00455-021-10896-z

Bady G, Leigh Dyle L, Riva EMG, Keravala C, Roe J Speech and Swallowing Outcomes Following Surgical Resection with Immediate Free Tissue Transfer Reconstruction for Advanced Osteosarcoma of the Mandible Following Radiation Treatment for Head and Neck Cancer 2022 *Dysphagia* 37:5 1137-1141 10.1007/s00455-021-10875-4

Bady G, Leigh Dyle L, Riva E, Keravala C, Roe J Early Post-operative Feeding: An Investigation of Early Functional Outcomes for Oral Cancer Patients Treated with Surgical Resection and Free Flap Reconstruction 2022 *Dysphagia* 37:4 1008-1013 10.1007/s00455-021-10888-8

Lowell L, Curie GM, Al-Yaghi C, Roe J, Sarhu G Laryngeal Sarcoidosis and Swallowing: What Do We Know About Dysphagia Assessment and Management in this Population? 2022 *Dysphagia* 37:3 548-557 10.1007/s00455-021-10805-4

Curie GM, Belsi A, Roe JWG, Alexander CM, Sarhu G, McGee A Not Just Dyspnoea: Swallowing as a Concern for Adults with Laryngotracheal Stenosis Undergoing Airway Reconstruction 2022 *Dysphagia* 37:2 365-374 10.1007/s00455-021-10287-3

Dawood M, McNamara R Drogham 2022 *Emergency Medicine Journal* 39:10 724-725 10.1136/emmed-2022-212617

Dawood M Highlights from this issue 2022 *Emergency Medicine Journal* 39:5 343-10.1136/emmed-2022-212481

Hinbert M, Kovacs G, Heper MM, ... Gu Sing W, ... Sivalanank K, ESC/ERS Scientific Document Group 2022 *ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension* 2022 *European Heart Journal* 43:38 3618-3731 10.1093/eurheartj/ehac237

Stachan H, Holsins G, Wells M, Maxwell M A realist evaluation case study of the implementation of advanced nurse practitioner roles in primary care in Scotland 2022. *Journal of Advanced Nursing* 78: 929-16. 2022. 10.1111/jan.15252

**A quantitative secondary analysis of health care concerns relating to adults with complex needs 2022
Patient Education and Counseling 1052447451 10.1016/j.pec.2021.05.030**

**Garfield S, Begum R, Wheeler C, Franklin BD Pharmacy services for shielding patients should act
as a blueprint for those who are housebound 2022 Pharmaceutical Journal 3087962
10.1211/PJ.2022.1.14239**

Newington L, Alexander CM, Kirby P, Saggi RK, Wells M Reflections on contributing to health

Appendix 2

Fellowships awarded in 2022

The experiences of people with HIV living with multimorbidity and other complexities of aging A qualitative study

Ms Claire Petersen, Lead Research Nurse and Clinical Trials Centre Manager (HV/ GU)

NeuroMap- Evaluation of cortical mapping for people with incomplete spinal cord injury

Rowan Byles, Senior Physiotherapist

Quantifying functional mobility using clinically relevant digital behavioural biomarkers from body tracking data in older adults

Mr. Julian Jayasingh, Irbch, Clinical service lead for OT & Physio Center; Sugry & Private Patients

How useful are commercially available Streptococcus pyogenes (S.pyogenes) rapid antigen detection tests (RADTs) in outbreak situations?

Ms Ewurabera Mills, Biomedical Scientist

Personalised rehabilitation for patients with lung cancer who are undergoing nonsurgical treatment

Ms Kelly Wade McEneaney, Clinical Service Lead Dietitian

An investigation of the feasibility of exercises for the treatment of dysphagia after laryngectomy

Dr Margaret Coffey, Speech and Language Therapist

Dr Gemma Currie, Speech and Language Therapist