

Institution: Queen's University Belfast
Unit of Assessment 2: Public Health, Health Services and Primary Care
<p>1. Unit context and structure, research, and impact strategy</p> <p><u>1. a. Introductory Synopsis</u></p> <p>The overarching mission of the Centre for Public Health (CPH) in Queen's University Belfast (QUB) is to: Improve the health and well-being of the public at national and international levels and reduce inequalities; by advancing knowledge and influencing clinical and public health practice, including national and international policies and regulations.</p> <p>Highlights for this Unit since REF 2014 are:</p> <ul style="list-style-type: none"> • Research grant income has increased by 116% to ~£48M over the assessment period. • The full-time equivalent (FTE) return has increased by 42%, from 29.6 FTE in REF 2014, to 42 FTE in REF 2021. • The number of female academic staff has increased by 83%. • CPH is hosted in a medical School which is only the second in the UK to have attracted an ATHENA SWAN Gold award. <p>We pursue our mission by interacting with academic colleagues, policy and practice partners, the UK public and populations beyond, to enhance the practice and policy-relevance of our interdisciplinary research (IDR) programmes and international partnerships.</p> <p><u>1. b. Organisational Structure, Size and Context:</u></p> <p>CPH is one of three research centres in the School of Medicine Dentistry and Biomedical Sciences (SMDBS), alongside the Wellcome-Wolfson Institute for Experimental Medicine (WWIEM) and the Patrick G Johnston Centre for Cancer Research (PGJCCR). A default culture of collaboration, including scope for joint appointments across the centres and Faculty has enabled CPH to expand further its reach and influence. Formally, a cross-centre Science Board, with rotating membership drawn from senior and early career researchers (ECRs), coordinates joint development activities in the School (such as seminar programmes) and thematic interest groups that collaborate on major funding initiatives.</p> <p>CPH is led by a Director (Kee) and a Senior Management Team drawn from four vibrant research groups (described below): Epidemiology and Public Health; Cancer Epidemiology Research; Health Services and Global Health Research; and Public Health Nutrition and Metabolism.</p> <p>The Public Health Nutrition and Metabolism Group were part of the QUB Panel 2 submission in 2014. Although part of the QUB Institute for Global Food Security submission to Panel 6, they remain integral to the mission of CPH and physically co-located within CPH. Such close relationships have consolidated ongoing successful interdisciplinary working and created a further bridge for cross-centre collaboration (with the Institute for Global Food Security). This is also exemplified by the inclusion of molecular epidemiologists and trialists from WWIEM and PGJCC into the UoA2 return, enabling researchers to work across research groups according to the cross-cutting research questions that are being pursued. This arrangement facilitates a range of interdisciplinary programmes, as well as national and international collaborations and has enabled our productivity and impact to increase significantly during this REF period, with our field weighted citation impact doubling, the percentage of outputs with international authorship increasing by nearly 50% and grant income increasing by 116% over the period.</p> <p><u>Epidemiology and Public Health Group:</u> Co-led by Hunter and McKnight, with Bradley, Busby, Cruise, Cunningham, Garcia, Kee, Maguire, Maxwell, McKay, McGuinness, O'Neill, O'Reilly, Passmore, and Patterson, who oversee:</p>

- Cohort and population wide epidemiological studies of the social and biological determinants of health and health inequalities, with leadership of local cohort resources and participation in national and international cohort consortia.
- Big Data infrastructure projects, including leadership of the ESRC's NI Administrative Data Research Centre and co-leadership with Swansea of HDRUK's Public Health theme.
- Complex public health intervention research.

The group focuses both on upstream and downstream risk factors (including molecular factors) for common chronic diseases (such as cardiovascular disease, diabetes, kidney failure and dementia) as well as on public health interventions and innovative methods. Kee, for example, is on the Management Group of the [MORGAM](#) and [BiomarCarE](#) cohort consortia, while Maxwell and McKnight have co-led multiple consortia focussing on the molecular epidemiology of renal disease and renal transplantation outcomes including [GENIE](#), [WTCCC3](#) and [DNCRI](#). Patterson and McKay have led academic outputs from the EURODIAB and GoDarts consortia, focusing on trends in diabetes incidence and its complications, respectively. O'Reilly leads the ADRC in NI, and during this REF period mentored and supported Maguire who obtained an MRC Methodology Fellowship, leading to a Lectureship and several international partnerships that complement the ADRC mission, for example with the University of Helsinki. Working with Swansea University and HDRUK, this group also provided the academic leadership for the establishment of [UKSeRP](#) record linkage platform in NI, enhancing several national investments such as the QUB led MRC's [RASP](#) precision medicine initiative for refractory asthma.

In parallel, responding to a Government priority and funded by the NI Department of Health and Social Care (HSC), McGuinness led a population wide record linkage project examining trends in dementia diagnoses and then worked alongside the NI Department of Finance's Innovation Laboratory, in charting a complex [systems map](#) for future service design for these patients. She also provided leadership to the [NICOLA](#) cohort's international collaboration in the NIH funded [HCAP](#) initiative to harmonise measurement of cognitive change across a number of international aging cohorts, while the NICOLA Study's bio-resource has participated in multiple mega-consortia including [GIANT](#), [CKDGen](#), [LIFEPATH](#), [GLGC](#) and [IAMDGC](#).

Hunter (NIHR Fellowship holder) and Bradley have applied novel designs for natural experiment evaluations of public health interventions, including the NIHR funded evaluation of the 20mph speed zoning in Belfast (leading to Hunter's role on the NI Department of Infrastructure Advisory group); the use of game theory for studying diffusion of social norms in schools in the UK and Colombia (funded by MRC, and leading to the roll-out of the [Dead Cool smoking prevention programme](#) to over 100 schools in NI; and the application of a regression discontinuity design to demonstrate the impact of the Department of Health's campaign for antimicrobial stewardship in NI. Garcia joined this complexity science group in 2019 when it became part of the UKPRP funded [PHASE](#): The Population Health Agent based Simulation nEtnetwork, on which Hunter is co-investigator. Kee is on the Management Group of one of four NIHR PHR Intervention Responsive Study teams ("[PHIRST North](#)") dedicated to working in partnership with local authorities to evaluate their priority public health programmes.

Cancer Epidemiology Research Group: Led by Coleman with Anderson, Bannon, Cardwell, Gavin, Hicks, Kunzmann, McMenamin and McShane who work collaboratively with colleagues Allott, McMullin and Orr in the PGJCCR. The group has substantial CRUK, NCI and NIHR funding that, in addition to core PHA investment in the Northern Ireland Cancer Registry (NICR), supports research into the prevention, early detection, prognosis and treatment of cancer. Programmes include research on pre-cancerous conditions, gastrointestinal cancer progression and precision medicine, as well as internationally recognised expertise in pharmaco-epidemiology, exploring the potential for drug re-purposing. The group has an outstanding reputation in training ECRs, evident in having hosted five CRUK Population Research Fellowship recipients since 2014 (including Hicks, McMenamin and McShane), a UKRI Future Leaders Fellowship (McMenamin), an NIHR Fellowship (Cardwell) and the recent CRUK Career Establishment Award to Coleman.

The group works very closely with other cancer epidemiologists Allott and Orr in PGJCCR, where Coleman is jointly appointed, sharing co-investigator status on research grants, joint supervision of postgraduate students and a shared seminar programme. This cross-centre working has contributed to the success of >£1M investment to three recent projects awarded to Coleman and collaborators in 2019 from CRUK's newly established Early Detection Research Committee. The group's hosting of the NICR has also enabled international collaborative research, such as Bannon and Gavin's participation in the International Cancer Benchmarking Project, CONCORD and EUROCARE. The group has strong collaborative links with Clinical Academic researchers such as McMullin who is co-investigator on a 20-site UK/Ireland wide case-control study of myeloproliferative neoplasms. Increasingly, the group has worked with our Health Services Research and Global Health Group, supported, for example, by Department for the Economy networking grants, on research in Angola, Vietnam, Malaysia, Uganda and in the case of Mongolia, with an NIHR Global Health Systems and Policy Research Development Award, to design better cancer prevention services in LMIC settings.

Health Services and Global Health Research Group: Led by Donnelly with Azuara-Blanco, Chakravarthy, Chan, Clarke, Congdon, Heron, Hogg, Lohfeld, McAneney, McCorry, McKenna, O'Neill C, Peto, Virgili and Wright, the group works collaboratively with colleagues Shields and Rooney in WWIEM. The group focuses on improving health outcomes and services for people with chronic conditions by conducting technology assessments and investigations of need and demand on the organisation and delivery of services and their quality and cost-effectiveness. There is an emphasis on improving services for older people in particular, eye health, cancer care, oral health care, mental health, and palliative care, all of which are underpinned by Clarke's methodology and O'Neill's health economics research.

Our eye health care research portfolio, includes Virgili's leadership of the Cochrane Eyes and Vision Group together with NIHR and MRC-funded multicentre trials on eye diseases including Azuara-Blanco's role as Principal Investigator of [CHAMP-UK](#), [EAGLE](#), and [GATE](#), Chakravarthy's role as Principal Investigator of [ECHOES](#) and [IVAN](#) and Hogg's role as Principal Investigator of [MONARCH](#).

McKenna and collaborators across England and Wales are conducting an NIHR-funded study [TOPIC](#) that examines the implementation of NICE guidance on oral health care for people in Care homes. Donnelly and McCorry and an international research team were awarded funding by Marie Curie to develop a set of research-based and expert-informed indicators for assessing quality in palliative services and with colleagues in the QUB School of Psychology via MRC PHIND funding, are tailoring and testing 'acceptance and commitment therapy' for use with stroke survivors who have cognitive impairment, and developing a psychological intervention to overcome barriers to walking activity among people with visual impairments.

An additional focus of the group has been on novel approaches to facilitate service delivery and promote service evaluation in low-resource settings. Trials in China led by Congdon, including the MRC funded [SWISH](#) Trial elucidating the impact of spectacle provision on children's educational outcomes, and the [PROSPER](#) and [THRIVE](#) trials in India and Bangladesh respectively, which together have demonstrated the potential for reading glasses to improve work productivity to a greater extent than any previously-studied health intervention. These trials support a novel strategy to reduce poverty in service of the first SDG through low-cost glasses delivery. Clarke is one of the founders and currently the Research Director for [Evidence Aid](#), an international organisation and registered charity in the UK, dedicated to alleviating suffering and saving lives by providing the best available evidence on the effectiveness of humanitarian action and enabling its use.

Methodology research permeates all our health services studies, as well as our evidence syntheses. There is a focus on improving the efficiency, applicability and use of research and reducing research waste. Clarke is a founder of the [COMET Initiative](#) which has global reach in promoting and facilitating the development of core outcome sets to overcome the widely recognised problems of heterogeneity in how outcomes are chosen, measured and reported in

randomised trials and systematic reviews. He is also the Co-ordinating Editor of the Cochrane Methodology Review Group and established the [SWAT and SWAR initiatives](#), which are coordinated and hosted in CPH to make it easier for people to conduct and report methodology studies that are embedded in clinical research studies. Through Clarke's leadership of the NI Clinical Trials Unit, the group works closely with trialists in other centres in the school including Shields, McMullin and Rooney. Health economics and policy appraisal are integral parts of most studies undertaken by the group. O'Neill C, for example, co-organises (with Cornell University and Wisconsin University) a bi-annual [Masterclass](#) of international health economics experts that is attended by researchers from around the world and he is an expert member of a [LSE-Lancet Commission](#) on the future of the NHS across the devolved nations of the UK.

1.c. Research and Impact Strategy:

With an overall mission to improve the health and well-being of the public at national and international levels and to reduce inequalities by advancing knowledge and influencing clinical and public health practice, our strategy is to do this by:

- Maximising our competitiveness to attract grant income from major funders such as UKRI and NIHR.
- Aligning our focus with their main priorities and those of the Strategic Coordination of Health of the Public Research Committee, for example healthy environments, life course and aging, and complex systems approaches to public health.
- Ensuring national and global impact.
- Sustaining a vibrant research culture that develops the talents and careers of our ECRs and builds enduring international research partnerships.
- Building and sustaining public health research infrastructure including traditional and e-cohorts, record linkage infrastructure, methodology expertise and engaged partnerships with research users.

Key Achievements of strategic aims during the assessment period.

Since the last REF, CPH researchers and their partners obtained funding from key national and international initiatives aimed at developing public health trials and clinical research capacity, including:

- Renewal of the UKCRC Centre of Excellence for Public Health Research led by Kee (£2,989,959), with subsequent follow-on funding as partners in two UKPRP network grants.
- Renewal of funding for the ESRC Administrative Data Research Centre for NI led by O'Reilly (£1,473,090).
- Funding by HDR-UK of the Swansea University-QUB collaborative HDR-UK research programme and a Rutherford Fellowship, with Kee and O'Reilly integral to the public health research strategy (£508,132).
- Renewal of funding, led by Kee via ESRC and the Health and Social Research and Development Division of the NI Public Health Agency for the Northern Ireland Cohort for the Longitudinal Study of Aging (NICOLA Study, part of the DPUK Dementia Platform) that is an active contributing partner to an international network of ageing studies; (£638,601, with additional support from QUB of £359,015).
- Renewal of funding for the Northern Ireland Longitudinal Study (NILS), led by O'Reilly (£469,866); a large-scale data linkage study that includes longitudinal data on NI residents from the Census, vital events and health registration datasets, which *inter alia* is being used to explore a wide range of social determinants of public health.
- The Belfast Ophthalmic Image Reading Centre (BORC), led by Peto, is one of the largest ophthalmic image analysis centres in the world, supporting national and international ophthalmology trials and observational cohorts. Current portfolio funding totalling £4,126,898, includes NIHR-funded trials, the UK Biobank, Queen's Diamond Jubilee Trust Fund, the MRC-Newton Awards, European Eye Epidemiology Network, the British Council, and the Innovate UK grants.

- Funding from the MRC Network of Hubs for Trials Methodology Research which helped to establish the repositories of Studies Within A Trial (SWAT) and Studies Within A Review (SWAR); led by Clarke (£128,813).
- Funding from the NI Public Health Agency's Research and Development Division (£150,000 from 2017), to establish and provide the HSC Statistical and Methodological Support Service, led by Clarke, to assist clinician researchers across the NI's HSC Trusts in undertaking research that would not be large enough for support from, for example, the NIHR programmes.
- Leveraged funding from the PHA R&D (NI) division to establish the Cochrane Development, Psychosocial and Learning Problems Group, led by Clarke (£373,950).
- Leveraged funding (£1,009,369 from NI PHA R&D and RoI Health Service Executive), as a CPH contribution to setting up the Wellcome Trust-HRB funded [Irish Clinical Academic Training \(ICAT\) Programme](#) that is developing a long-term commitment to supporting clinical academic researchers (led initially in NI by Maxwell and now McGuinness).

Impact and innovation

The University's Social Charter, launched in 2016, provides a platform for demonstrating the innovation and creativity of staff and students and the national and global impact of their work, and as part of this the University launched an ambitious '[Engaged Research Action Plan](#)' (ERP) in 2019. This Plan is a core element of the CPH impact strategy (and was initially led by one of our UKCRC Centre of Excellence academics), which recognises the need to approach engagement as a two-way process, with mutual benefits for all parties involved. An example of this two-way engagement for CPH impact is the recent analyses of the NICOLA Cohort, funded by an ESRC Impact Accelerator Award that was directly commissioned by and informed the Victims Commissioner's considerations of pensions for victims of the civil unrest "Troubles" in NI. The ERP is being delivered through 38 specific actions, which includes:

- Appointing an Engaged Research Officer to project manage implementation.
- Providing a dedicated seed fund to support projects with clear potential for engagement with external stakeholders to consolidate existing relationships, or to pump-prime opportunities for future external funding.
- Convening an external Engaged Research Advisory Group (with representation from CPH), with particular emphasis on sectors with which QUB does not already have strong links.
- Funding for staff to attend the National Co-ordinating Centre for Public Engagement (NCCPE) Academy programmes.
- Establishing a Patient and Public Involvement (PPI) in Research Network, reflecting the NHS 'INVOLVE' principles. As part of this network, McKenna exemplifies approaches widely adopted in CPH, having established the Belfast Older Person's Patient and Public Involvement Group ([BELONG](#)) to facilitate meaningful PPI in his research studies on oral health.

Although our UKCRC Centre of Excellence for Public Health Research (NI) already had well established formal links with the communities that we served through, for example, membership of its Management Executive by the [Community Development and Health Network](#), the QUB [Engaged Research Plan](#) which gives a greater priority, than previously, to co-production of actionable knowledge to support communities locally and at a national level. An early success has included our membership of one of the NIHR's Public Health Interventions Responsive Teams ([PHIRST-North](#)) assisting local government in evaluation of their public health programmes.

CPH academics are better able to prosecute this engaged research mission, as many work with non-academic partners on a variety of local Department of Health-led policy taskforces, such as *Making Life Better*, a regional public health strategy group, while several CPH staff have been embedded in the NI COVID taskforces including, for example, Kee and Bradley on the Chief

Scientist's Pandemic Modelling Group and the Chief Medical Officer's COVID-19 Strategic Intelligence Group. McKnight is a founder member of the [NI Rare Disease Stakeholder Group](#), which helped develop the NI rare disease statement of intent, 5-year plan, and is currently working on a rare disease strategy for post-2020.

Our submitted UoA2 Impact Case Studies illustrate how our own impact strategy is bearing fruit. For example, the IVAN Trial of treatments for neovascular age-related macular degeneration ([nAMD](#)) is a landmark trial funded by NIHR and provides clear evidence that the drug bevacizumab (Avastin) is a much cheaper, equally effective alternative to ranibizumab (Lucentis) for the treatment of this common eye problem. This has led to widespread demand by healthcare providers in the UK and internationally to be able to use the cheaper drugs; a decision in the High Court of England and Wales to approve this switching; and support for the use of bevacizumab in the NICE guidelines in January 2018. An inter-disciplinary example of impact from our global health research, the PROSPER Trial, showed how the provision of free spectacles brought significant productivity benefits for tea pickers in India, a cost-effective measure that has now been widely adopted in the community.

Main Objectives and Planned Activities for the Next Five Years:

CPH's Strategy and Research Plans are developed, in the context of School-level University strategic priorities, by our Senior Management Team comprising the Centre Director and Theme leads alongside representatives of our ECR community, and the leaders for postgraduate research and undergraduate teaching. Our research strategies and plans take account of the priorities of major funders and are focused on our specific areas of strength and critical mass, underpinned by methodological and health economics research, where there is clear evidence of a vibrant and supportive culture for ECRs and recognised international excellence. An International Scientific Advisory Board has advised on overall strategic direction on individual research streams and on key national and international research initiatives, focusing on areas where CPH and our partners can deliver high quality research, and engage with stakeholders for long term impact on clinical and public health practice and policy.

The **objectives** of CPH are to:

- Harness the added value of interdisciplinary approaches to address questions of national and global priority, including, for example, exploiting Big Data science to improve population health and personalised medicine.
- Increase our UKRI / NIHR / Wellcome Trust and competitive international grant income and the proportion that is secured in sustainable programme grants.
- Expand our postgraduate taught programmes and maximise the number of international students enrolling for Masters' and PhD degrees.
- Mentor our early career scientists to ensure they can attract "blue chip" competitive national Fellowships that put them on a path to independence.
- Expand the pipeline for careers in clinical academic medicine by offering the necessary mentoring, facilities, and opportunities for national and international leadership development across a broad range of specialities, including primary care.

The Centre's **impact strategy** is to catalyse and support effective knowledge exchange (KE) across CPH partners (including patients, policymakers, commissioners, practitioners, the Third Sector, and the general public), and thus our **strategic objectives** have been to:

- Increase engagement between academics and relevant stakeholders.
- Highlight and foster opportunities for non-academics to be involved in the research process from its initiation to dissemination as demonstrated for example in the cultural adaptation of smoking prevention interventions in schools in Bogota and in co-authorship of outputs e.g. from a previous MRC PHIND funded project on using social media for public health messaging.
- Provide opportunities to build research capacity with non-academic stakeholders, by facilitating secondments and training opportunities, as exemplified by invited

secondments for personnel from government departments and the Public Health Agency (PHA) and thereby generating collaborative [academic outputs](#).

- Incorporate KE and impact into work planning, including monitoring and evaluation to capture impacts.
- Ensure that staff and students have opportunities to develop skills that enable them to engage with a wide range of public health stakeholders, as exemplified by one of our [PhD students](#) being supported with internships at the Institute for Public Health (Ireland) and with the Academy of Medical Sciences and upon graduation immediately taking up a post with the Economic and Social Research Institute in Dublin.
- Share examples of good practice in KE and impact and identify barriers to the flow of knowledge.
- Highlight the work of CPH through a range of different mediums including traditional media, social media, podcasts, videos, an example being the bi-lingual podcasts made by high school adolescents participating in our MRC funded MECHANISMS study in Colombia.
- Ensure that research outputs are easy to access and available in a range of different formats e.g. [policy briefings](#) and [lay summaries](#).
- Increase the number of staff and students involved in public engagement activities so that members of the public are better informed about and engaged in research. Our partners for impact also include a range of international NGOs (such as Orbis and Evidence Aid) as well as relevant industries with ongoing collaborative agreements with, for example, Thermo Fisher, Microsoft, Oxford Nanopore, Hologic and Novartis.

1.d. Interdisciplinary research

CPH members represent a variety of disciplines including clinicians with expertise in public health, dentistry, and other clinical specialties, trials methodology, epidemiology, statistics, health service research, health economics, anthropology, nutrition, and molecular epidemiology.

The UKCRC Centre of Excellence for Public Health (NI), led from CPH, spearheaded a new ethos, and provided an exemplar for QUB in supporting interdisciplinary research (IDR) across all Faculties. IDR formed part of the core mission of the UKCRC Centre, resulting in six PhD student and 17 post-doctoral researcher appointments (directly funded by UKCRC) during the REF period which were all jointly supervised by investigators from different Schools and/or Faculties. At a time of considerable financial austerity, QUB honoured its commitment and funded nine tenured UKCRC lectureships, all of whom were to extend the IDR programmes; six in CPH, two in the Management School, and nine in the Centre for Evidence and Social Innovation ([CESI](#)). The latter Centre was instigated by one of the senior co-investigators in our UKCRC Centre of Excellence, coalescing a large IDR group in social sciences. Kee serves on its management Board facilitating ongoing joint working (e.g. shared supervision of early career researchers) and a common IDR ethos. Our two UKCRC lecturers in the Management School went on to form the Centre for Health Research at the Management School ([CHARMS](#)) with an overt IDR mission to promote social, behavioural and management science research into issues relating to health and other dimensions of human wellbeing.

QUB operates a number of other targeted internal initiatives to foster emerging IDR collaborations, including: the Global Challenge Networking Programme: a series of networking events centred on creating new connections, facilitating greater exchange and sharing of ideas, fostering deeper cross-disciplinary engagement to underpin new perspectives and to support further funder engagement; and a Pump-Priming Fund for IDR offering seed-funding awards of up to £30k for collaborative research initiatives that cross disciplinary boundaries and which adopt a 'challenge-led' focus. An example of how such support has borne fruit is in our AHRC-MRC funded grant (**£165,416**) led by CPH anthropologist Lohfeld, with colleagues in QUB Drama, to study "How the arts and story-telling can save lives: the Vietnam breast cancer project".

1.e. Open Research

Following the principles of the Concordat on Open Research Data, QUB has established an [open research](#) data agenda. Thus it has an open access (OA) policy and an OA team that undertakes advocacy and training activities, promotes and ensures compliance with sector policies, administers block grants, and coordinates engagement with publishers, including the payment of OA fees for a number of journals and those from the BioMed Centre suite of publications. During the current REF period OA has been embedded as the norm across QUB, with **79%** of all academic staff (**100%** in CPH) having completed a mandatory online OA training course. A high level of compliance with the OA Policy for REF has also been achieved.

The OA ethos in CPH is exemplified by Clarke who co-authored the [good practice](#) principles for sharing individual participant data from publicly funded clinical trials, which were published in April 2015. These are endorsed by all major UK funders. Other exemplars of recent good practice include, sharing raw data from cohorts and trials with funders e.g. collaborating with potential NICOLA cohort users through the Dementia Platforms UK and sharing pseudonymised raw data from the NIHR-funded trials with sponsors. We have curated more than 100 genetic datasets submitted to online repositories, complemented by our own resources to facilitate data sharing and reuse such as [CORGI](#) and the recently funded [RENGENPECT](#) which was developed as a resource to host integrated molecular, environmental, clinical and sociodemographic data for renal disease.

1.f. Research Integrity and Ethics.

QUB supports the Concordat to Support Research Integrity and has established regulations, policies and codes of practice to govern and maintain the integrity of research, including the [University Code of Conduct and Integrity in Research](#), which all staff and research students in CPH adhere to. The University has a research governance, ethics and integrity committee chaired by a PVC, whose brief includes a review of research projects that may impact on humans, animals, or the environment, across all academic disciplines. Research activity in CPH is audited to ensure compliance with legislation and university regulations and policies, and that research is being conducted, managed, and reported robustly, ensuring transparency and fairness. The University also endorses the [Russell Group's Statement of Cooperation](#) in respect of cross-institutional research misconduct allegations.

2. People**2.a. Overview of approach**

Across the groups we have 16 academics in the Epidemiology and Public Health Group, 9 in the Cancer Epidemiology Research group and 16 in the Health Services and Global Health group.

Recruitment to the Centre of Public Health has been strategically focused to build on areas of strength, to consolidate expertise in certain areas and to address emergent high priority skills gaps. Since 2014, the Health Services Research Group expanded substantially with the transfer to CPH in 2015 of HSR researchers (mainly focusing on eye care) who previously had worked in another centre in the school. This move also expedited a considerable expansion of research in Global Health and the subsequent incorporation of a Chair in Eyes Health Technology Assessment, with the recruitment of Virgili from Florence to lead the Cochrane Eyes and Vision Group. In addition, we have made two strategic appointments in the field of complexity science, an area of significant interest to UKRI and the UK Prevention Research Partnership. Indeed, Hunter and Kee are part of the successful first wave of the UKPRP Network on this theme ([PHASE](#)).

Following the untimely death-in-post of our previous Director (a cancer epidemiologist), we made four lectureship appointments to the Cancer Epidemiology Research group; three securing competitive Research Fellowships (Hicks, Kunzmann and McMenamin), with McMenamin also securing a UKRI Future Leaders Fellowship. The subsequent Research Group Lead, Coleman, was promoted to a personal Chair when she won a Career Establishment Award from CRUK in 2018.

We anticipate up to six retirements from among our professoriate in the next five years and we are aiming to build further capacity in ageing research, data science and health economics; all areas ranked as high priority by UKRI.

The increased investment in staff development across all categories has translated into increased staff well-being and satisfaction with the research culture, as documented in the University's 2019 All-Staff Survey, with responses from **all** CPH staff indicating they believe the following:

- **97%**: that their work was interesting.
- **91%**: that their work gave them a feeling of personal accomplishment.
- **90%**: that QUB respects individual differences (cultures, working styles, backgrounds, ideas).
- **93%**: that they have the freedom to work in a way that suits them, as long as the work is done.
- **93%**: that QUB is committed to world class research.
- **85%**: that were proud to work for QUB.

2.b. Staffing profile and recruitment.

The current 42 FTE (48 headcount) cohort comprises: **46%** female; **4%** non-white ethnic (slightly greater than in the NI population) and **18%** non-UK, occupying the following academic grades:

- Lecturers: 18
- Senior Lectures: 8
- Readers: 3
- Professors: 19

2.c. Staff development and career progression

QUB replaced the previous "Appraisal" system with an annual [Personal Development Review](#) in 2020 which offers much greater agency and flexibility to staff to outline their own ambitions for education, research and citizenship, ensuring they are supported to achieve their potential and progress to higher academic positions. Within the complement of staff returned as part of this UoA, **18%** have made academic progression since 2014; of which **11%** to Senior Lecturer, **44.5%** to Reader and **44.5%** to Professor and **44%** of those who made academic progression were female.

2.d. Early Career Researchers and post docs

The objectives of our Skills Development training strategy are to:

- Develop highly productive Early Career Researchers (ECRs) who will acquire the skills and capabilities being prioritised by UKRI in key shortage areas.
- Support the training of ECRs in achieving scientific independence, impactful research and leveraging additional research income in strategic areas.
- Sustain and embed a *modus operandi* of transdisciplinary working and partnership so that ECRs and their mentors espouse novel methodological eclecticism in addressing their individual research projects.
- Disseminate the key skills beyond the host Institution.
- Establish infrastructures (including datasets, international partnerships, mentoring programmes, and short courses) that will benefit future cadres of ECRs working in aligned priority areas.

The [Queen's Fellowship Academy](#) has been designed to provide appropriate development support in order to nurture researchers with outstanding potential, including a Fellows Network and a bespoke mentoring programme. There are currently 32 Fellows in the Academy from across the University, of which four are from CPH (McMenamin, Hicks, Kunzmann and Wright).

McMenamin is one of two Fellows who are part of the Fellowship Academy Operations Group which informs the plans for the Academy.

In addition to providing opportunities for tailored specialist training, the ECRs in CPH all have access to a programme of generic foundation training. A structured programme, “Enhancing Research Practice”, is offered, comprising elements such as “Applying your research to policy agendas”, “Researcher Writing Retreats” and “Communicating the impact of your Research”, the successful completion of which leads to an Institute of Leadership and Management Level 5 Certificate. Researchers at all levels who wish to undertake a further education course relevant to their career advancement can apply for University funding support. In addition, the University has rolled out a tailored Postdoctoral Career Development Programme, while our own Faculty established a Postdoctoral Development Centre (FPDC) which offers bespoke training and support to postdoctoral researchers in terms of academic and non-academic career development. McShane sits on its management committee. This programme provides support in skills relevant to career development including, grant writing, publishing, project management, mentorship, assisting in PhD supervision, communications, network building and outreach. From December 2019, seven postdoctoral Researchers in CPH had assistant PhD supervisor roles approved. The FPDC also implemented a Concordat to support the career development of researchers’ action plans, which resulted in the University’s HR Excellence in Research Award being renewed in 2020.

The ECRs also have the opportunity to participate in a QUB [Excellence in Leadership and Management Development Programme](#) to build their research team leadership capability and skills around team and project leadership, group dynamics, performance management, collaborative working, and recruiting and retaining staff. ECRs also benefit from joining a vigorous Postdoc Society within the School, which has representation on School management committees and coordinates an independent programme of seminars and training events that supplement those offered by CPH and [partner schools](#), including regular contributions to the Knowledge Exchange Seminar Series ([KESS](#)) Programme with parliamentarians in the NI Assembly. A number of our ECRs have been facilitated and funded to take up secondment opportunities with our policy and practitioner partners; two, for example, in the Department of Finance’s Innovation Laboratory, one in the Academy of Medical Sciences, one with the NI Assembly and one in the PHA for NI. In addition, the UKCRC Centre co-funded an ECR to work in UC San Francisco as part of her Paul Beeson CARDI Innovation Award. Two others won prestigious Health Economics Fellowships from the US National Institutes of Health and were supported in their secondments to the Memorial Sloan Kettering Institute in New York, one of whom remains in academia while the other is in the Public Health Agency.

A key aspect of support for tenured staff on their first academic appointment is the **Faculty Collaboration Seed Fund** which is designed to help ECRs establish new research links with world-leading programmes related to their research discipline. Funding, up to a maximum of £5K, is available for research visits of 1-3 months.

2.e. Postgraduate Research students:

Postgraduate research studentships are vital to research development within CPH. The number of students who graduated over this REF period, (including MPhil/MD/PhD research students), slightly decreased from 94 fte in REF 2014 to 83.54 which is largely attributable to our Public Health Nutrition Group being submitted to UoA 6. Our programme for mentoring, evaluating, and supporting postgraduate research students, aligned with the researcher [concordat](#), involves a requirement by the internal supervisory team for at least 12 formally minuted supervisory meetings per year, with the expectation that a detailed written training plan is devised within the first three months which is linked to the students’ project plans and timetable alongside an appropriate [Postgraduate Researcher Development Programme](#). As well as attending taught courses on generic skills such as communication science and medical statistics, postgraduate research students are required to present their research orally at a local symposium and attend an annual research progress interview. These are conducted by a diverse panel of senior QUB academics, which does not include the students’ supervisors and relevant external associate

partners, leading in the first year to differentiation to doctoral status when the student will demonstrate ownership, understanding and knowledge of their project approximately nine months into their work. The School's Postgraduate Research Committee is responsible for supporting and monitoring postgraduate student progression on a formal basis.

Postgraduate research students are expected to attend the CPH seminar programme, which delivers a wide range of research seminars by distinguished visiting researchers. Each research group also runs journal clubs and research seminars specific to their research area, to which students will contribute. In addition, students are encouraged and supported to attend relevant training courses at other institutions and are expected and supported to present their findings at national and international conferences for which travel scholarships are available.

Beyond project specific skills, QUB's [Graduate School](#) offers training in a range of complementary skills that helps prepare students to become the next generation of innovators, leaders, entrepreneurs, communicators and thinkers. Optional training opportunities include: social engagement (e.g. [IMPACT](#)), [Researcher Plus](#), and [Leadership training](#), which can lead to a [Level 7 Certificate in Strategic Management and Leadership Chartered Management Institute](#). Complementing internal guidance from supervisors and collaborators, careers advice, online training resources, and 1-2-1 consultancy are also formally provided by the Graduate School. Facilitating inclusivity and maximising productivity, [QUB's Student Guidance](#) Centre offers a student wellbeing and disability service, a learning development service and a dedicated careers service offering opportunities for short placements or secondments working in local SMEs, the Third Sector, data analytical companies, the NHS and the Public Health Agency.

While there is an established peer-mentoring system in CPH, research students can also take part in the SMDBS mentoring scheme, with a trained mentor external to the mentee's own research centre. Female research students and Fellows have the option to take part in a University-wide mentoring scheme, run by the QUB [Gender Initiative](#), where they are paired with a mentor from a different School.

In the most recent 2020 Postgraduate Research Experience Survey (PRES), it was noted that the percentage of students who responded agreed that:

- **91%:** supervisors had the **skills and subject knowledge** to support their project
- **90%:** received an appropriate level of **feedback** on their work.
- **82%:** supervisors helped them to identify their **training and development needs**.
- **89%:** had suitable **working space**.
- **82%:** had adequate provision of **computing resources and facilities**.

2.f. Equality and Diversity

The University's Equality, Diversity, and Inclusion team, based in the People and Culture Directorate, helps us create a culture that is inclusive at all levels, in every system and process. The team are responsible for management of the equality, diversity and inclusion policies of the University and provision of training to staff on related issues.

Section 75 of the Northern Ireland Act 1998 ("the Act") requires the University to have due regard to the need to promote equality of opportunity. The University's [Equality, Diversity and Inclusion Policy](#), revised in January 2020 and applying to all staff and students, seeks to provide equality of opportunity and treatment to all, regardless of a person's gender identity/expression (this includes Transgender and Non-Binary people); pregnancy or maternity status; marital or civil partnership status; whether or not they have dependants (including caring responsibilities); religious belief or political opinion; race (including colour, nationality, ethnic or national origins, including Irish Travellers); disability; sexual orientation and age. This policy is a statement of Queen's arrangements for fulfilling Section 75 statutory duties. An Annual Progress Report to which CPH contributes, summarises how we have discharged our Section 75 statutory duties. This is sent to the Equality Commission for Northern Ireland each year and follows its guidance.

The University provides a comprehensive menu of Equality, Diversity, and Inclusion Training for all staff, using a blended approach of e-learning and face-to-face sessions. All CPH staff are required to complete online Equality and Diversity (E&D) and Unconscious Bias e-learning programmes annually. In addition, all new staff receive E&D Training as part of their induction process. There is a range of other policies dealing with specific E&D issues including the Bullying and Harassment Complaints Procedure, with a number of trained Anti-Harassment Advisors on campus, the Disability Action Plan, which is compliant with the Disability Discrimination Act 1995 and monitored through an annual progress report; and the Trans Equality Policy.

The University launched its LGBT+ staff network, [PRISM](#), in October 2018. This Network was created to provide a welcoming space for LGBT+ employees to meet during work hours, to discuss relevant issues, work matters and to plan social events. QUB's first Black, Asian and Minority Ethnic ('BAME') and International Staff Network, known as '[iRise](#)', was launched in June 2019. It promotes QUB as a welcoming place to work for BAME and International members of staff, providing a forum for networking and a means of peer support, while ensuring the interests of BAME and International staff are represented to the University. The cultural diversity of the PGR student body has also increased so that in this REF cohort **16%** of UoA2 students were from outside the UK and **10%** from outside Europe.

The SMDBS has its own Gender Equality Office, established in 2010, and Gender Equality is firmly embedded in all aspects of the work of the School and all its centres. At a centre level, **equality diversity and inclusion** is a standing item on the agendas of the CPH staff and Senior Management Team (SMT) meetings. The SMT is comprised of **6** males and **5** females and of the 26 new academics appointed in CPH since 2014, **14** were female. While QUB has policies and services to support parents and carers, to increase mental health awareness and to promote work life balance, CPH prides itself on its collegiate and inclusive culture, supporting flexible working and career breaks as appropriate to individual circumstances. Two members of CPH staff sit on the School's Gender Equality Office Committee, with one of them now heading up the implementation of the School's SWAN Action Plan. CPH operates core meeting hours (10am-4pm) for all key business meetings to ensure staff with caring responsibilities, can attend. It also monitors the gender breakdown of the seminar programme to ensure female role models are visible to staff and students in the Centre.

The Women's early Career Academic Network (WeCan), run by the Gender Equality Office, holds events throughout the academic year to promote professional and social interactions among female academics, provide support and guidance, explore training opportunities for early career academics and researchers, and to share strategies for dealing with academic life and work-life balance. The fruit borne by CPH's embrace of these initiatives has included three internal promotions of female CPH academics to Chair positions in this cycle.

Since REF 2014, CPH and the University identified that the dominant area of gender pay gap was at professorial level. Action has been taken to halve the professorial gender-pay gap from **14.5%** in 2014 to **8.6%** in 2018 through two significant actions:

- The review of Promotions and Professorial Salary Review criteria to ensure that the leadership domain encompassed a full range of roles and responsibilities, including leadership in SWAN; and a calibration exercise to ensure this was accounted for in the promotions process for the professoriate.
- The reduction of the number of points in the professorial scale; staff from CPH were involved in developing the consultation with the professoriate and implementing this policy.

3. Income, infrastructure, and facilities

The SMDBS, like other Schools in the Faculty, is given an annual research income target, and as one of its three research centres, CPH contributes its fte share to this. Of the **£48.6M** of research income during this REF period, UoA2 researchers have secured **£10.3M** (21%) from

UKRI which represents a **133%** increase of research council income. NI-based researchers have been eligible to apply for some but not all NIHR funding schemes and UoA2 researchers also secured **£14.59M** of income from UK central bodies, local authorities and health bodies over this REF cycle; a **74%** increase since the last REF return. NI researchers are not eligible to apply to the large infrastructure schemes, such as BRU/BRC funding.

Our own CPH income generating strategy aligns with the core strategic objectives of QUB. Therefore, key actions that have been taken over this REF period to support income generation are:

- Participating in annual Funder Liaison Group meetings with funders such as the MRC and the Wellcome Trust.
- Accessing local seed funding from the University or “Opportunity Led Awards” from the HSC Research and Development Division of the PHA. Such funding has enhanced several successful applications to the MRC PHIND Scheme.
- Mandatory internal CPH peer review and Faculty peer review of all UKRI grant proposals led by ECRs, probationers and staff with less than 7 years’ experience.
- Support from the University for strategic partnerships, including for secondments and sabbaticals to better position us for national and international large scale multi-institutional initiatives e.g. Congdon with ORBIS, Hunter with the Keck School of Medicine, University of Southern California and the Yale Institute of Network Science and Lohfeld with the research department of the Eye Hospital at Wenzhou Medical College, Wenzhou, China.
- Enhanced training for academic mentors offering peer support for ideas generation and encouraging participation in sandpit events for the same purpose. Mini sandpits were regular features of the annual retreats of the UKCRC Centre of Excellence and Kee subsequently used this learning as a plenary speaker at the 2014 CRUK Sandpit for public health intervention development and then chaired the programme for their 2015 sandpit.

CPH is based in the Institute of Clinical Sciences (ICS) on the Royal Victoria Hospital campus, immediately adjacent to the NI Cancer Registry (directed by Gavin) and the NI CTU (directed by Clarke). The Centre Director is supported by a Manager who directs a professional support team of 39 ; 10 of which are core funder and 29 are research funded, comprising administrative, clerical and technical staff, of whom 12 work in the NI Cancer Registry. Among the support staff are a Data Manager and IT Systems Manager and we also have access to the University’s High-Performance Computing Centre. Within ICS, we also house the Belfast Ophthalmic Image Reading Centre led by Peto and the Administrative Data Research Centre led by O’Reilly. Since the 2014 REF, the physical footprint of CPH has doubled and includes a biorepository with freezer space for the NICOLA cohort samples and facilities for in-house GWAS/EWAS analysis.

4. Collaboration and contribution to the research base, economy, and society

4.a. Academic collaborations and contributions:

During this REF cycle, CPH academics have been or currently are PIs, Co-Is or Management/ Advisory Group members of several leading national and international research consortia such as, O’Reilly and Kee with the HDRUK, O’Reilly with the ADRC-Network, Kee with the NIHR PHIRST, Hunter with the UKPRP PHASE-Network, Clarke with the Cochrane Methods and Virgili with the Cochrane Eyes and Vision Group. CPH has benefited hugely from QUB support offered for such collaborative research. For example, QUB allocated **41** PhD studentships to us that were aligned with major collaborative research enterprises across the UK such as the UKCRC network of Centres of Excellence and the ADRC, while our contribution to the HDRUK public health network benefited from QUB allocating two postdoctoral ECRs to the programme.

A key aspect of the internationalisation agenda at QUB is to deliver the highest quality research that has the potential to make an enduring impact on global development and contribute to the delivery of the UN Sustainable Development Goals and UK Aid Agenda. During the assessment

period, QUB launched an institutional Global Challenges Research Fund (GCRF) Strategy which seeks to build research capacity and capability both in the Global South and in QUB, where it is most able to have a lasting impact. In September 2018, QUB was ranked as one of the top 25 universities in the UK based on the scale of its GCRF funding portfolio and on this basis was awarded a UKRI Global Impact Accelerator Award (GIAA). Our own CPH GCRF awards have supported our work in Uganda, Angola, Vietnam, and Tanzania.

QUB also helped CPH establish a Memorandum of Understanding with several partner institutions in Vietnam (Hanoi), South Africa, China (Guangzhou), Hyderabad, Singapore, and the US (Vanderbilt), including support for travel for academics and students on exchange visits. By way of example, QUB supported a £25K investment to establish long-term collaboration in cancer epidemiology between CPH and the Vanderbilt Epidemiology Centre, Vanderbilt University, USA, which has resulted in a highly productive and synergistic academic collaboration. Research visits were made by senior and junior academics, and postdoctoral research fellows between the two institutions, in addition to extended exchange visits by PhD students. Reciprocal Molecular Cancer Epidemiology Symposia were hosted, in 2014 at QUB, including an accompanying grant-writing workshop supported by Cancer Research UK, and in 2015 at Vanderbilt University. Joint scientific articles have been published and joint grant applications have been submitted, including a successful submission to the National Institutes of Health.

4.b. Engagement with non-academic communities

Several of our senior staff have honorary appointments with our primary local partner, the NI PHA or with the Belfast HSC Trust. This relationship is much more than titular, as testified by the significant collaborative scientific endeavour that we support, examples of which include:

- Organisation of the annual scientific conference with the PHA (NI) and the Institute for Public Health for Ireland, ensuring that [the programme](#) is both scientifically innovative and relevant to practice.
- Collaboration on focussed high priority topics for our researcher users, such as the recent evaluation we conducted for the PHA (and the Department of Finance Innovation Laboratory) on a [Nudge intervention to reduce anti-biotic prescribing](#).
- Senior staff in CPH either directly leading key screening services (Peto, for diabetic retinopathy screening) or leveraging additional UKRI resources to enhance service quality such as through a UKRI fellowship, or who have made important contributions to service delivery as in the recent COVID response through membership of the NI Chief Medical Officer's COVID Strategic Intelligence Group (Bradley, Kee), the Pandemic Modelling Group (Bradley, Kee), GOG-UK (Bradley), NERVTAG (QCOVID subgroup, Kee) and through bespoke locally funded but highly responsive projects on behalf of PHA curating and analysing social media data for various COVID-19 and COVID-19 vaccine sentiment analyses.

The NICR led by its Director, Gavin and hosted by CPH, is funded by the PHA, and routinely engages with government departments to produce Official Statistics for NI. However, in addition to dealing with data and analysis requests, including cluster investigations for the PHA, Gavin, as a member of the programme board for the International Cancer Benchmarking Project has contributed significantly to driving up standards of cancer care in NI.

As a further example of how our staff are working collaboratively with our partners to change public health practice, we joined with the PHA and secured funding from NIHR to test, in a pragmatic real world cluster-randomised trial, the impact of the [Roots of Empathy intervention](#) to improve social and emotional development of primary school children. This programme has now been rolled out to over 100 primary schools in NI. Working with the PHA in areas such as these has enriched the research environment by ensuring our ECRs learn that more effective research translation begins with asking questions relevant to practice and ensuring that an ethos of co-production scaffolds the research journey from beginning to end.

Although Public Health in NI remains part of the NHS, working with local authorities is essential if we are to address upstream determinants. To that end, Kee launched the NI Public Health Research Network to promote evidence co-production and evaluation in the 11 local authorities and held the directorship position until 2015. Early lessons from the network subsequently informed a multi-institution [Health Foundation funded project](#) examining how better to promote evidence use in local authorities across the UK and gave us a sound platform to collaborate in PHIRST-North.

4.c. Wider contributions and impact on non-academic world and communities

All CPH staff, including ECRs, are trained to articulate their research questions and design their work to ensure maximal impact on practice, on policy and/or on society. Among the many examples, not included among our Impact Case studies are:

- O'Reilly: As lead, worked with the ADRC (NI), for the Department of Agriculture, Environment and Rural Affairs (DAERA), to use linked data from the Agricultural Census and the main Population Census, to gain a better understanding of the health, welfare and educational issues affecting farming communities in NI, providing baseline evidence of the need for further research targeting and policy outcome monitoring, and yielding an estimated saving to [DAERA](#) of **£350,000**.
- Hunter: In her first postdoctoral position and Lectureship in the UKCRC Centre of Excellence, helped to coordinate a programme of work (the "PARC" Study) on the evaluation of the Connswater Community Greenway (CCG). As part of that work the team demonstrated the potential impact on public health and cost effectiveness of such investments, and this was subsequently referenced in the [Strategic Plans for Greenways](#) by the Department for Infrastructure which details plans for a Greenway network throughout NI. This CCG evaluation and the training in neighbourhood walkability measurement delivered by the QUB team to the City Council was one of the subjects of an [ITN documentary](#) showcased as exemplary practice at the 2015 annual meeting in London of the Royal Society of Public Health. Hunter was then invited to lead an [evidence review](#) on urban green space interventions for environmental, health and equity impacts for the WHO Europe and was a member of an expert panel which made [recommendations](#) for local practitioners and policymakers on urban green space in Bonn, Germany, September 2016. The PARC Study is included as an exemplar case study in a WHO working paper which was highlighted and widely read in [The Conversation](#).

Among other recent examples of our mission for reach and influence on the wider community and economy are our:

- HDRUK investigators' central role in the [Belfast Region City Deal](#), which is promoting a "One Health" agenda, connecting intelligence on environments, livestock, human health and whole populations to show how interventions in one domain can lead to benefits in another.
- Staff serving on the policy panels of local Charities including Gavin serving on the scientific committee of MacMillan (NI), driving their research priorities, and partnering with CRUK to compile data for the National Cancer Diagnosis Audit for NI.
- Leadership roles with bodies like Public Health Agency, such as Peto's leadership of the diabetic retinopathy screening service; and our leadership of annual PHA scientific conferences.
- Participation in several of the Department of Finance Innovation Laboratory policy building workshops including Bradley on antimicrobial resistance; Kee on childhood obesity prevention and McGuinness on dementia care.
- Work on nearly 1300 podcasts for Cochrane Reviews (Clarke) which allow patients and the public generally to hear about the latest Cochrane evidence.

Our Centre also catalyses impact outside of academia through interactions with NGOs. For example, Hunter is a member of Belfast Healthy Cities Board of Directors, while Congdon serves

as Director of Research for the eye health charity Orbis International. Chan has held a similar position in the past with the Brien Holden Vision Institute, while Peto works closely with Orbis and with the Hong-Kong-based charity Lifeline Express.

4.d. Contribution to the sustainability of the discipline

Capacity building was one of the main objectives of our UKCRC Centre of Excellence for Public Health Research and across QUB, CPH made nine tenured IDR Public Health Lectureship appointments (in different Schools and Faculties), and aside from those directly funded by UKCRC, leveraged an additional 40 PhD studentships. CPH also supported secondments for staff from NI PHA and other government bodies such as the Department for Communities NI and the local equivalent of the Department of Work and Pensions, resulting in joint academic [publications](#) and, in some cases, supporting their case for Honorary Fellowship of the UK Faculty of Public Health ([UKCRC Final Report](#)).

Several senior staff in CPH also hold leadership positions in regional and national training programmes, mentoring early career researchers, including junior Post-Foundation Clinicians and Academic Clinical Fellows. For example, McGuinness is the NI lead for the Wellcome Trust funded [Irish Clinical Academic Training Programme](#), while Cunningham is the lead for the NI Deanery [Academic Foundation](#) Year 2 programme and Kee the Chair of the NI Deanery's Public Health Training Committee. Responsive to national Global Health priorities and working with another of our UKCRC Centre of Excellence partners in the (QUB) [Centre for Evidence and Social Innovation](#), we built upon our work with the PHA in NI to secure further NIHR funding for a [Global Health Research Group for Early Childhood Development for Peace-building](#) (Kee, co-investigator), working with UNICEF to develop novel interventions and evaluation capacity in 6 LMIC settings (Timor-Leste, Kyrgyzstan, Egypt, Tajikistan, Mali and Vietnam).

Many of our staff have also supported various national and international training initiatives. For example, McKay has served as Vice Chair to the EU Horizon 2020 Marie Skłodowska-Curie Innovative Training Networks and Individual Fellowship Life Panels (H2020-MSCA-ITN/IF-2018/2019/2020), while Kee serves on the Steering Group of the NIHR Training Academy Public Health Incubator and sits on the MRC non-clinical Fellowship and the UKRI Future Leaders Fellowship panels.

4.e. Indicators of wider influence, contributions, and recognition.

We have encouraged staff at all levels to support and influence the development of our core disciplines at national and international level, in ways which we believe have strengthened their contribution to science and to policy and practice. Examples include:

Journal Editorial Board Membership:

- **Azuara-Blanco:** Cochrane Eyes and Vision Group Editorial Board.
- **Clarke:** Coordinating Editor of the Cochrane Methodology Review Group, Coordinating Editor of the James Lind Library, Editor in Chief of the Journal of Evidence-Based Medicine and Podcast Editor of the Cochrane Library.
- **Coleman:** Editorial Board Member of Gastroenterology; British Journal of Cancer.
- **Donnelly:** Senior Editor BMC Health Services Research.
- **Hunter:** Associate Editor of the International Journal of Behavioural Nutrition and Physical Activity.
- **McKay:** Nature Scientific Reports.
- **McKenna:** Gerodontology, Associate Editor (McKenna); Journal of Dentistry, Editorial Board Member.
- **McMenamin and McShane:** BMC Cancer, Associate Editors
- **McMullin:** Editor: Journal of Clinical Pathology
- **Peto:** Board Member, Royal Society of Medicine.
- **Virgili:** Coordinating Editor of the Cochrane Eyes and Vision Group.

National/International funding committees and peer review panels:

- **Azuara-Blanca:** NIHR-HTA prioritisation Committee 2019.
- **Chakravarthy:** NIHR-HTA prioritisation Committee 2010-19.
- **Clarke:** NIHR HTA Methods Group; NIHR HTA General Board 2016-2019 Hunter: NIHR PHR Funding Board.
- **Coleman:** Cancer Research UK Population Research Committee Funding Panel.
- **Congdon:** British Council for the Prevention of Blindness Review Board
- **Kee:** MRC Public Health Intervention Development panel, 2013–18; MRC Population and Systems Medicine Board, 2011-2015; MRC Better Methods Better Research Panel 2020-2023; MRC Fellowships and UKRI Future Leaders Fellowships Panel, 2020-2023; MRC Agile COVID Panel 2020/21; DHSC-NIHR Long COVID Panel 2021; Department of HSC Policy Research Unit Commissioning panels (COVID Recovery/Renewal/Re-Set; Mental Health, Obesity, Health Services Research, Cancer Screening), 2016-21; Chair (2014-19) NIHR PHR Programme Funding Committee; European Research Council panel (LS7) for “Diagnostic tools, therapies and public health” 2015 and 2018.
- **McGuinness:** Alzheimer’s Society Biomedical Grant Advisory Board.
- **McKay:** EU Horizon 2020 Innovative Medicines Initiative 2 Life panel for H2020-JTI-IMI2-2015-01, Topic 2; and SC1-DTH-12-2020: Use of Real-World Data to advance research on the management of complex chronic conditions.
- **Peto:** British Council for the Prevention of Blindness Review Board.
- **Shields:** Asthma UK National Grants Panel.

Policy and Practice advisory committees:

- **Azuara-Blanco:** European Glaucoma Society Guidelines committee (chair); NICE glaucoma guidelines NG81 committee; NIHR CRN Glaucoma Clinical Study Group (chair).
- **Chakravarthy:** Chair Royal College of Ophthalmologists AMD guidelines to 2016; European AMD Guidelines, European Diabetic Macular Edema Guidelines.
- **Garcia:** Member of the Scientific Committee of the Brazilian Physical Activity Guidelines Development Group (commissioned by Brazilian Ministry of Health); WHO Physical Activity Guidelines Development Group.
- **Hunter:** Member of the WHO Europe expert panel for urban green space interventions
- **Kee:** Department of Work and Pensions Methods Advisory Group, 2019-2022; International Advisory Board of the CRUK / BUPA Prevention Research Initiative, 2014-2017; RCUK / Innovate UK Urban Living Partnership Advisory Group, 2016-2018.
- **McKenna:** Currently the only Dentist holding a NICE Fellowship; Dental Caries Guideline Development Group for Developing Better Oral Health, Public Health England (2019-2020); Platform for Better Oral Health in Europe (2016-2020); European College of Gerodontology, President, 2016-2017.
- **McMullin:** European Hematology Association: scientific working group MPN: (2014-2020); MPN&MPNr-EuroNET (Network of experts in the molecular diagnosis of myeloproliferative neoplasms and related diseases); Chair Working group 3: Congenital erythrocytosis and hereditary thrombocytosis 2014-2020.
- **O’Neill C:** National Screening Advisory Committee for Ireland.
- **Shields:** British Thoracic Society Asthma Guidelines group, Co-chair Pharmacological section, to 2016; European Respiratory Society Taskforce: Persistent bacterial bronchitis Guidelines Group.

National /interventional academic consortia, research initiatives:

- **Azuara-Blanco:** Commonwealth Scholarship Commission.
- **Busby:** Steering committee for the International Severe Asthma Registry.
- **Chakravarthy:** Advisor to Retina Network India, 2018.
- **Clarke:** Chair of the Board of Trustees and Research Director for Evidence Aid.
- **Coleman:** The International Barrett’s Pathology Working Group.

- **Congdon:** Fred Hollows Foundation Diabetic Retinopathy Research and Advisory Group; ORBIS International Director of Research.
- **Garcia:** Co-Chair of the Brazilian Society of Physical Activity and Health's Public Policy Working Group.
- **Gavin:** International Cancer Benchmarking Project; European Network of Cancer registries, Steering Committee (2017-2020)
- **Hunter:** Co-founder of the Early Career Networks of the Council for Environment and Physical Activity (CEPA) and the International Society for Physical Activity and Health.
- **Kee:** Advisory Board for NIHR School of Public Health; BiomarcaRE consortium Management Group.
- **McKnight:** Executive and Research committee of The Renal Association until 2016; International Population Studies Epigenetics and Genomics Working Group; UK Genetics Training Leads network, NHS GMC network and GeCIP consortia.
- **Peto:** Head of the European Vision Institute's Reading Centre; Vice President of the European Association for the Study of Diabetic Eye Complications; Head of Diabetic Eye Complications of the European Eye Epidemiology Consortium and a founding member of the European Coalition for Vision.