

**Institution: Newcastle University**

**Unit of Assessment: UoA2 - Public Health, Primary Care and Health Services Research**

## **1. Unit Context and Structure, Research and Impact Strategy**

### **1.1 Overview**

The mission of our public health, primary care and health services research is to ‘improve health, care and wellbeing for all and reduce health inequalities’ and our goal is ‘to undertake world-class research and to actively translate our findings into policy and practice’. As such, we have a strong, vibrant, applied interdisciplinary research environment with researchers drawn from a wide range of disciplines spanning the health, biomedical and social sciences – all working together to respond to societal challenges. We are visibly leading in: applied epidemiology, applied public health, primary care, methodological innovation in health and social care evaluation, working in partnerships with policy and practice, addressing health inequalities, translational research, and providing an environment and talent pipeline that gives all researchers freedom and opportunity to succeed.

Our research is primarily carried out within the **Newcastle University Population Health Sciences Institute (NUPHSI)** which was formed in November 2019 during an extensive Faculty restructure, and expansion of the previous Institute of Health and Society (IHS). The restructure converted six, largely independently operating research institutes to three strategically interconnected ones: Biosciences, Translational and Clinical Research, and NUPHSI. This strengthened the **vibrant, interdisciplinary research activity** across the Faculty of Medical Sciences (FMS). Our researchers work together within NUPHSI to promote interdisciplinary working, and across the other Institutes and facilities (e.g. Clinical Trials Unit and NIHR Biomedical Research Centre [UoA1], Newcastle University Centres of Research Excellence [NUCoREs] REF5a 2.21). We collaborate with allied health professionals (e.g. pharmacy, nutrition and dentistry, UoA3) and beyond FMS, primarily in social policy (UoA20) and biostatistics (UoA10).

Our UoA2 submission includes **33 staff**, an increase from 2014 (27.22 FTE REF2014, 31.27 FTE REF2021), with our return including **76% females** (73% of Professors) up from 50% female in REF2014 (38% Professors). Our UoA2 income has increased from an average of **£5.8M** per year in REF2014 to **£7.7M** (a 15% increase or **£31,000** per FTE per year). We have been awarded 25 fellowships, including **three** National Institute of Health Research (NIHR) Senior Investigator and **13** post-doctoral awards. During REF2014 we supervised **207** PGR studentships with 89% funded by NIHR, UKRI, charities, overseas scholarships etc., together with **230** Masters students in our Public Health, Global Health and Epidemiology programmes.

### **1.2 Strategy and Achievements**

Our goal builds on our aims from REF2014 - to undertake **world-class research** and to **actively translate** our findings into practice to improve health and reduce inequalities. We achieve this by working in large interdisciplinary teams, engaging with local, national and international partners as well as the global academic community.

Headline achievements build from our REF2014 aim “*to increase research infrastructure and work closely with end-users of our research*”. During the REF period, we were awarded: the renewal and national leadership of the **£20M NIHR School for Public Health Research (Adamson,**

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*Bambra, Kaner, Ramsay, Sniehotta*), the **£5.1M NIHR Research Design Service North East and North Cumbria**, (*Vale, Craig, Ternent*), one of the three **£1.7M Alzheimer's Society National Centres of Excellence in Dementia Care** (*Robinson*) and membership of the **£2.3M NIHR School for Primary Care Research** (*Robinson, Hanratty, Kaner, Craig*). We successfully led the regional bid for the **£9M NIHR Applied Research Collaboration (ARC) North East and North Cumbria** (*Kaner, Adamson, Bambra, Hanratty, Rankin, Vale, Craig, Rowlands*), and were awarded leadership of **two additional £1.9M ARC national priority consortia** (*Adamson, Public Health; Bambra, Inequalities*). We (co)led two successful bids for **£5M NIHR Policy Research Units (PRUs) in Behavioural Science** (*Sniehotta, Bambra, Craig, Kaner, Vale*) and **Older People and Frailty** (*Hanratty, Matthews, Craig*), and are a partner in the **PRU in Public Health** bid (*Adamson*). Two national investments are led by us: **£7.8M NIHR Innovation Observatory** (*Craig*), and **£20M National Innovation Centre for Ageing** (Academic lead, *Robinson* [now Director *Palmarini*]). Equally important is the recent **Academic Health Science Centre (AHSC)** award to the University in partnership with local health trusts and Newcastle City Council, and the award to lead the **NIHR Methodology Incubator** (*Teare*).

We successfully undertake interdisciplinary and collaborative research: 38% of returned outputs are interdisciplinary, with 60% national and 38% international co-authorship; 52% of UoA2 returners are authors on outputs for other UoAs; and authors in underpinning research for six impact case studies (ICS) for other UoAs.

Some examples of our extensive international collaborations are exemplified by involvement in: **€7M Norwegian Research Council Centre for Global Health Inequalities Research** (*Bambra*); **€7.5M EU Horizon 2020 EUROLINKCAT** cohort linkage study (*Rankin*); and **€15.8M EU Innovative Medicines Initiative LiTMUS consortium** on the identification and validation of biomarkers for non-alcoholic fatty liver disease (*Vale, Ternent, Oluboyede*).

### 1.2.1 Applied Epidemiology: Early life development, Cancer and Ageing

Our Applied Epidemiology (8.4 FTE) focuses on early life development, cancer and ageing research. Our achievements are reflected in £10.9M in grant awards, and 548 NU publications (50% written with international collaborators and field-weighted citation index (FWCI) of 1.92).

#### Key achievements:

- **Large collaborative grants: NIHR PGfAR** (*Sharp*, £2.5M), **North of England Children's Cancer Research Fund** (*McNally, Sharp, Pearce*, £1.5M), **MRC** (*Matthews*, £2.8M), **Sir Bobby Robson Cancer Foundation** (*Sharp*, £1.2M; £925,000), **Guts UK** (*Sharp*, £1.25M).
- External fellowships: **NIHR Advanced Fellowship** (*Heslehurst*, £900,000).
- **Early life development:** (1) An award of EU Horizon 2020 funding for the EUROLINKCAT linkage study (€7.5M) enabled estimates of microcephaly ([BMJ2016](#)) and long-term trends in neural tube defects across Europe ([BMJ2015](#)) and resulted in *Rankin* becoming the academic lead for Public Health England's (PHE) National Congenital Anomaly and Rare Diseases Registration Service; (2) risk and management of diabetes in pregnancy ([Diabetologica2014](#)) informed [NICE guidelines on diabetes and pregnancy risk](#); (3) research into health professionals' management of perinatal loss of a co-twin ([Perinatol2016](#)) underpinned the development of [tools for practitioners](#) (UoA3 ICS).

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- **Cancer:** (1) research on radiation risks both from medical treatments ([Heart2017](#)) and environmental exposure ([BJC2014](#)) led to membership of UK Government Committee on Medical Aspects of Radiation in the Environment; (2) research on cancer prevention and survivorship (e.g. [BMCCancer2018](#), [BJOG2017](#), [Gut2020](#)) led to appointments on National Cancer Research Institute Groups and developing guidelines for monitoring after [colorectal resection](#).
- **Ageing:** (1) national dementia estimates, incidence ([NatCommun2016](#)) and prevalence included in [PHE diagnostic targets](#) (extension of REF2014 impact), [Prime Minister's dementia challenge](#), global burden of disease ([Lancet2015](#)) and the [World Alzheimer's Report](#); (2) influential modelling of the ageing population on the needs of health and social care ([AgeAgeing2018a](#), [Lancet2018a](#)) built into the House of Lords Select Committee [Ageing report](#); (3) research ([AgeAgeing2018b](#)) into the independence of older people is showcased in the UoA2 ICS "[LifeCurve™ software for assessing functional decline](#)", essential activity given the increasing dependency of ageing populations ([Lancet2018b](#)).

### 1.2.2 Applied Public Health

Our Applied Public Health (8.4 FTE) research focuses on changing health behaviours, supporting communities with severe and multiple disadvantage, and reducing health inequalities. Our achievements have been reflected in £24.8M in grant awards, 461 NU papers (36% written with international collaborators and FWCI of 2.44).

#### Key achievements:

- **Leadership of strategic infrastructure grants:** **regional ARC** ([Kaner](#), £9M) two £1.8M national **ARC consortia** ([Adamson](#), [Bambra](#)), **School of Public Health Research** ([Adamson](#), £20M), **NIHR PRU Behavioural Science** ([Sniehotta](#), £5M), **Fuse** ([Adamson](#), £4M).
- **Large collaborative grants:** **Leverhulme Trust** ([Bambra](#), £997,000), **NORFACE** ([Bambra](#), €1.1M), **NIHR PGfAR** ([Kaner](#), £1.5M), **NIHR Policy Research Programme** ([Ramsay](#), £629,000; [Kaner](#), £1.4M), **NIHR Public Health Research** ([Adamson](#), £1.5M).
- **Changing health behaviours:** (1) trials ([Lancet2018c](#)), evidence synthesis ([BMJ2014](#)) and theory development ([HealthPsychoRev2016](#)) influenced PHE's guidance for delivering and commissioning Tier 2 [Adult Weight Management Services](#); (2) [Intake24](#), a new interactive, accurate and efficient online food diary ([Nutrients2017](#)) has been used by PHE to monitor the [Sugar Smart](#) campaign (UoA2 ICS "[Intake24: a free, accurate online food intake measure](#)"); (3) the [School Food Plan](#) included NU research (e.g. [IntJBehNutrPhysAct2014](#)), which directly led to the introduction of free [school meals for infants](#) (2014) and [simplified food standards](#) (2015), (UoA3 ICS).
- **Supporting communities with severe and multiple disadvantage:** (1) research into parental substance misuse and adversity in children ([TraumaViolenceAbuse2018](#)) was used by PHE to inform the development of a [social return on investment toolkit](#) for use by commissioners; (2) a primary care alcohol screening and brief intervention programme evaluated across the Newcastle-Gateshead CCG ([BMCFamPract2016](#)) has since been recommended by [NICE guidance](#) (REF2014 impact extension).

## Unit-level environment template (REF5b)

- **Reducing health inequalities:** (1) creating parliamentary debate and national policy discourse around regional health inequalities (NHS report, JECH2019; UoA20 ICS); (2) supporting a World Health Organization (WHO) Europe policy resolution on reducing health inequalities (UoA20 ICS); (3) influencing the English pharmacy-funding model and delivery of the national pharmacy flu vaccination service (BMJOpen2016a, UoA3 ICS).

### 1.2.3 Primary Care and Health Services Research

Our Primary Care and Health Services Research (6.8 FTE) focuses on supporting patients with multimorbidity and reducing age-related illnesses. Our research achievements are reflected in £9.9M in grant awards, 381 NU papers (43% written with international collaborators and FWCI of 2.35).

#### Key achievements:

- **Leadership of strategic infrastructure grants:** NIHR School of Primary Care Research (SPCR) (Robinson, £2.3M); NIHR PRU Older People and Frailty (Hanratty, £5M).
- **Large research grants:** One of the three national Alzheimer's Society Centre of Excellence (PriDem) (Robinson, £1.7M); NIHR Global Health Research Group (Robinson, £2M).
- **Multidisciplinary care:** (1) we work with NHS England and local CCGs to enhance care through design and evaluation of local initiatives. Recent examples include contributing to a CCG chronic obstructive pulmonary disease strategy (PrimCareRespMed2017) and implementation of multidisciplinary case management (BMJOpen2016b); (2) The Connected Health Cities project improved interactions between patients, family and health and social care professionals at the end of life (SocSciMed2020).
- **Optimising care for older people:** (1) the government's loneliness strategy drew on our highly cited work (Heart2016, AJPH2017); (2) we completed commissioned work (UK Government's Foresight Future of Ageing project) for the Future of Ageing Report, and our NIHR-funded work (HS&DR2014) informed NHS policy initiatives on Comprehensive Care of older people with frailty; (3) we work with the North East Commissioning Support Unit and CCGs in leading evaluation of new ways of working in care homes (BMJOpen2018) and the community application of national early warning scores (Hanratty AgeAgeing2020).
- **Patient care for people with dementia:** (1) our research (NIHR HTA2014a) on dementia has influenced NICE guidelines primary care management of dementia and the dementia care pathway (follow-on from REF2014 ICS and new research from the PriDem project), findings informing international policy and practice include the Global Dementia Plan and Alzheimer's Disease International. NU's Massive Open Online Courses on Dementia Care (2019 national dementia care award winner) has 35,000 users from 170 countries.
- **Changing patient experience:** collaboration with young people with long-term health conditions and healthcare commissioners identified key factors underlying successful transition between child and adult services (BMCMed2018) and recommendations directly informed high-level policy e.g. NHS Long Term Plan and NICE guidance NG43 (UoA2 ICS "Improving the transition of young people with long-term health conditions from child- to adult-oriented healthcare").

### 1.2.4 Health and Social Care Evaluation

Health and social care evaluation research (7.5 FTE) focuses on the development and application of research methodologies that facilitate early technology evaluation and assessment, through to implementation research across the whole range of clinical specialties, public health and social care. Our research achievements are reflected in £23.4M in grant awards and 197 NU outputs (33% written with international collaborators and FWCI of 1.65).

*Key achievements:*

- **Leadership of strategic infrastructure grants:** **NIHR Innovation Observatory** (£7.8M, *Craig*), **NIHR Research Design Service** (£5.1M, *Vale*), **Cochrane Incontinence** (£800,000, *Vale*).
- **Large research grants:** Department of Health - **Connected cities for health** (£4M, *Burton*), leading analytics themes (*Vale, Craig, Wason, Burton*) in four **NIHR** (£2M each), one **MRC** (£4.8M), five **EU consortia** (£2M-£11M), 20 **NIHR trials** (£0.6M-£3.2M), and two **NIHR i4i studies** (£1M each).
- **Summarising knowledge:** (1) our systematic reviews, network meta-analyses and modelling of the effectiveness, safety and cost-effectiveness of surgical treatments for stress urinary incontinence in women (The ESTER study: *Craig* [NIHR HTA2019](#)) underpinned [NICE](#) guidelines; (2) development of the [ScanMedicine](#) platform, which uses AI methods to bring together medical data sources to simplify searching.
- **Developing method guidance:** (1) state-of-the-art synthesis methods evaluating diagnostic tests when no gold standard test is available ([PLoSOne2019](#)); (2) identifying target differences for RCTs using evidence synthesis, consensus and survey methods ([NIHR HTA2014b](#); [BMJ2018](#)); (3) leading the development, piloting and dissemination of tools to incorporate economic evidence into Cochrane reviews ([GRADE](#) [JCE2020](#)).
- **Biostatistics development/guidance and software:** (1) basket trials that evaluate several new treatments simultaneously implemented in the OACS trial ([Biostatistics2020](#)); (2) efficient multi-arm multi-stage trials designs ([BMCCancer2020](#)) implemented in multiple HTA-funded trials ([MIDFUT trial](#), [CONFORM-OH](#)); (3) platform trials used in the international [FORMAT trial](#) ([StatMed2019](#)); (4) CONSORT reporting guideline extensions for including stepped wedge trials and adaptive designs ([BMJ2020](#)).
- **Data to knowledge:** (1) Public releases of [DataSHIELD](#), which enables remote non-disclosive sharing of sensitive research data, provided enhanced functionality, greater ease of use, and ability to include high-volume 'omics data; (2) development, implementation and evaluation of novel modelling methods underpinned PHE's weekly reporting on "[Excess Deaths in England](#)". Joint first place in the national 2020 [Analysis in Government Award](#).

### 1.3 Open Access and Research Integrity

Wide dissemination of both research outputs and data is encouraged. As well as developing software for enhancing reuse ([ScanMedicine](#) and [DataSHIELD](#) above), colleagues are supported by Research Data Managers to develop data management plans to ensure in advance data sharing, including making use of the NU [Research Data Repository](#). Our cohort studies are held on several open repositories. The University's [e-Prints repository](#) ensures research outputs are

**Unit-level environment template (REF5b)**

made Green Open Access, with RCUK/UKRI and COAF funds augmented by Faculty and NUPHSI to increase Gold Open Access. We are actively preparing for Plan S.

NU is a signatory of the Concordat for Research Integrity (REF5a 3.2.3) with Professor of Bioethics Woods (UoA21) as its expert convenor on research integrity, while Professor Rowe (UoA4) has been appointed Dean for Research Culture and Strategy with oversight of integrity. We have joined the UK Reproducibility Network, maintain policies and procedures compliant with the Concordat to support Research Integrity, subscribe to UKRIO, and are members of the Russell Group's Research Integrity Forum. Importantly, the methodological expertise provided within NUPHSI, together with the NIHR Research Design Service which provides critical input into study design and statistical rigour, significantly contributes to overall research reproducibility and integrity.

**1.4 Future Strategic Aims and Goals for Research and Impact**

The University research strategy, launched in October 2018, promotes a one-university vision and the 2019 FMS restructure aligns with this. By enabling researchers to work together in cross-disciplinary networks across the faculties, we are better configured to meet the demands of the contemporary funding landscape (larger grants funding multidisciplinary working to address major societal, economic and health challenges) and to achieve collective research excellence.

We lead many FMS research themes: Ageing and Geroscience (*Brittain*, ECR lead *Kingston*), Applied Cancer Therapeutics and Outcomes (*Sharp*), Innovation, Methodology and Application Hub (*Teare*), Public Health and Inequalities (*Bambra*); and hold leadership positions in many Newcastle University Centres of Research Excellence (NUCoREs): Regulatory Science (*Vale, Craig*), Ageing and Inequality (*Matthews, Bambra*), Cancer (*Sharp*), and Healthier Lives (*Adamson, Kaner*).

The FMS themes and NUCoREs provide interdisciplinary research spaces for sharing ideas, grant development and mentorship; host internal and external (including international) seminars; and support ECRs and PGR career development by enhancing their training and mentorship opportunities within cross-disciplinary environments. Contributions by academics, methodologists, technologists and project managers within NUPHSI and themes are recognised and rewarded on an equal basis within the team science setting.

The aim over the next five years is to **maximise our cross-disciplinary** input into our research endeavours, whilst developing our disciplinary remits. NUPHSI strategy is to recruit more “transition to independence” and senior lecturers to develop a strength in depth and maximise the opportunities provided by NUAcT fellowships (REF5a 3.2.4). Recruitments will expand our areas of strength (our themes and NUCoREs). We will continue to enable a supportive research-active culture that implements our vision but can also respond to short-term needs, such as COVID-19.

Our goal remains “*to undertake world-class research and to actively translate our findings into policy and practice*” and drives our impact strategy operationalised by close collaborations with policy and practice via our infrastructures (section 3.2). This is exemplified by our three impact case studies.

## Unit-level environment template (REF5b)

*Key strategic research aims are to:*

- **Expand our international, national and regional applied public health research** into reductions in health inequalities, changing behaviours and supporting severely disadvantaged and marginalised communities, and **increase our impact** through further external collaborations with partners in local and national government and the NHS.
- **Maximise opportunities from our cohort and registry studies** and link with new opportunities in routine data analytics e.g. by exploiting our membership of the recently-established Northern Hub of HDR UK and Population Research UK to investigate public health questions at a pace and scale not previously available.
- **Build on and further expand our academic primary care expertise** in ageing and integrated care through large national funding initiatives e.g. L&G Advance Care Research Centre, and expand the primary care remit beyond general practitioners.
- **Increase the development and implementation of our innovative designs and methods** for use in clinical trials and evidence synthesis studies, from concept through to delivery, capitalising on the opportunity afforded by leading the **NIHR Methodology Incubator** (*Teare*) to build capacity in methodology.
- **Maximise the opportunities for direct impact on improving health and reducing health inequalities** regionally, nationally and internationally from the newly-created ARC and **AHSC**, and direct input into Government from our NIHR Policy Research Units. Build industrial links such as exemplified by our Innovate UK Healthy Ageing grant into developing healthy home solutions (£11.5M, *Kingston*, 2021).
- Build on the success of our campaign for gender equality for other under-represented groups (especially BAME) and ensure appropriate mentoring and leadership opportunities to enhance career development and further embed EDI within our research culture.
- **Increase regional and national capacity** by continuing to obtain funds for, and deliver, the highest standard of multidisciplinary doctoral, post-doctoral and leadership training, including utilising industrial funding. Providing opportunities for our fellows, including the 13 new NIHR ARC fellows.
- Build on our recent joint PhD programmes with Monash, Australia and Universitas Indonesia in Jakarta to develop **a wider range of international researchers**. We will also **foster diversity amongst our home students** by expanding our pipeline from our increased diversity of UG students, through Masters to PhD students and into post-doc researchers.

## 2. People

### 2.1 Staffing Strategy and Career Development

Our UoA2 submission includes **33 staff**, of whom **six** are early career researchers (ECRs), slightly higher than 2014 (27.22 FTE REF2014, 31.27 FTE REF2021). Since November 2019, academic staff have been based in NUPHSI, and most were previously within the Institute of Health and Society (IHS). The restructure has brought together staff employed within the population health sciences remit across many UoAs (e.g. 1, 3-4, and 20). Research themes have been developed to synthesise and foster interdisciplinary collaborations.

## Unit-level environment template (REF5b)

Strategic professorial clinical/non-clinical appointments have been made across all our themes: epidemiology (*Matthews, Sharp*), health inequalities (*Bambra*), primary care (*Brittain, Hanratty, Rowlands*), biostatistics (*Teare, Wason*) and data science (*Burton*). Areas of research strength have also been enhanced by promotions including chairs (*Craig, Pearce, Sniehotta*) and senior/lecturer (*Brown, Heslehurst, Kingston, Oluboyede, Ternent*) as well as appointments at senior/lecturer (*Craig, McGovern, Ramsay*).

Across NU, we promote research excellence amongst all staff and full compliance with the Research Concordats (REF5a 3.2.3). UoA2 has a high proportion of female staff across all grades (76% overall, with 73% at Professor). We recognise that ethnic diversity is poor, as is reflected across Higher Education nationally (9%) and this is a key issue for the future. Self-declared disability has improved from REF2014 but is still low at 6%. The research undertaken within UoA2 is heavily dependent on good quality research staff that are predominantly funded on research grants. Research staff are offered open-ended contracts after four years, and staff movement between projects is facilitated by a continuous process that starts at least six months prior to the end of funding/contract with all new positions placed in the redeployment pool, together with **bridging funding** (one core element of the delivery of the **Concordat**) being available through **Wellcome Trust Institutional Strategic Support Fund**, Institute and principal investigator (PI) funds. Equality of opportunity and diversity are strongly fostered by the Institute and themes, and we have equality leads in the Faculty and Institute. Moreover, the University's Dean of EDI (*Rankin*) is from UoA2.

All staff participate in annual review meetings (PDR) with a senior academic, with dedicated training to both appraiser and appraisee: these focus on achievements over the past year, plans for the current year and career development. The annual PDR also provides strategic advice, identifies areas of support and training needs and highlights concerns. Each PDR is submitted to the Head of Institute enabling high level oversight and identifying common needs across disciplines. In 2021, we move to a year-long *engage and aspire programme* with mentoring at all levels with regular discussion, rather than an annual one-off review. Staff are also encouraged to access complementary external programmes e.g. PI development programme and Aurora Schemes (16 attendees). The NU **Manager Toolkit** offers workshops, online training and short videos to help both academic and non-academic managers. All academic staff contribute to undergraduate and postgraduate teaching with training in teaching skills provided.

Evidence of a sustainable staff structure and career development: promotion processes are overseen by the Head of Institute, with close conversation between line managers. Individuals who aspire to be considered for promotion or have been recommended by their line manager for promotion submit their paperwork well in advance of the deadline to a specially convened NUPHSI panel, which offers advice on how to strengthen the application without delaying the process. During the REF2021 period, eight research staff have been promoted to senior research positions, with twelve from research assistant to research associate.

### 2.2 Clinical Academics

We recognise the importance of collaboration between our researchers (including clinical and allied health professionals) and the NHS, public health and social care organisations. We have direct links to both Public Health and Primary Care, which is reflected within the academic body and our training opportunities. Of the UoA2 academics, **five (15%) are clinicians** and hold honorary NHS contracts, and we host **seven clinicians with honorary academic appointments**. We pay close attention to the training needs of clinical academics, who are supported by the **Clinical Academic Office** which manages the **NIHR Integrated Academic Training pathway**,



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and by the involvement of senior clinical academics in PDR, mentorship and internal peer review of applications for external awards. They are integrated fully within NUPHSI's research themes and structures.

We have five NIHR Academic Clinical Fellows in general practice, four in public health and three NIHR Clinical Lecturers, with GP PhDs increasing from 0 in REF2014 to seven in REF2021 (including one Alzheimer's Society and two NIHR doctoral research fellowships). Research fellowships obtained include three NIHR in-practice fellowships, one SPCR GP Career progression fellowship and one post-qualification Health Education England North East (HEENE)/CCG-funded fellowship. A HEENE Academic Clinical Lecturer in Public Health was awarded an NIHR post-doctoral ICA fellowship and we have one pre-doctoral Public Health SPHR Fellowship. We have had 11 on the Academic Foundation programme. The MSc in Public Health and Health Services Research offers research and academic training for both Public Health Specialty Registrars and GPs - with two HEENE-funded posts open to local GPs in training each year (nine to date); these Extended Integrated Posts are split between GP training (50%) and research (50%). Posts in educational research have supported 12 GPs in training to complete a Diploma or Masters in Medical Education.

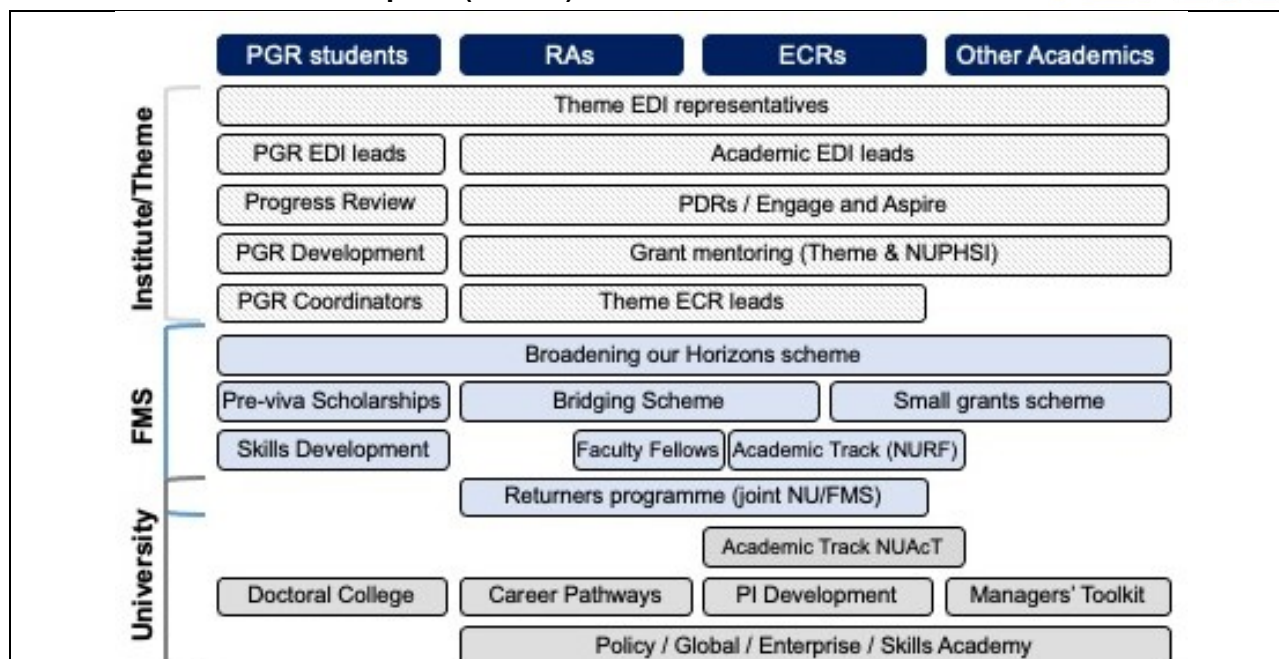
### 2.3 Early Career Researchers

Our ECRs are **supported and actively mentored** in fellowship applications, and are encouraged to develop their methodological and translational skills through bespoke training programmes. These include NU and FMS ECR programmes, including the PI Development Programme and Policy Academy fellowship scheme (*Kingston, Spence*, plus seven non-independent researchers). There have been **eight external personal fellowships** held during the REF2021 period including **NIHR advanced career development fellowships** (*Heslehurst, O'Donnell, McGovern, Adams, Sowden*), **MRC Innovation Fellowship** (*Wilson*) and **two SPCR fellowships** (*Kingston, O'Donnell*). Within FMS, Newcastle University Research Fellowships (NURFs, now the University NUAcT scheme) provide start-up costs, a PhD student and dedicated mentoring support. Initially aimed at biomedical scientists, this expanded into NUPHSI in 2018 and now has **four** appointments (*Kingston, Grayling, Spence, Wu* [NUAcT]). Each NURF/NUAcT position is worth approximately **£450,000 of investment in our ECRs**. UoA2 academics mentor a further **two researchers** with **junior SPCR fellowships** (£68,000), and **three researchers** who gained **highly competitive internally funded Faculty Fellowships** (worth £150,000), only two offered each year across the whole of FMS. Faculty fellow (*O'Donnell*) has since gone on to secure an NIHR Fellowship.

### 2.4 Supporting Staff Development (see Figure)

IHS provided a collective **support fund** to cover bridge funding, pilot funding, patient and public involvement (PPI), conference and training costs available to all levels from PI through to PGRs (£290,000). In addition, FMS also has a **Small Grant Scheme** which provides **pump priming funding** to researchers to support external grant applications (focused on enabling preliminary data collection for ECRs and PPI involvement): in total three people have benefited from this scheme. Our **Broadening our Horizons** scheme supports and celebrates the contribution of post-doctoral researchers and PGR students. It allows them to present their work at conferences, visit other research groups (or policy makers / industry) nationally and internationally to gain new techniques or mentoring and thereby raise their profile and that of NU internationally. The fund, which has provided 21 awards (of 135 FMS awards), covers travel, accommodation and any childcare costs to support attendance.

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## 2.5 Recognition and Reward

Formal recognition for excellent performance is achieved via our annual promotion round, a fully open process which allows all academics to submit their own case for promotion. In line with the NU signatory of the [Declaration on Research Assessment](#) in 2018 we do not use journal impact factors for promotion or evaluation, therefore achievements are based on quality evaluations not traditional journal names and non-contextual citations. Of the 33 academics in UoA2 (12 strategic appointments), nine have been promoted over the REF2021 period with two individuals achieving two promotions.

## 2.6 Research Students

We have a vibrant and diverse postgraduate research student community (PhD, MD, MRes, MSc). During the REF period **80** students were awarded PhDs, with **127** ongoing students fully or partly supervised within UoA2. Our PGR population is quite diverse with 71% female and 34% from BAME backgrounds (16% excluding international students). Most students (89%) are funded from individual studentships, with 25% **UKRI/NIHR**, 10 from the **ESRC Northern Ireland and North East Doctoral Training Partnership (NINE DTP)** and six within the **EPSRC Digital Civics CDT** located in **Computer Science** (co-applicants *Hanratty, Sniehotta, Adamson*). We also have a steady presence of international students primarily funded via University or governmental scholarships from a range of countries including Saudi Arabia, Kuwait, Nigeria, India, Indonesia and China, with 22% of our PGRs international. PGRs are authors on 19% of our return.

Levels of student satisfaction are comparable to, or higher than, those for the sector as a whole, according to successive Postgraduate Research Experience Survey (PRES) exercises, with an upward trajectory. Level of agreement amongst IHS/NUPHSI students with the statement "Overall, I am satisfied with the experience of my research degree" were 80% in 2015, 87% in 2017 and 91% in 2019.

Studentships are advertised widely and awarded in open competition. Candidates are shortlisted against explicit criteria (including academic achievement), with shortlisted individuals being interviewed by a panel of at least two selectors. Speculative applications from candidates meeting

**Unit-level environment template (REF5b)**

academic entry criteria are reviewed by the PGR lead to identify potential supervisors whose research interests match the candidate.

Training and supervision of PGR students: all students have a supervisory team with a minimum of two supervisors, with complementary topic and methodological expertise. All supervisors are associate/full fellows of the FMS Graduate School (or equivalent in another faculty) with one supervisor experienced in successful PGR degrees and examinations. Formal supervisory meetings (recorded on the E-Portfolio system) take place at least monthly. Annual Progress Review meetings with two other colleagues from related areas offer independent advice to the student. The FMS Graduate School ensures that issues such as the requirements of Interruption of Studies, changes in supervisors, etc. are dealt with sympathetically and equitably. The key role of the Postgraduate Student Coordinator (*McColl*) is to ensure a vibrant PGR research community and to support students and supervisors. PGRs have access to desk space and computer equipment throughout their PhD study period, including write up. In the 2019 PRES, 97% of respondents said their supervisors 'have the skills and subject knowledge to support my research' (against 89% for the sector). PRES ratings for 'My supervisors provide feedback that helps me direct my research activity' have consistently exceeded 90% in successive PRESs.

PGRs can access subject-specific and generic skills training through the FMS Postgraduate Training programme which aligns with the **Vitae Researcher Development Framework** (REF5a 3.2.3) and can also (subject to capacity) attend modules from Masters courses. PGRs access support beyond their FMS postgraduate training, via the Policy Academy, Media Skills groups and other faculties. PGRs are aligned to research themes and encouraged to present their work at monthly research discussion forums and annual research days.

There is an active PGR student support group run by the students which meets bi-monthly, with presentations on topics such as Writing Your Thesis, Preparing for Viva, and Stress Management. New students are allocated a 'buddy', an established PGR student who can introduce them to colleagues, assist them in navigating university systems and provide general peer support. Final year PGRs have a 'writing up buddy' to assist thesis submission and viva preparation with a recent NU post-doc colleague.

The **FMS Broadening our Horizons** scheme (section 2.4) is open to PGRs and shows the importance of research dissemination and the fostering of external collaborations (including with Industry). Our students are heavily involved with both the organisation and participation in the North East Postgraduate Conference (one of the largest such conferences in the UK with >600 registrants each year), which is largely supported by UKRI DTP sponsorship. It allows free participation to all PGR students in the North of England, including a **full-time crèche facility** (funded by Newcastle University EDI funds). PGRs are eligible for the University-wide student hardship fund. FMS Graduate School also offers a **post-submission scholarship**, which supports talented research students with up to three months of additional stipend after the submission of their thesis or final dissertation. Since 2014, **nine IHS/NUPHSI students** have been successful in their applications (five for academic development, three in enterprise, one internship).

Key postgraduate student achievements since 2014 include: three FMS thesis awards, with many achieving significant prizes/fellowships including one Marie Skłodowska-Curie Fellowship, a Flinders University Vice-Chancellor's Award, two SPCR launching fellowships, two NIHR Infrastructure Short Placement Awards for Research Collaboration, a Wellcome Trust Broadening Horizons award for international collaboration; a place on the TUTOR-PHC, Canadian/international research training scheme; five NU Academic scholarships, three NU

## Unit-level environment template (REF5b)

Enterprise award scholarships and a NU Policy Research Fellowship; and numerous prizes for presentations at conferences, including one who won the chance to present next to the keynote speaker at the European Congress on Obesity. Many students undertake engagement activities e.g. Soapbox Science and five have been awarded Public Lecture prizes (with one [writing a blog](#) about their experience).

## 2.7 Equality, Diversity and Inclusion

Despite the high proportion of **women within our UoA (76%)** we do not take the issue of gender discrimination or wider EDI remit for granted. We promote EDI principles at the heart of our staffing strategy and development providing a positive working structure. The FMS restructure embedded the University's **commitment to EDI as a core principle** (REF5a 3.4), and enhanced EDI representation within committees and expanded EDI PGR representation. Since 2014, **75% of all internal promotions were women, including 33% chairs**, there were **13% internal promotions in BAME** groups (0% chair), with 12 strategic external appointments (**70% women** but 0% BAME). Of our staff, 18% have taken maternity leave or caring breaks, 20% work part-time (including 43% of ECRs, 13% men), flexible working is encouraged (e.g. term-time working, compressed working hours, home working). Timing of all meetings and training is primarily scheduled within core hours of **10am-4pm**. Across FMS we have robust policies to support staff and PGR students to return to work following any extended leave with personalised support (**Returns Support Programme**, which since 2018 has helped three UoA2 returners). Athena SWAN Silver was awarded to IHS in 2011 (renewed 2014, consolidated into FMS award 2019) but improvements can still be made for other protected characteristics and we are aware of the potential discriminatory impact of COVID-19 (described in section 2.8). Women have many senior leadership roles including Head of the Institute, lead of EDI (now Dean of EDI for the University), Deputy-Dean of Research and Innovation in FMS (now Dean), UoA REF co-ordinator, impact champion and FMS REF lead.

The NUPHSI EDI committee meets regularly (Chair *Brown*, plus five NUPHSI colleagues) and is supported by a core FMS EDI team. NUPHSI are active in University EDI Initiatives including, but not limited to, funding from the **Equality, Diversity and Inclusion Fund** for projects including: participation in the **BAME staff network**, disability inclusive images, and **University Disability Interest Group** (chair *Wilson*). *Wilson* organised the International Day of Persons with Disability Conference (2019), as well as speaking at the annual NU EDI research conference (established by University EDI lead, *Rankin*). *Wilson* was recognised in the **Shaw Trust Disability Power list** of the *most 100 influential disabled people* in the UK. FMS led the drive to reintroduce the **Parents Network**. The "You Said, We Did" initiative was developed to **give everyone a voice for change**. Issues identified and resolved included the provision of EDI training, divergence of policy for unpaid paternal versus maternal/adoption leave, and disseminating EDI knowledge (roadshows and an [EDI blog](#)). We value the University approach to EDI (REF5a 3.4), with its membership of the **Advance HE's Race Equality Charter**, a **Global Stonewall Diversity Champion** and member of the **Business Disability Forum**; this provides a framework within which our approach is secured. We are committed to the Concordat to Support the Career Development of Researchers with NU being one of the first awarded a **HR Excellence in Research Award** by Vitae in 2010 (renewed twice since). The NUAct Scheme recruitment process includes a first phase short listing that is anonymised to avoid explicit and unconscious bias.

Our submission was constructed with an understanding of disciplinary balance. Outputs were self-nominated and evaluated anonymously by at least two other senior academics (with both an indicative score and reasons), and the REF lead moderated the scores. Selection of the return was by paper, not author, in line with our code of practice.

## 2.8 Responding to COVID-19 Impacts on Colleagues (REF5a Annex)

Staff support: since March 2020 we have been mitigating the impact on colleagues and their research. The NU response included practical initiatives for all colleagues: **3-month contract extensions** benefited six RAs and one research administrator. **Emergency UKRI funding** provided 3-month extensions, and similar support for projects in their second year and non-UKRI grants is now underway. Support includes **clinical redeployments, converting studies and meetings to online and University-enabled safe home working** with office equipment made available. FMS researchers were also encouraged to “do what you can” whilst protecting their mental health and family and caring responsibilities.

PGR support: NU has provided **fee-free extensions** (up to six months) or for suspension of studies for up to 12 months. The **NU COVID-impact fund** provides additional stipend with particular emphasis on EDI issues. During lockdown, NUPHSI arranged **virtual drop-in sessions** and regular information and support on topics such as **maintenance of good mental health and wellbeing**. Support and guidance have been provided to mitigate impacts on face-to-face research and home working, including via provision of IT.

## 2.9 Future EDI Priorities

Given that 76% of our colleagues are female (including 73% of chairs) and the majority of Leadership roles are held by women, our EDI aspirations need to expand beyond gender. With only 9% of colleagues from BAME backgrounds (0 chairs) and 6% with declared disabilities, these are an important future focus. We are a **Global Stonewall Diversity Champion**, however no data exists to assist with monitoring related protected characteristics. We need to **examine our recruitment processes, including documentation and networks, to support a more inclusive research environment**. First stage blind assessment of NUAcT applications is a new undertaking which we will monitor to see if it assists with redressing our imbalance. However, it only reflects applications and therefore encouraging applicants from diverse backgrounds will be essential. We need to continue to work on the [University initiatives](#) supported by the **FMS EDI leads** and the **University EDI Dean** to create research cultures, activities and environments that will be spaces where people from diverse backgrounds can thrive.

## 3. Income, Infrastructure and Facilities

### 3.1 Income

During the REF2021 period, we have been awarded **£53.7 million** in research income. This represents **£7.7 million per year: a 15% increase** from REF2014 (£5.8 million per year). UKRI income represents **£4.3 million** (8% of total), with NIHR funding **£31.0 million** or 58% (compared to 14% and 47% in REF2014). Two other areas have seen substantial increases - UK charity funding has increased by **10%** to £845,000 per year and industrial funding is now £117,500 per year (up from £15,600).

### 3.2 Infrastructure and Facilities

#### 3.2.1 Facilities and Accommodation

The expansion of the remit of population health sciences has meant a new significant investment in repurposing offices (with our NHS partners) in the **Sir James Spence Institute** to provide research space and specialist labs for children and young people; co-locating Ageing researchers with clinical colleagues at the **Campus for Ageing and Vitality**; and co-locating nutrition researchers in the **William Leech Building**. An exciting development has been our [award-winning](#)

## Unit-level environment template (REF5b)

**Helix site**, where the **Catalyst** building houses the **National Innovation Centre for Ageing, National Innovation Centre for Data and the NIHR Innovation Observatory** (an investment of £40M). The Catalyst co-locates **researchers with industry** – enabling fast implementation of research into industrial collaborations. The Catalyst also houses **VOICE (Valuing Our Intellectual Capital and Experience)**, an **NIHR-funded** organisation to ensure that citizens' knowledge and experiences input to research at all levels. During the REF period, VOICE (led by NU Prof of Practice *Corner*) has expanded from a local organisation to a global entity with participants from 10 countries. In recent months, UoA2 researchers have also been involved in the development of the **Integrated COVID Hub-North East, a £110M public investment** in a state-of-the-art laboratory, innovation laboratory and regional command and control centre (including an analytics hub led by *Matthews*) to **assist the region with COVID-19 response**, and future funding to link regional infectious disease response to hospital services and the community. UoA2 staff also have access to major facilities within the FMS including **four Clinical Research Facilities, MoveLab** (physical activity), **Dame Barbour building** (£39M, psychology, nutrition and exercise), the **Culture Lab** (assistive technologies) and laboratory facilities in the **Cancer NUCoRE**. We have recently purchased the **Campus for Ageing and Vitality** site (CAV, **£8M**) from our partner NHS Trust. CAV provides ample space for future estate development to enable our strategy to expand our clinical and population ageing research activities, including housing the NUPHSI, BRC, and the Clinical Ageing Research Unit. The CAV site is central to the future strategy of our **AHSC** to become a living lab for healthy ageing innovation and substantial future expansion of interdisciplinary research.

### 3.2.2 Externally Funded Research Centres and Networks

An important aspect of our infrastructure is the leadership of and collaboration in externally-funded research centres and networks (examples below).

Centres and Units
NIHR School for Public Health Research (SPHR)-Fuse (2012-2022) <sup>†</sup>
NIHR School for Primary Care Research (SPCR) (2015-2020) <sup>†</sup>
NIHR Policy Research Unit (PRU) Behavioural Sciences (2019-2023) <sup>†</sup>
NIHR PRU Older People and Frailty (2019-2023) <sup>†</sup>
NIHR PRU Public Health (2019-2023)
NIHR Public Health Consortium (2017-2019)
MRC Lifelong Health and Wellbeing Centre in Ageing and Vitality (2014-2019)
NIHR Biomedical Research Centre in Ageing and Long-Term Conditions (2007-2022, renewed 2017)
MRC/ARUK Centre for Integrated Musculoskeletal Ageing (2012-2022, renewed 2017)
Infrastructure Awards
NIHR Innovation Observatory (2017-2024) <sup>†</sup>
NIHR Applied Research Collaboration (ARC) North East and North Cumbria (2019-2024) <sup>†</sup>
NIHR Research Design Service (RDS) North East and North Cumbria (2008-2023) <sup>†</sup>
BEIS/UK Government National Innovation Centre for Ageing (launched in 2018)
NIHR Newcastle In Vitro Diagnostics Co-operative (IVDC) (Newcastle MIC) (2008-2023)
Training/DTPs
ESRC Doctoral Training Partnership (NINE DTP) (2017-2022)
ESRC North East Doctoral Training Partnership (2011-2016)
EPSRC Centre for Doctoral Training in Digital Civics (2014-2022)
Wellcome Trust 4ward North Clinical PhD Academy (2017-2022)
<sup>†</sup> See section 3.2.6 for details

### 3.2.3 Methodology Platform Infrastructure

We provide expertise in Biostatistics, Health Economics and Evidence Synthesis in close collaboration with the **Newcastle Clinical Trials Unit (NCTU)**. This UKCRC-Registered CTU collaborates with investigators to design, conduct and deliver clinical trials. NCTU has a trial portfolio across many clinical disciplines and from diverse funders (public, commercial, and charitable). The groups also collaborate with the [Newcastle In Vitro Diagnostics Co-operative](#) in evaluating **diagnostic tests, including for COVID-19**. The **Biostatistics Research Group** is a team of over 20 biostatisticians with research strengths in innovative clinical trial design, including adaptive trials, precision medicine trials, and cluster-randomised trials. The group's trial/study portfolio comprises 32 currently funded ongoing clinical studies. These include **18 NIHR, eight MRC and three major national charity** trials; 22 of these are jointly held with NCTU. The **Health Economics Group** includes over 45 academic and research staff whose work particularly focuses on the development and application of methods of economic evaluation and early modelling, which are essential elements in the success of our translational funding applications to NIHR. The group currently has more than 60 projects funded by peer-reviewed grant applications. The **Evidence Synthesis Group** is a 22 strong multidisciplinary research group, comprising reviewers, information specialists and economic modellers with strong skills, knowledge and experience in searching, data retrieval, systematic review and meta-analysis, network meta-analysis and decision modelling/economic evaluation and application of futures/horizon scanning. In addition, members of the group contribute and support delivery of [NIHR Innovation Observatory](#) outputs (see section 3.2.6).

The **Newcastle Joint Research Office (JRO)** supports NUPHSI researchers in the development, implementation and delivery of experimental, translational and clinical research, including funding development, governance, regulatory compliance, and intellectual property. A Quality Assurance team provides oversight in relation to regulatory requirements. An Informatics team supports data access, storage and reporting. The JRO also delivers bespoke training, ultimately ensuring that our clinical research is safe, value for money, of the highest quality and translate to improved patient outcomes.

### 3.2.4 Research Management

NUPHSI research managers, an integral part of our research environment, are coalesced to ensure senior research managers (SRM) can develop their research knowledge and line management skills. Secondment opportunities allow the development of new skills prior to promotions. SRMs provide methodological and practical input in trial design, leadership in contracting, ethics and on financial management on all NUPHSI studies. They provide senior oversight of the wider research and management team: Trial Managers (TMs), Data Managers (DMs) and Study Administrators (SAs). TMs drive the development of trial protocols, risk identification and mitigation, trial set up, regulatory approvals - MHRA and HRA submissions - site initiation, and day-to-day management of trial conduct, ensuring trial fidelity, equipoise and rigour, performing monitoring, and any safety reporting, alongside reports to the Sponsor and funder throughout the trial lifecycle to trial closure, and archiving. The DM leads the design, structure, and build of the databases, including trial randomisation system to Good Clinical Practice (GCP) standards, as well as managing the data entered by centres. Working together they ensure our research is conducted to GCP requirements.

### 3.2.5 Data Resources

A number of cohort studies are run from, or have fieldwork sites in, Newcastle or surrounding areas, led by UoA2 researchers (*Adamson, Jagger, Kingston, Matthews, Pearce, Robinson*).

## Unit-level environment template (REF5b)

Studies cover the full age range from the **Newcastle Thousand Families Study** (started in 1947, ongoing oral history interviews), early years cohorts (**Gateshead Millennium Study**, born 1999/2000), to studies in older people (**Newcastle 85+ study** (95+ interview undertaken in 2014/2015), **Cognitive Function and Ageing Studies I and II**, ongoing COVID-19 follow-up). These studies, together with registry studies from REF2014, contribute to worldwide collaborations producing key evidence on understanding the population (e.g. EUROCAT [BMJ2016](#), COSMIC [PLOSMed2017](#), TULIPS [Thyroid2020](#)), provide high quality research evidence (over 200 papers, 10% returned across four UoAs), and are a rich resource to students at all levels (including undergraduate psychology and pharmacy, Masters programmes, and PhD students). All studies (including student projects) can be deposited on the NU [Research Data Repository](#) for further reuse.

### 3.2.6 Supporting Infrastructure for Impact (including cross-HEI infrastructure)

NUPHSI currently hosts academic leadership of many cross-HEI national initiatives with policy makers and health partners. They provide access to a wider network of colleagues and inform and support our research, link directly to health providers, and provide opportunities to inspire and educate our trainees.

**NIHR Applied Research Collaboration North East and North Cumbria (ARCNEC)** (Director *Kaner*). This regional research and implementation initiative combines 12 CCGs, 10 acute and three specialist trusts, one ambulance trust, two medical schools, two pharmacy schools, six Higher Education Institutions (HEIs) and 13 local authorities. We secured £6.9M in matched funding from partners, to support our aim of accelerating the implementation of research that benefits the community.

**NIHR School of Public Health Research (SPHR)**, National Director, *Adamson*, with *Bambra*, *Kaner*, *Ramsay*): is funded to increase the evidence base for cost-effective public health practice. Regionally implemented as [Fuse](#) (Centre for Translational Research in Public Health, UKCRC-funded 2008-2018) with senior Investigators *Bambra*, *Kaner*, *Sniehotta*, *Vale*, it shares communication and knowledge exchange function across five North-East HEIs. Fuse offers Quarterly Research Meetings, seminars and other events, including a biannual international knowledge exchange conference, all co-produced with practice and open across the five HEIs through the network of 1,400 members.

**NIHR School of Primary Care Research (SPCR)**: is funded to increase academic primary care research and develop capacity (Lead *Robinson*, *Craig*, *Hanratty*, *Matthews*).

**NIHR Policy Research Unit (PRU) on Behavioural Science** lead *Sniehotta* (with *Bambra*, *Craig*, *Kaner*, *Vale*). We also co-lead with Manchester University the **NIHR Older People and Frailty PRU** (Deputy Director *Hanratty* with *Matthews*, *Craig*) and are a member of the **NIHR Public Health PRU** (*Adamson*). All three centres enable direct impact as research is commissioned by the Department of Health and Social Care or arms-length bodies, providing experience for researchers in writing policy briefs as well as academic outputs whilst providing long-term security.

**NIHR Innovation Observatory (NIHR-IO)** (Director *Craig*): undertakes futures scanning for new and repurposed medicines, medical devices, diagnostics and digital health innovations.

**NIHR Research Design Service North East and North Cumbria (RDS NENC)** (*Ternent*, *Teare*, *Exley*, *Vale*) and a UKCRC registered **Clinical Trials Unit (NCTU)** provide research support for frontline clinical and allied health practitioners.



## Unit-level environment template (REF5b)

**National Innovation Centre for Ageing (NICA):** the bid for this nationally and globally unique £40M centre was developed and led by *Robinson*. NICA's aim is to bring together applied ageing researchers with patients, the public and industry to co-develop smart tools and technologies which facilitate healthy ageing and promote independent living.

We also collaborate with other NU-hosted centres including: NIHR [Biomedical Research Centre on Ageing and Long-Term Conditions](#) and the Academic Health Science Network North East and North Cumbria ([AHSN NENC](#)). The AHSN supports quality improvement and implementation partnerships and co-funds the North East Quality Observatory Service ([NEQOS](#)) to provide quality measurement for NHS organisations. Newcastle University has recently been awarded an **AHSC** in partnership with Newcastle upon Tyne, Cumbria, and Northumberland, Tyne and Wear NHS Foundation Trusts, the AHSN and Newcastle City Council.

We have **well-developed pathways to promote the impact of our research:** NUPHSI (and IHS before it) have **two impact champions** who together with the **FMS Impact Officers** look for potential impact opportunities and how to maximise them. Impact within the ARC, NIHR Schools and PRUs are linked directly to NHS Trusts, local authorities, the **Department of Health and Social Care** and arms-length bodies.

#### 4. Collaboration and Contribution to the Research base, Economy and Society

##### 4.1 Overview

Our researchers play an active role in shaping the research direction both nationally and internationally. Their expertise and leadership are recognised by their selection to strategic advisory roles, funding councils and policy forums (detailed below) and honoured by prestigious national awards. We have also contributed to HEFCE and Research England actions through shaping and delivering the REF process (*Sniehotta*, REF2021). Staff at all levels are encouraged to undertake academic citizenship activities and receive support, mentoring and training to undertake such roles (e.g. Policy Academy REF5a 2.2.5). This involvement is key to enabling our research to be heard by policy makers and thereby maximise the potential impact.

##### *Academic awards and other honours received*

*Robinson* (Dame Commander of the British Empire). NIHR Senior Investigators (*Robinson*, *Adamson*, *Kaner*). Awarded Regius Professorship in Ageing (*Robinson*). Fellowship through distinction Faculty of Public Health (*Rankin*), Academy of Social Sciences (*Matthews*), Royal College of General Practitioners (*Robinson*), Honorary Fellow of the Institute and Faculty of Actuaries (*Jagger*). Royal Society of Apothecaries William Farr Medal for excellence in the care and research of older people (*Robinson*). [Shaw Trust Power list of 100](#) most influential disabled people in the UK (*Wilson*).

##### 4.2 Societal Impact and Strategic Voice

As part of our leadership of the NIHR SPHR we established the [Equal England: Health Inequalities Knowledge Exchange Network](#) in 2016 in partnership with Public Health England. The network has over 600 members from across policy and practice, academia and the public across England. It brings colleagues together for knowledge exchange, co-development of research and for impacting on policy and practice in order to reduce regional and socio-economic inequalities in health.

**Unit-level environment template (REF5b)**

[Fuse](#) (section 3.2.7) leads on knowledge exchange and research co-production across the whole North-East public health system, supporting evidence-based change in local authority and NHS practice to address upstream determinants, improve health and wellbeing and reduce inequalities in health across the region.

[VOICE](#) (Valuing Our Intellectual Capital and Experience) is our public engagement network and associated online digital platform, led by Professor of Practice *Corner*. Established in 2007, VOICE has grown significantly with national and international reach and now sustains a network of thousands of engaged “research-active citizens”, supporting thousands of research projects. VOICE is embedded as a University coordinating mechanism for public engagement with research and the PPE/I mechanism for a range of our NIHR infrastructure across the North East and two national centres (the National Innovation Centre for Ageing and the NIHR Innovation Observatory).

The [NENC Primary Care Research Strategy](#) was co-developed between NU SPCR and North of England Commissioning Support Unit (NECS), who work on behalf of the 12 NENC Clinical Commissioning Groups (CCGs) and our regional NIHR Clinical Research Network (CRN). The strategy will engage key regional parties to drive growth and adoption of primary care research.

Many of our PIs have given public lectures across the UK and beyond to engage audiences, including invitations at science festivals, bespoke events and our Newcastle Insight lectures, and schools outreach during the pandemic to explain epidemiology.

### **4.3 Responsiveness to National and International Priorities**

#### **4.3.1 Expert Witness and Select Committee Input**

Highlights include: Newcastle University Institute of Ageing submission (*Jagger, Matthews, Kingston, Robinson, Hanratty*) to [Ageing: Science, Technology and Healthy Living in Science and Technology Select Committee](#) (2019-2020). Expert Panel for [National Audit Office Disability and Employment Study](#) 2018-2019 (*Bambra*). Input into 2018 House of Commons Science and Technology Committee investigation into [energy drinks in children](#) (*Visram*). [Secretary of State for Business, Energy and Industrial Strategy’s Early Years Healthy Development Review](#) 2019-20 (*Rankin*). 2018-2020 [WHO Europe Scientific Advisory Group](#) on Health inequalities (*Bambra*).

#### **4.3.2. Guideline Development**

Influencing guidelines is the first step to impact for much of our research. For example, we have been involved in (1) writing guidelines: [WHO alcohol brief intervention](#) training manual for primary care (*O’Donnell*), NICE guidelines for dementia [management](#) (*Robinson*), [PHE clinical guidelines](#) for surveillance after colorectal resection or polypectomy (*Sharp*), PHE guidance for delivering and commissioning [Tier 2 Adult Weight Management Services](#) (*Sniehotta*), and the Chief Medical Officer’s [Expert Scientific Advisory Group](#) on low-risk drinking [guidelines](#). As a core member of NICE Public Health Advisory Committee (2012-) *Kaner* shaped five sets of guidance during REF2021: [Excess Winter deaths](#), [Community engagement](#), [Drug misuse prevention](#), [Physical activity and the environment](#), and [Alcohol school-based interventions](#); (2) influencing guidelines: NICE guidelines [surgical management of stress urinary incontinence](#) (*Craig, Vale*), [management of diabetes in pregnancy](#) (*Bell, Rankin*), [Dementia, disability and frailty](#) (*Matthews, Jagger*), the [dementia care pathway](#) (*Matthews, Jagger, Robinson*) and national stillbirth and neonatal death charity Sands “[Pregnancy loss and the death of a baby](#)” guidelines (*Rankin, UoA3 ICS*).

## Unit-level environment template (REF5b)

**4.3.3 COVID-19**

Many UoA2 colleagues have been actively involved in COVID-19 research (e.g. leading the data analytics for the [COVID Hub-North East](#), impact on cancer detection ([Gut2021](#)), influencing care home response ([AgeAgeing2021](#)), health inequalities ([JECH2020](#), [Health Foundation grant](#)), and policy reports for [Independent SAGE](#) and the [Northern Health Science Alliance](#)).

**4.4 Collaborations**

Much of our research includes multi-disciplinary collaborations across the University, nationally and internationally and with NHS, councils or government departments.

*Research networks:*

Children's Cancer & Leukaemia Group (*McNally*), Great North Children's Hospital Community Network (*Rankin*), Health Economists' Study Group (*Vale, Ternent, Oluboyede, Brown, Craig*), NIHR Clinical Research Network (*Kaner*), Public Health Intelligence Network of the North East (*Brown*), UKCRC-registered CTUs Executive (*McColl*), UK Faculty of Public Health (*Ramsay*, Vice Chair Academic & research committee); Cochrane (*Vale, Craig*); Campbell Collaboration (*Vale*); International Health Economics Association (*Brown*); Grading of Recommendations, Assessment, Development and Evaluations (GRADE) (*Vale*, Chair); Co-convenor Cochrane Campbell Economic Methods group (*Craig*).

*Educational Linkages:*

Several staff have visiting positions in other UK and International Institutions, to enhance collaborations and stimulate new research opportunities including: *Jagger* (University of New South Wales), *Matthews* (University of Cambridge, University of New South Wales), *Ramsay* (UCL). At least 90 external PhD examinations have been undertaken in the UK and internationally.

*Industry:*

Industrial and commercial collaborations include: development of software or devices (e.g. [LifeCurve™](#), [Intake24](#)), and with clinicians in the field of diagnostics (i4i and Innovate-funded) for melanoma ([AmLo Biosciences](#)) and rapid non-invasive assessment of peripheral arterial disease (NOTEPAD).

**4.6 Contributions**

UoA2 researchers have made a sustained and substantial contribution to the wider research community, within the UK and internationally, as members of **39** funding panels (including **four** chairs), editors of **four** research journals and **33** editorial boards (examples below).

*Chairing of research councils or similar national or international funding bodies*

UK Funding panels including: ESRC Grant Assessment Panel (*Matthews*); NIHR Doctoral Fellowship Panel (*Rankin*); UKRI Future Leadership Fellowship Panel (*Matthews*); NIHR GP in practice fellowship deputy chair (*Robinson*); Research Council of Norway (*Vale*), NIHR Advanced Career Fellowships deputy chair (*Kaner*), NIHR Evaluation, Trials and Studies Coordinating Centre deputy chair (*Kaner*).

*Membership of research councils, national or international funding bodies*

UKRI MRC Methodology Research Panel (*Robinson*); Strategic Skills Fellowship Panel (*Matthews*, deputy chair); MRC/NIHR Trials Methodology Research Partnership (deputy Chair,

**Unit-level environment template (REF5b)**

*Wason*), Multimorbidity call (*Hanratty*); NIHR Recovery Renewal Reset (*Hanratty, Kaner*); NIHR Programme Grants for Applied Research (*Vale, McColl, Kaner, Exley*), Research for Patient Benefit (*Wason, Craig, Brittain*), Health Services and Delivery Research (*McNally, Craig*), Health Technology Assessment (*Vale, Wason*), Global Health Policy and Systems Research (*Robinson*), Global Health Research Units and Groups (*Robinson*), In-Practice Fellowships (*Hanratty*); EPSRC 'Content Creation and Consumption in the Digital Economy' (*Brittain*); Health Foundation (*Bambra*); Wellcome Trust Fellowship Panel (*Bambra*); Health and Care Research Wales Research for Patient and Public Benefit Committee (*Craig*); Asthma UK's Research Review Panel (*Craig*); Independent Research Fund Denmark (*Jagger*); Norwegian Research Council Public Health (*Bambra*); Canadian Institute of Health (*Matthews*); Health Board Ireland (*Kaner, Jagger*), Federal Ministry of Education and Research, Germany (*Kaner*).

*Chairing of national or international research or health strategy panels*

NIHR EXILENS-Exploring the Impact of alcohol Licensing in England and Scotland (*Kaner*), NIHR NETSCC Trial Steering Committee, Communities in Charge of Alcohol (*Kaner*), NIHR Methodology Incubator (*Teare*), NIHR Statistics Group (*Teare*).

*Membership of health strategy panels*

i-HTS-international HealthTechScan European Regional group (EuroScan, Chair *Craig*), NICE Public Health Advisory Committee PHAC C (*Kaner*), MRC Stratified Medicine Steering Group (*Matthews*), MRC/NIHR Multimorbidity Steering Group (*Jagger*), Medical Aspects in the Environment (COMARE) (*McNally*), NHS Scotland Alcohol Brief Intervention Expert Advisory Group (*O'Donnell*), National Congenital Anomaly and Rare Diseases External Medical and Scientific Advisory Group (*Rankin*), ONS National Population Projections Expert Advisory Panel (*Jagger*), PHE Productive Healthy Ageing and Dementia Expert Advisory Group (*Jagger*), Topol Review (*Vale*), Scottish Congenital Anomaly and Rare Diseases Registration Service (*Rankin*), UK PharmaScan Oversight & Governance Board (*Craig*), Alzheimer's Disease International (*Robinson*), International Advisory Board, Hamburg Network Health Services Research (*Kaner*), World Health Organization (WHO) Europe strategy committees (*Rowlands, Kaner, Bambra, Visram*).

*Leading positions in professional subject associations or learned societies*

EU Joint Research Centre (JRC)/European Surveillance of Congenital Anomalies (EUROCAT) Management Committee (*Rankin*); NIHR Statistics Group (*Teare*), NIHR Methodology Incubator (*Teare*), MRC/NIHR Trials Methodology Research Partnership (deputy chair, *Wason*); Society for Social Medicine and Population Health-mid-career researcher committee chair (*Visram*); World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians (WONCA) (*Robinson* - Ageing committee).

*Editorial / Associate editorial positions and editorial board membership and other esteem*

We have had 11 editorial positions (e.g. Cochrane Incontinence [Co-ordinating editor *Vale*], Health Psychology Bulletin [*Sniehotta*], NIHR Journals [PGfAR, *McColl*]). We have also had 10 associate editorships and 17 editorial board positions for international journals. Our researchers have given over 100 named, keynote and plenary lectures at prestigious national and international conferences. We are also heavily involved in trial steering groups and other study groups across the UK and abroad including chairing trial steering groups (e.g. *Adamson, Hanratty, Vale, Wason*).