

## Aberdeen City Health Determinants Research Collaborative Business Plan/Detailed Research Plan

---

NIHR Health Determinants Research Collaboration Aberdeen is funded by the NIHR PHR Programme

---

### 1. Background and Rationale

Aberdeen's wealth and economy has been dominated by the success of the oil and gas industry for the last four decades. The recent massive downturn in the industry and the global pivot to different forms of energy has led to rapid and wholesale "shock" to, and a negative impact on, the socio-economic climate in the city. [1,2,3] Aberdeen is therefore experiencing socio-economic transformation ahead of, and at a greater pace than, many areas. The Council and its partners are working together to manage opportunities and mitigate risks associated with the socio-economic transformation. We recognise that **mitigating inequalities** which will negatively impact the physical and mental health of our people **requires a strong collaborative approach with a good understanding of the wider drivers of population health, evidence-based interventions grounded in robust research, and a culture that values, and is skilled at using, evidence to inform planning and decision making.**

As the first Scottish Health Determinants Research Collaborative, Aberdeen will **contribute to, and be fully aligned with, Scotland's wider health research activities.** The "Leadership for Public Health Research, Innovation & Applied Evidence" report [4] for Scotland's Public Health Reform Programme emphasises the need for research across all domains of public health, and the data and intelligence functions underpinning them. It recognises a wider conception of the determinants of population health and the scope of research and knowledge needed to address them, reflecting social, economic, environmental, cultural, commercial, political and organisational determinants of health and equity. This recognition is the foundation of our application.

Our proposal positions **the Aberdeen City Health Determinants Research Collaborative (AHDRC) within the existing governance arrangements of both the Council (ACC) and the City's Community Planning Partnership (Community Planning Aberdeen – CPA – which includes partners from NHS Grampian Public Health, the University of Aberdeen (UoA) and Robert Gordon University (RGU)).** CPA sets the City's strategic priorities and oversees an extensive programme of improvement using appropriately resourced tests of change. Both ACC and CPA have a long-standing commitment to evidence informed decisions using for example Quality Improvement Methodology and Values Based Reflective Practice. By becoming an integral part of the ACC and CPA governance structures, AHDRC will be positioned to strengthen collaboration with the academic sector and ensure that research activities reinforce existing practices, inform and support the strategies, plans and improvements to which partners, communities and citizens are committed. In this way, **there will be a clear pathway for the AHDRC's work to be informed by the City's priorities, and have impact by translating evidence for use in practice and directly supporting decision-making through a deeper understanding of health determinants.**

We have identified two key areas to enhance ACC's capacity and capability for research activity. Firstly, there is a need for ACC and CPA to have a pipeline of evidence reviews and evaluation of activities to inform local planning and decision making. ACC has the ambition, but not currently the research capacity or capability to deliver this at the level, pace or scale required. **Through partnership with UoA and RGU, AHDRC will provide access to evidence summaries, evidence reviews, apply research findings to practice in local contexts, and undertake evaluation. It will also facilitate training for ACC and CPA teams to develop and strengthen skills to use research and evidence, plan and undertake research, evaluation and improvement science.** AHDRC will provide the multi-disciplinary research and development team to facilitate shared-learning, develop networks and engage in collaborative research activity.

Secondly, access to data, linked to health outcomes, is necessary for relevant research about health determinants. This is both a local and a national research priority (Health Data Research UK [5] and Research Data Scotland [6,7]). **AHDRC will make prioritised local authority and other data sets available for use in research and evaluation, and place these in a secure environment** where they can be accessed safely with clear governance, transparent and open research processes for its use. This will provide a focus on **adding value to data in a manner that provides essential context** to aid both research application and to underpin new, original research using linked data. It will also develop communities of practice and **mobilise the necessary datasets to enable health determinants research and its application to practice in the local, national and international context**. We propose that this includes the curated **information about lived experiences to offer a deeper understanding of health determinants and inequalities**.

The AHDRC will address these needs and provide a **step change in ACC's journey towards becoming a research active organisation, enabling the use of evidence for local planning and decision making as well as undertaking research and evaluation to address the City's priorities for health and wellbeing, mitigating the harms associated with current, and preventing future inequalities**.

## 2. Overarching vision, aims and objectives

The AHDRC is a joint venture with Aberdeen City Council as the lead applicant and with co-applicants from NHS Grampian, University of Aberdeen and Robert Gordon University. Our shared vision is that:

***Aberdeen City Council is a research active organisation, commissioning and generating research, curating and translating research evidence to support people to be healthy, happy and prosper regardless of their background or where they live.***

***The AHDRC facilitates a supportive and sustainable research environment, enabling the acquisition of skills and training, and generating and translating interdisciplinary research that will support a post-pandemic recovery, a sustainable and just economic transition, reduce current and prevent future health inequalities, and improve health in the City, Scotland, the UK and internationally.***

### Success Criteria Through Initial 5 Years

- Research outputs, evaluation, and an atlas of health inequalities and its determinants, generated by the AHDRC and its partners, are consistently used to support decision making locally and more widely
- Research evidence is mobilised, translated and applied for use in local contexts to support local planning and change in practice
- ACC and CPA strategies, plans and programmes of activity are rigorously evaluated with support from the AHDRC multidisciplinary research and development team
- Research programmes on health determinants are established, comprising locally commissioned and externally funded projects, with ACC staff as lead or co-investigators
- There is strong community engagement and involvement in health determinants research and its translation into practice, including local and national planning and policy making
- Health determinants datasets from ACC and partner agencies are made available for research and are accessible in a safe environment by local, national and international researchers
- Training in research skills is embedded in routine staff development
- The AHDRC positively impacts health outcomes locally, nationally and internationally

### Workstream aims and objectives

#### 1. **Develop health determinants research capacity and leadership** (Co-Leads: Murchie, Paranjothy)

- Create a critical mass of researchers and focus on health determinants through the AHDRC and use that focus to ensure sustained engagement of key stakeholders, partners and collaborators. Co-develop the AHDRC health determinants research programme in partnership with CPA, the community, academic collaborators and stakeholders.
- Ensure commissioning support for multidisciplinary health determinants research.
- Plan for the sustainability of a research active culture and supporting resources beyond the life span of the award.
- Develop robust research support infrastructure within ACC to support the management and administration of research projects, applications and awards and the career development of ACC-employed research staff.
- Equip the AHDRC team with the leadership skills and opportunities for working in a multiagency environment.

## **2. Generate evidence to support decision-making and the translation of evidence into practice (Co Leads: Paranjothy, Mackie)**

- Curate /undertake evidence reviews aligned to the agreed research programme.
- Lead and facilitate the development and submission of research bids to funders to undertake innovative research addressing the evidence gaps in each priority area.
- Work with stakeholders and the public to co-produce interpretation and framing of key-messages from research and evidence reviews for different audiences, understand the requirements, enablers and barriers to implementation.
- Create an atlas of health inequalities and its determinants, including a library of qualitative interviews capturing lived experience narratives.

## **3. Build an enabling research eco-system (Co Leads: Murchie, Black)**

- Curate and make health and health determinants datasets accessible and ready for use in evaluation and research projects, prioritised to match the AHDRC research programme.
- Extend Aberdeen's established Trusted Research Environment (Grampian Data Safe Haven – DaSH) to provide a research environment for projects using data to understand health determinants, with interoperability between multi-agency datasets.
- Develop a single permission process for research proposals requiring data access, covering all partner organisations.
- Extend and develop our virtual data office to co-ordinate AHDRC workstreams with all partners' information and data processes, resources and governance.
- Champion open, reproducible and transparent research by creating and supporting a community for researchers and analysts working with data to share learning.
- Work closely with other UK leading data research organisations (RDS/HDR UK) to increase the visibility of AHDRC data catalogue.

## **4. Establish and promote a positive research culture and skills to support ACC members and staff to engage confidently with research, including: (Co-Leads: Newcombe, Murchie)**

- Generating the questions that require exploration to shape and drive forward the research agenda in a way that is locally relevant.
- Understanding and meeting skills needs.
- Training practitioners and community workers in research methods including quantitative and qualitative analysis and to participate in multidisciplinary research and evaluation.
- Training frontline community workers and citizens to undertake qualitative interviews to collect data on lived experiences as they relate to health determinants and inequalities.
- Using research outputs to inform effective action.
- Championing the application of existing research evidence relating to health and health determinants and facilitating research literacy across partners and stakeholders.

## **5. Involve and engage stakeholders and the public in all our activities (Co-Leads: Wylie, Martin, Belfiore)**

- AHDRC activities are embedded within ACC and partners' existing community engagement and involvement arrangements.
- Public involvement and engagement activities (PPIE) are innovative, flexible and inclusive.

- Stakeholders, including underserved communities and groups, are engaged through innovative and creative, arts-based approaches to ensure maximum levels of participation.
- There is full and meaningful collaboration with and between the diverse communities and groups within the city on all AHDRC activities.

## 6. Establish and deliver a knowledge dissemination plan of the learning arising from the AHDRC (Co Leads: Mackie, Wylie)

- AHDRC outputs will be used to inform planning and decision-making, ensuring delivery is targeted in a manner appropriate to the receiving audience.
- AHDRC outputs will include consideration of how evidence can be applied to practice to support its use by practitioners.
- Experiential learning PPIE workstreams are used to contribute to the evidence base relating to research engagement and “what works” in translating research into practice.
- Wider professional and academic engagement throughout the programme will be sustained through the development and implementation of real-time knowledge exchange / updates using digital platforms in line with an agreed communications plan.
- AHDRC findings will be presented at professional and academic events / workshops / conferences across Scotland, the UK and internationally. These will inform submission of research findings into peer-review journals.
- A curated AHDRC learning hub will be created during the programme and established and sustained to support ongoing activities.

## 3. The Wider Determinants of Health in Aberdeen

### 3.1 The Local Socio-economic Context

Many of the **challenges confronting Aberdeen are consistent with those currently facing cities and regions across the UK** and elsewhere, relating to the transformation of work and social life generated by the digital revolution and global pandemic, the impact of climate change, concerns around housing and environment, the evolving infrastructure and economy of cities and, critically, the inequalities and insecurities associated with a range of health and social issues, some of which are already evident or likely to emerge in future. Energy transition is also having a substantial impact on Aberdeen, as the ‘Oil Capital of Europe’. This needs to be understood and managed, including how energy transition might be confronted in a city with a historically high reliance and employment in an evolving and increasingly turbulent energy sector.

Until recently Aberdeen’s oil bounty had rendered the city particularly affluent in UK terms. Belying its affluent image, however, wealth flowing from oil has been very unevenly distributed, with highly affluent city areas bordering areas of significant deprivation (SIMD 20). [8] **Communities with low incomes are now facing further challenges** due to the unprecedented fall in the value of government social assistance remittances that many have relied on, wholly or partially, for their household incomes, to meet the higher costs of living associated with food, fuel and other costs since the end of last year.

Recent oil sector retrenchment has entailed that the **City has recently had to confront issues around its sustainability**. A rise in oil sector redundancies has produced ‘new poverty’ amongst growing numbers of formerly highly paid workers. **Deprivation has begun to extend more widely**, with food banks emerging in formerly affluent areas and local charities noting increasing calls for assistance, as a scenario predating COVID 19. There are also concerns around a potential outflow of young people from the area exacerbating a longer-term demographic shift.

**Local policymakers are now heavily engaged in reorientating the energy industry towards renewable and decarbonised energy as well as decommissioning, together with diversification towards tourism and other areas of economic potential.** While there is room for optimism, how far this might replace oil and gas, and can be managed to benefit the majority of citizens, will require considerable exploration and planning. At present, due to the unanticipated

impact of the war in Ukraine, there are indications that the UK government is contemplating setting aside pressing climate concerns to revive North Sea oil and gas production in response to sanctions imposed on Russian fossil fuel output. However, while this may provide a short-term hiatus in terms of Aberdeen's economic downturn, how sustainable this is in the medium term and beyond is an open question, as political pressure around environmental concerns and the move towards renewables is unlikely to see this provide a longer-term solution to the region's economic problems. The war in Ukraine is compounding an already challenging local outlook where pre-existing and exacerbated household level **food insecurity experienced due to the pandemic and its wider impacts look set to be further exacerbated** by consequent global food, fuel and fertiliser shortages. [9]

Given the above, and the likelihood of ongoing social and economic turbulence, there are **evident challenges around physical and mental health, wellbeing, social tensions** and the lived experience of communities most exposed to the risks emerging from this climate of uncertainty. On this point, while economically divided, Aberdeen has also grown more ethnically and culturally diverse creating potential for further social fracturing should intersectional inequalities fail to be adequately understood and addressed. The 2011 Census showed that, 82.9% of the Aberdeen City's population classified their ethnicity as 'White - Scottish' or 'White - other British', compared to 91.9% in Scotland.

Overall, the fact that this region is experiencing such a confluence of significant drivers of change simultaneously suggests that this area might readily present itself as a **microcosm for the exploration of a variety of social, health and wellbeing effects of rapid contemporary urban transition, in addition to the impact of the climate emergency. The AHDRC will harness the expertise across its partners and focus on what can be done to address these wider drivers of population health and health inequalities.** In doing so it will seek to generate high impact findings and generalisable insights of interest and utility to researchers, policymakers, and stakeholders across the UK and beyond.

The AHDRC will work with partners and **academic collaborators from a range of disciplines including sociology, economics, education, psychology, data science, public health, implementation science, realist evaluation, participatory action research, environmental geography, arts and culture with expertise in areas including health, public health, housing, real-estate, Just Transitions, community energy, biodiversity food and energy production, active travel, arts participation and wellbeing, socio-economic conditions, unemployment and the gig-economy** (see Upload 6 – Expert Collaborators). In doing so, the AHDRC will seek to exploit existing academic and professional capacity **to gain a better understanding of health determinants and support the translation of this knowledge into evidence-based action to improve health and wellbeing.** A first task will be to crystallise the key questions relating to the health determinants associated with the priorities identified by the City (see table below) and develop the AHDRC health determinants research programme (AHDRC Workstream 2).

Effective action on health determinants will require an in-depth understanding of our communities and the needs of disadvantaged groups including how inequalities have emerged and anticipation of future trends. The AHDRC will **produce a detailed atlas of health inequalities that documents transitional phases**, illustrating the evidence on existing and emerging impacts of inequalities on health, **including the lived experiences of communities** and sub-sections of communities whose experiences may vary depending on characteristics such as age, gender, ethnicity and sexuality. This will be enabled by developing a research eco-system that will bring together a range of datasets relating to changes in key health determinants and inequalities over time, as well as the systematic capture of the lived experiences of people in our communities to provide a greater depth of understanding. In doing so we will build and curate a set of local narratives about experiences of health, health determinants and health inequalities. To prime and drive the development of this work programme within the AHDRC, **child mental health and wellbeing and avoidable hospital presentations** have been identified as key priority areas. We are, therefore, using these **as pathfinders to ensure the ecosystem design is fit for purpose**

and to drive forward the early phase to create and test **a pathway for data mobilisation that can be generalised to support the AHDRC research programme** (AHDRC Workstream 3).

### 3.2 Addressing local health inequalities and disadvantaged communities

A community focus and partnership approach lie at the heart of the model for public health in Scotland. The Community Empowerment (Scotland) Act 2015 introduced a statutory duty of community planning, which requires public sector bodies to work together and with community bodies to improve outcomes, and to reduce outcome inequalities, on themes they agree are local priorities. Chaired by the Leader of the Council, with senior strategic representation from ACC; NHSG Public Health; University of Aberdeen; Robert Gordon University; Police Scotland; Grampian Regional Equality Council and many other partners, community and voluntary groups and representatives, **CPA’s purpose is to understand and tackle complex socio-economic drivers which impact on population health and to mitigate and prevent inequalities.**

Through alignment with CPA, the **AHDRC will be directly connected to place leadership, the key commissioners of local services and world class academic research. We will directly align the AHDRC research programme with the City’s core social, environment and economic prioritisation process.** CPA’s current strategic priorities are shown in Box 1 below and were identified through a data driven population needs assessment and extensive community involvement and engagement. Each is tackled with a focus on inequality and each is a potential determinant of physical and mental health. **The AHDRC will build on and strengthen our existing population needs assessment and root cause analysis of complex inequalities with robust and effective research to inform action to tackle the issues faced by disadvantaged groups.** The AHDRC will also build on CPA’s longstanding and well-developed engagement of citizens, communities and disadvantaged groups, extending that to participation and engagement in research (AHDRC Workstream 5).

Box 1: CPA priority areas as defined in the current Local Outcome Improvement Plan [10]

Economy	Place
<ul style="list-style-type: none"> <li>- Poverty</li> <li>- Employment &amp; fair work / energy transition</li> <li>- Upskilling / reskilling &amp; employment mobility</li> </ul>	<ul style="list-style-type: none"> <li>- Climate change</li> <li>- Active travel</li> <li>- Nature crisis / biodiversity and land use</li> </ul>
People - Children & Young People	People - Adults
<ul style="list-style-type: none"> <li>- Developmental milestones at health reviews</li> <li>- Mental health &amp; wellbeing</li> <li>- Wellbeing of care experienced children</li> <li>- Positive destinations for children</li> <li>- A child friendly city</li> <li>- Young people charged with an offence</li> </ul>	<ul style="list-style-type: none"> <li>- Criminal convictions &amp; reconvictions</li> <li>- Healthy life expectancy</li> <li>- Housing and homelessness</li> <li>- Alcohol consumption &amp; drug related deaths</li> </ul>

Whilst we are data rich in describing these challenges, the **AHDRC will grow capacity and capability to mobilise existing research evidence and utilise these data meaningfully and understand the determinants through actionable research.** CPA will work jointly with the established Grampian Public Health Research Network (GPHRN – funded by NHSG and UoA), **bringing together professional leadership, communities, stakeholders and academics with expertise in health determinants** (AHDRC Workstreams 2, 5). Through a **programme of themed seminars and workshops** we will set the initial research priorities and inform further **development and refinement of the AHDRC research programme** over the 5 years (AHDRC Workstreams 1,2,5). The AHDRC will then **deliver a suite of evidence summaries, reviews and policy briefings** aligned to the City’s priorities, drawing on the expertise of academic collaborators, stakeholders and communities to bring together the evidence base to support decision-making. It will also work with and support ACC teams to **evaluate the impact of interventions to mitigate inequalities** (Workstreams Aim 2).

## 4. Collaborations

### 4.1 Current collaborative approach for delivery of public health

In Scotland, responsibility for local delivery of public health sits with the territorial Health Board and for Aberdeen this lies with NHS Grampian (NHSG). This is different to how public health is organised in England, with local public health teams positioned within Local Authorities. The Public Health team in NHSG, led by the Director of Public Health, is responsible for improving population health, through joint working with ACC, CPA, other external partner organisations, and communities. NHSG covers the wider North East of Scotland region. The **Director of Public Health**, will be a member of the AHDRC steering group and **connect the AHDRC through strategic leadership with public sector Chief Executives in the North East Alliance for Public Health** to ensure a joined-up collaborative approach towards addressing health determinants and facilitate evolution from a health care system to a health system. NHSG are committed partners in the AHDRC proposal, with five co-applicants supporting the development of the application and the operation of the AHDRC, including, Susan Webb, Director of Public Health, Professors of Public Health, Paranjothy (joint-lead applicant) and Black who both hold joint appointments with UoA and NHSG; Phil Mackie, Consultant in Public Health working with the Aberdeen Health and Social Care Partnership (AH&SCP); and Jillian Evans, Head of Health Intelligence at NHSG. The Grampian Data Safe Haven is a partnership between NHSG and UoA, and co-applicants Wilde and Paranjothy provide strategic leadership as the Technical and Clinical Leads respectively.

There is a **long and strong history of partnership working in the City at both strategic and operational levels through CPA** and this is reflected in existing relationships between ACC, NHSG, Aberdeen Health & Social Care Partnership (ACH&SCP) and the academic sector in the area of health. Co-applicant Bone is a UoA Social Scientist and is a member of ACC'S Anti-poverty outcome improvement group, co-applicant Douglas is a Professor in Public Health at RGU and a member of CPA's Outcome Improvement Group for Resilient, Included and Supported.

The COVID pandemic has **strengthened these relationships strategically and operationally and established new ways of working** – for example, ACC (Murchie) has worked closely with NHSG (Evans) and the UoA's Centre for Health Data Science (ACHDS, Black, Wilde and Paranjothy) to produce surveillance data to assess the wider impacts of COVID. These outputs have informed shared strategic decision-making across NHSG and Local Authority partners and action to support vulnerable communities. ACC (Murchie, Anderson), ACHDS (Paranjothy, Wilde) NHSG (Black, Evans) and Police Scotland are also engaged in collaborative projects to establish a virtual data office and explore data sharing across organisations to inform action in two key priority areas - protecting vulnerable children and reducing avoidable hospital presentations. ACC (Murchie, Anderson) are also a partner in the UoA led Networked Data Lab project (Black – Principal Investigator, Wilde) on children and young people's mental health, funded by the Health Foundation. These **collaborative projects form the foundation that the AHDRC will build upon to systematically develop ACC's research eco-system, capacity and capability over the next five years** to deliver on its vision, aims and objectives.

### 4.2 Strengthening and extending our collaborations

At a strategic level, the AHDRC's vision, aims and objectives are aligned with UoA and RGU strategies. **UoA committed in its 'Aberdeen 2040 strategy' to building and strengthening its community and regional networks in order to listen to, and work with, external stakeholders to build partnerships that deliver imaginative solutions to societal and industrial challenges.** To this end UoA has embedded measurable commitments to sharing institutional knowledge and resources at all levels of its organisation including building networks across our community to foster interdisciplinary interactions between their subject research strengths, using and sharing expertise to drive new understanding. UoA have established a **dedicated Vice Principal to lead Regional Engagement and Recovery**, who is a member of CPA's Board and will also be a member of the AHDRC steering group. **RGU's renewed research strategy which**

has **Health and Wellbeing as one of four key interdisciplinary research themes and its 'sector-focussed' approach around energy, health and digital**; Vice-Principal Nick Fyfe is a co-applicant and will be a member of the AHDRC Steering Group.

The AHDRC team of UoA and RGU co-applicants **extends our operational collaborations** beyond public health and data science to include social science (Bone), policing and criminal justice (Fyfe), health services research, evaluations and evidence reviews (Brazelli), health economics (McNamee), culture, arts and social inclusion (Belfiore), public involvement and engagement (Martin, Johnstone and Poobalan). We have also obtained **commitment from academics across UoA and RGU to engage with the work of the AHDRC** through participation in workshops, seminars, research development groups and supervision for internships, MSc and PhD students. These collaborators will provide the AHDRC with expertise in areas relevant to the City's priorities as identified in the Local Outcome Improvement Plan (CPA's priorities and ambitions for the area - See Upload 6 – Expert Collaborators). The AHDRC will also have access to **expertise within the UoA Interdisciplinary Centres** on Nutrition, Health and Well-being; Data and Artificial Intelligence; Social Inclusion and Cultural Diversity; Energy Transition, Environment and Biodiversity. [11]

We have engaged with and obtained commitment from **Public Health Scotland, the Scottish Managed Sustainable Health Network (SMaSH), Research Data Scotland, The Improvement Service, Creative Scotland and the Chief Scientists' Office (CSO Scotland)** to work in partnership with the AHDRC. AHDRC partners will be members of the AHDRC Expert Advisory Group provide their expertise and networks to deliver collectively of the AHDRC aims and objectives, ensuring our activities are aligned and complimentary (see letters of support).

A key aim of the AHDRC will be to develop ACC research capacity and capability through collaboration with the academic sector and partners to **successfully bid for research grants** from prestigious external funders for the conduct of robust research studies at scale to inform the health agenda. The proposed workplan, structure and resources of the AHDRC, including shared posts and projects are all designed to strengthen these collaborative relationships over the five-year period. Leadership, expertise, capacity, systems and technology will all be shared in our **joint commitment across all partners to deliver the aims and objectives of the AHDRC**. During the first year, AHDRC will launch a series of themed research development groups, stakeholder engagement and knowledge exchange and dissemination forums continuing throughout the five-year period. These will **bring academic collaborators, partners, stakeholders, and communities together with ACC** staff to co-create innovative approaches to tackling the City's health determinants, including identification of opportunities for research and evaluation of ACC and CPA activities to inform what works in different contexts and assessing where more robust evidence could add value in aiding decision making. In doing so we expect to **generate new collaborative health determinants research projects** and bids for research funding (with ACC leading or as co-applicant) to a range of funders including the NIHR and create efficient pathways for the translation of research knowledge into policy and practice and evaluation of its impact.

#### **Strengthening collaboration with the Data Safe Haven [12]**

UoA and NHS Grampian have more than 10 years of experience of managing a trusted secure data research environment for health research. The Data Safe Haven (DaSH) is ISO accredited and an approved Scottish Government safe haven, supporting researchers analyse individual person level data in a secure way. **Through partnership with ACC, we will extend this to wrap the infrastructure and expertise around the AHDRC ecosystem.**

The AHDRC will allow us to **scale up DaSH to integrate multiagency data, linking across data systems from ACC, environmental and health data**, anonymise the data and support research teams to undertake research for public benefit. This includes developing the DaSH steering group committee into a multiagency partnership including public representatives.

The AHDRC will **develop and test secure scalable data extraction, storage, and archive methods**. Working with analysts in ACC and NHSG, we will refine, test, and apply identifier seeding methods to enable linkages to be made between different organisations' data systems, focusing on methods to securely link vulnerable populations. All staff working on data within the AHDRC will be trained in information governance for research data and trusted research environments. Workshops with ACC, NHS and DaSH data analysts will be run to **share expertise in data linkage, data security and quality assurance methods**. From each research dataset, we will **build an atlas of health inequalities and its determinants for Aberdeen City** and will share this with HDRUK and Research Data Scotland platforms.

A **Safepod facility will be installed at the UoA in 2022 and will be available for use by ACC staff and other AHDRC partner organisations**. The Safepod will enable access to large administrative datasets not currently accessible in Aberdeen (which currently require travel to external centres to access) including from the UK Data Service and Office of National Statistics and will expand the City's trusted environment infrastructure. Additional Scottish Government administrative and health datasets will be made available through the Safepod network.

#### 4.3 Collaboration to strengthen skills and a culture of research and evidence

The activities of AHDRC and the experience and expertise of co-applicants and collaborators will **facilitate capacity building and cultural change within ACC through skills development and transfer**. The AHDRC will support **ACC staff to obtain training in research and evidence-based practice by enabling access to short 30-credit courses** (UoA and RGU have agreed fee-waivers for a total of twenty places a year for ACC staff). Through our network of collaborators, we will identify suitable jointly **supervised internships, MSc projects and doctoral studentships to be undertaken in ACC**, providing a **pipeline of research trained post-graduates** with a taster of working with ACC and available to take up positions in ACC with access to support and networks across multi-agency partners. We will **enable ACC staff to gain key supervisory and mentorship experience** by working experienced HEI supervisors.

UoA will provide their comprehensive **Grants Academy research support training programme** to ACC staff, alongside UoA staff, enabling further links across the organisations. ACC staff will be provided honorary status with UoA enabling access to academic services, facilities and multi-disciplinary seminars and workshops. We anticipate that **collaborative working on a series of projects and learning from this process will strengthen relationships** with partners and evolve to a position where we progress towards **operating as a sustainable multi-agency entity that generates impactful health determinants research**. These strengthened collaborations will address an urgent "real world" need for understanding and do so in a way which **builds permanent foundations for ACC and CPA to embed research and evaluation into systems of decision making**. Key to this, the AHDRC will enable access to timely, credible, and relevant research and provide the skills for it to be appropriately understood and used.

#### 4.4 Approach to Collaborative Working

The joint working arrangements of the ADHRC will be set out in a Framework Agreement, to be in place between the applicant parties ahead of the start of the award. This Agreement will set out the key principles of the collaborative working in accordance with the NIHR terms of funding, including:

- Responsibilities for the administration of the award including distribution of funding, financial management and reporting;
- Governance structures and standards for the ADHRC, including the remit and composition of oversight and management groups and reporting and escalation structures;
- Management of any ADHRC materials intended for public access, including media releases, policy papers, publications and ownership and rights to access of any ADHRC outputs
- Tasks and responsibilities of each party.

An AHDRC Data Management Agreement will be arranged between the parties – and, if necessary, updated once the permissions pathway for data permissions in year 1 has been finalised. This will build on Information Sharing Protocols already in place and signed by partners. The agreement will set out the principles regarding information security and organisational technical measures, protocols for the storage location, curation, and governance of access to AHDRC data, training requirements of staff or students of any party handling personal or sensitive research data, data approval pathways and data protection roles and responsibilities.

#### 4.5 Collaboration milestones and success measures

During the first six months we will hold a **stakeholder engagement session** to introduce the AHDRC aims and objectives, and gain stakeholders input into shaping our work programme. This will be followed by a **series of stakeholder engagement events** (2 - 3 annually). By the end of Year 1 we will have launched 2 **research development groups** with a further three per year for the next four years. Through the work of the research development groups we intend to submit 2 **research funding bids** in Year 1 and increasing this to 3 – 5 per year in subsequent years. Initially, these are likely to be led by an HEI partner with ACC co-applicants, but ultimately, ACC will lead bids. We are already working to identify funders and calls to target in Year 1.

The success of our collaborations will be measured as part of our plan for a built-in evaluation (details below). Specific success measures relating to collaborations will include (i) **the number of collaborative research bids** submitted for funding with ACC staff either leading or as a co-applicant, (ii) **number of internships, MSc and doctoral research projects jointly supervised** by ACC staff and academic collaborators, (iii) number of **MSc and post-doctoral students who take up employment in ACC**, (iv) number of **ACC staff involved in the delivery of undergraduate and post-graduate taught programmes**, (v) successful **annual health determinants dissemination events** delivered in collaboration with partners with evidence of reach of participants across the UK and internationally.

### 5. **A Sustained Culture of Research and Evidence within the Council**

#### 5.1 Actions to support a research active culture

The AHDRC will establish and promote a positive research culture that supports elected members and staff at all levels to engage confidently with research and enhance the use of research evidence. It will build a **strong, active and visible multi-disciplinary research team in ACC** connected with academic partners and actively co-delivering a programme of research support activities including:

- i. informal **research support network events, debates and research cafes** to enable staff across the AHDRC and partners to share their experiences in a supportive environment and discuss how to access research training appropriate to their needs;
- ii. **'research and evaluation clinics'** – ACC teams can book slots with AHDRC research staff to get support with using research in their work (e.g. support with finding relevant evidence, interpretation or planning evaluations) or discuss how to access research training;
- iii. **'practitioner fellowships'** – where ACC staff are provided with protected time to undertake a specific research project over a 3 – 6-month period, with supervision and mentorship from an academic with relevant expertise in the AHDRC network of academic collaborators;
- iv. an **annual dissemination event** for all persons, groups and organisations including communities, private and 3<sup>rd</sup> sector, other local authorities, researchers, elected members, and individuals. The purpose of the event is to tap into public reason, share learning and research, build collaborative networks, and build relationships new/old and to identify new areas of research relevant to health determinants;
- v. a **virtual learning hub** with resources relating to research activities available to all online;
- vi. a **research 'champions forum'** will be set up where learning can be shared, and questions raised, and answers given.

At a systemic level **within ACC, work is underway to explicitly include research principles within the ACC's Workforce Strategy**. Through this, research related knowledge, skills and behaviours will form a part of the workforce capabilities framework; and, where appropriate and not already embedded, research values, attitudes, skills and behaviours will form part of recruitment and selection processes, attracting those that already have the values and fit we need. The ACC's Chief Officer for People and Organisational Development, Newcombe, is a co-applicant for the AHDR and will lead on this (AHDR Workstream 4).

Key to strengthening the culture is credibility and the AHDR will adopt the UK Research Integrity Office's (UKRIO) Code of Practice for Research, fostering and promoting honesty, rigour, transparency, open communication, and accountability in all our activities and ensuring the care and respect for all participants. The AHDR will facilitate training in Good Research Practice for ACC staff by providing access to training resources already available in the UoA.

## 5.2 Success Measures

We will measure progress towards embedding a research active culture in ACC by:-

- **undertaking knowledge and practice surveys** at baseline and two subsequent waves over the five year period, to measure shifts in the skills and research awareness of staff
- the **number of ACC staff accessing training**, completing practitioner fellowships, and actively participating in research programmes on health determinants
- examining the extent to which **ACC and CPA strategies, plans and programmes of activity are rigorously evaluated** with support from the AHDR

## 5.3 Summary of cultural shift and capacity and capability building supported by AHDR

Individual	<ul style="list-style-type: none"> <li>○ A calendar of annual training opportunities for ACC staff, curated by the AHDR Centre Manager, working with ACC People and Organisational Development team and informed by needs assessment. Training will include access to existing sessions run by the UoA, with ACC staff participating alongside UoA staff in UoA's Grants Academy and Research Bites events. Bespoke workshops/sandpits will be delivered in priority areas, including, but not be limited to: identifying funding calls; research application development; constructing a budget; research project management; data management plans; Good Research Practice and promoting and maintaining a positive research culture.</li> <li>○ Training in, and knowledge sharing for, the research eco-system, including use of the safe haven, embedding the principle of sharing learning in contracts for partnering with AHDR for research.</li> <li>○ Training practitioners and community workers in research methods.</li> <li>○ Training frontline community workers as peer researchers to build their ability to undertake narrative reviews and document lived experiences.</li> <li>○ Supporting leadership skills for working in a multiagency environment.</li> <li>○ Initial scholarships – i. 4 PhD studentships for doctoral research aligned to agreed AHDR research priorities, ii. 20 MSc places per year for ACC staff covering data science and public health, iii. "practitioner fellowships".</li> <li>○ Opportunities for ACC staff to undertake internships with partner organisations such as NHSG and Public Health Scotland.</li> </ul>
Organisation	<ul style="list-style-type: none"> <li>○ Workshops / training for professional services research support functions at ACC will be delivered by counterparts from research finance, HR and research development in the UoA and in areas including research finance accounting and financial reporting, research contracts, career development, grant application support and funder engagement. Role shadowing and a mentorship / buddy system will be established.</li> <li>○ Research, intelligence and evidence led work, becomes part of the formal governance structures and permissions 'gateways' of ACC and CPA.</li> </ul>

	<ul style="list-style-type: none"> <li>○ Research values, attitudes, and behaviours form part of recruitment and selection processes, where appropriate, to attract those that already have the values and fit that we need.</li> <li>○ 'Becoming Intelligence Led' is a key theme within our capability framework and so research skills become part of continuous professional development and form part of workforce capabilities framework.</li> <li>○ To build a critical mass of capability in research techniques, knowledge transfer activity will be built across ACC's 500 strong Leadership Forum.</li> <li>○ Working in a matrix way across functions multi-agencies become part of ACC's leadership development offering.</li> </ul>
Networks	<ul style="list-style-type: none"> <li>○ AHDRC activity will permeate CPA and be an interface between communities, research, policy and real world improvement.</li> <li>○ Mutual peer development across all AHDRC partners, supporting learning from experiences.</li> <li>○ A common purpose and regular joint working with the substantial network of academic collaborators.</li> <li>○ Formal and informal relationships and shared activity with Scottish Government, Public Health Scotland, Research Data Scotland, Creative Scotland, The Improvement Service and others (and the structured engagement through the AHDRC Expert Advisory Group).</li> <li>○ Dissemination events, regular workshops, seminars, cafes.</li> </ul>

## **6. Patient Public Involvement and Engagement (PPIE) Strategy**

By design and from day one, people will be at the heart of an inclusive, accessible, and ethical AHDRC. We have described in detail (PPIE Involvement section on REALMS) how we have involved members of the public and incorporated their input whilst developing the proposed project. Their key insights have helped to shape the future direction of the AHDRC's strategy of involving community partners and members of the public.

The AHDRC's PPIE strategy includes building on the mature and long-standing engagement arrangements, protocols, governance, and networks already in place across the Aberdeen City Council (ACC), the Community Planning Partnership and AHDRC partners. The ACC has strong links with schools, young people, equality and diversity groups and specific local communities within Aberdeen City. The ACC also regularly engages with a city-wide Civic Forum, a well-established citizens panel of over 1,000 members, and Local Empowerment Groups. The AHDRC will also benefit from existing networks and involvement activities that partner organisations bring to the AHDRC, e.g., the University of Aberdeen School of Medicine, Medical Sciences and Nutrition has existing PPI groups, links to the NHS-Grampian Engagement and Participation Committee, and Public Engagement Research Unit.

We will forge new relationships and create new PPIE networks to better support people's ability to collaborate in the AHDRC fully and meaningfully. The AHDRC will embed community representatives at all levels throughout the Community Planning Partnership, including those with lived experience, to change current practice. This will facilitate and contribute to building and enhancing the range and depth of research within Aberdeen. The AHDRC's strategy, with the support of UoA's Interdisciplinary Centre for Social Inclusion and Cultural Diversity (Director co-applicant Belfiore), is to explore creative and participatory approaches to inclusive knowledge translation targeted at younger citizens, refugees and migrants, and other groups who might be less likely to engage with more traditional or formal means of research communications.

Together with our community co-applicants, we have discussed an initial public engagement strategy for the AHDRC, which will be further refined and co-created by the public advisory group and members of the public. We propose using a range of media, include print, radio/podcasts, project website, and social media to create AHDRC related content from which research-related

conversations can flow in the community. We will organise AHDRC activities to coincide with community-wide events hosted by ACC and partners to engage with diverse audiences. We will commission local artists to use their talents to undertake projects that represent health, inequality and value of research and publicly display their works of art. We would like to undertake engagement activities at local primary and secondary schools to highlight research and related careers and envision a series of competitions for student teams to identify a local health problem and solution. In addition to traditional academic dissemination, we will work with our community partners to ensure all academic publications have accompanying lay summaries featured on the AHDRC website. Alongside our community partners, we also will create a communication strategy early in the project. We will regularly distribute an electronic newsletter to keep AHDRC partners and Aberdeen-based organisations up-to-date on involvement opportunities and projects.

The AHDRC PPIE strategy also includes capturing where and how contributions involvement and engagement activities have an impact on the ACC and AHDRC. We seek to identify those moments where community co-applicants, public advisory group members, and the public influence or change the course of action for the project. We will be guided by behavioural theory (e.g., engagement ladder theory, ADKAR model for change management, stages of change) to monitor how ACC staff, community partners, and members of the public develop through this process. We will collect both quantitative and qualitative data to explore and evidence such change. We will actively reflect on meetings, conversations and activities undertaken, document examples throughout the project, and collate into an impact report for the project end.

## **7. Leadership and staffing structures**

Aligning the AHDRC with CPA, ensures that it will be **fully embedded into the leadership and structures of the City**, not just ACC. The agreed AHDRC research priorities will be the City's priorities. Research will be both determined by and actively used by ACC and CPA. We wish to re-emphasise the importance of our existing partnership arrangements to influencing health determinants. The commitment from all partners to jointly improving health and reducing inequalities is in place and will be fundamental to the ultimate success of the AHDRC. Operationally, the AHDRC will be under the responsibility of the Director of Commissioning for ACC. The Director of Commissioning chairs the CPA Management Group and has lead responsibility for commissioning all ACC services. To oversee the operation of the AHDRC, the Director of Commissioning will chair and be supported by a multi-agency AHDRC Steering Group, including senior representation from UoA, RGU, NHSG as well as community representation.

During the first phase 6 months, and prior to the appointment of a full time Director, the AHDRC will be co-led by Murchie and Paranjothy, ensuring that it is set up and launched and on course to deliver its aims and objectives on time and within budget. They will be supported by a full time ADHRC Centre Manager based in ACC for day to day progress and monitoring of the ADHRC, as well as an ADHRC Executive Management Group (EMG) comprising the co-applicants who have responsibility for leading on delivering AHDRC workstreams (see section on expertise and contributions to the AHDRC). The EMG will meet weekly in the first instance until the AHDRC is set-up and launched (first 3–6 months) and then tapering the frequency of meetings to settle into a rhythm of meeting every 4–6 weeks. The EMG will be convened by the AHDRC co-leads and clerked by the Centre Manager. It will report monthly to the Steering Group to ensure smooth set-up and launch of the AHDRC and regular monitoring and review of progress against milestones and objectives. The AHDRC Centre Manager will deal with operational queries, and maintain the training programme and external funding bid schedules. An ACC MS Teams site to support the development of the AHDRC application has been very effective in enabling joint working between the parties and this vehicle will be maintained and developed further by the ADHRC Centre Manager as the main repository for AHDRC documentation. Sensitive or confidential documents will be controlled through managing permissions access.

UoA will support ACC to **develop the ADHRC multi-disciplinary Research and Development (R&D) team**, experience and skills for research management. UoA will support the recruitment of the AHDRC research fellows and analyst to be based in ACC by co-developing suitable job-descriptions, advertised in appropriate multidisciplinary academic and professional networks. The AHDRC research team will receive ongoing academic mentoring from UoA to support them in their continuing professional/academic development and access to academic facilities.

## **8. Governance and management structures**

There are two parts to the proposed AHDRC governance, firstly in ACC, secondly, through CPA.

- Aberdeen City Council is the lead applicant, the contracting partner and will have accountability for the operational management of the AHDRC. This requires both line management and elected member oversight. The Director of the AHDRC will be line managed by the ACC's Director of Commissioning who, in turn, is responsible to the Chief Executive and to elected members through the Council's Strategic Commissioning Committee.
- The strategic priorities of the city, however, are shared with our communities and partners through CPA. It is vital, therefore, that the development of the AHDRC work programme responds to these broad priorities and the research needs of the Partnership. The AHDRC work programme will be submitted to the CPA Board for agreement. Regular performance / progress reporting will be presented to the CPA Board to align with reporting to NIHR.

## **9. Justification of costs**

Supported by our accounts department, and the research finance functions of our academic partners, a comprehensive costing has been calculated based on the resource identified in the proposal. A detailed breakdown, including explanation of the co-applicant and post %FTEs, is set out in the 'Justification of Costs' section of the NIHR application form. The cost increase from the EoI is largely due to the addition of ACC costs for key functions identified as essential to support the setup and management of the ADHRC. To build capacity and ensure sustainability the Stage 2 bid now includes costs for additional ACC applicants directly involved in delivery roles and for professional service functions (HR, accounts and legal) required for administration and management of the award.

Aberdeen City Council: (£3.55M) of this: Salary costs (£3.34M) comprising: co-applicant time to lead delivery of work programmes; Director and administration - the ambition and scope of the ADHRC will require a full-time director (until Director is appointed (month 7) this function will be provided by Murchie and Paranjothy) and a full-time centre manager and administrative resource to support the Director with operational and project management; professional services support (HR, accounts and legal); Promotion & Engagement Coordinator to manage links with CPA and deliver stakeholder & PPIE activities; Information Governance Officer and Data Engineer for data management and analysis; and 3 research fellows to undertake evidence synthesis, evaluation and health economics work programmes. Non-salary costs (£216K) comprising: dissemination for promotion and networking through an annual dissemination event and attendance at conferences, travel budget to enable mobility and participation in ADHRC events, laptops and audio recorders for researcher and data posts, printing for conference and planned written communication materials, external facilitated training, delivery of 2 lived experienced studies including transcription and output costs, translation budget and budget to support PPIE activities (£63K).

NHS Grampian: total £426K comprising 3 co-applicants' time to co-lead work programmes, Senior Analyst to work on the research ecosystem workstream and Public Health Researcher to contribute to the AHDRC programme of evidence reviews and built-in evaluation. Robert Gordon University: total £36K (100% fEC) comprising 2 co-applicants' time to co-lead work programmes. University of Aberdeen: total £1.19M (100% fEC) comprising 8 co-applicants' time for Joint-lead of AHDRC and to co-lead work programmes; Information Security Officer, Data Analyst and Research Coordinator to undertake Data Safe Haven training, data management, data linkage and analysis; evaluation expertise for self-evaluation of the ADHRC against Objectives, lived

experience coordinator to provide training to community workers to undertake interviews and curate outputs, public health researcher to work on supporting research development groups and write bids for research funding. Laptops for researcher and data posts, software licence, data storage & archiving costs to support data management requirements.

## **10. Other sources of funding support**

The AHDRC will draw on support from the Grampian Public Health Research Network (GPHRN), which has a research fellow in public health and a research fellow in epidemiology jointly funded by NHSG and UoA to facilitate and support public health research and evaluation. GPHRN is based at the UoA ACHDS and will work with the AHDRC to deliver on its Health Determinants research programme. NHSG also fund an evidence review service, which will provide expertise in literature searching to support the AHDRC research and development team in conducting evidence summaries and reviews.

Our HEI partners (UoA and RGU) have agreed to provide support to facilitate research capacity and capability building in ACC as outlined in the building resource, capacity and research culture section above. In addition, UoA and RGU have each committed to providing ten places (total n = 20 per year) on MSc 30-credit short courses in areas relevant to health determinants, public health, data science, research methods and evidence-based practice, two PhD studentships each (total n=4) aligned to the AHDRC research areas and facilitate a programme of practitioner fellowships.

The AHDRC will also generate new collaborative bids for research funding to address health determinants (with ACC leading or as a co-applicant) to a range of funders including The Health Foundation; NIHR PHB Response Mode; Chief Scientist Office of the Scottish Government; arbdn Financial Fairness Trust (previously Standard Life Foundation); Joseph Rowntree Foundation; Nuffield Foundation; ESRC (UKRI) as well as small grant funding bids to develop pilot data and extend network development through internal UoA funding and NHSG Endowment funds. As some of these funders have not historically supported bids led or involving councils, we have started to approach the funders to confirm ACC staff will be eligible to apply. If the ADHRC is funded we intend to take active steps to initiate building positive engagement with key funders, by providing background on the ADHRC objectives of becoming an effective research active organisation, to set the scene for our future planned bids.

## **11. AHDRC Plan for Built in Evaluation**

We have planned a built-in evaluation to assess the AHDRC's structures including forums for stakeholder and public involvement and engagement; translation of evaluation findings, research outputs and evidence reviews to policy and practice; how policy makers and practitioners use the research to deliver change; and identification of lessons learned. We use the term policy makers to refer to elected councillors, council officials and multi-agency non-executive and executive partners, recognising that all have a role and stake in policy making in a complex environment, but are subject to different sets of intrinsic and extrinsic factors and influences in their determinations of the value and utility of information and evidence in policy making decisions.

The evaluation will take a participatory approach, focussed on joint learning on whether and how the AHDRC achieves its aims, and what can be learned and shared with other AHDRCs and similar settings. We will develop a realist-informed theory of change as part of a broader collaboration with other stakeholders during Year 1. This theory of change will draw on our logic model and consider the challenges and the expected causal pathways for addressing them, including change mechanisms and their underpinning assumptions, and desired outcomes. The expected causal pathways will be discussed with stakeholders as part of our programme of stakeholder engagement events. We plan to have three participatory action research cycles, during years 2, 3 and 4, with each cycle leading to refinement of our theory of change model. The evaluation will draw on a wide variety of perspectives and data, supplemented by in-depth interviews and workshops at the end of each cycle to probe the different domains, understand

changes to the positions of different actors within the local system and feedback into improved learning and action in the next cycle. We have costed in the resource for this evaluation that will be carried out by D'Ambruoso, an expert in realist evaluation and participatory methods at the Aberdeen Centre for Health Data Science, supported by a Public Health Researcher at NHSG.

## **12. Equalities, Diversity and Inclusion**

CPA's city vision is "*A place where all people can prosper*" regardless of their background or circumstance. By being aligned to the CPA, the AHDRC will fundamentally support evidence-based policy making where the primary focus is reducing inequalities. Co-applicant Wyllie will lead EDI to promote fairness and embed diversity in all AHDRC activities. The AHDRC will be building on existing community involvement, engagement, and participation arrangements with well-established representation of diverse communities of geography and of interest. This includes Grampian Regional Equality Council as a fully participating member of CPA. Institutionally, ACC has the policies, practices and representative forums expected of any local authority, as well as full time equalities officers to provide support and advice. Our application includes costings for using ACC's existing interpreting and translation service. Our partner organisations also have policies and processes in place to progress the advancement of equity, diversity and inclusion across all aspects of their activities. UoA's Equality and Diversity Policy statement and code for students and staff promotes a culture of dignity and respect. UoA's Equality, Diversity & Inclusion Committee oversees EDI activities. UoA holds an Athena Swan Bronze award and is a signatory to the Advanced HE Race Equality Charter and are active Stonewall Diversity Champions. UoA's Staff LGBT Network Group was shortlisted for Best Network Group by the *Equality Network* in Scotland. The University is accredited as 'Disability Confident' and strives to ensure that disabled staff and students can work and study in an inclusive, accessible, and supportive environment. At least 50% of NHSG's workforce is multicultural and NHSG has an ongoing programme to advance the equalities agenda, ensure a diverse workforce is supported and increase awareness and understanding of the impact of racism and discrimination. This includes the introduction of a Race Equality Champion, and an Inclusion and Engagement Advisor, complimenting an Equality and Diversity Manager, a Staff Equalities Network and a 'Grampian Empowered Multicultural Staff' Group. Recruitment and in work policies are examined to ensure they do not lead to discrimination, identifying areas of underrepresentation, and advocating for measures to rectify this, including 'positive action' where appropriate. We are also developing an evidence base and scrutinising data which highlights where discrimination exists, ensuring that Senior Leaders lead by example and that equality and inclusion is at the heart of all of NHS Grampian's strategic objectives.

## **13. Outputs, Dissemination, Generalisability and Communication**

### **13.1 AHDRC Outputs**

- A 5-year Health Determinants research strategy, aligned to the priorities of Community Planning Aberdeen Partnership and agreed by stakeholders. This will include a prioritised research plan for the AHDRC. [Workstreams 1 & 2]
- Programme of seminars and workshops on health determinants to stimulate new approaches and research on health determinants (4 in Year 1 increasing to 6 in Year 2 onwards). [Workstream 2]
- A programme of formal, resourced tests of change underpinned by research and evaluation. [Workstream 2]
- A suite of evidence reviews that address health determinants priorities – 2 to 3 per year. These will be used to inform decision making by CPA Board and Management Team, as well as provide summaries of the evidence and implications for policy and practice to wider audiences working with health determinants and inequalities. [Workstream 2, 5, 6]
- Policy briefing papers co-produced with stakeholders – 2 to 3 per year. [Workstreams 2, 5, 6]
- Publications in peer-reviewed journals (ACC staff as lead or co-authors). [Workstream 2, 3, 5]

- A pipeline for development and submission of research bids to funders to undertake innovative research addressing the evidence gaps of health determinants. 2 to 3 bids for research funding initially submitted per year, increasing to at least 4 to 5 per year by year 5, with ACC staff as lead or co-applicants. [Workstream 2, 4, 5]
- Presentations promoting and sharing learning from the work of the AHDRC at relevant conferences, workshops and meetings e.g., Annual Faculty of Public Health conference. [Workstream 6]
- Prioritised health and health determinants datasets catalogued and made ready for use in evaluation and research projects by researchers through the Grampian Data Safe Haven, with record-linkage to health and other bespoke datasets as appropriate. [Workstream 3]
- Atlas of Health Determinants for Aberdeen and a wider multi-agency data catalogue [Workstreams 2 & 3]
- A curated, discoverable library of qualitative interviews capturing lived experience narratives [Workstream 2, 4]
- Access to and use of an established secure research facility for findable, accessible, interoperable and reusable curated data for health determinants research; [Workstream 3]
- A single permission process for research proposals, with aligned information and data processes, resources and governance through a virtual data office; [Workstream 3]
- Accessible platform to share algorithms and code along with outputs. [Workstream 3]
- A calendar of annual training opportunities for ACC staff. [Workstream 4, 5]

### 13.2 Dissemination

Our dissemination strategy will communicate the work of AHDRC, research findings and champion the use of research in decision-making by Local Authorities. A dissemination plan will be developed and refined during the first three months and implemented collaboratively between partners, the corporate users of evidential outputs from the AHDRC, and the people and places of Aberdeen whose health will be the focus of the AHDRC. It will be informed by our stakeholder and public involvement and engagement activities. Timelines for key dissemination activities will be aligned to the timing of AHDRC activities and delivery of key outputs. Our approach will use established and new formal and informal communication channels. For example, 'City Voice', software simulators, community and residents' groups, social media platforms, special interest groups, social networks, elected members surgeries, community events, newspaper articles and stories, workshops, meetings etc. This is a mix of communication channels and interpersonal social networks to promote awareness of the AHDRC and build a research community that shares experiences and learning through discussion of successes and failures. A dedicated AHDRC website and social media presence to support the sharing of outputs, linked to a repository of outputs, reports and resources for evidence-based practice. These will include 'how to' guides on topics such as survey design, qualitative interviews, data analysis pitched at different levels, to meet the requirements of the different stakeholders (e.g. community groups, ACC teams, etc).

### 13.3 Generalisability, transferability and active learning

Whilst our work programme will be designed to address the City's priorities through a health determinants lens, we will seek to **ensure that the work and outputs of the AHDRC are generalisable across similar settings by engaging with stakeholders**, including other Local Authorities and organisations that have a pan Scotland/UK remit as appropriate. The AHDRC will **champion research and development with other local authorities** in Grampian, across Scotland and the UK. This will be achieved through our **formal programme of stakeholder events** and with our network of stakeholders as we engage them in scoping specific projects and discuss the interpretation and implementation of findings. Where relevant we will seek to ensure our **outputs and policy briefings set out how our findings are transferable to different contexts**, informed by discussions with our stakeholder networks. Our programme of informal research support network events, debates, research cafes, 'research and evaluation clinics', annual dissemination events and research champions programme are all designed to support

active learning. Our plans for a **virtual learning hub will provide a range of resources** including 'how to guides' for various research methodologies to support the use of research for decision making as well as evaluation methods for use by teams in ACC with support from the AHDRC.

#### 13.4 Stakeholder engagement and communication

We have developed an initial stakeholder map which will be reviewed as the AHDRC evolves over the 5 years. We will draw on the wider expertise available through our network of academic collaborators and stakeholders, including Public Health Scotland, Research Data Scotland, the Scottish Managed Sustainable Health Network (SMaSH), The Improvement Service and Creative Scotland to further develop our stakeholder map during the first three months of the AHDRC. Our programme of stakeholder engagement events is designed to obtain input into shaping our work-plan, scoping specific projects and evidence reviews to ensure the work we produce is grounded and of relevance, discussion of findings to co-produce interpretation and framing of key-messages for different audiences. These activities will support the AHDRC to produce targeted outputs that are in an appropriate format and accessible and useful to a range of audiences e.g. elected members, public, third sector organisations, CPA Board and Management Group, local and national policy makers (e.g. Convention of Scottish Local Authorities), Public Health Scotland and the relevant departments in Scottish Government. Co-applicants Wyllie and Belfiore will lead the development and delivery of our stakeholder engagement plan and activities.

#### 14. **Barriers for long-term impact**

Having assessed our local circumstances, as well as analysing the output from the 14 NIHR Local Authority Research Systems projects commissioned in the summer of 2020, we have identified the following barriers and related mitigation.

**Barrier:** The political and commissioning cycles of government and local authorities are dynamic. Resources are often allocated at short notice and with restrictions on how and when it can be used. Decision making, therefore, can be reactive with little time to commission or even consider research.

**Mitigation:** By connecting the work programme of the AHDRC to the long-term strategic priorities of the city we will ensure that the research priorities supported by the AHDRC answer the critical long-term strategic questions. We will build a bank of research which is permanently available, accessible and updated. The growth of a research active culture and the discipline of strong research aware governance will ensure decision makers consider the available research.

**Barrier:** In a political environment research and evidence can conflict with political commitments and philosophy.

**Mitigation:** In Aberdeen, Community Planning is a long-term strategic undertaking with elected members from all political parties. The evidence-based priorities have been systematically adopted into partners' own organisational plans. There is a shared long term, cross party and cross organisational city vision, minimising potential conflict with short term political commitments.

**Barrier:** It is clear from the 14 NIHR Local Authority Research Systems projects that a lack of local authority time and resource is a significant and common barrier to becoming research active.

**Mitigation:** The AHDRC is key to unlocking capacity and capability through a stronger awareness and culture which understands the value of research, making it an inherent part of analysis, planning and decision making. The AHDRC will directly provide resources e.g., a literature / rapid evidence review service; a curated research library; and will develop and deliver a programme to upskill non-researchers.

**Barrier:** The availability of research ready health and health determinants datasets. All aspects of data and information management can be barriers to research. The AHDRC will support research in complex issues which require a mix of data, held in diverse ways by many organisations, for different purposes. There are many access, quality, interoperability, legal and ethical challenges.

Mitigation: Given the importance of information and data in supporting research, the Council's Chief Officer for Data & Insights has been integral to preparing these proposals and will be key to delivering the AHDRC. The Council is already working closely with partners on information and data management and is at the forefront of data sharing collaborations e.g. suicide; preventable drug related deaths; avoidable emergency presentations; etc. The AHDRC will include resource and expertise which will mitigate information and data barriers by putting in place systems for data management, information sharing and data ethics. These will build on and leverage the significant assets already in place across partners, including ACC's Data Office and ACHDS and DaSH.

## **15. AHDRC impact**

The AHDRC pathway to impact is summarised in the Logic Model. We anticipate that our activities and outputs will lead directly to the development of a sustainable research culture in the Council, as we progress against key stretch targets aligned to the City's priorities. Key to delivering impact from research, the governance of CPA is already in place to challenge the evidence base for policy and practice and to test theories of change and support translation and implementation of evidence into policy and practice locally. This will be complimented by our planned engagement activities with stakeholders who have a national and wider remit to facilitate wider impacts from the work of the AHDRC. In the medium term (5 years) we expect to see an increase in the use of evidence from evaluations, reviews and research activities in local decision-making, and increase in staff skills for evidence-based practice. The availability of new datasets for research and evaluation through the AHDRC's work on developing a research eco-system will provide a step change in the infrastructure available for health determinants research. This will enable new collaborative research activity that will produce new insights in to health determinants. The AHDRC's embedded programme of stakeholder and public engagement that informs all its activities and programmes of work will ensure there is a timely pathway to impact. Our built-in evaluation will provide learning about how to embed a culture of research in a local authority, what structures and processes are needed and how they enable change and the extent to which they work in different contexts. The AHDRC's activities and outputs will contribute to a coordinated system wide approach towards achieving the collective goal of supporting people prosper and live healthy lives, mitigating the harms of current and preventing future inequalities. Progress towards this goal will be tracked by the contribution of AHDRC activities and outputs towards addressing the stretch targets associated with the City's priorities. In the longer 5–10 year period, the AHDRC will have created a sustainable research culture in ACC and will be on track to becoming a multi-agency research organisation that generates evidence and translates this into policy and practice with demonstrable impact in preventing future inequalities through action on health determinants.

**16. Project timetable, Implementation and Milestones** – Reference Gantt Chart and the "Success Criteria" in this Business Plan.

## **17. Safeguarding and ethics**

ACC and co-applicants have well established processes and governance for managing safeguarding, ethical and regulatory issues relating to the conduct of research and use of data. During the initial phase of AHDRC we will put a single approval process in place for all partners.

## **18. Expertise and contribution of AHDRC delivery team**

We have put together a strong team for the delivery of the AHDRC. All ACC co-applicants are well placed to seek out opportunities for ACC to undertake research and make use of research funding through their connection with the CPA and ACC leadership and decision-making processes. UoA and RGU co-applicants bring a wide range of expertise relevant to health determinants and inequalities and strong experience of leadership in collaborative inter-disciplinary research to contribute across all AHDRC activities. ACC Lead Murchie is the Council's Chief Officer for Data and Insights who also has direct responsibility for the City's community planning and locality planning arrangements; ACC's strategic planning and improvement arrangements; all matters

relating to the management and governance of information and data; existing corporate research resources; and is a member of the Scottish Government Data Task Force Advisory Board. Paranjothy has a joint appointment across UoA and NHSG as a Professor in Public Health and Honorary Consultant in Public Health Medicine and is a co-Director of the Aberdeen Health Data Science Centre and Clinical Lead of the Grampian Data Safe Haven (DaSH), with expertise in epidemiology and a research programme focussed on inequalities in women and children’s health. Murchie and Paranjothy will co-lead the delivery of AHDR Workstream 1, supported by Newcombe (Chief Officer, People & Organisational Development), Webb (Director of Public Health) and Fyfe (Vice Principal at RGU, bringing leadership experience, expertise in policing and criminal justice research and lead on setting up practitioner fellowships). Paranjothy and Mackie (Consultant in Public Health based in Aberdeen City’s Health and Social Care Partnership and expertise in climate change and sustainability) will co-lead AHDR Workstream 2, developing the research programme for the AHDR and delivery of evidence reviews. Mackie also led the team that delivered the LPHRIAE Review for Scottish Government and the Convention of Scottish Local Authorities (CoSLA) and wrote the final report. They will be supported by Brazzelli (Reader in Health Services Research at UoA and experienced in involving communities in evidence reviews), McNamee (Professor of Health Economics with expertise in using methods such as discrete choice experiments to support prioritisation activities), Douglas (Professor of Public Health at RGU with expertise in mixed-methods research on health inequalities), Belfiore (Professor of Cultural Policy who will provide expertise on social inclusion across all AHDR activities) and Bone (Senior Lecturer in Social Science with research interests in health inequalities, member of the CPA Anti-Poverty Outcome Improvement Group, Grampian Regional Equality Council’s advisory panel and a Director of Community Food Initiatives North East (CFINE). Murchie and Black (Professor of Public Health at UoA, experienced in data science, harnessing electronic health and administrative data for research and use of data to drive quality improvement and for population health surveillance and research; a Director of HDRUK in Scotland and a member of the Scottish Government Data Intelligence Network) will co-lead on AHDR Workstream 3, supported by Wilde (Head of Digital Research and DaSH Technical Lead at UoA), Evans (Head of Health Intelligence at NHSG and Deputy Chair of NIHR HSDR Board 2013-2019), Anderson (ACC Information & Data Manager), McDowell (ACC Enterprise Architect) and Cannings (ACC Data Protection Officer). Newcombe and Murchie will lead on AHDR Workstream 4. Wyllie (ACC Transformation and Improvement Advisor), Martin (Senior Lecturer in Epidemiology at UoA, and UoA’s School of Medicine, Medical Sciences and Nutrition Lead for PPIE, experienced in qualitative methods and lived experiences work), and Belfiore will co-Lead the AHDR Workstream 5) supported by Bone. Mackie and Wyllie lead on AHDR Workstream 6, supported by Paranjothy. Wyllie will be AHDR Lead for EDI and Mackie will be AHDR Lead for Sustainability.

These collaborators will provide the AHDR with **expertise in areas relevant to the City’s priorities as identified in their LOIP (CPA’s priorities and ambitions for the area)**, including economics, socio-economic conditions, unemployment and the gig-economy, education, psychology, implementation science, realist evaluation, participatory action research, environmental geography, climate change, housing, real-estate, Just Transitions, community energy, biodiversity food and energy production, active travel, arts participation and wellbeing.

This Stage 2 application has been prepared by Murchie (ACC) and Paranjothy (UoA), with extensive input from all co-applicants. All named collaborators have also provided input. The application has been further supported by support services from all partner organisations.

***Glossary of Acronyms***

ACC – Aberdeen City Council	UoA – University of Aberdeen
CPA – Community Planning Aberdeen	LOIP – Local Outcome Improvement Plan
NHSG – NHS Grampian	RGU – Robert Gordon University
ACHDS – Aberdeen Centre for Health Data Science	DaSH – Grampian Data Safe Haven
ACH&SCP – Health & Social Care Partnership	RDS – Research Data Scotland