# Science and Health Policy Engagement Workshop Report

## 1. Introduction

The Centre for Science and Policy (CsaP) at the University of Cambridge organised a Policy Engagement Workshop in collaboration with the National Institute for Health and Care Excellence (NICE), Health Innovation East and Applied Research Collaboration (ARC) East of England on 8 February 2024.

The objective of the workshop was to introduce the work of the three organisations and provide an overview of the various ways in which researchers can engage with health policy to further the use of research evidence to inform the development of national guidelines and achieve positive health outcomes.

The recommendations drawn from the workshop aim to encourage researchers, at all career stages, from the School of Clinical Medicine and School of Biological Sciences at the University of Cambridge to consider engaging with policy and practice organisations, as a potential mechanism to generate impact from their research.

Professor Mike Kelly, an Honorary Senior Fellow at the Department of Public Health and Primary Care, University of Cambridge, opened the Policy Workshop by noting the importance of thinking about 'impact' right from the beginning of every research project. Professor Kelly prompted the researchers to think about different pathways to impact from very initial stages by remarking; "You should be thinking about who or what it is you want to influence, through your work as you develop your research questions. Who is it that will be interested in the answers to your research questions?".

## 2. NICE: Role, Remit and Overview of types of Guidance

Deborah O'Callaghan, Associate Director, Field Team Midlands and East, NICE and Health Inequalities Lead delivered a detailed overview into NICE as an organisation, the products and services they offer and how to navigate their website to find resources useful to the researchers. NICE produces guidance for health and care practitioners and commissioners; it provides rigorous, independent assessment of complex evidence for new health technologies, for social care and for public health. "We look at what is safe, what is effective, and what is value for money", Deborah O'Callaghan noted.

NICE mostly looks at areas where people are most affected and improvement is needed, in order to drive innovation and develop recommendations for health and care practitioners. It encourages the uptake of best practice and evidence-based guidance to close these gaps and improve national health outcomes. While NICE has often been described as the “drugs watchdog”, Deborah emphasizes that NICE is much more than that. For instance, NICE uses a measure called the ‘Quality-Adjusted Life Years’ (QALY), to measure the impact of medical interventions on both the quantity and quality of life and to determine value for money.

In guidance development, NICE assesses what is important for people using health and care services. NICE determines if the infrastructure is in place, if the intervention is cost-effective, and where training is necessary for implementation. NICE also works with developers in health technology to support an early development proposal prior to making a more substantial appraisal.

## 3. Development of NICE Guidelines

Kay Nolan, Associate Director of Surveillance Program, draws from over 15 years of work experience with NICE. Kay provided insights into how NICE develops guidelines and keeps them up to date. “NICE is transforming and changing which provides opportunities for researchers to influence NICE outputs. Giving feedback on what NICE says, this has the biggest impact on guidelines”, Kay Nolan pointed out.

NICE guidelines consist of evidence-based recommendations for public health and social care in England and Wales. These guidelines are developed collaboratively with input from health and care professionals, service users, and carers as well as academics.

NICE Guidelines describe how services might be best delivered, as described by patient experts. These guidelines are developed by drawing the best available evidence and built on the core principles of transparency and independence. Guidance is built upon collected, appraised and synthesized evidence, ranging from clinical trials, expert knowledge of patient groups and clinicians, to real-world data from patient registries. More than 20,000 recommendations are now part of NICE’s portfolio.

NICE develops guidelines following a guidance development cycle:

i. Identification of a topic
ii. Defining the scope; the scope refers to the details of the parameters of the guidance, which key areas, population groups, and questions it aims to address. NICE publishes this scope for stakeholder engagement. Stakeholder engagement helps to identify key gaps in the scope. This is also the point at which researchers can comment on the types of evidence which will be relevant to the guideline. You should consider if and how the scope aligns with your research.

iii. The evidence is searched for, synthesized and appraised.
iv. Draft guidelines are developed based on the evidence and input from the guideline development committee.
v. Consultation takes place with stakeholders on the draft guidelines.
vi. Guidelines are finalised and published.

Professor Nick Wareham, MRC Epidemiology Unit, shared his experiences of chairing a NICE committee on the prevention of prediabetes.

There are many ways researchers can get involved with NICE and contribute their research. The main pathways are outlined below:

i. Register as a stakeholder

   You can register as a stakeholder to help NICE develop guidelines, and for the NICE quality standards, and indicators. Guidelines cover pharmaceuticals, diagnostic technologies, medical technologies, interventional procedures, social care and public health.

ii. Comment on a consultation

   All comments are considered and recorded, and the comments made during the consultation are published alongside each guideline along with responses to the comments. It is possible to comment on NICE's guidance at different stages in its development. This includes commenting before development, regarding whether a technology should be evaluated and defining the scope of the evaluation. During development, it is possible to comment on a draft version of the guidance. After publication, NICE holds a review consultation, regarding whether guidance should be updated and how.

iii. Join a committee

   Committee meetings are another way to engage as a researcher with the work of NICE. NIHR specifically issues funding calls related to NICE research recommendations and thereby aims to meet evidence gaps relating to NICE guidelines and to the research recommendations in each guideline. Committees develop and update NICE guidance. They meet over several months and help to shape the NICE recommendations. NICE searches for professional members with specific technical, research and methodological skills and work experience, and lay members of the public with personal experience within health and social care.

iv. Look at Recommendations for Research

   If the NICE guideline process concludes that there are evidence gaps, they will publish Recommendations for Research alongside their guideline publication. These Recommendations for Research informs NIHR funding, as described above. These

Recommendations were highlighted to early career researchers and researchers at all career stages as an excellent way to scan for research that is needed and where results from research would be very likely to be impactful.

## 4.Health Innovation East: Role, Remit and how to get involved

Nick Clarke, Principal Advisor, introduced Health Innovation East, based near Cambridge and covering the East of England. Health Innovation East is funded by the NHS and the Office for Life Sciences to bring together academia, citizens, health services and industry to realise the value of innovations more quickly. They focus on real-world evidence and research to translate them into patient benefits.

With a focus in the East of England, the organization is part of a national network which enables delivery on a scale. Health Innovation East supports innovators from insight to implementation – helping them design and engineer new technologies and products, navigate complex systems and generate value propositions that make a positive and lasting health impact. They focus on real-world evidence and research to translate them into patient benefits. Their goal is to support innovation helping to meet real-world challenges, such as the ageing population.

Early-stage innovators can approach Health Innovation East for support on how to position their products for use in the NHS. One example discussed is a novel technology (QbTest) that supports children and young people in speeding up the diagnosis of ADHD – which following real world testing has now been scaled up to all eligible services in the East of England.

Two other initiatives supported by Health Innovation East were presented:

1. A regional population health equity framework is being developed by the regional Office for Life Sciences and NHS England team, with a board which will focus on key clinical and policy areas and bring a health equity lens to the delivery of programmes. It aims to identify inequalities and different areas and monitor trends in access, experience, and outcomes, and support qualitative research with underserved communities so that their experiences and perspectives are given due consideration.
2. The Health Equity Evidence Centre was also presented by Dr John Ford, which aims to address health inequalities in primary care. An evidence map supported by a machine-learning algorithm has been produced, that scans research articles and identifies similar ones. This is updated regularly.

## 4.1 Health Equity Framework

Dr Suzanne Tang, Consultant in Healthcare Public Health, NHS England, introduced the Regional Health Equity Framework covering the East of England. This regional approach integrates four pillars of work (Healthcare inequalities, Prevention, Population Health Management, Social and Economic Development) with the overarching aim of improving population health outcomes and increasing health equity.

Overall, they measure health life expectancy (HLE) and life expectancy. The HLE differs depending on where one was born in the UK, according to their collected data. For example, the life expectancy at birth for men born in Luton was 8.7 years less than for men born in Central Bedfordshire.

## 4.2 Health Equity Evidence Centre

Dr John Ford, Honorary Visiting Fellow, Department of Public Health and Primary Care, University of Cambridge, presented how to reduce health inequalities through general practice. The Health Equity Evidence Centre aims to address health inequalities in primary care. They produced a machine-learning evidence map that is accessible to everyone in the world. This website uses a machine-learning algorithm that scans research articles and identifies similar ones. This is updated monthly. One example is how they used a gaming platform to research children's anxiety, eating disorders, and depression.

## 4.3 Case Study: National Cardiovascular Diseases (CVD) Vision

The national CVD vision is one pressing example, where the NHS aims to prevent 150,000 heart attacks, strokes, and dementia cases by 2029. Indicators for hypertension management are the following: Inequalities in hypertension management, with poorer management in more deprived areas. Preventative actions to change this are part of the health inequity framework. The four pillars of healthcare inequalities are the following: Improvement Programs, prevention, population health management techniques, and social and economic development. A regional population health equity board will focus on key clinical areas and policy areas, such as CBT prevention, and work together to bring a health equity lens to the delivery of programs. It aims to identify inequalities and different areas and monitor trends in access, experience, and outcomes, but also qualitative research with underserved communities so that their experiences and perspectives are given due consideration.

"I think there is a huge scope for research to contribute to the health equity agenda, and certainly within NHS England and our regional team would be keen to welcome your thoughts on how we can best collaborate in the region", Dr Suzanne Tang stated.

## 5. Applied Research Collaboration (ARC) East of England: Role and remit and opportunities to get involved

Emma Dickerson, Business and Operations Manager and Dr Melanie Handley, Associate Professor, introduced the role and remit of ARC East of England. ARC East of England is a collaboration between Cambridgeshire and Peterborough NHS Foundation Trust, and the Universities of Cambridge, East Anglia, Hertfordshire and Essex along with other NHS Trusts, Local Authorities, patient-led organisations, charities, and industry partners across the region. NIHR Applied Research Collaborations (ARCs) support applied health and care research that responds to, and meets, the needs of local populations and local health and care systems. The ARC East of England is one of 15 ARCs across England, part of a £135 million investment by the NIHR to improve the health and care of patients and the public.

Below are the two major pathways to get involved with ARC East of England:

i. ARC Research and Implementation Fellowship: The ARC Fellowship is aimed at clinicians, health & social care practitioners, voluntary sector staff, and managers in health and social care services across the East of England. It is for those who would like to work at the interface of research and practice, develop an understanding of the research environment, and develop skills in research methodology, service redesign, change management, and implementing evidence-based improvements into practice. The application process for the next cohort will start in autumn 2024 for fellowships to start in April 2025.

ii. Support for early career researchers: ARC has dedicated funding for PhD studentships in each of its themes. The research questions and programs of work of the PhDs align with the research aims of the relevant theme. They can also cut across more than one theme where synergies are identified. PhD students are based at one of the four partner Universities of the ARC: University of Cambridge, University of East Anglia, University of Essex or University of Hertfordshire.

The ARC also hosts events to promote and share opportunities for early career researchers and those wishing to incorporate research into their services and careers.

## 5.1 Enhancing Dementia Care

Dr Melanie Handley, Associate Professor, ARC East of England, presented the CONNECT study. The study aims to co-design and test an intervention to support person-centered approaches with people with dementia in hospitals. Constant observation is one-to-one support, predominantly used to prevent falls, in people with delirium superimposed on dementia. They were co-designing an intervention with hospital staff and people with lived experience of dementia. They tested the intervention to explore how it was used, evaluated the benefits for staff and people they were caring for, and collected suggestions for improvements.

## 6.Summary and Recommendations

For the closing session, Professor Mike Kelly led a short discussion with the audience to discuss the next steps researchers should take and how to make the best use of the opportunities that were presented by the other speakers. Below are the key recommendations that emerged.

**The local infrastructure to support Knowledge Exchange and impact needs to be developed more:** The ARC and Health Innovation are great examples of existing regional infrastructure. With the use of the information detailed in the sections above, researchers can exchange information and ideas, contact and work with them.

**Research recommendations and gaps for evidence should be used as prompts for research:** NICE produces Recommendations for Research alongside their guideline publications. Researchers could take greater advantage of consulting these to inform their research and dissemination plans. Also, taking part in committees and consultation meetings allows ongoing exploration of routes to impact.

**Researchers are encouraged to take adequate training to publish and share their research:** Regularly publicly sharing your research is a first step for creating the base for impact and the University of Cambridge provides training through the Engaged Researcher series, which includes training on writing for The Conversation, for example.

**More comprehensive data should be used to address the inequalities and inequities in health research:** It is often not possible for policy makers and guideline developers to access collected data which demonstrate the different impacts of health interventions. Often, data such as age, gender, or location are used to describe the original sample of a study, not to test for differential effectiveness of interventions. It is important for policy makers to know what factors lead to different outcomes of interventions. Turning this into a research question is still a significant gap that researchers could address, with impact being thought of at the beginning of research, not at the end.

**Early and mid-career researchers should be encouraged to engage with policy and practice:** The early and mid-career researchers now, are the ones who will bring about significant changes in the research system and its impact on health. So exploring the opportunities to connect with health policy and practice organisations at these career stages is important.