Impact Story Template and Guidance

Impact Story Template

Name of the NIHR Infrastructure Centre
ARC South West Peninsula

Contact details for further information on the Impact Story*
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*Please note that NIHR CC may approach the individual(s) named above for further information.

Title of the Impact Story

Title of Impact Story *[A short title using plain active language that summarises the impact (not the research findings)]*
Supporting Net Zero in Healthcare Through Evidence Mapping

Does this Impact Story provide updated information for a previously submitted Added Value Example (AVE)?
No

If this is an update to a previously submitted AVE, please provide the title and year of submission of the AVE for which this is an update.
N/A

Impact Summary (maximum 150 words)

Briefly summarise, in plain English, what the problem was, how your Centre has worked with other NIHR infrastructure and/or parts of the health and care system to address it and what has changed as a result of your research evidence. Please include who benefits and how (using the types of impact outlined in the guidance), including benefits for the health and care system. Please include any 'if' statements as relevant e.g if shown to be feasible; if implemented regionally; if adopted nationally.
Healthcare can harm the environment. In England, the NHS makes up 4% of the country's carbon emissions. To help reach the UK's goal of net-zero emissions by 2050, we looked at ways to reduce carbon emissions in hospitals. We reviewed different approaches in medical areas like urology, cancer care, kidney care, and stomach conditions. The most common approach was using telehealth (video or phone appointments). Telehealth can lower carbon emissions by reducing travel, but many studies didn't look at the full impact on care or emissions from running the service.

We made a map showing what research exists and where more is needed. Most studies focused on early stages of patient care. The map helps people find evidence and shows where future studies should focus. Our work supported a national funding call and has been widely viewed; it has the potential to guide future research to cut NHS carbon emissions.

Impact Details

Healthcare services contribute 1-5% of global environmental impacts, with the NHS responsible for 4% of England's carbon footprint. To meet the Climate Change Act's 2050 target of net-zero emissions, efforts are focused on reducing emissions in key NHS areas like estates, transport, supply chains, and high-emission medicines. Evidence evaluating interventions to reduce carbon emissions within secondary healthcare could enhance these efforts.

We conducted a systematic review of carbon-reducing interventions within medical specialties in secondary healthcare and produced an evidence and gap map showing where evidence informs the patient care pathway. The most studied specialities were urology (n=14), gastroenterology (n=13), oncology (n=13) and renal (n=11). The most studied intervention was telehealth (n=26). Telehealth technology could reduce carbon-emissions when compared with face-to-face care. However, carbon calculations often only considered patient-travel and didn't include emissions associated with delivering other parts of the service or impact on wider patient care pathway.

Heterogeneity between types of interventions within individual specialties and methods used to calculate carbon-emissions limited conclusions as to which interventions may be most effective in reducing carbon emissions. Patient clinical/ satisfaction and financial outcomes alongside carbon emission data were limited.

The evidence and gap map displays the evidence included in this review as it relates to the patient care pathway for each specialty. Most of the evidence was found in the first three stages of the patient care journey: 1) initial assessment/diagnostic tests, 2) initial treatment or 3) follow-up.

The evidence and gap map enables evidence users to locate evidence relevant to their interests and requirements. Importantly it also highlights areas where future research would be beneficial.

The report and evidence and gap map were used to inform the NIHR Cross-Programme funding call 'Decarbonising the health and social care system'. The report has been

downloaded 235 times, and the evidence and gap map has received 230 unique visitors.

If the NIHR were to fund research in the highlighted evidence gaps, the impact of our work would be to inform the future research programme on decarbonising the health and care system, furthering knowledge of the impact of interventions to reduce carbon emissions in secondary care and facilitate the NHS reaching the Climate Change Act's 2050 target of net-zero emissions.

This project was funded by the NIHR Policy Research Programme and conducted by the Exeter PRP Evidence Review Facility. Core members of the Exeter PRP Evidence Review Facility are supported by PenARC. Without the infrastructure funding, we would not have been successful in obtaining funding for the Evidence Review Facility.

Please link to the sources of evidence of the impact described in this Story (e.g policy documents, reports, datasets, news articles, videos, reports, testimonials,websites, awards)

The evidence and gap map is available here: https://eppi.ioe.ac.uk/cms/Portals/35/Maps/carbon-emissions-healthcare.html

The technical report is available here: https://zenodo.org/records/14169531

The briefing paper is available here: https://zenodo.org/records/14192083

NIHR Research Specification: https://www.nihr.ac.uk/funding/decarbonising-health-and-social-care-system/2024217#tab-378321

Next steps and Lessons Learnt

Please outline the next steps in your journey to achieving impact, particularly where the impact is still in the early stages. Are there any barriers you anticipate to the next steps you have outlined above and how can NIHR support?

300 words

Liz Shaw, who led this work, is co-applicant on a £6.5M UKRI/NIHR funded project – the 'UK Hub for One Health Systems: Creating Sustainable Health and Social Care Pathways' led by Ed Wilson at the University of Exeter. She will be sharing knowledge and insights from our work and ensuring that current evidence is incorporated into decision making for the hub.

Any lessons learnt along the way that might benefit someone else on a similar journey?

300 words

We worked closely with the Greener NHS team at NHS England and with colleagues at the Department of Health and Social Care to ensure that our outputs were fit for purpose. In addition to the report and evidence and gap map, we also produced a 4-page briefing paper and a slide deck. We held a dissemination event online attended by over 100 individuals from NHS England, NIHR, DHSC, universities and NHS organisations – it was following this event that we were contacted by NIHR to ask if they could cite the work in the forthcoming funding call.

Health category/ field of research

Please indicate 'YES' to **all** that apply.

HRCS Health Category	Please indicate 'YES' where applicable	NIHR Priority Areas	Please indicate 'YES' where applicable	NIHR Goal Outcomes	Please indicate 'YES' where applicable
Blood		Elective Care		NHS there when people need it	
Cancer and Neoplasms		Primary Care		Fewer lives lost to biggest killers	
Cardiovascular		Urgent Care		Fairer Britain, where everyone lives well for longer	
Congenital Disorders		Cancer access			
Ear		Social care			
Eye		Mental Health			
Infection		Stroke and heart disease			
Inflammatory and Immune System		Cancer survival			
Injuries and Accidents		Suicide			
Mental Health		Smoking			
Metabolic and Endocrine		Alcohol			
Musculoskeletal		Air pollution	Yes		
Neurological		Obesity			
Oral and Gastrointestinal		Physical activity			
Renal and Urogenital					
Reproductive Health and Childbirth					
Respiratory					
Skin					
Stroke					

Generic Health Relevance					
Disputed Aetiology and Other					

Impact Story Guidance

1. Purpose and uses of Impact Stories

Impact Stories give NIHR sight of the value that the research it funds brings to the health and wealth of the nation, including improving patient outcomes, reducing health inequalities, serving the health needs of under-served communities and building national capacity and capability to conduct high quality health and social care research. They help NIHR to (1) demonstrate this value to our stakeholders, for example, government ministers and departments, the health and care system and patients and the public; (2) evaluate and evidence the impact of the research we fund; and (3) inform decision-making about our funding processes and priorities.

2. What does NIHR mean by 'impact'?

For NIHR, research impact is about **making a meaningful difference to people's lives through the research we fund and support, making a difference to wider society and effecting meaningful change i.e an effect or benefit.** We recognise that the journey to achieving this looks different for research infrastructure and even different types of infrastructure. We have, therefore, developed guidance on the types of impact we would like to hear about from the infrastructure we fund, as outlined below. We are also keen to hear about the impact that the research we have funded has had that NIHR funded teams are aware of but have not been directly involved with. We want to be able to evidence our impact as described below.

3. Impact types:

Please consider the following impact types and types of evidence when providing your example. Evidence can be quantitative e.g number of patients affected, amount of money saved, number of people trained or qualitative e.g patient testimonials, quotes from service users or public contributors, statements from policymakers.

Types of impact	Types of evidence
Improved patient/service user outcomes	- Improved outcomes in health or social care (also includes prevention of poor outcomes) - Decreased time to diagnose or treat - Improved health literacy and public awareness
Changes in service delivery	- Improved patient safety - Commissioning or decommissioning of a service - Improved patient care pathways - Improved management of a disease or condition - Improved access to services or quality of care
Policy influence	Influencing policy or clinical guidelines and subsequent implementation or de-implementation
Capacity, skills or workforce development	- Training or skills development that fills a gap - Capacity development in under-represented professions or groups - Increased capacity and capability to respond to needs of commercial companies and/or the health and care system

Systems influence	- Relationship building and improved collaborations and ways of working between different parts of the health and care system, including with ICB/S - Improved adoption or uptake and subsequent implementation, including through HINs - De-implementation or de-commissioning of services - Improved operational efficiencies - Improved embedding of EDI and PPIE
Developing and delivering operational excellence (particularly relevant for Networks)	- Developing operational excellence - Developing novel or innovative methodology - Improving cost-effectiveness - Implementation, adoption or spread of good practice regionally or nationally
Economic impact	- Cost savings to the NHS, public health and social care - Increased revenues - Jobs created