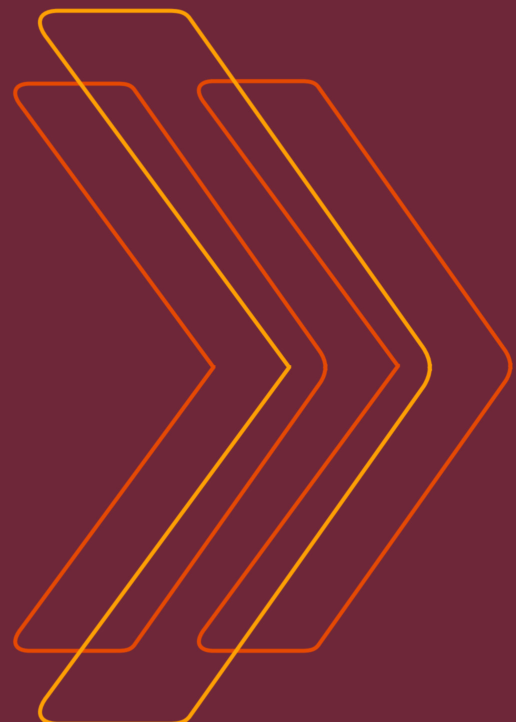
The King's Fund

Ideas that change health and care

NHS and life sciences industry partnerships

Collaborating to improve care



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About this report

This work was commissioned by the Association of the British Pharmaceutical Industry (ABPI). The research, analysis and writing have been conducted independently by The King's Fund and we retain full editorial control. The ABPI had no final approval or veto over the contents of this report. The companies involved in the case studies featured in this work did not provide funding or editorial input to the report.

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Key messages

- Now more than ever, the NHS needs to improve and transform care given the deep challenges it is facing. To meet the scale of this challenge and build a sustainable health and care system for the future, the NHS will need to draw on the assets and contributions of all its partners, including in the life sciences industry.
- The UK has a large and thriving life sciences sector, but the full potential of this to improve patient care is not being realised. Successive governments and policy-makers have set out ambitions for the NHS and life sciences industry to work together more closely to deliver improvements in health, as well as driving economic growth.
- Collaborative working projects are a well-established way for the NHS and industry to work together. They involve pharmaceutical companies and NHS organisations formally pooling skills, expertise and/or resources to deliver a specific project.
- There are already examples of collaborative working being undertaken successfully and, when done well, this can deliver benefits for patients, staff and services. The involvement of industry can bring capacity and resource to pump-prime improvements in care, as well as providing access to valuable skills and expertise.
- Making a success of these partnerships is not easy: it requires significant time and effort from all partners, as well as a high level of rigour around the design and delivery of projects.
- We identified three key barriers to these partnerships being used more widely and on a more strategic basis:
    - Openness and trust: Cultural differences and mistrust of the pharmaceutical industry can stand in the way of partnerships, despite rigorous processes and requirements around collaborative working.
    - Leadership and oversight: There are frameworks and extensive guidance, but industry bodies have played a far greater role in developing and overseeing these than NHS bodies. More could be done to create a genuine sense of co-ownership, with greater leadership and oversight from the NHS.

  - Access and experience: Routes to partnership can be ad hoc and reliant on existing relationships. There is often limited understanding and experience around relevant processes and guidance, and staff may have limited time and headspace to dedicate to partnerships given the demand and capacity pressures across NHS services.

- To realise the potential of these partnerships to improve patient care, we recommend the following:
  - The government and NHS leaders should set out clear support for NHS–industry partnerships and seek to maximise the contribution of industry to key NHS priorities. NHS England and the Department of Health and Social Care should work with industry bodies to further develop collaborative working guidance, to provide greater oversight to ensure that this is understood and implemented in all partnerships, to make opportunities for collaborative working more widely accessible, and to facilitate the sharing of evidence and learning around the experience of working with industry.
  - Local NHS leaders should support and advocate for industry partnerships, and identify where collaboration with industry could help deliver local NHS priorities. They should work to make routes to establishing and approving partnerships more straightforward, and develop processes and oversight to ensure that partnerships taking place in their system are conducted in line with guidance. They should also ensure that the impact of these partnerships is robustly evaluated and transparently communicated.
  - Industry leaders should proactively communicate what companies get out of these collaborations and ensure independent evaluations of their impact. They should also work more closely with national NHS bodies to develop truly co-owned guidance for collaborative working, and seek to actively understand national and local NHS priorities and build strategic partnerships that go beyond individual projects.

- These partnerships should form part of a broader, ambitious approach to collaboration between the NHS and life sciences industry that looks to deepen links and understanding between the sectors in order to tackle the challenges of today and shape innovations in health and care for the future.

1 Introduction

In 2019, clinicians in the cardiology and diabetes departments at a Lincolnshire hospital could see something was not working in their services. People with diabetes admitted for a heart attack were able to receive state-of-the-art procedures to relieve their acute condition, only to be discharged without the management of their cardiometabolic risk factors being optimised, even though these were the very things that could prevent a recurrence. Co-ordinated care between the diabetes and cardiology teams was rare, and opportunities for secondary prevention were being missed. But up against competing priorities and the required improvements falling between two separate departments, the clinicians were unable to secure internal support for change.

It was against this backdrop that a chance discussion between one of those clinicians and a clinical colleague at a pharmaceutical company (known to them through previous research collaborations on clinical trials) opened the door to an alternative route. The hospital trust and Boehringer Ingelheim (Boehringer) entered into a formal joint working arrangement, with Boehringer contributing funding and project management support to help pump-prime a new cardio-diabetes service. This cross-specialty service focused on optimising the management of cardiometabolic risk factors for people with diabetes following acute coronary syndrome, according to best practice guidelines and evidence. Two years later, the new service was well established and funded by the trust on a permanent basis. Ongoing evaluations point to impressive improvements in patient outcomes, including reductions in acute kidney injury, hospitalisations for heart failure, repeat heart attacks, and the number of deaths.

Around the same time, a very different issue was presenting itself elsewhere. Tens of thousands of people had already benefited from access to cutting-edge hepatitis C medicines able to cure the infection and prevent serious long-term complications. But others were missing out on these treatments because they did not know they were carrying the virus. Many of these individuals were already experiencing multiple disadvantages, with injecting drug use the most significant risk factor for hepatitis C.

A concerted effort was needed to reach people and enable them to access the tests, diagnosis and treatments necessary to cure their hepatitis C and prevent its potentially devastating complications. An ambitious five-year partnership between the NHS Addictions Provider Alliance (whose services work with many of those most at risk from hepatitis C) and Gilead Sciences led to the Hep C U Later programme, a targeted initiative to drive testing and referral via community drug and alcohol services. Five years on, more than 40,000 tests have been taken through the programme, with many more people receiving treatment as a result, and steady progress being made towards the wider national goal to eradicate hepatitis C.

There is much that is different in the examples just described. One is a relatively straightforward service improvement initiative within a single service in a district general hospital; the other spans a large alliance of providers across multiple regions as part of a national public health initiative. But what they have in common is that both rested on partnerships between the NHS and industry to drive change. The involvement of industry in these examples was not in their traditional role as suppliers of goods and services, or as funders. The partnerships involved a coming together of ambition, skills and resources across NHS and industry partners to drive improvements in care and better outcomes for the people who – thanks to the preventive interventions these projects put in place – had a better chance of living longer, healthier lives.

These are both examples of joint or collaborative working arrangements – a well-established and codified form of partnership where pharmaceutical companies and NHS organisations formally pool skills, expertise and/or resources to deliver a specific project. Partnerships of this kind are not a panacea and are certainly not without challenges, not least because they require NHS and industry partners to work together across different organisational cultures and contexts, and to overcome wider issues of scepticism and mistrust around the role and motivations of the pharmaceutical industry. But in the context of an NHS desperately in need of transformation but lacking the resource and headspace to make it, it is timely to explore their potential. What benefits can these partnerships offer? What are the prerequisites for them to succeed? What are the obstacles and pitfalls? And could (and should) the NHS be doing more to develop them on a larger, more strategic scale?

This report looks at four examples of joint or collaborative working projects. As well as the two already mentioned, our case studies include two further examples: one project to improve asthma care in Greater Manchester (with AstraZeneca); and another to improve the front-end skin cancer pathway in Lancashire and South Cumbria (with Sanofi). In the sections that follow, we draw on these four case studies to explore the lessons that can be learnt and consider what more could be done to fully harness the potential of NHS–industry partnerships.

2 Background

We wanted to understand how the NHS can collaborate with industry partners in the life sciences sector, what these partnerships look and feel like in practice, and how to create the conditions for their success. To shed light on these broad questions, we focused on a specific type of NHS–industry partnership – collaborative working projects between NHS organisations and pharmaceutical companies (described in further detail below) – as these are a well-established way for NHS and industry partners to work together. Although our findings are specific to this particular type of partnership, we hope that the insights offer useful lessons around collaboration between the NHS and industries in the life sciences sector more broadly, particularly in terms of the key challenges and enablers, while recognising that different industries have distinct priorities, ways of working and regulatory underpinnings.

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The report is based on qualitative research into four case studies of collaborative working projects:

1. Improving outcomes for people with diabetes following acute coronary syndrome in Lincolnshire (with Boehringer Ingelheim).
2. Eliminating hepatitis C among people in contact with drug and alcohol services across the NHS Addictions Provider Alliance (with Gilead Sciences).
3. Improving asthma care in Greater Manchester (with AstraZeneca).
4. Improving the front-end skin cancer pathway in Lancashire and South Cumbria (with Sanofi).

We selected these examples to give a range of projects in terms of their scale, focus (covering different disease areas and intervention types), geographical areas, and the industry and health partners involved. So that we could draw out lessons about successful partnership working, the case studies were selected on the basis of the reported success of the projects and feedback that the partnerships had functioned well.

For each case study, we conducted in-depth interviews with key individuals involved in leading and working alongside the projects, including those from the NHS partners and the industry partners. This allowed us to understand the work through the eyes of people on both sides of a partnership. We interviewed 18 people in total. (For further details on our methodology, *see* Annex A.)

Our work is not an evaluation of each of the four projects. Rather, this report explores key successes and challenges of the partnerships that were highlighted through qualitative interviews and in the documents shared with us, to understand how each partnership worked in practice. Further information on each case study, including links to relevant documents and contacts, can be found in Annex B.

The report is structured as follows. After this background section (which includes an overview of the case studies), Section 3 considers the benefits that collaborative working projects can bring. In Section 4, we explore what these examples tell us about 'what good looks like' and offer a set of principles underpinning effective partnerships. In Section 5, we explore what stands in the way of successful partnerships and the factors that can help to mitigate or overcome these challenges. Section 6 concludes with a discussion of what this tells us about the potential for industry to work alongside the NHS to improve patient care, and whether the NHS could be doing more to develop partnerships of this nature on a more strategic basis. Finally, we consider steps that local and national leaders could take to further harness the potential of NHS–industry partnerships.

About collaborative working

There are a range of ways in which pharmaceutical companies interact with the NHS, including as suppliers of goods and services, through research and development, by providing donations and grants, and through joint or collaborative working.

What are joint/collaborative working projects?

Our four case studies are all examples of joint or collaborative working projects – a particular form of cross-sector working between pharmaceutical companies and the NHS. These involve pharmaceutical companies and NHS organisations coming together to pool skills, expertise and/or resources to deliver a defined project. Joint working has been established since 2008 and must deliver direct benefits to patients. When joint working was introduced, guidance from the then Department of Health stated that 'NHS organisations and staff are encouraged to consider opportunities for joint working with the pharmaceutical industry where the benefits that this could bring to patient care and the difference it can make to their health and well-being are clearly advantageous' (Department of Health 2008). Collaborative working was introduced in 2021 to cover a broader range of activities (encompassing joint working) and can be for the direct benefit of patients and/or health care services (*see* Table 1). (For simplicity, throughout the remainder of this report, we use the term 'collaborative working' to refer to projects both defined as 'collaborative working' and 'joint working' under the definitions of the ABPI Code of Practice.)

Table 1 Definitions of joint and collaborative working

Collaborative working projects	Joint working projects
Collaborative working projects involve partnerships between one or more health care organisation, pharmaceutical company and possibly other organisations. They involve pooling skills, experience and/or resources from all parties, and each organisation must make a significant contribution. There must be a shared commitment to successful delivery from all partners. Projects can be for the benefit of patients and/or the NHS.	Joint working projects are a specific type of collaborative working. They must be patient centred and benefit patients directly, meaning they have a narrower focus than collaborative working.

Source: (NHS Confederation and ABPI 2024)

Although these projects are usually framed in terms of their benefits to patients and/or the NHS, it is also expected that there will be benefits to the pharmaceutical companies involved. Collaborative working has previously been described as delivering a 'triple win' by benefiting patients, the NHS and the companies involved (**NHS Confederation 2019**). Benefits for companies may include improving their understanding of NHS systems and pathways or enhancing their networks and profile with NHS organisations. There may also be potential commercial benefits to a company – for example, if a collaborative working project increases the number of eligible patients receiving medicines recommended by national guidance that includes medicines supplied by the company involved (**NHS Confederation and ABPI 2024**). In relation to these interests, companies must operate within tightly defined parameters (described in the following section on how projects are governed and regulated). Importantly, requirements specify that if medicines are involved, their use must be in line with nationally accepted clinical guidelines and that the work must not involve promotion of a specific medicine (**ABPI and Prescription Medicines Code of Practice Authority 2024**).

There are many examples of current and past collaborative working projects in addition to the four case studies described here. An extensive repository can be found in the online NHS–Industry Partnership Case Studies Library (**ABPI 2024a**). Transfers of value (financial payments and benefits in kind) related to collaborative working projects from companies to UK health care organisations (including NHS organisations) increased from £7.1 million in 2021 to £24.9 million in 2023 (**ABPI 2024b**; **ABPI 2024c**).

What do collaborative working projects involve?

Guidance and resources have been produced over a number of years to help those in the NHS and industry to undertake joint or collaborative working projects. The first guidance was introduced in 2010, when the ABPI and the then Department of Health developed a joint toolkit to support NHS organisations and the pharmaceutical industry to work together (**Department of Health and ABPI 2010**). The latest guidance for England (produced by the ABPI in partnership with the NHS Confederation, the membership body for health and care organisations in England, Wales and Northern Ireland) offers practical, step-by-step advice and tools to provide support at all stages – from project identification and scoping, to

set-up and governance structures, to implementation and outcomes reporting (**NHS Confederation and ABPI 2024**) – summarised below.

- **Project identification and scoping**: This should involve identifying and agreeing the project's purpose, resourcing and timelines, and setting this out in a project concept framework to be approved by the organisations involved.
- **Project set-up and governance**: This includes the formation of a project team and/or steering committee to manage the project. It also involves identifying appropriate governance committees in each participating organisation to provide oversight. The project team should develop a project initiation document (PID) setting out the project's objectives, governance framework and exit strategy (in case it needs to be terminated for any reason). The PID must be approved by the project team and relevant governance committees. A collaborative/joint working agreement must then be drafted and signed by each organisation. This is a legal contract, which must include key information about the project (drawn from the PID) as well as provisions to ensure that any confidential, competitive or personal data is protected. The final stage of project set-up is the publication of an executive summary of the project. This must be published on the industry partner's website prior to the project commencing, and NHS partners are encouraged to do the same.
- **Implementation and outcomes reporting**: Projects should monitor key metrics and outcomes, covering clinical, service and economic impacts. Industry partners must publish outcomes within six months of project completion, and NHS partners are encouraged to do the same. In addition, any transfers of value related to these projects must be disclosed annually via the Disclosure UK database to ensure transparency (*see* below).

How are collaborative working projects governed and regulated?

The involvement of pharmaceutical companies in collaborative working projects is tightly governed and regulated. The guidance summarised above is underpinned by requirements set out in the ABPI Code of Practice (**ABPI and Prescription Medicines Code of Practice Authority 2024**). This applies to all pharmaceutical companies that are members of the ABPI (as well as some non-member companies that have agreed to comply with it) and is overseen by the Prescription Medicines Code of Practice Authority (PMCPA). The Code of Practice sets standards to ensure that

pharmaceutical companies are operating in a professional, ethical and transparent manner, and is central to the system of industry self-regulation in the UK. It is underpinned by four key principles: benefit to patients, integrity, transparency and respect.

Collaborative working is specifically regulated under clause 20 of the ABPI Code of Practice. This specifies that if medicines are involved, their use must be in line with nationally accepted clinical guidelines, and that collaborative working must not constitute an inducement to health professionals or other decision-makers to prescribe, supply, recommend, buy or sell a medicine. The guidance also sets clear limitations on the involvement of industry – for example, companies are not permitted to have any direct contact with patients or with identifiable patient data.

On the NHS side, collaborative working projects must comply with requirements for NHS staff and organisations around managing conflicts of interest in the NHS (**NHS England 2024a**) as well as overarching guidance on organisational governance (see, for example, **NHS England 2024b**), and working with industry (**Department of Health 2008**). In addition, some local health and care systems have developed local guidance and processes around collaborative working – for example, Cheshire and Merseyside Integrated Care Board (ICB) (**Cheshire and Merseyside NHS 2023**) – to offer greater direction and support to local teams.

Partnerships must also comply with various legal and compliance frameworks, including anti-bribery and anti-corruption laws, competition and commercial in confidence issues, and data protection legislation. In addition, the ABPI Code requires companies to disclose transfers of value (including payments or benefits in kind) made to NHS and other health care organisations, including those made as part of collaborative working projects via the Disclosure UK database. Disclosure UK is part of a Europe-wide initiative to increase transparency around the interactions between pharmaceutical companies and health care professionals and organisations (**ABPI 2024b**).

The requirements and frameworks described here apply only to partnerships with the pharmaceutical industry. Other industries in the life sciences sector, including the healthtech and biotech industries, are regulated differently, and do not have such established mechanisms for joint working with the NHS.

The wider context for collaborative working

There is significant national interest in opportunities for the NHS and life sciences sector to work more closely together. This has been highlighted repeatedly by current and former governments as a key priority and a means of improving health and driving economic growth (Labour 2024a; UK Government 2021). There are a number of different aspects to these ambitions, including strengthening research and development collaborations, building a more strategic approach to the procurement and supply of medicines and devices, and improving the uptake and adoption of innovations (NHS England 2022b; UK Government 2021; NHS England 2019).

The NHS and health systems in other countries have a long history of collaboration with industries in the life sciences sector. As well as notable successes and improvements resulting from these collaborations, there are also well-documented examples of poor practice, failings and misdemeanours. In particular, notwithstanding the significant medical advances made over past decades, the pharmaceutical industry has a chequered history in terms of its involvement in health and care, with controversies ranging from misrepresentation of data and poor-quality trials to overly aggressive marketing tactics and concerns around the industry exerting undue influence in areas from clinical practice to policy-making (Abraham 2009; House of Commons Health Committee 2005).

Over recent decades, a variety of mechanisms have been put in place to guard against such failings being repeated and to enable greater trust and confidence in the sector. These include steps to strengthen independent regulation around the development, approvals and marketing of medicines, industry self-regulation, and greater transparency around the activities of pharmaceutical companies (Scorringe 2019; Abraham 2009). This context partly explains why collaborative working is so tightly defined and regulated. Despite progress, and evidence that overall trust in the sector has risen in recent years, there remain misgivings and mistrust around the role and motivations of pharmaceutical companies. These are often firmly held beliefs based on deep-rooted cultural and historical factors (Ipsos Mori 2022). This forms a central part of the backdrop for collaborative working, and we explore this in further detail throughout the report.

Overview of case studies

Case study one

- United Lincolnshire Hospitals NHS Trust (ULHT) with Boehringer Ingelheim
- Joint working project, November 2020 to September 2023

People with type 2 diabetes are more likely to experience complications and worse outcomes following acute coronary syndrome (ACS), but it is possible to significantly reduce these risks through effective secondary prevention to manage key risk factors. Despite this, clinicians at ULHT observed that people admitted for ACS were often discharged without being screened for diabetes and/or without their treatment being optimised across both conditions according to best practice guidelines and evidence. Joint care between the diabetes and cardiology teams was rare, and opportunities for prevention were being missed.

Following unsuccessful attempts to secure internal funding and support for a new service, lead clinicians across the teams began conversations with Boehringer, a pharmaceutical company they had worked with previously through clinical trials. This led to the development of a new, cross-specialty cardio-diabetes service.

People admitted to ULHT with ACS are screened for diabetes. Those with known or newly diagnosed diabetes are then seen by a cardio-diabetic in-reach service, and regular ward reviews bring input from both specialist teams, with a focus on reviewing cardiometabolic risk factors and ensuring their management is optimised. All patients with diabetes are reviewed following discharge at a cardio-diabetes multidisciplinary meeting and at a cardio-diabetes outpatient clinic within three months of discharge. These focus on further opportunities to review and optimise management, including developing a co-ordinated cardio-diabetic plan to support ongoing management in primary care and signposting to additional services.

Boehringer's involvement brought funding for a dedicated clinical research fellow post to oversee delivery and evaluation of the service. Boehringer also offered significant project management support and brought particular expertise in relation to understanding the impact and value of the service.

As a result of the changes, screening for diabetes among people admitted to ULHT with ACS has risen to close to 100%, identifying those with previously undiagnosed diabetes and many more with pre-diabetes (who are then referred to a prevention

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Case study one *continued*

programme). Among those with known or newly diagnosed diabetes, management of their cardiometabolic risk factors is routinely optimised during admission and following discharge. Early outcomes data indicates significant improvements in clinical outcomes, including a reduction in acute kidney injury, hospitalisations for heart failure, repeat ACS and the number of deaths. People report improved understanding of their conditions and treatments, and appreciate their care being joined up across the specialties involved. Early evaluations also point to implied cost savings as a result of complications and admissions that have been prevented.

Case study two

- The NHS Addictions Provider Alliance with Gilead Sciences
- Joint working project, May 2019 to March 2024

Chronic hepatitis C infection can lead to cirrhosis, liver failure and cancer. Although antiviral treatments are highly effective at eliminating the virus and preventing long-term complications, many people do not receive treatment because they are unaware of their infection. Hepatitis C disproportionately impacts individuals living with higher levels of deprivation, and most cases are linked to injecting drug use. There is therefore an important role for drug and alcohol services in helping people to access testing, treatment and support.

With the support of Gilead Sciences, a large-scale, long-term programme was initiated (the Hep C U Later programme) to drive testing and referrals into treatment across the NHS Addictions Provider Alliance (involving 18 NHS trusts that provide community drug and alcohol services to around a third of service users in England). This was part of a wider national partnership between Gilead Sciences, NHS England and other providers of drug and alcohol services (including third-sector providers).

A team of regional 'patient access to care managers' work directly with local services to identify and put in place practical support to help drive testing and treatment. They also help link drug and alcohol services with the clinical networks responsible for treatment to ensure that people testing positive can receive treatment. Targets were set for testing, treatment and progress towards elimination, with data flows

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Case study two *continued*

and monitoring put in place to drive progress against these (supported by dedicated 'data co-ordinators'). Work has also been undertaken to develop resources, offer training and agree common standards across providers.

Gilead Sciences funded key roles, including the patient access to care managers (employed by Gilead), programme lead and data co-ordinators (employed by the NHS). They also contributed expertise in programme management and brought tools and experience around data and analytics. In addition, they played a convening/connecting role, building on their wide networks across drug and alcohol services and hepatitis C treatment providers to facilitate alignment of objectives and joint working.

The programme has driven a significant increase in testing in drug and alcohol services, with more than 40,000 tests taken across the Alliance between 2020 and 2024, and many more people receiving treatment as a result. This has contributed to the success of wider national elimination efforts: between 2015 and 2022, the number of people living with hepatitis C in England fell by more than 50% and mortality by more than 35%.

Case study three

- Health Innovation Manchester with AstraZeneca (with a third party, LungHealth)
- Joint working project, December 2021 to December 2022

People living in Greater Manchester experience both a higher prevalence of asthma and worse outcomes than the England average. These poor outcomes are often linked to deprivation levels, with Greater Manchester covering four of the most deprived local authorities in England.

The STARRS-GM project (Standardised Asthma Reviews and Reduction in SABA model in Greater Manchester) was developed to test a variety of changes to improve outcomes for adults living with asthma in the region. It involved proactively identifying people with poor asthma control and offering them targeted reviews in primary care to help optimise their asthma management, supported by guided consultation software.

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Case study three *continued*

Health Innovation Manchester (the local Health innovation Network) was responsible for overall project management and day-to-day running of the programme, including recruiting and supporting the GP practices involved. AstraZeneca contributed funding for specialist nurses to deliver training in primary care, as well as bringing expertise in data and analytics to support the identification of at-risk groups and build evidence of impact. The third party, LungHealth, is an independent company offering guided consultation software for asthma and chronic obstructive pulmonary disease (COPD). Its software was used to support the asthma reviews and the company offered training and support around its use, as well as input around project development and design.

More than 1,000 people received an asthma review as part of the programme. A large proportion received a personalised asthma action plan as part of their care, and many had changes made to their treatment to improve asthma control. A new phase of work is now under way to build on learning from STARRS-GM and further refine the model.

Case study four

- Lancashire and South Cumbria Cancer Alliance with Sanofi
- Collaborative working project, December 2022 to August 2023

In 2022, only 67% of people referred for a suspected skin cancer in Lancashire and South Cumbria were having cancer diagnosed or ruled out within the recommended 28 days. Urgent referrals from primary care had increased significantly and were continuing to rise. Local service managers in the Cancer Alliance and the integrated care board (ICB) identified changes that were needed to the pathway to improve patient outcomes and patient experience by offering faster diagnosis, reducing inappropriate referrals, and delivering care in more convenient settings, as well as to reduce pressure on services. At the same time, the system was considering how it would implement teledermatology (the use of digital images to diagnose and monitor skin conditions).

A project was undertaken to understand pressures in the pathway and identify opportunities for improvement. This involved an extensive ‘process mapping’ exercise

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Case study four *continued*

to understand current provision (including interviews with local stakeholders), 'heat mapping' to show referral patterns, and 'asset mapping' to give a comprehensive picture of provision across different settings. An options appraisal was developed to aid decisions on future service change, particularly potential models for teledermoscopy.

Sanofi offered project management support throughout. It also directly supported delivery of the work by contacting stakeholders, conducting interviews and leading much of the data analysis. Sanofi also brought expertise in data analysis and presentation, and tools to support this, which was central to the referral and asset mapping. The work also identified a need for educational support for GPs around diagnosis of dermatological conditions. Educational videos were developed by Lancashire Teaching Hospitals NHS Foundation Trust, with the support of a separate grant from Sanofi.

The work supported informed decision-making on the future of the pathway, with changes made as a result, including a teledermoscopy service across all four acute providers in the region, a 'community image capture hub' in one primary care network, and rollout of a digital platform to support the secure uploading and transfer of images. The proportion of people having cancer diagnosed or ruled out within 28 days had improved to almost 90% by the end of 2023/4.

Further details on each case study are provided in Annex B.

3 What benefits can partnerships bring?

In this section, we consider the benefits that NHS–industry partnerships can bring. We first draw on the case studies to describe the sorts of benefits that can result from collaborative working projects, using examples to illustrate these. We then explore the benefits of NHS and industry partners working together on these projects, including the particular skills and resources that industry can bring.

In order to draw lessons around 'what good looks like' in terms of collaborative working, we selected case studies based on their reported success. This means that the examples studied here do not give a picture of the level of success across collaborative working arrangements more broadly. Instead, they offer lessons on the benefits that can occur when they go well. The nature and balance of benefits will, of course, be unique to any given project. It is also worth reiterating that this research is not a full evaluation of the four case study projects. Here, we describe the benefits that were highlighted during interviews and in documents shared with us in order to illustrate the type of impact collaborative working projects can have. Further information on the outcomes of each case study, including links to relevant documents and contacts, can be found in Annex B.

Benefits of collaborative working projects: examples from the case studies

The case studies we explored illustrate examples of benefits for patients and populations, for NHS staff and services, and for the companies involved. This reflects the 'triple win' of collaborative working projects that has been described previously (NHS Confederation 2019).

Benefits for patients and populations

Better access to proven interventions and best practice care

All four case studies were focused on putting existing best practice guidelines or established evidence into practice.

In Greater Manchester, the work led to more people having a personalised asthma action plan and receiving treatment that was appropriate to the severity of their condition. In Lancashire and South Cumbria, more people were having skin cancer diagnosed or ruled out within the nationally recommended timeframe. In Lincolnshire, people were having their medical treatment optimised across a range of cardiometabolic risk factors based on the most up-to-date evidence and guidelines for treatment of people with diabetes. And across the NHS Addictions Provider Alliance, many more high-risk individuals were being referred to receive proven treatments for hepatitis C.

Importantly, these examples were not about driving interventions to be used more widely than current guidelines suggest, which could lead to concerns around overtreatment. Instead, they were focused on increasing access to approved, recommended management for eligible people (in line with the requirements of the ABPI Code of Practice).

Improving outcomes

We heard examples across the four case studies of improved clinical outcomes resulting from the projects.

For example, following initiation of the cardio-diabetes programme in Lincolnshire, early data indicates reductions in acute kidney injury, hospitalisation for heart failure, repeat myocardial infarctions and number of deaths.

Of the 46 providers in the NHS Addictions Provider Alliance, 20 have reached 'micro-elimination' of hepatitis C for their service users. (Micro-elimination is defined according to the following criteria: 100% of people using the service have been offered a hepatitis C test; 90% of these people have been tested; and 90% of people diagnosed have started or completed treatment.) Along with the wider national elimination programme, this has contributed to a dramatic fall in the number of people living with the virus and its associated complications and mortality.

> *In terms of anything I've been involved with in my career this is one of those few things where I can tangibly say this has saved this many lives. There are thousands of people walking around now that would have been dead. I remember early on in my career, 20 years ago, when hep C treatment was much more laborious and access to it was a lot harder. People died. Loads of people died and now they're much less likely to. So that alone is huge. It's so significant, it's game changing. That's the biggest, biggest benefit by a long way.*
> NHS lead

Improving patient experience
We also heard examples of improvements to patient experience. For example, changes to the skin cancer pathway in Lancashire and South Cumbria reduced the time people spent waiting for investigation of suspected skin cancer, and patients in Greater Manchester and Lincolnshire reported better understanding of the management of their chronic conditions.

Targeting or tailoring services to specific population needs, with a focus on tackling health inequalities
In some of the examples, the work had focused on better targeting interventions and support based on an improved understanding of population needs, including by focusing on reducing unwarranted variation in the uptake of clinically effective medicines. For example, in Greater Manchester, an important part of the project was to use data to target asthma reviews and optimise treatment for those at the greatest risk of poor outcomes. The Hep C U Later programme focused on implementing testing in ways that would work for people who often fail to be effectively reached by health and care services. This included identifying gaps in

testing and undertaking extensive outreach work. Approaches were tailored to each local service depending on population needs, including specific initiatives within some services – for example, to work with people experiencing homelessness.

> *These are often underserved individuals in society experiencing multiple exclusions, not engaging in traditional care pathways. We were able to change the way the care pathways were being delivered to meet people where they needed to be met to engage in the treatment… This is a really good model for doing that because you're setting up and appropriately resourcing a team to focus on a specific goal to reach a specific community.*
>
> NHS lead

Benefits to NHS staff and services

Empowering staff to lead and support service improvement

Interviewees described the personal and professional rewards that the projects had brought for both clinical and managerial NHS staff. They described the rewards of working on a well-resourced project with tangible clinical improvements and data to demonstrate those improvements, particularly when this gave them the opportunity to address shortcomings in services that they had identified.

> *The clinical team know what the problems are. They just don't necessarily have the capacity, the resources and the headspace to make it happen… These projects give them something that makes them feel they can make a difference.*
>
> Industry lead

Upskilling staff and equipping local teams with knowledge and skills

Across all four case studies, we were told how the projects had led to increased knowledge and skills among local staff. Examples included better understanding of complex asthma management among GP practice nurses in Greater Manchester, better GP understanding of the dermatological referral pathways available in Lancashire and South Cumbria, cross-fertilisation of knowledge across the cardiology and diabetes teams in Lincolnshire, and much greater understanding of testing and treatment pathways for hepatitis C among staff working in drug and alcohol services. This capacity building was highlighted as being particularly important in terms of sustaining improvements beyond the period of any project.

What's been wonderful about this project is that now there's a whole army of people out there who are dedicated to the elimination of hepatitis C taking on that learning, taking on that shared best practice, developing projects themselves and sharing that widely.
Industry lead

Improving service quality and effectiveness
As described earlier, all four case studies focused on implementing best practice as per existing national guidelines and evidence. Doing so should improve service quality and effectiveness. While this is first and foremost about improving patient outcomes, it also has the potential to support greater efficiency and value (although this must be set against any additional costs related to the service change). For example, in Lincolnshire, data pointed to a reduction in rehospitalisations for complications and further cardiovascular events. In Lancashire and South Cumbria there was a fall in waiting lists for skin cancer diagnosis due to a reduction in unnecessary referrals. And as a result of the Hep C U Later programme (and wider national hepatitis C elimination efforts), many fewer people should require treatment for serious complications of chronic hepatitis C infection in the future.

Benefits to industry partners

There was an expectation and acknowledgement across our four case studies that collaborative working arrangements also bring benefits to the companies involved. This is clearly a driving force behind their involvement. Both NHS and industry interviewees emphasised the importance of being transparent about what these benefits are, and ensuring that they are appropriate and ethical, and fall within the requirements of the ABPI Code of Practice.

Benefits to industry partners highlighted in our case studies include the following.

Driving implementation and adoption of best practice guidance that the company has an interest in
Although projects are not permitted to promote particular medicines, they may focus on increasing uptake of treatments in line with nationally accepted clinical guidelines. Interviewees were open around the potential for companies to benefit from case-finding and expanding access to recommended treatments if they produce medicines within that disease area.

Ultimately, we do have treatments that sit within a pathway, but if patients aren't accessing services, they're not going to access medicines, so it's in everyone's interest to work like this.
Industry lead

The drive was the need to find the patients to help reach elimination, and of course the business rationale for that is we've got these great products, but if there's nobody to treat, what can we do? So how can we work together with the NHS and others to bring those patients into care?
Industry lead

Regarding our case studies, Gilead is one of a handful of companies that supplies hepatitis C treatments to the NHS; Boehringer produces medicines that are part of cardio-renal-metabolic pathways; AstraZeneca produces a combination maintenance and reliever therapy and biologics for asthma treatment; and Sanofi produces medicines within the skin cancer pathway.

Interviewees emphasised that the parameters around collaborative working mean the projects must be strictly focused on increasing access to approved and recommended treatments for already eligible patients, and should not involve the promotion of any particular medicine or brand. They also emphasised the importance of being transparent around these potential interests.

Improving their understanding of NHS systems
Some interviewees described the benefits for industry partners of building a greater understanding of NHS pathways and services, and how local systems operate.

Enhancing their connections and profile
Collaborative working can also enable companies to build relationships and networks with NHS organisations, and raise their profile.

A sense of contributing to improvements for patients and the NHS
We also heard from interviewees that achieving benefits for patients and for the NHS can be an important motivation for industry partners, both for the companies and for the individuals involved.

> *The obvious assumption that some can make of the pharmaceutical industry is they're just faceless, evil people trying to sell their drugs, and they'll say whatever they need to do that. But my experience is, while they don't hide the fact that they've got to pay bills, there is a genuine underpinning value there, which is actually that they can do that and also save people's lives and change them for the better.*
>
> NHS lead

Benefits of partnering

The benefits to patients and services described above are general benefits that, broadly speaking, could be expected from any major service improvement; they are not unique or specific to those where industry is involved. But in the case studies examined here, we heard that the involvement of industry had been central to unlocking those benefits. The second part of this section therefore focuses on the benefits of NHS and industry partners working together on these projects – in other words, what it was that the involvement of industry offered, and the benefits that resulted from the partnership working itself.

The defining feature of collaborative working arrangements is that they involve a coming together of skills and resources across NHS and industry partners. The success of the case study projects rested in large part on the commitment, hard work and expertise of the NHS staff involved, whether clinicians, clinical academics, managerial staff or wider teams (for example, in health innovation networks). In terms of the specific contributions of industry, a number of common themes emerged.

First, all four case studies demonstrated how industry can offer **'pump-priming' resource** to overcome capacity constraints within the NHS, which are seen as a major blocker to innovation and improvement. In all cases, the industry partners were able to put in place capacity to drive and deliver the work. What that capacity looked like and where it came from varied across the projects, ranging from companies directly inputting capacity in the form of project management or staff time, funding new roles (although employment was often managed by the NHS partner), or contributing specific expertise and tools available within their organisations (*see* below).

This is particularly valuable given the pressures NHS staff and teams are already working under. We heard examples of how the upfront investment of capacity and resource from industry helped unlock the potential within NHS teams and services to improve or transform care. This sometimes built directly on the passion and enthusiasm of NHS staff, enabling them to translate ambitions for services into real improvements in patient care.

Clearly, industry involvement is just one of a number of avenues that can offer this. Many improvement and innovation initiatives draw on alternative types of investment and support, including via national NHS improvement programmes and funding routes, through health innovation networks, or through grants or donations from other sources. The examples studied here suggest that industry involvement can be a valuable addition to that menu.

> *With the funding crunches in the NHS, any new novel ideas are never going to be looked upon favourably. And it's not because people don't want to do it. It's all to do with funding issues. So I think that we need to look at other avenues, of which partnership working is one. And as long as this is supported by proper research and proper clinical governance, I think it is all for patient benefit.*
> NHS lead

> *None of this would have happened without focus and money. It's one of the few initiatives I've seen which has actually been built for success… This project has been done properly and it's been done in a way that's realistic, and it's been funded. And surprise, surprise, it's been successful.*
> NHS lead

Another key element that industry brought to these projects was **dedicated project management capacity and expertise**. Project managers (either employed or funded by the companies) were often important in delivering the work. In Lincolnshire, a project manager from Boehringer supported the project, working alongside the clinical research fellow (part-funded by Boehringer) who led the clinical aspects of the work. In Lancashire and South Cumbria, a project manager from Sanofi offered dedicated support throughout, working alongside a senior project manager from the ICB. The Hep C U Later programme employed an overall project lead and local patient access to care managers to drive progress within regions. In Greater Manchester, the project management role was fulfilled by the Health Innovation

Network. These dedicated roles were often described as essential to driving progress, particularly as NHS staff involved in the projects often had little time to dedicate to it due to competing priorities.

> *I can't think of a better analogy than they 'sheep-dogged' us. So, they rounded us up and kept us going in the right direction when all those conflicting demands that you have could easily divert you elsewhere.*
> NHS lead

Some interviewees pointed to pharmaceutical companies having particular skills and expertise in this, and bringing a culture of robust project management.

> *I think we're used to it in a commercial organisation. What are we spending? Where are we trying to get to? Are we on track? So we've got the right performance metrics. There is just a real hygiene around it.*
> Industry lead

Project management was particularly valuable given the organisational complexities surrounding the projects. The Hep C U Later programme required co-ordinated effort across many providers and regions; the Lincolnshire example involved working across separate medical specialties with different business units and operating priorities; and both the Greater Manchester and Lancashire and South Cumbria examples involved working with multiple independent GP practices to effect change. In all cases, dedicated project management was important in overcoming these complexities to work across boundaries. Our case studies therefore highlighted examples of both operational project management activities and more complex network management, focusing on relations between the partners and wider stakeholders.

In addition to project managers, other dedicated roles (such as the patient access to care managers in the Hep C U Later programme) offered support and training to staff, helping to **build capacity for ongoing improvement**. In Lincolnshire, the project brought funding for a clinical academic fellow post; having this additional capacity supernumerary to service delivery requirements was described as bringing value beyond the project, offering education and spreading best practice within the department.

Across the four case studies, **effective use of data and analysis** was central to the work, and we heard many examples of how industry partners had played an important role in facilitating this. For example, in Greater Manchester, data was used to identify people at highest risk of complications from their asthma and to target interventions to these groups. In Lancashire and South Cumbria, referral and asset mapping was undertaken to better understand demand and provision across the skin cancer referral pathway. In the Hep C U Later programme, work was undertaken to improve the quality and flow of data across providers around testing, referral and treatment of hepatitis C, and linking this up to provide a complete picture. Interviewees highlighted that pharmaceutical companies often hold significant experience and expertise in data and analytics (particularly in relation to their research and development activities), which they can draw on to support this work.

In some of the examples, dedicated capacity to support data and analytics had played an important role. For example, in the Hep C U Later programme, data co-ordinator roles were resourced by Gilead to work across trusts, ensuring that data collection was consistent and could be turned into an Alliance-wide view of progress, helping to overcome challenges associated with multiple providers and information systems being involved. The data co-ordinators were also able to work alongside individual trusts to help them understand and act on their data to make improvements.

Industry partners were also described as bringing expertise around the data required to understand value and service implications and build a case for recommissioning. In Lincolnshire, 'value and outcomes consultants' from Boehringer (who bring expertise in health economics) were brought in to advise, ensuring that collection of the necessary data was built into the design of the work.

Several interviewees also described industry partners as having brought skills around **communications and engagement**. This included bringing together data and information around milestones and achievements, and sharing this in a variety of ways, including through internal communications, awards submissions and press releases. Some interviewees described how this had helped to build profile and understanding, and to support the case for sustaining initiatives beyond the project lifespan.

Interviewees also highlighted that partnerships with industry can bring **access to a breadth and depth of skills and expertise** within a company beyond the individuals and resources directly assigned to a project. These can be significant in the case of what are often large, global companies. In our case studies, examples included access to expertise in health economics, analysis, project management and clinical care.

> *She had access to lots of people, with expertise in different things that I would not have got from one person for six months, or if we had the resource to pay one person within the trust or within the ICB to get that. So you're not just accessing one person, you're accessing the whole organisation full of different skills.*
> NHS lead

Finally, interviewees also described examples of industry partners playing a **connecting or convening role**, including by drawing on their networks and insights into the wider health and care landscape. This speaks to the sheer complexity of NHS systems and organisations, and the challenge of ensuring that these are joined up, but it is nonetheless surprising to find that industry partners were playing this role.

In Lincolnshire, the involvement of industry had helped the clinical teams to work across specialty boundaries, overcoming the challenges they had faced in getting support due to a sense that the issues were seen by the two service/business units as 'somebody else's problem'. The clinicians involved also described how the industry partners had helped them to look beyond their own organisation, supporting them to understand the wider system and who they needed to engage (in this case, the four local clinical commissioning groups and, latterly, the ICB).

In Greater Manchester, AstraZeneca was able to connect clinicians leading the STARRS-GM project with those who had led similar work elsewhere as a result of their experience of related initiatives.

> *They have got lots of examples of other places where they've done innovative projects. So there was a similar project that they did on a smaller scale, and I was introduced to the consultant who had done that project. We had a chat and there was lots of learning, so it was bringing that shared lived experience of doing something like this and then making sure we weren't making the same mistakes.*
> NHS lead

In the Hep C U Later programme, we heard that Gilead had helped to make connections on a number of fronts, supporting widespread co-ordination of testing and treatment efforts. This included between providers of drug and alcohol services (including both NHS and third sector providers), between drug and alcohol services and the operational delivery networks responsible for hepatitis C treatment, and between local providers and the national NHS England hepatitis C elimination programme team.

> *We had a wide network, both within drug and alcohol services and across the operational delivery networks. And I think what Gilead brought to the party was national and local people that could work to connect the systems together. It was very much around connection, around alignment of objectives and facilitating the conversations across drug and alcohol services and clinical networks so that pathways were in place to enable more testing and anybody that was found to be positive to be linked through to care. But that required a significant amount of focus, so we put people on the ground.*
>
> Industry lead

> *We're working with most of those partners and we can help them connect with each other so that their efforts are cumulative rather than independent.*
>
> Industry lead

4 What makes partnerships work? Lessons from experience

In this section, we explore what these case studies tell us about 'what good looks like' across different aspects of NHS–industry collaborations, and offer a set of principles underpinning effective partnerships. Within each principle, we consider enabling actions that can help put them into practice.

The principles we have identified fall into three broad domains: purpose, people and process (*see* Figure 1). In practice, there are many connections and interdependencies across these.

Figure 1 Principles underpinning effective partnerships

Principle 1: Create a shared sense of purpose, with a focus on improvements for people and populations

Delivering improvements for people and populations should be the starting point for any collaborative working project and should remain the focus throughout. Our four case studies were all underpinned by clarity around the improvements they were trying to achieve for people using services, and we heard numerous examples of how this helped drive the work and bind the partners together.

> *It's actually, what is going to get us the best deal for the patients? Start there and work backwards.*
>
> NHS lead

> *Primarily, we are here to serve our patients and that's got to be the central ethos.*
>
> NHS lead

A clear sense of shared purpose is a critical driving force behind effective collaboration, underpinning the ability of NHS and industry partners to work successfully together.

> *Although we are coming from two separate ethoses – one being a commercial organisation, one being the NHS – we actually really do have a shared ambition and that ambition is defined. We know what we're all working towards and we're absolutely trying to bring everything to that. So there's discussion around what can and can't be done, but often we find solutions and that's been the exciting part of it, we were all working to find solutions together.*
>
> Industry lead

> *I like to explain it like there's two circles. There's the Gilead agenda, and there's the NHS agenda. And where they overlap, that's where the magic happens, because actually our agendas are aligned. We do want to find people who have hep C, we do want to treat people that have hep C – we have all of that in common. And I think having such a clear goal, a clear vision of what is to be done was a really important thing to have. And you know there are going to be moments where we disagree on a different direction at times, but not in a way where those things can't be done. Where there's a will there's a way, and we make it happen.*
>
> NHS lead

Before even getting to the stage of forming a partnership, clarity around the ambition on the NHS side can be important in guiding decisions around whether to involve an industry partner and who the right partner might be to help achieve those objectives.

Patient and public involvement (PPI) should be a central driving force behind this. This featured to varying degrees across the four case studies, with a variety of mechanisms used to facilitate it. This often built on existing routes for involvement, such as patient and public involvement groups and the involvement of patient charities. However, patient and public involvement was not particularly prominent and did not appear to have significantly shaped the design of these projects. Across all four case studies, interviewees reflected on this as an area for improvement.

Principle 2: Focus on measuring progress and outcomes

Partners need to identify and agree on the central objectives of the partnership and develop ways of monitoring progress towards these through insights and data. For example, the Hep C U Later programme involved a strong focus on the central objective of elimination. To support this, data systems were built to track progress in real time, clear criteria for success (the 'micro-elimination' criteria) were established, and connections were built between testing and treatment data to ensure a whole pathway view that captured outcomes, not just test numbers.

> *Data became a fundamental critical element not only to being able to work together to address gaps, blocks and barriers within the pathways, but also to be able to say, actually, we are seeing success.*
> NHS lead

Interviewees described the importance of building measurement in from the start of a project. They also emphasised the importance of capturing patient insights and feedback to understand the impact of changes.

As described in Section 3, we heard that industry can bring skills, tools and experience around data and analytics to support this, as well as a rigour and culture around focusing on measurement and outcomes.

Monitoring and reporting outcomes is also a requirement of the formal processes surrounding collaborative working (described in Section 2). This must be underpinned by robust data management processes and governance (*see* principle 7).

Principle 3: Draw on the ideas and insights of NHS staff

To help design and deliver successful improvement initiatives, collaborative working arrangements should build on ideas and insights from those working in services. This enables an understanding of the problems patients and services are experiencing, and the potential solutions. For example, in Lincolnshire, the collaborative working project stemmed from the ideas of passionate, engaged clinicians who could see that improvements were needed in their services. The industry partnership was then the catalyst that helped to translate those ideas into reality.

Importantly, partners should not come to these projects with a ready-made solution or preconceived idea of the change that is needed.

> *The conversations very much were, what would you need as a drug and alcohol service provider to be able to drive your ambition to test as many people as possible and ensure that those individuals had every opportunity to access treatment? What would you need? And so we sat down and basically worked through a programme of what would be required, not only to do that across one service, but to do that across the whole of the Alliance [NHS Addictions Provider Alliance].*
>
> Industry lead

We heard from interviewees that NHS partners, particularly those working directly with patients and service users, bring an understanding of how changes can be put into practice within the realities of existing service provision. They can also bring an understanding of local priorities and needs (including health inequalities), which industry partners from teams with a national or global focus may not be aware of.

> *The very first part of any partnership that we build is, is this a problem that Greater Manchester has? Is this a problem that Greater Manchester faces today? Everything that we do needs to link to our core local strategy.*
>
> NHS lead

Principle 4: Prioritise and invest in relationships

Effective NHS–industry partnerships require relationships and trust to be built between the partners involved. Across our four case studies, we heard that this was central to the success of the projects. This would likely be the case for partnership working of any type but is arguably even more important (and more challenging) in these partnerships because they involve individuals coming together from very different organisational contexts and cultures, across the public–private sector divide.

Building on principle 3, a clear shared purpose is an important foundation on which relationships can be built. Alongside this, relationships need to be underpinned by robust agreements and processes to support the joint work (detailed in principle 8). With these prerequisites in place, effective working relationships can be developed through a number of actions.

First, regularity of contact is important. Interviewees described the benefits of key individuals involved in the project meeting on a regular basis, with project processes and structures set up in a way that facilitates this. We also heard about the need for two-way communication, and people making themselves available between meetings to address any issues. Some interviewees described the importance of open and honest communication, and the need to surface and work through disagreements as and when they would arise.

We also heard how trust is built through the process of delivering a project, increasing over time as partners deliver on their commitments and demonstrate agreed ways of working. This was described as particularly important in NHS–industry partnerships as the starting point may be a level of mistrust based on preconceptions about the motivations and conduct of pharmaceutical companies (explored in Section 5).

> *Following through on our commitments is a big one. If people can see that, then it helps to build real trust. And I think success also builds a bit of trust as well.*
> Industry lead

> *The contract said that they wouldn't do promotional activity, but you still have that element of doubt because nobody had done it before, certainly not within our area. But then, bit by bit, that confidence grew.*
> NHS lead

Another factor described as important in enabling effective relationships was working in the spirit of collaboration, with a sense of equal partnership. We also heard that effort is required on both sides of the partnership to get the most out of the joint working relationship.

> *It genuinely has to be joint working where you both provide resources and expertise. Don't fall into what you see as being a parent–child type relationship or a prime contractor to subcontractor relationship, because it makes things a lot harder.*
> NHS lead

> *The responsibility doesn't just lie with the company. I took a big responsibility to nurture that project manager that was coming into our space with no knowledge of the pathway, no knowledge of the people... If you don't do that, if you expect this sort of company to come in and change things without giving it support like you would another team member, then you probably wouldn't get the same outputs.*
> NHS lead

Some of the projects benefited from continuity of key individuals within the partnership. Some also built on pre-existing relationships, and these existing connections were sometimes the route through which the joint working had been initiated.

No matter how effective the working relationships within an NHS–industry partnership, it is essential to respect and maintain appropriate boundaries in all aspects of the work, and to have processes and safeguards in place to ensure this (*see* principle 7).

Principle 5: Local leaders to support and champion the work

Collaborative working arrangements need to have the backing and support of key local leaders and decision-makers. On a practical level, this involves someone on each side of the partnership being willing to formally support the work by signing the contract.

Projects can sometimes be delayed or derailed by internal bureaucracy and multiple sign-off processes within the organisations involved. We heard that this is most

likely when they involve services or organisations without previous experience of similar arrangements and the processes involved, particularly given the particular sensitivities around working with industry (explored further in Section 5). In such cases, the engagement of one or more senior organisational leaders can help cut through uncertainty and enable decisions to be made at an appropriate level. To work in this way, leaders need to assure themselves that those leading the day-to-day delivery of a project are equipped and committed to managing the involvement and relationships with industry appropriately, and that robust processes and governance are in place to provide assurance around that (*see* below).

Leaders can also play an important role in advocating for and championing collaborative working projects, helping to raise their profile, encourage wider involvement and, where appropriate, support the case for ongoing investment through future commissioning. In several of our case studies, clinical leaders had played a particularly important role in this respect.

Principle 6: Identify and engage key stakeholders

To achieve their objectives and deliver lasting improvements in patient care, collaborative working projects need to engage wider stakeholders beyond those leading the work. This includes others involved in delivery of the project, those it impacts (including patients, service users and staff), and those who would need to support or commission it on a longer-term basis. This is particularly important when the context for the project is complex – for example, when it spans multiple providers or pathways.

In our interviews, we heard about a variety of activities that could support this, including stakeholder mapping exercises, early engagement, targeted engagement, steering groups with a broad membership, regularly communicating project progress, and showcasing outcomes. Several interviewees described the importance of collecting and sharing different types of information to meet the needs of different stakeholders, including information on clinical outcomes, patient and staff experience, and service and cost implications.

One of the challenges to getting buy-in beyond those leading the work can be scepticism or mistrust surrounding the involvement of industry. We heard examples

of NHS project leads playing an important role as ‘bridge builders’, facilitating involvement or engagement of their colleagues. In some ways, these individuals were lending their own credibility to the work to help overcome a level of reluctance to engage with an initiative associated with a pharmaceutical company. This role was sometimes played by individual staff members (particularly clinicians), while in other cases there was a more formal mechanism in place, as in the case of the Health Innovation Network in Greater Manchester, or the NHS Addictions Provider Alliance and national NHS England hepatitis C elimination programme in the Hep C U Later programme.

> *When I come up against that sort of scepticism, that’s where having a clinical lead like myself is really helpful because I can go, ‘look, I hear you, I get that, but this is different,’ and explain how the joint working agreement works.*
> NHS lead

> *What we had to do continually was advocate and work with our members to encourage them to be part of this, to support it, to prioritise it. It was all done through influence.*
> NHS lead

Principle 7: Put in place robust and transparent processes and governance

NHS–industry partnerships must be underpinned by strong governance and processes to ensure that they operate within appropriate parameters and to provide assurance around this to all involved. The importance of having robust and transparent mechanisms for this, and of everyone involved understanding and being aware of these and their implications for ways of working, came through strongly in our case studies.

Interviewees pointed to existing guidance and frameworks surrounding collaborative working (notably the ABPI Code of Practice and related guidance described in Section 2). These were described as useful in guiding project design and set-up, and important in providing reassurance for those entering into or supporting a partnership of this kind. However, we were told that awareness of the relevant guidance and frameworks is variable, and often relies on an organisation or individual having prior experience of joint working.

Having formal agreements and documents in place (for example, the joint/collaborative working agreement) was seen as important in terms of transparency, accountability and good governance, as well as ensuring that all partners were on the same page regarding project aims and approach. However, some interviewees cautioned against underestimating the time and effort involved in building such an agreement.

> *You can't underestimate the time it takes to build a good joint working agreement. It is immense and it needs legal teams as well as contract experts to get that right. The governance and the contracting pulls you back in shape and keeps you all honest, because everything is done back to that shared purpose. We all know why we're here, these are our boundaries and our guide rails, and if we stay on them, we'll get where we want to go.*
> NHS lead

We also heard about the importance of project oversight through regular governance meetings, and the case studies had used a variety of approaches to this. Some interviewees also pointed to the need to strike an appropriate balance between having rigorous agreements and processes in place while also being able to adapt and evolve the work within appropriate parameters.

Processes and governance surrounding data-sharing came through as particularly important. There are strict safeguards in place around storing and managing NHS patient data, and industry partners' access to certain types of data is also limited under the ABPI Code of Practice. Across our case studies, various data-sharing frameworks and governance mechanisms were used to ensure that data was managed within these requirements. These included local memorandums of understanding, information-sharing agreements, and processes to ensure that data was held on the NHS side or was only shared with industry partners in an aggregated, anonymised form.

Principle 8: Invest in effective project management and oversight

As set out in Section 3, effective project management and oversight played a key role in driving successful partnerships across our case studies, and its importance should not be underestimated. This is particularly the case when projects involve NHS staff and services that are already overstretched, and/or when the nature or context of the project is particularly complex.

These roles may be undertaken by different partners depending on the project, including being resourced by the industry partner (either directly by giving staff time or indirectly by funding new roles) or by NHS staff or others (for example, a health innovation network). In addition to general operational project management and network management skills, interviewees pointed to the importance of specific knowledge and experience in navigating NHS systems and processes.

Principle 9: Ensure that clear boundaries are maintained in relation to companies' commercial interests

It is critical that these partnerships are clearly separated from the promotional and marketing activities of the companies involved. This is an absolute prerequisite to involving industry partners in this way. As described previously, there are stringent requirements around this on the industry side, notably in the ABPI Code of Practice.

In line with this, there is an onus on companies, and the individuals working for them, to respect these boundaries and reflect them in all their dealings with the NHS that take place as part of collaborative working arrangements. There is also an onus on NHS organisations and staff to maintain these boundaries and to be cautious when entering into arrangements, taking steps to ensure that the work stays within agreed parameters at all times. There should also be openness about why a company is getting involved and what the motivations are behind them contributing to a partnership, including absolute clarity and transparency around commercial interests.

We heard positive accounts across our four case studies around rigid compliance with these standards, although this is to be expected given that they were selected based on being successful examples of collaborative working.

There was a very clear line, and there were no commercial pressures applied.
NHS lead

These are supposed to be non-promotional activities… We've been very clear when we go into all our projects that the purpose of them is to improve the way the system's set up to improve outcomes for patients. The clinical decision-making, their choice of medicines, the formulary, the guidelines, that's completely out of scope… Setting that ground rule of what the space is that we're operating in, it does a lot to build the trust, and then it's the behaviours you exhibit during the actual delivery of the project that matter.
Industry lead

What is distinct about these partnerships?

The lessons set out here have much in common with broader evidence on cross-sector collaboration and partnership working, with many similarities in terms of the key conditions for success (*see*, for example, Naylor and Tiratelli 2023; Walsh and de Sarandy 2023; Maybin *et al* 2022). These include the importance of building trust and investing in relationships, creating a shared sense of purpose and setting clear objectives and measurement. Paying close attention to these factors is arguably all the more important in the case of NHS–industry partnerships because they involve individuals coming together from very different organisational contexts and cultures.

The principles presented here also highlight some distinct features compared to other types of partnerships, and a slightly different balance in terms of what is required to make them a success. In particular, formal governance, processes and frameworks come through as particularly critical, as did the importance of maintaining clear boundaries.

In terms of our findings on trust and relationships, these are a pre-condition for successful partnerships of all types. But in the case of NHS–industry partnerships, wider contextual and cultural factors (particularly the preconceptions and mistrust we describe elsewhere in this report) mean that partnerships are often starting from a lower baseline. This makes it more challenging but even more important for partners to invest time and effort in this, and to ensure that the individuals and companies involved consistently act in ways that promote trust to be built.

5 Key barriers to partnerships and how these can be addressed

The previous two sections give a sense of what can be achieved when NHS and industry partners successfully come together to bring about improvements in patient care. It is important to note that our case studies were selected based on their reported success; not all partnerships will deliver the same benefits, and there are many challenges and complexities involved.

Even across these examples, difficulties were encountered and not everything went according to plan. In all four cases, it was clear that significant investment of time and effort was needed on all sides of the partnerships to make them a success.

Although the four projects varied widely in terms of their focus and nature, they had much in common in terms of the challenges they highlighted regarding effective partnership working between the NHS and industry. In this section, we draw on insights from our case studies into the challenges partnerships commonly face to understand what stands in the way of effective partnerships and explore barriers to them being used more widely. We also consider factors that can help to mitigate or overcome these challenges.

Preconceptions and mistrust

One of the most prominent themes in our interviews was a sense that there is often an inherent mistrust of the pharmaceutical industry, and that this can be a key barrier to effective NHS–industry partnerships. Interviewees described 'an automatic system bias' within the NHS against involvement of pharmaceutical companies. A variety of factors were described as contributing to this. These included general misgivings around companies' motivations given their commercial/profit imperatives, as well as negative preconceptions based on previous interactions with pharmaceutical companies, most often through their sales and marketing activities.

There is generally a lot of scepticism among medics around working with industry. And I think some of that is because before you get into the world of working with the people who actually do the science and develop the drugs, you're only exposed to drug reps and the sales aspect. And quite frankly, if your interaction with pharma has been that they pay for your lunches and give you free pens, which they don't really do anymore, and try and flog you their medications, then you do have a little bit of a skewed view.

NHS lead

Many interviewees also pointed to mistrust stemming from the broader reputation of the pharmaceutical industry, with this being heavily shaped by examples of poor practice, ranging from overly aggressive sales tactics to extreme cases of wrongdoing such as the opioid scandal in the United States (**Smith 2021**).

Overall, we heard that this leads to a level of scepticism that can make it harder to establish collaborative working projects and get key partners involved (including getting engagement and buy-in from wider stakeholders, as described in Section 4). In some cases, we heard that this extended to an unwillingness to engage at all. For example, some GP practices had opted not to participate in the STARRS-GM programme for this reason, and in the Hep C U Later programme, a very small number of eligible drug and alcohol providers had done the same.

We heard that concerns were often most prominent where there was limited prior experience of working with industry, and that collaborative working is easier when it involves organisations, teams or individuals with first-hand experience, either through previous collaborative working projects or through research and development activities.

Although some of the concerns described above may be based on misperceptions or biases, they also include legitimate considerations and caution. Interviewees pointed to a number of factors that can help to mitigate these.

- **Guidance and the ABPI Code of Practice**: As described in previous sections, the existence of robust frameworks and guidance can provide a level of assurance that collaborative working projects will operate within appropriate parameters. Clearly communicating these requirements, and the related governance and processes in place around a given project, can be important in building confidence.

The thing that was helpful and I found quite reassuring was the fact that the arrangement we entered into was a joint working arrangement, which had been in essence validated by the NHS Confederation and ABPI. That was really helpful and from my perspective, if there were any conversations where there was a level of apprehension, I was able to say, 'look, this is actually a really equal relationship that's been validated by external organisations on both sides'.
NHS lead

- **Being able to invoke the guidance if necessary**: Although this was not an issue in the case study projects, interviewees described other examples of collaborative working projects where partners (both from industry and the NHS) had sought to push the boundaries of the arrangement. Project teams had then been able to invoke their formal agreement and/or the ABPI Code of Practice to ensure that the work remained within agreed parameters. We heard that it was often the industry partners who were most rigid around this, as they must comply with the ABPI Code.

- **Taking a considered and transparent approach**: We heard that those entering into partnerships need to do so with their eyes open and to be mindful of the wider objectives of the companies involved. In particular, we heard that this should involve open and honest conversations around what the industry partner stands to gain from a collaborative working project and their motivations for being involved, with this being transparently communicated as part of the work.

- **The conduct and values demonstrated by industry partners**: We heard that having key individuals who demonstrate values and ways of working in keeping with the aims of the project and agreed ways of working can help to instil confidence and allay concerns around industry involvement.

  I cannot stress how important it is to have someone in the middle of all this, who, values-wise, gets why you're doing it and actually seems to genuinely believe in it.
  NHS lead

- **NHS leads advocating and facilitating collaborative working**: As described in the previous section, NHS project leads were sometimes able to act as 'bridge builders', facilitating the involvement or engagement of their colleagues. We found examples of this role being played informally by individuals (particularly clinicians), as well as examples where it was undertaken more formally by the lead provider in an alliance or health innovation network.

Every partnership we [the Health Innovation Network] *develop with our industry partners is a step closer to breaking down the barriers of cynicism, mistrust and lack of desire to collaborate with industry from an NHS perspective. So we take that really seriously. It's our duty to build through good experience and good programmes a sense that these can be trusted partners. And if we do it ethically and we do it well, then what we can do together to solve some of these massive problems is so much greater.*
NHS lead

We also heard that national or local system leaders can play an important role in advocating for this type of partnership, and that it is the job of leaders to challenge misconceptions where they exist.

You do get a lot of raised eyebrows, or 'hang on a minute, this is industry'. And I think what the system hasn't done very well is change that culture. Because everything's above board, there are very, very strict rules. Even if industry wanted to fiddle it, they couldn't, because it's so strictly regulated and they have to be walking a very fine line in what they're doing. So nobody's doing anything wrong and it boils down to old attitudes and culture. And as individuals, I don't think we can change that. I think we need the system leaders to change that through comms, through education, through promoting this way of working.
NHS lead

- **Building experience and understanding of collaborative working**: Interviewees described the positive impact of seeing or experiencing a successful collaborative working project. This may come from first-hand experience, or from word of mouth within a system or organisation where a successful partnership has taken place. Some interviewees suggested that more could be done to share these experiences more widely, through greater access to partnership working and by showcasing examples.

Across the four case studies, it was apparent that many of those involved from the NHS side had gone on their own personal journeys in relation to their views around working with industry. We heard how experiencing a partnership had challenged their own preconceptions, leaving them with a more nuanced understanding around the role industry can play and how to appropriately manage their involvement.

I was exactly the same, not trusting them, but then I started doing joint work and realised, 'oh, they've actually got some of the brightest minds, they've got money,

they've got infrastructure, they've got access to big data, they get project support and project management'. This is all the stuff we're really missing in the NHS. Why wouldn't we work with them as long as the eyes are on the prize? This has got to benefit our patient population, and we're always very, very careful when we're working with them.
NHS lead

I get really impatient with people in the NHS who make comments about big, bad, evil industry. I'm not naive – yeah, that does happen, of course it does, we've seen the opioid crisis in the US. But that's not what everybody's about. So there's something really important about suspending any ideology or bias you have and actually understanding the organisation and the people you'll be working with. And it is really important because ultimately, in an environment which is stretched resource- and demand-wise, and particularly in the area we work in where you're working with people who are often really disadvantaged, I'm trying to ensure that we facilitate the best access to care for them, which gives them the best opportunity of being well. That means we have an absolute responsibility to try and lever those resources and assets which might be available to benefit them. We shouldn't let our ideologies get in the way of that.
NHS lead

Sustaining and scaling change

As described in Section 3, collaborative working projects often benefit from pump-priming resource as a result of industry involvement, helping to get improvements off the ground. But this creates a particular challenge in terms of how improvements can be sustained and mainstreamed after this dedicated resource and focus comes to an end. Interviewees stressed the importance of considering this from the outset and building it into project design, evaluation and engagement.

If you want to land something new into a system, you cannot be relying on the partner to continue forever to support the innovation. So you need people from your system who are aware of what you're doing, supportive of what you're doing, and ready to pick up the reins and recommission that work going forward.
NHS lead

We heard that this is particularly challenging within the severe resource constraints the health and care system is currently facing. Even where changes are shown to

deliver improvements, there will be competing priorities for funding, and even if those changes are likely to deliver savings in the longer term, it can still be difficult to secure investment if commissioners need to make short-term cost savings. We heard that this is particularly challenging in relation to interventions focused on prevention.

At the point when our research was undertaken, the status of each project was as follows.

- In Lincolnshire, the cardio-diabetes service had been fully funded by the trust on a permanent basis. The standard operating procedures developed through the project had been incorporated into business as usual and integrated into other pathways such as the local heart failure and community diabetes services. There had been some national interest in the work, including from the Getting it Right First Time (GIRFT) team, who identified this as an example of good practice and had signposted it to other trusts.
- In Greater Manchester, a new phase of work (with different partnership arrangements) was under way to build on learning from STARRS-GM and further refine the model. This included rolling out software to more GP practices, including people with COPD as well as asthma, and adding in additional elements such as remote spirometry.
- In Lancashire and South Cumbria, the project informed commissioning decisions around procurement and rollout of an image capture platform, and teledermoscopy was now offered by all four acute providers across the region. There was ongoing consideration of whether the model of PCN image capture hubs could be scaled up across the region more widely, with plans to test it on a larger scale ahead of any wider rollout.
- The Hep C U Later programme was the most significant of our case study examples in terms of its scale and duration. The joint working agreement came to an end in March 2024, but NHS England commissioned the programme to run for a further year as part of the national elimination programme. It was not yet clear what would happen beyond the national programme in terms of maintaining the targeted testing and treatment of hepatitis C via drug and alcohol services. We heard that work was under way in at least one local system to explore this.

The four case study projects differed widely in scale and the extent to which they had secured sustained improvements in services, and for some it was too early to draw conclusions on this. Barriers to adoption and spread of innovations in the NHS are well known and often studied (*see*, for example, Collins 2018), so it would be surprising if these challenges had not featured to some extent in our case studies. Despite this, they offered some common insights into factors that can support improvements to be sustained and adopted more widely where appropriate.

One important factor is to ensure **local ownership** of change. Interviewees described the importance of local teams driving and delivering the work, and the importance of projects being designed in a way that enables the changes to be absorbed into the processes and workloads of local teams once the dedicated resource supporting a project comes to an end. Where dedicated roles are brought in as part of a collaborative working project, part of their role can be to work alongside staff and help train and upskill them to continue the improvements on an ongoing basis. This **capacity building through the transfer of knowledge and skills** was a key benefit of the projects studied here.

Another factor that can support improvements to be sustained beyond a project is to effectively **involve and engage commissioners**. This means identifying who will be responsible for ongoing commissioning and engaging with them as early as possible. Across the four case studies, we heard different examples of how connections with commissioners were being strengthened. For example, Health Innovation Manchester was working closely with the ICB to jointly shape their innovation pipeline and ensure that it was aligned with the integrated care system's (ICS) strategic priorities. In Lancashire and South Cumbria, the project was formally connected to the ICB via the Cancer Alliance, giving commissioners a direct line of oversight. In the case of the Hep C U Later programme, once the national hepatitis C elimination programme comes to an end, maintenance efforts will need to contend with a particularly complex commissioning landscape with responsibilities split between ICBs, local authorities (responsible for drug and alcohol services) and specialised commissioning (responsible for hepatitis C treatment). It was not yet clear how this will be navigated, and one interviewee felt that the work could have benefited from earlier engagement around this.

Linked to the theme of engaging commissioners, we heard that it is essential to collect **data to demonstrate value and build a business case**. Interviewees described

the importance of understanding, at the outset of a project, what data and information commissioners would need and to build ways of capturing this into the project design. As described in Section 3, we heard that industry partners can bring valuable expertise – for example, 'value and outcomes consultants' from Boehringer (with expertise in health economics) offered support around this in Lincolnshire.

> *We always try to run these projects with a vision at the start that will gather sufficient evaluation of the impact to create a strong enough case to be recommissioned into business as usual, so that they're not left in the lurch with things falling down at the end of the project.*
> Industry lead

In some of our case studies, we heard about the importance of **learning and adaptation** in supporting changes to be scaled and spread. This reflects the fact that the issues and solutions to problems will look different depending on the particular context.

Finally, our case studies also highlighted the value of **partnering on a larger/more strategic level** to support improvements to be sustained and/or scaled. For example, in the Hep C U Later programme, the NHS Addictions Provider Alliance had enabled the work to be done on a greater scale than would have been possible through single organisations acting alone, and we also heard about the value of the national NHS England hepatitis C elimination programme in supporting the work. The STARRS-GM project had benefited from the support of Health Innovation Manchester, which was working to create strategic partnerships with industry and to align these behind the priorities of the wider system. And the Lancashire and South Cumbria example had been able to achieve pathway change across the system as a result of being led from within the Cancer Alliance (which was formally connected into the ICS). In these examples, the existence of mechanisms for system-wide collaboration had helped to support improvements in care to be scaled and spread where appropriate.

Other challenges

We heard that **differences in cultures and contexts between the NHS and industry** can be a significant barrier to effective partnership working. There were a number of aspects to this, including partners having to reconcile different organisational objectives, different contexts in terms of pressures and capacity or resourcing constraints, and different expectations around delivery.

> *Sometimes they were frustrated at how long things took to happen, and our lack of ability to tell people to do things and them be done. Perhaps they are used to a more command-and-control approach. But the NHS is different, that's not really the way that we work. Because actually the context and the settings we work in can be complicated, and especially in the context of the big reductions in budgets we're experiencing, it's a constant balancing act.*
>
> NHS lead

We also heard about the challenge of resolving **practical differences between organisational processes**, including distinct approval mechanisms, funding models and budget cycles. In addition, interviewees highlighted the challenge of staff on the NHS side having limited time and headspace to work on these projects due to **demand and capacity pressures in NHS services**.

Some interviewees reflected on the challenges created when **the way a project is set up does not facilitate effective joint working**. Examples included complex or indirect contracting routes between partners where a third party is involved, not having the right people in the room at the right stages, and a lack of clarity on interim milestones and tracking progress towards them. Interviewees highlighted these as areas for learning and improvement in future projects.

These challenges may be amplified if additional partners are involved. In Greater Manchester, the third partner (LungHealth) was central to delivery of the work. But as well as bringing great value to a project, the involvement of additional partners may add further complexity as they bring another set of priorities, objectives and ways of working to the partnership. Where this leads to differing views on the approach, we heard that it is important for all partners to come together to collectively work this through.

We were pulling together three completely different cultures. The way that the industry sets about its business, its core strategies, are probably shared in some respects – they want to improve the lives of patients like we do, but they want to do it so they make money to do more research and development and satisfy their shareholders. We don't object to that but it's a very different starting point. Then the SME [small or medium-sized enterprise], that's a start-up and wants to get its foot on the ladder and be adopted and all of that, they've got another set of lenses. So, bringing those three cultures into one room and not expecting some fireworks, I'd go back again to that shared purpose and objectives… and good governance as the only way to manage that. This is not easy stuff by any means.
NHS lead

Interviewees also highlighted **limited experience of collaborative working** as a challenge, including a lack of knowledge of relevant processes and frameworks, particularly within the NHS. Interviewees described how those with experience of similar projects were better able to navigate setting up a project, with industry partners often playing a leading role.

These projects could run a bit smoother or a bit quicker or with less barriers if the infrastructure on the NHS side had a better understanding of the legal framework, the code, the contracting, the reasons we need to do things.
Industry lead

We heard that **routes to instigating partnerships could be unclear or ad hoc** and that they often rely on existing links – for example, through organisations or individuals having worked with industry partners on clinical trials or other activities. However, these connections do not exist everywhere, and are far more likely to be present in some types of organisations or systems than others – namely where there are academic or research centres. In our case studies, we saw examples of mechanisms helping to broaden access to industry partnerships, such as the Health Innovation Network in Greater Manchester, and the NHS Addictions Provider Alliance and national NHS England elimination programme in the case of the hepatitis C project.

Many interviewees felt that **more could be done to capitalise on the full potential of partnership working**. Some contrasted the current approach to the well-trodden involvement of industry in clinical trials through established partnerships with

universities and clinical academics, suggesting the NHS could learn from this to do more to realise the potential for NHS–industry partnerships to bring about improvements in patient care.

> *There's no sense of cynicism across the universities when it comes to developing trials with big pharma. But when it comes to doing things at the front line, where it really matters, everyone goes 'wow, don't trust them'. We've got to figure out how to get out of that mindset so that we can do meaningful work, that together will contribute to the change that we need to see.*
> NHS lead

6 Discussion

Reflecting on the case for NHS–industry partnerships

Whether for the individuals no longer living with hepatitis C, those living with better control of their asthma or diabetes, or those experiencing shorter waits for a suspected skin cancer to be diagnosed or ruled out, the collaborative working projects studied here have delivered valuable improvements to people's health and care. They illustrate the types of benefits that successful NHS–industry partnerships can deliver and offer insights into how these can be achieved.

Across the four case studies, we heard that the involvement of industry had been central to unlocking those benefits. Not only had industry partners brought much-needed resource to pump-prime the changes, but they also brought valuable skills and expertise, ranging from project management to data analysis and health economics. Such partnerships are not a panacea but can be helpful in delivering specific changes in the right circumstances.

In all four case studies, it was clear that significant time and effort were needed on all sides of the partnerships to make them work well. They also required a high level of rigour in terms of how they were conducted. Throughout this report, we have frequently returned to the need for stringent processes and governance to ensure that partnerships operate ethically and transparently, with appropriate safeguards in place. Along with existing guidance on collaborative working, we hope our findings – and, in particular, the nine principles for effective partnerships – are a useful resource for anyone entering into a partnership of this nature.

Our findings reflect the broader literature on public–private partnerships, including evidence that in the right circumstances they may offer routes to address difficult problems by leveraging the ideas, resources and expertise of different partners (Torchia *et al* 2013). The wider literature also highlights similarities in terms of challenges and key conditions for success, including the need for appropriate regulatory frameworks, transparency and stakeholder involvement, the importance of building trust between partners, and the need for robust evaluation and stringent processes to identify and mitigate risks (Hammond *et al* 2022; Rybnicek *et al* 2020; Warsen *et al* 2018).

Why do these partnerships matter now?

Now, more than ever, the NHS needs to improve and transform care given the deep challenges it is facing. A toxic mix of intense service pressures, financial difficulties, workforce gaps and low morale leave the NHS facing one of the most challenging periods in its history. Key performance standards are not being met and public satisfaction is at an all-time low (Darzi 2024; Jeffries *et al* 2024). Part of the solution to putting the health and care system on a more sustainable footing for the future must be the widespread implementation of evidenced best practice, ensuring effective and efficient care pathways and the delivery of preventive care. But the NHS finds itself in a catch 22: hard-pressed staff can often find neither the time nor resources to make the changes that would improve patient care, support service sustainability and make their working lives better.

The King's Fund has previously written about the importance of the health and care system bringing about change and improvement 'from within' by investing in and supporting staff, and appealing to their intrinsic motivation to provide the best possible care within available resources (Ham 2014). Given the scale of the current challenge, the NHS will need to seek out resources and capabilities to enable this type of improvement and transformation wherever they can be found, including drawing on the potential contribution of partners in the wider health and care ecosystem. The life sciences sector is a major part of this ecosystem and, as demonstrated by our case studies, can bring valuable resources and expertise to support NHS teams to make improvements in patient care. Collaborative working projects are an established route to bring the pharmaceutical industry's strengths to help improve services in partnership with the NHS and can offer a valuable addition to the menu of options available to support improvement.

This must not be about private sector involvement making up for or masking a shortfall in NHS capacity or resourcing. The type of involvement we describe here is focused purely on transformation or improvement initiatives, not the delivery of routine care, with the involvement of industry focused on delivering a specific project within tightly defined objectives and timeframes.

It is also timely to consider the further potential of NHS–industry partnerships given the current policy context. At a national level, there is renewed interest in opportunities for the NHS and the life sciences sector to work more closely to

drive improvements in health (including by developing and implementing innovative therapies and diagnostics to enable the prevention and treatment of a whole host of diseases) and to drive economic growth. Ambitions for closer collaboration between the NHS and the life sciences sector have most recently been set out by the new government in its life sciences plan (Labour 2024a) and in priorities laid out by the Secretary of State for Health and Social Care (Streeting 2024) and the Prime Minister (Starmer 2024). While the UK already benefits from a large and thriving life sciences sector, there is a sense that its full potential is not being realised (Labour 2024a; O'Shaughnessy 2023; UK Government 2021). Collaborative working is just one of the ways in which this could be further leveraged.

Foundations to build upon

Collaborative working is a well-established and codified way for the NHS and pharmaceutical industry to work together. The value of these projects has been growing in recent years and there is a large body of learning from previous examples regarding how to make a success of these partnerships, including the learning and principles distilled in this report.

As described previously, the involvement of pharmaceutical companies in collaborative working projects is tightly governed and regulated, with stringent requirements and guidance and resources to support their design and delivery. However, while conducting this research, it was striking to find the extent to which these are currently led by industry. When joint working was first introduced, there were clear statements of intent around this from the then Department of Health (2008), and the supporting toolkits were jointly developed by the Department and the ABPI (2010). However, since then, the development and publication of guidance and frameworks has largely been led by the ABPI (although the most recent version was published in partnership with the NHS Confederation, with NHS England offering some support around dissemination). This raises the question of why the leadership and oversight has largely been left to industry, and whether NHS England could do more to oversee and support collaborative working.

It is also worth reiterating that the frameworks and guidance surrounding collaborative working apply only to partnerships with the pharmaceutical industry. Other industries in the life sciences sector, including the healthtech and biotech

industries, are regulated differently and do not have such established mechanisms for joint working with the NHS. Our findings may offer useful learning for other industries in the sector around broad principles for effective NHS–industry partnerships, but approaches to developing joint working would need to respond to the distinct characteristics and regulatory infrastructure of each. It may be timely for industry bodies and leaders from these industries to work alongside the NHS to develop tailored frameworks and processes to support joint working.

Taking account of the broader relationship between industry and the NHS

Standing back from these projects, it is useful to think about how they sit in the context of the broader relationship between the NHS and pharmaceutical industry. As detailed earlier in this report, there can be general misgivings and mistrust around the role and motivations of pharmaceutical companies. These concerns are well documented and often relate to deep-rooted cultural and historical factors. However, recent research into perceptions of the sector paints a more nuanced picture, suggesting that mistrust of the industry is actually relatively low among UK health care professionals (ABPI and Ipsos Mori 2024), and indicating that overall trust in the sector has risen in recent years, partly due to the industry's role in the Covid-19 pandemic (Ipsos Mori 2022). In any case, the existence of some discomfort around the NHS working with the pharmaceutical industry should not be a reason to shut it out. Instead, it should inform how partnerships are undertaken, ensuring complete transparency and that appropriate safeguards and assurances are in place to maximise the industry's potential contributions to improving health and care.

The requirements and guidance that already exist are an important part of this. It is essential that these are followed and that partners are held to account for doing so, to instil confidence that partnerships are approached in a way that does not create conflicts of interest or threaten the independence of the NHS.

As part of this, full and transparent disclosure of partnership arrangements is important to enable an informed understanding of the involvement of industry in the health and care system, and the implications of this (Jones 2008). There are clear transparency and disclosure requirements on pharmaceutical companies (via the Disclosure UK database) and NHS organisations are expected to adhere to NHS England's guidance on conflicts of interest and other relevant national

and local guidance (NHS England 2024a; NHS England 2024b; Department of Health 2008). However, concerns have previously been raised that NHS organisations do not always take sufficient steps to make information about collaborative working projects readily available – for example, by failing to keep a central record of arrangements (Moberly 2019). This suggests that more may be needed in terms of requirements and oversight on the NHS side to ensure that NHS organisations are consistently transparent about the details of any collaborative working initiatives they are involved in, and to ensure that this information is readily available to patients and the public.

Previous research has also identified opportunities to improve the data from pharmaceutical companies held within the Disclosure UK database to make it easier to identify the number and value of projects taking place within NHS organisations. While Disclosure UK has been noted as one of the most accessible pharmaceutical company transfer-of-value disclosure databases in Europe (Ozieranski *et al* 2021), it presents challenges when attempting to draw together information specifically related to NHS organisations, as the database covers all types of health care organisations and lacks built-in recipient subcategories (*ibid*). It is important to continue efforts to further improve visibility and transparency to build greater confidence in the approach and safeguards around collaborative working.

In addition, to help break down scepticism and mistrust, industry partners need to be highly transparent around their motivations for contributing to collaborative working projects, and what they expect to get out of it.

In terms of challenging preconceptions and overcoming mistrust, there is no substitute for experiencing collaborative working first hand. It may also be valuable to showcase examples more widely.

Above all, it is critical that benefits for patients and the public are the driving force for all partnerships. Although we found some positive examples of patient and public involvement in our work, more could be done to ensure that this is at the heart of collaborative working projects and is meaningfully driving the work.

The importance of sustaining and spreading improvements

In undertaking collaborative working projects, the NHS needs to find ways to maintain the improvements they bring once industry's involvement comes to an end. There is an onus on both NHS and industry partners to build this into projects from the start. As described in Section 5, our case studies offer insights into factors that can support this. In particular, they offer promising indications that recently developed mechanisms for system-wide collaboration in the NHS (including ICSs and provider collaboratives) could help support improvements in care to be scaled and spread if leveraged appropriately.

Collaborative working projects can also generate much-needed evidence about delivering improvements to patient care, including what works in which contexts, and the best ways to spread successful interventions. These partnerships should therefore ensure that evidence – generated through rigorous, independent evaluation – is appropriately recorded, collated, synthesised and shared.

A more strategic approach to partnerships

As set out above, there is a case that partnerships of the type explored in this report could be used more widely. This is not just about more projects taking place, but about how they can be used on a more strategic basis. This will require NHS and industry bodies to create a supportive context and put in place practical support at local and national level to enable people to access and deliver successful partnerships.

As part of a more strategic approach, it may also be beneficial for the NHS to consider what it could achieve more broadly from partnerships with industry beyond the impact of specific projects. Partnerships might also: offer opportunities to deepen links and understanding between life sciences companies and the NHS; help industry to understand more about the NHS and its priorities and needs; enable the NHS to create a greater 'pull' for innovations that would support its priorities; and offer learning for the NHS around how it can become a better innovation partner. This matters because collaboration between the NHS and the life sciences sector is not just needed to solve the challenges of today, but also to shape innovations in health and care for the future. This could also include consideration of how NHS–industry partnerships might contribute to the

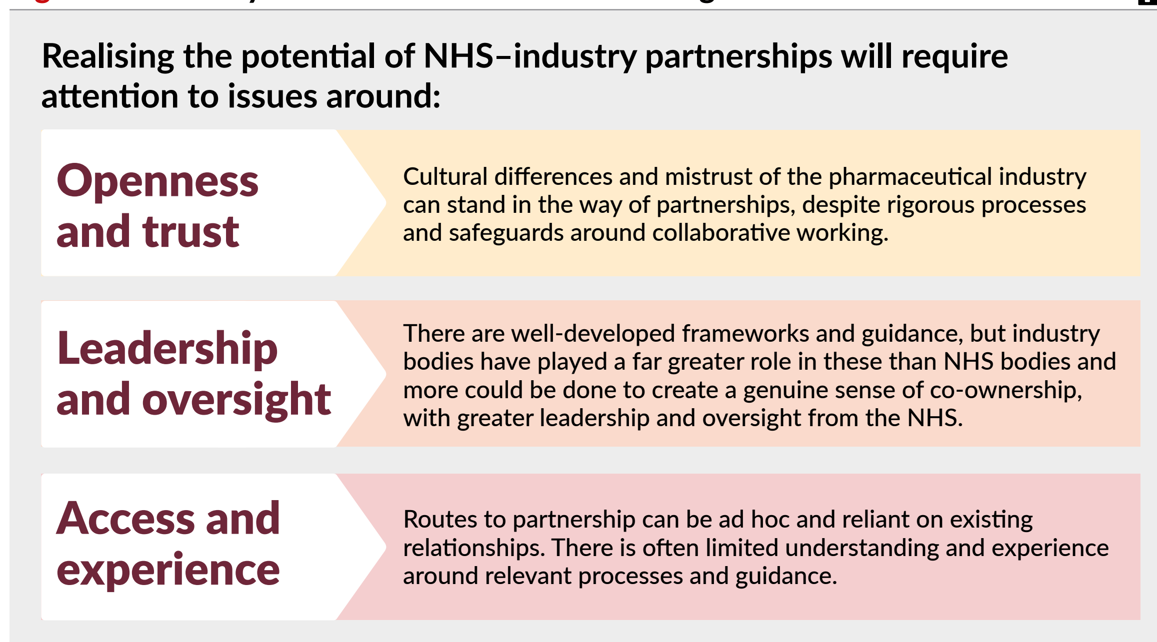
government's vision for a mission-driven approach, particularly in relation to its missions to 'build an NHS fit for the future' and to 'kick-start economic growth' (**Labour 2024b**). The life sciences sector in this country is an enormous asset and could make a significant contribution to these missions. If politicians and policy-makers are serious about pulling the full range of levers in support of the missions, then effective partnerships between industry and the NHS could be an important part of this.

7 Towards a more strategic approach: recommendations for national and local leaders

Other parts of this report offer lessons for those entering into NHS–industry partnerships on how to do them well. Here, we offer our reflections on actions that could be taken to build a more strategic approach to these partnerships overall, both locally and nationally, to further harness their potential (*see* Table 2 below). We invite leaders in national NHS bodies and government, local health and care systems, and industry bodies and companies to consider these in relation to their respective contributions.

These recommendations focus on addressing three key barriers to collaborative working being used more widely and on a more strategic basis (*see* Figure 2).

Figure 2 **Three key barriers to collaborative working**



Given the many competing demands and pressures on NHS leaders, it is not easy to dedicate time and effort to building successful partnerships with industry. However, our work suggests that if leaders can find the headspace to do this it can have substantial pay-offs, with investment of capacity, skills and resources from industry helping to unlock potential within NHS teams and services to improve and transform care for patients.

Table 2 Recommendations for national and local leaders

Openness and trust	Leadership and oversight	Access and experience
National NHS leaders		
• Set out clear and consistent statements of intent and support around partnerships with industry • Capture, collate and share robust evidence and learning from industry partnerships	• Proactively work with industry around how to maximise their contribution to key NHS priorities (for example, those that will be set out in the forthcoming 10-year plan) • Work with industry to develop the next iteration of guidance, and take greater ownership and oversight of this, ensuring that it is understood and implemented across NHS systems • Seek greater government direction for the NHS around ambitions for working with industry, including to deliver its missions	• Support wider access to partnerships so they are less reliant on individual connections and able to operate at scale – for example, by building routes for industry involvement into national programmes where this could help deliver programme priorities • Facilitate experience of industry partnerships to be shared – for example, through peer support arrangements to link NHS organisations entering into partnerships with others with first-hand experience

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Table 2 Recommendations for national and local leaders *continued*

Openness and trust	Leadership and oversight	Access and experience
Local NHS leaders		
• Actively support and advocate for industry partnerships where these can support the delivery of local priorities • Promote awareness of partnerships taking place in a local system to increase transparency and showcase evidence of their benefits and learning generated • Ensure that the impacts of collaborative working projects are assessed through robust and independent evaluation	• Develop mechanisms to oversee and support local industry partnerships, ensuring that they operate in line with national best practice guidance. This could be through an appointed lead or a group to 'hold the ring' on partnerships, drawing on those in the system with direct knowledge/experience, whether from the ICB, health innovation network (HIN), or provider organisations	• Put in place local processes to make routes to establishing and approving partnerships more straightforward, ensuring that these are in line with national guidance and frameworks • Identify where partnerships could help support the delivery of local priorities, and proactively build strategic partnerships with industry at ICS/HIN level to support these
Industry leaders (companies and industry bodies)		
• Proactively communicate what companies get out of these partnerships and why they want to work with the NHS in this way to counter scepticism and mistrust • Ensure that independent evaluations are undertaken to provide evidence on the impact of collaborative working	• Strengthen links with national NHS bodies to build genuine co-ownership of guidance and frameworks	• Build strategic partnerships that go beyond individual projects or organisations • Actively seek to understand national and local NHS priorities (for example, those that will be set out in the forthcoming 10-year plan) and consider how companies could support their delivery

Annex A: Methods

Our approach involved qualitative research examining four case study examples of joint or collaborative working projects.

Scoping and site selection (February to April 2024)

We chose to focus on examples of successful partnership working in order to draw out lessons learnt. We therefore undertook scoping work to identify examples with existing evidence of positive outcomes and clarity around how these had been achieved. Site selection was supported by a discussion with the ABPI, which identified (through its knowledge of its members) examples that had reported successful outcomes and where partnership working had functioned well. Possible projects were then independently reviewed, assessed and selected by The King's Fund.

We sought to prioritise examples that included a focus on health inequalities and/or prevention as part of the work. We also wanted to choose a sample of case studies that varied in terms of:

- disease area
- focus (covering prevention, diagnosis and treatment)
- geography/region
- scale
- part of the health system (primary care, secondary care, public health)
- partners involved (both in terms of the NHS and industry partners)
- level of experience among the NHS partners around working with industry.

A sampling frame was developed and used to create a longlist of potential case studies against these criteria.

Information on the longlisted examples was then reviewed in order to create a shortlist. Case studies without clear information around process and outcomes were excluded. Scoping discussions were held with some to get further information.

Some of the case studies initially selected did not respond to the invitation to participate or were not able to participate in interviews within the project timeframes, so were excluded.

The final four case studies selected were:

1. Improving outcomes for people with diabetes following acute coronary syndrome in Lincolnshire (with Boehringer Ingelheim)
2. Eliminating hepatitis C among people in contact with drug and alcohol services across the NHS Addictions Provider Alliance (with Gilead Sciences)
3. Improving asthma care in Greater Manchester (with AstraZeneca)
4. Improving the front-end skin cancer pathway in Lancashire and South Cumbria (with Sanofi).

Further details on each case study are detailed in Annex B.

Case study interviews (April to July 2024)

We sourced and reviewed published and unpublished documents for each case study to understand what the project involved and review evidence of outcomes.

We then conducted semi-structured interviews with key individuals involved in leading the projects, including those from the NHS and the industry side (as well as wider partners where relevant). This enabled us to understand progress from a range of perspectives. To help people feel comfortable to speak freely, we tried to ensure that our interviews kept the different sides of the partnerships separate. We interviewed 18 people in total.

Interviews focused on: project objectives and outcomes; how patients and the public were involved in design and/or delivery; people's experience of working in partnership; enabling and inhibiting factors to successful collaboration; and reflections and learning for future partnerships.

Information sheets and consent forms were shared with participants, and they had a chance to ask questions before they gave consent. We conducted the interviews on Microsoft Teams and each lasted one hour. Interviews were recorded and transcribed.

Analysis and synthesis (July to August 2024)

We undertook thematic analysis to bring together findings across the four case studies. Data was coded and the team then used the coding framework to generate themes. The thematic framework was tested on the data by members of the research team and was then refined to generate a final set of themes. All the data was then analysed thematically to draw together learning across the case studies. A quality assurance process was followed throughout the project.

Annex B: Case studies

Case study one: Improving outcomes for people with diabetes following acute coronary syndrome in Lincolnshire

Who was involved?

NHS partner: United Lincolnshire Hospitals NHS Trust (ULHT)

Industry partner: Boehringer Ingelheim (Boehringer)

What was the problem?

The association between cardiovascular events and diabetes is well established. There is evidence of significant excess morbidity and mortality from acute coronary syndrome (ACS) among patients with type 2 diabetes (**Alabas *et al* 2017**). National audit data shows a long-term trend of increasing prevalence of diabetes among people experiencing ACS (Myocardial Ischaemia National Audit Project (MINAP) 2022).

Secondary prevention through optimising cardiometabolic risk factors in people following a cardiovascular event has been shown to improve clinical outcomes and quality of life, and can reduce health care costs. This has been identified as a priority for the NHS (**NHS England 2022a**) as part of a broader focus on extending the benefits of secondary prevention (**Whitty *et al* 2023**).

In Lincolnshire, around a third of patients with diabetes have a recorded history of cardiovascular disease, which is higher than the England average. Clinicians at ULHT observed that despite the well-known associations between ACS and diabetes, patients admitted for ACS were often being discharged without being screened for diabetes and/or without their treatment being optimised across both conditions. Joint or co-ordinated care was rare, despite many patients being seen by both specialties over time.

What were the objectives?

A **joint working project** was undertaken between November 2020 and September 2023. It aimed to improve outcomes for patients with type 2 diabetes following ACS by implementing a new cardio-diabetic in-reach and outpatient programme. This would focus on identifying patients with these risk factors and working with them to optimise management of those risks. By doing so, the aims were to improve patient experience and clinical outcomes as well as to reduce the need for further unplanned NHS care.

What was done?

A new cardio-diabetic service was developed, led across the diabetes and cardiology specialties in the trust. The service was delivered by a multi-professional team including cardiology advanced care practitioners and junior/middle-grade doctors, with support from a consultant cardiologist and diabetologist and a clinical fellow recruited as part of the project to oversee delivery and evaluation of the new service.

Key elements of the work included the following:

- **An audit to understand current care and outcomes**: This highlighted that patients with previously undiagnosed diabetes were being missed, and that patients were often being discharged without treatment of their diabetes and cardiovascular risk factors being optimised in line with best practice guidelines.
- **Proactive identification**: This was to ensure that all patients admitted with ACS receive an HbA1c test to identify those with undiagnosed diabetes or pre-diabetes.
- **Cardio-diabetic in-reach**: This involved regular ward reviews for all eligible patients involving input from both specialist teams. Reviews focus on assessment of cardiometabolic risk factors and ensuring that patients' treatment for these is optimised.
- **Cross-disciplinary multidisciplinary teams (MDTs)**: All patients admitted with ACS with a known or new diagnosis of diabetes are discussed at a weekly cardio-diabetic MDT meeting prior to their visit/review in clinic.

- **Cardio-diabetes clinic**: All patients admitted with ACS with a known or new diagnosis of diabetes are seen in a specialist cardio-diabetes clinic within three months of discharge.
- **Optimising treatment**: Through these touch points, treatment is optimised across a range of cardiometabolic risk factors, including diabetes management (with a focus on treatments with proven cardiovascular benefits), lipid lowering therapy and blood pressure management, and supporting access to relevant prevention programmes. Decisions are informed by the latest guidelines and evidence.
- **Discharge and ongoing management**: Patients are discharged to primary care with recommendations and a comprehensive, personalised cardio-diabetes plan for managing their long-term conditions.
- **Education and training**: Cross-specialty training has also been delivered for cardiac advanced care practitioners and diabetic specialist nurses.

What roles did the partners play?

A project steering group was established to bring partners together and oversee project planning and delivery.

Staff across the diabetes and cardiology teams at ULHT contributed significant time and expertise to lead and deliver the service changes. This included medical and nursing consultants across both specialties, cardiology advanced clinical practitioners and diabetes specialist nurses. The trust also recruited and employed a clinical research fellow to lead the day-to-day management and evaluation of the changes.

Boehringer supported the project in a number of ways, including through:

- part-funding the cardio-diabetes clinical research fellow post
- project management, including convening and chairing the steering group
- practical support around project set-up and delivery, including developing supporting documents and navigating the contracting and sign-off process
- support around understanding and demonstrating the outcomes and value of the project, focused on building a case for recommissioning

- communications and engagement to raise the profile of the work and showcase progress (for example, through press releases and awards submissions)
- drawing on their networks and wider system view to help align the work with the priorities of the wider local system and support engagement (for example, with the integrated care board (ICB) and primary care).

What were the outcomes?

At the time of our research, close to 500 patients had been seen by the service. Screening for diabetes among patients admitted with ACS had increased from 65% to 97%. Around 8% of these patients were found to have previously undiagnosed diabetes and a quarter had pre-diabetes. People identified as having pre-diabetes were referred to the Diabetes Prevention Programme. Among patients with known or newly diagnosed diabetes, opportunities were taken to optimise the management of their cardiometabolic risk factors. This included more people receiving diabetes medications with known cardiovascular benefits, and additional lipid lowering therapies to achieve guideline-directed lipid targets.

Data collection and evaluation around clinical and service outcomes is ongoing. Early outcomes data shared with us by the research team indicates significant improvements in clinical outcomes, including a reduction in acute kidney injury, hospitalisations for heart failure, repeat ACS and number of deaths. It also indicates a reduction in other common diabetes-related complications. Evaluations conducted so far also point to service cost savings as a consequence of avoided complications and admissions. Patient feedback was positive, with people reporting improved understanding of their conditions and management, and appreciating their care being joined up across the different specialties involved.

Who were the wider stakeholders and how were they involved?

There was a focus on engaging the senior leadership of the trust, particularly those responsible for funding the service on an ongoing basis. Local commissioners were also involved through engagement with the ICB (previously four clinical commissioning groups at the start of the project).

Feedback was also sought from local GPs to understand whether the changes were supporting ongoing management of patients seen by the service within primary care.

This feedback was generally positive, with GPs commenting on the benefit of having a single, coherent management plan across patients' diabetes and cardiovascular management.

What happened next?

The cardio-diabetes service has been fully funded by the trust on a permanent basis. The standard operating procedures developed through the project have been incorporated into business as usual, and integrated into other pathways such as the local heart failure and community diabetes services. There has been some national interest in the work, including from the Getting it Right First Time (GIRFT) team, who identified this as an example of good practice and have signposted it to other trusts.

Resources

Resources are available on the FutureNHS Platform.

For further information and resources, contact Professor Kelvin Lee at **Kelvin.Lee@ULH.nhs.uk**

Case study two: Eliminating hepatitis C among people in contact with drug and alcohol services

Who was involved?

NHS partner: NHS Addictions Provider Alliance[1] (NHS APA)

Industry partner: Gilead Sciences

What was the problem?

Hepatitis C is a blood-borne virus that infects the liver. Left untreated, around 75% of cases result in chronic infection, which can lead to cirrhosis, liver failure and cancer. A range of antiviral treatments, available on the NHS, are highly effective at curing hepatitis C, thereby preventing long-term complications. However, many people are unaware that they have hepatitis C, and are not receiving effective treatment because the virus usually causes no symptoms until liver disease is at an advanced stage (**GOV.UK 2023**).

The World Health Organization (**2016**) set a target to largely eliminate hepatitis C by 2030. Following this, NHS England set an ambition for England to be among the first countries in the world to eliminate the virus as a public health concern by 2025, and has implemented a national programme to achieve this.

Hepatitis C disproportionately impacts individuals living in areas with higher levels of deprivation. The most common risk factor is injecting drug use, linked to the vast majority of cases. People who inject drugs may also find it more challenging to access and engage with testing and treatment services (**Barocas *et al* 2014**). There is therefore an important role for drug and alcohol services in helping people using their services to access hepatitis C testing, treatment and support.

1 The NHS Addictions Provider Alliance is an alliance of 18 NHS trusts, 17 of which provide community drug and alcohol treatment services across England. Members provide services to more than 49,000 people, covering approximately 35% of all service users engaged in the drug and alcohol treatment system in England.

What were the objectives?

A **joint working project** was undertaken between May 2019 and March 2024. The objective was to drive targeted testing and referral via drug and alcohol services in order to increase the number of at-risk people who are tested, and ultimately treated, for hepatitis C.

What was done?

A dedicated long-term programme (called 'Hep C U Later') was implemented to drive testing and referrals into treatment across the NHS APA. Key elements of the work included the following:

- **Patient access to care managers**: These are dedicated regional roles that were created to advocate and champion the work, and to identify and put in place practical support to help local teams drive it forward. This included bespoke training, advice and support. Post-holders also helped to link drug and alcohol services with the clinical networks responsible for hepatitis C treatment to ensure that pathways were effectively linking people who test positive into treatment.
- **Setting targets and monitoring progress**: Targets were set for testing and treatment numbers and progress towards elimination within individual services, with data flows and monitoring put in place to regularly measure progress against these. Work was also undertaken to develop and implement a definition and quality standards for 'micro-elimination' (defined according to the following criteria: 100% of people using the service have been offered a hepatitis C test; 90% of these people have been tested; and 90% of people diagnosed have started or completed treatment).
- **Improving quality and flow of data**: A significant amount of work was undertaken to improve the type and quality of data collected by drug and alcohol service providers in relation to hepatitis C testing. Data co-ordinator roles were created to provide direct support to services to use their data to understand progress and priorities in their areas. The data co-ordinators also focused on ensuring consistency across the data coming in from different trusts to allow a whole view of progress across the APA.

- **Development of resources**: These included testing and treatment campaigns across the APA, handbooks, posters, leaflets, social media campaigns and a stigma toolkit.
- **Agreeing best practice standards**: Building on the work of the Hep C U Later programme, work was undertaken with wider partners to develop sector-wide standards for blood-borne viruses in drug and alcohol services.

What roles did the partners play?

Gilead Sciences funded key roles including the patient access to care managers (employed by Gilead), the Hep C U Later programme lead, and data co-ordinators and analysts (employed by the NHS). The NHS APA also contributed significant additional staff time to lead parts of the programme.

Gilead contributed expertise in programme management, particularly around identifying objectives and monitoring progress, and brought tools and experience around data and analytics. They also played a convening and connecting role, building on their wide networks across drug and alcohol services and hepatitis C treatment providers to facilitate alignment of objectives and joint working.

What were the outcomes?

The project has driven a significant increase in the amount of testing in drug and alcohol services. A total of 46,468 hepatitis C tests were taken across the NHS APA over the course of the Hep C U Later programme, increasing consistently year-on-year, from 6,475 between April 2021 and March 2022, to 12,498 between April 2022 and March 2023, to 18,067 between April 2023 and March 2024. Similar sustained increases have been seen in the number of people receiving treatment and whose hepatitis C has been successfully cleared.

Of the 46 drug and alcohol services involved across the NHS APA, 20 have reached micro-elimination (*see* above), with many others close to achieving this milestone.

The work also led to improvements in the quality and flow of data on testing, referrals and treatment across different drug and alcohol service providers,

and across the diagnosis and treatment pathway (including better linkages with specialist treatment centres and operational delivery networks).

This project has been part of the wider NHS England national elimination programme, which has led to a dramatic fall in the number of people living with hepatitis C and its associated complications and mortality. Between 2015 and 2022, the number of people living with chronic hepatitis C infection in England fell by more than 50%, and mortality fell by more than 35% (**GOV.UK 2023**).

Who were the wider stakeholders and how were they involved?

Gilead's involvement in supporting hepatitis C elimination initiatives resulted from the national strategic procurement process for hepatitis C treatments in 2019 (**Jones 2019**; **NHS England 2019**). The NHS England Hepatitis C Elimination Programme team were important partners to the project. The Hep C U Later team also worked closely with operational delivery networks – the regional structures through which hepatitis C treatment is delivered.

The Hepatitis C Trust was another important partner and was closely involved in the design of the interventions and ensuring that these were developed with the needs and preferences of service users in mind. This was further supported by the involvement of people with lived experience of addiction and hepatitis C.

Wider joint working took place through the Hepatitis C Drug Treatment Services Provider Forum (convened by Gilead), which includes third-sector providers of drug and alcohol services in addition to the NHS APA.

What happened next?

The joint working project with Gilead came to an end in March 2024. The Hep C U Later programme was then commissioned by NHS England to run for at least a further year as part of the wider national elimination programme.

At the time of our research, it was not yet clear what would happen beyond the national programme. The commissioning landscape is complex, with responsibilities split between ICBs, specialised commissioning (responsible for treatment) and

local authorities (responsible for commissioning drug and alcohol services). Work is under way in some local systems to explore how they will maintain progress towards hepatitis C elimination over the longer term.

Resources

The Hep C U Later programme: **www.hepculater.com/resources**

For further information, contact: **connect.hepculater@mpft.nhs.uk**

Case study three: Improving asthma care in Greater Manchester

Who was involved?

NHS partner: Health Innovation Manchester, the health innovation network (formerly known as academic health science networks, or AHSNs) for the Greater Manchester region. Its role is to bring together health and care organisations, industry and academia to accelerate innovation and improve health and wellbeing in Greater Manchester.

Industry partner: AstraZeneca

Other partners: LungHealth, an independent company offering guided consultation software for asthma and chronic obstructive pulmonary disease (COPD).

What was the problem?

Greater Manchester has a higher prevalence of asthma and worse outcomes than the England average. This is reflected in greater-than-expected emergency hospital admission rates and high rates of over-reliance on short-acting beta-agonist (SABA) medication (which indicates poor asthma control). These poor outcomes are linked to deprivation levels, with Greater Manchester covering four of the most deprived local authorities in England (Chakrabarti *et al* 2023; Marmot *et al* 2021).

What were the objectives?

A joint working project was undertaken between December 2021 and December 2022. This was known as the STARRS-GM project (Standardised Asthma Reviews and Reduction in SABA model in Greater Manchester). The project aimed to improve outcomes for adults living with asthma in the region by proactively identifying those at highest risk and offering them reviews to help optimise their asthma management, supported by guided consultation software.

Specific objectives included the following:

- To proactively identify and review ‘high-risk’ patients as defined by the NRAD (National Review of Asthma Deaths) criteria, and optimise their asthma management in accordance with national and local guidance.

- To proactively identify asthma patients who may be inappropriately prescribed high-dose inhaled corticosteroid therapy.
- To reduce SABA use in patients who are over-reliant on their SABA inhaler.
- To simplify and standardise asthma reviews through implementation of LungHealth, a computer-guided consultation tool.
- To guide decisions about further rollout of this software across primary care in Greater Manchester.
- To utilise fractional exhaled nitric oxide (FeNO) testing to identify at-risk patients and support appropriate interventions, including referral to severe asthma clinics and/or MDT management where appropriate.
- To deliver positive environmental impact by reducing the carbon footprint of asthma devices in the region.

The project involved two products that are part of the Accelerated Access Collaborative's Rapid Uptake Products Programme. This programme identifies and supports acceleration into the NHS of products with NICE (National Institute for Health and Care Excellence) approval that support the NHS Long Term Plan's clinical priorities, including FeNO testing and biological therapies for treating severe asthma.

What was done?

To deliver the objectives described above, the project involved the following activities:

- **Identifying patients at risk**: Data from GP information systems was used to proactively identify high-risk patients (those over-reliant on SABA inhalers or on high-dose inhaled corticosteroid therapy).
- **Implementing LungHealth software**: The software was rolled out to around 30 GP practices across five localities to support comprehensive asthma reviews and treatment optimisation. Primary care networks (PCNs) were prioritised for involvement based on asthma prevalence and level of unmet need. FeNO testing was also used to support consultations.

- **Education for health care professionals**: Training was provided to GP practice nurses to use the LungHealth software. The Asthma MDT service for primary care delivered education sessions, aimed at providing advice and guidance on asthma diagnosis, treatment and management, and providing the opportunity for GPs and practice nurses to discuss complex cases with secondary and specialist care clinicians from the GM Severe Asthma Service.
- **Education for patients**: Where appropriate, patients were provided with a personal asthma action plan to help improve understanding of their condition and concordance with treatment.
- **Streamlining referral routes to specialist services**: Referral routes were streamlined to support onward referral to specialist services where appropriate, including to severe asthma clinics and a consultant-led MDT to manage complex cases.

What roles did the industry and NHS partners play?

This was a complex partnership with multiple partners. AstraZeneca held a contract with Health Innovation Manchester, which in turn contracted separately with LungHealth (there was no tripartite agreement). A steering group was set up to bring the key partners and other stakeholders together. This group met weekly. A project board was also established to escalate decisions if needed. The respective roles of the main partners were as follows:

Health Innovation Manchester provided:

- overall project management and responsibility for day-to-day running of the programme
- management of steering group meetings and oversight of project governance
- clinical leadership and expertise
- recruitment and engagement between LungHealth and the GP practices involved (including gathering and sharing feedback around implementation issues)
- practical support to the GP practices and PCNs involved
- connections with the ICS to ensure that local commissioners were engaged.

AstraZeneca provided:

- funding for the joint working, including specialist nurses to deliver training
- experience of running similar programmes, including connecting the lead clinician in Manchester to clinicians who had led similar projects elsewhere
- data and analytics expertise and tools, including support around identifying at-risk groups, evaluation and building evidence of impact, including an equality impact assessment.

LungHealth provided:

- support to Health Innovation Manchester to develop the project design and identify cohorts of patients for inclusion
- guided consultation software to support asthma reviews
- training to use the software and ongoing engagement around its use, including adapting this where needed to support staff delivering care.

What were the outcomes?

- More than 1,000 patients received an asthma review as part of the STARRS-GM programme.
- A large proportion of the patients reviewed received a personalised asthma action plan as part of their care.
- Many had changes made to their treatment, supporting improved asthma control. This included stopping SABA inhalers and, where appropriate, switching to Maintenance and Reliever Therapy (MART) inhalers.
- Dry powder inhalers were increasingly prescribed as an alternative to aerosol inhalers, not only helping to optimise treatment, but also to reduce the overall carbon footprint of asthma devices in Greater Manchester.
- The Asthma MDT sessions and education resources for primary care had been accessed by more than 120 clinicians across Greater Manchester, leading to better knowledge among GPs and practice nurses around management and referral routes for complex asthma.

Who were the wider stakeholders and how were they involved?

STARRS-GM involved a range of stakeholders across the system, including the following:

- PCNs and GP practices, which led clinical delivery of the work. There was an important role for partners in working alongside practices to deliver training and support, and to capture learning and feedback around implementation of the model and changes that were needed.
- Community pharmacy, with some reviews delivered in community pharmacy as an alternative to general practice.
- Greater Manchester ICB, whereby the project was closely linked to the priorities of the ICB, and Health Innovation Manchester ensured that they were engaged throughout the project.

What happened next?

A new phase of work (with different partnership arrangements) is now under way to build on learning from STARRS-GM and further refine the model. This includes rolling out software to more GP practices, including patients with COPD as well as asthma, and adding in additional elements such as remote spirometry.

Resources

Health Innovation Manchester, **'Transforming asthma care and outcomes in GM'**.

Also *see* **Chakrabarti *et al* 2023**.

For further information, contact: **info@healthinnovationmanchester.com**

Case study four: Improving the front-end skin cancer pathway in Lancashire and South Cumbria

Who was involved?

NHS partner: Lancashire and South Cumbria Cancer Alliance (within Lancashire and South Cumbria Integrated Care Board)

Industry partner: Sanofi

What was the problem?

In 2022, there were concerns around the urgent suspected skin cancer pathway in Lancashire and South Cumbria. The Faster Diagnosis Standard (which sets an expectation for patients with suspected cancer to be diagnosed or have cancer ruled out within 28 days of urgent referral by their GP) was only being met in 67% of cases (against a standard of 75%). Referrals from primary care to the urgent suspected skin cancer pathway had increased significantly and were rising by around 10%–15% year-on-year.

Changes were needed to improve patient outcomes and experience by offering faster diagnosis, reducing inappropriate referrals and delivering care in more local/convenient settings, as well as to reduce pressure on overstretched services and address unwarranted variations in care. At the same time, the system was considering how it would implement the national ask to roll out teledermatology (the use of digital images to diagnose and monitor skin conditions).

What were the objectives?

A **collaborative working project** was undertaken between December 2022 and August 2023.

The objectives of the project were:

- to develop a clear understanding of pressures in the urgent suspected skin cancer pathway
- to support the Lancashire and South Cumbria Cancer Alliance to identify and implement improvements.

What was done?

The project involved:

- an extensive process mapping exercise to understand current provision
- an options appraisal to aid decisions on future service change.

Process mapping
Qualitative interviews were carried out with local stakeholders to understand current provision and challenges within the pathway, and to explore what improvements could be made. Interviews included local GPs (including those with a specialist interest in dermatology), consultants, service managers, practice managers and commissioners. A survey was also conducted of GPs taking part in a local teledermatology pilot.

The interviews highlighted a need to identify and prioritise areas where changes in the pathway were most needed. This led to a referral mapping exercise (drawing on analytics expertise and tools from Sanofi). A 'heat map' was generated of suspected skin cancer referrals from primary care across the region. Further analysis of hotspots was then done to understand referral behaviour. Asset mapping was also undertaken to give a comprehensive picture of dermatology provision across the region, including in community settings (for example, GPs with specialist interests in dermatology).

Options appraisal
An options appraisal was developed regarding potential image capture models for teledermoscopy. This incorporated insights from the process mapping described above. A series of options were identified, alongside criteria to assess these and a scoring matrix to support the ICB's decision.

The initial plan was for individual GPs to take dermoscopic images during consultations and upload these for review, but based on insights gathered during the work, this model was abandoned in favour of 'image hubs' across acute trusts and PCN/community centres to take images, and a central triage team to review them. A digital platform was procured to support the secure uploading and transfer of images.

What roles did the partners play?

A project steering group was established to agree the project plan, and the group met monthly to oversee the plan's delivery.

Lancashire and South Cumbria Cancer Alliance assigned a senior project manager to lead delivery of the work.

A project manager from Sanofi offered dedicated project management support throughout the process mapping and options appraisal. They also directly supported delivery of the work by contacting stakeholders, conducting interviews and leading much of the data analysis. In addition to putting capacity into the project team, Sanofi also brought expertise in data analysis and presentation, and tools to support this, which was central to the referral and asset mapping.

The work also identified a need for educational support for GPs to support their diagnosis of dermatological conditions such as skin cancer. Educational videos were subsequently developed by Lancashire Teaching Hospitals NHS Foundation Trust, with the support of a separate grant from Sanofi.

What were the outcomes?

The work supported informed decision-making on the future of the urgent suspected skin cancer pathway, with changes made as a result, including:

- teledermoscopy services in all four acute providers in the region
- a community image capture hub in one PCN, with commissioners now looking to scale this up across the ICB
- procurement and rollout of a digital platform to support the secure uploading and transfer of images.

There has been a marked improvement against the Faster Diagnosis Standard from 67% in Q3 22/23 to 88% by Q4 23/24. There has also been a downward trend in overall referrals from primary care, reversing the previous trajectory.

Who were the wider stakeholders and how were they involved?

A range of key stakeholders within the local health and care system were engaged in the work through the interviews and survey. Significant effort was put into contacting and engaging these individuals. The position of this work within the Cancer Alliance meant that it was formally connected to the ICB, so commissioners were engaged and informed throughout the work.

What happened next?

As described above, the project informed commissioning decisions around procurement and rollout of an image capture platform, and teledermoscopy was now offered by all acute providers across the region. There was ongoing consideration of whether the model of PCN image capture hubs could be scaled up across the region more widely, with plans to test it on a larger scale ahead of any wider rollout.

List of acronyms

ABPI	The Association of the British Pharmaceutical Industry
ACS	acute coronary syndrome
COPD	chronic obstructive pulmonary disease
FeNO	fractional exhaled nitric oxide
ICB	integrated care board
ICS	integrated care system
MDT	multidisciplinary team
PCN	primary care network
PID	project initiation document
SABA	short-acting beta-agonist
STARRS-GM	Standardised Asthma Reviews and Reduction in SABA model in Greater Manchester

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