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Original research

Using a peer-led network to overcome the barriers to innovation in the NHS: the case of the NHS InSites Programme

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ABSTRACT

Background The adoption and spread of innovation remain persistent challenges for the English National Health Service (NHS). Traditional top-down approaches provide authority but often fail to account for local context, while bottom-up approaches harness frontline knowledge but fail to overcome systemic inertia. The NHS InSites Programme offers a distinctive alternative that seeks to transcend this dichotomy by combining peer-led learning networks with centralised coordination. We aim to explore the factors that support or hinder the adoption and spread of innovation in the context of the NHS InSites Programme.

Method This qualitative study draws on 25 semistructured interviews with 33 participants, including NHS staff, InSites Hub members and NHS England commissioners. Thematic analysis was conducted to identify key barriers and facilitators to innovation adoption and spread.

Findings Participants generally expressed positive attitudes towards the NHS InSites Programme, viewing it as a valuable catalyst for collaboration, learning and structured innovation support, bridging the limitations of top-down and bottom-up approaches to innovation spread. Four overarching themes influencing innovation adoption were identified: ringfenced financial support; transcending hierarchical structures; harmonising processes to navigate fragmentation and challenging context. Our analysis also showed that the programme's effectiveness relies on relational trust to enhance learning; harmonised processes to allow adaptation and institutional support to transcend hierarchical structures.

Conclusion By providing dedicated resources, harmonising processes and enabling peer-to-peer learning, the NHS InSites Programme addresses several well-documented barriers to spreading innovation. Its long-term contribution

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ The dichotomy between top-down and bottom-up approaches to innovation has contributed to a recurring pattern of 'pilotitis' and uneven spread, highlighting the need for approaches that effectively embed innovations across the entire system.
- ⇒ Little empirical evidence exists on how such embedding can be achieved in practice within the NHS.

WHAT THIS STUDY ADDS

- ⇒ Our study shows that the NHS InSites is valued as a catalyst for collaboration and organisational alignment and also highlighted the programme's sustainability and scalability as ongoing concerns.
- ⇒ It demonstrates how the NHS InSites Programme combines peer-led networks, ringfenced resources and harmonisation tools to bridge the limitations of top-down and bottom-up approaches to innovation spread.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ The findings suggest that network-based, hybrid governance models could strengthen innovation embedding in the NHS and inform future policy and practice on scaling innovation.

will depend on sustained investment, continued policy support and the ability to scale its mechanisms beyond early adopter sites.

INTRODUCTION

The adoption and spread of innovation in health and care settings has been a long-standing priority for the English NHS, yet one of its biggest challenges.¹ While the NHS generates many promising

innovations, their spread is often uneven, constrained by fragmented governance, short-term funding and lack of local capacity.² Numerous initiatives have attempted to move innovations beyond pilot projects and embed them in routine practice, but the evidence of success has been mixed. The 10-Year Health Plan for England sets an ambitious plan to shift innovation from isolated pilots to a structured approach to encourage the spread of innovation by reducing bureaucracy, centralising procurement, aligning innovation governance and embedding leadership accountability.³ While the ambition has been welcomed by many innovators and healthcare providers, critics have expressed concerns that although the plan offers a clear vision of intended outcomes, it provides limited guidance on the mechanisms required to achieve them.⁴

Existing approaches have tended to fall into two broad categories, both of which have their own challenges.⁵ Top-down, policy-driven strategies, introduced nationally and subsequently adopted at local level,⁶ provide authority, visibility and resources, but often overlook the distinctive realities of local contexts, including the need for locally generated evidence and knowledge of services. This may lead to innovations being adopted but not fully adapted or integrated into adopting organisations.⁷ By contrast, bottom-up, grassroots approaches, usually developed by innovators in response to local problems, harness frontline expertise and contextual sensitivity but typically lack the influence, resources and system connections needed to overcome organisational inertia and structural barriers. As a result, innovations may be successfully adopted in the local area but fail to spread to others—so-called ‘pilotitis’.^{8,9}

Recent studies have argued that addressing these challenges requires moving beyond the diffusion–implementation divide and focusing instead on embedding innovation; that is, understanding how innovations can be both implemented locally and sustained at scale. Embedding involves three inter-related mechanisms: learning (sharing experience across different groups), adapting (modifying innovations to fit diverse contexts while retaining core elements) and institutionalising (establishing norms, processes and governance structures that sustain adoption).⁵

The NHS InSites Programme represents a distinctive attempt to operationalise this shift.¹⁰ Established in 2022 with funding from NHS England, NHS InSites is a national initiative linked to the NHS Clinical Entrepreneur Programme that enables NHS organisations to act as real-world testbeds for health innovations, including AI and digital health solutions, patient care and management, healthcare technology, staff and system support and infrastructure and operations. Initially involving 10 sites, the network now expands across 18 organisations across the country, supporting the rapid evaluation and embedding of new technologies,

services and models of care, helping to generate practical evidence, frontline engagement and local capability for innovation. The programme fosters a peer-led learning network and provides structured support through a Coordination Hub based at Mid and South Essex NHS Foundation Trust. Insights from the programme are shared across the 18 sites and with national policymakers, making NHS InSites a multilevel network that offers a connecting link between innovation development and system-wide NHS adoption.

The aim of this paper is to explore the factors that support or hinder the adoption and spread of innovation in the context of the NHS InSites Programme in the English NHS.

METHODS

A qualitative approach was used, involving semi-structured interviews. This approach offers flexibility in data collection and analysis and enables the exploration of participants’ perspectives in a manner that aligns with the study’s aim to generate applicable insights for policy and practice. The work was commissioned by NHS England and was conducted independently by the Centre for Health and Care Innovation Research at City St George’s University of London.

Data collection

Between October 2024 and February 2025, 25 semistructured in-depth interviews were conducted with a total of 33 informants linked to the NHS InSites Programme. Of those, eight interviews were conducted in a group-based format, allowing for collective insights and dynamic discussions. Participants included NHS staff from 18 member site organisations (n=26), 5 members of the NHS InSites hub team and 2 NHS England individuals involved in funding and commissioning the programme.

Purposive sampling was used to ensure the inclusion of rich and diverse range of experiences and perspectives. Initially, the NHS InSites Hub team facilitated introductions to the designated lead contact at each site. Complementarily, NHS staff associated with NHS InSites sites were identified and contacted via LinkedIn as all were encouraged by the programme to maintain a presence on the platform. Further participant recruitment employed snowball sampling, whereby leads recommended additional individuals from their sites (1–3 interviewees per site).

The research team further recruited participants from the NHS InSites Hub team (n=5). The sampling process was extended by their recommendations, which included related NHS England staff (n=2). A descriptive overview of the study’s participants is presented in [table 1](#).

Table 1 Descriptive characteristics of study participants

Stakeholder group	Number of interviews	Number of interviewees	Interview length (mean)
Member sites	18	26	44 min
NHS InSites hub	5	5	55 min
NHS England	2	2	52 min
Total	25	33	50 min
NHS, National Health Services.			

Three distinct interview schedules were developed to facilitate interviews with representatives of member sites, the NHS InSites Hub team and NHS England staff. The interview schedules were used for both group-based and one-on-one interviews and were semistructured, allowing flexibility with their use in practice. The design of the interview guides was informed by a scoping review of innovation evaluation literature and the study objectives. Two researchers (AB and HS) were involved in the interviews. All interviews were conducted via Microsoft Teams and were transcribed by an independent transcriber.

Data analysis

Qualitative data were analysed thematically as described by Braun and Clarke,¹¹ using NVivo software Release V.14.23.1. A researcher (AB) frequently read transcripts, highlighting key segments and organising them into a new node or existing relevant node. This iterative process led to the development of a dynamic coding structure, with new themes incorporated as they emerged. The coding framework was discussed with the research team, refined continuously and used to analyse remaining transcripts, enabling a deeper, evolving understanding. This approach, involving constant comparison and iteration, facilitated richer insights and allowed ideas to mature throughout the data collection and analysis phases.

This study was reported as per the consolidated criteria for reporting qualitative research standards.¹²

Patient and public involvement statement

Patients and the public were not involved in this study.

RESULTS

Interviews with NHS staff, InSites Hub members and NHS England commissioners generated a rich dataset that enabled exploration of factors supporting or hindering the adoption and spread of innovation within the NHS InSites Programme from multiple perspectives. The programme comprised 18 sites engaged in a range of innovations, which are summarised in [table 2](#).

Overall perceptions of the NHS InSites Programme

Participants expressed overall positive attitudes and experiences regarding the role that the NHS InSites Programme plays in fostering innovation adoption within their organisations and wider spread of innovation across the NHS. They believed that the programme enabled collaboration, facilitated valuable peer-to-peer knowledge exchanges and exposure to successful case studies, inspiring organisations to aim higher. Participants acknowledged that NHS InSites Programme helped align their organisational strategy towards innovation, making the approach more structured and intentional.

Even though our innovation activity is low at the Trust, our approach now is much more focused so yes I think InSites has helped us massively. (Head of Innovation-Site K)

While there is a general agreement about its potential, concerns were raised about scalability, accessibility and sustainability, with one participant raising concerns about ensuring the programme's outcomes are widely disseminated across the NHS, stating:

...the concern is how are we going to make sure that whatever the work is done by InSites is well known and spread across all the NHS. (Senior Improvement Manager- Site J)

Factors influencing the spread of innovation through the NHS InSites Programme

Four main themes were identified when analysing the data on the factors that influence the spread of innovation through the NHS InSites Programme: ringfenced financial support; transcending hierarchical structures; harmonising processes to navigate fragmentation and challenging context. These themes and subthemes are presented in [table 3](#) and are discussed in more detail below.

Ringfenced financial support

Financial support from the NHS InSites Programme, which is in the site's discretion to decide how to use, enabled the testing of innovation pilots and demonstrating real adoption support within local contexts. But beyond enabling the generation of evidence, the study participants emphasised the significance of dedicated funding from the NHS InSites Programme for capacity building. Capacity limitations, particularly at the organisational level, were frequently noted as a barrier to innovation adoption. The NHS InSites investment enabled trusts to better adopt, test and scale innovations despite the wider challenges in the NHS, including financial pressures and resource constraints described below.

Most of the money that they (Sites) get is spent on people—building capacity and capability. Funding remains a key enabler to show that the NHS can experiment with new ideas. (NHSE)

Table 2 Innovations across the InSites Network

Innovation group	Description	Affiliated site
AI and Digital Health Solutions	An AI Chatbot for staff to access information about policies and procedures	Site M
	AI skin cancer triage	Site F, Site D
	AI solution to flag potential 'Did Not Attend's'	Site N
	Ambient voice technology scribe	Site E
	Clinical AI call assistant	Site F
Patient Care and Management	Digital exercise platform	Site C
	Clinical decision tool	Site R
	A platform for patient communication to send in photos and videos of their conditions to their clinicians	Site A
	VR technology for children to distract during procedures	Site O
	A digital tool for reporting equipment faults	Site K
	Nipple tattoos for women who had breast surgery	Site C
	Cancer support app	Site K
	Patient support and knowledge platform	Site M
Medical Systems and Applications	Virtual ward technology	Site O
	Waiting list risk stratification	Site B
Healthcare Technology	Wound care management platform	Site E
Staff and System Support	Health and well-being app for staff	Site L
	Digital consent platform	Site K
	Rota management tool	Site C
	Workforce development	Site N
Specialised Care Solutions	Support platform for neonatal cardiac patients and their families postdischarge	Site A
	Digital clinical translation app	Site C, Site N
	Patient education platform for children and young people, their parents and carers before coming in for a procedure	Site R, Site B, Site K
Infrastructure and Operations	Drones for transporting medical supplies	Site Q
	Tracking ambulance keys	Site P
	Environmental sustainability for laundry services	Site I, Site J

At the same time, participants highlighted the uncertainty around long-term funding as a barrier as there was not always ringfenced budget to support pilots or scale successful innovations. Some participants noted that delayed or uncertain budget settlements (often tied to the NHS annual budget) created a vicious cycle where staff contracts and programme continuity were at risk. This uncertainty hindered long-term strategic planning and the sustainability of innovation programmes; delays could lead to staff turnover and cancelled even promising innovations before making a 'real difference to the patient'.

...Innovation adoption requires investment of five years and plus plans and those generally don't happen. (Head of Innovation- Site H)

Transcending hierarchical structures

Participants agreed that the NHS InSites Programme established a network facilitating interorganisational connectivity and communication that transcends traditional hierarchical structures. They thought that this peer-network acted as a vital facilitator for innovation adoption and diffusion by fostering open communication, collaboration and shared learning across sites.

Through regular meetings, informal conversations and online platforms, network members not only disseminated best practices but also felt safe to discuss challenges and share failures without judgement. This collaborative, trust-based communication effectively bridges knowledge gaps, encourages a culture of continuous improvement, reduces duplication of effort and amplifies collective knowledge, ultimately making innovation adoption more accessible, effective and widespread.

The Hub team was consistently recognised as a key factor in the successful run of the network, providing valuable insights and guidance while also establishing and maintaining trusting relationships with the sites. Their personal engagement was seen as instrumental in establishing the credibility of the programme.

...without X and Y, we wouldn't have a relationship with the sites. They make them feel very comfortable and ensure the credibility of the hub is maintained. (Hub team)

Harmonising processes to navigate a fragmented system

Participants referred to the systemic fragmentation that characterises the NHS, including lack

Table 3 Main themes, subthemes and quotes on factors influencing the spread of innovation through the NHS InSites Programme

Themes	Subthemes	Quotes
Ringfenced financial support	Funding vital to generate evidence	<i>That little pot of money lets us run a small, short-term pilot, gather feedback, evaluate it, and then go to the organisation and say, 'this is what we've done – can we take it forward?' (Innovation Project Manager, Site G)</i>
	Funding for capacity building	<i>why I think it's successful?...the funding has added capacity within the team, which is a positive, so that's enabled us to explore some of the objectives that we want to look at around innovation. (Head of Innovation, Site P)</i>
	Short-term budget cycles hinder innovation	<i>we don't have a long-term strategy and planning. The NHS is based on yearly budgets and then the money gets wiped out and then we have another year. Innovation adoption requires investment of five years and plus plans and those generally don't happen. (Head of Innovation, Site H)</i>
Transcending hierarchical structures	Peer learning and sharing	<i>"the peer network is to me the best support... I know other people they will ask questions on the one to ones.... and now I have established a network within a network of people I have already spoken to" (Innovation Consultant, Site A)</i>
	A safe space to share learning	<i>Good communication across the 18 sites, psychological safety so it is never really a silly question, you always feel safe asking all 18 sites how they do things, asking for advice and that is on the FutureNHS platform. So it is like a safe place to share learnings and ask for help. (Innovation Business Partner, Site F)</i>
	The central role of the Hub	<i>'...without X and Y, we wouldn't have a relationship with the sites. They make them feel very comfortable and ensure the credibility of the hub is maintained.' (Hub Team)</i>
Harmonising processes to navigate fragmentation	NHS fragmentation discourages wider adoption	<i>'I think it is about to ease adoption or innovations and also to the sites that want to adopt innovations for efficiencies and everything else, it means that they can get to go live with whatever they want to adopt earlier. So it is for benefits just helps with momentum because otherwise things get stuck in a procurement route, in a digital enabling route you know in an information governance route. The idea was not to get... unblock those blockers. Because it is usually the checks and balances where people end up getting stuck the most' (Head of Innovation, Site B)</i>
	Harmonising adoption processes	<i>"having an innovation passport means if one Trust has completed governance documents for an innovation, including DPIA [Data Protection Impact Assessment], QEIIA [Quality, Equality and Health Inequalities Impact Assessment], clinical safety case report that those can follow...so that each Trust doesn't have to repeat the same thing." (Innovation Business Partner, Site F)</i>
Challenging context	NHS workforce pressures	<i>"Although we try to share the successes, a lot of time our colleagues simply can't spare the extra hours to attend our online meetings because of their day-to-day pressures." (Hub Team)</i>
	Innovation not a priority	<i>the reality is that the NHS is—people are struggling to maintain business as usual, and much of the NHS is firefighting, and so it's hard to introduce new ideas and new projects when people are struggling to keep on top of existing projects. (Chief Information Officer, Site M)</i>
	Senior buy-in is a catalyst	<i>'We have got both the director of strategy and integration, and the chief medical officer involved... he was able to immediately direct us to the clinicians that he thought would be most appropriate to look at pilots and ideas... the chief medical officer has stayed involved, comes to all the meetings which is really useful. We've got quite a lot of buy-in from the execs (Head of Business Development, Site C)</i>

NHS, National Health Services.

of coordination, siloed funding and insufficient proactive engagement among stakeholders. The existing lengthy processes for procurement and approvals combined with risk aversion and fragmented decision-making created bureaucratic and administrative barriers that discouraged adoption and diffusion of innovations in the NHS. Even when pilots were successful, the system was unable to move quickly toward wider adoption.

Many participants highlighted the absence of clear structured processes and dedicated supportive systems that guide organisations and staff through the innovation adoption journey. Without well-defined streamlined procedures, staff face uncertainty about where to start, how to progress or what steps to follow. Furthermore, the variability across different trusts meant that each trust handled adoption differently and innovators were required to repackage their business cases for different settings.

There is no scaling support; each Trust has to decide within its own budget whether or not to adopt an innovation. We simply don't have a standard template for innovation adoption. (Head of Innovation- Site O)

In response to the lack of a standardised and simplified process, the NHS InSites Programme has commenced the development of an 'innovation passport', which was positively perceived by interviewees. By creating uniform business case templates and streamlined procedures, it allows governance documents to follow an innovation across different trusts. This initiative served as a key enabler as it reduces duplication, administrative burden and confusion, making it easier for organisations to adopt and implement innovations.

Having an innovation passport means if one Trust has completed governance documents for an innovation, including DPIA [Data Protection

Impact Assessment], QEHIA [Quality, Equality and Health Inequalities Impact Assessment], clinical safety case report that those can follow... so that each Trust doesn't have to repeat the same thing. (Innovation Business Partner- Site F)

Challenging context

Although, as mentioned above, the programme provided strong support to build capacity within the innovation teams, several interviewees identified broader staff time shortages, limited organisational resources and ongoing NHS pressures as significant barriers to the innovation process. Several participants emphasised that frontline staff and leadership are overwhelmed with maintaining core services and managing urgent issues, leaving little to no space or motivation to pursue new ideas. They stated that immediate financial savings and concerns of senior leadership with cost-cutting and operational efficiency take precedence over innovation initiatives. This mindset created a culture where innovation is viewed as a secondary concern, making it difficult to gain the necessary support, resources and urgency needed for successful adoption and diffusion.

...it's hard to introduce new ideas and new projects when people are struggling to keep on top of existing projects. (Chief Information Officer- Site M)

In this challenging context, senior buy-in was believed to cultivate a supportive environment for experimentation and risk-taking. The presence of executive sponsorship and signed participation agreements enhanced credibility, helped open internal doors and facilitated the piloting and adoption of innovation ideas. Active participation and commitment from dedicated governance groups, including chief medical officers and directors of strategy, played a key role in ensuring that innovation projects aligned with organisational strategies.

DISCUSSION

Main findings

Our findings showed that the NHS InSites Programme is seen as a valuable catalyst not only because it provides ringfenced financial support to innovators but also, more importantly, because it bridges the limitations of top-down and bottom-up approaches to innovation spread. Previous literature has identified learning, adaptation and institutionalism as the key mechanisms that transcend this dichotomy.⁵ Our study provides evidence that NHS InSites achieves this through relational trust to enhance learning, harmonised processes to allow adaptation and institutional support to transcend hierarchical structures.

Relational trust to enhance learning

Relational trust emerged as a key mechanism underpinning the exchange of knowledge and experience across

sites. Participants described the NHS InSites as a safe arena for candid discussion of successes and setbacks, a feature rarely reported in centrally governed innovation initiatives. While earlier research has emphasised the role of professional opinion leaders in influencing adoption decisions,¹³ the NHS InSites broadened participation beyond individual champions by deliberately fostering multidirectional, cross-organisational ties. This observation contrasts with other NHS initiatives that relied on formal dissemination channels,¹⁴ suggesting that relational trust can complement, rather than replace, traditional authority in supporting spread.

Harmonised processes to allow adaptation

Our findings are in line with prior research showing that innovation uptake varies across sites and innovations often fail to diffuse due to duplication and fragmented governance.¹⁵ The NHS InSites Programme aims to address this issue by harmonising organisational processes. Participants highlighted the need for common frameworks that allow contextual adaptation. Innovations were frequently tailored to local conditions, but these adaptations when guided by shared tools, such as the innovation passport, helped to reduce duplication and transaction costs. In contrast to centralised programmes that emphasise fidelity and standardisation,¹⁶ NHS InSites demonstrated the value of balancing harmonisation with flexibility. This finding highlights how codesigned processes can preserve efficiency while enabling adaptation to diverse organisational realities, thus bridging a persistent tension in diffusion efforts.¹⁷

Institutional support to transcend hierarchical structures

To navigate a complex innovation ecosystem, participants highlighted the importance of the right institutional structures that support both the national and local priorities for innovation. Central to this was the role of the InSites Hub, which acted as the network orchestrator, providing support and guidance whenever needed. While national and local leadership endorsement facilitated adoption, uneven engagement across sites underscores the fragility of such support in the absence of embedded institutional mechanisms.

Implications for policy and practice

The 10-Year Health Plan highlights the need for stronger adoption and scaling up of innovation³ but provides little guidance on how these aims can be achieved. Taken together, our findings indicate that embedding innovations and their sustainable adoption requires a configuration of relational, organisational and structural dimensions rather than privileging either central mandates or local autonomy. The distinctive NHS InSites geometry offers a practical framework for NHS policymakers and leaders seeking to build sustainable innovation infrastructures.

By fostering networks across adopters and innovators, NHS InSites created relational trust and peer-to-peer exchange, countering organisational isolation and extending influence beyond individual champions. Equally, its systematic sharing of contextual knowledge legitimised adaptation while maintaining integrity, echoing frameworks that stress adaptation as central to sustainability.¹⁸ The innovation passport illustrated how shared approaches can reduce duplication and transaction costs, resonating with calls to embed mechanisms that spread learning across organisational boundaries.¹⁹ Dedicated resources and visible sponsorship provided legitimacy and space for experimentation, but sustainability depended on embedding such support into core budgets and responsibilities.²⁰ Finally, national and local leadership endorsement, coupled with peer credibility, highlighted the value of hybrid governance that combines formal authority with relational legitimacy.²¹ Future policy support should, therefore, focus on consolidating these achievements, extending them beyond early adopter sites and testing their scalability in routine NHS practice.

Strengths and limitations

This study drew on insights into multiple stakeholder groups, including NHS site representatives, hub team members and NHS England commissioners, enhancing the robustness of the findings through triangulation. Conducting the research in parallel with programme implementation also enabled the collection of timely, context-rich data, strengthening the applicability of the results to real-world practice.

However, the relatively small sample size and focus on early adopter organisations limit the generalisability of the findings. Participants were largely leaders in innovation roles, meaning the perspectives of frontline staff and innovators themselves were not captured. Moreover, the study's short timeframe makes it difficult to assess long-term sustainability or scaling challenges. Future research should adopt mixed-methods approaches, include a wider range of perspectives and follow-up over a longer period to evaluate whether NHS InSites achieves system-wide embedding of innovation.

CONCLUSION

The NHS InSites Programme illustrates the potential of a peer-led, network-based approach to supporting innovation adoption in the NHS. By providing dedicated resources, harmonising processes and enabling peer-to-peer learning, NHS InSites addresses several well-documented barriers to spreading innovation. Nevertheless, the programme is still in its early stages. Its long-term contribution will depend on sustained investment, continued policy support and the ability to scale its mechanisms beyond early adopter sites.

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Competing interests During this study, JS, FM and HP were employed by NHS InSites. All other authors have no competing interest to declare.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

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