

*The***AHSN***Network*

# **Review of spread and adoption approaches across the AHSN Network**

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## Disclaimer

This report presents findings from an investigation of spread and adoption approaches across the 15 AHSNs in England. The conclusions from this investigation are those of the authors and do not necessarily represent the views of the AHSN Network or any single AHSN.

## Acknowledgements

This study was commissioned and funded by the AHSN Network and the NHS England Innovation, Research and Life Sciences team.

The focus of this study was AHSN spread and adoption activity that occurred between January 2018 and January 2020. We would like to thank 143 AHSN staff who shared their views during interviews with our team and thank senior management at each AHSN for supporting their involvement.

We would also like to thank a further 26 AHSN staff who shared their views at focus groups about AHSN spread and adoption activity during the March 2020 to June 2020 COVID-19 period. This additional element to the study was approved in March 2020 and reported separately.

Finally, the study team would like to thank those who kindly gave their time and energy to review this report and help shape the final version. In particular, Anna Lodge and Jon Siddall at South West AHSN; David Kryl, Philippa Darnton and Jackie Chandler at Wessex AHSN; Sian Trew and Jayne Holgate from the AHSN Network communications team; and members of the study steering group.

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# Executive Summary



# Introduction

This review identifies and captures learning from the Academic Health Science Networks (AHSNs) on methods used with partners in the health and care sector to spread and adopt innovation.

The three study partners (Wessex AHSN; South West AHSN; Centre for Healthcare Innovation Research (CHIR), City, University of London) were selected to deliver this project. In recognition of the value of this review to the AHSN's development and to the sectors increasing capacity to spread innovation, this review was jointly funded by the AHSN Network and NHS England.

It contains critical insight for the AHSN Network, its commissioners, the NHS, local authorities, voluntary sector, industry, and academics on how:

- AHSNs have operationalised their activities to spread specific innovations or improvements to care
- environmental factors have affected spread activity
- relevant theory has been operationalised in real world settings.

For AHSNs or other organisations leading spread and adoption projects, this review provides insight at an operational level, including insights on capacity and resources required for spread.

***This review provides insight at an operational level, including insights on capacity and resources required for spread***





***The insights sought from this review are valuable in allowing the AHSN and NHS to build on the positive experiences of the last eight years***

## Background

The 15 Academic Health and Science Networks (AHSNs) – collectively ‘The AHSN Network’ – were established by NHS England in 2013 to spread innovation at pace and scale to improve health and generate economic growth. Each AHSN works across a distinct geography, serving populations within regional health systems to spread innovation, whilst also operating as a connected national network.

As the only bodies that connect NHS and academic organisations, local authorities, the third sector and industry, AHSNs are catalysts that create the right conditions to facilitate change across whole health and social care economies, with a clear focus on improving outcomes for patients.

This review aims to understand the methods AHSNs have used to spread innovation in that context and draws out learning for AHSNs, commissioners and those in local and national systems trying to spread innovation.

This review has been undertaken during a period where each STP, ICS and CCG across the country is developing its operational activities to meet the NHS Long Term Plan and respond to COVID-19. Quality Improvement, Implementation Science and the NHS Change Model continue to have practical day-to-day relevance, as part of a wider ‘improve-mentation’ movement, for AHSN-related spread and adoption.

The review did not seek to identify and interrogate a common model of spread across the country but did look for patterns and opportunities to strengthen spread and adoption work. The insights sought from this review are valuable in allowing the AHSN and NHS to build on the positive experiences of the last eight years, while the recommendations will help to make the most of the varied and adaptive nature of this work through the recommendations in the report.

# Activities within the review

A mixed-method study was conducted between 1 January 2020 and 30 November 2020. The review focused on spread and adoption activity between January 2018 and January 2020, was structured around four work packages, and responded to five key study questions:

**1**

What different approaches to spreading innovations have been developed and applied by AHSNs?

**2**

What contextual factors enable or challenge different approaches to spread?

**3**

How theoretically informed are the approaches?

**4**

Have national policy and frameworks influenced the approaches?

**5**

What inferences can be drawn from a comparison of the different approaches and the TCAM national programme spread metrics?

# 143

## INTERVIEWS

To address the study questions, 143 interviews were conducted with AHSN staff at different levels of their organisation and involved in a wide range of different innovations. One national programme which was universally delivered by all AHSNs, Transfers of Care around Medicines (TCAM), was investigated in-depth.

Ethical approval for this study was granted by City, University of London, Business School Research Ethics Committee (ETH1920-1032).

# Summary of the analysis: Headline themes

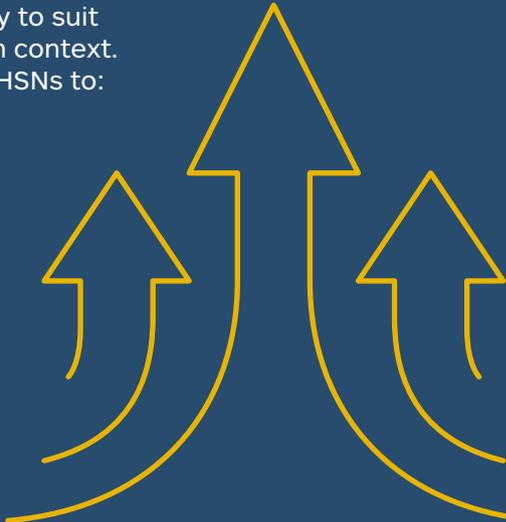
## AHSNs respond adaptively to complex environments through flexible methodologies

The review has found that there is no one methodology the AHSNs use to support spread and adoption in the health and care sector. AHSNs reported very good experiences using whole-system and relationship/engagement-focused approaches, engaging existing networks and building new networks across sectors and organisations. From the start, this increases ownership and with time would be expected to lead to sustainability and increasingly efficient spread and adoption programmes.

Due to the variety of programmes and the range of regional situations and drivers, the delivery of spread and adoption varies between projects and between AHSNs. Effective delivery therefore necessitates a flexible methodology to suit variety and changes in context. This in turn enables AHSNs to:

- Help NHS teams to adopt and spread innovation, using AHSNs as an experienced intermediary
- Share learning across the regions through the national AHSN Network
- Utilise in-built evaluation as the basis of measuring the impact of spread and adoption
- Help manage a constructive approach to evidence, and mitigate the risks of 'pilotitis'
- Utilise the adaptive capabilities of the AHSN, both clinical and corporate, to embed spread and adoption methods in local networks.

The findings in the review suggest that successful spread work is often complex, changeable, resource intensive, and always requires 'localising'. Due to varied contexts (AHSNs, programmes, regions), there is no simple recipe for success. Engaging with the complexity of context was critical to successful rollouts.



**Spread work is often complex, changeable, resource intensive and always requires 'localising'**

## In delivering projects, several approaches to spread and adoption were used to meet the needs of a diverse portfolio of projects

There was no 'one best way' to deliver spread and adoption identified in this review, reflecting the diversity of work the AHSNs do with national and regional partners.

Approaches to spread and adoption identified by AHSNs can be summarised into four categories:

- **Institute for Healthcare Improvement Model for Improvement**
- **Flexible end-to-end broad framework:** covering a wide range of activities by multiple AHSN staff.
- **Flexible implementation science informed project management approach:** informing various spread and adoption activities, e.g. contextual needs assessment and identification of potential challenges. Supported by carefully organised project management processes.
- **Flexible approach with a coaching focus:** incorporating a strong focus on behavioural coaching to empower rollout staff to innovate and support spread and adoption.

Four categories of project-level approaches were also identified during the review:

- **The Long Collaboration:** Often required for the larger national programmes or those involving considerable pathway change. This approach involves building a collaborative over months/years to drive the work forward, with funding and metrics decided and built into the programme. There is often a requirement for rollout sites to invest in the changes with their own resources, time, and align their commissioning timescales.
- **System partner needs-led:** These approaches tend to be developed around locally developed programmes, often in the form of pilot/demonstrator sites to build cases on effectiveness.
- **Innovator-led:** This is seen when AHSNs hand over some/all implementation responsibility to the innovators.

- **Targeting specialist services:** This is often used in relation to rapid uptake products, ITT/ITP innovations and small patient safety improvement products and is rapid, thus tending to not use a collaborative approach. Success often requires a finite number of specific clinicians to engage and collaborate.

Learning from the diversity of approaches found in this review can add to increasing the knowledge and adaptability of each methodology, thereby supporting partners to spread and adopt as effectively as possible.



## Through this review several operational elements were identified for successful spread and adoption

A key finding of the review has been the identification of a range of approaches to spread and adoption at a strategic and project level. Within these diverse approaches, there are five common principles of spread across all AHSNs:

1

**Engagement focused** – building in-depth understanding of stakeholders and working closely with them.

2

**Working with the needs of health systems** – being clear on local problems and needs and responding in a way that meets those needs.

3

**Building and using networks** – creating links between stakeholders to share learning, create peer support and build plans for spread on knowledge and experience.

4

**Seeking and achieving sustained spread** – aiming to achieve sustainable uptake, rather than just short-term use.

5

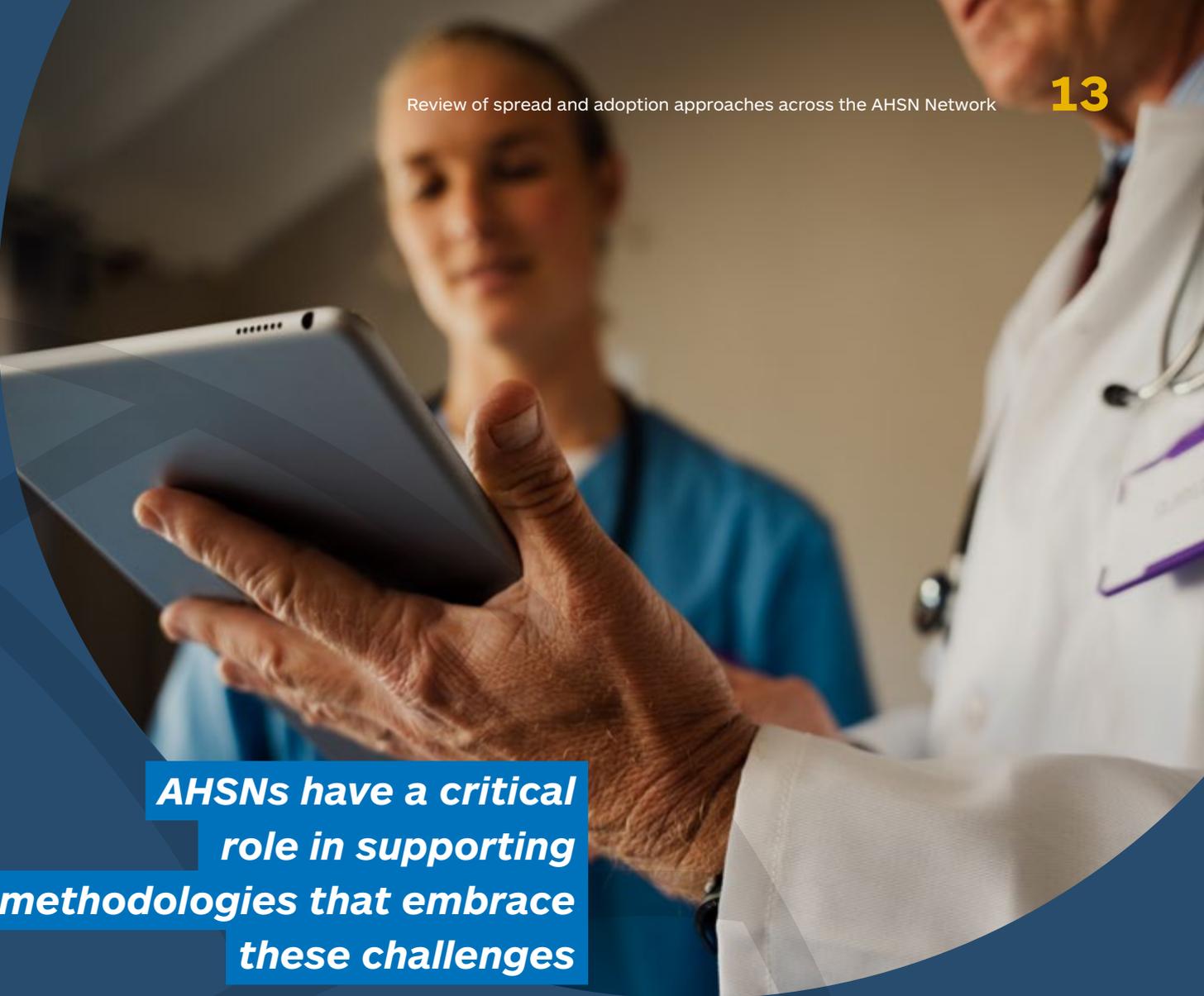
**Promotion of an AHSN persona** – being an ‘honest broker’ and facilitator with independence and a strong emphasis on understanding context.

The AHSN staff reported on several crucial factors for delivery of spread and adoption. These were:

- Flexibility, adaptability, and values-led approach of AHSN staff to meet the needs for innovation and rollout.
- Clinical champions at the rollout sites with an ensemble of support by a range of AHSN staff.
- Evidence about the innovation before and during rollouts and managing perceptions of the evidence with rollout sites (i.e., ‘pilotitis’ problem).

AHSNs and partners can utilise these commonalities to further reinforce spread and adoption to suit new projects as they emerge, to ensure the method is fit for purpose and has best chance of success.





***AHSNs have a critical role in supporting methodologies that embrace these challenges***

## **The review identified ways AHSNs and partners are responding proactively to barriers to spread and adoption**

Whilst there are a range of factors influencing successful spread, the most prevalent enablers and barriers were related to stakeholder characteristics and the organisational and systemic contexts. This is not an uncommon finding, but AHSNs have a critical role in supporting methodologies that embrace these challenges.

Importantly, it was identified that barriers and enablers are not static; they can reflect the perception, skill-set and situation of the individuals involved and can therefore be identified, mitigated, and potentially

changed to benefit spread and adoption activity. To do this requires in-depth understanding and consideration of context.

Where AHSNs had a very explicit approach to spread, there was evidence of more understanding and analysis of these barriers and enablers, with evidence that teams were working to understand, work with and around these important features. Those sites with more implicit approaches to spread were more likely to externalise influences on spread, removing their own agency in relation to those factors.

AHSNs that took more of a coaching approach to spread (understanding relationships, working practices and team-working) were more likely to consider mindset-oriented enablers (e.g. ability to learn from failure, ability to build trust) rather than just focus on operationally oriented enablers (e.g. project management skills, clinical background).

# Next steps

Building on the themes in this summary and the 24 conclusions to the five study questions, several key recommendations are captured as potential next steps for the AHSN and its partners in the NHS:

1

Further exploration of the range of approaches used to tailor them to innovations and contexts, with consideration made of the medium to long-term sustainability of the different approaches.



2

Use evidence-informed exploration checklists to identify potential challenges and mitigate for them in spread and adoption processes.



Further support to AHSN staff to appreciate different spread methodologies, possibly in the form of tailored training for different staff groups to complement their existing skill sets.

3



4

5

Continue the development of shared learning across the AHSNs, including a repository of learning across the AHSN Network containing insights and evidence from existing and new approaches to spread and adoption from within the AHSNs and elsewhere.

Using training and structured support to AHSNs to aid them in choosing and using the appropriate spread approach for the innovation and context.



6

7

Continue to champion the critical and practical role played by AHSNs in helping regional systems to use evidence as an enabler to spread and adoption.

The design and resourcing of project teams should utilise the diversity of adoption and spread experience within clinical, commercial, and other staff within the AHSNs.

# 1. Introduction



# 1.1 Background to spread and adoption activity at AHSNs

In recent years, the demand for innovation in health and social care has increased (King's Fund, 2014), with innovations often appearing in the form of digital devices, new diagnostic methods, and/or service pathway improvements. However, spreading and adopting innovations beyond their initial piloting into mainstream services remains a challenge (Greenhalgh et al., 2017).

The Academic Health Science Networks (AHSNs) were set up by NHS England in 2013 and relicensed in April 2018 to operate as the key innovation arm of the NHS. AHSNs are designed to connect the NHS with academic organisations, local authorities, the third sector and industry to support their local health and social care ecosystem to spread and adopt innovation at pace and scale and improve health and generate economic growth. The AHSN Network has shown it is highly effective in increasing spread and adoption of innovation.

All 15 AHSNs have the same commissioners (NHS England, Office for Life Sciences, and NHS Improvement which fund the Patient Safety Collaboratives) and follow a broadly similar pattern of innovation activity, as described

by the Innovation Pathway<sup>1</sup> and a review of the early development of five AHSNs (Ferlie et al., 2017). The review identified four broad areas of AHSN activity: scouting innovations, promoting evidence-based innovations, building relationships and matchmaking, and cross-institutional regional brokerage and support for regional innovation systems.

In the context of spreading innovation and supporting partners to adopt innovation, AHSNs have been largely free to develop their own approaches. An exploration of AHSNs' approaches would illuminate how AHSNs have operationalised their spread activity, how approaches link to successful and unsuccessful spread, how environmental factors beyond the control of AHSNs have affected spread activity, and provide guidance at the operational level for change agents within AHSNs. It would also provide guidance for senior

staff to determine capacity and resources required for spread, for NHS staff receiving support from AHSNs, and the wider academic community by investigating if and how relevant theory has been operationalised in real-world settings.

To support a shared understanding of concepts in this report, we have defined 'innovation' as an idea, service or product, new to the NHS or applied in a way that is new to the NHS, which significantly improves the quality of health and care wherever it is applied (Department of Health, 2011). We have defined 'spread' as the process through which new working methods developed in one setting are adopted, perhaps with appropriate modifications, in other organisational contexts (Cote-Boileau et al., 2019). 'Adopter' is an individual, team or organisation other than the innovator that implements the

***The AHSN Network has shown it is highly effective in increasing spread and adoption of innovation***

<sup>1</sup>[www.ahsnnetwork.com/supporting-innovation/innovation-pathway](http://www.ahsnnetwork.com/supporting-innovation/innovation-pathway)

innovation in a different site or setting to the one in which it was originally developed (Horton et al., 2018). 'Adoption' is an individual process detailing the series of stages from first hearing about an innovation to finally adopting it (Rogers, 2003). It is important to note that we did not differentiate between spread or adoption processes in this study but used the umbrella term 'spread and adoption' referring to both processes. Study participants did not differentiate between the two processes and often used the two terms interchangeably when talking

about their work. Importantly, to investigate how AHSNs supported spread and adoption, it was necessary to ask about actual 'mental and/or physical work' required. It was from this level of feedback that insights for the report were generated. We have defined 'approaches' to spread and adoption as a multi-faceted umbrella concept, involving the strategic views and assumptions of senior management, principles by which AHSNs operate, and operational activities on particular projects and programmes.

The three study partners (Wessex AHSN; South West AHSN; Centre for Healthcare Innovation Research, City University of London) were selected through an invitation to tender process to investigate and determine lessons for spread and adoption of innovation from an analysis of the different approaches applied by the 15 AHSNs in England. This study was funded by the AHSN Network and NHS England.

## 1.2 Scope of the study

The overall aim of this study was to produce the first overview of spread and adoption activity across the whole AHSN Network.

This exploratory study was the necessary first step in the process of opening the 'black box' of AHSN spread and adoption activity across the AHSN Network. To create a hitherto unknown aggregated picture of activity, we encouraged staff views about all types of innovation rollouts from local, regional, and national programmes.

We have used the term 'spread and adoption' for all activity described in this report. We have provided definitions of these terms in our introduction but were unable to separate staff views for each process. In describing their views, the majority of staff used the

terms spread and adoption interchangeably. In section 4, this study highlighted a wide range of 'mental and/or physical work' for spread and adoption, providing the foundation to start discussions about whether there is a meaningful difference in the work between spreading innovation and supporting adoption.

Whilst staff did share their personal views on key enablers as part of their individual experience of spread and adoption, as reflected in sections 4 and 5 of this report, a definitive assessment of how enablers related to spread and adoption outcomes was not possible due to the myriad of innovations and contexts discussed. Understanding 'what works' for all activity at AHSNs was out-of-scope for this study. However,

one national programme was chosen at the start of the study to demonstrate that comparisons of spread and adoption approach with spread and adoption outcomes was possible and would provide insights. The TCAM national programme was chosen and outcomes from all AHSNs were compared against their stated TCAM approaches. The findings are described in section 8 of this report.

This first exploratory and aggregated overview of spread and adoption activity across the AHSN Network has generated many avenues of inquiry. Suggestions for future directions of research have been provided at the end of this report.

## 1.3 Study questions

This study investigated five questions:

1. What different approaches to spreading innovations have been developed and applied by AHSNs?
2. What contextual factors enable or challenge different approaches to spread?
3. How theoretically informed are the approaches?
4. Have national policy and frameworks influenced the approaches?
5. What inferences can be drawn from a comparison of the different approaches and the TCAM national programme spread metrics?

In response to the COVID-19 pandemic, an additional element to this study was approved by the study commissioners in March 2020. A sixth study question was developed and answered in a separate short report<sup>2</sup>. The question posed was ‘What approaches to spread and adoption have AHSNs taken, and impacts seen, during the COVID-19 emergency?’. An additional 26 AHSN staff shared their views at focus groups about AHSN spread and adoption activity during the March 2020 to June 2020 COVID-19 period.

<sup>2</sup>Robens S, Sibley A, Ziemann A, Scarbrough H. (2020) *Experiences of spread and adoption across the AHSN Network during COVID-19. Short report commissioned by the AHSN Network and NHS England.*



# 2. Methods



## 2. Methods

A mixed-method study was conducted between 1 January 2020 and 30 November 2020. The study was structured around three work packages (WP):

### WP1

- A scoping exercise to identify approaches applied by each AHSN to local/regional and national spread programmes. Led by Wessex AHSN and South West AHSN, this work package addressed study questions 1 to 4.

### WP2

- An in-depth study to elicit different approaches applied by each AHSN to one national spread programme and use the national metrics data to identify influential approaches/factors. Led by CHIR, this work package addressed study question 5.

### WP3

- A synthesis of the findings from the first two work packages to develop conclusions and recommendations about spread and adoption processes for the AHSN Network. Jointly led by all three partners.

For WP1 and WP2, a virtual visit to each AHSN was organised to (a) conduct semi-structured interviews with senior managers and operational staff delivering projects/programmes, and (b) opportunistically collect existing documents and data. The temporal focus was a two-year period between January 2018 and January 2020. Interviewees were purposively recruited based on their expertise and experience related to spread work. Interviews were conducted between March and June 2020 via telephone by three researchers (AS, AZ, and ST). All interviews followed the same semi-structured interview guide, were audio-recorded, transcribed verbatim, and de-identified for analysis and reporting.

For WP2, one national programme was chosen and investigated across all AHSNs. The study steering group selected the Transfers of Care Around Medicines (TCAM) national programme based on expected availability and

variability of in-depth data across AHSNs (i.e., extent of adoption at each AHSN, duration/history of programme). At least one staff member involved in TCAM from each AHSN was recruited and data collection for WP2 was integrated into the recruitment and interview process for WP1.

The interviews and focus groups were analysed using qualitative thematic analysis. Codes were extracted from the interview transcripts by AS, AZ, and ST using common data extraction tables. Data extraction was organised using broad categorisations of adoption activity, either derived from the data or from the scientific literature (Leeman et al 2017, Powell et al. 2012, Damschroder et al. 2009). First order themes for each category were coded inductively from the interview transcripts by three researchers (AS, AZ, ST) and managed in NVivo version 12.

***The focus of this study was spread and adoption activity between January 2018 and January 2020***

## ***The unique contribution of the QCA methodology was the systematic identification of successful spread activities***

For WP2, data extraction of first order themes from the interviews focusing on TCAM used the same data extraction form. First order themes were synthesised in narrative form for each AHSN and across all AHSNs. We carried out an additional Qualitative Comparative Analysis (QCA) to investigate the interaction between TCAM spread outcomes and AHSN spread approaches and activities. The QCA was based on first order themes derived from the qualitative thematic analysis and TCAM spread outcome data officially reported by each AHSN to the AHSN Network National Metrics Dashboard.

QCA is a method of data analysis based on Boolean algebra. It allows for a systematic comparative analysis of small number and especially case-based data which are not suited for statistical analysis such as regression analysis (Ragin, 1999). The QCA helped to identify whether certain conditions or combinations of conditions (i.e. AHSN spread approaches and

activities as identified in the qualitative analysis) are part of the outcome set (i.e. TCAM spread outcome as reported to the National Dashboard). The core of QCA is the process of Boolean minimization, which reduces the complexity of combinations of conditions to a minimum of necessary or sufficient conditions for spread success and failure (Rihoux, 2009). QCA has been advocated as best practice to study causal complexity with analytical rigour in organisation research in comparative qualitative empirical studies (Greckhamer et al., 2018).

The QCA provided another systematic layer of information to the findings from the qualitative thematic analysis. It identified AHSN spread activities achieving successful spread of TCAM. Their identification provides a strong case for the relevance of those activities in the spread process. The unique contribution of the QCA methodology was the systematic identification of not only the relationship of single activities and outcomes, but also

the combination of activities. We chose crisp-set QCA as a suitable analysis method for this study because of the small number, case-based and mixed data. This was defined in a dichotomised way as 'absence' or 'presence' of spread characteristics. The QCA methodological steps: (1) develop a raw data table describing outcome indicators and conditions, (2) build a 'truth table' consisting of configurations (combinations of the conditions and the outcome), (3) Boolean minimization to reduce the complexity of the combination configurations to necessary or sufficient configurations ('solution terms') (Rihoux, 2009). The raw data input was reduced based on quality criteria such as limited variety, consistency, and informational value across cases (Rihoux, 2009). As a rule, there should be a mix of positive and negative outcome indicators and condition values across cases (there should be at least one third of cases with one value). Furthermore, cases with the same combination of condition values should be merged. The reduction led to the construction of the truth table with the final set of cases, outcomes, and conditions as the input for the next step of Boolean minimization. We used TOSMANA Version 1.6.1.0 for the Boolean minimization (Cronqvist, 2019).

Ethical approval for this study was granted by City, University of London, Business School Research Ethics Committee (ETH1920-1032).

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# 3. Participating AHSNs and staff



## 3. Participating AHSNs and staff

All 15 AHSNs in England participated in the study to address questions 1 to 5 (WP1-3). A total of 143 interviews (see Table 3.1) were conducted with staff at different levels of their organisation and involved in a wide range of different innovations.

Based on job titles and a description of their role during the interviews, a breakdown of participating staff was possible. Slightly over half of staff interviewed (54.5%, n=78) were at the operational level delivering projects and programmes. Slightly less than

half (45.5%, n=65) were at the senior level directing projects and programmes. Furthermore, an adequately representative range of staff were interviewed based on the cross section of work undertaken by AHSNs (see Table 3.2).

**Table 3.1: Number of staff interviewed by AHSN (WP1&2)**

AHSN	Number of staff	% of total recruited
Yorkshire & Humber	16	11.2
Oxford	15	10.5
Innovation Agency	13	9.1
HIN	11	7.7
Wessex	11	7.7
North East North Cumbria	10	7.0
West Midlands	10	7.0
Kent, Surrey, Sussex	8	5.6
South West	8	5.6
Imperial College Health Partners	8	5.6
Health Innovation Manchester	8	5.6
East Midlands	7	4.9
West of England	7	4.9
Eastern	6	4.2
UCLPartners	5	3.5
<b>Total</b>	<b>143</b>	<b>100</b>

**Table 3.2: Number of staff interviewed by broad job role (WP1&2)**

Broad AHSN role/team	N	%
Innovation adoption	76	53.1
Patient Safety	21	14.7
Commercial/Industry	15	10.5
Clinical leads	10	7.0
CEO/Deputy CEO	6	4.2
Evaluation/business support	6	4.2
Communications	3	2.1
Programme Coordination/support role	4	2.8
Legal/financial	2	1.4
<b>Total staff interviewed</b>	<b>143</b>	

Of the 143 AHSN staff interviewed, 18 focused solely on TCAM as the national programme investigated to address study question 5. Of the 18 interviews, 4 were with senior AHSN staff, 14 with operational AHSN staff, and covered TCAM activity in all 15 AHSNs.

# 4. Study Question 1

**What different approaches to spreading innovations have been developed and applied by AHSNs?**



## 4.1 Introduction

In considering AHSNs' approaches to spread and adoption, it was apparent these could be understood at several different levels. Firstly, the sanctioned AHSN high-level

position, i.e. 'this is how we do spread and adoption here', secondly, any general principles stated or inferred from examples of spread activity, and thirdly, from analysing the specific

activities themselves that may constitute an approach or part of an approach. Themes from the thematic analyses are outlined in Appendix Tables 1 and 2.

## 4.2 AHSNs' high-level orientation on spread and adoption

Four themes contributed to an understanding of the high-level orientation to spread and adoption.

1. **Transparency at the AHSN-wide level about approach to spread and adoption** (within AHSN control).
2. **AHSN high-level team/staff factors influencing spread approaches** (within AHSN control).
3. **The pre-eminence of flexibility in all situations** (a response to the environments AHSNs work within).
4. **Variation in the use of approaches** (a response to the environments AHSNs work within).

The first theme identified different levels of transparency about how spread and adoption was operationalised at different AHSNs. Ten (66.6%) AHSNs were explicit about their 'AHSN sanctioned' (i.e. all staff aware and described on their AHSN website) high-level approach to spread and adoption activities between January 2018 and January 2020 (see Table 4.1). Three approaches were high-level broad frameworks (Oxford, Manchester, Eastern) encompassing more than specific spread and adoption activities, e.g. identifying and selecting innovations to spread. Seven approaches were more specific and described as evidence-informed, e.g. by the NASSS framework (Greenhalgh et al., 2017) or IHI Breakthrough Series Collaborative Model.

***“Let’s say we were given an innovation tomorrow that we had to support, it doesn’t matter what it is, we would always know what we were going to do. If we didn’t have a model or a method or a framework, you could argue that our activities would be perhaps unguided, or ad-hoc. We’ve got an arguably evidence-based method so that we’ve got logic to our activities, and we know what to do, and we’ve got some degree of evidence and reason for our approach.”*** 13-AZ-005

Five (33.4%) AHSNs reported a largely implicit approach to spread and adoption activities between January 2018 and January 2020. The study team based their categorisation on (a) the absence of any information about spread and adoption

approaches on an AHSN website, (b) the absence of documentation received by the study team about spread approaches at the AHSN, (c) the overwhelming staff views at the AHSN in question. Only at this point was an AHSN deemed to have an 'implicit'/less transparent approach to spread and adoption. Importantly, this study cannot state if an implicit or explicit position affected spread outcomes, but reasonable inferences can be drawn about the challenges of hidden spread activity.

Implicit approaches to spread activities relied heavily on staff tacit knowledge and their previous experience. The implicit approaches were characterised by that fact they were unwritten, organic, opportunistic, highly flexible, and driven by staff skill sets and backgrounds.

***“So I think in terms of the actual implementation and the approach to that, I think it was sort of trial and error, and a lot of time around the middle stage before we actually ended up seeing some results.”***

15-AZ-004

***“Quite often sometimes it can be just luck of the draw whether innovations are a success or not. Something that you think you’ve really planned out and is going to be a game changer can fall flat. 06-ST-003***

***“I think the other approach is seeking forgiveness, not permission, there is an element of that. We use that a lot really. If you’re going to constantly seek permission from organisations, from execs, you are just going to get wound up in red tape straightaway whereas actually, if you can just go and demonstrate it, then they’re going to grow it because they’re going to be your advocate. They’re the ones saying, ‘This is brilliant. This is great’, so that’s another method that we would use – well, I use, not we.” 03-ST-001***

Interestingly, when considering all the themes identified in Appendix Tables 1 and 2, AHSNs who operated with an implicit high-level orientation to spread activities did not mention spread training for AHSN staff as something they did or as a lesson learnt. There was also limited mention of spread training for frontline staff to support sustainability.

To expand upon and explain the explicit/implicit distinction made above, we must explore several other themes that likely influenced the high-level orientation toward spread and adoption. It was clear AHSN team/staff factors played a part in AHSNs' orientation toward spread activity. One AHSN with an implicit orientation highlighted their large area of responsibility and another referred to their mission being subtly different and affected spread activity.



**“Every AHSN is set up resource-wise very differently, so we have a comms team that I can utilise, but other areas don’t have a comms team. Other areas have more human resources, they can go out and do more. So basically, each AHSN gets a lump of money and told, ‘You have to deliver all of this in this box’ but actually you decide locally how you’re going to resource it.”** 04-AZ-004

**“We cover quite a large area at [AHSN] so our team’s quite small, so it’s meant that our approach has been more superficial in terms of raising awareness, getting the key players and then allowing it to progress. We haven’t had the kind of manpower to do project management-based adoption which is what I think a lot of the other AHSNs do.”** 12-ST-001

**“[We] take more of a consultancy approach compared to some of the other AHSNs... it’s kind of conflicting with that spread and adoption 100% focus because that’s not really spread and adoption work, it’s enabling industry.”** 15-AZ-002

A widely reported and valued team/staff factor contributing to spread activity, for AHSNs with explicit and implicit orientations, was the diversity of AHSN staff backgrounds and experience – particularly in terms of decision-making and system reach. This suggests staff diversity should be maintained no matter which high-level orientation to spread an AHSN takes.

**“We’ve got clinicians in our team, people from business, engineering, academia, research, the commercial world and so on. To make a good decision about a signpost or whether to progress with supporting something, it takes that broad array of experience, skills and knowledge to decide what we’ve got in front of us and what’s the right thing to do.”** 09-AZ-005

**“All the different backgrounds and expertise, that’s meant that we’ve got real reach into the system.”** 09-AZ-004

**“The diversity means that it creates greater scope for adaptation to new things.”** 13-AZ-003

In terms of the high-level orientation to spread and adoption activity in AHSNs, it was clear AHSNs’ staff had different levels of spread awareness. Staff in AHSNs with explicit orientations demonstrated more awareness of spread approaches, with some reporting their preference for areas such as Quality Improvement and Implementation Science. All AHSNs with an implicit orientation reported they were unaware of any ‘common approach’ to spread, were not as explicit about how they operationalised spread activities, and highlighted siloed team working. The latter will have also been influenced by the valued diversity of staff, however, there is a need to bring this diversity together under the superordinate goal of effective spread and adoption to avoid conflict or siloed working.

**“I think we need to have a better understanding of the work that we’re doing as a whole, we’ve got a health team, a comms team, an economic growth team, it might be that we’re working on something really similar, or being introduced to the same people...I think we need to have a bit more of a joined up approach to spread.”** 10-AZ-006

AHSN spread and adoption activity does not operate in a vacuum, it must work with existing structures and strategic/operational decisions by rollout environments. Whilst high-level AHSN sanctioned explicit approaches were described, all AHSNs placed considerable value on the need for flexibility during spread and adoption activities. Responses to the situations AHSNs face included not using the high-level AHSN sanctioned approach and adapting mandated spread methods of mandated national programmes when necessary. Staff reported a wide variety of examples of tailoring the innovation to meet the needs of the health system, then changing their approach to support a different health system. This was often due to the starting point of the health system, if any innovations/pathways were already operating, and the level of clinical engagement. Sometimes only rolling out parts of the innovation was deemed the best thing to do for a health system and often maintaining good relations in the event of no progress was considered a high priority. Of note was the tailoring required for nationally mandated programmes, which often came with a mandated spread approach.

***“The national programmes, some of them were very prescriptive in terms of how they would be rolled out...but we had to do our own local pathfinding around that. For example, the PINCER project... we had to figure out exactly how that would work in our scenario, how that could be fitted in, what the integration with other services was going to be like, how we would manage the data and IT stuff... it was quite a decent pilot in terms of figuring out what the implementation process would look like. Then based on that, we looked at resource issues and we made a bit of a pivot on how we would roll this out...the guidance nationally was around using pharmacists to deliver PINCER, which is the Quality Improvement process around how you were prescribing in primary care, but this was about resource limitations with pharmacists. We opened that up with some GPs as well which had a bit of pushback at the time but has subsequently been shown to be actually quite effective at delivering effective change.” 01-AZ-001***

Regarding the variation of spread approaches across AHSNs, this was apparent from the different names given to AHSN high-level approaches (see Table 4.1). In terms of AHSNs with explicitly described approaches, considerable variation in their use within AHSNs was also reported. In response to dynamic rollout environments, AHSNs with step-based approaches

reported they would skip steps if they were not necessary nor possible for a particular innovation. Furthermore, high priority innovations may arrive at the AHSN and require immediate implementation which prevents embarking on the full step-based process. Additionally, staff within AHSNs with explicit approaches did not necessarily follow them; often citing their long experience as change agents or associating the AHSN sanctioned approach with another team inside the AHSN.

The most striking variation in spread approaches inside all AHSNs was the difference between broadly defined Innovation Adoption teams and the Patient Safety Collaborative teams. The former used a range of approaches, often linked to their AHSN approach, whilst the latter reported they were formally associated and preferred to operate with the IHI Model for Improvement/ Quality Improvement methods. Importantly, approaches to spread and adoption for the Patient Safety Collaborative programmes were mandated by their commissioners, with limited ability to vary plans locally apart from decisions about who they would work with.

***“[Innovation adoption team] work on clinical pathways much more, the patient safety team tend to do it somewhat differently from what they do, they have a step-by-step approach...what we do in patient safety is very grounded***

***in QI methodology. We use the IHI QI methodology, PDSA cycles, driver diagrams, that is absolutely our methodology, very grounded in measurement.” 01-AS-003***

Whilst these differences exist and the Patient Safety Collaborative programmes have restricted ability to try new approaches if needed, the use of networks emerged as a common feature. ‘Patient Safety Networks’ in the form of communities of practice and Quality Improvement networks were used routinely.

Another form of variability in approach was reported between national programmes (NHSE seven programmes, Innovation and Technology Payment innovations, and the Rapid Uptake Products) and locally developed innovation. These examples demonstrate another layer of complexity when considering approaches to spread and adoption.

***“The differences in the national and local innovations...I find the local projects are sometimes easier to deliver, because you’re solving a problem that a stakeholder has themselves identified, rather than one that somebody nationally has said they’ve got a problem and this is the tool to solve it. You can come up with often more bespoke solutions which suit local needs better. So that’s the main difference, but we use the same process, whether it’s a local or national project, it’s just more the point at which***

*you start and how wedded it is to the needs of the system. The one thing we do more with the local projects rather than the national ones is developing toolkits for spread. Often with the national projects somebody else has already done that by the time it gets to you.”*

01-AZ-007

*“Because they’ve [local health partner] come to you and you’re working with them, it’s much more about what are their challenges, so that might be pathway mapping, it might be the analytics element that they need more support with, it might be that they’ve never done any improvement work at all so they really need some coaching and mentoring around how to do that and how to pull a team together...with some of the tech work they’re tending to pilot quite a lot. Certainly through the collaboratives we’ve noticed that even whilst we might be spreading NEWS2 for deterioration, you then*

*get little pop-up projects that people have done as a solution...we get them to share those within the collaboratives and then other people pick up that idea and spread it...they go back and say, ‘I like the idea of that emergency response trolley, let’s do that in our place, but we’re going to turn it into a box because we haven’t got a trolley.’ It’s spread of local ideas through the collaboratives, that is slightly different than testing a product.”* 07-AS-03

*“For the rapid uptake products, it’s much more specific...more transactional things rather than ongoing cultural development.”* 09-AS-002

*“If it’s a national programme it is more about that system side, overcoming those barriers. Whereas if it’s a smaller company or an innovation that’s not backed nationally, but we think our system locally*

*would benefit, then that takes a lot more hand-holding of the innovator and the business to support them because they don’t to have the same level of resource, insight, budgets, etc to do that scale and sometimes they can’t scale nationally. We often need to go at the pace that the innovator can scale at because many of the SMEs need to get their early sales and then go out for investment before they can scale up further. We have to keep in mind the supply side as well as the system side when we’re thinking about spread.”* 09-AZ-004

More specific approaches, at the project level, to spread and adoption were identified from the spread activities described in the staff interviews. These are presented in Table 4.4 and discussed in section 4.5.



**Table 4.1: Brief description of AHSN high-level approaches to spread and adoption**

AHSN	Orientation	Brief description of AHSN high-level spread and adoption approach
East Midlands	Explicit	'Gateway' process (e.g. Gateway E planning document is for projects nearing the end of their 'demonstrator' phase and Gateway F planning document is for spread planning, informed by NASSS framework, and has a spread and adoption exploration checklist): "We've got our Gateway documents that we use for our projects, which starts as Gateway A to F. Which is taking a good idea into what's the clear value added, the value proposition...how are we going to enable that and what's the governance around that...to then we've trialled that, is this strong enough for spread purposes? Then what plan do we put in place to try and start spreading it. So we've got some methodology for us all to apply to projects dependent on what stage they're at...that will help naturally guide all of us towards knowing what we need to do to maximise the chances of spread."
Eastern	Explicit	'Adoption and Spread Methodology': "We have an adoption and spread methodology [Identify stakeholders, Know the figures, Raise awareness, Engagement or active dissemination, Flexible approach, Support behaviour change, Support changes to infrastructure, Maintain support, and Share learning]...I think we do have a common approach, but every project is very different and requires a different type of support depending where they [rollout sites] are on the innovation pathway."
Health Innovation Manchester	Explicit	'Pipeline and Portfolio Approach': "The beauty of the pipeline process is it's not just been influenced by the programme or project managers, it's been influenced by the commercial section of our business, it's been influenced by the business intelligence section of our business, also the applied research collaborative part of our business. Also, the Academic Health Science Network and our academic clinical leads have been involved in the development."
Health Innovation Network	Explicit	Implementation science Guide for project development in health InnoVaTION (IGNITION) guide and NHS Change Model. More recently, further evolution includes a 5-point framework [System perspective; Embrace complexity; Behavioural science, not broadcast; Flexible approach; Collaboration].
Imperial College Health Partners	Implicit	Principles and activities described but spread and adoption approach reported as not formally organised within AHSN. Broad 'Innovation Pathway' outlined but not specific to spread and adoption activities. "I don't think that there's an absolute common approach, but we do utilise certain, I would say, ways of working when we are getting involved or starting to really take action on programmes."

AHSN	Orientation	Brief description of AHSN high-level spread and adoption approach
Innovation Agency	Explicit	Putting Innovation into Practice (PIP) model [Ideas; Evidence; Adoption; Evaluate; Spread; Share success and learning]. This approach is supported by a 'Coaching Academy' for AHSN staff and rollout site staff. "So we do have a standard approach to spread and adoption, but that's not to say that it's not flexible, and that we won't adapt, and of course we will do because we're working in such a fluid NHS landscape, so we have to adapt and evolve, but we do have a structured method that we follow."
Kent, Surrey & Sussex	Explicit	Predominantly using IHI Breakthrough Series Collaborative Model. "We do quite heavily use the IHI Breakthrough Series methodology, that's historically been used quite a lot by KSS."
North East & North Cumbria	Implicit	Principles and activities described but spread and adoption approach reported as not formally organised within AHSN. "I think we probably do rely a bit too much on instinct and relationships and internal, inbuilt change management rather than any specific scientific process or step-by-step approach."
Oxford	Explicit	'10 Step Approach': "We have a common approach, broadly, so we have a defined process approach in terms of how you would work through different stages of the project, but make sure key aspects are kicked off, whether that be horizon scanning, looking at strategic priority, then moving forward to kind of selecting innovation, then around planning and then around implementing...we've got the ten-step process...it's very process based. What I would say is every project and initiative comes in at a different stage on that process and also, as you can understand, with products and services and transformation innovation varying so widely in terms of what they need, there's quite a lot of specific tailoring in unique approaches to make sure that it fits overall."
South West	Explicit	'Spread Academy': a hybrid model influenced by the Billions Institute and NASSS framework, with a strong focus on training to support behaviour change and cultural change within rollout sites. Four principles for successful spread: (1) Understand your intentions and your key ingredients, (2) Understand the context you are going to be working with, (3) Set a 'clear and compelling' aim and use data in useful and interesting ways, (4) Identify the most suitable methods to work with people to help them to do what they want to do. "Billions Institute has this 'model for unleashing' which we've adopted, but we're increasingly creating our own framework from. Spread Academy is a big, relatively rare, quite exclusive intensive training course, which I think in our follow-ups we've shown there is significant benefit for the teams to take part in."

AHSN	Orientation	Brief description of AHSN high-level spread and adoption approach
UCL Partners	Implicit	Principles and activities described but spread and adoption approach reported as not formally organised within AHSN. "In my experience, I would say no, so not UCLP or the AHSN Network in general. I've seen lots of different ways of approaching spread and adoption of innovations, just adapting it to meet local needs or adapting it to meet the piece of tech you're trying to implement, etc, so lots of different ways."
Wessex	Explicit	'Spread and Adoption Template' informed by NASSS framework and Everett Rogers framework: (1) Understand the innovation, (2) Understand the adopters, (3) Spread through networks, (4) Implementation planning, (5) Embedding innovations, (6) Spread in systems.
West Midlands	Implicit	Principles and activities described but spread and adoption approach reported as not formally organised within AHSN. "I'm going to say we don't have a standardised approach...I think we're very much a delegated authority AHSN in that we use people's skill sets to scope and identify, and use their knowledge, their intelligence for how best to implement something."
West of England	Explicit	Predominantly using IHI Breakthrough Series Collaborative Model. "We use the IHI Breakthrough model, predominantly. It does work really well and I think it gives you structure but is also flexible enough. You can use it for a big national programme or you can tailor it down when you're just rolling out in one organisation."
Yorkshire & Humber	Implicit	Principles and activities described but spread and adoption approach reported as not formally organised within AHSN. "We don't have a written approach or a methodology that we would apply to all of our programmes...you can see that we have common elements that we frequently employ but we don't have a methodology."

## 4.3 Commonality and variability of principles toward spread and adoption

A range of interview responses across AHSNs highlighted broad principles toward spread and adoption (see Appendix Table 1). Discussion about principles was qualitatively different than discussion about specific spread activities in section 4.4. Five principles were identified and reported as applicable to any programme/innovation. A high level of commonality across AHSNs was apparent.

1. Promotion of an AHSN persona
2. Engagement focused
3. Working with the needs of health systems
4. Building and using networks
5. Seeking and achieving sustained spread

Almost all AHSN staff reported several ways in which they present themselves to health service/innovation partners. Their promotion of an AHSN persona was considered important in setting the right basis for spread and adoption activities. Firstly, acting as an ‘honest broker’ between health services and industry, without conflicting agendas, and not being perceived as an extended sales force was considered important.

***“I think the benefits are that we’re trusted brokers...we are facilitators, we unlock issues, we negotiate the politics, we’ve got no hidden agenda. We don’t gain financially by maintaining the status quo and we’re known for that. We’re perceived as doing the right thing and actually that’s very powerful.”***  
10-AZ-004

***“Ultimately, we’re technology agnostic, we just want to see them doing something innovative.”*** 13-AZ-005

Secondly, being seen as a ‘facilitator’ for organisations to innovate and collaborate was a key part of setting the scene for spread work and developing an understanding of the boundaries of AHSN activity.

***“I think without the AHSN role in linking all those groups together, it just wouldn’t have happened. Although they were all pharmacists, it’s not their fault, they just don’t communicate with each other because that’s the legacy. Hospital pharmacy is based on the patient in the hospital and has its own network, the community pharmacy follows up outside the home.”*** 15-AS-003

***“The interesting thing about the role of the AHSN is we are not the delivery arm of any of our projects, we just try and get people to join our gang, be part of our party, and do the work. We don’t do any of the work ourselves, we may fund them, we may pump prime them to do the work, but when it comes to actual clinicians improving outcomes for patients, we don’t do any of the doing, we just try to persuade them to join projects which would hopefully improve patient safety or outcomes.”*** 14-ST-002

Thirdly, being seen as a ‘contextual assessor’ to ensure the form of the spread activity follows an assessment of how an innovation may functionally fit into a context, i.e. ‘form follows function’ was an important process.

***“Having worked in Quality Improvement quite a lot, there’s such a lean quite often towards, ‘This has worked really well somewhere, let’s just lift the whole thing. I’m going to throw it at you and you just need to do exactly what we did step by step’. Obviously, everybody always says, ‘It’s different here. You had more money, you had***

***more time'. Picking out the nuances is usually a great way to approach any kind of spread.***

02-AZ-002

***"We wouldn't go, 'It's got to be this [supplier] or this [innovation]."*** 06-AZ-007

Most AHSNs reported a strong focus on engagement (in general terms) as a key principle of spread and adoption activities. This was characterised, firstly, by taking a systems approach to engagement.

***"If we can, we avoid talking in what I would describe as the old currency of trusts, CCGs, sites and hospitals. We'd rather engage at a system level...our general philosophy is we attempt to go as high as possible...we would seek to agree a spread programme at the highest level up the pyramid as possible so we get maximum spread for minimum resource consumption."*** 09-AS-005

Secondly, by taking a 'Pull rather than Push' approach.

***"We try and get commitment rather than compliance because if you're always working towards achieving compliance with something that's been mandated then once that mandate goes, then it's like, 'We don't have to do that anymore, do we?'"*** 03-AZ-005

Thirdly, by collaborating widely and with different sectors to ensure a variety of clinician views and commitment is obtained.

***"We take a broad spectrum of advice across clinicians and expertise across multiple different systems. We don't just go to one clinician and say, 'What do you think?' and that's therefore the answer for every clinician in the country. You have to do that broader bit at the front end."*** 10-AZ-005

***"As part of our innovation pathway, we hold service level agreements with all of our key organisations in the region... organisations that we think are key to spread and adoption... as part of those SLAs, there's an element of them committing to supporting the AHSN with spread and adoption across their organisation or across the local geographies."*** 10-AZ-006

Most AHSNs described a strong emphasis on working with the needs of health systems to ensure timely and appropriate offers of innovation support and its associated spread activity.

***"Really working with them, what are your local priorities... we very much do start right back from that...we do a bit of research in terms of looking at their business plans, strategic plans, for the next ten years, how that fits with say the NHS Long Term Plan. Really working out what the common themes are between the acute trust, the ICSs, etc around a region and then saying, 'Okay, we see this is a real issue, we've done a bit of background work and research, these are some of the potential solutions, is this of interest?' and try and develop a regional project from that aspect."*** 01-AS-001

Most AHSNs highlighted building, maintaining, and using networks as a key principle for spread and adoption activity. Whilst similar to the general engagement principle, this was specific to the use of networks.

***"A lot of our work is around collaboration and bringing together networks...not just within the health system but also engaging with charities and clinicians across primary and secondary care, a whole range of different professions involved, and also industry, so bringing that kind of multi-professional community together to identify where they want to focus their efforts and then thinking about what the role innovation plays within that."*** 12-ST-003

Finally, seeking and achieving sustained spread was a reported as a key principle.

***"I think we accept that not everything that we try is going to work, but where they do work, our internal processes are focused around making sure that that innovation is embedded within core processes and core funding, because the key for sustainability is making sure that it is commissioned on an onward basis."*** 04-AZ-002

# 4.4 Commonality and variability of specific spread and adoption activities

A wide range of specific spread and adoption activities were described by AHSN staff. These were brought together under a framework of broadly recognisable spread stages (see Figure 4.1). There was variability between AHSNs in how much they considered at each stage and, importantly, pre-existing influences on spread and

adoption and sustaining activity were generally less discussed during the study interviews. Most descriptions of spread and adoption activities were focused on developing ‘Plan A’ and reacting to how the plan was received before adapting the spread plans. To demonstrate the influential nature of many activities in this section, cases

of successful and unsuccessful spread and adoption work are described in Tables 4.2 and 4.3 and thematically summarised in Figure 4.2. Furthermore, a range of ‘spotlight’ cases (see Appendix) illustrate key spread and adoption activities by most AHSNs.

**Figure 4.1: Common stages and activities of spread and adoption**

**Influential areas prior to planning spread activities:**

- AHSN high-level approach to spread
- Structure of the AHSN/staffing/size of patch/mission/diversity
- Tension: targeting the willing or going where the need is
- Presence/absence of a diagnostic assessment of the innovation
- Presence/absence of a diagnostic assessment of the rollout context
- Presence/absence of evidence on innovation
- Presence/absence of enabling networks
- Innovation/something similar already operating in rollout sites
- Operational/strategic decisions by sites
- Availability and pressures upon innovators to support spread
- Level of industry team support, e.g. with innovation value propositions
- Level of AHSN staff spread awareness/training
- Level of site staff spread awareness/training
- Availability of clinical staff at AHSNs
- Background and preferences of AHSN staff toward spread methods
- Availability of a ‘Trio approach’ for each project (AHSN project manager, AHSN clinical champion, AHSN implementation/QI spread specialist) (site clinical champion also required)

**Planned activity:**

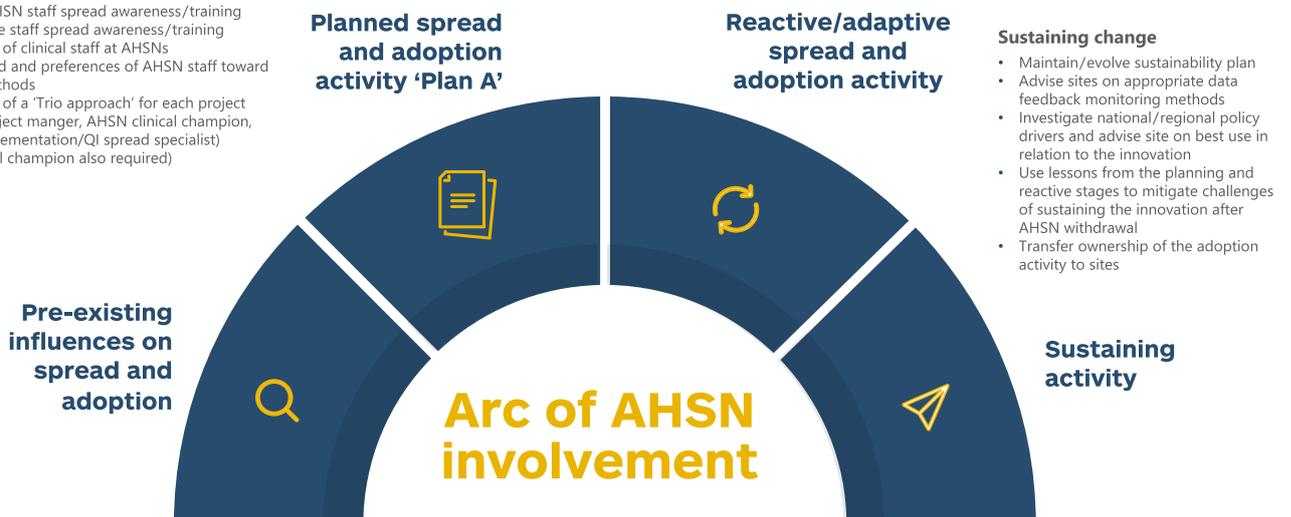
- Use diagnostic assessment of innovation and rollout context to mitigate identified challenges (e.g. via task & finish groups/ action learning sets)
- Set clear adoption aims and ensure a shared understanding of those aims with rollout sites (e.g. using logic models, driver diagrams, ‘fishbowling’)
- Ensure the innovation ‘fits’ the context
- Establish the role of the AHSN in the rollout and the exit point
- Empower/coach site staff to support adoption
- Activate/develop networks to support adoption
- Develop, maintain and prioritise relational work linked to the innovation – engagement is vital
- Recruit resilient site clinical champion – vital
- Align spread plan with local and national priorities
- Utilise financial incentives where appropriate/available
- Develop and communications plan
- Develop a sustainability plan

**Adapting and reacting to rollout site progress:**

- Adapt and react to new information/evidence
- Weekly meetings to review spread progress and alter spread plans as needed
- Refine/evolve communications plan
- Support the development of headspace/capacity for site staff
- Support decommissioning of old service/innovation where possible
- Maintain/evolve shared narrative of the innovation and spread plan
- Use escalation processes to manage unreasonable behaviour in rollout sites
- Seek and share learning across/within AHSN
- Stop spread activity if it is not working to save/redeploy AHSN resources

**Sustaining change**

- Maintain/evolve sustainability plan
- Advise sites on appropriate data feedback monitoring methods
- Investigate national/regional policy drivers and advise site on best use in relation to the innovation
- Use lessons from the planning and reactive stages to mitigate challenges of sustaining the innovation after AHSN withdrawal
- Transfer ownership of the adoption activity to sites



# Spotlight

## Table 4.2: Successful case of spread and adoption

*“...the COPD Discharge Bundle which is a spread and adoption programme that fits within the portfolio of work at the Patient Safety Collaborative. What this project is about is essentially trying to spread best practice on a five-point care bundle that relates to specific clinical interventions for patients who are living with chronic obstructive pulmonary disease who are discharged from their acute spell in hospital. The key thing is, with the teams that we’ve worked with, we’ve agreed a set of very specific interventions that are commonly accepted and agreed by the experts within the field to be the appropriate interventions to make for this particular patient group. The initial stages of a spread and adoption journey have to be about really cementing that buy-in and commitment that there’s a shared and common purpose here. A shared interest in seeing improvement in these particular care measures being executed and delivered and so, that initial work around*

*engagement takes usually between nought to three months, but it’s absolutely crucial to cement that onward success. Then really once you’ve got that agreement that there is that shared purpose, we then agree a very specific mechanism through which we would collect data to understand how often these particular care measures or process interventions have been delivered. In this particular instance, having access to a national audit is really helpful because it’s meant that it reduces the data collection burden that needs to be created from the outset for the adopting teams... establishing a baseline period and an improvement period in this context which is six months and then 12 months to follow, so an 18-month programme. Engaging clinical teams regularly to discuss their progress, so that there is a real sense of local ownership around adoption of this best practice set of interventions. Then the role of AHSN has been to facilitate its extent of knowledge, support between*

*peers, for example organising virtual support visits where clinical teams can discuss progress. Really use the data to drill into what is happening on the floor in clinical practice and use it in a monthly review cycle or quarterly review cycle depending for who and what changes need to be made to improve the adoption journey further. I think that it’s really important to understand and communicate effectively that adoption does take time to be embedded. This is a particular piece of work that we worked on for 18 months with [sites named]. We saw significant improvement in the adoption of the best practice and then correspondingly significant reductions in length of stay for patients and improvements in terms of readmission rates as well, which was the overarching ambition of the programme to improve that patient experience.”*  
07-AZ-003

# Spotlight

**Table 4.3: Unsuccessful cases of spread and adoption**

**(1)** *“An example that didn’t go well in [AHSN] is some work that we did to encourage the uptake of [innovation]. This was a project which had a good deal of interest within it, good levels of engagement clinically, but the core problem with it is, that it lacked two things. Firstly, it lacked the ability to be able to collect meaningful data to underline change and drive the adoption journey. Secondly, and linked to that, because there was that lack of data, effectively the engagement fell away and there was no coordinated sense of clear objectives that were shared so that we could translate how the [innovation] would fit into a patient pathway. It was a project that also was superseded by a wider commissioning agenda with national announcements regarding funding and commissioning of [innovation] which removed the need to locally do the work. I think there’s a wider issue in that we engaged on that project with not having done our homework around what the wider national commissioning context might be. Whilst we did focus on the evidence base, and the need for the intervention, which is clearly there, the programme very quickly became superseded. Then it was very difficult for*

*us to demonstrate to our partners the impact of the work because we didn’t have a clear and robust data set that underpinned the programme. Also, the data that we did have relied very much on the willingness of local teams to submit it and so it was quite burdensome in terms of their time. Again, that didn’t drive strong engagement with the programme.”* 07-AZ-003

**(2)** *“We thought we’d start with [rollout site] because they’re quite big and there would be a large volume of activity going through. The approach that I took was to send the project manager there who would do the baselining work by being on site and seeing when [innovation] was needed to understand the whole process. What we found was that it [need that the innovation would address] wasn’t happening that often and we’d made an assumption that there would be a higher volume of [problem for innovation to address] happening. On that basis, I had a project manager who was basically twiddling her thumbs a lot of the time. That approach didn’t work very well! You live and you learn!”* 01-AS-004

**(3)** *“Last year, we had [national programme]...we hit a pretty*

*big wall of resistance right from the word go...many other trusts around the country had a similar service but had given it a different name. Again, the national programme was almost saying, ‘You’ve got to roll it out and call it this,’ so many of the people who’d developed similar services felt as if they were being told, ‘You’re not good enough.’ I think we’ve learned that if we’d paid a bit more attention to some of those subtle issues and tested some of it out before we anointed this as a national programme, we possibly would have planned the launch of the project differently.”* 09-AS-005

**(4)** *“So we had ones [innovation rollouts] where [site staff] suddenly went on maternity leave or changed jobs and then the next person that came in didn’t like the product, so it didn’t get used. We learnt very quickly don’t do it as a push from just the SME side. Then we thought well, okay, so we could buy the products and then, if they’re not used in the system, we could move them and put them somewhere else or use them somewhere else, but that was a nightmare of a process, so for us, getting involved in procurement, that*

*just didn't work. Some of the projects were successful, which is fine, but in terms of the amount of resource it took for us to do that, we decided we wouldn't do that again."*  
09-AZ-004

**(5)** *We developed some consistent messages and tools for care homes, engaged clinicians, specialists, infection-control nurses, hydration specialists, nutrition specialists across the patch to develop materials. We engaged some regional partners to help us develop and spread some of those messages around, that would be played on screens in waiting rooms in the NHS up and down the [rollout counties]. But the latter didn't happen...we didn't have the mandate to do it from the system. We struggled to get a lot of buy-in...also, we had no funding. But before we'd identified any resources we'd set off on that journey...what we should have done was spent a little bit more time securing resources and the mandate before we set off. I think that was probably an example where it was a very well-intentioned piece of work that the AHSN supported but actually it wasn't a target for the system and we struggled to get any traction and it didn't go anywhere.*  
10-AS-001

**(6)** *"Teledermatology...the standard pathway is patient goes to see a GP, GP looks at the patient's skin, says, 'Oh,*

*I don't know about this, I'd better send the patient to the consultant dermatologist.' Patient waits many weeks and the consultant dermatologist looks at the patient. The alternative is, patient goes to see the GP, GP takes a photo of the skin, sends the photo to the consultant, the consultant takes a quick look at it and says, Yes, I need to see this patient' or 'no, I don't need to see this patient.' Of course, if it's a no, that comes back more or less instantly and you cut down two thirds of the patients trying to visit the dermatologist unnecessarily and the dermatologist now has the capacity to see the patients who do need to be seen. So, two times in [region] the CCGs have paid for the dermatoscopes. They've taken the GPs off their GP-ing hours and trained them, paid for the software, negotiated an advice and guidance tariff with the providers to say if you advise through a photograph we'll pay you something so the trust isn't missing out. Both times the whole system has collapsed. So, the commissioners have a big meeting with the service providers and say, 'Why aren't you using it?' The GPs say, 'Well, we don't use it because every patient we send through gets called in anyway, every single one. We just get [told] we need to see the patient, so we've stopped digging about in the drawers to find the dermatoscope because there's no point, the patient's*

*going to get called in anyway.' Then the commissioner says to the consultant, 'Why are you calling in all the patients?' The consultant says, 'Well, I call in all the patients because I can't see anything, the resolution of these photographs is so low that I just can't tell.' The commissioner says, 'When I look on screen the resolution looks amazing, I can see everything, I can zoom in.' The consultant says, 'No, we don't get to see it on screen, we just get a black and white printout.' The patient notes are prepared for the consultant by the medical secretaries who just print... that's what they've always done so they still do it. No one sat down and said, 'Who's in this pathway?' Everyone's said, the doctor has to do this, the consultant has to do this, but if no one's told the medical secretaries the whole thing fails. It was a total failure to do implementation planning. No one planned how is the consultant going to see this on a screen? Do you have one iPad per consultant? Do you have an iPad per team? Where does the iPad live? Who's got the unlock code? What happens when a consultant's on holiday and you have a locum consultant in for the week? It's that kind of detail that nobody thought through, they just assumed."*  
13-AZ-004

**(7)** *"An unsuccessful case was using a product by [company] which was an ECG ambulatory device. We have uptake from*

*[GP practices] in our patch and the innovator had gifted the technology for free...with this particular project we didn't have the CCG engaged and we didn't have secondary care engaged in terms of cardiology, so this was purely just within primary care in [practices]. We did all the training and about to go live and then suddenly the GPs put a halt on the project...they suddenly thought, 'Actually, we want payment for this', and we were like, 'No, you're not getting payment, you've been given the device for free*

*and actually this is better than what you've currently got. We just need to get some more evidence to prove that. We do know it's more efficient for you and for patients [but] we couldn't get any traction in the end...we just didn't have enough to showcase it and I think that's because we didn't have everybody round the table at the beginning."*

13-ST-001



**Figure 4.2:** Thematically identified characteristics of successful and unsuccessful spread and adoption activity from staff views on successful and unsuccessful ways to enact spread and adoption work

### Staff reflections on successful spread

- Innovation meets a system need and that need has clearly defined with the system
- Robust evidence is available on the innovation
- Early investigation of rollout context, e.g. using exploration tools like NASSS-CAT\* or IGnITION. These provide topics to investigate/mitigate for or be an aide-memoire for experienced change agents
- Investigating the hierarchies within rollout sites for potential challenges and gain support
- Early site staff engagement with rollout sites to address challenging and complex issues. Action Learning Sets were reported as an effective way to do this
- Broad engagement – with as many relevant networks as possible, to spread understanding about the value of the innovation and gain ideas on how to conduct the rollout
- Clinical champion at the rollout site. Much will depend on their involvement and those considered resilient and adaptable were reported as more successful
- Consideration of the flexibility/adaptability of the innovation (as this may be required)
- Consideration of Quality Improvement methods to structure the implementation activities
- 'Storytelling' – developing a coherent narrative about the innovation to share with relevant stakeholders was reported as an important part of successful spread

### Staff reflections on unsuccessful spread

- AHSNs not doing due diligence about the suitability of the innovation will likely mean spread fails to start or slows down spread activities
- AHSNs not doing due diligence to understand the rollout context
- AHSN staff making assumptions could generate problems for spread
- Cold calling rollout sites will be unlikely to develop good relationships for spread
- Data collection problems will slow spread activity down or halt it
- Innovations that do not meet a system need will be unlikely to be taken on
- Mandating change at rollout sites will affect the success of spread work
- Not empowering clinicians to make decisions will likely slow spread work down
- Not enough available evidence on innovation will usually slow down or halt spread
- Not involving the innovators to support engagement of frontline staff
- Ongoing financial incentives unavailable to maintain use of innovation
- Lack of engagement of, and resourcing for, rollout site clinicians

Five broad areas were identified in relation to spread and adoption activities, with a range of different themes within these areas (outlined in Appendix Table 2).

1. Planning/preparatory activities
2. Dissemination/communication activities
3. Financial activities

4. Project management activities

5. Capacity building activities

Importantly, whilst not all these activities were present in every rollout, many were discussed as necessary to rollouts and AHSNs not engaging in some of these activities/conducting due diligence was linked to unsuccessful cases. Therefore, it may be reasonable to consider

if some/many of these activities are relevant for rollouts in the future. This section reflects the views shared but also provides potential spread and adoption ideas to AHSN staff prior to and during engagement with rollout sites.

## Planning/preparatory activities

All AHSNs highlighted the critical importance of preparatory activity to understand the innovation and understand the rollout context prior to starting the rollout. Variability was seen in the extent of this work and often helped to explain the success/lack of success of rollouts, as highlighted in the cases described in Tables 4.2 and 4.3.

Key to understanding the innovation was a thorough awareness of the evidence base for the innovation (see Spotlight 1 in Appendix) and its practical use, whether a device, diagnostic or pathway. This was critical to conveying its value to rollout site staff. Importantly, the commercial/industry teams within AHSNs often played a large part in the development of, or provided support to innovators to organise, the value proposition or business case for their innovation (see Spotlight 2 in Appendix). Their work was considered part of the spread and adoption journey, paving the way for innovation adoption teams to have successful engagement at rollout

sites. All AHSNs described a decision group that assessed the credibility of the innovation and its feasibility for spread, e.g. the Innovation Agency's Innovation Curation and Assessment Panel (ICAP) meetings. Reflecting on and enhancing the activity in these groups may improve spread and adoption.

Key to understanding the rollout context was awareness of strategic/operational decisions made by rollout sites, a focus on their needs and alignment of innovations to local priorities. Although the starting point for rollouts would differ depending on the innovation and context, success could often depend on how much the innovation and context had been considered. Many rollouts considered these, and continued to consider, throughout implementation activity. Variability was also seen in the use of context exploration checklists, e.g. NASSS-CAT, to support AHSN staff to dive deeply into contextual issues, identify challenges and mitigate for them. Based on the reasonable

assumption that it is better to know than be unaware, having some consistent structure to contextual explorations, used consistently to act as a 'safety net', may ensure high quality AHSN due diligence and serve as an aide memoire for experienced change agents (see Spotlight 3 in Appendix).

A universal planning activity was the development of relationships through stakeholder mapping and engagement. This was stated as critical to all forms of rollout, to include engagement as early as possible and as widely as possible, involving stakeholders in spread and adoption planning from the start and a constant eye on the status of relationships to ensure they are maintained (see Spotlight 4 in Appendix). Local commissioners were often seen as important to engage with as they could potentially be a barrier to implementation. Access to and strength of relationships with local commissioners were considered important to spread and adoption for many forms of rollout. An important output

of this relational work was a robust sense of how the AHSN, and sometimes the innovation supplier, would support a rollout site and strong ownership of the innovation at the rollout site. Furthermore, the value of system relationships was paramount and staff reported they should be maintained in the event of limited progress or local priorities changing. There was reluctance by AHSN staff to impose innovation on sites if it risked the relational position they had developed over time.

***“It’s not neglecting the human aspect. You can follow a methodology, and that’s fine, but you have to be able to deal with the local needs and requirements, the local characters and requirements, and be sympathetic to those and work with them, and understand what’s really driving people. If you don’t do that, you’re going to fall flat on your face most of the time. It can be very easy to look at a spreadsheet and a project plan and go, okay, yes, this should be done by this, this, and this - but the work of getting that done is very human.”*** 01-AS-006

***“I can be more of a relationship manager...it’s in the pre-implementation stages that I think we have the most impact, when we’re actually building those relationship as opposed to managing them, and instilling some confidence in the supplier that the NHS trust in question is on board...and you can provide case studies of where they’ve worked elsewhere. That’s where***

***I find our biggest impact is.”*** 03-AZ-003

‘Identifying and working with the willing’ was a common part of the spread and adoption planning stage. This position was understandable given the breadth of innovations offered by AHSNs to their health partners.

***“To get quick uptake and scale...work with the willing to start off with, the low hanging fruit, those that want to work with you, and then you can get traction on your project. Then what usually happens is the neighbours or the neighbouring CCGs or others find out.”*** 03-ST-004

Working with the willing was often described as influenced by the Rogers diffusion curve and concept of early adopters, however, this could be criticised as potentially generating inequality of access to innovation in sites that do not come forward to AHSNs. Furthermore, AHSN staff sometimes raised the issue of not having a clear idea of the ‘readiness’ of sites for innovation in their sphere of influence. This highlighted a potential need to investigate readiness more rigorously and as early as possible, potentially on an ongoing basis as part of a set of basic information about local health partners.

Often, adopting an innovation requires some degree of pathway change within the rollout site. Even if changes are perceived as minor, these must be considered and mitigated for as early as possible (see Spotlight 5 in Appendix).

***“In order to get the benefit from the innovation you’ve got to actually have the pathway change. You wouldn’t benefit from the product unless you make the pathway change.”*** 04-AZ-002

Furthermore, AHSN staff highlighted the need to identify tensions, such as rollout sites’ reluctance/lack of capacity to engage in wide ranging change. Sometimes, sites ‘just want the device’ and have not considered its impact on their existing processes. In addition, AHSN staff rolling out multiple innovations across multiple sites stated they did not have time to engage in pathway discussions, indicating the importance of raising this issue early and ensuring ownership of spread activities and innovation use has been established with the rollout site.

A universally perceived planning activity was the organisation of a clinical champion at the rollout site. This was universally perceived as critical for the vast majority of rollout situations. The on-site champion role often provided a range of value as the liaison person between the AHSN and site, the person with which contractual/financial/process arrangements had been made clear to support spread and adoption, the person who could support shared understanding of the innovation at the site level and manage any conflicts that arise. Importantly, the majority of AHSNs’ staff indicated the clinical champion should be a clinician with the ability to influence, has the gravitas and the reputation of their colleagues, and be resilient as adoption challenges emerge during the journey.

Similarly, the clinical backgrounds of AHSN staff was reported as important to consider during the planning stage. Having 'enough' AHSN staff with clinical backgrounds, or deploying clinically trained AHSN staff appropriately, to support conversations with clinical colleagues in rollout sites and navigate the inevitable detailed discussions about pathway change, was considered highly important to spread and adoption activities. Additional benefits were the ability to speak the same clinical language and

possibility that AHSN clinical staff were known to local health partners or present in local networks, which in turn supported engagement with the innovation offered by the AHSN.

***"We have a clinical team on purpose, all of my team have a clinical background, whether it's in public health, nursing, or medicine. The purpose of that is that they can have those very detailed discussions with clinicians."*** 07-AS-005

***"With PReCePT...I already had a huge network, I'm known by senior people and junior people, so the network was already there which I think really helped. Whereas I think with some of the innovation that the AHSN has to do, that network has to be built up, you have to find somebody interested."***

07-AZ-002

## Dissemination/communication activities

Communications activities/staff were highly involved in spread and adoption in several influential ways. Five important spread/adoption activities were led or supported by the communication teams across the majority of AHSNs.

Firstly, support to development of the narrative of the innovation prior to engaging with the rollout site. 'Storytelling', with the available evidence, was a critical to developing a shared understanding of the innovation both at the AHSN and rollout site. A compelling narrative was often seen as vital; this often involved evidence of system/service-level benefits and unambiguous patient-level case studies demonstrating the benefits. Secondly, to build on the narrative, it was critical to establish and communicate a clear plan for spread/adoption

with the rollout site, as their understanding of the 'ask' was vital for giving the innovation the best opportunity to succeed. Interestingly, several AHSN staff reported how leaving the narrative in the hands of the innovators was a less optimal approach.

***"People that you're going to engage with want to know what you're asking of them in terms of time, resource, and outcomes. If you're going to suddenly ask them to put a whole new system in place and you're expecting them to do it by next Friday, that's unrealistic. It's very much being really clear about the ask, being really clear about the resource that you're going to give them in the support. It's about honest engagement."*** 02-AZ-002

***"I think it was a major mistake that we were reliant on the innovator to roll [innovation] out...we hadn't done our homework about where this was being utilised and how we would build the confidence interest from the local system."***

02-AZ-003

Thirdly, linked to the clear plan was the need for the tailored language/tailored versions of the narrative depending on the stakeholder. This may involve developing several value propositions or AHSN staff being mindful of their approach during the early stages of engagement.

***"I think different styles of communication work for different people...with clinicians having somebody as a key person or a champion for an***

***innovation that can speak peer-to-peer to different clinicians definitely works, whereas for academia, using the approach of more research papers, written evidence, that tends to work a little bit better.”*** 03-ST-003

***“For me, it’s a case of changing my language, because I’m predominantly based in secondary care, and most of the interaction with healthcare providers is with consultant cardiologists, and you have to be very direct, and very straight-to-the-point. I think when engaging with GPs and commissioners it’s a slightly softer approach, it’s negotiation, and more trying to secure buy-in and using language which isn’t accusatory or implies that they’ve made errors or mistakes, but rather a case of, how can we work with you to make improvements?”***  
03-AZ-001

Organising events/webinars/workshops was a common and effective method for stakeholder engagement. It supported the two factors above and were used in several ways. To ‘baseline’ opinion on the proposed innovation, generate support for it, didactically introduce the innovation, but more often used as an opportunity to co-produce the narrative and spread/adoption plans with rollout sites. In a few cases the ‘Liberating Structures’<sup>3</sup> engagement methods were used to good effect. Finally, developing plans for ongoing communications team involvement was considered a valuable part of spread and adoption. It helped to maintain the shared narrative about the innovation; often using patient case studies as they became available, showcasing early adopters, keeping communications as a standing spread meeting agenda item, and using a tracker spreadsheet

to monitor communications with each of the rollout sites. Interestingly, showcasing early adopters was often reported alongside the generation of engagement with neighbouring rollout sites – in a ‘maybe we should get involved too’ manner – demonstrating the knock-on benefits of good ongoing communications about an innovation.

<sup>3</sup>[www.liberatingstructures.com](http://www.liberatingstructures.com)

## Financial activities

Financial activities to support spread and adoption were not ubiquitous and used in a highly variable manner across the AHSN Network, but several themes were identified and raise interesting questions about their influence on spread and adoption. Financial activities linked to spread were sometimes considered in a binary manner, with innovations either being financially supported or not, but a more nuanced situation was identified from the AHSN staff interviews.

It was apparent that some AHSNs had sought additional funding, either through a competitive bidding process or joint working arrangements with industry partners, and this work often occurred in parallel to spread and adoption planning. For example, several AHSNs recognised the resource challenge for the rollout of mobile ECG devices to detect Atrial Fibrillation and acquired funding from pharmaceutical or other sources to pay for AHSN staffing to ensure a successful rollout. Other AHSNs brought together a range of local health and industry partners to submit bids to NHS England, which in one case was successful and funded all spread and adoption activity for the programme.

More specifically, many AHSNs sought and obtained seed-funding/pump-priming/back-fill for their rollouts. All of which were considered vital to spread and adoption in their given context but also raises the question of sustainability once AHSNs withdraw their support. This should be considered during the planning stages.

***“You’ve not only got to invest time, you’ve got to invest funding to make things happen. Money is tight around the system and it’s having that conversation up front... [by saying] this is a great innovation, but actually, if you have no money, if we put some investment in this, from an AHSN perspective to enable this to happen, how likely is it you would set this up at the end?”***  
02-AZ-001

***“We also paid for some clinical time, so consultant obstetricians, consultant neonatologists, so that you’ve got the system credibility. We also paid for [innovation] champions within each of the acute trusts. That meant that organisations felt that we valued their time, but also there was a responsibility on them to allocate time for the project and work itself.”*** 02-AZ-002

***“I pump-primed the hospitals to pay for the implementation and the [innovation] licenses, which meant that [they] had it in their in-year budget, a sum of money to pay for it. The way the hospital budgets work, because of my inside knowledge is, they can then carry that over the following year, so if it’s in budget that year, that remains in budget next year. So, pump-priming it allowed that licence fee monies to be in those ...budgets long-term. Having some pump-priming money was important for me.”*** 04-AZ-004

***“The question is then about how sustainable is it after the funding ends, which is always something that needs to be considered.”*** 02-AZ-006

Interestingly, several AHSN staff raised the question of providing money versus project management support, as collaborating sites may differ in their preference. It would seem reasonable to consider this during planning.

***“Having done it [spread the innovation] in the three months, some of the other hospitals who we did provide funding to, gave them a small fund to support their own implementation activity, i.e. their own internal project manager...it was a few thousand pounds. Those trusts actually came to me and said we would have rather had your support as a project manager to help us get this off the ground than receiving the monies...they’d seen I’d done implementation and had really good results. They said if they could go back in time, they would have rather not have had the money but had project management support.”***  
06-AZ-008

Two other financially related strategies to support spread and adoption were identified. Firstly, in parallel to direct financial assistance was support to develop a business case from the early learning within the funded period.

***“With the [innovation products] where there has been funding for a specific amount of time, we’ve worked with the [rollout site] to ensure they understand the funding is there for a set amount of time...we’ll support them with data capture in the initial stage of implementation to give them the best data they can have to build a business case to support the continued use once that initial funding has come to an end.”*** 06-AZ-004

Secondly, some AHSNs supported engagement with NHS procurement teams, often in the early phases of engagement.

***“After we had positive clinical engagement and the business case was made, we walked through into what the procurement challenges would look like and what details procurement would need to be able to get this in. I think we provided a draft letter template to the clinical lead at the site to send to procurement which had all the relevant information and then procurement could add the supplier to the system and add the relative product names to the ordering for the system so that then clinicians could pick that up.”*** 01-AZ-001

It appeared the idea of ‘financial support’ from AHSNs was more nuanced and involved a blend of project management activity around the monies/resources for rollout sites. Routine focus on this form of spread and adoption work during the early stages of engagement may support effective innovation adoption.

## Project management activities

Project management processes were a clear vehicle for AHSN spread and adoption activities. Once the relational work, network mapping, evidence-assessment and contextual investigations were underway, all AHSNs formalised spread and adoption activities with recognisable stages of project and/or programme management. All AHSNs considered timescales, costs, scope, quality, benefits and risks of the spread and adoption work required. Similarly, all AHSNs reported adaptive project management processes to deal with the uncertainty of action by their local health partners. Tactics were often changed as the spread journey unfolded.

***“You do have to go through it [adaptation] every time, have to make slight tweaks every time, in order to make it work for each organisation. You have to be agile enough in your project management to know that it isn’t going to be the same project every time...you need that kind of, ‘Okay, well we can work with you, with some flexibility. Okay, we can see it can’t just be done our way but we can help you through it,’ and that’s really important... [perhaps] a toolkit with enough flexibility in it to allow for local adaptation, iterative adaptation, with people who are comfortable with you messing with their beautiful baby.”*** 06-AZ-007

***“I think if things aren’t quite being taken up in the way you expect, or if there’s an unknown that you just weren’t expecting, whether it’s a political or a practical issue, you’re ready to adapt and change your tactics if they’re not quite paying off.”*** 13-ST-004

Interestingly, several AHSNs highlighted a ‘trio approach’ to spread and adoption work, whereby each innovation was supported by (1) AHSN project manager, (2) AHSN clinical expert, and (3) an AHSN implementation science/Quality Improvement expert. This was often described as reducing the risk of problems. Whilst project managers and clinicians were often easy to identify at AHSNs, identifying

implementation science/Quality Improvement support was generally less available. The latter skill set was often sought externally or developed in-house, e.g. an academic fellow of implementation science was utilised at one AHSN to support a national programme and was considered integral to its success. Importantly, this trio approach could be a larger ensemble approach, involving communications and industry experts as well. Many AHSN staff favoured a move away from a 'lone wolf' approach to innovation rollouts due to the risks to due diligence and bottleneck of responsibility/reliance upon a single AHSN staff member.

Structured methods for improvement such as the IHI Breakthrough Series Collaborative Model<sup>4</sup> were popular to support adoption. Importantly, this project management-style approach to adoption was more often seen in Patient Safety teams and several of the national programmes that emerged with the IHI approach to adoption pre-specified. However, even for this structured approach, tailoring of Quality Improvement methods was reported, particularly when

rollout sites did not have the resources to commit to all the steps in Quality Improvement approaches.

For other projects, more generic project management activities were identified. Highly tailored and needs-led project management activities were reported. For example, by co-producing the priorities that needed project management. Also, recognising that different rollout sites required different intensities of AHSN support.

***“We did a one-day workshop where we created action plans with [rollout site], so instead of it being death by PowerPoint it’s actually, ‘Right, in your [care] home what do you want to work on? The Deteriorating Patient? Great, let’s do a driver diagram, let’s do some Quality Improvement, ‘let’s come up with a series of actions’...and we made sure we included the local authority people, the CCG, so they could pick it up afterwards, so they could go into their homes, know what they want to measure, what they want to change so that it wasn’t just on us because that’s obviously not sustainable.” 03-ST-001***

Regular check-ins and weekly team meetings were considered a critical part of supporting spread and adoption and ensured AHSNs remained aware of the challenges in a dynamic adoption journey. Similarly, the use of Project Initiation Documents (PID) was commonplace, as were programme management databases such as Verito. A common aspect of project management across all AHSNs was the need to monitor spread and adoption uptake. This served to support decisions about the rollout.

***“As an organisation, how do we actively performance manage the delivery of our innovations and adoption and spread? How do we monitor that? Within our AHSN, we have introduced a new matrix system whereby we have all the information that’s readily available both at delivery level and at senior executive level. It is very easy for us to miss opportunities if we’re not managing the delivery of innovations.” 04-AS-003***

<sup>4</sup>[www.ihi.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHICollaborativeModelforAchievingBreakthroughImprovement.aspx](http://www.ihi.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHICollaborativeModelforAchievingBreakthroughImprovement.aspx)

## Capacity building activities

Alongside the planning and relational work, several activities were described to enhance the likelihood of adoption. Building, maintaining, and using networks was already recognised as a key principle of spread and adoption. It is also a key and ongoing activity to support rollout sites; by engaging with peer networks, communities of practice, and using techniques such as ‘fish-bowling’. The latter involved taking the range of stakeholders physically into the service/centre/unit to see the pathway and proposed changes operating for themselves, rather than discussing it in a meeting room, to support a shared understanding of the innovation and its place.

Other capacity to support spread and adoption generating activities can be organised as support for AHSN spread work or support for rollout sites. To support AHSN spread work, continuous spread learning and peer support from other AHSNs was reported by some AHSNs. The former was reported less than anticipated and often due to a limited amount of time to identify lessons from spread and adoption. Peer support from other AHSNs was widely reported, particularly to support the mandated national programmes. In some instances, AHSNs shared staff/teams, e.g. data analysts, where those resources were not available.

Approximately half of the AHSNs reported spread and adoption training was organised for AHSN staff and this presents a potential area for improvement and/or

expansion of the ‘spread and adoption toolkit’ of AHSN staff. Many staff recognised the value of spread and adoption training, but it rarely appeared in its own right; it was more often part of a general internal training function. Interestingly, by establishing formal training on spread and adoption, a risk to spread success may also be mitigated. Currently, it is reasonable to conclude part of the success of spread and adoption activity, in some AHSNs, will be decided at the point of staff recruitment.

***“If you want us to use rigorous spread methodology, then recruit to that level, or certainly have an ongoing programme of training and development and investment in the people to cover those kinds of approaches, but I don’t see it right now and that’s a great shame.”*** 02-AZ-005

***“We’ve got an internal programme of training for our staff. As part of that, we had a session on spread and adoption, both using that to inform the revising of [AHSN high level approach]. So it was a little bit of telling people about what implementation science was, what the current evidence is around implementation, spread and adoption, and then using it as a way to get staff to reflect on their direct experiences of doing it.”*** 05-ST-002

Developing capacity to support rollout sites was seen in several ways. Approximately

half of AHSNs highlighted they provided training for rollout site staff/stakeholders to support spread and adoption. This was in addition to training to use the innovation. Some AHSNs mentioned the health system is generally organised to performance manage the delivery of care, rather than manage transformation of services, and the baseline level of implementation/transformation/spread knowledge can be quite low in staff at rollout sites. A valuable output of this training was the creation of headspace for site staff to understand what was required of them. Learning about spread and adoption methods took away likely work, i.e. working out how to adopt the innovation themselves as they went along and was complimented by AHSN staff often supporting the project management of the adoption journey. Key to developing capacity was empowering site staff to own the rollout of the innovation (see Spotlight 6 in Appendix). Approximately half of AHSNs reported better spread success from focusing on empowering site staff.

***“One of the things that we learnt...is that even if you’ve got something where you’re very clear what your aim is and you’re very clear about how you’re going to do it, if the actual operation of it is totally reliant on input from us it won’t sustain. It’s got to be self-sustaining. What we are there to do is to empower people to do things for themselves rather than to do it for them.”*** 01-AS-003

***“I think a judicious balance of empowering people to do the bits that only they can do and taking away some of the project management churn is helpful.”***

09-AS-001

***“I deliver education on Quality Improvement to try and engage [site staff] that adopting something isn’t just an extra part of their day, it should be seen as part of their job spec, if that makes sense? So the Quality Improvement skills, everybody should have, and everybody should be coming to a team meeting with an idea of we could do this better if we had a look at this, and then having the skills on how to go about small change so it doesn’t seem too onerous and big.”***

11-AZ-003

Finally, developing capacity to support spread and adoption commonly involved the development of implementation packs/toolkits/videos about the innovation. Ubiquitous examples were described and served to provide the best chance for success in the dynamic journey of innovation adoption. These were valuable for adoption in a single site, sharing a blueprint for spread across a range of new sites, and for innovators at the beginning of their journey as they organise their value proposition. Importantly, these resources offer information but in doing so enable successful spread and adoption.

***“I think what we’ve done over time is develop toolkits and resources and websites so that there is quite a lot of***

***information out there for people to help them implement.”***

05-AZ-005

***“One programme of work had videos that can be shown to different trusts...as to why various projects of work are important and it’s coming from the patient point of view. I think that can be quite a good enabler.”*** 03-ST-003

***“I worked with the supplier to adapt the spread and adoption pack to make it appropriate. We have a template that [another AHSN] had developed and then we went through, we adapted it, but basically it’s a ‘How To’ guide and we have these for all the ITP products.”*** 06-ST-001



## 4.5 Identified approaches to spread and adoption

An analysis of AHSNs' high-level orientation, general principles, and specific activities of spread and adoption identified several approaches to spread and adoption (see Table 4.4). Explicit and implicit approaches were identified at the AHSN level. Four types of high-level explicit approach were identified: (1) IHI Model for Improvement/Breakthrough Series Collaborative, (2) Flexible broad framework, (3) Flexible Implementation Science informed project management approach and (4) Flexible approach with a coaching focus.

Furthermore, four types of approach were identified at the project-level: (1) 'The Long Collaboration', (2) 'System partner needs-led', (3) 'Innovator-led', and (4) 'Targeting specialist services'. Descriptions of these

approaches, with advantages and disadvantages described by AHSN staff and/or inferred by the study team, are presented in Table 4.4.

It was apparent each of the approaches had their own advantages and disadvantages, which raises the question of how to choose and use approaches depending on the innovation and rollout context. More reflection upon individual AHSN/programme/project nuanced approaches, more sharing of approaches between AHSNs, and a new focus on selecting approaches would be productive move to enhance spread and adoption of innovation.

Importantly, these approaches only represent the beginning of a clearer understanding of spread and adoption approaches

across the AHSN Network. It is not possible to say if an approach was empirically 'better' than another as this broad study question was focused on uncovering approaches and could not simultaneously address impact on spread and adoption across such a wide range of AHSNs and contexts. To address a question on which approaches are more effective, a more sophisticated research design would be needed. However, qualitative insights on factors that influence spread and adoption success were obtained in this study and described in this report.



**Table 4.4: Identified approaches to spread and adoption**

<b>AHSN orientation to spread and adoption approach</b>			
<b>Approach</b>	<b>Brief description</b>	<b>Advantages</b>	<b>Disadvantages</b>
'Explicit' AHSN high-level orientation (10 AHSNs)	Characterised as brought together into a framework, some broad some specific, and described as evidence informed.	Spread activity by AHSN staff is visible to AHSN managers. New staff more aware of how spread is done when joining the AHSN.	A fully mandated framework would not be flexible enough to manage the highly dynamic environments innovation is rolled out within. None were fully mandated and all explicit approaches were adapted when required.
'Implicit' AHSN high-level orientation (5 AHSNs)	Characterised as unwritten, organic, opportunistic, highly flexible, and driven by staff skill sets and backgrounds.	Creative spread activity encouraged, which may lead to effective 'out of the box' solutions.	Spread activity by AHSN staff could be invisible to AHSN managers, increasing the risk of unseen problems. With a reliance on staff backgrounds and experience, successful spread may largely be dependent on the staff recruitment process and understanding their spread experience.

AHSN-level explicit approaches			
Approach	Brief description	Advantages	Disadvantages
IHI Model for Improvement/ Breakthrough Series Collaborative (KSS, West of England)	Two AHSNs specified QI methods was their preferred approach to spread and adoption. Furthermore, QI methods were often mandated/ the preference of many Patient Safety Collaborative programmes/projects.	Solid evidence base on the use and success of Quality Improvement methods. Defined methods can be learnt quickly by AHSN staff and rollout site staff trained to use them when needed. Many AHSN staff are already highly proficient in these methods.	Staff more comfortable with QI methods may prefer to use these methods regardless of the rollout situation. QI methods are best equipped to support targeted and simpler innovation rollouts, and less suitable for complex pathway change requiring cultural shifts in staff behaviour.
Flexible broad framework (Oxford, Manchester, Eastern)	End-to-end frameworks that covered a wide range of activities by multiple AHSN staff.	All AHSN staff have a central focus for considering their part in the journey of an innovation through the AHSN and into the rollout site.	The broad frameworks covered a range of AHSN activity, including horizon scanning and selecting innovations. These frameworks lacked some detail on how to operationalise spread and adoption work, e.g. particularly in the 'Deploy Innovation' phases.
Flexible implementation science informed project management approach (East Midlands, Wessex, HIN)	Implementation science frameworks informed various spread and adoption activities, e.g. contextual needs assessment and identification of potential challenges. Supported by carefully organised project management processes.	Frameworks/models/theories from implementation science have been developed from a solid evidence base and often been rigorously assessed. They may generate ideas for new ways to tackle spread and adoption activities. Moreover, may act as a useful aide-memoire for experienced change agents.	Currently, there are approximately 100 frameworks/models/theories developed in the field of implementation science. Limited guidance from academia is available on choosing and using these for real-world implementation of innovation, particularly at pace and scale, and in dynamic environments.
Flexible approach with a coaching focus (South West, Innovation Agency)	Flexible approach but incorporating a strong focus on behavioural coaching to empower rollout staff to innovate and support spread and adoption.	Behavioural factors have been linked to successful innovation adoption. The identified coaching focused on empowerment, confidence building, relational work e.g. managing difficult conversations, shifting mindsets, and building capacity for transformation.	Including a coaching element, to generate capacity to innovate or support spread and adoption in partnering health systems, requires significant investment by AHSNs. Due to the volume of innovations supported by the AHSNs, it may not be possible to universally deliver an approach with a coaching element.

Project-level approaches			
Approach	Brief description	Advantages	Disadvantages
'The Long Collaboration'	Often required for the larger national programmes or those involving considerable pathway change. Often involves building a collaborative over months/ years to drive the work forward, with funding and metrics decided and built into the programme. Often requires rollout sites to invest in the changes with their own resources, time, and align their commissioning timescales.	Evidence for innovation usually complete and strong. Often backed by NHS England, trust, CCG. The requirement for system thinking by rollout sites can motivate sites into action to support spread. Prescriptive methods to monitor, communicate and spread can assist AHSNs. Roles on the project often defined in advance. Usually has a national lead role to coordinate activity across AHSNs (e.g. sharing clinical champions). Spread can be fast and effective if an 'Improvement Collaborative' already exists in the region. May lead to 'pop up' projects off the back of a good collaborative.	Can have buy-in problems if due diligence has not been done, e.g. not conveying the evidence base, not organising the metrics in advance of the launch, encountering similar interventions already in use at sites. Top-down mandated innovation is not always palatable by site staff, particularly if the perceived need for the innovation is not clear and may lead to relational issues between sites and AHSNs – whereby AHSNs must choose between pushing the innovation or maintaining good relationships. All national programmes still need 'localising' at every trust/CCG/practice and this involves an assessment of 'fit' and navigation of local politics. The rigidity of these programmes can hinder adoption (e.g. ESCAPE-pain in some sites). A lack of lead-in time (6 months preferred by AHSN staff) can hinder the preparations required to get a national programme moving at local level. Spread can be slow if an 'Improvement Collaborative' does not already exist in the region, it will mean AHSNs are starting from scratch in each rollout location.
'System partner needs-led'	Locally developed programmes. Often in the form of pilot/ demonstrator sites to build case on effectiveness. Can include national programmes whereby its already up and running, to a greater or lesser degree, in rollout sites.	Strong alignment with local priorities, opportunity to develop CQUINs/ financial incentives with sites, bespoke solutions possible. AHSNs have a high degree of control over the spread and adoption plans, so can play to their strengths. AHSNs often develop implementation plans to support other regions/trusts/CCGs replicate the spread activity (e.g. developing strategic outline cases and business case templates). Considered easier to deliver by AHSN staff	Absence of a national push for some innovations can slow progress. Requires a strong understanding of the innovation by AHSN staff. In the event the nationally mandated innovation is already running, this represents an opportunity to minimise the use of AHSN resources.

Project-level approaches			
Approach	Brief description	Advantages	Disadvantages
'Innovator-led'	AHSNs handing over some/all implementation responsibility to the innovators	Usually targeted solutions for identified problems, but whether the problem exists in the rollout location requires investigation. Big pharma companies have the resources to develop the business case for spread and adoption and do not require as much input from AHSNs as other innovations.	More needs assessment with local sites, work to develop/evaluate the value proposition of the innovation, and development of toolkits for their use in practice. Pace and success of rollout often determined by the innovator's ability to deliver and support the innovation. Innovators may be reluctant to share the 'warts and all' with rollout sites to support spread activity.
'Targeting specialist services'	Can include multi-innovation rollouts (10+) under one programme manager, so resource challenged. Often include rapid uptake products, ITT/ITP innovations, and small patient safety improvement products. Would not use a collaborative approach as there is not enough time to develop one. Requires a good understanding of how the innovation is better than current practice. Requires a good understanding of specific services.	Potentially fast spread activity if the situation permits. Usually targeted solutions for clearly identified clinical problems. Packaging multiple products together and offering a 'solutions bundle' to rollout sites can be an effective way to manage the volume of options and increase adoption. Spread and adoption plans may be light-touch if the 'triage' process to understand the innovation in relation to system needs does not warrant heavy AHSN involvement.	Support from AHSNs may be seen as transactional with limited ability to support culture change. May require good knowledge of, and direct conversations with, local procurement services to support spread. Success requires a finite number of specific clinicians to talk to each other. Funding and metrics often not decided nor built into the project, support from Commissioning Support Units needed for data access. Still requires 'localising' at every CCG/trust and this often involves an assessment of 'fit', navigation of local politics and governance, finding a clinical champion, and maybe an audit/evaluation to clarify effectiveness/cost savings for the rollout site. Individual AHSN staff managing multiple rollouts are unlikely to have time to follow a stepwise spread approach.

## 4.6 Summary

A range of themes (see Appendix Tables 1 and 2) contributed to understanding the different approaches to spread and adoption by AHSNs. These were discussed at three different levels: the sanctioned AHSN high-level position, at the level of principles, and at the specific activities level.

On the issue of transparency of approach, ten AHSNs were explicit about their high-level approach and these were a mix of broad frameworks, theory-informed frameworks, the IHI model for improvement approach, and several with coaching elements built in. Five AHSNs took a more implicit approach to spread, characterised as unwritten, organic, opportunistic, highly flexible, and driven by staff skill sets and backgrounds. AHSN team factors and the environments AHSNs operate alongside helped explain the high-level approaches.

Diversity of AHSN staff backgrounds was highly valued. Similarly, AHSN staff with clinical backgrounds and undertaking a 'trio approach' (project manager, clinical lead, implementation science/QI lead) was highly valued for spread activity.

Flexibility and tailoring were reported as essential for all spread and adoption work, largely due to the starting point of innovations and environmental factors within rollout sites. Variation in spread approaches was reported between AHSNs, within AHSNs, between national

and local programmes, and even within mandated spread plans for AHSN Network mandated national programmes. The latter was due to the need to 'localise' national programmes.

All AHSNs with an implicit orientation reported they were unaware of any 'common approach' to spread, were not as explicit about how they operationalised spread activities, and highlighted siloed team working. Furthermore, AHSNs with an implicit high-level orientation did not mention spread training for AHSN staff or rollout site staff as something they supported.

Despite the variation in high-level approaches, five common principles were identified: (1) Promotion of an AHSN persona, (2) Engagement focused, (3) Working with the needs of health systems, (4) Building and using networks, and (5) Seeking and achieving sustained spread.

A wide range of specific spread and adoption activities were described by AHSN staff. These were brought together under a framework of broadly recognisable spread stages (see Figure 4.1). Similarly, these activities could be organised under five types of spread activities: (1) Planning/preparatory activities, (2) Dissemination/communication activities, (3) Financial activities, (4) Project management activities, and (5) Capacity building activities. Whilst not all these activities were present in every rollout, many were discussed

as necessary to rollouts and AHSNs not engaging in some of these activities/conducting due diligence was linked to unsuccessful cases. Therefore, it is reasonable to consider if some/many of these activities are relevant for rollouts in the future. The analysis provides potential spread and adoption ideas to AHSN staff prior to and during engagement with rollout sites.

At the project level, four approaches were identified and described in Table 4.4. These approaches only represent the beginning of a clearer understanding of spread and adoption approaches across the AHSN Network. It was not possible to say if an approach was 'better' than another as this broad study question was focused on uncovering approaches and could not simultaneously address efficacy across a wide range of AHSNs and rollout contexts.

More reflection upon individual AHSN/programme/project nuanced approaches, more sharing of approaches between AHSNs, and a new focus on choosing and using approaches would be a productive investment of time to enhance spread and adoption of innovation.

# 5. Study Question 2

**What contextual factors enable or challenge different approaches to spread?**



## 5.1 Introduction

The contextual factors that enable or challenge approaches to spread were extensive, and to provide the basis from which to start to understand them, the study team used the Consolidated Framework for Implementation Research (CFIR, Damschroder et al., 2009) to structure data analysis. The CFIR provided an overarching typology in five key areas of implementation: intervention characteristics, outer setting, inner setting, actor/stakeholder characteristics and the process of implementation.

In the context of this study, we defined the innovation characteristics as those elements that directly make up the innovation or programme, the outer context as elements related to organisational and system factors, and the individual stakeholders as those involved in spread and adoption activity from both the AHSN and adopting organisation. As the 'inner setting' related most closely to the spread approaches themselves, these were considered as being part of the understanding of approaches used, as outlined in section 4, as was the process of implementation.

The most reflected upon characteristics were those related to the stakeholders or individuals involved (which covered both AHSN staff and those they worked with), and the outer characteristics – those related to influences external to the AHSN in question. These outer characteristics related to multiple levels of influence, from elements of local organisational systems to national policy decision-making, and they were particularly important because they can be difficult to influence by AHSN staff. In many cases, the influence of stakeholders was more within the control of the AHSN and clear strategies could be put in place to build on or counteract the influence as needed.

***The most reflected upon characteristics were those related to stakeholder behaviours and influences external to the AHSN***

## 5.2 Stakeholders – influence on spread and adoption

The influence of behaviour, perception and working practices of stakeholders on spread at rollout sites was highly evident. AHSN staff identified the difference between the influence of general staff, senior/leadership staff, and champions with the need for positive interactions with all three instrumental to spread.

In relation to general staff, if there was a lack of understanding around the benefits of the organisation, a lack of belief in the evidence or no sense that the innovation provides added value, then adoption was made difficult. There were also barriers experienced if capacity and resources were limited, and staff felt they have a 'lack of headspace' to engage with something new. This 'lack of headspace' clearly linked to influences from working practices, systems and organisational structures, as well as to workplace culture, and related to the lack of capacity to look beyond immediate actions. However, if staff were interested and passionate, if they wanted to make change and were open to new approaches, then these restrictions were overcome and spread enabled.

These latter conditions were enabled by service directors who themselves demonstrated an attitude that was open to change and innovation, and who

supported new ideas. However, there were extensive barriers put forward by health service directors, as identified by AHSNs staff, and many of these related to mindsets. There was a sense that some service directors don't really want to engage, and there was little understanding of what lies behind those mindsets. Barriers from senior staff emerge when they were passively resistant, risk-averse and opposed to new ideas. Where senior staff were engaged and happy to enable staff to adapt and use resources to try new ideas, senior leadership played an enabling role.

Champions were viewed as critical to successful spread, with a wide number of AHSNs reporting that having the right champions, who are enthusiastic, respected by their peers, and good communicators, had a very positive impact on spread outcomes. Champions need to be interested in taking the innovation further than one single site, be able to interpret complex information, understand governance and be able to challenge other clinicians. They also need to have a clear understanding and engagement with the benefits to the patient and the system in question.

AHSN staff were very clear on the skillsets and attributes that they themselves need to enable staff. In particular, the

ability of AHSN staff to build trust, to communicate openly and to influence stakeholders were seen as very important, and these strengths were built upon with a clear understanding of pressures faced by staff and organisation, and the recognition of the need to work around partners' time and resource commitments. AHSN staff also enabled spread when they had a sound understanding of the setting, were realistic about timescales and which 'battles to choose'. In terms of skillsets, some AHSNs felt that having a clinical background/expertise was important to ensuring spread, alongside project management skills. Others, however, felt that Quality Improvement skills were central to spread, as well as having good networks, being able to deliver and sell the innovation, and being 'credible'.

## 5.3 Outer setting characteristics – influence on spread and adoption

There were a substantial number of enablers and barriers which related to outer setting characteristics, with a larger number of barriers than enablers.

Enablers at an ‘outer’ level were complex and often needed to work at a system or organisational level. The most common enablers related to the culture of the organisation, including the leadership. Where this was a culture open to learning, had a mindset for change, where ‘Quality Improvement is part of everyone’s job’, and there was organisational readiness, AHSNs found an environment in which spread works more easily. Understanding the need and enthusiasm from across the different organisations created a fertile ground for spread. Where there was silo thinking, an aversion to risk and a strong focus on targets, people were less likely to ‘see the bigger picture’ and as a result were more likely to resist new ideas.

There were leadership trends that supported the spread culture, many of which were centered on leadership which allowed the time and safety to adapt and try new ideas. The findings show that supporting staff to adapt approaches, to

try something innovative and to take the time needed to enable change are all important elements in supporting spread efforts. There was also positivity expressed around leaders who can help in bringing together stakeholders, highlighting the role that leadership within the AHSN can bring in supporting frontline staff in creating and upholding networks that enable spread. Where rollout site leaders were autocratic and not open to adaptation, staff felt that their opportunities to spread successfully were restricted.

In the same way that organisational structure and leadership can enable spread, these elements also featured strongly in reports of barriers to spread. Most importantly, organisational capacity provided major barriers to spread, most commonly that the organisation had other demands or priorities, but also a lack of availability to engage or a time-poor system (which links to the availability to engage). This lack of capacity impacted on engagement, which provides a barrier, as does the financial situation of the setting. Where there was limited resource, organisations were less likely to engage in new ideas and commit any short-term resource

needed to change. However, in settings where the Board had bought into the innovation and there was whole team engagement, capacity issues could be resolved to enable spread to take place.

The only enabler related to existing systems was when part of the system had already engaged with the innovation, as this allowed the organisation to see how the innovation had rapidly added value with limited input. However, barriers here can be substantial, especially when there was a system already in place which does something similar, which meant that stakeholder did not see the need for the newer innovation. There were also issues raised around competing innovations, both in terms of those that there were existing contractual agreements, as well as stakeholders preferring alternatives for other reasons. If there were locally created alternatives, these would tend to be preferred. AHSNs reported that having limited options to offer (being ‘bound’ to one product) also restricted spread as other options may be more appealing to those adopting. A lack of understanding of the role of the AHSN also made these situations more difficult, as they

were more likely to be perceived as directly related to particular innovations.

Staff turnover also had a major impact on spread, with the loss of managers or leaders at rollout organisations being a commonly mentioned barrier to spread. The same applied to champions leaving as well as those who had received training on a particular innovation.

Access to data was a major barrier, with information governance issues being difficult to navigate for new innovators, stakeholders within systems, and external stakeholders such as AHSNs. Getting access to data was important to demonstrate the value of an innovation, as well as for establishing baselines and measuring progress (which would also increase uptake as progress is defined). It was also sometimes necessary for the innovation to work. Where data was not 'owned' locally, as in the case of national programmes, or when access was complicated, it was difficult for AHSNs to use data in a positive way to enable spread. Data sharing was often complicated by information governance arrangements

and negotiating data sharing agreements was time-consuming, leading to delays in spread.

***“The other issue that keeps coming up for us, which is a real barrier to change is information governance...the whole issue around patient data and patient information and the length of time that it takes to get right systems and processes and agreements in place is, at times, absolutely torturous. I think at one point in the care home project, I spent about seven months just working through information governance issues. I think when you're working in an organisation like the NHS, where you're trying to deploy and implement at speed...working around that, around information governance and finance, actually, are often barriers to that deployment.” 10-AS-001***

The lack of standardisation of systems, relationships and delivery created barriers to spread, with AHSNs working with health systems organisations that varied across England. Each system was different and had its own complexities,

governance, and local drivers; and where innovations or programmes were based on a perceived standard approach, this caused complications. Where the innovation required the interaction of different sectors (e.g. police, social care, local authorities) the barriers to spread increased, with AHSNs finding it harder to engage and identify the right stakeholders and conflicting priorities became more evident.

Organisationally, there was also the complexity around relationships between organisations, with difficulties in working relationships, siloed working, and politics between different parts of the health system all causing barriers. Relationships with commissioners were also highlighted as particularly important to success, with key barriers emerging when commissioners do not support the innovation. Where there were supportive contractual agreements, incentives and commissioners open to new ideas and pathways, spread was enabled.



## 5.4 Innovation characteristics – influence on spread and adoption

There were several characteristics specific to the innovation which had extensive impacts on the spread of an innovation/programme. In particular, the evidence around an innovation was particularly influential both in terms of enabling but also producing barriers to spread. Where there were perceived problems with the evidence, where it was not seen as objective, where it was old, or of low quality and where there were limitations in terms of scope (e.g. lack of evidence of cost effectiveness or clinical effectiveness), AHSNs found that spread was harder to achieve. There were also behavioural elements linked to acceptance of evidence, with staff not being convinced by the evidence due to their own views, experience or vested interest in alternatives, and also, staff wanting to do their own validation work (something that was referred to as ‘pilotitis’).

**“So data and research evidence and things like that, so many people love ESCAPE-pain because there are loads of academic papers behind it, but equally it sometimes got us into difficulty because different organisations want different things from the data and sometimes when we’ve sent them loads of stuff they can’t**

**find the one thing that they’re looking for. So for example, a CCG might be really interested in ESCAPE-pain because it thinks it can reduce the number of people going for hip or knee replacement surgery, and of course the research that was done was done at a time when they were looking at overall cost. So we know that overall, for a particular cohort of people that went to ESCAPE-pain X number of years ago, the health and social care costs were significantly reduced compared to the control group. So that is defined as number of knee pain related bed stays and number of prescriptions, it doesn’t say how many people who were planning to have an operation then didn’t have an operation because they went to ESCAPE-pain. So sometimes data is exactly what’s been looked for but it’s not always answered in the right way and you have to make assumptions and things. Yes, so data I think can be a barrier or an enabler.” 05-AZ-003**

In terms of enablers, it was clear that a wide range of evidence – different sites, focused on implementation as well as effectiveness, looked at cost and clinical effectiveness – could really help to support spread. Where the evidence had high

levels of credibility, with links to national policy and guidelines, academic publications and nationally produced toolkits, the innovation became much easier to spread.

Cost-effectiveness played an important part in enabling spread. Where there was clear and relevant cost efficiency of the innovation, low cost, and limited length of license costs, engagement was enabled. Sites were more likely to be resistant to spread if there were upfront and ongoing costs, and costs were seen as being higher than with existing systems or known alternatives.

The nature of the innovation was particularly important to understand in relation to spread, with clear links between increased complexity and lack of adaptability and increased barriers. Where the innovation was overly prescriptive, not easily adaptable and needing the redesign of pathways or changes to be made within the system to make it work, spread was particularly challenging. This was due to the increase in workload, especially when implementation was across different sectors of the system. There were also barriers when there was complexity around costing frameworks, again, relating to costs which go across units within

or across organisations.

Where innovations required minimal change within the system, making use of existing infrastructure and adapting to systems and pathways, spread was much easier. It also helped if the innovation itself is adaptable, so that it can fit the setting, but also can be improved within the context.

Barriers were identified in relation to the origin or development of the innovation, particularly when the innovation was reported as not fit for purpose or as good as a competitor. In relation to competition, there was evidence that spread would be harder if the innovation was similar to something that had been developed locally.

AHSNs reported that innovations that were adaptable, that different sites could 'put their stamp on' as well as those developed in collaboration with systems and/or patients were easier to spread.

## 5.5 Understanding barriers and enablers in relation to AHSNs' high-level orientation to spread and adoption

Section 4 described how some AHSNs had an 'explicit' and others had an 'implicit' approach to spread and adoption. An analysis was undertaken to compare the number of comments made about barriers and enablers in relation to these two high-level approaches. The findings showed some evidence that staff in AHSNs with an explicit high-level approach to spread provided more detail about challenges and enablers to spread, possibly indicating a more in-depth understanding of the methods needed to ensure spread. They were more likely to describe how their own actions become enablers and provided many ways in which they themselves enabled spread, including building trust, understanding the pressures on staff, being good communicators

and being able to reflect and learn from failure.

AHSNs with an implicit high-level approach were more likely to externalise influences on spread, describing higher numbers of enablers and barriers relating to the innovator, perhaps demonstrating they were more likely to recognise the control of others on the results of their approach to spread. This was likely if there was less understanding of their own approach. In such cases, spread often felt as if it was up to the adopters.

***"I think unsuccessful stuff has been generally...where an innovator hasn't necessarily been completely honest about their [situation] and we haven't necessarily spotted they are in***

***a position to be able to respond to demand, where there are gaps in the evidence base, but things are being pushed through without really, you know, there might be some evidence base, but it isn't the same."*** 12-ST-003

AHSNs with an explicit high-level approach, however, had more understanding of the enablers and barriers around clinical site staff in charge of rollout. They were more analytical about why staff became either enablers or barriers. For example, demonstrating an understanding of the different influences of behaviour rather than simply describing the barrier as being that staff do not have time or understand the innovation.

***“For things to be successful, all I can say is my success factors are walking the walk with people, helping them to see that you’re there, helping them to understand that you want to make things easier for them, their culture better or outcomes for the people that they’re looking after, do less harm and make their working practices easier. I think once they understand the vision, otherwise it’s just you’re just being done to as a clinician rather than being part of the change, and I think the whole culture needs to change in the NHS to actually let’s all be part of the change because otherwise we will just still have no understanding, so basically we’ve developed some regional guidelines. I remember going into one of the hospitals and I said, ‘Do you know that guideline changed?’ They went, ‘Yes’. I said, ‘Do you know why it changed?’ None of them could answer me why it changed, but all of the clinicians around the region made that change, and made it a regional guidance and it’s for the best for the women for consistency so that all the trainees rotating around the region have the same guidance, so there is no drug miscalculation, but actually the staff didn’t know why and they***

***just thought ‘oh just another change’, another preparation that I’m going to have to figure out how to do differently. You get a much better engagement if there is understanding, and I think people are bright, and you get a lot of your good innovations from the ground level staff. That’s where they need to come from.”*** 01-AZ-002

There was also evidence that staff from AHSNs with an explicit high-level approach were more likely to recognise the detail in relation to mindset and leadership. For example, whilst AHSNs with an implicit approach to spread might say that ‘organisational readiness’ provided a mindset that enabled, AHSNs with an explicit approach were more likely to give further detail.

***“Well, the big one would be [particular group of clinicians] and [particular other group of clinicians] not talking to each other. Just by telling them to, they’re not going to do it. That’s years of culture differences, and relationships that have problems with –***

***they’ve been traumatised or broken down through previous cases, comments made in meetings. Culture might be people just don’t particularly like anything new. You might have a band of senior people who co-ordinate within an A&E department or delivery suite department who actually just don’t particularly like all this new-fangled stuff and don’t see a need for it. So the days that they are on shift, those particularly helpful posters that go up at a patient’s bedside or whatever, they’re just not done. They’re just not put out, they’re not encouraged. A new patient comes on the ward, they don’t get that on their bedside and then other staff see well, that patient didn’t get it, it mustn’t be that important if the senior person doesn’t think it’s important. So that can become habitual that practice...it was just quite shocking to me how each ward was so completely different in culture, and it was all dependent on the person in charge of the ward.”*** 07-AZ-002



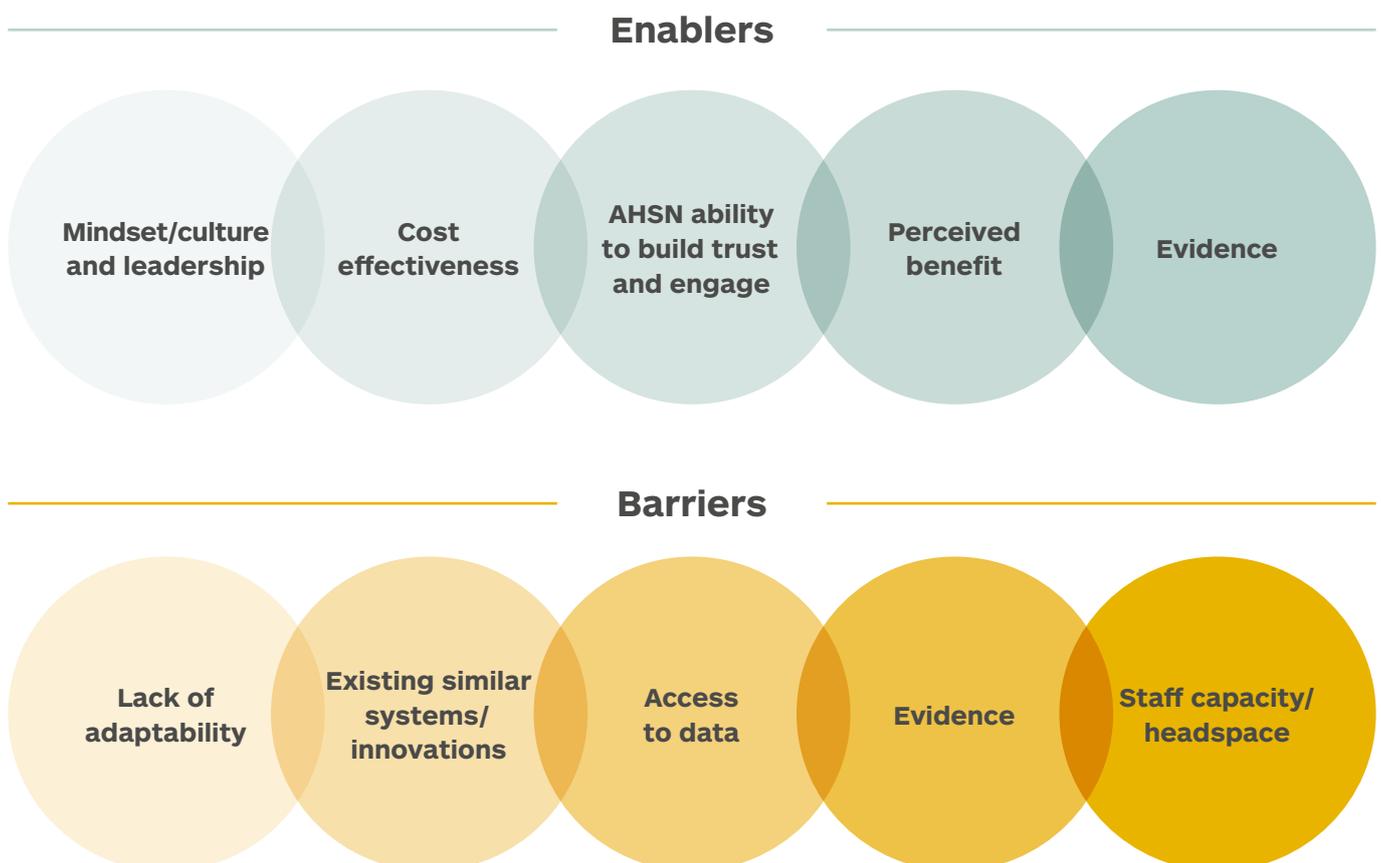
## 5.6 Pervasive barriers and enablers – a dynamic approach

Working from the number of mentions of the different barriers and enablers, it was possible to see which were perceived as the most pervasive. In Figure 5.1, the greater the number of mentions of a barriers or enabler, the darker the colour of the bubble. Evidence was clearly an important enabler as well as a barrier, the outcome depending

on how people interact with the evidence. Evidence was the most important enabler to spread, especially in relation to the evidence about the innovation, including perceived benefit; whilst the lack capacity of roll-out staff to engage ('headspace') and evidence that was not accepted produced the strongest barriers. Other structural and

organisational elements also produced strongly perceived barriers, including access to data, existing alternatives or pathways that did not support the innovation and the lack of adaptability of the innovation itself.

**Figure 5.1: Heatmap of pervasive enablers and barriers**



Whilst we can look at the barriers and enablers on a scale which helps us to see which were perceived as more important than others, these can be viewed as overlapping spheres with some elements influencing others to create either a barrier or an enabler.

As can be seen in Section 4 of this report which analysed approaches to spread, dynamism and the ability to shift as situations and contexts change was required. Much of this work was about how people interact with other people as well as with structural, political, and organisational systems and processes, and as such, understanding how these systems and processes create enablers or barriers was important to consider. Importantly, barriers and enablers often emerge as a result of action. They were not necessarily static hurdles to overcome, they may be experienced as a barrier or an enabler because of the action of individuals.

An example of this was how people use and respond to evidence. Whilst evidence was clearly identified as a barrier, it could also be an enabler. This may be related to how it was perceived, which in itself may be due to the existing experience of people at the roll-out site (e.g. they have links to a similar product, fail to read all of the evidence, prefer a different approach) or the way in which it was introduced or used (e.g. lack of adaptability, promoted by leadership without hearing the views of frontline staff, confusing and complex presentation).

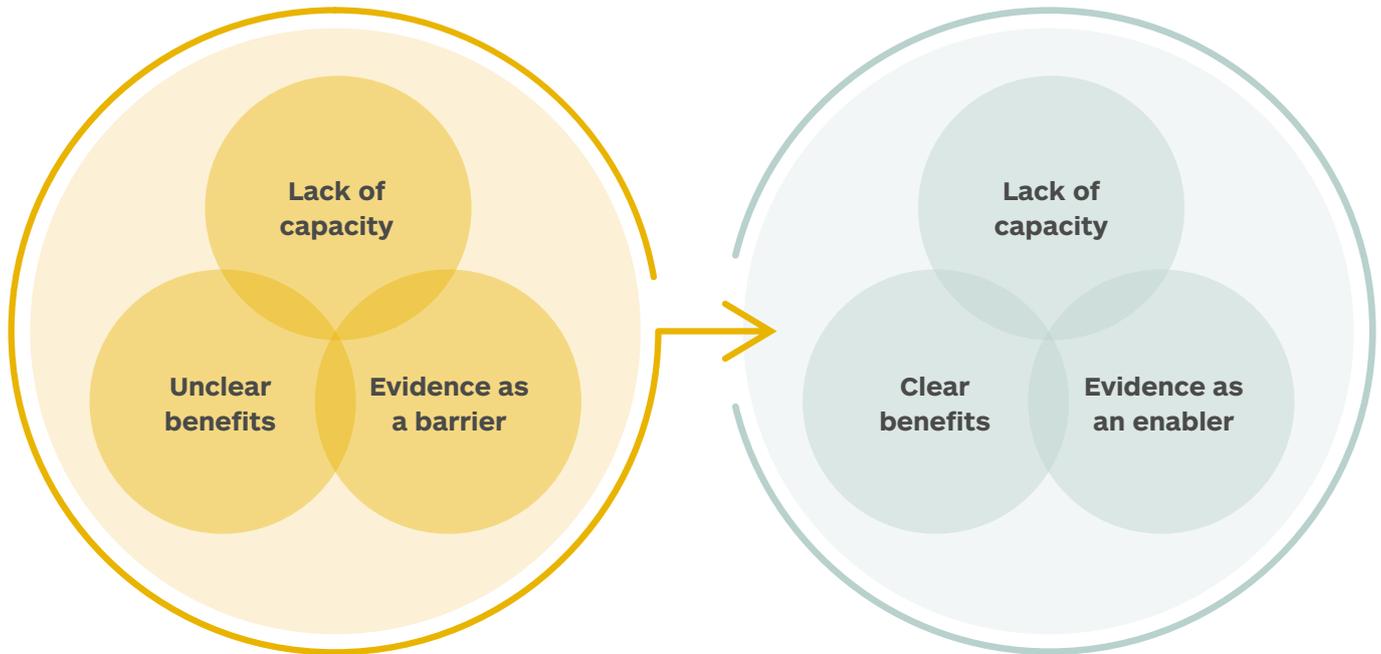
The issue around evidence and whether it becomes either a barrier or an enabler emerged through how it related to a number of other key contextual features, including mindset, culture and leadership, as well as lack of adaptability, and staff capacity and headspace. Evidence does not have an absolute value, rather it has a relative value dependent on the stakeholder or audience. The barrier or enabler emerges from how people interact with it and when evidence is being evaluated the source is being assessed at the same time. For example, AHSNs spoke highly of the value of clinical champions, largely due to the role this person can play in translating evidence in a way that is valued by other clinicians. Evidence is often more likely to be accepted by clinicians if delivered by clinicians. Evidence of benefits to staff and patients was perceived as an enabler and a barrier, but it was also found that where there was adaptability in the approach, the benefits were seen as broad and therefore more acceptable. Benefits that provided improved capacity

(‘headspace’) were also highly valued, and if there was increase headspace and capacity to look beyond immediate activities, a culture of change, and a mindset open to change was more likely to be possible.

Mapping the influence of barriers and enablers and the relationships between them was helpful for an understanding of how to avoid creating barriers, as well as how to adapt approaches to lessen their impact or work around them. For example, whilst staff capacity or lack of headspace to engage around spread may be viewed as a barrier out of the control of AHSN staff, the perceived benefit of an innovation may help overcome this, especially when looking at benefit to staff (see Figure 5.2). There may also be coaching and leadership training work that AHSNs can do to support leadership in adopting organisations to ensure a mindset and culture that is open to change, thus enabling staff to have the space needed to enable spread (see Figure 5.3).

**Mapping the influence of barriers and enablers and the relationships between them was helpful for an understanding of how to adapt approaches to lessen their impact or work around them**

**Figure 5.2: The value of understanding the perceived benefits of the evidence**

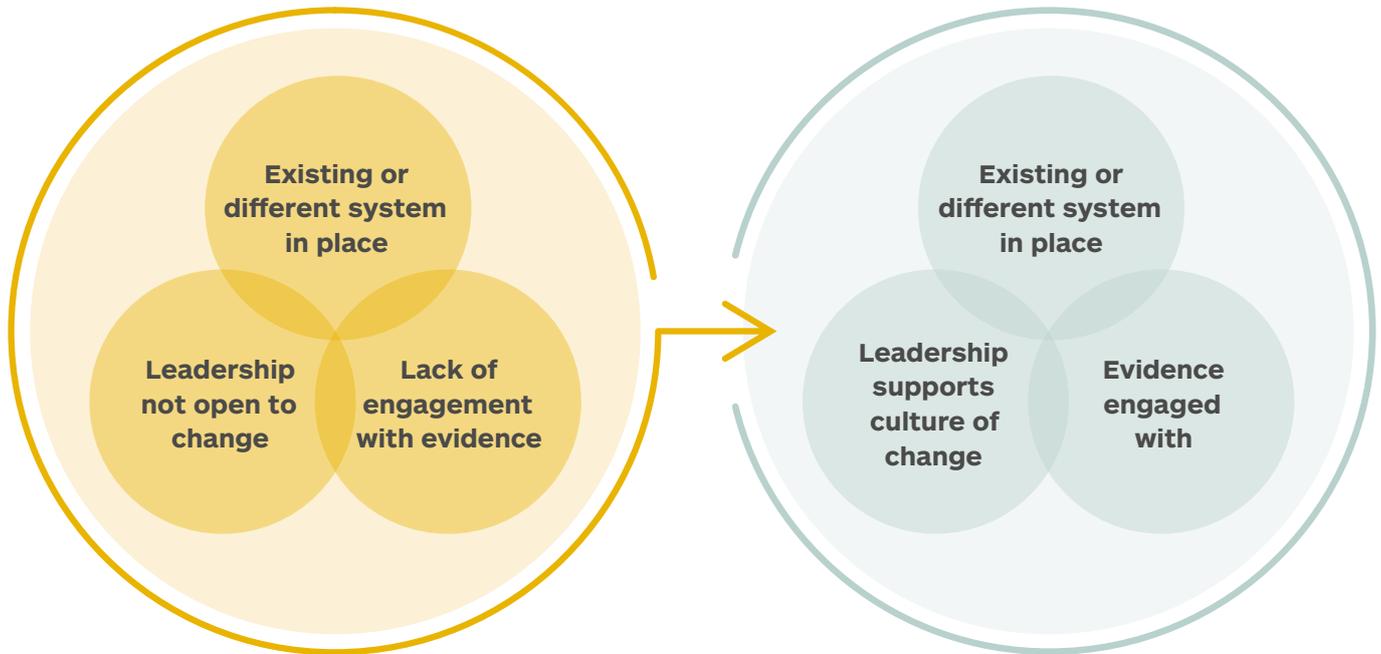


Another important sphere to add to this diagram relates to how the nature of the innovation was perceived by stakeholders. Where innovations were viewed as convergent (reinforcing the status quo) they were more likely to create an openness to spread. Stakeholders did not have to change whole approaches, shift

systems, or adopt new ways of thinking. These innovations fit into what already existed. Where innovations were viewed as divergent, they cut across existing pathways and ways of working, creating the potential for disruption. In such situations, there is the need for strong acceptance of the need for

change (possibly relating to better acceptance of evidence) and the capacity of workforce and leadership to be flexible to change.

**Figure 5.3: Existing system in place shifted from being a barrier through leadership**



Breaking down some of these complexities highlighted the need for AHSNs to have a strong understanding of their system, the people within it, and the ways in which people work. In order to overcome these barriers, which are at first glance structural

(e.g. evidence, systems etc) but which also relate to how people relate to the innovation and to their working context, there is the need for spread to be seen as very much about relationships rather than simply as process. In particular, there is the need for

AHSNs to be able to translate the value of an innovation into the discourse of each setting, as part of the AHSN 'honest brokering' role.

## 5.7 Moving toward a more nuanced understanding of barriers and enablers

This analysis of barriers and enablers to spread and adoption highlighted a wide range of factors. The most prevalent enablers and barriers were related to stakeholder characteristics and the outer setting (organisation and system) factors.

AHSNs with an explicit high-level approach to spread provided more detail about barriers, enablers, AHSN staff behaviour, and behaviour of rollout site staff during spread and adoption, compared to AHSNs with implicit high-level approaches to spread. Furthermore, AHSNs with an implicit high-level approach were more likely to externalise influences on spread and described higher numbers of enablers and barriers related to innovators.

Of the ten AHSNs with four different types of explicit approaches (see Table 4.4), a wide range of similar enablers and barriers were identified. Barriers and enablers did not appear linked to any one of the four approaches more than another. There was some indication AHSNs with coaching elements were more likely to consider mindset-oriented enablers (e.g. ability to learn from failure, ability to build trust) rather than operationally oriented enablers (e.g. project management skills, clinical background).

It is important to recognise barriers and enablers are not static, they can reflect the perception and situation of the individuals involved and can therefore be identified, mitigated, and potentially changed to

benefit spread and adoption activity. The complexity can include the actions of AHSN staff, actions of adopters, perceptions of the innovation (whether convergent or divergent), and the system and culture of the rollout setting. Undertaking a more nuanced assessment of influential factors should help AHSN staff overcome what might be initially perceived as fixed barriers.



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# 6. Study Question 3

**How theoretically informed  
are the approaches?**



## 6.1 Introduction

Before outlining the evidence on the role of theory in AHSN approaches, we need to place this question in the context of the kind of work involved in such approaches and how far it is amenable to theoretical influence. AHSNs are not healthcare providers or innovators themselves but operate between these actors. They can be best typified as ‘innovation intermediaries’; that is, ‘organisations that generate value to other actors within a system of innovation’ (De Silva, Howells, & Meyer, 2018). The work of innovation intermediation then is to provide a ‘link between at least two entities which need to connect in order to generate or adopt innovation, but which do not do so sufficiently without having a linking device or linking support’ (Edler & Yeow, 2016). Reflecting this role, AHSN work can be seen as situated in multiple different arenas:

- Within a wider innovation-diffusion **process** and ecosystem.
- Within a network of personal and inter-organisational **relationships**.
- Within and across different institutional and policy **contexts**.

Viewing AHSN work in this way helps to explain many of the features highlighted in our study. AHSN work is *dynamic* because it must respond to the unpredictable and temporally unfolding character of the innovation-diffusion process.

The nature of the work is not static but shifts according to the innovation’s stage of development. AHSN work is *relational* because collaboration with other partners is vital to achieving successful outcomes. Social networks, both personal and interorganisational, are central to the cause – the flow of information and action is channelled via these networks. The objects of the work such as the innovation itself and evidence for it are also to a degree relational. The evidence involved is important not only in itself but also in the way it is presented to, and engages, different audiences. Likewise, one of the most important aspects of the innovation is how it intersects with the perceptions and ways of working of its adopters. Finally, the work is *flexible* because, almost by definition, intermediary work must work across, and adapt to, the expectations of multiple different contexts.

Further, because different AHSNs may play their role in different ways, and situate themselves (and projects) at different points in the arenas highlighted above, the work is highly variable both across and within AHSNs, making it even more difficult to generalise about approaches.

These features of AHSN work – dynamic, relational, flexible, and highly variable – are important to bear in mind when discussing how far AHSN approaches are informed by theory, and whether they should be more or less informed. Generally, work is more amenable to the application of theory and other frameworks when tasks are narrowly defined, routine and predictable in nature, and take place within a well-defined context. While the role of innovation intermediary is highly knowledge-intensive, the work involved is generally viewed as non-routine and unpredictable in nature (Edler & Yeow, 2016).

Our findings on the role of theory in informing AHSN approaches will be presented at two levels: (1) as evidenced in the way individual AHSN staff members talk about their work, and (2) as reflected in the explicit frameworks adopted by the majority of AHSNs as highlighted previously (see Table 4.1).

## 6.2 Codified and non-codified forms of knowledge in AHSN work

To reflect the breadth of usage within the AHSN setting, ‘theory’ is defined here in a broad sense to relate to codified forms of knowledge. These can vary from systematic scientific understandings of underlying causal relations, appropriate to conceptualizing phenomena, to more normative frameworks which act as a guide to action. With few exceptions, we observed right across the AHSNs some reference to theory or normative frameworks derived from external sources, including academic literature and well-known individuals or institutions. The work cited varied from high-level theory, specifically Rogers theory of diffusion (3 references), through to healthcare-specific analytical or diagnostic frameworks, notably Greenhalgh’s work and the NASSS framework (12 references), and more normative methodologies derived from Implementation Science (7 references) and Quality Improvement (12 references).

These references also suggested multiple different ways in which theory was informing AHSN work. These ranged from broad, motivational effects where theory was seen as ‘inspiring’, to more functional applications where theory or frameworks were seen as useful or a flexible tool, as shown in the following quotes:

***“Trisha Greenhalgh....came and gave a presentation on her frameworks. We do look at those frameworks and we get inspiration from them.”***

15-AS-003

***“So I actually find it a really useful common-sense framework...rather than reinvent the wheel.”*** 04-AS-001

***“It also, using a bit of a PDSA-type approach, allowing them to land whatever it is that they’re doing and adapt it to fit their specific circumstances, but still maintain the core elements of whatever it is we’re trying to do.”*** 09-AZ-007

Some frameworks were seen as directly informing work via education or training, as per the following quote:

***“I’m very struck by a lot of the work of....organisations like Billions Institute.”*** 07-AZ-003

Conversely, sometimes theory or frameworks were seen as a background presence rather than something directly relevant.

***“I would like to think they drew upon lots of national, global evidence and models of change and models of adoption, which I’m sure they did.”*** 11-ST-001

One outlier was an AHSN with an implicit orientation where a more unrestricted tailored approach was preferred to explicit frameworks:

***“I don’t think there’s one, common standard approach. I think it’s very ad-hoc and tailored specific to that programme. It completely depends on what that programme is, the scale of that programme and who it involves.”*** 10-AS-002

A general finding, however, was that AHSN staff drew on theory and frameworks in a relatively eclectic way, combining or blending them to meet the needs of their work.

***“I’d say it’s quite a pragmatic mix of change management project and programme management, rigour and Quality Improvement methodology, supported with a very strong thread right the way through it of coaching.”*** 09-AZ-007

***“We’ve got elements of academic stuff sprinkled throughout the different stages; the GRADE framework, for example, that we used for one of our business-case elements.”*** 02-AZ-006

## 6.3 Role of non-codified knowledge and experience

It was also clear from this research that reference to external sources of codified knowledge was generally balanced with a significant reliance on more tacit knowledge produced in a learning by doing, or trial and error way. The following quotes illustrate this point:

***“Then it was primarily myself and [name] who used our experience of doing actual project work. I don’t know what she would refer to, in terms of her experience, but yes, that sort of pragmatism that we had from years of doing work at lots of different levels.”*** 05-ST-001

***“We’ll have quite a bit of discussion about actually what’s worked...what kind of project is this, what kind of members are we engaging with, and tweak and tailor depending on our own experience of other projects.”*** 05-AZ-005

***“I would say there’s very much a kind of experienced-based approach. It’s probably quite prevalent within the AHSN.”*** 09-AZ-003

The importance which staff gave to previous experience as a guide to ‘what works’ made them receptive to learning from their peers both within and beyond their AHSN:

***“I think the current process of spread and adoption has been developed very much on a basis of best practice....I think a lot of that comes from experience of the project managers and the seniors that are responsible for it.”*** 04-AS-003

***“We’ve reviewed lessons learned, through to looking at how other Academic Health Science Networks and other organisations drive and deliver adoption and spread of innovation.”*** 04-AS-003

***“I know when I was finding out about [programme] and scoping it, I rang up the colleagues from [other AHSN] who’d done it. I was like, ‘What were the biggest challenges?’ They said, ‘the IT integration, make sure that you put this on the radar first.’ All those tips are really helpful.”*** 15-AS-003

The experience of peers in the AHSN Network or other parts of the NHS was seen as a more credible source of learning, though this could be complemented by the legitimacy which senior management gave to particular frameworks:

***“At the time we had a chief executive...who had spent most of his career looking at Quality Improvement. He works very closely with the IHI.”*** 08-AZ-004

***“Then we had our chief executive [join] and he’s got experience of industry, and he’s brought a lot of his learning.”*** 02-AS-002

As summarised in Figure 6.1, AHSN staff generally drew on, and were influenced by, a wide range of sources of knowledge. This was both codified and tacit, and sourced both from within the AHSNs, from the wider NHS, and from external sources.

**Figure 6.1: Theory and other knowledge sources in AHSN work**

<b>CODIFIED</b>	In-house high-level frameworks		Rogers Diffusion of Innovations model
			NASSS framework
<i>KNOWLEDGE</i>			
<b>TACIT</b>	Experience from other AHSNs	Experience from other parts of the NHS	Experience from other sectors
	Personal/team experience		
	<b>INTERNAL</b>		<b>EXTERNAL</b>
	<i>SOURCE</i>		



## 6.4 AHSN explicit frameworks and the link to theory

As seen in Table 4.1, 10 of the 15 AHSNs operated with what we describe as ‘explicit frameworks’. A number of these were also explicitly informed by codified knowledge from academic sources, including: the NASSS framework (Greenhalgh et al., 2017) (East Midlands, Oxford, South West, Wessex), Rogers model (Rogers, 2003) (Wessex), and Quality Improvement (Oxford, West of England) and Implementation Science methodologies (HIN). Even where these frameworks were informed by theory, however, they were not applied ‘off the shelf’ but tailored in some way to the AHSN’s own needs, sometimes by blending them with other sources of codified knowledge; for example, Oxford’s ‘10 Step Approach’ was derivative of both the NASSS framework and Quality Improvement methods.

This need for a home-cooked mixture of different ingredients in explicit frameworks seems to reflect, first, the relatively unique nature of the AHSNs’ intermediary role, and second the variety of ways in which explicit frameworks were being deployed. On the first point, as noted above the combination of processual, relational, and contextual features involved in AHSN work are difficult to represent in explicit frameworks. Even the high-level broad frameworks adopted by three of the AHSNs (see Table 4.4) tend to emphasize some aspects of the work over others. One example of this is the pipeline and portfolio model adopted by Health

Innovation Manchester, which reflects the ‘stage-gate model’ or ‘funnel’ approach used to manage the innovation process within companies (Cooper & Edgett, 2009). This framework highlights different stages of the innovation-diffusion process, from ideation to rollout, but does not include consideration of building and managing inter-organisational relationships, or the need to adapt to different contexts.

Since explicit frameworks cannot fully capture and codify the multi-faceted character of AHSN work, individuals need to apply them in a way which is dynamic, relational, and flexible. As this interviewee from an AHSN with an explicit approach to spread and adoption commented:

***“I think a main thing about how we do our adoption and spread work it’s like an art as well as a science. You can look at all the models and be cognisant of what they say, but the softer side of things is really important as well. You’ve got to be aware of the theory and be skilled at applying it, but equally not be completely wedded to it. You’ve got to use the approaches of framework but be flexible. I find it depends on the stakeholder, some people love process, and they like to see that you are uber-organised and you’ve got all your different steps laid out. Other people can’t cope with that, they don’t like a very project management office approach.” 01-AZ-007***

Second, as this quote underlines, the way in which frameworks are interpreted and used is at least as important as the frameworks themselves. The latter ranged, as discussed earlier, from higher level to more operational applications, as follows:

- High level, integrative overviews of AHSN activities
- Providing a template for education and training
- Diagnosing the context for spread
- Planning spread activities
- Project management frameworks for directing and monitoring project progress

These different uses help explain why some AHSNs blended or combined multiple frameworks – HIN, for example, complemented their Implementation Science influenced project management approach (IGNITION) with a higher level 5 point framework [System perspective; Embrace complexity; Behavioural science, not broadcast; Flexible approach; Collaboration]. Different frameworks could also be used for different internal or external audiences, with high level frameworks serving to make sense of, or coordinate, activities at AHSN level versus being used in the detailed management of projects.

## 6.5 Conclusions

There is no comprehensive theoretical framework that maps directly onto AHSN approaches. The lack of any obvious candidate for ‘one best way’ may help explain the more home-grown, hybrid and diversified frameworks seen in our study. While higher level, externally sourced theories are referenced by participants in our study, there is an understandable tendency to draw on theory which is closer to hand rather than more distant theory relating to other sectors. Frameworks such as NASSS and Quality Improvement methodologies are already popular within the NHS more generally, are seen as more actionable, and are reinforced by social ties with the originating academics or institutions. With few exceptions, notably the high-level ‘Pipeline and Portfolio’ model of Health Innovation Manchester, the frameworks cited have a health sector rather than commercial origin.

In terms of overt links to theory, the NASSS framework arguably offers the closest match to the scope of AHSN work, which may help explain its popularity in our study. However, even this framework is not comprehensive, but focuses on diagnosing the likely challenges facing new technology adoption and implementation within healthcare. This lack of an overarching theoretical framework helps to explain the different types or levels of frameworks referenced, with some referring to spread across sites, others focusing on implementation or more

operational issues around Quality Improvement. High level theories, such as Rogers Diffusion of Innovation theory, may offer the widest coverage of the innovation-diffusion process as a whole but they have only limited applicability to the complex healthcare environment (Greenhalgh et al., 2004), and therefore make poor guides for AHSNs seeking to manage specific projects within that overall process. On the other hand, normative frameworks may provide more specific guidance, but the more specific they are the more limited their scope. In consequence, explicit frameworks were sometimes blended or combined so as to link high level conceptions of the innovation journey, such as the pipeline model at Health Innovation Manchester, with more operational or project management methodologies derived from Quality Improvement or Implementation Science, such as the IHI Breakthrough series.

Discussion of the role of codified knowledge in AHSN work needs to be counterbalanced by recognition of the importance attached to learning by doing, and the tacit knowledge gained from experience. The importance of these other sources of knowledge is not surprising given the weakness of explicit frameworks as a guide to action in the complex and uncertain settings which the AHSNs have to navigate. Since the kind of intermediary work they do is at best only partially captured, even by high-level frameworks, many AHSN staff view their work more as a craft than a science; experience, intuition and learning from their peers being seen as more practical and ‘hands on’ than codified knowledge.

Overall, the findings suggest that AHSN work is highly knowledge-intensive, but that it depends on the learning and experience of individuals as much as on the codified, and explicit knowledge developed by the AHSNs themselves. This is not to say that these different forms of knowledge are simply substitutes for each other (Hansen, Nohria, & Tierney, 1999). Explicit, codified frameworks can complement the development of tacit knowledge and craft skills on the part of AHSN staff. This is evident, for

example, in the emphasis which South West AHSN gives to its 'Spread Academy' where staff are trained for their work with a hybrid template derived from the NASSS framework and the Billions Institute. As we found, codified forms of knowledge can support AHSN work in a number of different ways; not only directly as a tool to guide action on the ground, but also as a way of reflecting on and learning from experience, measuring progress on projects, and defining a common lexicon

to help individuals and groups coordinate their activities. To this extent, our study suggests that the lack of any explicit framework – as found in five of the AHSNs – is not necessarily a negative, except insofar as it may limit AHSNs' ability to learn from the experience of their staff, and to evolve their approaches over time in response.

***Overall, the findings suggest that AHSN work is highly knowledge-intensive, but that it depends on the learning and experience of individuals as much as on the codified, and explicit knowledge developed by the AHSNs themselves***

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# 7. Study Question 4

**Have national policy and frameworks influenced the approaches?**



## 7.1 Introduction

During the interviews, AHSN staff were asked to reflect on any national-level influences on spread and adoption at the programme/project level. It was hoped that national influences could be linked to specific spread and adoption approaches undertaken by AHSNs, however, this was not possible for several reasons: questions on this topic produced generalised responses on a broad range of national influences, many staff did not have the experience/background to contribute to this national-level question, and it was apparent the link between spread approaches and national guidance was not widely considered. Only one comparison was made, a simple comparison of national influences between AHSNs with 'explicit' and 'implicit' high-level approaches (as seen in section 4), however, that analysis revealed no differences. National influences appear to act upon all AHSNs/programmes/projects in a reasonably similar manner.

A broad range of national influences were reported (see Table 7.1), including national policy, national guidance, professional bodies, and commissioning frameworks. The findings below were considered highly useful for describing national influences and how they may impact on programmes and projects, particularly in relation to AHSNs' intermediary position between health and commercial settings.

AHSN staff reported national policy and guidance could be both a barrier and an enabler

to spread and adoption; largely related to whether it was absent or present, respectively. However, this binary position was not always clear as a lack of national guidance did not necessarily mean an innovation would not be adopted. Some cases reported it was better to have no guidance than negative guidance. This highlighted the influential nature of national guidance but also the willingness of rollout site staff to experiment with innovation if local needs were met by the innovation.

National guidance, in general, enabled spread and adoption by lowering the risk around an innovation for health system managers and helping stakeholders see the relevance and value of the innovation.

***“It allowed the middle manager to feel confident and there’s no risk to them personally for them making the decision or supporting it. You’re going to get a natural buy-in, because there’s less risk for them, I think that’s really important.”***  
11-ST-003

National guidance, in general, was a barrier to spread and adoption when a change in policy/guidance occurred, ambiguity existed about the guidance, and rollouts were required within short timeframes.

***“When national policy changes that can be huge. People can be working on something and then, if it’s no longer included***

***in the planning guidance or something, that can really undermine what you’re trying to do.”*** 03-AZ-005

***“I think national guidance helps rather than hinders, as long as the guidance is clear.”***  
07-AS-003

***“When we’re looking at the Innovation Exchange, the curation pile, and we were seeing AI products come through, we were trying to understand what needed CE marking and who was managing that? Was it NICE? Do we direct [innovators] to NICE, or not, and what was NHSX doing? If something was AI now, what did that mean? Trying to figure out where the CE marking fitted in and what we were advising to companies...we were starting to struggle a lot with on who best to send them to.”*** 09-AS-003

***“With the primary care work that I’ve been doing...[national body] suddenly went out to all practices in the country and said, ‘Right, as of [date] you’ve got to be doing [innovation]’. That drives practices into really peculiar behaviour because they panic, and we’ve seen practices buying things to meet this deadline knowing that once they’ve ticked that box they might not do much to embed the use of [innovation]...AHSNs have a role to play there to help practices once initiatives like***

***that come into play, which they always will.”*** 08-AS-001

AHSN staff indicated more could be done to provide clear guidance and develop national levers to support the use of innovation and its adoption.

***“You’ve got to get NHS England to nail their colours to the mast. You’ve got to get them to say something clear, to say, ‘Yes, we want AHSNs to do this and we believe this is the right thing to be doing.’ If not, people out in the system will just hide behind, ‘Well, NHS England haven’t said we should be doing this so why should we work with you?’ It’s incredibly difficult...but if they could say that I think it would make a massive difference in terms of the laggards and the people resistant to change.”***

13-AZ-001

***“I think feeding [innovation adoption] into some of the national programmes, such as Getting It Right First Time or Model Hospital [NHS Improvement], are a really good route. I think we should be using champions in things like NICE in their implementation teams and championing the use of [innovations]. I think developing a narrative at a national level around the use of innovation and adoption. I know the CQC are considering changing or reviewing their framework to have a greater focus on the use of innovation, and the need to see it exemplified within their inspection routine.”***

13-AZ-002

The most widely reported specific

national-level influences were the NHS Long Term Plan, Quality and Outcomes Framework (QOF), NICE guidance, commissioning contracts and professional bodies. These specific influences, and their alignment with the innovation and rollout context, could be both a barrier and an enabler to spread and adoption.

The NHS Long Term Plan was simultaneously highly motivating for stakeholders but also considered a hinderance when not backed up by financial support. The QOF was reported solely as an enabler to spread and adoption due to its financial incentives. NICE guidance was reported as a strong enabler but could also be a hinderance if guidance changed. Furthermore, local interpretation of NICE guidance was reported to maintain momentum of innovation adoption. This was often justified by a collective sense of what was appropriate locally. Innovations built into national and organisational level contracts were often easier to spread or adopt. In situations whereby contractual/payment arrangements changed, this could affect spread and adoption if benefits/cost savings were unable to be calculated. Professional bodies/Royal Colleges/National support forums largely enabled spread and adoption of innovations. Their support increased the credibility and awareness of innovations, and often led to endorsement which supported adoption. The only example of professional bodies hindering spread was if they disagreed with the evidence for an innovation.

Less frequently reported influences on spread and

adoption were Commissioning for Quality and Innovation (CQUIN), the Care Quality Commission, the World Health Organisation, and NHS Digital data sets. These were all enabling factors for spread and adoption. Finally, it was clear coordination of national levers improved the chances of spread and adoption, with the NEWS2 rollout as one of the best examples:

***“With the NEWS2 work, there was a more coordinated approach nationally, so what really helped was that the NHS England and NHS Improvement endorsed it, NICE endorsed NEWS2, the National Quality Board endorsed it, CQC endorsed it, and then there was a CQUIN which was developed to support the implementation along with the work that the Patient Safety Collaborative were doing, in terms of that very local work with individual organisations. That coordinated approach was really beneficial because there were different levers being enforced from within the system.”***

09-AZ-003

In summary, only a small proportion of staff interviewed were able to comment in detail on national influences. Given their capability to both enable and hinder spread and adoption, it would be prudent to support AHSN staff in this area.

National levers should be considered a long time before spread begins, ideally as one of the first activities during the ‘pre-spread’ stage described in Figure 4.1. Furthermore, due to their ability to halt a rollout, changes in national policy/frameworks/

guidance should be closely monitored throughout the spread journey. This would provide the opportunity to change direction/ stop the rollout if necessary and redeploy AHSN resources.

Frequently reported national influences were the NHS Long Term Plan, Quality and Outcomes Framework (QOF), NICE guidance, commissioning contracts and professional bodies. These five areas could be investigated for all innovation rollouts.

Ambiguity within national guidance can be highly disruptive for spread and adoption. It can create attitudinal positions amongst rollout site staff, e.g. that the innovation isn't worthwhile when it is, or the reverse.

Potentially, spread and adoption success may be at risk if there is no national drive in the area they wish to innovate. Understandably, it's impossible for national guidance to

precede all possible forms of innovation, however, to mitigate the requirement for some form of national endorsement it is suggested that a process be set up within the AHSN Network. Such a service could aim to generate the required backing at highest/most targeted levels possible. This could support innovators in developing their value propositions and serve as a crucial enabler during the spread and adoption process.

**Table 7.1: National-level influences on spread and adoption of innovation**

National-level influence	Examples
<b>NHS Long Term Plan</b>	<p><i>"With familial hypercholesterolaemia...at the moment [rollout sites] are going 'Who is going to pay for that?' And you just go, 'Well, it's in the NHS Long Term Plan and they go, 'Oh all right'...is a hugely powerful motivator for organisations. Rather just put the shutters up and say, 'Well, we're not doing that because nobody is paying for it'. If it's part of a national priority setting exercise then that's really, really helpful." 10-AZ-004</i></p> <p><i>"We appreciate the NHS Long Term Plan...but generally policies are not backed by money, so we don't really incorporate that into our decision making. We go with what our region wants, what they're financially able to afford, where the evidence is, rather than policy. It usually gets in the way because everyone turns up with a new innovation saying, 'Oh, we meet the Long Term Plan'; and then we're like, great, but it doesn't come with money or anything else so they're not helpful." 12-ST-001</i></p>
<b>Quality and Outcomes Framework</b>	<p><i>"For PINCER being able to engage practices by telling them 'If you implement PINCER you also have the opportunity of many QOF points.' So, these kinds of incentives are very helpful in that case." 11-ST-002</i></p>

National-level influence	Examples
<b>NICE guidance</b>	<p><i>“The NICE guidelines are a key thing for us, that gives the clinical impetus to why [innovation] should be done, gives the case, and draws on the literature.” 03-AZ-002</i></p> <p><i>“NICE guidelines are hugely helpful and I know a lot of countries are quite envious of NICE because it gives us that central agreed guideline which people don’t argue with because it’s recognised that it’s been through such a robust process.” 05-AZ-006</i></p> <p><i>“With familial hypercholesterolaemia...NICE guidance had a significant influence on one of the aspects that we were planning to roll out for that. We were going to do cascade testing but that’s now been stated by NICE as not recommended, so that’s clearly had an impact.” 07-AS-001</i></p> <p><i>“My Deteriorating Patient work...at the time they first set up the programme was just when the NICE guidance had come out...with its flow charts on how you should manage sepsis...it wasn’t practical and with a fair bit of shady evidence, some of it. It was a real galvaniser, certainly for all the acute sites to together come up with a pragmatic pathway they could all sign up to. The real benefit there was the peer support to say, ‘Okay, it’s not just you,’ saying actually, ‘We’re not going to follow NICE guidance to the letter, we’re going to do this.’ Trusts could all call on each other and say as a group, ‘We’re going this way and that’s okay.’ We’ve got good people with clinical knowledge and backgrounds, that are respected in their fields within our patch that are saying, ‘Actually, this is the right way to go to keep our patients and ourselves safe,’ so that was fantastic”. 01-AS-006</i></p>
<b>Contracts</b>	<p><i>“The national contract for CCGs, yes, for CCGs to ask trusts to sign. It gives us support, it gives us a driver, a lever to go out to those trusts who haven’t yet implemented [innovation].” 13-AZ-002</i></p> <p><i>“The fact that suddenly the payment system’s changed to block contracts, and that completely blew that innovation out of the water, really, because you couldn’t demonstrate any saving. If you suddenly have tariffs moved to block contracts, or vice versa, that can be difficult. Where the savings pop up can be difficult.” 04-AS-002</i></p> <p><i>“The commissioning intentions changed, block contracts were put in with secondary care and it null and voided [innovation] adoption within the rollout site. I think there was a bit of a failure there to understand the whole process.” 04-AS-003</i></p>

National-level influence	Examples
<b>Professional bodies</b>	<p><i>“The Royal Colleges were helpful...in the absence of NHS England saying anything supportive about [innovation]...professional bodies still hold a lot of sway.” 13-AZ-001</i></p> <p><i>“[Professional bodies] is quite helpful because it’s recognised and respected and it tells people, ‘This is recommended by your professional body.’ So working with some of those and being mindful of what their stance is on particular projects can be really helpful to move things forward. Equally, they can also be a barrier if they don’t like or disapprove what you’re doing.” 14-AZ-001</i></p> <p><i>“Who do clinicians and clinical teams trust...it may be professional bodies, it may be societies, societies that are recognised by professional bodies. Why didn’t NHSE or the national teams ever attempt to get some of the more high-profile national bodies and societies etc to engage with some of these national programmes? Even be part of the review panel, to see whether it’s worthwhile doing? The endorsement or non-endorsement of products that come through those routes have much more power for clinicians than whether NHSE like it or not.” 15-AZ-001</i></p>
<b>CQUINs</b>	<p><i>“CQUINs are really helpful because they’re another incentive.” 05-AZ-001</i></p>
<b>Care Quality Commission</b>	<p><i>“I find it very useful if you have something in one of the big policy documents, that helps us. I find that a very useful lever to be able to align it to some of the CQC frameworks, that’s a good driver. That helps get the senior sponsorship because it’s aligned. It’s the alignment with goals, values and visions, that strategic alignment. If you can align it with a national policy, then it helps teams to get the internal senior leadership.” 03-AZ-005</i></p>
<b>World Health Organisation</b>	<p><i>“I think there was definitely a national neonatal policy framework and objectives set by the World Health Organisation. It was to reduce infant mortality by 50% by 2025 or something along those lines...the World Health Organisation, one of their objectives also influenced the medicines optimisation work which was preventive...preventing harm through medicines across the globe and that objective has definitely shaped our medicines work, they have influenced us.” 14-ST-003</i></p>
<b>NHS Digital data sets</b>	<p><i>“I think one of the things I’ve found useful is making use of the publicly available data from NHS Digital...information on the numbers of procedures, the Hospital Episode Statistics, outpatient data, the tariff data. In particular cases where it has been a business case that’s needed to be made, we’ve utilised that data to be able to build quite a simple cost model.” 06-AZ-004</i></p>

**National guidance, in general, enabled spread and adoption by lowering the risk around an innovation for health system managers and helping stakeholders see the relevance and value of the innovation**

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# 8. Study Question 5

**TCAM national programme  
– What inferences can be  
drawn from a comparison  
of the different approaches  
and the spread metrics?**



## 8.1 Background

Transfers of Care Around Medicines (TCAM) is a national programme of the AHSN Network. Its purpose is to improve the sharing of information about patients' medicines after hospital discharge with community pharmacists. Community pharmacists can provide a follow-up consultation with the patient to support them in

taking their (potentially changed) medication and reduce the risk of readmission to hospital or emergency department attendance. TCAM is supporting acute trusts to electronically transfer information with the patient's consent to community pharmacists by means of the PharmOutcomes software. TCAM was originally developed in the

North East and further developed by the AHSNs in Wessex and West of England before it became a national programme to be rolled-out across all 15 AHSNs between 2018 and 2020.

## 8.2 National TCAM spread metrics

TCAM spread progress was monitored at the AHSN Network level. Each AHSN reported metrics on TCAM spread progress every three months. AHSNs reported the number of (completed) referrals of patient's medication information from trusts to community pharmacies and one of five levels of adoption for each acute trust in an AHSN's

area. The AHSNs were given a 50% adoption rate target for their acute trusts. At the end of the reporting period covered by this study (Q3 19/20, Oct-Dec 2019), 41% (n=7) of AHSNs had reached at least 50% adoption rate (Table 8.1). This was an increase of 16% (25% adoption rate, n=3) from the same period one year prior (Q3 18/19, Oct-Dec 2019).

The data for Q2 20/21 (Jul-Sep 2020) showed a further increase of 10% to 51% (n=10) of AHSNs supporting adoption of TCAM in more than 50% of their region.

**Table 8.1: Adoption rates of TCAM per AHSN at three time points between 2018 and 2020 and change between programme years**

AHSN	Adoption rate [%]			Change Q3 18/19 - Q3 19/20 [%]	Change Q3 19/20 - Q3 20/21 [%]
	Q3 18/19	Q3 19/20	Q2 20/21		
Oxford	0	20	20	20	0
Health Innovation Manchester	9	33	44	24	11
West Midlands	0	20	60	20	40
East Midlands	50	50	63	0	13
HIN	14	14	29	0	15
Yorkshire & Humber	21	57	57	36	0
KSS	10	30	50	20	20
South West	43	57	57	14	0
Innovation Agency	47	56	56	9	0
NENC	44	25	25	-19	0
Eastern	18	45	60	27	15
UCLP	7	33	29	26	-4
Wessex	50	63	63	13	0
West of England	83	50	100	-33	50
ICHP	17	50	67	33	17
<b>Total</b>	25	40	51	15	11

**Legend:**

no change
increase
increase > 25% points
decrease
unsuccessful < 50% adoption
successful >= 50% adoption

Q3 18/19 =  
Oct-Dec 2018

Q3 19/20 =  
Oct-Dec 2019

Q2 20/21 =  
Jul-Sep 2020

(latest available  
data 26/10/20)

(Source: AHSN Network: National Metrics Dashboard, TCAM Spread data; last accessed: 26/10/20)

## 8.3 TCAM spread activities and experiences

### Common barriers and enablers to TCAM spread

There were a few common underlying barriers and enablers to the spread of TCAM that were the same for each AHSN. TCAM was originally developed in the North East and further developed by the AHSNs in Wessex and West of England before it became a national programme to be rolled-out across all 15 AHSNs between 2018 and 2020. The main scientific evidence about

the effectiveness of TCAM was based on this early adoption case in the North East and published in BMJ Open. Interviewees generally assessed this evidence base as being an enabler of their spread efforts.

The national programme was accompanied by the appointment of a national leadership team hosted by Wessex AHSN whose role was to provide support to the

15 AHSNs to spread TCAM locally. The national leadership team have provided implementation guidance, evidence, and information on TCAM, training material, dissemination templates, and convened regular meetings of all AHSNs to facilitate shared learning. Despite the national mandate and implementation guidance, AHSNs reported that they did not

feel the national programme was overly prescriptive and AHSNs were quite flexible in choosing an appropriate spread approach and activities that worked in their region. Feedback gathered from the interviews indicated the national leadership was seen as supportive and helpful to the local spread work.

As part of the national programme, every AHSN was given a budget to support the spread of TCAM locally which AHSNs mainly used to pay at least one staff member to lead on the spread of TCAM, to pump-prime the license fee for the software for one year for every acute trust who adopted TCAM, and to cover project management related costs such as catering during events or printing information material.

The PharmOutcomes software could be implemented in three different ways: fully

or partially integrated into existing administrative IT systems or used as web-based solution. Many community pharmacists were already using this software, so the software implementation focus during the national programme was on the implementation of the software in acute trusts. AHSN interviewees reported the web-based version seem to be easier and quicker to implement as no integration with the existing IT system was necessary, was seen as user friendly, but increased the time needed to use the software compared to the integrated version. The PharmOutcomes software offers an automatic extraction of utilisation data that helped AHSNs and system adopters in the real-time evaluation of the TCAM spread progress.

The supplier of the software was involved in the local

spread work of TCAM mainly by providing introductory presentations, evidence and data, and personalised support to adopters installing and using the software. AHSNs reported positive experiences working with the supplier; they were seen as flexible, approachable, and supportive.

Since early/mid 2020, TCAM became part of the Community Pharmacy Contractual Framework and the National Standard Contract which provides an incentive to further adoption and continued use of TCAM. Although the interviewees welcomed this contractual arrangement as an important enabler to spreading TCAM, they stated that it would have helped them spread TCAM more successfully if it had arrived earlier during the national programme period.

## TCAM spread experiences by AHSN

Table 8.2 provides a summary of the key TCAM spread experiences for each AHSN highlighting specific activities and contextual barriers and enablers, and any key lessons. There are a few core TCAM spread activities that were applied by all AHSNs which are not listed in the table, such as the adaptation of the national programme to meet local system needs, seeking senior-level

support, identifying champions, setting up local demonstrator or pilot sites, running training courses and events, monitoring spread progress, using and adapting national guidance and materials, or shared learning across AHSNs as part of national programme meetings. These commonalities will be covered in the cross-AHSN analysis in the next section. The summaries in

Table 8.2 aim to illustrate the variation in activities chosen by AHSNs and any individual variation in the delivery of these activities, e.g. different ways of delivering training, or disseminating information or different ways how AHSNs build relationships with their local system stakeholders.

**Table 8.2: Summary of key TCAM spread activities, barriers and enablers, and lessons learned by AHSN**

AHSN ID	TCAM spread success*	Key barriers & enablers	Key/focus spread activities	Key lessons
01	No	<ul style="list-style-type: none"> <li>• Delayed start (late appointment AHSN staff)</li> <li>• Low adoption (negative past experiences of trusts adopting TCAM, trust's IT restructure, limited capacity stakeholders)</li> <li>• Lack of financial security long-term (late contractual arrangements)</li> <li>• Limited national level and supplier support due to delayed start</li> </ul>	<ul style="list-style-type: none"> <li>• Application of AHSN's high-level framework (adjusted to start at later stage in framework)</li> <li>• Setup of senior project group setup and steering groups for each site</li> <li>• Intersectoral engagement (pharmacists, senior trust management, trust's IT and IG departments, commissioners, local pharmaceutical committees)</li> <li>• Newsletters for community pharmacists</li> </ul>	<ul style="list-style-type: none"> <li>• More senior-level support (e.g., to engage IT departments)</li> <li>• Provision of local evidence on benefits for trusts and limited extra staff workload using TCAM important</li> </ul>
02	No	<ul style="list-style-type: none"> <li>• Delayed start (capacity AHSN)</li> <li>• Low adoption (trust IT department capacity)</li> </ul>	<ul style="list-style-type: none"> <li>• Application of AHSN's high-level framework (adjusted to start at later stage in framework)</li> <li>• Employment of local chief pharmacist at AHSN</li> <li>• Senior whole-system governance process</li> <li>• Use of local networks (chief trust pharmacists and CCG pharmacists)</li> <li>• Scale-out to include more conditions</li> <li>• Developed training/guidance videos for stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Earlier employment of pharmacist at AHSN</li> <li>• Whole system senior-level support very helpful</li> <li>• Obtaining additional local financial support helpful</li> </ul>
03	No	<ul style="list-style-type: none"> <li>• Delayed start (lack of pharmacist expertise at AHSN)</li> <li>• Low adoption (trusts' IT readiness)</li> <li>• Previous local adoption of TCAM increased readiness for adoption during national programme</li> <li>• Long time to process IG sign-off at trusts</li> </ul>	<ul style="list-style-type: none"> <li>• Employment of local chief pharmacist at AHSN</li> <li>• Shared learning with other AHSNs and adaptation of other AHSNs' materials</li> <li>• Implement at system level (STP)</li> <li>• Use of local networks (system-wide pharmacy and medicines optimisation group, trust committees)</li> <li>• Involvement of GPs (via Local Medical Committee)</li> <li>• Adaptation to implement in community and mental health trusts instead of acute trusts and focus on different patient cohorts</li> <li>• Launch first with LPC, then trusts</li> </ul>	<ul style="list-style-type: none"> <li>• Earlier employment of pharmacist at AHSN</li> <li>• IG sign-off might have been easier with national endorsement (NHS Digital) and national IG toolkit</li> <li>• Project management training for clinicians at AHSNs would have been helpful</li> </ul>

AHSN ID	TCAM spread success*	Key barriers & enablers	Key/focus spread activities	Key lessons
04	Yes	<ul style="list-style-type: none"> <li>• Non-adoption by trusts (capacity, IT readiness)</li> </ul>	<ul style="list-style-type: none"> <li>• Employment of local deputy chief pharmacist at AHSN</li> <li>• Use of local networks (STP groups)</li> <li>• Engage chief operating officers in trusts to increase IT Department engagement</li> <li>• Organising events in evening hours around locally relevant topics, not only TCAM</li> <li>• Pump-primed trusts to pay for implementation and licenses instead of paying for licenses directly</li> </ul>	<ul style="list-style-type: none"> <li>• Focus more on planning for sustainability, not just initial adoption (also at national level)</li> <li>• Shared learning across local system helpful (especially with local adopter/demonstrator)</li> </ul>
05	No	<ul style="list-style-type: none"> <li>• Low adoption (trust's capacity)</li> </ul>	<ul style="list-style-type: none"> <li>• AHSN key methodology of 'community of practice' not applied to TCAM spread</li> <li>• Focus on behavioural change activities and keeping up motivation and enthusiasm of stakeholders</li> <li>• Focus on establishing multi-stakeholder/intersectoral discussions</li> <li>• Celebrating successes with stakeholders (milestones)</li> <li>• Focus on storytelling approaches</li> </ul>	<ul style="list-style-type: none"> <li>• Spread skills and knowledge at AHSN helpful</li> <li>• More collaboration with CCGs</li> <li>• Stepped and locally adjusted national targets (lower targets at beginning increase motivation, take into account different local priorities and readiness)</li> <li>• Add process metrics (e.g., relationship building)</li> <li>• Increase national programme time (&gt; 2 years, initial relationship building takes a long time)</li> </ul>
06	Yes	<ul style="list-style-type: none"> <li>• Previous local adoption of TCAM</li> <li>• Local stakeholders 'liked' TCAM</li> <li>• Non-adoption by trusts (capacity, IG process)</li> </ul>	<ul style="list-style-type: none"> <li>• System-level/wide implementation (ICS)</li> <li>• Co-creation with local stakeholders (let ICS set target, trust/LPC set patient cohort and develop local forms)</li> <li>• Setup of TCAM intersectoral community of practice (each trust, LPC, PCN, CCG)</li> <li>• Developed IG FAQ</li> <li>• Use local networks</li> <li>• Include patient's voice, focus on storytelling</li> <li>• Stepped approach (formulated lower local targets at beginning, increased later)</li> <li>• Developed online training</li> <li>• Celebrate and communicate successes (newsletter, poster development)</li> <li>• Development sustainability plan</li> <li>• Development/write-up of case studies on different patient cohorts</li> <li>• Development of evaluation toolkit</li> </ul>	<ul style="list-style-type: none"> <li>• Do not use benchmarking (blame and shame) but work with laggards and create enthusiasm based on variation in output</li> <li>• Involving all stakeholders from start proved useful</li> </ul>

AHSN ID	TCAM spread success*	Key barriers & enablers	Key/focus spread activities	Key lessons
07	No	<ul style="list-style-type: none"> <li>• Low adoption (capacity and mindset stakeholders)</li> <li>• Local stakeholders 'liked' TCAM</li> <li>• Lack of financial security long-term (late contractual arrangements)</li> <li>• Limited resources at AHSN (generally)</li> </ul>	<ul style="list-style-type: none"> <li>• System-level approach (STP)</li> <li>• intersectoral stakeholder involvement and shared partnership working</li> <li>• Use of local networks (medicine optimisation programme boards) and invite other local stakeholders (e.g., trusts) to join board meetings</li> <li>• Training and events for community pharmacy</li> <li>• Build on existing trusted relationships</li> <li>• Keeping on agenda (regular check-in)</li> <li>• Project teams and TCAM leads in each trust, and inviting community pharmacy to join team</li> <li>• Regular meetings with CCGs, GPs</li> <li>• Created dashboard with referral information and regular sharing with all local stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• More local leadership/champions</li> <li>• Learning from other AHSNs (early adopters) helpful</li> <li>• Engage with community pharmacy early</li> <li>• Initial engagement and relationship-building takes time</li> </ul>
08	Yes	<ul style="list-style-type: none"> <li>• Previous local adoption of TCAM</li> <li>• Non-adoption by trusts (IT restructure, trust champion left)</li> </ul>	<ul style="list-style-type: none"> <li>• Employed part-time local pharmacist by AHSN</li> <li>• Engaged with CCG Medicines Optimisation teams</li> <li>• Use of local networks (e.g., local pharmacy networks)</li> <li>• Published evaluation of early adopter case</li> <li>• Use patient voice/analogies, storytelling</li> <li>• Communicate successes</li> </ul>	<ul style="list-style-type: none"> <li>• More intersectoral/system-wide engagement and shared learning activities (e.g., action learning set/ community of practice)</li> <li>• Increase national programme time (&gt; 2 years to ensure supporting sustainability)</li> <li>• Scale within stakeholder organisation (involve more than 1-2 champions/responsible people, involve teams)</li> <li>• Apply process metrics (include process milestones)</li> </ul>
09	Yes	<ul style="list-style-type: none"> <li>• Previous local adoption of TCAM</li> <li>• Non-adoption by trusts (capacity, IT readiness, IG process)</li> <li>• Staff turnover at AHSN</li> <li>• Stakeholders 'liked' TCAM</li> </ul>	<ul style="list-style-type: none"> <li>• Employed local pharmacist by AHSN</li> <li>• QI/coaching/support methodologies</li> <li>• Use of networks</li> <li>• Use of patient voice</li> <li>• Senior-level support (engage regional IT CIOs to engage IT department)</li> </ul>	<ul style="list-style-type: none"> <li>• More clinical champions in each trust</li> <li>• More senior-level support</li> <li>• Patient safety/patient voice important driver</li> <li>• Start with system/stakeholder map</li> </ul>

AHSN ID	TCAM spread success*	Key barriers & enablers	Key/focus spread activities	Key lessons
10	No	<ul style="list-style-type: none"> <li>• Previous local adoption of TCAM (created competitiveness/lack of ownership in local system)</li> <li>• Low adoption (misconception barriers and teething problems that have been overcome by now, lack of trust in evidence)</li> </ul>	<ul style="list-style-type: none"> <li>• Project manager at AHSN with experience working in pharma-context (but no pharmacist)</li> </ul>	<ul style="list-style-type: none"> <li>• More senior-level support</li> <li>• More champions in each trust</li> </ul>
10	No	<ul style="list-style-type: none"> <li>• Previous local adoption of TCAM (created competitiveness/lack of ownership in local system)</li> <li>• Low adoption (misconception barriers and teething problems that have been overcome by now, lack of trust in evidence)</li> </ul>	<ul style="list-style-type: none"> <li>• Project manager at AHSN with experience working in pharma-context (but no pharmacist)</li> </ul>	<ul style="list-style-type: none"> <li>• More senior-level support</li> <li>• More champions in each trust</li> </ul>
11	No	<ul style="list-style-type: none"> <li>• Low adoption (trust IT readiness, capacity, accountability worries of community pharmacists)</li> </ul>	<ul style="list-style-type: none"> <li>• Trust-by-trust engagement and network engagement with LPCs</li> <li>• Intersectoral meetings (LPC, trust, supplier),</li> <li>• Co-production (definition of patient cohort and condition focus)</li> <li>• Community pharmacy engagement event in evening (AHSN pays event costs)</li> <li>• Training through pharmacists at hospital (train the trainer through AHSN)</li> <li>• Development of material, training videos</li> <li>• Poster creation for wards with option to update day-by-day progress</li> <li>• Regular lessons learned workshops</li> <li>• Support for stakeholders to bid for additional funding</li> </ul>	<ul style="list-style-type: none"> <li>• Stepped approach (start with small cohort/department, then scale later)</li> <li>• Setup of steering group inviting every LPC, trust, supplier, patient representatives, and CCG planned</li> </ul>

AHSN ID	TCAM spread success*	Key barriers & enablers	Key/focus spread activities	Key lessons
12	No	<ul style="list-style-type: none"> <li>• Delayed start (stakeholders questioning evidence, negative past experiences with other adoption projects)</li> <li>• Low adoption (capacity stakeholders, especially IT Department, financial commitment trusts, financial uncertainty community pharmacy)</li> </ul>	<ul style="list-style-type: none"> <li>• Employed pharmacist at AHSN</li> <li>• Generated literature review to add to evidence base</li> </ul>	<ul style="list-style-type: none"> <li>• More financial incentives to run demonstrators</li> <li>• Initial engagement takes time</li> </ul>
13	Yes	<ul style="list-style-type: none"> <li>• Software known to/ used by stakeholders</li> <li>• Non-adoption (capacity stakeholders)</li> </ul>	<ul style="list-style-type: none"> <li>• Employed pharmacist at AHSN</li> <li>• Intersectoral, senior advisory group (pharmacists, GPs, patients)</li> <li>• Use of networks</li> <li>• Patient voice focus</li> </ul>	<ul style="list-style-type: none"> <li>• PPI/patient voice impactful</li> <li>• Engagement with CCGs important</li> <li>• Baseline/initial engagement takes time</li> </ul>
14	Yes	<ul style="list-style-type: none"> <li>• Previous local adoption of TCAM</li> <li>• Evidence challenged</li> <li>• Staff turnover at AHSN</li> <li>• Trust IT restructure</li> </ul>	<ul style="list-style-type: none"> <li>• Intersectoral steering group (trusts, CCGs, LPCs, other community services)</li> <li>• Patient voice/narrative</li> <li>• Test runs referring patients to community pharmacy</li> </ul>	<ul style="list-style-type: none"> <li>• Scale-out to mental health trusts, care homes and other patient cohorts planned</li> <li>• Incorporating patient voice impactful</li> <li>• Continuous evaluation essential</li> <li>• Involving all stakeholders from the beginning crucial</li> </ul>
15	Yes	<ul style="list-style-type: none"> <li>• Stakeholders had no prior knowledge of software</li> <li>• Referrals limited to own AHSN service area</li> </ul>	<ul style="list-style-type: none"> <li>• Employed pharmacist at AHSN</li> <li>• Use local network (medicine optimisation/pharmacy network)</li> <li>• MoU with stakeholders (sustainability)</li> <li>• Community of practice approach</li> <li>• Patient voice/narrative</li> <li>• Online training</li> <li>• (Co-)production of communication packs</li> <li>• Setup of pan-regional AHSNs group for shared learning and cooperation</li> </ul>	<ul style="list-style-type: none"> <li>• More sharing of local evaluation data with stakeholders</li> <li>• Less hands-on facilitation</li> <li>• More patient and public involvement</li> <li>• More involvement CCGs</li> <li>• More use of stakeholders with research background in local evaluation</li> <li>• Initial engagement takes time</li> </ul>

\* TCAM spread success: &gt;= 50% adoption rate in Q3 19/20 as reported in the national metrics dashboard

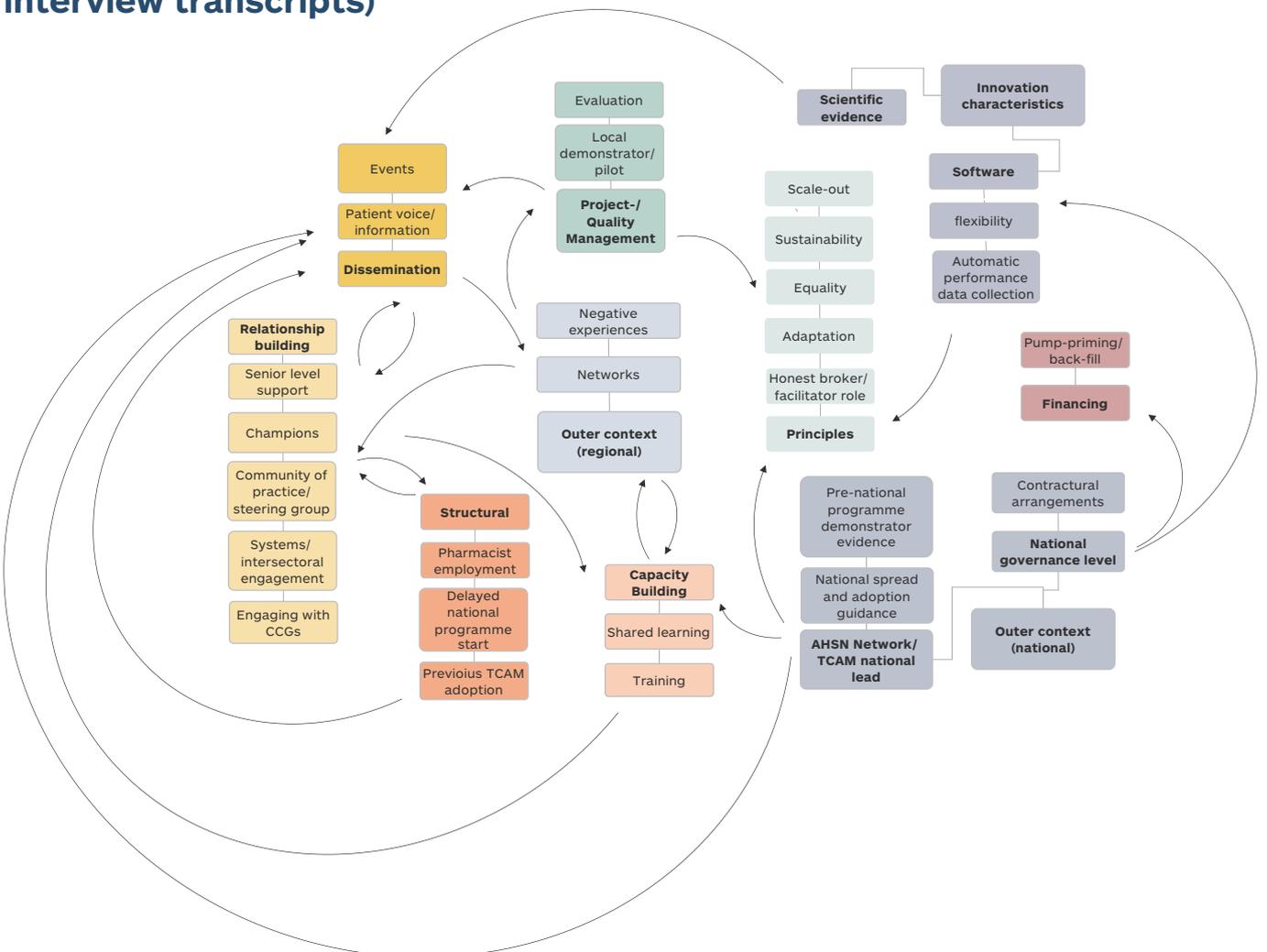
## Cross-AHSN TCAM spread experience

Key principles and activities that were particularly relevant in the spread work for TCAM are described in the following sections. It is important to note these activities do not stand alone but are interrelated, have multiple purposes and effects, and interact with contextual barriers and enablers – including the national level as TCAM was a national programme. Figure 8.1 illustrates these interactions between the identified key spread principles and activities and key contextual factors for TCAM spread. It illustrates the

key focus of any AHSN spread activity was building relationships and how this cluster of activities was connected to regional systems and other spread activities such as dissemination and capacity building activities. Another cluster of connections was identified around the outer context/at the national level and especially the AHSN Network/national programme leadership team. The AHSN Network level was connected to the cluster of AHSN spread principles in terms of how the national programme was adapted to best serve the

local system. There were links to specific spread activities such as capacity building and dissemination activities reflecting the support the AHSN Network or the national programme leadership team provided in the form of training and information material, data, or evidence. There was an absence of connections between some factors, e.g. there was no connection between the national AHSN Network level and the core AHSN spread activity of building relationships – this activity was solely in the control and mandate of the local AHSNs.

**Figure 8.1: Interrelationships of key principles, barriers and enablers and activities of spreading TCAM (based on qualitative thematic analysis of interview transcripts)**



## High-Level TCAM spread and adoption principles

Similar themes could be identified for TCAM compared to the thematic analysis across all spread and adoption activity. While the TCAM national programme comes with guidance and support for how AHSNs can spread the programme, AHSNs reported they applied their explicit high-level spread and adoption approach and some reported that they adapted the national information or tools to the local context. The flexibility of the three TCAM IT integration solutions helped find a locally suitable way of implementation.

***“We’ve tried to find a balance between following the national spread and adoption approach and then tailoring that to local needs, local context, how that fits with the local stakeholders and their drivers and their contexts, and looking at the local delivery models and working with those or adapting those. So the common aim is the same, the common goal is the same, and some of the approaches around spread and adoption are going to be the same...There will be some common themes that come out of that and then some more local nuances or changes to flex it to make it work on a local level.”*** 07-AZ-015

***“I also reviewed some of the national documents, which had been made available by [the national lead AHSN]...I use the key principles to develop my own set of tools and resources to help me deliver the projects***

***into the way I like to work as an individual. Obviously I’m including some of those... I guess key tasks that might not have been delivered before, but I was confident would work because of my experiences of working in the NHS.”*** 06-AZ-008

Also, spread and adoption principles seen in the overall thematic analysis were present in the TCAM context. Despite needing to reach a national target for TCAM adoption, the AHSNs still saw themselves in the facilitator and support and honest broker role and not as an enhanced sales force.

***“The interesting thing about the role of the AHSN is we are not the delivery arm...We don’t do any of the work ourselves, we may fund them, we may pump prime them to do the work, but when it comes to actual clinicians improving outcomes for patients, we don’t do any of the doing, we just try to persuade them to join projects which would hopefully improve patient safety or outcomes... Another enabler has been that we have been the conduit of communication between the [innovation’s IT] system and the developers and the major key stakeholders, so the acute trusts and the LPCs.”*** 14-ST-002

Related to the national target, one theme was more prominent for TCAM. The national adoption rate target of 50% of acute trusts in an AHSN service area was viewed as a tension. Some interviewees found this difficult

to arrange with their principle of equally serving their local area.

***“Well, I think setting 50 per cent is fair enough. I’ve got 50 per cent in my area...For me, yes, there is that tick box of the national target but actually, if locally I feel 80 per cent of my trusts would benefit and they’re in the right position, then that’s what we’ll support. The other thing I did very clearly with my offer, which I think’s very important, is we’re fair and equitable to everybody across our system, so even though the national ask was only acute trusts, because that’s where the evidence was, my local offer for financial support was for all trusts, including mental health trusts. What I didn’t want to be seen is that we’re preferentially pump-priming and supporting one area over another.”*** 04-AZ-004

Activities to achieve sustainability featured as a major theme for TCAM, as it did in the broader thematic analysis in section 4. AHSNs reported different activities to achieve sustainability for TCAM adoption, for example, creating ownership on the side of the adopting stakeholder organisations. This was linked to a balance of involvement of AHSNs in project management and financing adoption. Sustainability was also dependent on having national contractual arrangements in place to incentivise TCAM use.

***“The challenge we’ve got***

***now is, if we step away from some of these projects, they fall over instantly, and I've seen that. I have six-weekly calls on TCAM, still, and we've been doing it for two years...I think understanding where the AHSNs come in and leave is really important...People talk about our role is to lead the innovation, and then hand it over, but in the current way the NHS is set up, who do you hand it over to? The regional offices don't do work like this. The STPs should, but it's really variable...Things only stay stood up because somebody drives them to, or there are the contractual obligations to make them happen. It's not a failure of the project if it doesn't stand on its own two feet after two years, but that's how it's viewed a lot. I'll hand it over, and if it doesn't stay on its own two feet, then it wasn't a very good project...AHSNs may have to play a little role, very light touch keeping things going over time, with projects, until they are in a contract, or they are more robustly supported."*** 13-AZ-001

An interesting feature of TCAM spread and adoption work was some AHSNs expanded (scaled-out) the use of TCAM beyond what was suggested in the national programme to cover additional patient cohorts or services, e.g. mental health trusts, care homes and prison services. This linked also to the equality value mentioned above.

***"We have been approached at various levels...to implement in other settings...They've approached the AHSNs last year, to try and set up TCAM for the prison service. I think it's being piloted in one prison... There's also a number of mental health and community trusts that have implemented or are implementing TCAM...Also, we're now talking about implementing TCAM to – or extending the currently implementation to include care home pharmacists."***

13-AZ-002



## TCAM spread and adoption activities

Being a pharmaceutical programme, some AHSNs reported that including appropriate pharmaceutical expertise in their spread work offered a fundamental added value. Pharmaceutical expertise helped support the intricacies of the TCAM programme, helped speak the same language as key adopters in the system, helped to answer questions and were respected and accepted as peers by key adopters. Often, pharmaceutical experts would be embedded in the local system and have established trusting relationships with other pharmacists and pharmaceutical networks in the local system. AHSNs followed different activities to ensure the inclusion of pharmaceutical expertise, for example, an AHSN project manager with a pharmacy background, a pharmacist employed part-time by the AHSN to work with a project manager, and a senior pharmacist working in the local system supported the AHSNs spread efforts as a champion.

***“I think they’d had their commission for about six months and became aware that they couldn’t just run this with the project manager. They needed to have the pharmacy teams. That’s why I was called in. So, it was very much left up to me to then build those relationships through... the medicines optimisation pharmacy network...”***

***Approaches being taken and that often varied between whether you were a pharmacist or non-pharmacist. As a project manager you were looking at it more with a helicopter view or some of the non-pharmacists had other backgrounds they could draw upon...[a] more person-centred approach to the project.”*** 15-AZ-002

AHSNs reported that being embedded into existing local pharmaceutical networks supported the spread of TCAM. The advantages being to approach key system stakeholders together and at the same time instead of individually, obtaining buy-in across the system, gaining general (senior-level) support for the programme rollout which can support rollout at operational level in each of the adopting organisations, and networks were also a good place to recruit local system champions and local demonstrator sites. One AHSN set up a new local network initiated by the TCAM spread work. During the TCAM programme period, AHSNs used regular network meetings to report on evaluation results and recruit further adoption sites.

***“We’ve done some network riding or network surfing, so we’re trying to use existing networks and meetings and convenings of people to try and convince people to take on the TCAM service. We’ve also used that network surfing technique***

***to also try and keep our ear to the ground to work out what priorities people are working on locally that we can try and align the TCAM service with...There’s also a whole [regional] local pharmacy network meeting that gets together monthly and again, we use that as sounding board for the work and get their advice and hopefully plug into any contacts there to try and support the work that we’re doing with TCAM.”*** 08-AZ-003

AHSNs following a systems approach was reported as an advantageous activity to spreading TCAM. Next to being embedded in networks and being able to approach the key stakeholders in a system all at once, AHSNs would follow a systems approach by convening intersectoral stakeholder groups to implement TCAM involving all stakeholders, from the start, who would be involved in TCAM spread. This could cover different departments in acute trusts, community pharmacists, primary care representatives, and commissioners, and some AHSNs also involved local universities, patient representatives and the supplier. These ‘communities of practice’ would be involved throughout the whole process of spreading TCAM and some AHSNs report how these forums helped with the transition to sustainability.

***“The key stages with my implementation have been getting the right people involved at the start of the project...I've established a TCAM community of practice... and it's got a representative from each of the hospitals, whether you have gone live with TCAM or not. Also, representatives from clinical commissioning groups, primary care networks and also the local pharmaceutical committees... It's actually allowed us to do is to have quite...confident and strong conversations about how can we make TCAM sustainable minus the AHSN involvement... Also, where they've been helpful is, we've got some really strong links locally around evaluation... We invited [a local university] to our TCAM Community of Practice to discuss evaluation.”***  
06-AZ-008

Evidence was important for TCAM spread work. There was a strong scientific evidence base for TCAM that supported the adoption decision of system stakeholders. In addition, real-world and local evidence from pilots or demonstrator cases either from an AHSN's local area or from sites in other AHSNs was considered valuable for convincing stakeholders to adopt TCAM. This was closely linked to the importance of evaluating the spread and adoption processes to provide real-world/local evidence. In comparison to other innovations or national programmes, data for the evaluation of TCAM spread and adoption was mostly captured

automatically as part of the clinical care delivery process using TCAM software, so no extra work for clinicians was required which has been shown to be a barrier to conducting evaluations on other programmes.

***“We like to present facts if you like from published evidence. Obviously TCAM, you've got the BMJ paper and we've also, I suppose we've got the advantage of TCAM, because obviously...we've got examples of AHSNs which have already had some success. So we can refer to that, which we think helps build credibility with the stakeholders.”*** 01-AZ-008

***“Yes, I think one of the key things we did was, we set up a demonstrator hospital, so we had one hospital that was slightly ahead of the curve, that had been doing it for a longer period of time. Because I want to be fair and equitable to them...I gave them the equivalent money of integrating to become my demonstrator site. Anyone could go and visit, they could ring and speak to the technician that was leading it and implementing it...They went out and visited our community pharmacies, and the key areas that were doing that.”***  
04-AZ-004

Dissemination activities were important and closely linked to the provision of evidence to the local stakeholders; to monitor progress of TCAM

spread, to convince other local stakeholders to adopt TCAM, and to support the adoption process at stakeholder organisations. Of particular importance in TCAM dissemination was the patient voice and provision of information to patients to support the adoption of TCAM. Some interviewees reported they wished to increase patient involvement in future spread work.

***“We used that as a local case study really and a local story to try and convince others to come on board...We've done a lot of storytelling where we can, even if it's quite anecdotal stories of how clinicians are benefitting, individual pharmacies are benefitting from the TCAM service, as well as showing people evidence and data to try and convince people...We've used lots of patients' analogies ...I have to say with TCAM, we didn't do that as much as I would like to. I think what we tried to do there was use some patient stories or analogies with our new sites especially to try and convince them, but we haven't necessarily brought patient representation or engagement into any of those conversations directly.”***  
08-AZ-003

Dissemination activities were closely linked to providing training for stakeholders and often those two activities were combined. AHSNs developed face-to-face and online training events and materials and used

these sessions to communicate progress, develop buy-in and build relationships with stakeholders, and support recruitment of new adopters. Participants were often recruited through established networks.

***“Once that's all decided and we've had enough conversations, everybody feels brought in, there's a community pharmacy engagement event normally held in the evening, so we would facilitate all of that along with the LPCs, the AHSN pays for that as well, pays for the venue and catering. So it's normally a two-hour event where all of the local community pharmacies in the area are invited and then there's a presentation from the trust in terms of what they're doing, the LPC, in terms of why this is really important, what needs to be done from the supplier. So they'll give a demo so that the community pharmacies know exactly what to expect and then the AHSN gives a presentation on what this looks like across the...region, the results we've got so far, why this is important basically and putting it in the context of it being a national programme that the AHSN is supporting. Once the community pharmacy event has happened then the trust goes live soon after that and then we try and offer ongoing support.”***  
11-AZ-001

There was a clear benefit reported by AHSNs from sharing learning across the AHSN Network, and a clear wish to increase the exchange of

experiences among AHSNs in the future. The main advantage was avoiding duplication of efforts by learning from other's solutions to similar challenges in spreading the national programme. Activities, sharing events, and guidance provided by the national TCAM leads were generally appreciated. Many interviewees sought or established shared learning networks with a smaller number of AHSNs (often in neighbouring regions).

***“We had sharing days across the 15 AHSNs...It was a process of us learning and understanding what had gone on before and trying to work through...what do we need to take forward, and how well did some of those processes work to help with implementation?...The national team have been very helpful... What they do is, they provide a really good overview of what's happening nationally with TCAM, what they might have heard as a new policy driver... What that's helping me to do is interpret that, communicate that locally to my colleagues...It has also enabled me to have the opportunity to link in with other AHSN colleagues...So we've had a couple of...exchanges to share challenges with TCAM, how we've approached those challenges and any solutions.”***  
06-AZ-008

AHSNs described financial strategies as advantageous and disadvantageous at the same time. Financial strategies for TCAM largely involved pump-priming the licence fees for acute

trusts to use the TCAM software or offering back-fill payments. AHSNs reported the need for balance between supporting the initial adoption and not jeopardising sustainability of TCAM with delayed/missed negotiation of financial arrangements involving local commissioners.

***“I think ongoing funding is a barrier, but at the moment, given the way that [the supplier] sell their licences, it can be an enabler. We're funding it would be a first year for some of... our key trusts where there's transfers. It does give us the opportunity to do it as a pilot, and there's no obligation for the acute trust to carry on if they don't feel it's providing impact.”***  
14-AZ-003

***“TCAM's a good example where actually, it's relatively self-sustaining, so for me in our area, I pump-primed the hospitals to pay for the implementation and the licenses, which meant that their chief pharmacist had it in their in-year budget, a sum of money to allow to pay for it... So, pump-priming it allowed that licence fee monies to be in those chief pharmacists' budgets long-term...I didn't want to pay the TCAM licence myself, because I didn't want that from a sustainability perspective, and also from a competitive contractual perspective. So, I pump-primed the trust to own and have that.”*** 04-AZ-004

There was a clear link between financial strategies and national level support, in the form of incorporating TCAM into national contractual arrangements. AHSNs reported this toward the end of the programme and that it enabled financial stability and sustainability of TCAM. AHSN staff reported an earlier implementation of nationally binding contractual arrangements would have been a significant incentive to support their TCAM spread work.

***“Because those incentives and levers were not in place, we wasted an awful lot of time, and are still wasting an awful lot of time, just convincing people that this is a good idea, in terms of medicines. Basically, nobody would argue that sending information from hospital to the community pharmacy can only help keep our patients safer but it’s not a must do. There’s not enough slack in the system for an awful lot of our partners to give headspace to the ‘not***

***a must do.’...I think the main barriers are the lack of national incentives in contractual levers.”***

05-AZ-002

## 8.4 Pathways to success – Qualitative Comparative Analysis

Based on the results of the qualitative thematic analysis, a list of key themes linked to spread activities to analyse in the QCA were identified:

- A delayed start of TCAM spread work (variable name: NONDELAY)
- Adoption of TCAM before the start of the national programme (ADOPT)
- Attempted spread work with system stakeholders who have had negative experiences with spreading TCAM (EXP)
- Established pilots, local demonstrator sites, or early adopter case studies (PILOT)
- Employing a (senior) pharmacist at the AHSN (PHARMA)
- Engagement of local champions (CHAMP)
- Securing senior-level support/buy-in (SENIOR)
- Involvement of CCGs (CCG)
- Involvement of system stakeholders from across different sectors, e.g., acute trusts (pharmacists, IT, IG), community pharmacy, clinical commissioning groups (INTERSECT)
- Spreading through existing local networks (NETWORK)
- Involvement of patient representatives or incorporating the patient’s voice in dissemination activities (PPI)

Table 8.3 shows the initial inputs to the QCA, using the values 1 (theme/variable present in this AHSN) and 0 (theme/variable absent in this AHSN). Presence/absence of themes was based on the findings from the qualitative thematic analysis. In addition, the variable about the

transparency of the high-level spread approaches at the AHSNs was included – implicit or explicit approaches as defined in section 4 (variable name EXPLICIT). The outcome for each AHSN was based on the adoption rates for each AHSN at the end of the calendar year 2019 (variable

name OUTCOME) with a value of 1 (successful case = adoption rate 50% or higher) and a value of 0 (unsuccessful case 49% or lower) (Table 8.1).

**Table 8.3: QCA raw data table**

AHSN ID	OUTCOME	EXPLICIT	NONDELAY	ADOPT	EXP	PILOT	PHARMA	CHAMP	SENIOR	CCG	INTERSECT	NETWORK	PPI
1	0	1	0	1	0	0	0	1	0	1	1	1	1
2	0	1	0	0	0	1	1	0	1	1	1	1	1
3	0	0	0	1	1	1	1	0	1	1	1	1	1
4	1	1	1	0	0	1	1	1	1	1	0	1	1
5	0	1	1	0	0	0	0	0	0	0	1	0	0
6	1	0	1	1	1	1	1	1	1	1	1	1	1
7	0	1	1	0	0	0	0	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	0	1	1
9	1	1	1	1	1	1	1	1	1	0	0	1	1
10	0	0	1	1	0	1	0	0	0	0	0	0	0
11	0	1	1	0	0	1	0	0	0	0	1	1	1
12	0	0	0	0	0	0	1	1	1	0	0	0	0
13	1	1	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1	1	1
15	1	0	1	0	0	1	1	1	1	0	1	1	1

After applying the quality assessment measures to the raw data table, as outlined in the methods section, the list of QCA variables was reduced (Table 8.4). Selection criteria included the variety of variables across cases (more than 1/3 of cases have a different value), confidence in the data, and likelihood of causal links between a variable and the outcome.

The following variables were excluded from the QCA based on a lack of variation across the cases, as the majority of AHSNs applied these activities:

- Involvement of patient representatives or incorporating the patient's voice in dissemination activities (PPI)
- Spreading through existing local networks (NETWORK)
- Established pilots, local demonstrator sites, or early adopter case studies (PILOT)

Only a minority of AHSNs had negative experiences in the past so this variable was excluded:

- Attempted spread work with system stakeholders who have had negative experiences with spreading TCAM (EXP)

The transparency of the high-level approaches of AHSNs did not appear to explain successful or unsuccessful TCAM spread. Their initial inclusion in the QCA led to conflicted cases, i.e., both explicit and implicit approaches could lead to both successful and unsuccessful TCAM spread. Therefore, this variable was excluded from the QCA:

- Transparency of high-level spread approach (EXPLICIT).

Furthermore, the following variables were excluded due to limited confidence that the qualitative data would clearly differentiate between presence or absence of this activity.

- Engagement of local champions (CHAMP)

- Involvement of CCGs (CCG)
- Securing senior-level support/buy-in (SENIOR)

To elaborate, some interviewees clearly talked about having nominated champions while others mentioned the involvement of a clinical lead or a clinician driving the implementation which could be interpreted as champions, but not that clearly. Regarding CCG involvement, some interviewees clearly identify CCG involvement as enabler or non-involvement as barrier while others reported contact with CCGs without identifying this as an activity connected to outcomes. Similarly, senior-level support was described in a number of ways, ranging from very clear senior support by appointing a steering committee for TCAM consisting of senior stakeholders to less clear senior-level support.

**Table 8.4: Final input for the QCA (truth table)**

AHSN ID	NONDELAY	ADOPT	PHARMA	INTERSECT	OUTCOME
12	0	0	1	0	0
2	0	0	1	1	0
1	0	1	0	1	0
3	0	1	1	1	0
5, 7, 11	1	0	0	1	0
4	1	0	1	0	1
15	1	0	1	1	1
10	1	1	0	0	0
8, 9	1	1	1	0	1
6, 13, 14	1	1	1	1	1

The QCA reduced the possible combinations of variables and outcomes for the solutions to explain successful and unsuccessful cases (Table 8.5).

Successful TCAM spread was explained by a non-delayed start of the spread work combined with a pharmacist facilitating the spread work at the AHSN. Unsuccessful TCAM spread was explained by either the delay

of spread work or the absence of a pharmacist facilitating the spread work. The other spread activities (adoption before the national programme started and an intersectoral approach) were not relevant to explaining TCAM spread outcome.

All seven successful AHSNs had a non-delayed start and a pharmacist employed. This combination of the two spread

activities can be considered both a necessary and sufficient combination to lead to successful TCAM spread. There were no other alternative solutions that led to success. This combination needed to be present for success to occur. While both factors were important, neither were sufficient to lead to successful TCAM spread on their own.

**Table 8.5: QCA solution terms and confidence values**

Outcome	QCA Solution	AHSNs covered by solution (ID)	Raw coverage	Unique coverage	Solution coverage
Successful TCAM spread	NONDELAY* PHARMA	4; 6,13,14; 8,9; 15	1.0	1.0	1.0
Unsuccessful TCAM spread	nondelay +	1; 2; 3; 12;	0.5	0.375	1.0
	pharma	1; 5,7,11; 10	0.625	0.5	

Upper case letter = condition is present; lower case letters = condition is absent; \*combination of conditions (Boolean AND); + non-combined/alternative conditions (Boolean OR)

The solution for success spread explained 100% of successful cases (raw coverage = 1.0, solution coverage = 1.0) and was the only solution to explain all cases of success (unique coverage = 1.0). The solution for unsuccessful TCAM spread contained two alternative pathways. Four unsuccessful AHSNs had a delayed start (pathway 1) and five unsuccessful AHSNs didn't have a pharmacist employed to facilitate spread work (pathway 2). One of these AHSNs had both a delay and did

not have a pharmacist employed. The solution for unsuccessful spread explained all eight unsuccessful cases (solution coverage = 1.0). Each alternative pathway in the solution covered about half of the cases (raw coverage = 0.5 and 0.625). Each pathway did not solely explain unsuccessful cases, but one case is covered by both solutions (unique coverage = 0.375 and 0.5). The low level of coverage of the separate pathways or conditions included in the solution explaining unsuccessful TCAM

spread confirmed the validity of the solution for successful TCAM spread. Only this combination of two activities led to successful TCAM spread and when this combination of activities was absent, spread of TCAM was unsuccessful.

## 8.5 Summary

A delayed start into the national programme was identified as a primary disadvantage to achieve successful spread and employing a pharmacist at the AHSN to facilitate the spread was identified as essential to achieve successful spread.

As TCAM was an intersectoral programme, our findings highlighted the relevance of activities to engage all relevant stakeholders as early in the spread process as possible, for example, by convening an intersectoral project group or steering committee, by thinking at the system-level (e.g., STP, ICS), or by working with existing intersectoral networks (e.g. local medicine optimisation groups).

Targeting existing networks or convening steering groups could at the same time allow for obtaining senior-level support and save time and resources to spread programmes across a local system (i.e., by approaching all system stakeholders at the same time, peer-group support, and shared learning). Engaging the whole system increased local ownership of a programme which can increase the likelihood of normalisation and sustainability of a programme.

As TCAM had patient safety at its core, highlighting and reporting on patients' experiences was identified as a key evidence base, next to the evidence on effectiveness and health system

benefits to engage stakeholders in the adoption/spread process.

At the national level, better alignment of implementation plans and national levers (e.g., contractual arrangements) for national programmes could have saved a lot of time in the spread and adoption of TCAM.

The support of the national programme leadership and the opportunity to share learning across the AHSN Network was considered very helpful.

**Successful TCAM spread was explained by a non-delayed start of the spread work combined with a pharmacist facilitating the spread work at the AHSN**

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# 9. Conclusions and recommendations



This study investigated spread and adoption of innovation activity across 15 AHSNs in England. A range of different approaches, principles, and specific spread activities were uncovered, as were the developmental influences upon the approaches. This has made spread and adoption work by

AHSNs more visible. A wide range of contextual factors affected spread and adoption including individual, organisational, and national influences. Importantly, a more nuanced understanding of these factors was developed, presenting them as contingent on AHSN actions and capabilities rather than fixed enablers

or barriers to spread. One national programme, TCAM, was investigated in-depth and identified empirically key factors that affected spread and adoption performance across the 15 AHSNs.

## 9.1 Conclusions from each study question

Due to the wide range of findings from this study, the 24 conclusions, considerations and potential next steps have been organised in Table 9.1 by study question.



**Table 9.1: Conclusions, considerations and potential next steps by study question**

<b>Study question 1: What different approaches to spreading innovations have been developed and applied by AHSNs?</b>	
<b>Main conclusions</b>	<b>Considerations and potential next steps</b>
<p><b>1.</b> Ten AHSNs were explicit about their high-level approach to spread and adoption. These were a mix of broad frameworks, theory-informed frameworks, the IHI model for improvement approach, and several with coaching elements built in. Five AHSNs took a more implicit approach to spread, characterised as unwritten, organic, opportunistic, highly flexible, and driven by staff skill sets and backgrounds. AHSN team factors and the environments AHSNs operate alongside helped explain the high-level approaches.</p>	<p>Spread and adoption activity is a symphony of AHSN activity, health service reactivity to that activity, and susceptible to wider context factors.</p> <p>Importantly, this study cannot state an implicit position by AHSNs affected spread outcomes, but reasonable inferences can be drawn about the challenges of hidden spread activity. Increasing the visibility of spread work would support AHSN staff to operationalise the spread and adoption of innovations.</p> <p>Regarding AHSN team structures, diversity of staff backgrounds and clinically trained AHSN staff were highly valued for spread and adoption. Moreover, one AHSN with an implicit orientation highlighted their large area of responsibility and another referred to their mission being subtly different and affected spread activity. It is suggested a deep dive into the structure of AHSNs would yield further insights on influences on spread and adoption.</p>
<p><b>2.</b> All AHSNs with an implicit orientation reported they were unaware of any ‘common approach’ to spread, were not as explicit about how they operationalised spread activities, provided less information on barriers and enablers to spread, and highlighted siloed team working. Furthermore, AHSNs with an implicit high-level orientation did not mention spread training for AHSN staff or rollout site staff as something they supported.</p>	<p>AHSNs with a more transparent understanding of their spread strengths and weaknesses will likely highlight areas of improvement quickly. Also, transparency should assist new members of AHSN staff orientate to innovation spread work. Potentially, without transparency or in-house spread training, part of the success of spread activity will be determined at the point of staff recruitment.</p>
<p><b>3.</b> Flexibility and tailoring were reported as essential for all spread and adoption work, largely due to the starting point of innovations and environmental factors within rollout sites. Variation in spread approaches was reported between AHSNs, within AHSNs, between national and local programmes, and even within mandated spread plans for AHSN Network mandated national programmes. The latter was due to the need to ‘localise’ national programmes.</p>	<p>Acknowledging the variability and tailoring required for spread and adoption activity places greater emphasis on the front end of spread work, i.e. the planning and reactive adaption stages. It is suggested innovation and contextual assessments (e.g. using NASSS-CAT) are as in-depth as possible for each innovation rollout to mitigate avoidable challenges and embrace the complexity of rollout environments.</p> <p>It is suggested that ‘the approach to take’ should be bespoke and developed from your diagnostic assessment of the rollout context and the innovation and developed from good practice and proven techniques and tools.</p>

### Study question 1: What different approaches to spreading innovations have been developed and applied by AHSNs?

Main conclusions	Considerations and potential next steps
<p><b>4.</b> There was variation across AHSNs in their high-level orientation to spread and adoption, and at the specific spread activities level. However, considerable commonality across AHSNs was found in their general principles that guided their spread and adoption activity: (1) Promotion of an AHSN persona, (2) Engagement (in general terms) focused, (3) Working with the needs of health systems, (4) Building and using networks (the specific act of), and (5) Seeking and achieving sustained spread.</p>	<p>These principles provided an anchor for all AHSNs for spread and adoption activity. Consideration could be given to whether they have equal weighting within AHSNs and if any other common principles exist and would benefit spread and adoption activity.</p>
<p><b>5.</b> Spread and adoption activities can be considered in four broad stages. A wide range of examples of different forms of spread work were identified. Whilst not all these activities were present in every rollout, many were discussed as necessary to rollouts and AHSNs not engaging in some of these activities/conducting due diligence was linked to unsuccessful cases.</p>	<p>It is suggested that considering some/many of these activities would be relevant for future innovation rollouts. The breakdown of these activities into activity types, e.g. planning activities, capacity building activities, etc, may offer potential ideas to AHSN staff for operationalising rollouts.</p>
<p><b>6.</b> Of the AHSNs with explicit high-level approaches, four categories were identified: (i) IHI Model for Improvement, (ii) Flexible broad framework, (iii) Flexible Implementation Science informed project management approach, and (iv) Flexible approach with a coaching focus. Further diversity in approaches were observed, particularly with Patient Safety teams across all AHSNs that primarily focused upon the IHI Model for Improvement. In many cases, this contrasted with the explicit approach outlined by the AHSN overall.</p>	<p>It is suggested the broad frameworks (e.g. Pipeline and Portfolio approach) consider the findings of this study to see if aspects of the broad frameworks, such as the 'Deploy' phases of these frameworks, can be enhanced. Furthermore, it is suggested Patient Safety teams, and teams in general, consider a broader range of spread approaches when appropriate to the innovation and context.</p>
<p><b>7.</b> At the project level, four categories of spread approaches were identified: 'The Long Collaboration', 'System-partner needs-led', 'Innovator-led', and 'Targeting specialist services'. These represent the beginning of a clearer understanding of spread and adoption approaches across the AHSN Network. However, it was not possible to say if an approach was 'better' than another as this broad study question was focused on uncovering approaches. A sophisticated research design would be required to address the efficacy of approaches across the wide range of AHSNs/rollout contexts.</p>	<p>It is suggested that more reflection upon individual AHSN/programme/project nuanced approaches, more sharing of approaches between AHSNs, and a new focus on choosing and using approaches would be a productive investment of time to enhance spread and adoption of innovation.</p> <p>Furthermore, to increase inter-AHSN learning on spread, develop an online (internal) repository (an AHSN Network organisational resource) of spread case studies/methods/challenges across all 15 AHSNs using a template with structured areas to report on. Suggested name: Spread Intelligence Repository (SIR).</p>

## Study question 2: What contextual factors enable or challenge different approaches to spread?

Main conclusions	Considerations and potential next steps
<p><b>8.</b> This analysis of barriers and enablers to spread and adoption highlighted a wide range of factors. The most prevalent enablers and barriers were related to stakeholder characteristics (behaviours, attitudes, champions) and the outer setting (organisation, system) factors. However, some innovation characteristics were of note. Evidence on innovation effectiveness was frequently a barrier and enabler, and the issue of ‘Pilotitis’ at rollout sites was a frequent delaying factor.</p>	<p>Understanding how different factors interact to create enablers and barriers is important and it is suggested should be a central part of spread training for AHSN staff and rollout site staff.</p>
<p><b>9.</b> Champions were viewed as critical to successful spread, with a wide number of AHSN staff reporting that having the right rollout site champions, who are enthusiastic, respected by their peers, and good communicators, had a very positive impact on spread outcomes. Champions need to be interested in taking the innovation further than one single site, be able to interpret complex information, understand governance and be able to challenge other clinicians. They also need to have a clear understanding and engagement with the benefits to the patient and the system in question.</p>	<p>It is suggested that champions are sought and appropriately selected at each rollout location. A pragmatic view should be taken at what level (practice, unit, service, trust, STP/ICS) this is operationalised. The level of complexity of the innovation and required pathway/service change(s) may determine how many champions should be sought and who would be best placed to support the rollout.</p>
<p><b>10.</b> AHSNs with an explicit high-level approach to spread provided more detail about barriers, enablers, AHSN staff behaviour, and behaviour of rollout site staff during spread and adoption, compared to AHSNs with implicit high-level approaches to spread. Furthermore, AHSNs with an implicit high-level approach were more likely to externalise influences on spread and described higher numbers of enablers and barriers related to innovators.</p>	<p>It is suggested AHSNs increase their understanding of their spread strengths and weaknesses to potentially improve their spread performance by being more aware of barriers and enablers.</p>
<p><b>11.</b> Of the ten AHSNs with four different types of explicit approaches (see Table 4.4), a wide range of similar enablers and barriers were identified. Barriers and enablers did not appear linked to any one of the four approaches more than another. There was some indication AHSNs with coaching elements were more likely to consider mindset-oriented enablers (e.g. ability to learn from failure, ability to build trust) rather than operationally oriented enablers (e.g. project management skills, clinical background).</p>	<p>It is suggested AHSNs systematically investigate and record the links between spread approaches and influential factors, to maximise learning from the process.</p>

### Study question 2: What contextual factors enable or challenge different approaches to spread?

Main conclusions	Considerations and potential next steps
<p><b>12.</b> It is important to recognise barriers and enablers are not static, they can reflect the perception and situation of the individuals involved and can therefore be identified, mitigated, and potentially changed to benefit spread and adoption activity. The complexity can include the actions of AHSN staff, actions of adopters, perceptions of the innovation (whether convergent or divergent), and the system and culture of the rollout setting.</p>	<p>It is suggested a more nuanced appreciation for barriers and enablers may provide more opportunity to mitigate and intervene prior to and during spread and adoption activity. This will likely require a mix of skills and experience including the ability to understand and analyse context, consider interactions in complex situations, positive people skills and a clear understanding of clinical settings.</p>

### Study question 3: How theoretically informed are the approaches?

Main conclusions	Considerations and potential next steps
<p><b>13.</b> AHSNs blend a range of theories and frameworks from internal and external sources to meet the shifting needs of their work.</p>	<p>AHSNs should aim to improve their collective learning from experience by finding ways to share and codify more of their know-how about spreading different types of innovation in different contexts.</p>
<p><b>14.</b> Theories and frameworks are combined and blended in an eclectic way to address a variety of needs ranging from high level coordination of activities to training and project management.</p>	<p>There should be greater critical scrutiny of the frameworks guiding AHSN approaches to ensure that they fully reflect latest thinking, not only from the health sector but more widely, and address the needs of the AHSN intermediary role.</p>
<p><b>15.</b> Tacit knowledge and experience are also important in AHSN approaches, reflecting the dynamic, relational, and flexible nature of the work.</p>	<p>It is suggested tacit knowledge be gathered and made visible to AHSN operational and senior staff for a variety of reasons, e.g. to better select staff to manage innovation rollouts and identify gaps in spread knowledge/experience.</p>
<p><b>16.</b> There is no obvious candidate for a 'one best way' framework to encompass all AHSN activity, but the NASSS framework and other primarily healthcare-oriented frameworks were most widely cited.</p>	<p>It is suggested AHSNs should aim to critically reflect on their use of diagnostic frameworks, such as the NASSS framework, as a basis for contextual assessments and greater shared knowledge of the challenges of spreading innovation.</p>

#### Study question 4: Have national policy and frameworks influenced the approaches?

Main conclusions	Considerations and potential next steps
<p><b>17.</b> Only a small proportion of staff interviewed were able to comment in detail on national influences. Given their capability to both enable and hinder spread and adoption, it would be prudent to support AHSN staff in this area.</p>	<p>It is suggested internal training would support AHSN staff awareness of national levers, which may help or hinder their rollouts at any point in the spread journey.</p>
<p><b>18.</b> Frequently reported national influences were the NHS Long Term Plan, Quality and Outcomes Framework (QOF), NICE guidance, commissioning contracts and professional bodies.</p>	<p>It is suggested these five national levers be considered very early during the 'pre-spread' stage described in Figure 4.1. Furthermore, due to their ability to halt a rollout, changes in national policy/frameworks/guidance should be closely monitored throughout the spread journey. This would provide the opportunity to change direction/stop the rollout if necessary and redeploy AHSN resources.</p>
<p><b>19.</b> Spread and adoption success may be at risk if there is no national drive in a particular area of innovation, or consider ambiguity exists in the national guidance on an innovation.</p>	<p>Understandably, it is impossible for national guidance to precede all possible forms of innovation, however, to mitigate the requirement for some form of national endorsement it is suggested that a process be set up within the AHSN Network. Such a process could aim to generate the required backing at highest/most targeted levels possible. This could support innovators in developing their value propositions and serve as a crucial enabler during the spread and adoption process.</p>

### Study question 5: What inferences can be drawn from a comparison of the different approaches and the TCAM national programme spread metrics?

Main conclusions	Considerations and potential next steps
<p><b>20.</b> A delayed start was identified as a primary disadvantage to achieving successful spread and employing a pharmacist at the AHSN to facilitate spread was identified as essential to successful spread.</p>	<p>Longer timeframes to spread national programmes would enable AHSNs to ‘baseline’ contexts, especially when needing to build new relationships, establishing whole-system networks, and allowing for spread activity to consider local stakeholders’ schedules.</p> <p>Longer programme timescales would also allow time to develop and implement a plan for sustainability.</p> <p>It is suggested that AHSNs match the background and expertise of AHSN staff responsible for spreading a programme to a programme’s clinical focus. Ideally, this staff member would also be embedded in the local system and at a senior level.</p>
<p><b>21.</b> As TCAM is an intersectoral programme, our findings highlighted the need to engage all relevant stakeholders as early in the spread process as possible, for example, by convening an intersectoral project group or steering committee, thinking at the system-level (e.g., STP, ICS), or working with existing intersectoral networks (e.g., local medicine optimisation groups). Targeting existing networks or convening steering groups could at the same time obtain senior-level support and save time and resources to spread programmes across a local system (i.e., through approaching all system stakeholders at the same time, peer-group support, and shared learning). Engaging the whole system has also shown to increase local ownership of a programme which can increase the likelihood of normalisation and sustainability of a programme.</p>	<p>It is suggested that AHSNs match the background and expertise of AHSN staff responsible for spreading a programme to a programme’s clinical focus. Ideally, this staff member would also be embedded in the local system and at a senior level.</p>
<p><b>22.</b> As TCAM has patient safety at its core, highlighting and reporting on patients’ experiences was identified as a key evidence base, alongside the evidence on effectiveness and health system benefits, to engage stakeholders in the adoption process.</p>	<p>Encourage and invest in local patient and public involvement from the start and for the duration of a programme especially when a particular programme’s user group includes patients. Ideally, involvement would include active co-creation, e.g., engaging patients in dissemination activities or as part of a programme’s advisory or steering group’s decision-making process.</p>
<p><b>23.</b> Better alignment of implementation plans and national levers for national programmes can save a lot of time.</p>	<p>Align the timeframes for national spread programmes with existing/known future national levers as much as possible.</p>
<p><b>24.</b> Support from the national leadership for the programme and sharing learning across the AHSN Network was considered very helpful to spread.</p>	<p>Explicitly encourage the exchange of experiences and shared learning between AHSNs and across the whole AHSN Network. This would also support the national programme leadership staff to enhance/update their support and maintain their valued status.</p>

## 9.2 Synthesised conclusions

In addition to conclusions drawn for the individual study questions, seven synthesised conclusions were drawn when all the findings were considered together.

1. AHSNs play a unique role with some in-built tensions, e.g. between being an objective evaluator of innovations versus introducing them to adopters; between responding to national mandates and helping to localise innovation; and between explicit management approaches and implicit responsiveness to dynamic health service environments. Furthermore, a great deal of emphasis was placed on the need for flexibility in spread and adoption work. The uniqueness of the AHSN role and these tensions mean that there is no simple recipe for success, there is not 'one best way' to do spread and adoption. A range of approaches were described in this study and should be tailored to the innovation and context but, importantly, be transparent and evaluable. Understanding how approaches work more effectively given the challenges of specific contexts should be a key focus of future research.
2. The key activities for successful spread are multi-factorial; it is a symphony of AHSN activity, health service reactivity to that activity, and is fragile in its susceptibility to wider context changes.

The findings suggest that successful spread work is often complex, changeable, resource intensive, and always requires 'localising'. Embracing the minutiae of spread and adoption work, particularly whilst making plans on how to spread and/or support adoption, would seem prudent. Thorough innovation and contextual assessments, potentially using evidence-informed exploration checklists, would put AHSNs in the best possible position to identify potential challenges, make them visible, and mitigate for them.

3. A range of approaches and activities to spread and adoption were identified between AHSNs, and importantly within AHSNs, depending on the innovation and contextual conditions and AHSN staff backgrounds. Diversity and flexibility were valued by all, but it is unclear how AHSNs chose approaches or if they were well matched to the innovation. Further work by the AHSN Network is needed to support AHSN staff to choose and use the right spread approach for the right innovation and context.
4. Currently, spread and adoption learning is being captured and shared primarily through the tacit knowledge of individuals and informal sharing of work on specific programmes or at specific AHSNs. The next step for

AHSNs could be increased reflection on their spread and adoption approaches and activities, using learning from this report, to increase dialogue between and within AHSNs on the topic of spread and adoption. This would make transparent and optimise AHSN high-level orientations to spread and adoption and approaches at the project and programme level. As innovations are only as useful as they are able to be effectively spread or adopted, a repository of learning across the AHSN Network would provide a central hub of learning for all. This could (i) collate case studies and (ii) synthesise experiences to form a Network-wide appreciation of what works and in what context.

5. Increased training on techniques and methods for spread and adoption was requested by many AHSN staff, both for themselves and for rollout site staff to support the sustainability of innovation. In addition, the authors identified that AHSNs with an implicit high-level orientation to spread activities did not mention spread training for AHSN staff or rollout site staff as something they did or as a lesson learnt. It is suggested a working group be created to develop training topics to cater for the varied backgrounds of AHSN staff, e.g. Quality

Improvement training for staff with Implementation Science backgrounds and vice versa, relational and coaching training for staff new to building collaboratives, and a more nuanced understanding of enablers and barriers to spread, i.e. seeing the tangible (governance, clinical pathways, evidence) and less tangible (behaviour, personalities, culture) barriers and enablers as dynamic, potentially influenced by AHSNs themselves, and manageable when innovation and contextual in-depth assessments have been enacted prior to the rollout.

6. Evidence about the innovation was a critical factor for spread and adoption. It was both a barrier and enabler, and evidence within national policy/frameworks such as NICE were a key influence on engagement of rollout site staff. Also, rollout site reactions to the evidence position, such as 'Pilotitis' (new/repeated examinations of the evidence) and level of Information Governance required, influenced spread and adoption. AHSN industry/commercial teams often played a large part in understanding the available evidence on an innovation and the development of the value proposition(s) for health partners. Interestingly, in our separate short report on AHSN spread approaches

during COVID-19<sup>5</sup>, it was reported the need for evidence before rollouts reduced and health services were more open to experimentation. There is a tension here between evidence-based innovation and pace of spread. It is recommended there is still a need for AHSNs to play the role of learning and evidence gatherer and sharer, to inform system decisions as the pandemic continues. In particular, to gather evidence where change may have happened quickly without robust evidence in place.

7. A range of roles were identified across the study as critical for spread and adoption. Firstly, champions at the rollout site who were enthusiastic, respected by their peers, resilient, and good communicators had a very positive impact on spread outcomes. Secondly, clinically trained AHSN staff

were highly valued for similar reasons. In the context of the TCAM programme, employing a pharmacist was a key factor explaining TCAM adoption rates. Thirdly, surrounding each innovation rollout with an ensemble of staff with complementary skill sets was perceived as an enabling factor. Key roles were a local site champion, a clinically trained AHSN staff member, an AHSN project manager, and support from internal/external expertise in Implementation Science or Quality Improvement methods. It is suggested consideration be given to the staffing support for each innovation rollout.

<sup>5</sup>Robens S, Sibley A, Ziemann A, Scarborough H. (2020) Experiences of spread and adoption across the AHSN Network during COVID-19. Short report commissioned by the AHSN Network and NHS England.

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# 10. Further research



The study has identified several important findings about the way in which AHSNs conduct their spread and adoption activities. As this study was principally an

exploratory mapping exercise to identify the approaches taken, the findings suggest several areas for more focused investigations which would build

on the current study. We present an indicative summary below of these areas and possible research questions.

Key finding	New research question
1. We found significant variation in the extent to which AHSNs applied explicit frameworks in guiding their activities.	What are the pros and cons of implementing a common normative framework to guide the spread activities of AHSNs?
2. The variation in spread approaches adopted by AHSNs mirrors underlying variations in the training, work organization and skill-sets of AHSN staff.	How do differences in the capabilities developed by AHSNs relate to their effectiveness in spreading innovations?
3. Four categories of broad approaches at the AHSN-level were identified: (1) IHI Model for Improvement, (2) Flexible end-to-end broad framework, (3) Flexible Implementation Science informed project management approach, and (4) Flexible approach with a coaching focus.	What differences are there in spread and adoption outcomes when staff operate under different types of AHSN-level broad approach?
4. Four categories of project-level approaches were identified: (1) 'The Long Collaboration', (2) 'System partner needs-led', (3) 'Innovator-led', (4) 'Targeting specialist services'. These may not be the only approaches, but the ones identified so far. A more in-depth look at these types would generate learning.	What differences are there in spread and adoption outcomes when staff operate under different types of project-level approach?
5. Our analysis of the use of theory and formal approaches highlighted the implications of developing and using codified versus more tacit forms of knowledge in spread activities.	What role can the codification of knowledge and evidence play in improving the spread of innovations across diverse contexts and supporting shared learning across the AHSN Network?
6. Spread activities are found to be highly context and innovation dependent, requiring the tailoring of evidence and social networks to support adoption.	What differences in approach should be applied to; different types of innovation; national programmes versus locally sourced innovations; and to different stages of the innovation process?
7. A persistent finding across the AHSNs is the importance of developing social relationships with innovators and providers to underpin successful spread activities.	Which forms of social network (strong versus weak ties, cohesive versus bridging networks) are most conducive to supporting the spread of innovations by AHSNs, and at what stage of spread?
8. We found staff used the terms spread and adoption interchangeably, which affected our ability to differentiate approaches and activities for either type.	What differences are there in activities, approaches, and principles used by AHSN staff when supporting adoption of innovations compared to supporting spread of innovations?
9. The sustainability of innovations in practice is accepted as a key outcome by AHSNs, but the means of achieving this outcome are less well understood.	What constitutes a desirable form of sustainability for innovations, and which strategies are most effective in spreading innovations sustainably?

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# Appendices

**Appendix Table 1: Thematic analysis of high-level orientation and principles guiding spread and adoption activity**

Higher order theme	Theme	Sub-themes	Commonality/variability across AHSNs
<b>High level orientation of AHSNs to spread and adoption activity</b>	Transparency at the AHSN-wide level about approach to spread and adoption	<ul style="list-style-type: none"> <li>• Explicit</li> <li>• Implicit</li> </ul>	10 AHSNs explicit and 5 AHSNs implicit
<b>AHSN high-level team factors</b>	AHSN team/staff influencing spread approaches	<ul style="list-style-type: none"> <li>• Diversity of staff backgrounds</li> <li>• Different levels of spread awareness amongst staff</li> </ul>	Most AHSNs reported this
<b>Environmental influences on AHSNs approaches to spread and adoption</b>  (the way AHSNs must/forced to operate to work with innovators and health service partners)	The pre-eminence of flexibility in all situations	<ul style="list-style-type: none"> <li>• Flexibility in general</li> <li>• Flexibility in national mandated programmes</li> </ul>	Almost all AHSNs reported this
	Variation in the use of approaches within AHSNs	<ul style="list-style-type: none"> <li>• Variation in use of common approach</li> <li>• Variation between AHSN teams</li> </ul>	Most AHSNs reported this
<b>Described principles of spread and adoption activity</b>  (the way AHSNs work when the work is under their control)	The AHSN Persona	<ul style="list-style-type: none"> <li>• Being an honest broker</li> <li>• Facilitating organisations to innovate and collaborate</li> <li>• Form follows function</li> </ul>	Almost all AHSNs reported these
	Engagement focused	<ul style="list-style-type: none"> <li>• Systems approach</li> <li>• Pull over push</li> <li>• Collaborate widely</li> </ul>	Most AHSNs reported this
	Working with the innovation needs of health systems	N/A	Most AHSNs reported this
	Building and using networks	N/A	Most AHSNs reported this
	Seeking and achieving sustainability	N/A	Almost all AHSNs reported these

**Appendix Table 2: Thematic analysis of activities undertaken during spread and adoption**

Higher order theme	Themes	Commonality/variability across AHSNs
<b>Planning/preparatory activities</b>	<ul style="list-style-type: none"> <li>• Understand the innovation</li> <li>• Understand the rollout context</li> <li>• Develop relationships through stakeholder mapping and engagement</li> <li>• Identifying and working with the willing</li> <li>• Consider pathway changes and the 'fit' of the innovation</li> <li>• Organise a clinical champion at the rollout site</li> <li>• Make use of AHSNs staff with clinical backgrounds</li> </ul>	All AHSNs reported these
<b>Dissemination/communication activities</b>	<ul style="list-style-type: none"> <li>• Develop the narrative of the innovation</li> <li>• Establish and communicate a clear spread/adoption plan</li> <li>• Tailor language and narrative for different stakeholders</li> <li>• Organise events/webinars/workshops to engage</li> <li>• Develop plans for ongoing communications engagement</li> </ul>	Most AHSNs reported these
<b>Financial activities</b>	<ul style="list-style-type: none"> <li>• Seek seed-funding/pump-priming/backfill</li> <li>• Support to develop business cases from early learning</li> <li>• Supported engagement with NHS procurement teams</li> </ul>	Approximately half of AHSNs reported these
<b>Project management activities</b>	<ul style="list-style-type: none"> <li>• Adaptive project management processes</li> <li>• 'Trio approach' to spread and adoption work</li> <li>• IHI Breakthrough Series Collaborative Model</li> <li>• Tailored and needs led project management activities</li> <li>• Different intensities of AHSN support required at different rollout sites</li> <li>• Regular check-ins and weekly team meetings</li> <li>• The need to monitor spread and adoption uptake</li> </ul>	Most AHSNs reported these
<b>Capacity building activities</b>	<ul style="list-style-type: none"> <li>• Building, maintaining, and using networks</li> <li>• Continuous spread learning</li> <li>• Peer support from other AHSNs</li> <li>• Spread and adoption training for AHSN staff</li> <li>• Spread and adoption training for rollout site staff</li> <li>• Empowering site staff to own the rollout</li> <li>• Develop implementation packs/toolkits/videos about the innovation</li> </ul>	Most AHSNs reported these

# Spotlight 1

## Need for a solid evidence base on the innovation

The evidence base for an innovation was universally discussed as critical to the ability for an innovation to be introduced, spread, and adopted.

*“There was one of the products that was lifted onto the ITP that was mandated for adoption and one of our Professors in the region pitched up and said, ‘Okay, well we’re not showing any evidence around this, can we look at doing something locally where we evaluate it, and look at the outcomes?’ They evaluated it, looked at the outcomes, and as part of that actually showed there*

*was no clinical difference in using this product. It wasn’t any better than what was being ordinarily done as standard of care, and in some instances actually there could be worse outcomes.*

*That would probably be an example of something that has come through that we were expected to adopt, but actually it wasn’t something that we wanted to support the adoption of...I think that’s a lesson for me, you’ve got to be clear the evidence is robust and the clinicians have got to believe that, otherwise you’re never going to manage to get it into the NHS.” 10-AZ-006*

*“We always need to do a strategic outline case for the innovation. You have to be able to demonstrate the benefit to even get an ‘in’ with people, you have to be able to demonstrate that.” 01-AS-004*

*“The clinicians who failed or were unwilling to engage with this didn’t believe it was right for their patients... that’s why we struggled to get it adopted because the clinical community were not convinced by the evidence.” 10-AZ-004*

## Spotlight 2

### Industry teams' contribution to spread and adoption

Industry/commercial AHSN staff members contribute to spread and adoption by supporting innovators to develop their evidence base and value propositions/business cases. Acknowledging their contribution to the spread journey, alongside the clinician/service-facing innovation adoption AHSN staff, is important.

*"We'll work with them [innovation adoption team] and go through all the learning we've had with all the different innovators...we would drag in our comms team to talk about stuff, we would drag in our intellectual property expert to talk about the IP and go through each of the trusts' IP policies. We'll run workshops and make sure they're [trust staff] upskilled, to make sure that they've got the right framework for their trust".*  
10-AZ-003

*"I directly and through my team support market access, so adoption and spread for*

*businesses, health and life sciences, SMEs with products that are directly relevant to our systems. The team also support adoption and spread of communities of practice. To do our work properly we have to influence the pathways and transformation and work with our [AHSN] teams to achieve adoption and spread. Whilst we lead that from a commercial perspective, we face the businesses with the right products that our systems need, we rely very heavily on our own contacts and networks but also our colleagues at [AHSN] their contacts and networks...to bridge that gap between the things that the businesses we work with have got that the NHS needs and the NHS understanding that they're out there, and finding routes through to get them commissioned or procured."*  
09-AZ-005

*"Yes, so some of the companies will [need help] from team members, particularly the [Innovation adoption team], so I can*

*always point them in that direction to get some initial advice from them as well. Also, at the same time if companies approach them they'll refer them through to me to have that initial conversation and do that bit of sense checking just to see where they are."* 10-AS-003

*"Really working [industry team] with them [innovators], what are your local priorities... we very much do start right back from that...we do a bit of research in terms of looking at their business plans and strategic plans for the next ten years, and how that fits with the NHS Long Term Plan what the common themes are between the acute trusts and the ICSs, etc around a region and then saying, 'Okay, we see this is a real issue, we've done a bit of background work and research, these are some of the potential solutions, is this of interest?' and try and develop a regional project from that aspect."* 01-AS-001

# Spotlight 3

## Early spread and adoption planning exploration tools

Innovation and contextual exploration checklists were used at some AHSNs. These provide the opportunity to understand and mitigate for challenges prior to embarking on spread activity. For example:

*“We’ve also looked at things like NASSS-CAT [innovation and contextual checklist], which looks at the complexity of the system that you might be dropping a product into. It’s not something that we routinely use at the moment, but we predict it might go that way over the coming months.”*  
09-AZ-006

The NASSS framework is part of the East Midlands AHSN ‘Gateway approach’:

*“To stop individuals making whimsical decisions about what should be funded or about timescales etc, it was put into place. It’s guidance for the team to know what they need to work with and to help them understand what they’ve got to maximise the chances of spread.”*

*“These gateways are not meant to be somebody in*

*a room filling in a form on their own, they’re meant to be run as active workshops, especially when we get to that adoption and spread bit, so that you would have, for example, a group of people the key stakeholders to run that workshop to make sure that there’s common understanding that everybody’s brought in, that they’ve got all the right things in place to give a maximum opportunity for success.”*

The Health Innovation Network developed an Implementation science Guide for project development in health InnovaTION (IGNITION):

### Part 1: Scoping out

1. Is there a compelling need?
2. Is there a robust evidence-base about how to address the need?
3. Is it a key strategic priority area?
4. What change do we want to bring about (i.e. the aim)?
5. Does the HIN have adequate resources and capacity for this work?

**Pause:** complete project brief and gain approval

### Part 2: Unpacking the detail

6. Who do we need to involve in this project to make it successful (Stakeholders: Step 1)?
7. What do we know about the key group(s) and the setting(s) we need to work with (Stakeholders: Step 2)?
8. Where are we now with the change we want to see and how will we measure progress?
9. What approaches are we going to use to bring about the change?
10. How are we going to implement the approaches we’ve chosen (i.e. what, when, how, who)?
11. How are we going to evaluate the impact of the project and what we’ve learnt from doing it?
12. Does the HIN have adequate resources and capacity for this work?

**Stop:** complete project initiation document (PID) and begin project.

# Spotlight 4

## Relationships critical to spread and adoption

Relationships with rollout sites were stated as critical to all forms of rollout, to include engagement as early as possible and as widely as possible, involving stakeholders in spread and adoption planning from the start and a constant eye on the status of relationships to ensure they are maintained.

*“Our medical director is very well connected, as are most of the executive team. There’s a couple of occasions where I’ve just known who the right person is to go and have a conversation with... [for problems] I’ll just go and speak to them and see what’s going on and whether we can unblock that. I think our medical director is particularly good at that.” 10-AS-001*

*“I’ve approached it with ‘who we do know?’ Who do we have contact with already? Who are the key stakeholders? Actually, doing that stakeholder mapping is absolutely crucial because otherwise you don’t know if you’re talking to the right people. It is absolutely*

*worthwhile spending a lot of time on that right at the beginning to understand where does the power lie? Who actually has the power to influence what it is that you are trying to do?” 01-AS-003*

*“Where there were clinical concerns about the product that we just couldn’t overcome [with rollout sites]...if those concerns are valid then we don’t want to brush them under the carpet and I think when you’re hearing the same clinical concerns from lots of different [rollout site staff] then we need to take our foot off the pedal with this because it’s reputationally damaging then for us to be seen to be pushing something that people are telling us they have concerns about.” 09-AS-001*

*“We say if you want to be involved, that’s great, but having to push too much against the closed door sometimes if it’s not going to work at this point, it might be better to get them involved later.” 03-AZ-005*

In terms of building, managing, and sustaining relationships, some AHSNs highlighted the importance of asking these questions:

1. Do they trust you?
2. Are you credible?
3. Are you going to bring them something that they know will work?
4. Are you planning to be transparent about the extent of your involvement?

By tackling these questions, relational problems are less likely to become a barrier to spread.

# Spotlight 5

## Assess pathway fit and changes

The impact and placement of an innovation on a clinical pathway should be considered and, when the resultant disruption would be high, may be a reason not to deploy the innovation.

*“It’s how easily something fits in a pathway...you can’t just, even with your medical devices, plonk them down into a pathway. You need to re-engineer the pathway around them.” 01-AZ-007*

*“I suppose the thought of having to change everything... people think it’s not worth it. We’ve already got a solution for that...if you compare a 1988 car with a 2020 car, you can see that it’s [2020 car] loads better straightaway. It uses less fuel, it goes faster, it’s more comfortable. With the digital systems it’s not always as obvious because people*

*set up systems and then learn to cope around the shortfalls. They get used to having that 1988 car. We’ve found that it’s not always the product, it’s the ways of working that people have set up around it.” 09-AZ-002*

*“It’s about playing the long game...some stuff is just an easier fit, but where it involves real change, transformation to a pathway, doing something really differently, introducing something genuinely new, you have to play the long game we’ve found. If you do play the long game, it speeds up the adoption overall, just because you’ve done it in the right way. People feel as though they’re being consulted, it’s not being done to them, and they see the benefit and what’s in it for them before anything else. That’s entirely the right way to be.” 09-AZ-005*

*“If you’re looking at doing a piece that affects the pathway, there’s a lot more pathway mapping and understanding how it fits into a programme to do. If you’re working with one particular organisation, they might need to do some mapping work and understand how it fits into the pathway.” 07-AS-003*

*“The system naturally filters out some of the stuff that’s not up to a good margin, or not, it might be a bit better, but if it’s only a tiny bit better and it means we’d have to change all these systems and all this sort of stuff, or different suppliers and often it’s not worth it.” 09-AZ-002*

# Spotlight 6

## Empowering and coaching rollout site staff

Empowering rollout site staff may involve difficult conversations about current practice. Training AHSN staff/ assigning clinically training AHSN staff to manage these conversations may support the empowerment of rollout site staff to engage and sustain the innovation.

*“If you’re in a room with somebody talking about a pressure ulcer standard, if you’ve got clinicians and tissue viability staff and nurses in the room, the implication of the discussion is that they’re not managing pressure ulcers well enough, and so you get antibodies and resistance.*”

*My natural instinct is to say, ‘Right, well if this can improve my practice, then I want to do it,’ but there is conservatism and risk aversion and so on. Also, the inference that sometimes when you’re [AHSN] introducing stuff, it’s because quite often these places are in crisis, they’re at ‘requires improvement’ level. This is all really tough for people to admit or to get their heads round, so the approach is important, absolutely. [AHSN] we’ve got an education and improvement team and programmes for coaching for patient safety and coaching for adoption and spread. We’ve recruited people from our trusts, our NHS*

*organisations, in leadership positions, who are dealing with transformation problems and cultural problems. We’ve given them coaching skills that they can use with their teams to help them change their practice, change direction, have a different mindset about the way in which the care is being provided. That’s been really successful for spread.”*  
09-AZ-005



# *The***AHSN***Network*

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 The AHSN Network

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