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What's getting in the way?

Barriers to improvement in the NHS

Evidence scan

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The report was produced as part of the Health Foundation's work on the process of change and, in particular, to support the development of the report *Constructive comfort: accelerating change in the NHS*.

For more details of this work, see www.health.org.uk/acceleratingchange

Health Foundation evidence scans provide information to help those involved in improving the quality of health care understand what research is available on particular topics.

Evidence scans provide a rapid collation of empirical research about a topic relevant to the Health Foundation's work. Although all of the evidence is sourced and compiled systematically, they are not systematic reviews. They do not seek to summarise theoretical literature or to explore in any depth the concepts covered by the scan or those arising from it.

Author
Dr Debra de Silva

Organisation
The Evidence Centre

Contact
debra@evidencecentre.com

Key messages

Every day, teams within the NHS strive to make things better, but individual, organisational and system-wide barriers get in the way. This evidence scan compiles published research about the key barriers to improvement in the NHS.

For this scan, 12 bibliographic databases were searched for published research available as of October 2014. Seventy-three studies about the NHS were analysed, as well as more than 100 studies from other countries as a comparison. Most studies in the NHS were small scale, based in a hospital context and published within the past five years. As such, further, larger-scale research would be useful.

The scan found that the top barriers to improvement in the NHS can be divided into those relating to the **initiative itself**, those relating to the skills and attitudes of **individuals**, those relating to **organisational** context and those relating to a broader **system level**. These barriers are spread across the development, delivery and dissemination phases, as summarised in the table below.

There were many similarities with international research but key areas where the NHS may differ include greater instability of organisational structures, less improvement experience among staff and fewer incentives to improve.

Prevalence of barriers to the implementation of improvement

	Design	Delivery	Dissemination
Initiative-related barriers			
Insufficient evidence base	X		X
Usability of interventions		X	
Fit with processes		X	
Individual barriers			
Staff resistance	X	X	
Staff skills and knowledge		X	
Role demarcation		X	
Organisational barriers			
Culture and stability	X	X	
Lack of leadership	X	X	
Management	X	X	X
Insufficient use of data	X	X	X
Lack of time allocated	X	X	X
Lack of funding	X	X	X
System-wide barriers			
NHS culture	X	X	X
Lack of stability	X	X	
Partnerships		X	X
Incentives and funding	X	X	

Note: crosses indicate where barrier have been found to exist most prominently

Scope

NHS practitioners and managers are striving to provide high quality services. Thousands of improvement projects are run every year, but not all succeed. This scan examines research into what gets in the way of improvement in the NHS – because if we have a clear idea of what the barriers are, we are in a better position to consider solutions.

Purpose

The Health Foundation is interested in drawing together experience and evidence about the barriers and facilitators to improvement in the NHS so that future projects and policy making can reflect the best available knowledge. This evidence scan draws together published research about barriers to change to support this.

The key question that the scan seeks to address is:

– What are the main barriers to implementing improvement projects in the NHS?

The focus is on barriers because this is a gap in knowledge. More work has focused on facilitators.

Barriers are defined as things that get in the way, slowing progress or stopping improvement programmes from succeeding. Examples may include lack of staffing, difficulties sharing information between IT systems and so on. It cannot be assumed that the opposite of a barrier will always be a facilitator.

For the purposes of the scan, improvement projects are defined as interventions that seek to improve NHS service delivery, organisation or ways of working. This is broader than interventions termed 'quality improvement' and incorporates wider change initiatives. However, it does not include service reconfiguration or structural or system-level interventions without a key focus on improving delivery or outcomes for service users.

Approach

The scan focused on readily available research published about the UK NHS. It was completed in November 2014.

To be eligible for inclusion in the scan, material had to:

– include empirical data

– be readily accessible in print or online

– be about improvement in the NHS

– include information about barriers to improvement

– be published in the English language.

To identify relevant research, two reviewers independently searched 12 bibliographic databases for studies of any design. The databases comprised: Pubmed/Medline; Embase; Cinahl; PsychLit; the Cochrane Library and Controlled Trials Register; National Library for Health; Social Services Abstracts; TRIP; ASSIA; Health Business Elite; Google Scholar; and the Health Management Information Consortium. All databases were searched from their inception to the end of October 2014.

Combinations of search terms such as the following were used: NHS; improvement; change; innovation; adoption; barrier; constraint; challenge, feasibility, sustainability, embed; variability; implementation; diffusion; evaluation; health care; UK.

Abstract and title searches identified more than 4,000 articles about improvement in the NHS, though many were descriptive and did not contain empirical data. These articles were scanned and the full text of promising material was read. Only studies that explicitly included empirical material about barriers were eligible, so this excluded a number of broad studies about NHS projects.

In total, 73 empirical articles met the inclusion criteria.

In addition, more than 100 studies from other parts of the world were used to provide contextual information. Although the scan focused on the NHS, we wanted to understand whether barriers in the NHS were unique in any way so made comparisons with reviews and studies undertaken in other countries.

Findings were extracted from all publications using a template and themes were grouped according to the type of barriers identified.

The scan reports some brief examples of NHS improvement projects, but the focus is on drawing out trends and learning points, rather than the findings of individual studies.

All of the evidence was sourced and compiled systematically, but the scan is not a systematic review and does not seek to summarise every study about barriers to improvement in the NHS.

Studies included

Of the 73 studies, 53% focused on the hospital context, 16% focused on primary care and 30% looked at combined primary and secondary services or allied professions such as dentistry (see table 1).

Almost a third of the studies spanned multiple regions in England or were national (32%). The midlands and northern regions were slightly better represented than southern England. Studies were also available from Scotland, but there was little material from Wales or Northern Ireland.

Seven out of 10 studies had been published since 2010 (69%), perhaps suggesting more of a focus on identifying barriers in recent years.

Half of the studies were small cross-sectional designs (49%), meaning that they may not provide the most robust evidence (see table 2).

Table 1: Country and context of studies included in the scan

	Primary care	Secondary care	Other eg combined, pharmacy, dental	Total number
Scotland	6	1	3	10
Northern Ireland				0
North England	3	7	5	15
Midlands		11	4	15
South England	2	7		9
England national /multiple regions	1	13	9	23
Wales			1	1
Total number	12	39	22	73

Table 2: Research design and year of publication of studies included in the scan

	Up to 1999	2000–2009	2010 onwards	Total number
Review		1	4	5
Randomised trial			2	2
Follow-up over time			10	10
Large cross-sectional study		6	14	20
Small cross-sectional study	4	11	21	36
Total number	4	18	51	73

What do we already know?

A great deal of research has explored barriers to innovation and improvement. This section summarises key messages from international research and Health Foundation programmes to provide a basis for comparing what is happening in the NHS.

Learning from international research

International research suggests that barriers to healthcare improvement relate to:

- the initiative itself and how it is implemented
- characteristics of the individuals involved
- organisational factors
- features of the wider environment.[1–3]

Table 3 summarises the main potential barriers under each of these headings.

Barriers relating to the improvement **project itself** include being difficult to use, not being compatible with existing services or systems, not having a strong evidence base and not being perceived to be better than alternatives. There are also practical implementation barriers, including not allocating enough time or financial resource and not having appropriate IT systems.

Barriers related to the **characteristics of health professionals** and managers include people's attitudes, perceptions, patterns of behaviours, skills and confidence.

Barriers related to **organisations or teams** include having a hierarchical structure, poor organisational culture, lack of teamwork or collaboration and insufficient infrastructure.

The **wider environment** may also raise challenges, including the regulatory context, national targets and feedback from patient groups.

Table 3: Potential barriers to improvement sourced from the international literature

Factor	Potential barriers	
Characteristics of the initiative itself[4–15]	• Not easy to use • No clear information or guidelines about use • Not consistent with existing procedures • Not able to be tested on a small scale before rolling out • Results not immediately visible to professionals or other stakeholders	• Not thought to be relevant or add value • May carry risk to patients or organisations • Not been used much in the past/not well tested • Lack of evidence base
Practical issues relating to implementing improvement[16–21]	• Lack of financial resources • Lack of other resources such as equipment or IT interfaces • Lack of incentives • Lack of administrative support • Lack of time available	• Lack of staff available to coordinate implementation • Lack of involvement of professionals and patients in development • Lack of opinion leaders or champions who influence others
Characteristics of the individuals involved[22–54]	• Lack of leadership buy-in/engagement • Lack of support from colleagues and managers • Lack of role modelling by colleagues • Perceived increase in workload • Perception that project is not advantageous • Lack of skills and knowledge among professionals	• Lack of confidence among professionals to make change • Lack of autonomy of professionals to make decisions/changes • Lack of perceived ownership of improvements/top-down implementation • Health professionals' assumptions about acceptability to patients • Perceived ethical issues
Organisational factors[55–68]	• Lack of formal reinforcement or championing by management • Top-down decision-making process/ hierarchical structure • Organisational size and type • Staff turnover • Lack of teamwork or silo working	• Poor relationships with other departments or organisations • Lack of collaboration • Lack of improvement culture • Culture of blame • Number of potential professionals/users to be reached
Contextual/ environment factors[69–78]	• Project does not fit into existing rules, regulations or legislation • Priorities of commissioning organisations • Behaviour of other organisations eg using different approaches • Patients not willing to take part	• Patients doubt whether professionals have skills or capacity • Financial burden of the change on patients, organisations or systems • Counter-incentives such as financial targets for other things

Learning from Health Foundation projects

The Health Foundation funds a wide variety of improvement programmes in the NHS. In 2012 the Health Foundation commissioned a team to draw together lessons from 14 evaluations of Health Foundation-funded initiatives.[79] The researchers concluded that there are 10 key challenges to improvement in the NHS. These challenges can be divided according to whether they occur during the design, delivery or dissemination stages (see box 1).

There are some similarities and differences between these evaluation findings and the international literature. The Health Foundation work focused less on organisational, team and individual capabilities and more on dissemination and sustainability issues than published international research.

The report emphasises that insufficient planning can get in the way of improvement in the NHS and it encourages teams to spend time reflecting, developing monitoring tools and networking before starting an improvement programme. Similar to the international literature, it is acknowledged that not having an evidence base for change or buy-in can act as barriers.

> *'The report concludes that structured improvement is complex and takes time and, unless the conditions for success are in place, is unlikely to fully achieve set objectives. This reinforces the importance of the role that organisation and system leaders play in supporting successful improvement efforts.'*[80]

Box 1: Key challenges in Health Foundation-funded projects

Design

- People may not realise that there is an issue that needs addressing
- People may not be convinced the intervention chosen is correct
- It may be difficult to get data collection and monitoring systems in place
- Goals may seem unrealistic or overly ambitious

Delivery

- Organisational context, culture and capacities may act as a barrier
- People may work in silos and there may be a lack of staff engagement
- There may not be sufficiently inclusive leadership
- The right incentives (carrots and sticks) may not be in place

Dissemination

- Seeing improvement as a specific 'project' or as owned by a particular individual can inhibit sustainability
- Change may cause unintended side effects

What is happening in the NHS?

Many case studies, evaluations or small research projects have described barriers to improvement in the NHS. While the barriers from these studies may not be generalizable, they provide useful themes. This section explores the most frequently identified barriers to improvement in the NHS.

Overview

Our scan of 73 empirical studies outlining barriers to improvement in the NHS found that challenges could be classified in terms of whether they related to:

- the intervention itself
- individuals associated with implementation
- organisational or team-related factors
- system-wide barriers.

This section briefly describes some of the barriers identified in each of the four broad areas.

These four factors are similar to the international literature (as described overleaf). However, research about the NHS tends not to focus so much on barriers associated with the interventions themselves.

Initiative-related barriers

Issues related to the specific characteristics of improvement initiatives in the NHS included the following.

Usability

- Perceptions that tools or changes were not easy to use or implement.[81]
- Complexities of care pathways or the number of stakeholders involved.[82,83]
- Number of improvements or changes implemented simultaneously.[84]

Fit

- Perceptions that improvements did not sit well with existing processes or organisational realities.[85]
- Lack of evidence base.[86]

Below are some examples from individual studies.

Examples of studies that identified barriers related to intervention characteristics

Usability barriers

The former NHS Institute for Innovation and Improvement's sustainability model was designed to help health care teams take action to embed improvements in routine care. A study with 19 NHS organisations throughout the UK found that most teams did not use the model consistently to take action. Some team members said they had difficulty understanding and applying the model or did not think it was useful.[87]

Another study of 10 hospitals using the World Health Organisation (WHO) surgical safety checklist in England found that the design of the tool and the way it was put into practice affected outcomes. The most common barrier was resistance from senior clinicians, but there were also issues with the tool design and layout, a lack of integration into existing processes and staff feeling that it had been imposed.[88]

Complexity

An example of how context, process and perceived outcomes are all potentially important barriers to improvement comes from a study of 11 mental health innovation projects within community, voluntary and NHS settings. Key barriers to improvement included the perceived complexity of the innovation, resistance from corporate departments and middle management and access to resources within the host organisation.[89]

Introducing multiple approaches simultaneously

A quality improvement collaborative in England aimed to improve ambulance care for people with heart attacks and strokes. Evaluation found many successes from the collaborative approach, but issues that limited progress included difficulty using formal quality improvement tools, terminology, and lack of staff skills and confidence in improvement methods. A wide number of tools were used, such as shared learning sessions, monthly teleconferences, annotated control charts, provider prompts and individualised or team feedback. Introducing so many things at once may have been difficult for teams to cope with.[90]

Using barriers as a justification

A study from England sounds a note of caution, suggesting that reported barriers to improvement may be used as an 'excuse' or a way of avoiding change. An examination of how GP practices implemented National Service Frameworks found that staff cited various barriers related to the frameworks such as the complexity of the documents and lack of time for implementation. It appeared that there were many barriers related to the tools themselves. However, observation at meetings, interviews and document analysis revealed that these barriers were constructions that staff used to justify why tasks had not been completed. Staff said that the tools were 'too hard' to use or that they had no time to do so, but interviews found they were prioritising other things. Thus, stated barriers may also reflect staff buy-in and priorities.[91] This is an example of how barriers can span multiple categories simultaneously.

Individual-related barriers

The key barriers related to individuals identified in studies in the NHS included the following:

Attitudes

- Resistance from clinicians and managers.[92–97]
- Lack of trust in the process, stakeholder organisations or data.[98,99]
- Perceived conflicts between the views of patients and professionals.[100,101]
- Assumptions about what patients want.[102]

Skills and training

- Lack of confidence among professionals about their abilities.[103,104]
- Lack of skills in improvement approaches.[105,106]
- Lack of skills in project management.[107]
- Lack of skills in change management.[108]
- Lack of analysis skills.[109,110]
- Lack of pre-registration training and continuing professional development about improvement.[111–113]
- Differences in individual learning styles.[114]

Time/prioritisation

- Lack of time available to think about improvement.[115,116]
- Lack of time available to implement improvement.[117]
- Competing priorities.[118]

Professional roles

- Strong disciplinary demarcation of roles.[119,120]
- Culture of specific professions.[121]
- Lack of authority or autonomy to undertake improvement.[122]
- Failure to assume responsibility.[123]

Resources

- Reimbursement and contractual issues, particularly for GPs and dentists.[124]

Staff resistance to, or lack of acceptance of, change was repeatedly highlighted. Factors identified as affecting staff acceptance involved the perceived negative impact of service change, staff–patient interaction, credibility and autonomy and technical or design issues.[125]

Below are some examples from individual studies.

Examples of studies that identified barriers related to individual characteristics

Clinician attitudes

In Wales, doctors and nurses at 22 NHS sites were interviewed about why they did or did not embrace online patient decision support initiatives. The greatest barrier was the attitudes of clinicians and clinical teams. Technical problems contributed to professionals' views but low engagement was mainly due to clinicians' limited understanding of how the tools could be helpful, thinking that shared decision making was already commonplace and assuming that some patients are resistant to being involved in treatment decisions. Clinicians did not feel the need to refer people to use decision support tools, and did not see why they should change their existing routines. Factors such as efficiency targets and guidelines were also cited as barriers.[126]

Confidence

A study of introducing end-of-life care pathways in three acute hospital trusts in England found that barriers may include leadership and facilitation, education and training, staff confidence and lack of communication across boundaries. Even when there was effective leadership at all levels of an organisation and extensive education for all staff, significant barriers remained, particularly staff anxieties about putting improvement into practice.[127]

Trust

A study in Scotland explored barriers to GPs taking part in external peer review. GPs were reluctant to take part because they questioned the value of participation over existing models for getting feedback internally. There was a limited understanding of the concept and purpose of external peer review and some distrust of the host educational provider and how the information would be used. GPs also placed limited value on the topics discussed and their relevance to routine clinical practice or professional appraisal. In short, they resisted because they did not trust the process, the organisations involved or the potential value.[128]

Incentives

Research in England explored barriers to improving specialised dental care. NHS remuneration was identified as a significant barrier because it led to a time–cost tension. It was argued that the NHS system rewards volume rather than quality and this may create a perverse incentive against improvement. A lack of comprehensive undergraduate and postgraduate education and training about improvement and about substantive topics was also suggested as a barrier.[129] This is another example of how barriers can span multiple fields. In this study incentives were discussed in the context of individual reimbursement, but they are also a system-wide issue. It highlights that policy and regulation decisions can have individual impacts, which in turn influence practitioners' motivation to take part in improvement initiatives.

Organisational barriers

The key barriers related to organisational or team factors identified in studies in the NHS included the following:

Culture

- Lack of culture of improvement.[130,131]
- Perceived culture of blame.[132]
- Lack of priority placed on improvement.[133]
- Risk averse culture and prioritisation of defensive practices.[134]
- Rituals that undermine improvement.[135,136]

Leadership

- Lack of strong leadership and clear shared vision for improvement, including at board level.[137–141]
- Hierarchical leadership structure rather than transformational or engaging leadership.[142]
- Undue focus on either clinical or managerial leadership.[143]
- Not ensuring leadership and autonomy for improvement at multiple organisational levels.[144]
- Lack of accountability for improvement.[145]

Focus

- Resistance to things imposed externally rather than perceived organisational needs.[146–149]
- Limited focus on person-centred services.[150]
- Attempting to localise everything rather than drawing on regional or national expertise.[151]

Resources

- Lack of organisational management time or capability.[152]
- Staff shortages and use of agency staff.[153]
- Lack of dedicated funding.[154]
- Systems not set up to support integration of improvement into existing processes.[155,156]

Information

- Lack of information sharing within organisations and teams.[157]
- Insufficient use of the data available.[158–160]
- Insufficient information and analysis systems.[161,162]
- Lack of, or inflexible, feedback structures in place.[163]

Timing

- Wanting to see 'quick wins' rather than allowing improvement time to embed.[164,165]
- Not allowing dedicated staff time for training or implementation of improvement.[166–168]

Engagement

- Insufficient engagement of professionals and patients.[169]

Below are some examples from individual studies.

Examples of studies that identified barriers related to organisational issues

Leadership and culture

A three-year evaluation of 16 integrated care pilots found that barriers to implementation included leadership, organisational culture, information technology, clinician involvement and the availability of resources. These are similar to the things identified in international literature. However, this study also identified different barriers such as the presence or absence of personal relationships between leaders in different organisations, the scale of planned activities, governance and finance arrangements, support for staff in new roles and organisational and staff stability.[170]

Organisational processes

A study of six acute hospitals in England explored implementing 'reasonably adjusted services' for people with intellectual disabilities. The research found that most changes did not result in consistent provision of adjustments and that improvements often depended on the knowledge, understanding and flexibility of individual staff and teams. This meant that improvement was haphazard throughout the organisations. Barriers included a lack of effective information systems, lack of staff understanding of what may be needed, lack of clear lines of responsibility and accountability for implementing change and no allocation of funding and resources.[171]

Resources

A study of setting up NHS Health Checks in pharmacies to provide cardiovascular screening for 40 to 74 year olds found that challenges included IT, developing confident and competent staff and ensuring that there were enough people using the new services (volume and flow). The researchers suggested that delivering improvement can be a complex process, requires a great deal of planning and can incur higher than expected costs.[172]

Information

Information gathering and audit may be part of the improvement cycle. A study of doctors' perspectives of taking part in a national clinical audit programme found that the main barriers were lack of a common vision and poor communication, which contributed to poor inter-professional relationships and a perceived culture of blame. Disseminating data improved engagement.[173]

Links between organisational, structural and individual factors

Interviews with 113 health and social care professionals from two mental health trusts and eight adult community mental health teams found that barriers to improvement included specific leadership styles and models of decision making, blurred professional role boundaries, generic working and lack of training for role development. At a more structural level, barriers included inadequate staffing levels, high caseloads, excessive administrative duties and incompatibility of information technology (IT). The researchers concluded that organisational issues such as team support, IT provision, administrative support and investment in leadership education would be useful.[174]

System-wide barriers

System-wide or contextual barriers have been a particular area of study for UK research. The key system-related barriers to improvement identified in studies in the NHS included:

Consistency

- Lack of stability in the system, meaning time is spent on reorganisation and reconfiguration rather than targeted improvement.[175]
- Conflicting priorities, perverse incentives and guidelines from regulatory authorities.[176,177]
- Differences in the priorities of policy makers versus professionals and patients.[178]

Drivers

- Perceived lack of strong policy context or guidelines for improvement.[179–181]
- Political rhetoric.[182]
- Perceived 'interference' from regulatory or policy bodies.[183]

– Lack of incentives or funding for improvement.[184,185]
– Lack of champions or early adopters.[186]

Structures

– Fragmentation and silos across services and sectors.[187–189]
– Lack of structures for disseminating learning quickly and routinely.[190,191]

Relationships and roles

– Lack of relationships between organisations or with policy makers and commissioners.[192–194]
– Strong professional pressure groups.

Below are some examples from individual studies.

Examples of studies that identified barriers related to system characteristics

Structural integration

A study in England explored how telemedicine interventions were set up and embedded into routine NHS practice. Contextual factors were found to play a significant role. Potential barriers included not having a positive link with a local or national policy-level sponsor, lack of structural integration of new processes and instability of organisational structures. Telemedicine improvements were found to flounder if they were not embedded into professionals' ways of working or supported by change champions and multidisciplinary teams. Political, organisational and 'ownership' factors were influential.[195]

Existing structures

A study of two regions in Scotland and two regions in England explored issues with improving care pathways and shifting care into the community. The research found that shifts in activity from secondary to primary care were small, non-strategic, piecemeal and not directly underpinned by resource shifts. Barriers identified included the immobility of existing resources, concerns about the appropriateness of shifting care, weak incentives and a lack of cooperation between key stakeholders. The researchers suggested that there was a fundamental tension because those to whom power was devolved were neither equipped, nor of the mind, to undertake the strategic resource shifts needed to underpin improvement.[196]

Incentives

A study undertaken in the 1990s explored how improving the uptake of day surgery in NHS hospitals depended on managerial and clinical incentives. At this time a high proportion of surgeons regarded day surgery as clinically acceptable for a wide range of procedures, but a lack of facilities and funding incentives limited adoption. The researchers concluded that improvement is more likely to flourish in the NHS where managerial and clinical incentives coincide. They argued that there are likely to be most barriers when administrative or performance management goals are at odds with clinical and wellbeing aims.[197]

Priorities

When interviewed about barriers to improving quality in general practice, NHS managers from England identified the absence of an explicit strategic plan, competing priorities for attention of the commissioners, sensitivity of health professionals, lack of information due to poor quality clinical data, lack of authority to implement change, unclear roles and responsibilities of managers within the organisations and isolation from other organisations facing similar challenges.[198]

Summary

This section summarises the main learning points and compares findings from research about the NHS to other countries.

Key barriers

Many policymakers and NHS managers and practitioners are passionate about improving health services – and a wide variety of initiatives have been tested. There are some examples of tangible change in the way that care is delivered and the outcomes for service users and staff. However, there may be just as many examples of improvement initiatives that fail to get off the ground. Once initiatives are established, their effectiveness may be inconsistent. Improvement is essential for the NHS – but it is not easy.

The published research suggests that the key barriers hindering improvement initiatives from developing, flourishing and embedding in the NHS include, in order of frequency researched:

1. organisational issues such as culture, leadership, teamwork, collaboration and IT infrastructure
2. system-wide issues such as perverse incentives, lack of coherent policy and infrastructure and lack of systems to support information sharing
3. individual-level barriers such as resistance among professionals and lack of time and capacity
4. initiative-related barriers, such as the design and usability of specific improvements.

Research about barriers to improvement in the NHS has particularly emphasised the importance of system-wide issues.

'Individual activities, roles and specific service configurations seemed far less significant than the overall culture, stability and long-term commitment to a service in a given area. Time is required for new service configurations to stabilise so that staff are able to overcome barriers and develop the necessary facilitators for quality care provision.'[199]

However, just because more research has focused on this does not mean that it is the most important barrier. This scan has provided lists of various types of barriers, but there is little empirical evidence to say whether one barrier is more prevalent or important than another. It is also true that the prevalence and priority of barriers is likely to depend on the context and the type of improvement occurring. Thus it is potentially unhelpful to try to distinguish the 'most important' barriers as these will differ according to context.

It is also important to note that although this scan has divided barriers into those focused on the initiative, individual barriers, organisational issues and system-wide factors, barriers may not fit easily into just one of these categories. There is much overlap and the barriers may interlink and feed off one another. Furthermore, barriers may occur at all four of the different levels simultaneously.

As well as thinking about barriers in terms of their substantive content, barriers can also be categorised according to where they occur along the improvement journey. In other words, **barriers are evident at the design, delivery and dissemination stages**.

The most commonly researched barriers are spread across varying stages of the improvement process (see table 4).

This scan adds value because this categorisation of barriers, according to both content and implementation stage is new.

Table 4: Spread of barriers to improvement at various stages of implementation

Potential barriers	Before implementation – design	During implementation – delivery	After implementation –dissemination
Initiative and implementation-related issues			
Evidence base	X		X
Usability of equipment/ tools		X	
Fit with existing practices		X	
Individual-related issues			
Attitudes/resistance	X	X	
Lack of knowledge and skills		X	
Culture/role demarcation in disciplines		X	
Organisational-related issues			
Organisational stability	X	X	
Culture	X	X	
Leadership	X	X	
Management skills	X	X	X
Use of information and data to support change	X	X	X
Time allocation	X	X	X
Financial resources	X	X	X
System-wide issues			
Policy/NHS culture/ regulation	X	X	X
Stability of NHS system/ reconfiguration	X	X	
Partnership working		X	X
Incentives	X	X	
Funding streams	X	X	

Note: Crosses indicate where barriers have been found to exist most prominently.

Is the NHS different?

The list of key barriers in the NHS largely conforms to what has been found in the international literature and in evaluations of Health Foundation-funded NHS initiatives. However, there are differences in emphasis.

When considering important facilitators to improvement, there is often a focus on training in specific improvement approaches and in change management, but this emerged less frequently in NHS literature about barriers. Individual-related factors focused more on potential resistance to change, lack of time and lack of capacity generally, rather than highlighting a need for specific training.

In the published international literature, the role of patient voices and advocacy groups has been explored as both a facilitator and barrier to change. In NHS research, there is little mention of the potential for patient knowledge or attitudes to act as a barrier to improvement. It is uncertain whether this is because this is not an issue in the NHS or because it has been overlooked by research.

The barriers identified in the NHS relate less to individual attributes or characteristics of the changes themselves, and more to organisational and system-wide issues. These are areas where policy intervention can have a major impact.

It is important to note that just because barriers are not well covered in the empirical literature does not mean that they do not exist in practice. The published empirical evidence is unlikely to capture all the subtleties and details about barriers to improvement, but it does highlight that organisational, team and environmental barriers are a core issue in the NHS. International literature is beginning to focus on these issues too, but perhaps to a lesser extent.

When looking at the differences and similarities between NHS research and international findings, it is important to consider whether aspects of the NHS are unique. Some argue that improvement may occur more slowly in the NHS compared to other health systems or sectors.[200–202] There are a number of potential reasons. The top three issues outlined in the empirical research[203,204] were:

1. NHS structure and culture,
2. expertise and experience
3. gaps between evidence and practice.

We briefly outline these issues, drawing together findings from the discussion sections of all 73 empirical studies included in the scan. To avoid repetition, all 73 citations are not provided again.

1. NHS structure and culture

Empirical research notes that the NHS is a large and complex system, with components that change frequently due to ongoing reforms. The lack of stability may lead to fragmentation, duplication and frustration and this may act as a barrier to improvement.[205,206] So too may the hierarchical structure and the constantly changing landscape of organisations and stakeholders with whom to interact.[207–209]

The issue of **stability** is important because organisations and teams may not have a strong sense of themselves as improvement agents and may be loath to begin large-scale improvement that spans different financial years. Organisational restructuring means that effort is expended setting up systems and structures, leaving less time to focus on improvement in service delivery.[210]

With widely varying priorities, **improvement may not be valued** within the NHS as a core task of organisations and individuals. Research suggests that there is little socialisation or sense of urgency to improve.[211,212] Commissioners and provider organisations may not have a shared vision of improvement and there may be few incentives for improvement built into the system on a local, regional or national basis.[213] Furthermore, collaboration with social care and the third sector may be limited.

The NHS also contains many specialised and **powerful professional groups** who may not wish to change or who support particular ways of working.[214] This can act as a barrier to improvement because it can be difficult to integrate new ideas with existing practices.[215]

The focus also tends to remain on individual 'projects' rather than embedding a culture of improvement or wider-level systems thinking, focused around the needs of patients and pathways.

Regulation and performance management may mean that professionals are averse to taking risks or trying something new.[216] Furthermore, regulatory and inspection priorities may not be aligned with improvement. There may be a focus on poor performing organisations and regulatory bodies may not provide tools and incentives that encourage professionals to take part in improvement.

2. Limited expertise and experience

Research suggests that generating ideas for improvement, putting them into practice and sustaining and sharing them, may require skills that are not traditionally within the scope of NHS health professionals and managers.[217] A lack of experience and expertise in improvement methods and in dissemination approaches may be a major barrier in the NHS which is perhaps less evident in the international evidence. This is not to say that the NHS has less skilled or experienced personnel overall, but perhaps in the past, less emphasis has been placed on **upskilling and supporting staff** to engage in improvement.

There may also be unrealistic expectations about how quickly improvements can be achieved, or a lack of staff time devoted to improvement programmes. While some professionals and managers may have **time allocated** to improvement work, this is not consistent across the sector.[218] For instance, doctors may be more likely to be able to negotiate time to undertake improvement than health care assistants. Even the notion of 'undertaking improvement' points to a specific mindset, whereby improvement is seen as a distinct entity or a project, rather than an entire culture or way of doing things.

3. Evidence versus practice gap

Although there are pockets of good practice, research suggests that the NHS can be slow to **adopt evidence** for improvement. This may be more pronounced than in other industries or in some other health systems due to fragmented commissioning and procurement practices in the NHS; a lack of frequent and productive interactions between industry and the public sector; and sub-optimal use of the many repositories of evidence-based reviews and guidance.[219–221] Use of evidence to guide decisions may be increasing, but the pace of change may be slower than in the private sector, where there is a need to innovate to survive.

Information is essential to improvement but **information technology** and data collection may not be well developed in the NHS. There are difficulties sharing information across services and sectors due to technological issues and because of legal and ethical issues. Analytical capability has not historically been a strength of the NHS.[222,223]

The way information is communicated to individual professionals and teams may also act as a barrier, with people not knowing the gap between their practice and good practice, or what to do about it. This gap in accessible information is one where policy makers and supporting organisations could make a substantial contribution.[224]

This scan has identified what is getting in the way of improvement in the NHS according to published research. Table 5 summarises the key findings. While some research suggests that reported barriers to improvement may be used as an 'excuse' or a way of avoiding change,[225] other research suggests that there are very real organisational and structural issues that hinder progress.[226–228]

The scan has not sought to identify solutions, but it is clear that tackling these sorts of barriers may require a complex set of educational and regulatory interventions and may take some time to achieve. No matter how dedicated, informed and experienced an NHS manager, professional or team is, some of these barriers cannot be tackled alone. There is much that individual professionals and teams can do to keep making NHS services even better, but policy makers also have a key role to play in facilitating those improvement efforts and addressing some of the hurdles that teams face.

Table 5: Key barriers to improvement in the NHS

Focus areas	Potential barriers
Initiative barriers	
Usability	• Initiatives are difficult to use or do not fit well within existing structures or processes
Resources	• Insufficient resources allocated to develop and sustain improvement • Basic equipment may not be available or may take a long time to source
Evidence base	• Lack of agreed evidence about how to improve • Lack of access to evidence base leading to not selecting the 'right' things • Not examining learning from other sectors • Lack of resource put into evaluating and sharing lessons learned
Individual barriers	
Staff attitudes	• Resistance to change • Lack of agreement that change is needed and the best way to improve • Different views between disciplines about the best way forward • Hierarchies in views about who should be involved in improvement
Staff skills and knowledge	• Insufficient improvement planning, implementation and dissemination skills • Insufficient data analysis skills • Insufficient skills in improvement methodologies
Organisational barriers	
Organisational culture	• Culture of blame rather than improvement • Lack of focus on improvement • Focus on 'quick wins' rather than sustained change
Leadership	• Lack of transformational and supportive visible leadership • Lack of investment in leadership development • Lack of leadership buy-in • Lack of leadership ability to interpret and act on data • Lack of connection between boards, managers and frontline staff • Unrealistic expectations
Management skills	• Lack of project management skills • Lack of clear communication and governance processes
Use of data	• Difficult to track data over time • IT systems incompatible between organisations and sectors • May be difficult and time-consuming to access data quickly and regularly
Time allocation	• Insufficient time allocated to think about ways to improve • Insufficient capacity allocated to implementing improvement • Duration of time allowed for projects is too short to show impacts
System-wide barriers	
NHS culture	• Perspective that real improvement is not a priority • Potentially risk-averse culture rather than willingness to change radically • Improvement not seen as 'everybody's business' • Focus on targets rather than improvement
Stability	• Changing policy priorities and competing drivers • Lack of stability of organisations in the sector and across sectors • Lack of stability of key roles (leaders and frontline staff) • No stable group leading and coordinating improvement efforts
Partnership working	• Silo working, protectiveness and tribalism • Not involving all key partners, including patients and carers and social care
Incentives and funding	• Lack of incentives to improve • Inverse/perverse incentives (eg Quality and Outcomes Framework targets, waiting targets) • Financial crisis meaning less resource is available to experiment

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The Health Foundation
90 Long Acre
London WC2E 9RA

T 020 7257 8000
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