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Raising Research Awareness Through Corporate Induction Using the Plan-Do-Study-Act Cycle: INTRO Project Phase 2

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Abstract

Background

Embedding research within routine healthcare practice is a strategic priority for the National Health System (NHS) in England and wider healthcare systems, yet staff awareness remains variable. Corporate induction offers a key opportunity to raise awareness about research however, delivery is inconsistent. This study reports Phase 2 of the INduction Training for Research Optimisation (INTRO) project, which piloted and evaluated standardised research induction resources across NHS organisations in England.

Methods

A multi-site quality improvement study using the Plan–Do–Study–Act cycle was undertaken across five National Health Service Trusts. Corporate induction research resources, comprising a short video and structured slides, were developed and implemented within corporate induction programmes. A mixed-methods evaluation was undertaken using a staff survey assessing usability, relevance, and impact (n = 105), alongside qualitative data from focus groups and interview (n = 7) analysed thematically using Normalisation Process Theory.

Results

The intervention demonstrated high-level acceptability and feasibility. Of 105 survey respondents, 72% (n = 75) viewed the resources in less than ten minutes. 95% (n = 99) respondents found the materials easy to understand. 39% (n = 41) were not aware of research within their organisation before viewing the resources, which increased to 88% (n = 92) having awareness of research at their organisation after viewing the resources, 87% (n = 91) reported a positive change in their perception of research and 84% (n = 88) indicated a greater likelihood of supporting research. Qualitative findings identified the perceived value of a national resource, strong stakeholder engagement, and adaptability to local contexts, which informed recommendations for local implementation. Barriers included perceptions of limited time within induction programmes, competing organisational priorities, and challenges in maintaining visibility beyond induction. Early behavioural and cultural impacts, including increased engagement with research and improved awareness across staff groups, were suggested as future recommendations.

Conclusion

Standardised, ‘bite-sized’ resources were feasible and acceptable for improving research awareness at corporate induction across diverse healthcare organisations. Embedding such resources within corporate induction increased research awareness and can contribute to developing a research-active

workforce, although sustained impact requires ongoing awareness-raising beyond induction and the development of robust approaches to evaluate long-term behavioural and cultural change.

Contributions to the Literature

Applies Normalisation Process Theory to quality improvement study evaluation.

Demonstrates feasibility of embedding research awareness into corporate induction at scale.

Identifies organisational complexity as a barrier and stakeholder engagement as a key facilitator.

Background

Research-active healthcare organisations consistently demonstrate better patient outcomes, improved service efficiency, and enhanced staff development opportunities [1, 3]. Research involvement is, however, often viewed as an activity performed by designated staff with limited visibility in everyday practice [4]. The United Kingdom National Health Service (NHS) policy and the National Institute for Health and Care Research (NIHR) emphasise the importance of embedding research through healthcare staff training, infrastructure, and leadership initiatives [5], but ensuring that all NHS staff understand the relevance of research to their roles remains challenging [6].

Corporate induction programmes represent an important, but underutilised, opportunity to raise awareness about research among all new employees. Corporate induction programmes primarily include statutory and mandatory training to meet legal and regulatory requirements, with research seldom or inconsistently included [4, 7]. A national survey in England highlighted that, although research is referenced in healthcare professionals job descriptions, most induction programmes dedicate little or no time to it [4]. Where content exists, it is often limited to brief signposting, with wide variations in delivery, length, and scope [8]. This gap suggests the need for a more standardised approach to incorporating research content into induction programmes to raise awareness about research, its importance and normalise research as part of daily NHS practice.

To address this, the Induction Training for Research Optimisation (INTRO) Quality Improvement Project was conducted using the Plan, Do, Study, Act (PDSA) cycle [9, 10]. Phase 1 (Plan) involved a national stakeholder consultation using co-production methods to generate consensus recommendations for incorporating research awareness resources into healthcare induction programmes [8].

Aims and objectives

To raise awareness about research with new starters from all NHS staff groups, with the broader aim of ensuring that research is integral to everyday healthcare delivery.

The following objectives were achieved through the Do, Study and Act stages of the PDSA cycle [11]:

- Identify existing corporate induction research resources (CIRR) from stakeholders across England and review against recommendations from the national consultation, to determine if novel resources needed to be created within the Do stage of the cycle
- Develop novel resources, if required within the Do stage of the cycle
- Examine the feasibility, acceptability and perceived value of the INTRO resources within NHS corporate induction programmes as part of the Study stage of the cycle
- Where implemented, understand implementation and adoption using Normalisation Process Theory (NPT) [10, 11] to complete the Study stage of the cycle
- Propose and share recommendations to guide embedding of standardised research awareness resources across healthcare organisations within the Act stage of the cycle.

Method

This mixed-methods study was conducted as a quality improvement project at five NHS organisations. We have followed the Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) guidelines [12] to ensure transparency and rigour in reporting the Do, Study and Act stages of the cycle, which builds on the Plan stage of the cycle [8].

Scoping existing, and developing novel, CIRR (the intervention) to raise awareness about research (Do Stage)

A Project Steering Group, comprising of research, education and training, and induction programme leads alongside staff from NHS organisations across England, and patient and public representatives, provided oversight of the project. Twenty-four diverse resources (already used to raise awareness about research at induction within English NHS organisations) were sourced from participants of the Plan stage of the study, members of the expert Steering Group and fellow NIHR senior research leaders. These resources were independently assessed by two of the project team against the recommendations from the Plan Stage of the study and findings tabulated under the headings: resource name, source, purpose, type of media, time taken to complete, independent reviewer comments. Steering Group consensus was reached to, 1. Create a new standardised slide set that included editable slides, where organisation-specific information could be added (about organisational research activity and research contact details) (Supplementary File 1), and 2. Edit an existing organisation-specific three-minute (so it could be used across NHS organisations), with new audio overlay scripted with the Project Steering Group (Supplementary File 2). Together, the set of six slides and the two minute and 55 second video formed the CIRR [13].

Setting, Participants and Sampling (Study Stage)

Five NHS organisations were purposively sampled [14] to ensure variation in organisational type (large acute, specialist-orthopaedics, women's and babies', children's, and an NHS Trust Integrated Care System (ICS) including acute, community, learning disabilities, mental health, and general practices). These sites were also where project co-leads were employed and engaged key stakeholders to facilitate the implementation. These stakeholders included: research leads, professional group leads, education and training leads, organisational development leads, and induction programme leads and their staff. For online survey data, respondents were staff who had read, viewed or attended corporate induction that included the CIRR from January (dependent on the study site) until December 2025. These staff members were invited to voluntarily provide anonymous survey responses. Staff who oversaw or facilitated implementation of the resources were invited to participate in a focus group.

Data Collection (Study Stage)

A mixed-methods approach was used. Quantitative data (closed questions, e.g. multiple-choice, Likert Scale and yes/no responses) were collected using an online Google Form. The survey questions, developed in in collaboration with the Project Steering Group, aimed to evaluate baseline awareness of research, perceptions of research, and comprehensibility, duration, relevancy, suitability, acceptability, and overall value of the CIRR (Supplementary File 3). Qualitative data were collected through a two-hour focus group and a one-hour individual interview (for one stakeholder who could not attend the focus group). The focus group topic guide was developed in consultation with the Project Steering Group to gather in-depth data about: Initial thoughts about the project; Participation in the project and the process of implementation; Opportunities and barriers for implementing the CIRR; and Overall perception of the project.

Data analysis (Study Stage)

Quantitative data were analysed using descriptive statistics (n, %). Qualitative data were captured using MS Teams transcripts, which were verified for accuracy by an experienced qualitative researcher on the project team, and where needed, corrections made. Coding and thematic analysis [15] was conducted by a small group of the project team. Themes were further analysed and sorted under the components of the four constructs of the Normalisation Process Theory (NPT) [10]: coherence (understanding a new practice); cognitive participation (relational work required to sustain engagement); collective action (operational work done to endorse practice); and reflexive monitoring (appraisal work undertaken to assess impact and value) [11]. Independent coding, thematic analysis and alignment with NPT constructs and components was conducted by a second experienced qualitative researcher in the project team, and agreement was reached about any differences through group discussion in reference to transcript data.

Ethical considerations (Study)

The NHS Health Research Authority did not consider the project was research, so Research Ethics Committee approval was not necessary. Approval was instead sought from Quality Improvement and Governance Groups from each individual study site and data were collected, processed and stored in compliance with the United Kingdom (UK) General Data Protection Regulation and the Data Protection Act [16]. The online survey included information about anonymity to conceal the identity of respondents, the purpose of the survey and planned publication of findings and that responding to the survey would be regarded as informed consent to participate. Participant information sheets were shared with invitations to focus groups and interview, fully informed written consent was obtained prior to the focus group and interview, and consent was verbally confirmed by participants at the start of the focus group and interview.

Dissemination (Act)

Recommendations from the focus group participants, Project Steering Group, Director of the NIHR Nursing and Midwifery Programme, and Director of the NIHR Nursing and Midwifery Senior Research Leadership Programme, informed dissemination of the CIRR and outcomes of the INTRO evaluation study.

Results

Quantitative data collection period

A pragmatic approach was taken regarding the start date of quantitative data collection at the different study sites. Implementation commenced as soon as local approvals were obtained. Due to variation in the time taken to gain local approvals, the date of implementation of the CIRR and of online survey data collection, therefore, varied by site (Table 1).

Table 1
CIRR Implementation Date by Site

Study Site ID	Nature of site	Type of CIRR	Induction attendees during evaluation period	CIRR implementation date
1	Women and babies	Slides and video presented at induction event	167	January 2025
2	Children's	Slides and video presented at market stall on induction day	289	April 2025
3	Orthopaedics	Slides and video on online Learning Hub	213	January 2025
4	Integrated Care organisation (NHS) Acute, Community, mental Health, learning disabilities, and general practice	Slides and video presented at induction event	340	April 2025
5	Large acute hospital trust	Slides and video on online learning hub	0	December 2025

Note: Due to the lengthy approval process, survey data was not collected site 5, however qualitative data was gathered regarding the implementation process.

Implementation strategies

The CIRR were incorporated into induction using a range of delivery formats dependent on usual delivery of the corporate induction programme by site. Strategies included online learning platforms, face-to-face or hybrid sessions, marketplace events, sharing QR codes to webpages where online resources were published, and printed handouts of the slides.

Participant characteristics

The demographics of 105 survey respondents is shown in Table 2. The number of responses varied by site, reflecting the duration of data collection at different sites. Most responses were from nurses and midwives, but respondents represented all the main staff groups. There was also a range in the length of time respondents had worked in the NHS.

Table 2
Survey Respondent Demographics (n = 105)

Demographic		n	%
Site	1	41	39
	2	41	39
	3	13	12.5
	4	10	9.5
Staff group	Nurses and midwives	34	32.4
	Allied health professionals	15	14.3
	Healthcare assistants	13	12.4
	Administrative and clerical staff	12	11.4
	Medical and dental staff	10	9.5
	Other	21	20
Experience working in the NHS	No prior experience	8	7.6
	Less than 1 year	35	33.3
	1–3 years	14	13.3
	3–5 years	8	7.6
	5–10 years	12	11.4
	More than 10 years	28	26.7

Six focus group participants and one interview participant were all female, and included research and education leads who facilitated the delivery of, or delivered, CIRR from four of the study sites (1, 3, 4 and 5) and a key stakeholder from Phase 1 of the project.

Staff Evaluation of Clinical Induction Research Resources

Survey data were collected from 105 respondents at four study sites, shown in Table 3. In terms of usability, 23 (22%) spent less than five minutes viewing the CIRR, of which 11/23 (47.8%) viewed the slides, 2/23 (8.7%) viewed the video and 10/23 (43.5%) viewed both the slides and the video. The majority that spent six – ten minutes viewing the CIRR, 44 (84.5%) viewed both resources, with only six (11.5%) viewing the slides and two (3.8%) viewing the video. 15 (68.2%) of those who spent 11–15 minutes viewing CIRR, viewed both resources, six (27.3%) viewed the slides and one (4.5%) viewed the video. Respondents that spent more than 15 minutes reviewing the resources mainly viewed both the slides and the video 7 (87.5%), with only one (12.5%) viewing the video. For those respondents who took longer than 5 minutes to view the video, we could not determine if this was due to time taken to access the resource, buffering during viewing or repeated viewings.

The success of the CIRR was indicated by a change in respondents' awareness of research conducted in their employing organisation from 61% (n = 64) at baseline to 88% (n = 92) after viewing the CIRR. Other encouraging findings were that 87% (n = 91) respondents reported a positive change in their perception of research and the resources increased the extent in which 84% (n = 88) would support research going forward.

In terms of relevance and suitability, the CIRR were reported to be relevant and comprehensible, and most respondents were likely to recommend the resources to other staff. Also, the majority were satisfied with the resources, although two respondents were not satisfied. Respondents were asked to share reasons for their responses in a free-text box. Two respondents, who thought the resources were good quality, would have preferred an in-person interaction.

Table 3
Findings from Online Survey (n = 105)

CIRR Evaluation Criteria		n	(%)
Type of CIRR viewed	Slides	23	22
	Video	6	6
	Both	76	72
Time taken to view resources	Less than 5 minutes	23	22
	6–10 minutes	52	50
	11–15 minutes	22	21
	More than 15 minutes	8	7
Baseline awareness of research conducted within employing organisation	Yes	41	39
	No	64	61
Increase in awareness of research conducted within organisation after viewing CIRR	Strongly Agree	42	40
	Agree	50	48
	Neither agree nor disagree	11	10
	Disagree	2	2
	Strongly disagree	0	0
Positive change in their perception of research	Strongly Agree	27	26
	Agree	64	61
	Neither agree nor disagree	13	12
	Disagree	1	1
	Strongly disagree	0	0
CIRR increased extent that respondent would support research in future	Strongly Agree	31	30
	Agree	57	54
	Neither agree nor disagree	17	16
	Disagree	0	0
	Strongly disagree	0	0
Relevancy	Extremely relevant	20	19

CIRR Evaluation Criteria		n	(%)
	Very relevant	42	40
	Moderately relevant	19	18
	Slightly relevant	19	18
	Not at all relevant	3	3
	Prefer not to answer	1	1
Comprehensibility	Strongly Agree	49	47
	Agree	50	47
	Neither agree nor disagree	6	6
	Disagree	0	0
	Strongly disagree	0	0
Likelihood of recommending to others	Extremely likely	28	27
	Very likely	44	42
	Moderately likely	20	19
	Slightly likely	9	8
	Not at all likely	4	4
Overall satisfaction	Very satisfied	38	36
	Satisfied	54	51
	Neither satisfied nor dissatisfied	10	10
	Dissatisfied	1	1
	Very dissatisfied	1	1
	Prefer not to say	1	1

NB: Percentages are rounded to sum 100% for each criterion

Evaluation of CIRR Implementation

Emergent themes from the focus group and interview were thematically analysed and grouped using NPT constructs and components (Table 4).

Table 4
Summary of the Emergent Themes Using Normalisation Process Theory

NPT Constructs	NPT Components	Themes
Coherence	Communal specification	Understanding of aim of project pilot
	Internalisation	Perceptions of project aims
		Desire to have a resource
		Suitability of resources in current format
Cognitive participation	Enrolment	Key stakeholders for organisation approval
	Activation	Sense of Shared Commitment to Implement CIRR
		Plans for future use
	Legitimation	Sense of ownership
Collective action	Skill-set workability	Key stakeholders as facilitators
	Contextual integration/ Interactional workability	Opportunities and barriers to implement
		Strategies and interventions used to implement
Reflexive monitoring	Reconfiguration	Suggestions for sharing more widely
	Individual appraisal	Evidence of a change in staff behaviour and short-term impact
	Communal appraisal	Evaluating future impact

Coherence

Understanding the aim of project was an emergent theme within the NPT component of *Communal Specification*. The project aims were understood by all participants who referred to transparency, inclusive engagement and effective communication throughout the project. One participant (P5), however, explained that they had been asked to share the resources *"because it was a national thing"* and did not understand *"any detail"* of the project.

Multiple findings illustrated the NPT component *Internalisation*; three themes emerged: 'Perceptions of the Project Aims', 'Desire for the Resources' and 'Suitability of Resources in Current Format', where participants talked about the value, timeliness and importance of the project and the brevity and appropriateness of the resources.

"It is a really useful and essential that [raising awareness about research is] in the introduction of any organisation." (P1)

In reference to Perceptions of the Project Aims, participants emphasised the importance of embedding research within organisational culture from the outset, particularly during corporate induction.

"When you start in an organisation, that's your key moment […] if you hear that in corporate induction […] it sends a really powerful message." (P3)

The national scope of the initiative also increased its perceived legitimacy and impact:

"It's just so positive to see it being rolled out, as a trust, and as a national drive towards promoting research." (P6)

A few participants, however, expressed initial concerns about adding content to corporate induction where there were competing priorities and not wishing to overwhelm new starters with too much information.

"*I had some real concerns about adding additional material to corporate induction that already felt incredibly packed and overwhelming for new starters. […] Those initial concerns that I had about this information overload, having had that ability to talk it through, it didn't then seem like an unreasonable thing to be putting on corporate induction."* (P4)

There was a strong Desire for a Resource, expressed through a perceived and overdue need for a resource to raise research awareness.

"We didn't have anything of that kind on corporate. So, it was really good that we've been able to bring that to our trust and […] it's just come at a really good time." (P7)

In terms of the Suitability of Resources in Current Format, CIRR were generally viewed as concise, format, and level of detail, referring to *"planting a seed"* (P7).

"They're not overwhelming. They they're quite short, snappy. However, they give the information they want and the little video […] it's really powerful. […] It's gone down well." (P5)

Participants highlighted the benefit of having a centralised resource that could be adapted across organisations, though some expressed tension between standardisation and local contextualisation.

"Now having come through the whole process, you realise that it needs to be a standardised. […] That obviously has your individual Trust contact details, but it needs to be the same so that people are getting the same thing everywhere. […] I think someone suggested we had pictures of who our research team is. It makes it too long. Too much information. […] Information that's not relevant." (P7)

Cognitive participation

Findings were identified for three components of the NPT construct *Cognitive Participation*: *Enrolment*; *Activation*; and *Legitimation*.

The theme ‘Key Stakeholders for Organisation Approval’ aligned to the component *Enrolment.* These included members of the Project Steering Group and local implementation teams. Participants emphasised the importance of involving key organisational actors, including research and development (R&D) teams, education teams, and multidisciplinary clinical representatives, to strengthen early engagement, secure approval and support implementation.

“Representatives from R&D […] the medics as well […] the nurses and the non-medics […] they were all involved.” (P1)

Two themes: ‘Sense of Shared Commitment to Implement CIRR’ and ‘Plans for Future Use’ were part of the process of *Activation*. Participants spoke about their own and their organisations shared commitment to implement the resources, although managing engagement and consensus was more challenging in large organisations.

“There was really good commitment and shared ownership of it. […] But as with everything in the organisation that's so big, that's hard.” (P1)

Within the theme Plans for Future Use participants reported their organisations’ intentions to continue use beyond the pilot period through scheduled induction sessions and online programmes.

“Yeah, we are definitely […] we’ve got calendar dates for the rest of the year.” (P7)

Most participants thought the CIRR should be shared with staff who were already employed, who were the majority. They suggested that this could be through other education and training opportunities, within clinical or local induction programmes, through the organisation’s social media accounts and/or at local team meetings.

“[The resources could be used for] reaching groups who are, you know, who've been in the organisation a long time.” (P2)

Legitimation came from participants talking about a ‘Sense of Ownership’. Together with organisational commitment there was a sense of strategic ownership, but there was less of a sense of ownership among operational staff who uploaded materials onto online learning platforms or delivered in-person presentations. In some cases, implementation was experienced as directive, where facilitators did not understand why the resources could not be further adapted to be “more personalised” (P7).

“We were literally just handed slides and said can you include these… here are the slides, run with them.” (P5)

Collective action

Three themes were identified within three NPT components: ‘Key Stakeholders as Facilitators’ (*Skill-Set Workability*); and Strategies Used to Implement and ‘Barriers to Implementation’ (*Interactional Workability and Contextual Integration*). To ensure *Skill-set Workability* the project leads worked closely with key

stakeholders in their own organisations, particularly R&D lead, education and training leads and corporate induction leads, to identify colleagues who would facilitate delivery of the CIRR. Participants emphasised the importance of engaging early with those responsible for delivery to ensure the CIRR were acceptable and feasible to deliver within corporate induction.

"I think you'd certainly engaged the right people […] what ended up getting put out was acceptable to everybody." (P1)

Strategies Used to Implement primarily included integrating the resource into existing induction programmes and events. One participant talked about a variety of ways the resources were personally shared in their organisation:

"[The] slides are printed out […] and the Rover gets wheeled around everywhere, so it is probably shared at more than just induction. […] We had water bottles, pens, notebooks and teddy bears […] we go round to the wards and we talk about research. […] We have the QR code so they can ask, do you know about research and what happens? So, after the induction session, during the lunch break we have the slides printed out and to talk people through them. And say we're research [...] So to give someone a leaflet, a flyer or a pen [with the research team email], that's the only way they're going to remember what on Earth they've learned that day!" (P6)

Delivery through online induction programmes was seen as both an opportunity as it enabled easy upload and broad access, it also reduced potential engagement compared to face-to-face delivery and was perceived to generate future work in maintaining and updating online content.

"The slides and the videos sit really nicely within a virtual welcome pack that everybody has to access." (P4)

Participants also reported 'Barriers to Implementation'. Limited time within already crowded induction programmes was proposed as the "biggest difficulty" (P1). Other barriers included competing organisational priorities, and complex approval processes within large institutions, which delayed implementation, and where free goods, e.g. branded pens, were initially given as incentives, funding was no longer available.

Reflexive monitoring

Within this NPT construct most findings were within the component *Reconfiguration* and the theme 'Suggestions for Sharing More Widely', where participants reflected on the project and considered how accessibility, visibility and use of the CIRR could be extended. The perceived quality of the CIRR was associated with the robustness of how the project was conducted.

"I feel like this piece of work has been done in a really robust way with the opportunity for lots of stakeholder engagement, lots of different views." (P3)

Suggestions were made to:

"Make it as easy to find as possible […], [create] that function within Google […] to pin this as a top. […] Continue building momentum (e.g. sharing at Trust events) so that it becomes the culture of the organisation." (P4)

And "[Create] screen savers. […] Use 'all-staff' e-mail". […] Just try to think of every possible opportunity [to share]." (P7)

Participants *Individually Appraised* the perceived effectiveness of the project and CIRR through Evidence of Change in Staff Behaviour and Short-term Impact. Accomplishing inclusion of the resources in corporate induction was regarded as a success.

"I think having achieved getting that [the CIRR] on there, on that [the corporate induction] programme, really is a big achievement." (P1)

Evidence of behavioural impact was also regarded as success, where individuals from different staff groups contacted a research team following viewing the CIRR.

"I've had two people come to me […] saying they saw something on research at the end of induction." (P6)

Participants also reflected upon 'Evaluating Future Impact' considering the need for *Communal Appraisal* to assess anticipated impact. Suggestions were made to collect baseline data within organisations, but there was uncertainty regarding appropriate evaluation metrics.

"We just we have had this conversation within the team. […] How do you how can you tell if it's being successful? We're successfully delivering it but is it having an impact?" (P7)

Recommendations for Implementation

Implementation of the CIRR had achieved its aim to raise awareness about research with new starters from all NHS staff groups, so the resources did not require refinement. Several suggestions were made about recommendations for implementing the resources at both local and national levels. Nationally the resources were shared on the NHS Futures website and with senior research leaders in the NHS. Recommendations were also made for local implementation. See Box 1.

Box 1. Recommendations on how to implement the CIRR at organisational level

1. Identify key stakeholders for approval and delivery, e.g. research and development directors/leads, Education and Training directors/leads, corporate induction leads
2. Identify desire for the organisation to have information to raise awareness about research within the corporate induction programme
3. Explain the aim of the resources *is to raise awareness about research for all staff groups*
4. Share the resources and highlight their brevity
5. Explain the CIRR are national, evidence-based resources
6. Share the link to the NHS Futures webpage, where the resources can be downloaded
7. Explore opportunities to implement, e.g. internal webpage with URL/QR code, in-person induction events/marketplaces
8. Offer to make edits, own ongoing update and be pragmatic about implementation and timescales, implementing in six months is preferable to not implementing at all
9. Agree a method of evaluating implementation at your organisation.

Discussion

This study demonstrates that standardised research induction resources are both feasible and acceptable to include within corporate induction programmes across diverse NHS Trusts, with evidence of improved awareness, usability, and willingness to support research activity. These findings reinforce the value of corporate induction as a critical early opportunity to introduce and normalise research within routine organisational practice [17].

A key contribution of this study is the demonstration that successful implementation extends beyond the quality of the resources themselves, requiring substantial organisational work to embed it within existing systems. Consistent with Normalisation Process Theory, implementation depended on the interaction between coherence (shared understanding), cognitive participation (stakeholder engagement), collective action (operational integration), and reflexive monitoring (ongoing appraisal). In particular, while national framing supported legitimacy and coherence, local implementation relied heavily on engagement from multidisciplinary stakeholders, including research and development teams, education, training and induction leads, governance structures, and senior organisational champions [18].

Our findings also highlight the influence of organisational complexity on implementation. Approval processes within NHS settings often involve multiple stakeholders and governance layers, which can delay adoption and introduce variability across sites [19]. This reinforces the importance of considering organisational context, not as a passive backdrop, but as an active determinant of implementation success. Even relatively simple interventions, such as brief educational resources, required negotiation, alignment with existing priorities, and adaptation to local processes [20]. Despite these challenges, the high-level acceptability of the resources was notable, particularly within the constrained environment of corporate induction. Participants valued the concise, accessibility, and practical format, suggesting that

that brevity is a key facilitator of implementation in time-pressured organisational settings. These factors informed the recommendations made for local implementation of the CIRR.

Another important finding is the tension between standardisation and local adaptation. While a consistent national resource support scalability, shared messaging, and efficiency, local tailoring is required to align with organisational structures, priorities and workflows [21]. This balance reflects broader implementation science principles, which emphasise that interventions are more likely to become sustained when they are both standardised in core components and adaptable in delivery [17]. In this study, flexibility in implementation strategies, such as digital integration and supplementary materials, appeared to facilitate uptake, while maintaining fidelity to the core resource [22].

Induction alone, however, is unlikely to achieve sustained cultural change. Without ongoing reinforcement organisational communication, leadership support, and integration into continuous professional development, the impact of a one-off intervention may diminish over time [17, 23]. Importantly, early indicators of behavioural and cultural change were observed, including increased awareness of research and initial engagement from staff across professional groups. Although these findings are encouraging, participants also highlighted challenges in measuring impact, particularly in the absence of baseline data and standardised evaluation metrics. This underscores the need for future work to develop robust approaches to evaluating the long-term effects of research awareness interventions, including behavioural outcomes and organisational culture change.

Overall, this study demonstrates that embedding research awareness into corporate induction is achievable at scale across heterogeneous healthcare settings. However, sustained impact requires more than initial implementation. It will depend on ongoing commitment, repeated exposure, and integration into wider training and development systems [24]. This study contributes to the implementation science literature by showing that stakeholder coordination, governance processes, and institutional complexity are central, not peripheral, to the normalisation of new practices. These findings provide practical insights for scaling similar interventions and highlight the importance of aligning national initiatives with local organisational realities.

Strengths

Selecting a small number of study sites enabled exploration of implementation across different healthcare contexts while collecting in-depth data [17]. This approach is consistent with quality improvement methodology, where early-stage testing on a limited scale supports iterative learning and refinement prior to wider rollout [18]. New starters from all staff groups were invited to respond to the evaluation survey, reflecting the breadth of staff working in the NHS, enhancing the transferability of findings. A mixed-methods approach enabled evaluation of both the resource and the implementation processes. The use of NPT offered a robust theoretical framework to understand how the intervention was implemented in practice. Inclusion of multidisciplinary participants from research, education and training, and organisational development, ensured a broad range of perspectives. In addition, the

structured coding framework and detailed supplementary table strengthened the transparency and rigour of the qualitative analysis.

Limitations

The relatively small number of participating organisations may limit generalisability. We adopted a pragmatic approach to the start date at the different study sites, as we felt this reflected real-world implementation of a project across several sites. The variation in start dates arose from organisation-specific approval timeframes. This meant that the data collection period was shorter at some sites. Also, at one study site data collection was retrospective from January 2025 to May 2025 and prospective data from May 2025 to December 2025. A further limitation, caused by the timeframe, was that many NHS organisations had reduced numbers of newly staff appointed due to considerable financial constraints through that financial year. It was not possible to conduct inferential statistical analysis, but descriptive statistical analysis was sufficient to address our study aim. Additionally, quantitative findings were based on self-reported data, introducing potential response bias. The qualitative sample, although multidisciplinary, consisted entirely of female participants, which may limit diversity of perspectives. The study focused on short-term outcomes; longer-term impacts on behaviour and organisational culture could not be assessed. Finally, disparity in local implementation approaches may have influenced the consistency of outcomes across sites.

Conclusion

The INTRO Phase 2 study demonstrated that resources to raise research awareness in corporate induction was both feasible and acceptable across diverse NHS settings. By providing a bite-sized, standardised, and editable resource, the intervention raised awareness about research with newly appointed staff and supported the early normalisation of research within organisational practice. The CIRR have been shared nationally and recommendations made for local implementation, however, sustained impact is unlikely to be achieved through induction alone. Future efforts should focus on scaling implementation, reinforcing messages beyond initial induction, and developing robust approaches to evaluate long-term behavioural and cultural change. Strengthening these elements will be critical to embedding research as a routine component of everyday healthcare practice.

Abbreviations

CI
Corporate Induction
CIRR
Corporate Induction Research Resources
INTRO
INduction Training for Research Optimisation
NIHR

National Institute for Health and Care Research
NHS
National Health Service
NPT
Normalised Process Theory
PDSA
Plan–Do–Study–Act
R&D
Research and Development
SRL
Senior Nurse and Midwife Research Leader
UK
United Kingdom

Declarations

Ethics approval and consent to participate

This study did not require ethics approval according to the NHS Health Research Authority Decision Tool. Nonetheless, the project was conducted in accordance with national Data Protection Law and the Declaration of Helsinki. Local quality improvement project approvals were gained at each study site. Informed consent was gained from all participants. Survey respondents were provided with information at the start of the survey that their anonymous responses would be analysed and used for reporting the project outcomes in peer-reviewed journals. Survey respondents were informed that submission of their responses would be regarded as informed consent. Fully informed written consent was obtained from all interview and focus group participants, which was confirmed by verbally at the start of the interview and focus group.

Consent for publication

Not applicable

Availability of data and materials

The data collected in this study are available upon request.

Competing interests

The authors have no competing interests to declare.

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Authors' contributions

VL, MT and DM co-led the project. They contributed to study design, data collection, analysis, and manuscript preparation.

LA contributed to data collection, data storage and contributed to manuscript preparation.

NM contributed to creation of the CIRR intervention and manuscript preparation.

LR, AMJ, CL and JT contributed to data collection and analysis, and manuscript preparation.

All authors read and approved the final manuscript.

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