

Effecting a national implementation project through distributed leadership in the West Midlands: rising to the spread challenge

James Gillies,¹ Victoria A Hodgetts Morton,² Simone Jasim,¹ Caroline Fox,³ Penny Broggio,⁴ Thillagavathie Pillay ^{5,6}

To cite: Gillies J, Morton VAH, Jasim S, *et al*. Effecting a national implementation project through distributed leadership in the West Midlands: rising to the spread challenge. *BMJ Open Quality* 2021;**10**:e001227. doi:10.1136/bmjopen-2020-001227

Received 11 October 2020
Accepted 9 May 2021



© Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹NHS Improvement, NHS England, Birmingham, UK

²Obstetrics, Birmingham Women's and Children's NHS Foundation Trust, Birmingham, UK

³Obstetrics, Birmingham Women's and Children's Hospitals NHS Foundation Trust, Birmingham, UK

⁴Paediatrics, Birmingham City Hospital, Birmingham, UK

⁵Faculty of Science and Engineering, University of Wolverhampton, Wolverhampton, UK

⁶Neonatology, University Hospitals of Leicester NHS Trust, Leicester, UK

Correspondence to

Professor Thillagavathie Pillay; t.pillay@wlv.ac.uk

ABSTRACT

We describe the utility and impact of a distributed leadership model to implement a National Health Service (NHS) England Academic Health Sciences national quality improvement programme, in the West Midlands. This model was adopted to address the inherent difficulties of implementing change in practice in a large geographical region with a diverse population of health service personnel. We report on the inclusion of a senior trainee as part of the implementation team, supported by a multidisciplinary clinical consultant team, with equal agency in decision making, acting as mentors and activators in the background.

INTRODUCTION

The problem

In December 2018, the West Midlands Academic Health Science Network (WMAHSN) was tasked with the spread of a quality improvement programme, Preventing Cerebral Palsy in Preterm babies (PRCePT) for the region, as part of the National Academic Health Science Network thrust to deliver this innovation to the country at scale and pace.¹ PRCePT focused on increasing uptake of magnesium sulphate (MgSO₄) administration to mothers in established preterm labour <30 weeks gestation, to reduce the risks of cerebral palsy in their preterm babies.² The WMAHSN was the last network to engage in this national implementation work. The region had the worst 2017 baseline uptake of MgSO₄ at this stage (58.6%³); targets of 85% were set by the national programme.²

The leadership model employed by the national PRCePT programme included a single clinical lead per region providing oversight, support and guidance to nominated trust-based obstetric and neonatal PRCePT team leads. These team leads then cascaded information within their respective organisations with progress fed back to the regional and national PRCePT team.

For the West Midlands, this single clinical model posed significant challenges: first, the region stretches over 90 miles South to North and East to West covering 5000 square miles and encompassed 14 obstetric and 14 neonatal units, in 13 hospital trusts. Time constraints dictated by geographical size and number of providers made face to face discussions and support, if led by a single individual, less likely to succeed. Second, the obstetric and neonatal services varied in the clinical exposure (number of cases) in dealing with preterm pregnancies eligible for this intervention (24⁺⁰–29⁺⁶ weeks). These ranged from just 1 eligible case per year at maternity services linked to 4 special care baby neonatal units (caring for the bigger baby, less ill), to 80 eligible cases per year in those maternity services linked to 5 neonatal intensive care units (NICU) (caring for the sickest and most premature of babies), and 5 local neonatal units (LNU) (intermediate capabilities for neonatal care). This together with a diversely experienced workforce meant that different levels of support for implantation of change would be required.

Rationale and aim

These challenges were acknowledged and reflections on learning from the Health Foundation,⁴ highlighting that successful spread of innovation in the National Health Service (NHS) needs to focus on the needs of those adopting the innovation and their context and not the innovation itself. To not do so would risk the pace and results from spread of innovation to the West Midlands achieving the expected national targets. To overcome these challenges, a novel team structure was developed, modelled around distributed leadership in effecting the spread challenge.



The distributed leadership model used

We focused on distributed leadership as a collection of leadership approaches including collaborative, coordinated, shared working without a hierarchical body 'in charge'.^{5,6} There are many variations in terms, but the most appropriate for our purposes is a description by Bennett *et al*⁷ who proposed that distributed leadership is based on three characteristics: (a) people making a concrete effort to work together to pool initiative, expertise and influence; (b) that leadership can include people at all levels in an organisation and (c) difference of expertise, perspectives and capabilities are harnessed to forge trust and reciprocal influence.

We reflected on Currie and Lockett's⁶ perspectives of Gronn's⁸ dimensions of concrete action and conjoint agency, for distributed leadership in NHS practice. While Gronn's model represents a 'pure' application of distributed leadership, most NHS practice involves transformation leadership which tends towards a heroic autocratic approach with little concrete action or conjoint agency. We understood that the extent to which these dimensions interact is influenced by the organisational and policy context and this then determines different conceptions of distributed leadership in practice.

For the NHS, over the last decade, 'distributed leadership' has been promoted to deliver change across health systems. The essence of this leadership in the NHS⁵ can be seen within the NHS Leadership Academy's Leadership Model,⁹ Developing People—Improving Care¹⁰ and the NHS Change Model.¹¹ However, the practical reality is that NHS policy context is largely transactional in nature, promoting a heroic autocratic approach to leadership. This heavily influences the extent to which conjoint agency and concrete action can be enacted when distributed leadership approaches are being adopted.⁶ In the context of the PReCePT implementation project, it was felt that taking a single person approach to clinical leadership would not address the regional challenges of meeting the needs of those adopting the innovation and their context. The distributed leadership model planned, and subsequently adopted by this project, was heavily influenced by Gronn's⁸ description and what Currie and Lockett⁶ refer to as 'pure' distributed leadership. Centred on the needs of the innovation adopters, it was intentionally designed through concrete action to enact the three characteristics of conjoint agency. The model embraced a participatory philosophy of commitment to empowerment through sharing of knowledge, planning, acting, monitoring and reflecting,¹² to address the spread challenge.

METHOD

1. The four stages in the development of the model, its impact on quarterly uptake rates for the region for the period of implementation (April 2019–March 2020), additional output and our collective reflections that this facilitated is described. All obstetric and neonatal

units participated in the regional implementation programme.

2. The WMAHSN conducted an end of project evaluation that included a request for stakeholders to complete a questionnaire. Seven questions were designed to understand how regional project leadership was experienced by key trust-based individuals in a way that was participatory and met their needs. The key findings of this evaluation are described in this paper.

RESULTS

Developing the intervention (distributed leadership model)

1. The initial call out: when approached by the WMAHSN to be the delivery vehicle to implement the quality improvement project in the region, a regional call out was sent by the WMAHSN for a volunteer to take on a funded role of the single regional clinical lead. Despite by this time, all trusts having local multidisciplinary PReCePT teams in place, this call was not answered.
2. A distributed leadership model for the West Midlands project was conceived and promoted: in attempting to understand the reasons for the call out not being answered, a 1:1 discussion was held with a senior neonatologist in the region. The challenges outlined above were acknowledged, reviewed by the WMAHSN project lead and a team approach with a distributed leadership across the discipline of obstetrics and neonatology promoted. WMAHSN funding for two programmed activities per month per candidate was approved.
3. A second call out for regional clinical team leads for the West Midlands was made after the review, and now answered.
4. Realigning with the national implementation programme: the WMAHSN project fell back in line with the recording and reporting structure for the national PReCePT programme.

Structure of the distributed leadership model used

This comprised four clinicians (a) a consultant neonatologist from an NICU and an LNU, (b) a consultant obstetrician with an interest in preterm birth prevention and (c) an obstetric senior trainee with an interest in quality improvement and preterm birth prevention (figure 1). They were supported by a WMAHSN project manager and project lead.

Roles within the regional lead clinical team

The trainee was nominated as the lead figure for the clinical lead team to represent the region at national meetings. The distributed leadership approach encouraged a team model based on reciprocal influence and reflection.^{5–11} This ensured that the trainee was mentored by three senior clinicians with diverse clinical experience to guide this project, allowing the trainee to flourish. At the same time, the trainee and team influenced their senior colleagues and they, one-another. The senior consultants acted as joint activators¹³ to and with the trainee who together synchronised their actions as to ensure delivery

Distributed Leadership Model for WM AHSN delivery of a quality improvement implementation project

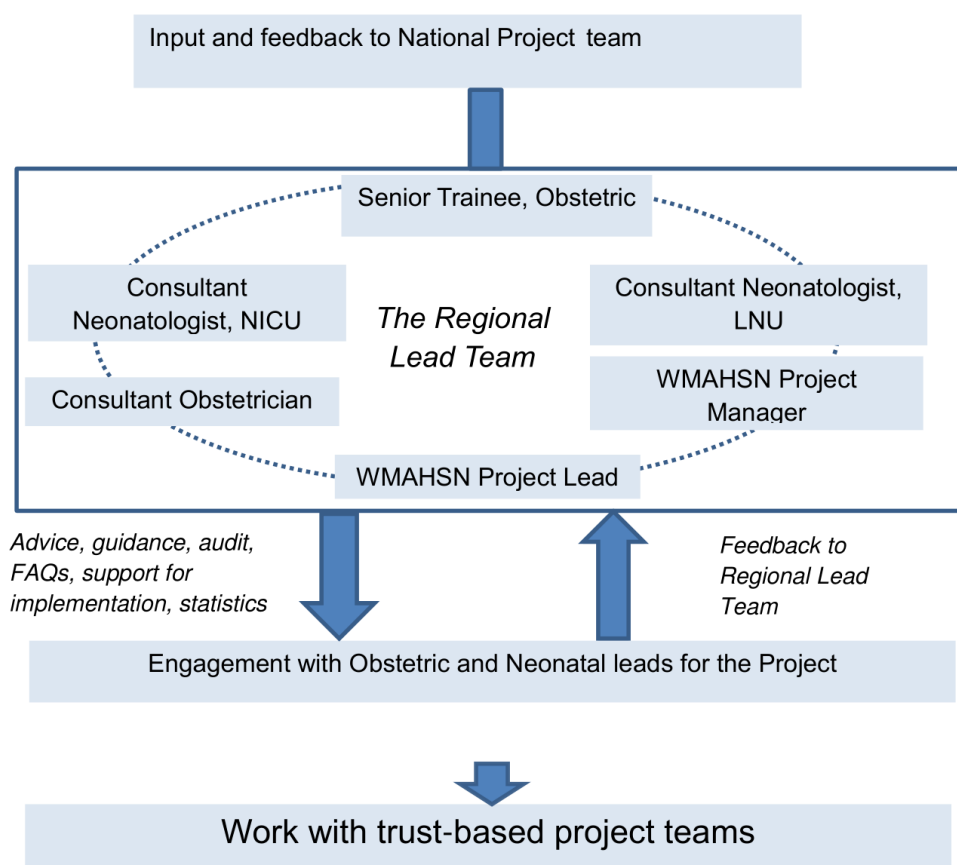


Figure 1 Distributed leadership model for WMAHSN delivery of a quality improvement project. FAQs, frequently asked questions; LNU, local neonatal unit; NICU, neonatal intensive care unit; WMAHSN, West Midlands Academic Health Science Network.

of the regional clinical lead duties across the region. Each clinician took on responsibility for close communication with 3–4 obstetric and neonatal services in order to facilitate better relationship building through familiarity with individuals and teams within their own organisational context.

Impact of the regional lead clinical team

Overall uptake rates

There was a substantial and sustained increase in the regional administration rate of MgSO_4 from the 2017 benchmark of 58.6%² to 85.5% for the period April 2019 to March 2020 when the project was delivered. During that period, the administration rates each quarter were: Q1 81.8%, Q2 80.9%, Q3 87.1% and Q4 85.5%. Quarter 4 administration rates dropped slightly due to the impact of COVID-19 on staffing and birthing behaviour during March 2020, this continued in to Q1 2020–2021. These reflect figures consistently close to or above the suggested national target set by the national programme, and also the developmental standard noted by the national neonatal audit programme, of 85%.³ The full data from

this work are likely to be reported for the PRCePT programme, elsewhere.²

Regional collaborative guideline

The team cohesively worked towards the development and implementation of the first West Midlands regional combined obstetric and neonatal (ie, perinatal) guidelines. ‘West Midlands Guideline for the Administration of Magnesium Sulphate to Women in Preterm Labour for Fetal Neuroprotection’ published 6 July 2020.^{sixth}

Audit of missed cases with regional impact

Through regional audit, the team were able to scrutinise reasons for poor uptake of MgSO_4 . Trust-specific learning points, missed opportunities for administration of MgSO_4 and identification of a practical regional time frame for administration of MgSO_4 were possible through audit. These have informed the regional guideline.

Did the delivery of the programme meet the needs of the local PRCePT teams

In table 1, responses from stakeholders within individual trusts highlighted that the leadership approach was

Table 1 The distributed leadership model in PReCePT: meeting the needs of the trust PReCePT teams

Questions	Stakeholder group	Success criteria in relation to meeting needs and context	Summary of responses
Can you describe how your team developed its implementation plan?	PReCePT teams n=10	Evidence of self-determined plans and absence of transactional relations	All responses describe implementation plans created by the trust PReCePT teams with an absence of regional teams' transactional input. However, all teams used support resources provided by leadership team.
Do you feel that PReCePT has been owned by your team or has it been a top down approach from NHS England?	PReCePT teams n=10 HoM's n=3 Obstetric MD's n=1	Evidence of local ownership, ideally with a feeling of support from the regional team. Absence of transactional relations	HoMs and obstetric MD feel ownership had been local. PReCePT teams either say local ownership or a mixed approach with support being given by regional team.
Have you been involved as an equal partner in the regional project?	PReCePT teams n=10	Evidence of being an equal partner. Absence of transactional relations	Nine said yes and one unsure.
Has the regional project team responded to your needs in a timely way?	PReCePT teams n=10	Evidence of timely response without barriers	All responses said yes, with some adding additional positive comments.
How would you describe the regional project management approach? Has it been the right approach for your team?	PReCePT teams n=10	Evidence of positive comments, support and absence of transactional relations	All responses provided positive comments to approach taken, highlighting that support was there and that it worked for teams.
Were the regional management capabilities and capacities adequate?	PReCePT teams n=10	Evidence of positive responses	Nine said yes one don't know.
How effective was communication between the project team and the local trusts?	PReCePT teams n=10	Evidence of positive responses	Eight positive, one not great, one reasonable.

HoMs, Heads of Midwifery; PReCePT, Preventing Cerebral Palsy in Preterm babies.

experienced as participatory by trust-based stakeholders, based on mutual support and local ownership with the regional team responding to their needs and not the other way around.

DISCUSSION

The result of the critique of challenges posed in the West Midlands was the implementation of a clinical team of four, of diverse experience, functioning within the context of a collaborative of shared working. This resulted in the regional rates of uptake for MgSO₄ in established preterm labour, reaching and exceeding the national set standard in a short space of time. It is difficult to tease out whether the uptake would have been equally successful had a purely hierarchical model been used if the first call had been answered, as opposed to the distributed leadership model we chose in the second call. Prior to implementing the distributed leadership model, the background rates of MgSO₄ uptake were low, and care delivered around this time in the context of operational delivery networks, hierarchical in nature in the region. Therefore, we share the success of this project, as likely due to the distributed leadership model approach, but acknowledging that we have not explored contemporaneously, whether a hierarchical system approach may have delivered similar results for the region.

The development of the model emerged out of reflection as to why the original call was not heeded.

Assuming individual responsibility in such a widely variant geographical area may have been considered too challenging by individual healthcare workers, especially, as the brief was to improve our existing rates of MgSO₄ uptake from 58.6% to over 85%. The decision making around the team that coalesced thereafter took into account this potential reason for the poor initial response. In so doing a distributed leadership model evolved. In this model, all four team members worked alongside each other as part of the collective, enabling distribution of the workload between the team. This allowed the four members of the team to engage with different teams on the ground concurrently, in a more focused manner. Each of the team engaged with their units, and this was fairly independent of who was assigned as the spokesperson for the team. The team itself was not hierarchical. The junior trainee was supported and mentored through this process, and awarded the opportunity of representing work undertaken in the region, on a national level. The group felt that this was important in the trainee's growth and development. In planning and adopting this participatory model based on reflection, mentoring and activation, the group worked together cohesively to display the characteristics of distributed leadership described.⁷

While the uptake for MgSO₄ in the region may represent the effect of the 'last wave' of implementation,¹⁴ we believe its success was also due to a distributed leadership

model. Through scrutiny of all levels of questions posed by teams on the ground (adopters)⁴ because there were four heads instead of one, and audit of missed opportunities with delineation of a regional practical time scale for administration of MgSO₄, the responses focused on the needs of the adopters as they themselves highlighted during evaluation. In our opinion, this distributed leadership approach contributed to improved uptake of the programme in hospitals that were struggling. The model potentially removed barriers found in a hierarchical system by giving ownership to the programme to teams on the ground. By using four individuals, we overcame the vast geographical and expertise diversity, as there was more opportunity for small group support, especially for smaller units that did not see as many cases as their bigger counterparts.

The value of this model translated into leads being present but not overbearing, enabling trust-based adopters to modify PReCePT based on site context-specific challenges. A commitment to participation, shared leadership responsibilities and reciprocal influence ensured that top-down transactional performance was not a feature of the project. The clinical leads were able to feed off the experiences of each other in accepting that individual units had their distinct style, and that the pace of change was not going to be consistent for all units. This measured stance enabled a better understanding of the participatory philosophy¹² this project so clearly displayed. Future implementation strategies for the NHS, especially in the context of cross-discipline work, such as between obstetrics and neonatal services are likely to benefit from more consistent utility of this and other distributed leadership models.

A limitation of this descriptive work is that the methods applied to the capture and analysis of qualitative data reflecting the adopter perspectives was developed to meet project management needs, at a time when the implementation phase was ongoing nationally. It is a consideration for future implementation work by the WMAHSN to plan for more in-depth external evaluation of leadership methods applied.

The spread of an innovation does not in itself guarantee an improvement in outcomes if project focus is placed on monitoring the pace and scale of the adoption. Indeed, the very act of 'spreading an innovation' is a risk to adoption that requires recognition and mitigation through a focus on the adopters not the innovation. Here we describe a distributed leadership model that may be the way forward for NHS future perinatal quality improvement projects, given the complex cross-discipline interactions. Our experience suggests that at least for the West Midlands, this can be successful.

Acknowledgements To all teams working on PReCePT in the West Midlands, and to all families who have engaged in PReCePT roll out.

Contributors All authors participated in the distributed leadership model, engaged in discussions on the concept, contributed to edits on the paper and approved the final version. TP and JG developed the concept. TP led the development and preparation of the article, supporting JG.

Funding West Midlands Academic Health Science Network Reference PR000246.

Competing interests None declared.

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

Patient consent for publication Not required.

Ethics approval Approval for implementation of the concept was obtained from the West Midlands Academic Health Science Network.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Thillagavathie Pillay <http://orcid.org/0000-0002-4159-3282>

REFERENCES

- Academic health science networks. Available: <https://www.ahsnnetwork.com/> [Accessed 15 Sept 2020].
- Precept – preventing cerebral palsy in preterm babies. Available: <https://www.ahsnnetwork.com/about-academic-health-science-networks/national-programmes-priorities/precept> [Accessed 15 Sept 2020].
- The Royal College of Paediatrics and Child Health. National neonatal audit programme annual report: 2018 report on 2017 data [pdf], 2018. Available: https://www.rcpch.ac.uk/sites/default/files/2018-10/2018_nnap_report_on_2017_data_final_v8.pdf [Accessed 8 Jul 2020].
- Horton T, Illingworth J, Warbuton W. The Spread Challenge: How to support the successful uptake of innovations and improvements in health care. [pdf] The Health Foundation, 2018. Available: www.health.org.uk/publication/spread-challenge [Accessed 15 Sep 2020].
- McIntosh B, Layland A. Change management in the NHS: distributed leadership. *Br J Health Care Manag* 2019;25:230–4.
- Currie G, Lockett A. Distributing leadership in health and social care: Concertive, conjoint or collective? *Int J Manag Rev* 2011;13:286–300.
- et al Bennett N, Wise C, Woods P. Distributed leadership: a review of literature. National College for school leadership, 2003. Available: <http://oro.open.ac.uk/8534/1/bennett-distributed-leadership-full.pdf>
- pp.Gronn P. Distributed leadership as a unit of analysis. *Leadersh Q* 2002;13:423–51.
- NHS Leadership Academy. Healthcare leadership model. version 1. Leeds: NHS leadership Academy, 2013. Available: <https://www.leadershipacademy.nhs.uk/wp-content/uploads/2014/10/NHSLeadership-LeadershipModel-colour.pdf> [Accessed 15 September 2020].
- NHS England. Developing people – improving care. London: NHS England, 2016. Available: https://improvement.nhs.uk/documents/542/Developing_People-Improving_Care-010216.pdf
- NHS England. *The change model guide*. HS England: London, 2018. <https://www.england.nhs.uk/wp-content/uploads/2018/04/change-model-guide-v5.pdf>
- Chambers R. *Revolutions in development inquiry*. Institute of development studies. London: Earthscan, 2008.
- Davidson A, Brown P, Pharo E. Distributed leadership: building capacity for interdisciplinary climate change teaching at four universities. *Int J Sustain High Educ* 2014;15:98–110.
- Rogers E. *Diffusion of innovation*. 5 edn. New York: Free Press, 2003.