UNIVERSITY OF CAMBRIDGE

Faculty of Education

WORKING PAPERS SERIES

Professional Development in Clinical Leadership: Evaluation of the Chief Residents Clinical Leadership and Management Programme

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Working Paper 12/2017

PROFESSIONAL DEVELOPMENT IN CLINICAL LEADERSHIP: EVALUATION OF THE CHIEF RESIDENTS CLINICAL LEADERSHIP AND MANAGEMENT PROGRAMME

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December 2017

ABSTRACT

Evidence suggests that clinical leadership by frontline professionals can improve patient outcomes. Numerous clinical leadership development programmes have emerged in the U.K., however, there is a paucity of rigorous evaluations of such programmes. Existing evaluations often focus on individual outcomes, with limited attention to organisational impact. This study evaluates the Chief Residents' Leadership and Management programme in the East of England. Drawing on educational theories of professional learning, it evaluates the individual and organisational impact of this 10-month programme targeted at senior specialty trainees and general practitioners in clinical roles. It also examines the mechanisms of clinical leadership development and its organisational impact, making a contribution to our understanding of clinical leadership and professional change. The evaluation draws on in-depth interviews with the programme steering group and past participants, as well as a detail survey to all past participants. Its findings show that the programme successfully impacts on the participants' capability, willingness and likelihood to engage in service improvement: the participants' make significant positive contributions to their organisations, through increased and sustained service improvement and capacity building. Increased resilience regarding the risks and stress involved in clinical leadership contribute to this outcome. Implications for further programme development are discussed.

INTRODUCTION

With the increasing complexity of clinical problems, and the challenges around financing, organisation and quality of healthcare, it has been argued that frontline clinicians need to accept the role of leaders within their health systems (Department of Health, 2008; West et al., 2015). *Clinical leadership* has hereby emerged as a central issue in discussions about the future of the NHS and healthcare systems world-wide (Hartley, Martin, & Benington, 2008; Horton, 2013; Swanwick & McKimm, 2011). Scholars reviewing the international evidence suggest that effective clinical leadership improves patient outcomes and experience (Blumenthal, Bernard, Bohnen, & Bohmer, 2012; N. Edwards, Marshall, McLellan, & Abbasi, 2003; Lees, 2016; Sarto & Veronesi, 2016; Spurgeon & Clark, 2017). However, there is significant lack of conceptual clarity about what clinical leadership means and what kind of training would be helpful (Spurgeon, Clark, & Wathes, 2015).

In the U.K., these discussions emerged particularly from the Darzi report (Department of Health, 2008) and the Francis report (2013)[i], which suggested that changes were required in the national health system to maintain high standards of patient safety and experience. They argued that frontline clinical staff should systematically observe and flag up problems, effectively communicate these to management, and evaluate solutions for cost-effectiveness, as well as clinical benefit. (see also Miller & Dalton, 2011) As barriers to such practice, negative frontline cultures with tolerance of

poor standards, and disengagement of clinical staff from leadership responsibilities were identified (Francis, 2013). As a result, leadership training for frontline staff gained momentum, to complement recruiting individuals into formally marked management-only roles. A range of clinical leadership programmes have been developed in the U.K.[ii] This paper presents the initial findings of the evaluation of The Chief Residents' Clinical Leadership and Management Programme developed by Cambridge University Health Partners (CUHP)[iii] and Cambridge Judge Business School's Centre for Health Leadership and Enterprise.

Many scholars have noted a paucity of rigorous evaluations of clinical leadership programmes (Blumenthal et al., 2012; Cork & Devine, 2015; Edmonstone, 2013; Steinert, Naismith, & Mann, 2012; Straus, Soobiah, & Levinson, 2013; West et al., 2015). Spurgeon et al. (2015) argue that "[m]uch of the content of [clinical leadership] programme delivery is at the whim of the preferences of providers and their preferred (largely unevidenced) approaches." Outside healthcare, a meta-analysis of experimental studies on the effectiveness of leadership interventions found a general positive effect; however, it also noted that the median duration of these programmes was 3-6 hours, with only immediate effects evaluated (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009). Reviews of research show that the focus has typically been on impact of such programmes on the individual participants, with little attention to benefits to their organisations (Avolio et al., 2009; Hartley et al., 2008; West et al., 2015).

While the literature suggests a positive relationship between clinical leadership and quality improvement, empirical evidence of direct causal links remains underdeveloped. Notwithstanding the significant challenges of capturing the broader impact of complex interventions, it is crucial that the field makes progress in systematically evaluating such programmes. We need to find a way to integrate findings from existing cross-sectional, as well as qualitative, studies and evaluations in order to accumulate a stronger evidence-base regarding the extent to, and ways in, which they can help us address the challenges healthcare faces. This requires an empirically-based conceptual framework, and operational model, of what clinical leadership development might achieve and how: for even when randomised controlled trials have been undertaken on the impact of clinical leadership development (Lornudd et al., 2016), evaluating their impact has been made difficult by the absence of operational models of what such impact could look like (*ibid*.). This study's task is to contribute to the development of such a framework through a theoretically-informed analysis of the Chief Residents clinical leadership programme. In order to do this, the current study links methods and theories from educational research on professional change with research in clinical settings to evaluate the particular clinical leadership programme.

Recent theories of leadership (Leithwood & Seashore-Louis, 2011; Spillane, 2012) and theoretical approaches to professional learning and organisational change (A. Edwards, 2017; Engeström, 2008) emphasise the need to focus on collaborative networks and practice as opposed to solely individual knowledge and attitudes (cf. Bakkenes, Vermunt, & Wubbels, 2010; Hofmann, 2016). Recent literature on clinical leadership resonates with these conceptual approaches (Fitzgerald, Ferlie, McGivern, & Buchanan, 2013; Gabel, 2013; Swanwick & McKimm, 2011; West et al., 2015). Such a lens will enable us to frame the identified strengths and weaknesses of the programme at-hand and contribute to the understanding of clinical leadership development more widely.

This paper reports on the initial findings on the evaluation, and addresses the following questions:

> **Q1**) To what extent and in what ways does the Chief Residents' Leadership programme have an impact on the on individual participants' professional learning and career development?

Q2) To what extent and in what ways does the Leadership programme have an impact on the organisations of Chief Residents?

Q3) How could the programme be further improved?

Future work will address the questions of how doctors learn to lead clinical and professional practice, and what role leadership programmes play in the development of leadership practice in medicine, as well as examining the nature and mechanisms of organisational impact that clinical leadership development programmes may seek to achieve.

WHAT IS CLINICAL LEADERSHIP?: THE CHIEF RESIDENTS CLINICAL LEADERSHIP AND MANAGEMENT PROGRAMME

Clinical leadership is about bringing about *change*. It is argued that the notion of clinical leadership lacks conceptual clarity (Edmonstone, 2014; Hartley et al., 2008; Swanwick & McKimm, 2011). Many discussions and frameworks entail extensive descriptions of the various competences clinical leaders should have, and/or things clinical leaders should do. However, for achieving concrete change, it has been suggested that separating competences from desired goals may not be helpful (Hartley et al., 2008). Avolio et al.'s (2009) meta-analysis of experimental research on leadership development supports this idea. It is suggested here that while those descriptive frameworks are helpful in facilitating discussions about professional development, in order to evaluate the effectiveness of clinical leadership development, we need to focus not only on competences but on impact.

There exist a range of clinical leadership programmes (lasting between a few days and 2 years), targeting different professional groups, career stages and leadership roles, from undergraduate education to formal senior executive roles. The Chief Residents' programme resonates closely with current literature and policy: not aiming "to transform doctors into managers, but rather encourage doctors to influence priorities by working in partnership with managers on improvement projects" (Spurgeon et al., 2015). The programme targets early career doctors (senior trainees/specialist registrars, within a year or two from becoming a consultant, and GPs), "who are likely to remain clinically focused during their career but are keen to engage with management challenges in their units. The goal of the programme is to make these doctors more effective as clinicians and future leaders of healthcare delivery and enable them to initiate improvement initiatives and take the clinical lead in such projects"[iv].

Initiated in 2010 at Cambridge University Hospitals NHS Foundation Trust (Addenbrooke's), the programme recruits 40-50 participants each year from Cambridgeshire and East of England, and is sponsored by the NHS through its local education and training board Health Education East of England (HEEoE). The 10-month programme has three main components:

- 10 taught modules (1 full day/month) delivered by the faculty of the Cambridge Judge Business School, covering an abbreviated and tailored version of an MBA curriculum focusing on a range on healthcare and non-healthcare organisations; as well as a leadership simulation exercise;
- A 10-month service improvement project in the participant's department; and
- Chief Resident role in the participants' departments, intended to facilitate communication between trainees and consultants.

DATA AND METHODS

The evaluation draws on in-depth interviews and a survey to past participants. It was also informed by interviews with the 6 programme steering group members as well as course feedback forms.

Participants and study sample

The Chief Residents programme was in its 7th cohort when this evaluation was conducted in 2016-17. A total of 293 people to-date have completed in this programme.[v] 30 past participants (13%) from cohorts 2010-2016 (N=231) were interviewed, selected through a stratified sampling procedure to ensure a representation of a range of views and experiences (see Box 1 for procedure). The survey was sent to all past and current participants.

- Participants grouped as CUH, other Cambs & Peterb hospitals, East of England Deanery hospitals and GPs; at least 10% or 4 interviewees invited from each group (whichever was more).
- Participants further sub-grouped according to year of participation (with smaller cohorts joined up); at least 10% or 4 interviewees invited from each group.
- In addition, each category to include participants from different hospitals, specialties and genders.
- The participant list split according to these criteria and each sub-group ran through a random order generator; Participants invited to interviews in the random order list, subject to the principle of different specialties and genders being included in each group. Unavailable interviewees were replaced by the next person on the randomised list in their category (36% accepted).

Box 1 Sampling of interview participants

Table 1 illustrates the distribution of interviewees across the cohort and organisations.

Table 1 Interview participants from cohorts 2010-2016 (totals in brackets)

LOCATION	2015-16	2014-15	2013-14	2012-13	2011-12	2010-11	TOTAL
Addenbrooke's	3 (20)	2 (15)	(15)	(11)	(10)	(7)	10
			1		4		
Cambs &Peterb	(8)	(7)	(5)	(7)	*Not participating in the programme*		4
Other	3		1				
EoE	3 (33)	2 (26)	(17)	(28)			10
			5				
GPs	2 (8)	1 (6)	(1)	(7)			6
			3				
Total	**7 (69)**	**8 (54)**	**11 (91)**		**4 (17)**		**30 (231)**
Organisations: 10 hospitals and 6 GP practices							
Specialties: 15							

Participant interviews

The interviews were conducted in person or via phone/Skype by the first author and audio recorded. The interviews lasted 30 minutes on average and were transcribed in detailed verbatim for analysis. The interviews followed a schedule developed based on the literature, exploring the participants' perceptions and thinking, regarding:

- The benefits of taking part in the programme,

- Service improvement during and after programme: Benefits and challenges,
- Challenges faced in practice and whether/how the programme facilitated those [clinical practice, team leadership, collaboration with management, service improvement],
- Opportunities and barriers to clinical leadership and service improvement,
- Ideas for programme improvement.

Several steps were taken to improve the validity of the interview data and counteract common forms of bias, such as social desirability: Interviewees were explicitly probed for negative perspectives or perceptions of no impact from the programme in order to avoid leading questions, participants were also informed that not all participants of such programmes find leadership feasible for clinicians, in order to legitimate sharing negative views. The interviews followed a principle informed by earlier research, that participants were probed for concrete examples of practice to substantiate their comments (Hennessy, Hassler, & Hofmann, 2016).

The data was cross-sectionally coded for themes from the interview schedule, as well as emergent issues raised by participants (Mason, 2017). Discrepant cases for each theme were systematically sought and compared (Silverman, 2015); further substantiating evidence was sought through examining concrete examples of practice. NVivo11 software was used to assist the analysis. The interview findings informed the development of the survey questionnaire, and survey data was used to triangulate interview findings.

Survey

A detailed questionnaire was developed, containing statements with a 5-point Likert scale and open responses, piloted through an expert panel[vi] and revised. All current and past participants were invited to take part online, at the end of the then-current course in June 2017. The return rate was very high at 59% overall (N=173/293)and consistent across the different cohorts, types of organisations and professional groups (see Table 2), which increases the confidence that the data is representative of the group on a whole. This paper draws on descriptive data from the survey as well as participant interviews. Future analyses will further interrogate the data in more depth.

Table 2 Survey respondents per cohort and organisation

		Year of participating in programme							Total/ Organisation
		2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	
Organisation during the programme	CUH	4 (7)	7 (10)	8 (11)	9 (15)	11 (15)	13 (20)	14 (17)	**66 (95)**
	GPs	0 (0)	0 (0)	4 (7)	1 (1)	2 (6)	6 (8)	6 (7)	**19 (29)**
	EoE	1* (0)	1* (0)	5 (28)	4 (17)	11 (26)	20 (33)	26 (29)	**68 (133)**
	C&P	0 (0)	1* (0)	1 (7)	1 (5)	5 (7)	4 (8)	6 (9)	**18 (36)**
	Other	0	0	0	0	0	1	1	**2**
	Total/ Cohort	**5 (7)**	**9 (10)**	**18 (53)**	**15 (38)**	**29 (54)**	**44 (69)**	**53 (62)**	**173**
Respondent organisations: 20 Trusts and several GP practices									
Respondent specialties: 35									

FINDINGS

General programme feedback

The programme is extremely well received by the participants. 97% of survey respondents agree that they 'would recommend the programme to others' (with over 80% agreeing strongly). All the programme's core elements are highly rated. When asked about whether the various aspects were beneficial for their professional development, 97% (59% and 61% strongly, respectively) agreed regards both the speakers and course content, 96% (59%[vii]) regards the specific topics, 93% (54%) regards the teaching style. The quality of teaching was described by one respondent as "higher than anything I have experience before or since". 93% (53%) also agreed that discussions with programme organisers were beneficial for their learning. Several participants mentioned other clinical leadership courses they had attended, which they describe as much less useful. 82% disagree with the statement 'I could have learned the things I learned on the Chief Residents' programme even if I had not taken part'. Their learning on the programme goes beyond what they had known to anticipate: fewer than half of the participants (47%) agree with the statement 'Prior to the programme, I had clear expectations of what I would learn'. Asked what participants had learned that they had not expected to learn, the most common response is "lots".

The steering group interviews revealed that the taught element went through several iterative developments based on participant feedback in 2010-2014 before settling. We therefore compared participants' responses before and after this period to see if this had impacted on their experience. A Mann-Whitney U test indicated that the ratings of the speakers were significantly higher for participants who took the course in or after 2014-15 (mean=4.62, N=125) than for those who took the course before 2014 (mean=4.26, N=47) (Mann-Whitney-U=2286.5, P =.009), and nearly statistically significantly higher for the content of the taught sessions (Mann-Whitney U=2486.0, P=0.69; means 4.61 and 4.47, respectively). However, the differences in ratings regarding other aspects of the programme were not statistically significant (Service improvement project, U=2678.500; P=.332; Discussions with the other participants, U=2924.000, P=.956; The Chief Resident role, U=2579.0, P=.216). Moreover, there are no significant differences between the earlier and later cohorts with regard to any of the programme impact items reported, apart from the number of further service improvement projects undertaken or supported, which is significantly higher for the earlier cohorts. This lends evidence to the suggestion that the programme model has potential for transferability to other settings.

From knowledge to a change mindset

One of the foremost benefits mentioned by the participants' of the Chief Residents' programme is **increased knowledge regarding organisational structure, management and finances**. Currently, 96% (33% strongly) of respondents agree that 'I understand how the management of the department influences what we do as clinicians' and 85% (23%) agree that 'I understand the financial side of clinical practice in my organisation.' 95% participants agree (55% strongly) that 'The Chief Residents programme contributed to my knowledge and understanding of how the organisation works'. The participants suggest that they "would not have learned about current NHS issues in depth if I hadn't done the programme" (79_Female_Yr2014-2015_Ipswich Hospital) as clinical management was "not otherwise available as part of my standard medical training" (29_Male_Yr2015-2016_NNUH), and they "were never encouraged to look at things like that, [as] a registrar we never looked at the financial documents that the trust produced" (Int19_Yr2014_EOE). "I wouldn't even have thought of things like that", a participant described their earlier mindset: "Why would I care? As long as I got my

pay at the end of the month" (Int19_Yr2014_EOE), reflecting a sense of disaffection. Organisational knowledge was described by many as "one of the most useful aspects" of the programme (19_Male_Yr2010-2011_CUH): Of the 117 respondents who answered the open question "What did you learn most from the Chief Residents' programme" 46 (39%) mention knowledge of NHS organisational structure and finances.

This knowledge is seen as helpful in consultant interviews. 68 respondents are now consultants and 79% agreed that "Participating in the programme helped me get a consultant post" . 52 (76%) of the Chief Residents who are now consultants are based in the East of England Deanery.[viii]

89% of respondents (36%) suggest that they became more interested in management roles. However, the Chief Residents' programme is not primarily about senior management roles, but about a focus on a continuous service improvement of clinical practice. In the survey, 96% (51%) of respondents agreed that 'I want to influence decision-making in my organisation' and 94% (36%) that they 'think of what could be changed in our overall service provision in my department'. The open responses suggest that the course contributed to how prepared participants feel about this aspect of their work:

> *"Really developed my knowledge in these areas from the CR programme and this has helped me to not only prepare with confidence for consultant interviews, but also plan for the future to contribute to both my department and trust moving forward with all the challenges faced." (123_Male_Yr2015-2016_NNUH)*

While some participants 'already had this mindset', the majority describe a significant **shift in mindset** during the course as a major outcome of the programme. This involves the development of a sense that clinicians can effect change. (See Box 2)

> *"Overall the knowledge that I can change things was the most important thing I learned." (19_Male_Yr2010-2011_Addenbrooke's hospital)*
>
> *"The most important learning point for me is to keep trying if I believe in something - there are enough people who care to make this happen." (174_Male_Yr2015-2016_Papworth Hospital)*
>
> *[What learned most?]*
> *"Not limiting ambition and realising that individuals change systems." (35_Male_Yr2015-2016_General Practice)*
>
> *"being a Chief resident almost changed my way of thinking slightly to understand a lot more, this is the problem and these are the possible answers rather than this is the problem and I'm really mad and angry about it. " (Int4 2015 CUH)*

Box 2 Shift of mindset as an outcome of the programme

In the survey, 86% (37%) agree that 'Through the programme, I feel empowered in changing things that I'm unhappy with in my organisation' and 73% (17%) that they view their job differently through the programme. One participant describes this is an 'invaluable' impact of the programme:

> *"Although it is often hard to quantify specific benefits in the short term, the broadening of clinicians' horizons at the critical juncture at the start of their consultant career is invaluable in establishing a culture of clinical leadership." (15_Male_Yr2013-2014_CUH)*

The significance for creating a 'culture of clinical leadership' is reflected in the interviews:

> *"As a junior doctor you think that 95% of your work is clinical and the more senior you get the more you realise that whilst the clinical side of your job is intrinsic to what your role is as a doctor, that actually the management side is just as important and I think the shame is that a lot of doctors see it as a burden whereas I see it as exciting and I think the Chief Residents course has helped me to put me in that positive frame of mind so I want to do it as opposed to feeling I have to do it." (Int16_Yr2011-12_CUH)*

We then ask what evidence there is that the knowledge and mindset acquired by participants have had an impact on their organisations?

Effecting change in practice

Some participants explicitly state that they "feel empowered by the knowledge I gained in change management and have put this to good use as a consultant" (19_Male_Yr2010-2011_CUH).

> *"Understanding the basics of finance and management in health sector has helped me interact confidently with non-clinical managers and enabled me to be a good liaison between clinical team and management and help move our service forward." (182_Female_Yr2014-2015_CUH)*

In the survey, 82% (38%) agree that 'Through the programme, I have been able to effect change in my practice'. This does not only apply to individual practice, as 78% (22%) that 'I have successfully persuaded colleagues to change our practice', further 74% (24%) agree that 'I have changed the service in my department to improve the quality of patient care'. We will unpick the substantiating evidence in two parts, considering (i) the impact on organisational practice *during* the programme (as an immediate, more visible organisational impact), and (ii) what has happened since they took part (as longer-term impact).

The Chief Residents' programme has two primary characteristics intended to ensure that the participants' learning on the programme also offers an immediate return to their concurrent organisations: a service improvement project and the Chief Residents' role in the participants' department. The idea is for the 'Chief Resident', along a similar US model, to take up a lead role in the Department, with a responsibility for helping bridge the "disconnect between the trainee body and consultant body --- opening up communication channels between consultants and trainees to be able to offer more mutual support" (Steering group interview).

Chief Resident role and impacting on organisational decision-making

The extent to which the intended role materialised was varied. While many participants had opportunities to participate, 22% of the respondents disagree with the statement that they were 'invited to take part in management meetings' as a Chief Resident. Even within the same hospital, practices and opportunities varied across different departments. The opportunity to engage was valued as a learning opportunity.

> *"[In my Department], the chief residents were invited and were expected to come along to the departmental management meetings and that felt like a real privilege because normally as registrars, you always feel like being 'ooh the registrars mustn't find out what's been happening,' there's the internal gossip that we are always not sort of privy to and it was always hidden from us. So then to come along and hear straight from the horse's mouth what the financial situation is like and what our strategy plans are like for the future of the department and things like that felt like a real honour, and sort of again made you feel like sort of being invited into that circle. And then when you've been invited in, it gave you a lot more confidence to sort of think that 'I can actually talk to and work with these people'. And we were then directly contacted by the people in the department who were wanting to get a hand along how a referral and the process work in the outpatients department, so us being bought to that meeting by the Chief Residents programme, we actually did some proper work in the department and also we facilitated some work and made it easier as we were in a sort of bridge to*

> *the registrars from the senior management, which they would have found more difficult to establish otherwise. " (Int1_Yr2012-13_CUH)*

In the survey, 71% (20%) agree that during the year as Chief Residents they 'expressed my views in management meetings', while just over half, 55% (12%) agree that they 'influenced decision-making in my department (e.g., at management meetings)'. In some organisations, there has been a permanent positive impact from the Chief Residents' role, for example where "The two of us set up a trainee committee & forum in the Trust & this continues", 4 years later (34_Female_Yr2012-2013_Ipswich Hospital).

Asked about their situation *currently*, 90% (35%) now agree that 'If I notice problems in our service, I express them', and equally 90% (43%) that 'The programme made me confident to voice my ideas in my organisations' (slightly lower at 85% agreement for confidence to voice ideas beyond their immediate team), while 71% (21%) agree that now they 'influence decision-making in my organisation'. Many participants suggest that the Chief Resident experience contributed to the increase:

> *"As a registrar --- you're not invited to the things that you get given an opportunity to attend as a Chief Resident. So I was invited to a lot more meetings and given the opportunity to give my views and they were taken seriously --- I felt like I had more of a voice then I'd ever had before. --- [So when you become a consultant,] it makes you more confident --- you've had some experience of being in board meetings and getting the confidence to speak up and having the confidence to argue your point with potentially much more senior people than yourself". (Int16_Yr2011-12_CUH)*

Interestingly, in the survey, this response is not related to how long ago the participants took part in the programme.

Impact through service improvement projects

The other central way in which the programme aims to facilitate learning and impact on the participants' organisations is the service improvement project all participants undertake. While a separate analysis is planned on the outcomes of the service improvement projects, we consider here participants' responses about the impact of their project. We coded the topics of service improvement projects shared in the survey (N=118) (Table 3).

Table 3 Types of topics of service improvement projects undertaken 2010-2017

Clinical outcomes / Patient safety	Process efficiency	Patient experience	Use of quality indicators	New service/ clinic/ building	Inter-professional collaboration	Team skills/ behaviours
36%	28%	15%	6%	8%	5%	2%

Asked about what aspects of their organisational practice their projects improved, 70% agreed that their project improved clinical practice in their organisation and also 70% the quality of patient care, 60% agreed regarding improving operational performance, 57% improving patient safety, 56% improving patient experience, 50% improving the training of others, 46% improving staff experience. 41% agree that they project brought a financial benefit to the organisation. 16% of respondents did not agree that their project had brought improvements on any of these criteria. As we will discuss below, this does not mean that those projects brought no subsequent (delayed) benefits to their organisations.

On a whole, this analysis suggests that a majority of the service improvement projects brings a benefit to the participants' organisations, offering return for programme costs, and suggests that further analysis of the volume and types of benefits brought by those programmes would be beneficial.

In the survey we also explored the extent to which involvement in service improvement had been **sustained** since the programme. While many participants experienced challenges with the sustainability of their programmes[ix], 55% of those respondents who had completed the programme before the survey agree that 'The outcomes of my project were sustained in that organisation'. The impact of this can be significant, for example bringing "recurrent benefits every year for several years amounting to approx £72,000 benefit pa" (125_Male_Yr2012-2013_CUH) or changing "the entire way in which we manage the repeat prescription [at the Practice] bearing in mind that our repeat prescribing budget is about the same as our practice budget" (Int06_Yr2015-16_GP).

We also explored the extent to which the participants had undertaken further service improvement projects since the programme. 92% (47%) agree that 'Through the programme, I became more involved in service improvement' and 29% that their service improvement 'project led me to implement changes in another setting that I moved to'. These claims are supported in the numbers of participants who have undertaken further service improvement projects since the programme (as further substantiation of these projects, we asked participants to provide their actual topics). Of the people who took part in the programme at least 2 years ago, 76% have undertaken further service improvement projects (55% have undertaken several), of those in cohort 2015-16 66%, and even of those in the programme which just finished as the survey was ran, 26% say they are already undertaking further service improvement projects.

Learning to learn from failure

16% of the participants do not describe their service improvement project as a success in any of the different types of impact categories (financial benefit, clinical practice, patient care, organisational performance, patient safety or experience, training, staff experience). However, in the longer term this perspective shifts. In the interviews and survey, several respondents describe how they learned from their projects and were subsequently able to undertake service improvement more successfully.

> *"Although I did not make much progress during my time as Chief Resident on this project, I am now clinical lead for the same department and am starting to make head way. The experience I gained back then was helpful." (19_Male_Yr2010-2011_CUH)*

> *"Unable to implement project [as Chief Resident] as clinical lead did not [support the project]. I have taken this project to another organisation and it is now being implemented there. The skill I learnt on the CR course have helped me be more successful the second time round." (82_Male_Yr2015-2016_EoE_nonNNUH)*

However, it is evident throughout the data that it is often not immediately obvious to clinicians that failures can be extremely helpful to learning:

> *"I have completed huge transformations since, but my feeling immediately after the year was that I had been a failure and it hasn't been worthwhile. It's taken time to consolidate and apply that fantastic knowledge." (114_Female_Yr2012-2013_CUH)*

> *"It [SI project] was a learning experience but it was painful. --- It was the journey that taught me more than anything else. If you'd have asked me six months into the project, I'd have probably thought well what's the point, but actually at the end of it I realise what the point was." (Int02_ Yr2014-15_GP)*

In fact, it was in itself described by one participant as an 'unexpected learning outcome' "that I can learn from the Quality Improvement Project, even though I didn't complete it" (22_Male_Yr2015-2016_NNUH).

Speeding up the process of engaging in service improvement

Our analysis suggests that it is the failures and challenges of some of the projects that made them so significant to the participants as an undertaking, as illustrated here:

> *"What the chief resident allowed me to do was to go through that journey in a safe way, where the reputational risk wasn't there for me because I could say it was a Chief Residents service improvement project that I was doing." (Int02_Yr2014-15_GP)*

> *"That was a very good lesson, and thankfully because I made quite a fairly big mistake early on that meant that I didn't make the same mistake with the things I've done as a consultant." (Int15 _Yr2010-11_CUH)*

Our analysis suggests that the 'safe space' to try out service improvement may be linked with a significant mechanism of impact from the programme, in that "it gives you confidence to do stuff, and it would have taken a lot longer to develop that confidence to do it" which is described as "huge" (Int24_Yr2012-13_GP). The programme is seen, by many participants in our interviews, to be speeding up the process through which clinicians come to exercise clinical leadership and undertake service improvement.

> *"I think I would have done it [SI] eventually but it [the programme] has given me the confidence to get on with it so soon. I would have done it eventually, once I'd sort of understood and worked my way in, and been careful about what I did and where I treaded for a little while. But this [programme] has given me the confidence to say, this is a business plan and this is how I put it forward. --- What might have taken me five years has probably taken me one or two." (Int19_Yr2014-15_EoE)*

This does not only apply to hospital doctors, but also to GPs.

> *"I think it's huge because it gives you confidence to do stuff and I think it would have taken a lot longer to develop that confidence. --- I think the great thing about the programme is that it actually gives people time out to start thinking about this because, certainly newly qualified GPs are going to be so busy doing the day job and getting settled in to that, that they're unlikely to develop the skill set until maybe five or ten years down the line if they were waiting to do it off their own bat. So the fact that you've learnt that at a relatively newly qualified stage or inexperienced stage, you can go in and do this and decide if this something you would want to do. So then you can go off and do further learning, I think that's a huge advantage to start with." (Int24_Yr2012-13_GP)*

We further explored this in the survey: 72% (28%) of the participants agree that 'The Chief Residents programme allowed me to undertake service improvement projects sooner that I would otherwise have been able to.' While knowledge acquired on the course is a central element of this, it is also about reputational risk.

> *'If you are doing things [SI] as a trainee and they don't work out, you don't feel like that's a permanent blot on your reputation whereas you might do if you're a junior consultant so that would have the potential to put people off permanently. It accelerates what you're prepared to take on as a junior consultant. If you are a junior consultant and you hadn't done it [a SI project before] you'd be saying 'well I'm just finding my feet, I don't want to get too big for my boots and try to change things, I'm just going to lay low for a while' so the sort of things that you might take on might not happen for another five or ten years. So it [the programme] probably does accelerate that process a bit.' (Int15_Yr2010-11_CUH)*

Our analysis therefore highlights a less often discussed aspect of leadership; attempting change and innovation is inevitably risky.

Risk-taking as a fundamental (but neglected) aspect of clinical leadership

Willingness and confidence to take risks in service improvement is described as an essential, and challenging, outcome of clinical leadership in the Steering group interviews:

> *"Doing something and not being afraid that it might not work. I think we need to help change the mindset of the NHS, which I think has become very very risk averse so people don't like to do anything in case it goes wrong, and I think if this [programme] gives colleagues the confidence to try things out and actually have the confidence to learn from things when they don't go as they planned I think I would want that."*

In the survey, half of the participants, 53%, agreed that 'I am willing to take reputational risks to achieve change in my clinical practice' and 50% agreed that 'I am willing to take personal risks to achieve change in my clinical practice'. The interviews suggest tentatively that the programme contributed to this.

> *'I've become a lot less risk averse. Not to the point of being dangerous but not necessarily being afraid of that. The programme gave me the confidence, you're not really going to achieve significant or substantial change without a degree of risk, without a leap of faith.' (Int17_Yr2011-12_CUH)*

Risk-taking involves confidence, but our analysis suggests that it also required the ability to manage the associated stress, which the participants suggest is not the same as managing the stress of clinical decision-making and work. Managing the stress linked with having to make decisions in patient care is part of learning to be a clinician, but learning to 'detach' from the risks of management decisions is often not addressed in medical education.

> *It [engaging in clinical leadership and service improvement] is challenging if you don't have that skill set or the confidence and when you do get involved in it, it is quite high pressure, and you've got to be quite resilient to take up these positions. And I think some doctors really struggle with that, I think we're quite resilient around clinical issues because we're trained to detach from it, but when people get involved in the leadership and the management they can take it really personally and feel that people are having a go at them as a person, rather than them because they happen to head up a process or an organisation or something. I think there's a reluctance to put yourself out there amongst doctors, to take the risk, we manage risk brilliantly in our day jobs, especially GPs, that's what we do, but actually putting themselves outside their comfort zone and outside the zone they've been trained to feel uncomfortable in. And I think people worry about personal reputation --- and I think that's enough to put some people off. (Int24_Yr2012-13_GP)*

The survey suggests that the programme supported this: 89% of respondents agreed that 'I feel I can successfully manage the stressful aspects of my work' and 83% (33%) agreed that 'The programme helped me in adjusting to the non-clinical aspects of the role'.

Longevity of staff as an outcome of the programme?

Resilience, risk-taking and detachment link with a potentially significant longer-term outcome. 72% of the respondents "believe that the programme impacted in my longevity in my job as a Consultant/GP". While this is a subjective assessment, it reflects a sense of motivation, enthusiasm and resilience. Given that these people are likely to undertake various leadership and management tasks and roles, if they are able to create a culture of motivation, well-being and commitment in their teams and organisations, this has the potential for impact.

This was elaborated in the interviews.

> *'When you talk to doctors sometimes they feel very disillusioned about management processes because often they feel excluded from those and disempowered, and probably partly because of the course I feel completely the opposite. --- I feel quite empowered in changing things that I'm unhappy*

> *with and I think that's from a longevity in your job point of view quite important, if you feel like you have agency. --- The older colleagues that I'm talking about who feel disempowered are people who never had the chance to go on the [CR] programme, maybe that's the natural state if you don't have something going on like this.' (Int15_Yr2010-11_CUH)*
>
> *'If you feel like you have agency in the world then you usually feel more positive about it. This course isn't necessarily giving people that power, it's just showing them that they do have it.' (Int16_Yr2011-12_CUH)*

The remainder of our findings section focuses on interrogating the dimension of clinical leadership that relates to *other people*.

THE HOW, WHO, WHY, WHEN, WHAT AND WHITHER OF OTHER PEOPLE IN CLINICAL LEADERSHIP

Commonly in leadership contexts other people are 'followers' to be influenced – how do we lead and manage a team, conduct difficult conversations, engage stakeholders to achieve buy-in, influence people's behavior. In the Chief Residents course 31% of participants mention aspects relating to working with other people when asked 'What they learned most' from the programme (emphasising teamworking skills, managing a team and individuals in a team, leading collaboratively, involving stakeholders, having challenging conversations). In the survey, 77% agree that 'Through the programme, I became more successful at leading a clinical team' and that 'I successfully conduct difficult conversations in my clinical team' (36 and 21 strongly, respectively). While there remains a gap between successfully identifying, and involving, stakeholders, the latter has improved from time during the programme to now (shift from 69% during the programme to 80% *now* agreeing that they 'successfully involve stakeholders to get their buy-in'), with 91% agreeing that 'The programme contributed to my ability to engage stakeholders'. We suggest this is the '**How**' dimension of other people in clinical leadership. The interviews also mentioned some strategies participants employed to successfully engage stakeholders. Participants knew they would need such skills (they are valuable but not mentioned as a 'surprise') and are positive about how the course helped them develop those.

Engaging stakeholders also involves identifying the '**Who**' of other people. The analysis suggests that it is important to learn to differentiate between different kinds of 'Who'. Projects need to include "**sources of help**" (4_Male_Yr2013-2014_CUH),

> *"Part of learning this process was to learn where to get the information from thus question above as I had no knowledge of the administrative side of the unit." (148_Male_Yr2012-2013_CUH)*

The 'Who' also includes identifying stakeholders whose involvement is needed to **avoid resistance**:

> *"[The service improvement project] was a useful experience, there were lots of transferable skills. Again thinking about the stakeholders, thinking about the financial pressure, engaging with people, thinking about who is most important, most likely to be obstructive to the project and prioritising attention to this group of stakeholders. So all of these things were very much applicable to my other service improvement project." (Int27_Yr2015-16_EOE)*

And identifying people who simply need to be **informed**, to avoid over-crowding a project:

> *"When you get too many people involved, it can just slow things down and if you really don't take hold of the reigns, it's very difficult to make sure things will progress, and that was one of the problems. --- Try to exclude people who don't really need to be involved but need to be informed at a certain point when you've achieved certain targets." (Int13_Yr2015-16_CUH)*

Engaging stakeholders hereby also involves the '**When**' of other people in clinical leadership:

> *"I think that the project that I did as part of the course is useful in teaching you about stakeholder involvement and how that's very important, so if you mess that up at the start of a project and don't include the people who feel they should be included then they can obviously become quite resistant to whatever you're trying to achieve later on so that was a very good lesson." (Int15_Yr2010-11_CUH)*

> *"I think if I was starting another [service improvement project] I would make sure that I had people at the beginning, who were going to sort of champion me and be on side with getting it running. Rather than sort of being keen to get going and doing it on my own. I think you'd need that buy in right at the beginning a bit more." (Int8_Yr2013-14_EOE)*

However, we suggest that there is another dimension in the participants' learning about other people that is relevant for clinical leadership, which represents a surprising new way of thinking for many participants. We call this the '**What**' of working with other people in clinical leadership. It is not about how and when we engage people to get buy-in, but about **the expertise and ideas** that those other people can bring to our change efforts. Our analysis of the open responses and interviews makes salient two inter-related aspects regarding the role of others' ideas in clinical leadership.

Firstly, the programme supported the participants' learning in **understanding the different perspectives of different stakeholders**, e.g., the "Different perspective of the senior management team compared to eg junior doctors" (16_Male_Yr2012-2013_West Suffolk Hospital), and "Lots of learning from other chief residents across different specialties" (55_Female_Yr2016-2017_Colchester Hospital) as well as "learning how things work in the community" (INT04 2010 CUH). Participants repeatedly mentioned how they were "surprised at how much I learnt from simply talking to other CR" (60_Female_Yr2016-2017_CUH): they had "no idea of the overall experience and how useful it was to have a forum to discuss and develop ideas with similar level trainees from other specialties which would not have been possible outside of the programme." (123_Male_Yr2015-2016_NNUH) Participants shared examples how learning to understand other stakeholders' perspectives helped them "unlock" problems their different staff groups are encountering (Int24_Yr2012-13_GP), changed how they write discharge letters from hospitals to General Practice (Int4_Yr2015-16_CUH), learned to enable smooth cross-specialty transfers of patients when they understand the "systems [other specialties'] have in place for an outpatient management", as well as when they don't understand it, to actually "be able to pick the confidence up to say I want to understand, to knock on a GPs door and say will you teach me what happens here, so I can understand how you work. Because I don't think I would have been able to do that [before the programme]" (Int19_Yr2014-15_EOE).

Secondly, coming to understand others' perspectives was described as helpful to gaining insight into "**Different ways of looking at a situation and developing strategies for dealing with problems and implementing changes**" (93_Male_Yr2014-2015_CUH); the understanding that "working together on different projects we could achieve incredible results and ultimately all have similar core aims and values for our patients" (123_Male_Yr2015-2016_NNUH). "The benefits of seeing different ways of approaching a task/problem" (93_Male_Yr2014-2015_CUH) were described by many as an 'unexpected' learning outcome. This suggests the nature of this learning outcome as two-staged. Some participants suggest that developing a mutual understanding of a problem is in itself a significant step:

> *"I think that probably the biggest result of that is a recognition in the department that wound infections in colorectal surgery is a problem, and why is it a problem. It's not just a minor inconvenience to patients, it's an enormous cost because, you know, it keeps patients in longer, it needs additional wound care both here and then in the community as well, so I think in the first instance recognition that there is a problem is the most important first step." (Int18_yr2013-14_EOE)*

It is important to highlight that the impact of these changes is not only on individual participants' thinking and mindset but has organisational implications. A new perspective many participants seem to have acquired is a perspective on **other people as a resource** which they can draw on to improve their service improvement efforts, "knowing the kind of information that they might be able to give me" (Int8_Yr2013-14_EOE).

> *"I understood more about the skills of non-clinical managers, I realise they are a huge asset if included in projects." (124_Female_Yr2016-2017_NNUH)*

This involves **developing networks across the 'silos'** (19_Male_Yr2010-2011_CUH) in which clinicians typically work:

> *"One of the key aspects of the CR Programme, if not the most crucial aspect, was being introduced to like-minded colleagues with whom I went on to work with both in a clinical and leadership/CR context. The networking aspect in under-played and more important to the Trust. --- It was a key way in which "isolationism" within clinical practice -due to the demise of clinical firms and local peer support structures - can be partly addressed and rectified." (88_Female_Yr2013-2014_CUH)*

In the survey, 85% agree that they 'have colleagues in different departments to call on if I have a question' although these networks are not always actively called upon: 66% agree they 'discuss my team's performance with colleagues from other teams'. 60% (56% of those who had completed the programme) 'regularly contact for advice or discussion about work' at least one colleague, who they met on the programme; 22% of those who had completed the programme say they regularly contact 3 or more former fellow Chief Residents for advice or discussion about work.

This also involves facilitating a dismantling of the **"Us and Them" boundary between clinicians and non-clinical managers**. Many participants echo an idea that, typically, "for doctors, the whole idea of management seems very distant, we talk about going to the dark side as if it's a bad place to go" (Int24_Yr2012-13_GP), while

> *"The programme was able to put us in touch with loads of management which either we didn't know exists or we wouldn't be usually in contact with --- and I think it gave us a better background, so we were able to sort of talk in the same language and were coming from the same place. Whereas before, perhaps, it was more of a 'them and us' scenario." (Int14_Yr2015-16_EOE).*

In the survey, 76% agree that they 'have conversations with the non-clinical management of my organisation', and 65% agree that in their 'current organisation, I feel I am on the same side as the non-clinical managers'.

The final type of organisational impact we suggest comes from the considering what we call the '**Whither**' of other people: How and to what ends might the participants support others after participating in the programme. The interviews make salient some possible key mechanisms by which capacity building could become a key form of organisational impact from such a programme. Some past participants describe how they are attempting to actively support colleagues and other staff to engage in service improvement, for example through including leadership-related knowledge and skills into supervision of their own trainees to develop those skills in others "earlier in training" (Int29_Yr2014-15_C&P/other), or through actually suggesting concrete service improvement projects for them to get involved in, and help them with starting to communicate across professional boundaries where currently "the confidence isn't there and the vocabulary isn't there" (Int2_Yr2013-14_GP/CCG), or initiating projects and handing parts of them for others to lead (Int07_Yr2012-13_GP and Int06_Yr2015-16_GP).

Some Chief Residents even describe chains of impact from past Chief Residents in their departments onto their own work. One Chief Resident described how her department had had a Chief Resident earlier whose project had demonstrated a potential for great financial savings but had not been sustained, and how she and another Chief Resident used this existing data to gain buy-in for their project which aimed to build a more sustainable development (Int16_Yr2011-12CUH). Another described in detail how a more senior trainee's Chief Residents' service improvement project findings had made a lasting impact on her practice (Int28_Yr2014-15_C&P/other), suggesting that through sustaining the given project, "the hospital can save up to a million pounds so that's a huge direct benefit to the hospital but **it's actually the spread of knowledge laterally to colleagues that can make a lasting benefit**".

The survey suggests this is more widespread: 74% say that 'Through the programme, I have increased my support for junior colleagues to undertake service improvement', with 80% of those who had completed the programme saying they have supported at least one colleague of trainee to undertake service improvement projects, while 56% have supported at least two or three.

DISCUSSION AND CONCLUSIONS

Summary of programme impact

In this evaluation, we asked what the impact of the Chief Residents' Clinical Leadership and Management Programme is on the individual participants' learning and on their organisations, as well as how it could be improved. This section summarises the findings.

The evaluation demonstrates that the programme significantly contributed to the participants' knowledge about how the organisation works in ways that would not have been otherwise available as part of their training. Participants describe the knowledge they acquired as significant to gaining a consultant post, and to being able to engage in service improvement in their subsequent work. The findings also suggest that the programme contributed to the participants' confidence and a shift of mindset, involving an emergent sense that effecting change is possible for them as clinicians on the NHS, a 'Can do' attitude. This involves a sense of empowerment for the participants, linked to a more positive view of engaging in clinical leadership and management. This resonates strongly with the policy call for addressing the disengagement of clinical staff from leadership responsibilities.

Many, but not all, participants were invited to participate, and expressed their views, in management meetings in their departments, and over half suggest they influence departmental decision-making as Chief Residents, for example by developing better communication between consultants and trainees, sometimes in ways that were sustained beyond the participant's programme year. Most participants say that they gained confidence during the programme and are now able to voice their ideas or express problems they perceive, and 70% agreed that they now influence decision-making in their organisations. This finding suggests the programme supports the policy call on clinical leadership calling for staff to systematically observe and flag up problems.

Current policy also highlights the need for clinicians to be able to develop cost-effective solutions to healthcare problems. Engaging with clinicians from other specialties and across the primary/secondary divide on the programme facilitated the envisioning of new solutions. The vast majority of participants suggest they were able to identify relevant topics for service improvement, and their service improvement projects are reported to have had a positive impact in their organisations. Significantly, the majority of participants have undertaken further service

improvement since the programme, which they attribute to their learning from the experience on the programme, including initial service improvement projects that were not successful. This points to a potential delayed impact from the programme: The evaluation suggests that participants became further active in service improvement sooner than had they not taken part in the programme.

The success of service improvement by the participants during and after the programme is attributed to the programme's contribution to participants' increased knowledge and confidence, as well as increased understanding of and skills in engaging stakeholders (how, who, why, when). As emergent themes from the evaluation, some of the participants also suggested the increased involvement in continuing service improvement involved an increased willingness and capability to deal with the risks and stress that leadership and innovation inevitably entail. We suggest that the ability and willingness to deal with risks are significant but under-discussed aspects of clinical leadership which this programme successfully addresses.

Finally, healthcare policy has called for clinical leadership development to contribute to more engaged and collaborative cultures in healthcare settings. The evaluation suggests that one major outcome for the participants was increased understanding of the perspectives of, and developing on-going collaborations with, other stakeholders in healthcare, across specialties, the primary-secondary divide, and with non-clinical managers, helping overcome dominant inter-professional boundaries, with the majority of the past participants still discussing work issues with fellow past Chief Residents. There is some evidence that participants are using their new knowledge and mindset to engage and support other colleagues (laterally) as well as trainees in service improvement, developing chains of relational impact from the programme. This, and the participants' view that the programme contributed to their 'longevity' in their clinical jobs, resonates with the policy call for clinical leadership development to contribute to more positive and collaborative cultures in healthcare settings.

Implications for programme development

The evaluation also leads to several suggestions for further development of this successful programme.

Evaluating past Service Improvement projects

It would be helpful to offer further **support on the development of service improvement project topics and project design**, to ensure all participants develop topics that are both feasible, and have the maximum opportunity to bring a benefit to their organisation. We suggest that this should involve further **attention to reviewing and analysing the different *types* of outcomes of service improvement** as well as **ways of capturing those outcomes**. This could be done by asking **participants of each cohort to systematically review and evaluate the objectives and outcomes of past participants' service improvement projects**. This would serve a dual purpose: (i) The programme would benefit of more **systematically evaluating the outcomes of the service improvement projects undertaken by participants**, as well as (ii) following up and evaluating the **sustainability and scalability of those outcomes**, to better understand programme impact, as well as successful pathways to service improvement. This could be built into the programme, without additional cost, by asking the participants of each cohort to analyse and synthesise past projects. Some of the participants' service improvement projects had a significant cost-saving outcome, however, fewer than half suggest that their project brought a financial benefit. The evaluation suggests that while the programme had a significant impact on widening participants' understanding

of problems and possible solutions, and improved their understanding on financial aspects of healthcare, further strengthening of the links between service improvement and cost-effectiveness for all participants could bring even greater financial benefits.

Engaging stakeholders and Alumni

The outcomes of this evaluation offer further insights into the mechanisms of successful leadership of service improvement, which could be integrated into the programme to **support participants carry out their projects**. Particularly the distinctions we have highlighted regarding **engaging stakeholders** are relevant here. The interviews suggest the participants could benefit from better understanding the '**how**' of successfully engaging stakeholders, '**whom**' they should involve (including the different reasons for involving different people: as a resource; champion; to avoid resistance), and '**when**' they should involve them. Furthermore, participants could benefit from reflecting on **what** other people can bring to their clinical leadership. We suggest that one useful way of doing this would be to invite **programme alumni** to talk to the participants about their experiences on the programme. This could also involve inviting **non-clinical managers** to engage with the participants, to further support boundary-crossing, and the dismantling of the divide that typically influences medical leadership (which the programme already does regarding the primary-secondary divide and the sub-specialty divide). This would especially support those participants whose own organisations do not facilitate such opportunities. Our analysis also suggests that the **role of risk**, and need for **detachment**, in clinical leadership would warrant further attention on the programme.

Engaging hosting organisations

Beyond the programme itself, it would be beneficial to explore further opportunities to better **engage all Chief Residents' hosting organisations** in facilitating the participants' engagement in their departmental leadership and decision-making, as well as more clearly communicating to the participants **the expectation to ask for and take up these opportunities** during the programme, perhaps through asking them to report back to their groups.

Creating an Alumni network

The creation of an alumni network of Chief Residents would contribute to strengthening the capacity and network building from the programme. It could also support the above goals of engaging alumni in the programme and engaging the current Chief Residents' hosting organisations. In the survey, a number of alumni were willingness to play a role in developing such a network.

The authors are currently conducting further analyses on the data set, examining the interrelationships among the respondents' responses and the development of a conceptual model of clinical leadership development. These analyses will be included in follow-up publications in the near future.

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[i] A public inquiry into the serious failings at the Mid Staffordshire NHS Foundation Trust.
[ii] Such as the Darzi Fellowship Programme, GenerationQ programme of the Health Foundation and programmes by The King's Fund and the NHS Leadership Academy.

[iii] Members of CUHP comprise the University of Cambridge, Cambridge University Hospitals NHS Foundation Trust, Papworth Hospitals NHS Foundation Trust and Cambridgeshire and Peterborough NHS Foundation Trust.
[iv] Chief Residents programme website (http://www.health.jbs.cam.ac.uk/corporate/chiefresidents.html).
[v] A very small number of participants opted not to participate or could not be contacted. Where participants' contact details were incorrect, a significant attempt was made to identify current contact details (e.g., through searching hospital staff lists and the NHS consultant data base).
[vi] Including a clinician who had undertaken a different clinical leadership course, a hospital consultant and a GP, both with leadership experience, as well as a school leader.
[vii] Percentage of those agreeing 'strongly' in brackets after each agreement % throughout the remaining document.
[viii] 24 at CUH, 8 at NNUH and a further 20 in 12 other EoE trusts, 2 did not disclose their current organisation.
[ix] For example, due to opposition from specific senior colleagues, lack of staff or staff changes, career break of the participant.