**Darzi Clinical Leadership Fellows: An Activity Theory Perspective**

**Abstract**

**Purpose:** To review the impact of the clinical leadership programme, in enabling the Darzi Fellows to lead change projects in health and care services, and to secure quality healthcare in the NHS beyond the lifetime of the programme.

**Design:** A longitudinal empirical investigation of clinical leaders (n=80) over an eight-year period was framed through an Activity Theory-driven research methodology using a mixed-methods approach.

**Findings:** Activity theory illuminated how change was sustained in the NHS in London through the Darzi Clinical Leadership Fellowship. By any reasonable measurement, this programme excels, with learning and positive behavioural change sustained after the Fellowship across the NHS. Further recognition is needed of the continuing development needs of Fellows as they take on more responsible leadership roles in their careers.

**Research Limitations/ implications:** Darzi fellows are a hard-to-reach group. The sample represents a response rate of 34%. 77% emanated from cohorts 5 to 8 programmes.

**Practical Implications:** The investment in a clinical leadership programme focused on systems leadership for quality generates value for the NHS.

**Social Implications:** Countless interventions flowed through London’s healthcare community and beyond as a result of the Fellowship. This research exposed how Darzi Fellows continue to lead innovation for alternative healthcare outcomes. Many proactive Fellows employ a suite of learned skills and capabilities, to lead systemic change.

**Originality/Value:** This research is the first known longitudinal clinical leadership development study undertaken The Darzi programme has created a unique clinical network of mutually supportive, team-centric systems thinkers and doers, with an evidence-based approach to systems change. Many Fellows are catalysing sustainable change in the healthcare environment.

**Keywords:** Leadership, Clinical effectiveness, Change Management, Healthcare, Innovation, Interprofessional

# **Introduction**

The Darzi Fellowship is a one-year, certificated, Clinical Leadership programme, supporting early career UK NHS clinicians and Allied Health Partners (the Darzi fellows). These Fellows are hosted by sponsoring NHS Health Trusts, Clinical Commissioning Groups and London-wide regional health organisations, which provide significant change projects as the case material for the Fellows learning and development. The Fellowship is overseen by the London NHS Leadership Academy. The programme is about to enter its 10th year (2018/19). In 2016, three Darzi Fellowship graduates evaluated the impact of the "individual and collective experiences" of one Darzi cohort “on the Fellows themselves, their host organizations and the NHS as a whole" (Conn et al., 2016 n.p). 94% of their 90% survey return rate reported the programme as worthwhile. 85% felt more empowered to improve health care systems, particularly through developing collaborative clinical networks. Socially desirable responding, a phenomenon which tends to dilute the quality of research results (van de Mortel, 2008), would be a rare phenomenon among as tightly integrated a group as the Darzi Fellows. Inflating successes would be readily identified. In fact, especially the newer graduates tend to minimise the descriptions of their contributions. Conn and colleagues also noted how the fellows self-described as “more reflexive, critical and strategic thinkers”. This built on a previous external evaluation of the Darzi fellowship (Mervyn & Malby, 2018), which also demonstrated the immediate impact of the fellowship. This study sought to investigate the impact of the programme beyond the year where the Fellows are engaged. Darzi Fellows from the first eight Cohorts (covering eight years) were invited to participate in a web-based survey on the impacts/influences of the programme since its introduction in 2009, to understand the sustained impact of the Darzi Clinical Leaders programme in securing quality healthcare in London.

The programme is strategically important since the NHS in England requires more ‘change agent’ clinicians armed with healthcare improvement and redesign of care skills (Wachter, 2016, Darzi 2008). Overall in the NHS “trainees are often observers rather than active participants in management decisions” (Conn et al., 2015), and the Fellowship importantly actively promotes a collaborative learning approach to leadership and management. A review of relevant literature on leadership and clinician leadership development (LD) follows. This includes a two-stage retrospective evaluation of the Darzi Fellowship Programme, which supports multidisciplinary clinicians and allied healthcare professionals (AHPs) in project-based assignments with NHS organisations across London. The objective is to evaluate the programme's ability to develop clinical leaders who can initiate systems-change through the skills and knowledge to lead changein multiple contexts, inter- and intra-agency collaboration, and mutual outreach through networks.

## **Theoretical Contribution**

Leadership has three elements: “a democratic component [jointly established goals] ….a collegial component [influence rather than power] and an enhancement component [an intent to improve things]” (Summerfield, 2014, p252). In the 1990s researchers explored the trait theory of leadership emerging which was underpinned by concepts of surgency (i.e. extroverted tendency; wanting to lead and drive change), conscientiousness, agreeableness, adjustment and intelligence (Lussier and Achua, 2001; Gregoire, 2014). Systems leadership requires leaders to let go of the desire to over simplify complex issues and to work with the mess and emergence of non-deterministic change (Randle 2016).

The NHS tends to revert to Systems Leadership as purely a peer-based leadership effort over ‘simple’ or ‘complicated’ issues that require coordination; an essentially mechanistic, rather than adaptive approach to leadership (Malby and Fischer 2006).

Transformational leadership style ties to high organisational commitment, through the ‘4 Is’ – “idealised influence, inspirational motivation, intellectual stimulation and individualised consideration” (Avolio et al., 1997 as cited in Bass & Steidlmeier (1999, pgs.187/188; Long et al., 2016). Transformational leadership has been embraced strongly in the UK public sector through models and frameworks such as the NHS Leadership Qualities Framework. The NHS is moving, as are many other countries to a more collaborative approach to health care development (previously through integrated care programmes, and more latterly through a population-based approach to accountable/ integrated care organisations and new models of providing care across organisations (Pollock & Roderick, 2018). Markets are seen to have failed to deliver the increased quality and better value expected (Alderwick et al., 2018).

Today, researchers attempt to deduce the influence of the various leadership styles (Thomas and Bendoly, 2009; Dulewicz and Higgs, 2005; Jogulu, 2010). The answer from the plethora of research studies could be interpreted as “it’s contextual; it depends”. The London Darzi Fellowship has focused on preparing the Fellows to lead in multiple contexts

**Leadership Development and Organisational Performance**

Healthcare organisations are adopting formal leadership development programmes, with coaching and mentoring for personal growth, development and job enlargement as a route to securing organisational performance. These programmes’ attractiveness to early careerists has not been validated. The popularity of these programs increases when participants hold graduate degrees or have higher compensation (Thompson & Temple, 2015, p 350).

The NHS has long sought to involve clinicians in management. Lord Darzi’s review (2008) stated that clinicians should be encouraged to be practitioners, partners and leaders in the NHS. Certainly, failure in health organisations is linked to the absence of clinical leadership (Francis 2010). The Kings Fund (2011) found that ‘One of the biggest weaknesses of the NHS has been its failure to engage clinicians – particularly, but not only doctors – in a sustained way in management and leadership.’

High organisational performance results when good clinical engagement occurs and higher quality care from strong clinical leadership (Dellve et al., 2018). Western healthcare systems require effective collaborative leadership because ensuring high quality healthcare, securing overall community health and managing costs (aka ‘the Triple Aim’) are difficult; also, as argued by Mery and colleagues (2017), because problem solution and implementation are highly demanding. This challenge requires innovation, which at scale is best realised through networks such as through health alliances (Shannon et al. 2017), informal support networks (van Dijk et al., 2013), patient-led networks (Swan, 2009) and primary care research-based networks (Roper, 2014). Innovation can achieve the Triple Aim, an example being Stoller (2014, p 233-234) of “decreased surgical mortality rates, improved diagnostic accuracy and lower error rates in emergency care”

Leading health networks requires many factors including collective leadership (Mervyn and Amoo, 2014). Much research exists on informal leadership and more distributed leadership forms (Gronn, 2002; Currie et al., 2011). The leadership of improvement collaboratives is the most important variable in operating or sustaining any collaborative venture. (Mervyn and Amoo 2014)

However clinical leaders are not equipped in their clinical training for innovation in systems. Medical consultant graduates are medically competent, but claim to be unready for “supervision, leadership, management and handling financial issues” (Westerman, 2013 cited in Stoller, 201, p 235).

In addition, for NHS sustainability, the public and the health system must be more closely involved (Baylis & Powell, 2017). Patients should engage in care design processes (Baker and Denis, 2011) leading to increasingly co-produced services (McCarry et al., 2018), knowledge and richer social relations (Filipe et al., 2017). Clinical leaders are not equipped in the UK for leading as peers in a coproduced partnership with people and communities.

Approximately 70% of organizational change initiatives fail (Hughes, 2011). The limitations of clinical LD provision are widely acknowledged, including the limited influence of change agents charged with implementing value, quality improvement and co-developing work practices while initiating wider systems changes (Hendricks et al., 2010). The London Darzi fellowship programme sought to address these issues.

**The London Darzi Fellowship Leadership Programme**

The theories of complex adaptive systems theory (complexity science) as applied to social systems (Luhmann 1995) were used to design the leadership programme. The most widely accepted and utilized texts in relation to this theory as applied to leaders cover the issues of ‘wicked problems’ (Grint 2010), Adaptive Leadership (Heifetz 1994), and Emergence (Scharmer and Kaufer 2013). Using these theories alongside relational leadership, the programme addressed the proposition above in relation to the capabilities of system leaders. The Fellowship Leadership Programme aim is to generate an understanding, commitment and leadership practice in:

1. Generating value in systems
2. Leading collectively as peers, including with citizens
3. Securing the relational conditions of openness, embracing diversity, evidence-based decision-making, questioning underlying assumptions, learning and distributed leadership.
4. Developing adaptive capability

This focus was combined with adult learning theory which is that adults learn best through ‘doing’, usually in the form of solving problems, when the subject is of immediate use (Knowles 1984). The leadership programme therefore focused on the host organisation’s real time project bringing the ideas and theories stated above to bear as the Fellows work on that issue.

**Evaluation of the Impact of Leadership Development Programmes**

The importance of clinical leadership for healthcare change has been well described (Swanwick and McKimm, 2011, Edmonstone, 2009, Wilson et al., 2013, Malby et al., 2013). West et al. (2015, p 3) found that across levels of LD programmes - individual, task-based, team, organisational, national “…there is little robust evidence for the effectiveness of specific leadership development programmes” There are reappearing themes such as self-awareness and personal reflection, communication, teamwork, leadership styles, a support network, duration of one year and experiential learning, in studies of the learning impact of Leadership Development (LD) programmes. (Strawn et al., 2017; Tsyganenko, 2014, Pradarelli et al., 2016, Haslam et al., 2017, Chestnut & Tran-Johnson, 2013).

The Darzi programme featured all these approaches in the design, alongside theory that promoted the notion that leadership is not positional, the importance of leading in context, leading as peers for systems change, self-knowledge and relationships.

# **Methodology**

We used an Activity Theory-driven research methodology (Wilson, 2006a), preceded by an overview and discussion on data-based themes regarding growth, development and impact of clinical leaders. We began this Longitudinal Evaluation by reviewing the extant core documentation and reports developed across the first eight Darzi cohorts (pre, mid and end-point). We identified highlights, key insights and challenges, illustrating the programme evolution including how variances developed across cohorts. This history supported the development and administration of a web-based survey of the programme’s early members (236 graduate Fellows with 80 responding). Thus, the longitudinal evaluation provided a rich, representative view of the programme. A nested, mixed methods approach (O'Cathain et al., 2007) underpinned the study prioritising ‘qualitative’ for guidance, while embedding or ‘nesting’ the quantitative element to aid in pattern matching. The n=80 sample represents a response rate of 34% and is the first known longitudinal Clinical LD study undertaken. 70% of respondents were female. 77% emanated from Darzi 5 to 8 programmes This data provides a robust spread of opinion and views.

# ***Research framework***

Activity Theory (AT) emerged as a concept of human consciousness and has been adapted to explore the development of humans in different contexts. For deeper detail on Activity Theory, pleased see (Nardi, 1996)[[1]](#footnote-1).

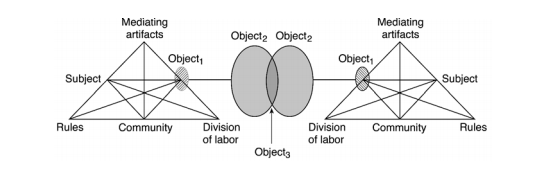


Figure 1: Two interacting activity systems as minimal model for the third generation of activity theory (Engestrom 2001 p 136).

The third generation of Activity Theory began by focusing on collaborative working and systemic engagements (Engeström, 1999a). New concepts and tools were subsequently developed to account for dialogue, including: *“… multiple perspectives and networks of interacting or nested activity systems”* (Engeström, 2001, p 135). Multiple interacting activity systems may exist in a mutual space. Activity Theory is underpinned by object-oriented human activity, multi-voicedness, historicity, contradictions, and transformations (Engeström, 1999).The third generation opened the potential for human practice, to initiate change and transform culture, and can be articulated through the concept of ‘knotworking’ (Engeström et al., 1999). Thus, we can explore clinical leadership development activities through third generation Activity Theory and its systems and contradictions. The term ‘contradictions’ is used here to denote the Fellow’s development within the Darzi network and overarching healthcare system. Contradictions are the structural tensions evolving within and between the activity systems (Engeström, 2001). Contradictions illuminate the NHS’ sometimes portrayed stilted, inefficient and bureaucratic nature while simultaneously identifying opportunities for organisational change through interaction and engagement. Here the notion of contradictions correlates to empowerment, transformation and organisational change. It identifies systemic change opportunities enabled by innovation, networked collaborations and expansive learning contextually with human engagements (Engeström, 2008) e.g.

*“I didn't think I would learn as much or change as much as I have. It feels empowering and hard to articulate the change. [I] have increased knowledge but something more than that which it is hard to put into words. Was quite powerful having a cohort to do this with as realised it wasn't just me feeling this way!”* (Darzi Fellow, 2017).*”* [[2]](#footnote-2)

Thus, we can explore the progress of Darzi change agents, through their boundary-crossing engagement, collective problem-solving and redesign of NHS work. Activity Theory informed both the data collection instruments and the conceptual and analytical framework for the analysis of the research data (Vygotsky, 1978, Leont'ev, 1974, Engeström, 1987). Wilson’s (2006b)adaption of Cultural Historical Activity Theory served as a platform for understanding clinical leadership development processes. This re-representation describes the structure and historical development of the Darzi programme, the mediating tools, rules, norms and conventions, and the sponsor-supported activities context. This enabled more fine-grained examinations of the Fellows’ development to understand their motivation for addressing significant healthcare challenges and for creating a more sustainable NHS.

**The Impact of the Darzi Fellowship**

The survey results indicate many Fellows (63%) who see themselves as leaders making real impacts in different ways. Some were uncertain (25%) and others refrained from claiming any contributions yet (12% predominantly in the most recent cohort).Through the Activity Process Model, we can understand both the effects, together with the programme elements and their linkages to other activity systems. Notably, we can see how the clinical careerists are actively augmenting the programme theory, network knowledge and project experience with service development, quality, and strategic leadership responsibilities alongside their clinical work. Fellows increasingly see beyond their clinical specialty challenges to those faced by others.They embrace diversity and willingly assume different roles.

In the initial activity system, the programme students formed the prime unit of analysis, placing them within one element of an overall activity system. Using Grounded Theory tools and techniques, we determined how the initial subjects (students) perceived the programme and their development; the instruments and tools (e.g. Health Education England (HEE) funding; Darzi leadership programme theory); the higher-level objective (Lord Darzi’s vision for more clinical leaders and system leaders for sustainability purposes); the rules, norms and conventions (i.e. associated with working in host organisations); the division of labour (enacted through their project-based assignments); the community of stakeholders (including sponsors, London South Bank University; HEE); the expected and emergent outcomes (graduates as Fellows; project-based impacts etc). Using Grounded Theory Method and Activity Theory, we could assess the programme’s initial impact including contradictions in their efforts to change the healthcare system. We show a shift from a narrow focus (programme students) to the maturity of Fellows and later see a collective of enlightened Fellows, who are driven to system change and think differently. We also show how the expected and emergent outcomes occurred from their training, development, support and accountability packages as per Level 4 of the Kirkpatrick model (2010). The Fellows credit a range of programme design principles employed in their work including a plethora of Leadership theories. Fellows are intimately aware of leadership styles and theories, incorporating them into their change practice. Further quotations from three Darzi Fellows (2017) included: *“More inclusive of others” … “A much better understanding of conflict, complex thinking around leading”…”An increase in passion and power in taking risks to disrupt systems”.* Beyond leadership, a range of concepts, theories, models, frameworks and approaches emerged linked to Systems Theory, Co-Production, Project and Change Management Theory, Network Theory, theories on Improvement Models and various learning-based theories. We explored the type of leader the Fellows became. Answering the leadership question, ‘I am a... (Likert scale 1 - 7), we list some of the embedded quantitative questions below:

**Table 1: Embedded Quantitative Questions Results**

**INSERT TABLE 1 HERE**

Chronbach’s Alpha (measuring internal consistency), tested the reliability of the questionnaire, supporting the findings that the Fellows are highly consistent in their leadership beliefs(in this case, 0.89; anything over 0.70 is considered good). There was general overall agreement regarding their developing leadership skills. Most respondents tended to Agree or Strongly Agree on items adapted from Wasko and Faraj (2005).The means rose according to the strength of their agreement. We noted that the “Leader who is transparent and realises the importance of shared and distributed approach to leadership.” earned the highest (Mean = 5.87). These views were not so polarised as shown by the Standard Deviation (S.D.) of 1.390. Conversely, the questions “Leader who has made an impact on health care through the delivery of real change”; and “Leader who effects change in multiple contexts and for multiple types of change work” were the least rated (Mean = 4.99), and the Fellows views’ were fairly consistent and not very polarised (S.D. = 1.33 and 1.27 respectively). The question “Leader who is a more reflective practitioner” had the highest SD of 1.505.

The important observation is that the data matches the model assumptions and show the development of robust, innovative leaders playing important London NHS roles and beyond.

The graduates typically tended to follow one of two career paths: more senior clinical posts (typically Consultants for the doctors) and Organisational Development and Strategic leadership roles. Respondents vividly described their career trajectory. Whilst some of the medical fellows were required to return to training and development roles, they also continued within those roles to develop their change skills at team level, and to secure opportunities to contribute to system-wide quality projects. Others went on to undertake wider leadership roles in the Royal College of General Practitioners (RCGP) and The National Institute for Health and Health Care Excellence (NICE). The transition from clinical leadership to more strategic roles commonly emerged from the analysis and included Directors to Service Specialists.

Making use of TOOLS which MEDIATE the process – MENTAL RIGOUR, CONFIDENCE, NETWORKS, TECHNOLOGY.

Innovation

Effective and

sustainable NHS

Within the NHS

Within a PATIENT-CENTRED and TRADITIONAL ‘SILO’- based SKILLS INVENTORY

and an NHS CURRENTLY UNDER SIEGE

Darzi Fellows

THE TRIPLE AIM

Quality Improvement

Overall community health-cost containment

Cost containment

Leadership

Development

Changing all elements of the process through the linkages provided by FEEDBACK LOOPS

Figure 2: Wilson’s Activity Process Model via Darzi Model

In the post-programme activity process model (Figure 2), the *subjects* were no longer individual Darzi students but rather merged into Darzi Fellows who are now following several career trajectories and evolving into future NHS leaders. The prime unit of analysis is now the Fellows acting as change agents tasked with bringing about London systems change. Post-programme roles are dependent on inter-relationships. Each Darzi cohort lives on through the network(s) it creates (e.g. the Darzi network itself) and joins ‘bridging networks’; thus, the learning self-perpetuates.

The activity process model enables wider identification of stakeholders who are change beneficiaries such as NHS sponsors in London. The relationships between the Sponsors and Fellows in the Fellowship year appears on the whole to be very good, as evidenced by the high degree of honesty and commitment shown by both. Many of the Sponsors try to secure Fellows year on year. The following Sponsor comments (of which there are many) are typical:

Fellows Understanding and Confidence

*“Our Fellow developed a wider understanding of system issues”*

***“****I have seen my Darzi Fellow grow in confidence but also sophistication about achieving change in complex systems”*

*“I think there has also been a recognition of the true challenges to be faced when driving forward a large service and quality improvement project. Almost a growing maturity and self confidence which has been great to see!”*

*“Really grown in self-belief, ability to plan steps towards an end point much better using real world and people knowledge developed over the project. Ability to talk about the aims of the project and its setting in current and future models of care as good as mine”*

Effective Change

*“The main change has been with creativity, taking a very different approach than previously and having what seems like an endless supply of creative ways to go about things. An increase In confidence and a desire to achieve and get things underway.”*

*“Producing a high level blueprint for a refreshed care coordination model, with consensus amongst partners”*

*“Improvements in sepsis recognition and management. Raising the profile and awareness of Sepsis recognition within the Trust and becoming a valued member of several committees”*

Networks and Context

*“The biggest area has been in making external links. Those with our STP, AHSN and with senior clinicians are the most important”.*

*“Greater understanding of wider healthcare. More self-directed learning and research initially needed for support for anything and encouraged to go away and look first before asking”.*

*“I have seen an increase in confidence and understanding of key drivers and systems within the NHS”*

50% of the Fellows felt ‘strongly’ in experiencing significant personal change, e.g. more confident with more senior individuals or in contributing their ideas in a team or in initiating educational change. They discovered systemic change is team-based and leadership can be informal. Some individuals may be reluctant to claim ownership of their teams’ successes and collaborative efforts or are too recent graduates (i.e. Darzi year 7 and year 8) to believe themselves as having effected significant change.

The Darzi programme has prepared Fellows for multiple roles that include clinical, quality, organisational development and strategic leadership. These organised, assertive Fellows are multi-tasking, often with little supervision. In the post-programme activity process model, Figure 2, these tools include the acquired art of systems thinking. The Darzi programme has practically and intuitively shown Fellows how to think first then act differently for alternative outcomes. The Fellows are much more proactive resulting from the programme.

Fellows understand how to use data to bring about system change*.* Various responses related explicitly and implicitly to changes beyond merely thinking, into action and intent. Thus, systems thinking is being incorporated in different aspects of their work-lives, helping to solve wicked problems, manage disturbances and improve decision-making. The Fellows strategic planning and translating messages from strategic plans allows stakeholders to see the bigger picture (critical issues for moving forward). The Darzi programme was also praised for embedding Co-Production principles of equality, which is being translated into reality by *“…putting patients first”* [employing] *“more systems thinking, not just front-line thinking about one patient only”,*

48 of the 77 Fellows stated that they were proud of their Darzi achievements. The more recent graduates of a Darzi program (i.e. Darzi 7 & 8) were the most likely to respond to this survey. In the case of this question, 17 of the 66 respondents who replied to the question with comments, stated that they hadn’t made a difference yet or typically that it was “too soon to tell”. Some chose to respond with observations about personal development (promotions, new or improved skills, awards, papers). Many pointed to improved services or general contributions (45), e.g. how they were now leading teams and using their Darzi learning to help support change.

Examples included completing challenging projects, publishing articles in learned journals and other accomplishments such as taking an active leadership role or more active relationship building. The programme raised awareness of how others work, and Fellows are now ” …*trying to consider different views from both a commissioner and provider perspective”.* Approximately 74% of participants reported either “somewhat agree”, “agree”, or “strongly agree” to the question: *“I have been able to create innovative practices and procedures in my work*” as a result of the programme.

An example of sustained change is the Darzi contribution to the Imperial College Healthcare Trust where the Fellows are leading improvements across the Trust as part of the Quality Team. One of the alumni is connecting up care across traditional boundaries for local children and families in North West London, and is working with a richly diverse group of young people, clinicians, designers, film makers, system change consultants, discourse analysts and others as part of the Talklab consortium, coproducing better healthcare for young people.

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The Fellows understand organisation structure and functioning much better and display determination to redress stilted practices and to create a higher performing system by challenging authority. Recognition and power-sharing examples between citizens and professionals emerged based on reciprocity and equality. Differences in thinking and practice around networks and underlying power structures also emerged.

The innovation pipeline is better understood rather than the typical narrow episodic fragments. The fellows embraced innovation and experimented with alternative work practices. Fellows merged into change agents in different ways e.g. through the trialling of new ideas *“and engaging with folks in the sector to raise the profile of Alternative Health Providers* (AHPs)*”* (Darzi Fellow, 2017). Observers credited the Darzi programme for nudging Fellows from their comfort zones and encouraging the uptake of new challenges*.* Fellows embraced the opportunity to be innovative, from the initiation of projects, innovative teaching and mentoring through to innovation in research.

**Discussion**

We now revisit our findings in a theoretical context. Our findings fill a practical, theoretical and methodological gap in knowledge considering that “only 8% of the scholarly articles proposing the practical implications of management articles [are] actually useful to managers” (Pearce & Huang, 2012, p 248).

We employed Wilson's activity process model to illustrate the evolution of students into Fellows and then into the Darzi network. During the Darzi programme, the rules, norms and conventions for students were programme based. Post the Darzi fellowship programme there was a tendency to bypass ‘the rules’ through considered risk-taking, and Fellows were more inclined to involve the public in decision making and challenge authority. The activity process models showed their career trajectories, organisational impacts and social influences. The outcomes were learned Fellows with a raised self-consciousness and core roles in London healthcare. The Fellows became change instruments, confirming research proving interactions between QI staff and clinicians can produce clinically impactful innovations (Woo & Skarsgard, 2015).

Change can result from replacing beliefs in phenomenon causation, given new data (Hemmerich et al., 2016). This can result from becoming more reflective, a common Fellow experience in their training and applied later. The Fellows indicate they are ‘systems thinkers’ (Senge et al., 1994) with confidence to take disruptive risks. Systems thinking includes the understanding that no single element in, e.g. a Quality Improvement system, is responsible for overall system performance. Rather it’s the mix of the forces and interrelationships that shape system behaviour.

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The socio-cultural influence of the Darzi network emerged through their ability to draw upon a network of like associates and alliances (boundary spanners). Lord Darzi’s vision is being translated through the Fellow’s common language in the networks’ communication channels. We see how the objective (*object* in AT language) evolved from early student reaction and depth of learning, through behaviour change and NHS organisation familiarity. Some anticipated and emergent programme outcomes resulted from the power of the Darzi network as a focus to initiate systemic change in London. Innovative activity within the network is leading to the mediation of the Triple Aim and thus arguably a more effective and sustainable NHS (Hashim & Jones, 2007). More insights into the Darzi network activities, resource and knowledge sharing are needed. The application of concepts, theories and models now at the Fellows’ disposal is causing change. Many responses were implicitly or explicitly related to leadership styles and approaches such as transformational or transactional, charismatic-transformational, situational, distributed, ethical, effective, and leadership styles for project managers. Thus, the Fellows are internalising their own mix of leadership styles to managerial and leadership challenges and power structures. Their application reflects the power dynamics that underpin this practice (Barnes et al., 2013). The analysis also drew insights into strategic project leadership (Shenhar, 2012), and how the Fellows are helping to facilitate sustainability of London NHS through change processes in their respective organisations. The Fellows are also creating more of a whole-systems mentality focused on improvement with the various stakeholders. However, we need more insights into the change types occurring through the Darzi change agents and how they negated change failure (Hughes, 2011). Fellows require more support in leadership and space for network development, to meet the complex and evolving health needs. The Fellows are increasingly implementing higher work standards and raising the expectations of others (Bass and Steidlmeier, 1999; Bass, 2000).

Darzi fellows seem to embrace their diversity and willingness to perform different roles. This points to a new breed of leader who is actively improving organisational culture and embarking on strategic management initiatives to achieve system-wide improvements, transformation and quality of care (Aarons et al. 2017).

*“There are not enough GPs and it is going to get worse before it gets better. We are creating a new way of working to enable better access and better workflow and efficiency of GPs to do more with less via centralised and remote e-consultation” (Darzi Fellow, 2017).*

The Darzi programme raised sensitivities regarding micro-managing and the dark side of leadership. Control and manipulation (Harms et al., 2011) was replaced with a sense of solidarity, empowerment, a ‘can do’ attitude and a tendency to consider change through others’ eyes. Evidence of more informal leadership and distributed leadership (Gronn, 2002; Currie et al., 2011) emerged, with Fellows assuming extremely challenging leadership roles and managing clinical situations.

Darzi fellows are ‘visionary’, merging traditional styles of leadership into an enlightened situational leadership framework (Kunnanatt, 2016). The leadership literature understands what leadership entails, but research must do more to gauge ‘the experience of *doing* leadership as a practical activity in complex organisations’ (Denis et al., 2010 p 67).

**Conclusion**

Several concurrent processes must happen for clinical LD programmes to be genuinely impactful. Leadership students must collaborate as a group or team. Innovation, the basis of systems change, is the result of a team effort. These clinical teams should be diverse, especially multidisciplinary “with a level of healthy conflict” (Roncaglia, 2016 p16), and the students must be reflective and resilient.

This study mainly focused on individuals in terms of their post-Darzi clinical leadership experiences. The Fellows seemingly became the leaders within the teams that are critical to innovation development. The collective of Fellows appears to contribute to London in different ways. We identified career trajectories, job types, and their progression. We also described perceived differences in their thinking/practice. The Fellows are empowered by their experiential learning and the associated transformational moulding forces within the Darzi programme.

This longitudinal study illustrates much success in achieving the Lord Darzi endeavour objectives. One measurement is through their progressions, e.g. to consultants, assuming strategic roles, becoming educators and further educated. The Fellows’ and their peers’ behaviour has changed. The Fellows left the programme with an appreciation of the multitude of reasons change doesn't work in the NHS, and importantly, why this need not be so. They became strategic system thinkers and their ability to prevent change failures was acknowledged by seniors who deal with the Triple Aim and NHS sustainability. The life-blood of the Darzi Fellowship is the Darzi network. The Fellows are much more aware of the power of networks and how to use them. By any reasonable measurement, the Darzi programme continues to be particularly successful. However, sometimes the Fellows feel isolated within their home organisations and even from each other. They typically network within their own Cohorts, horizontally rather than vertically through all the Cohorts. Some feel that their home organisation doesn’t seem to know what to do with them and their new skills. They also need encouragement to continue with their personal development. They have discovered the power of networking and now have an expanded resource list when they need to “call a friend” for clinical support, shared learning, job opportunities, and social mingling, which may include opening new doors.

Quality healthcare for all is based on the concept of compassion, a pervading theme of the Darzi programme (Boyatzis et al., 2013). However, its emphasis on moral virtue (see NHS’s inaugural principle) makes it vulnerable to inter-organisational competition and historical inequities. The Fellows are can deal with organisational tensions and therefore truly be catalysts for sustainable change. We identified career trajectories of the Fellows, which illuminated our understanding of change in NHS organisations. This allowed deeper insights into the macro - (implementing systemic change) and micro- (the behaviour and actions of Fellows as change agents in unique contexts), and understanding their interrelationships. This form of analysis highlighted further contradictions regarding their future developmental needs as clinical leaders, illuminating their practical desire for creating a more sustainable NHS in part through the mutual support of the Darzi network of Fellows.

**Areas for further research**

Although this paper deals with the behaviour of Fellows, more insights are needed into their organisational influence. It is unclear why certain organisations return for more Fellows and others don’t. Another emergent finding is the need for upskilling and further continuing development of clinical leaders. Why do some organisations continue to need assistance from change agents? Future research could be undertaken with the Darzi change recipients, including organisational members affected by the change, and thus key stakeholders who want to see that change goals are achieved. With only 51% of Fellows currently interacting with other leadership and improvement networks, there is scope for greater network collaboration across London Healthcare.

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2. (Respondents, are all denoted as ‘Darzi Fellow, 2017' because of data protection concerns with attributing Fellows to specific cohorts due to some lower response rates). [↑](#footnote-ref-2)