Enhancing medical students' leadership skills through student-selected components

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Organisational/Historical context

The Francis report (Mid Staffordshire NHS Foundation Trust Public Enquiry, 2013) investigated the failings at the Mid Staffordshire NHS Trust between January 2005 and March 2009. The report highlighted a lack of strong, patient-centred leadership as a key element responsible for the poor quality of care delivered. This incident is one of many examples where an absence of leadership has resulted in deficiencies in patient care (Delamothe, 2010) and, cumulatively, these cases have driven new policies and leadership training initiatives (*e.g.* NHS Institute for Innovation and Improvement, 2010 and Halligan, 2010) to improve the quality of healthcare delivered by the NHS. Whilst the majority of these have focused on the postgraduate space, there is increasing interest at undergraduate level.

Leadership education is mandated by *Tomorrow's Doctors* (General Medical Council, 2009), in which the General Medical Council (GMC) sets out the requirements for undergraduate medical curricula in the UK. Detailed curricula on medical leadership, covering both undergraduate and postgraduate education, are also provided by the Academy of Medical Royal Colleges (NHS Institute for Innovation and Improvement, 2010). The preparation of undergraduates as future healthcare leaders is imperative if medical students are to answer the calls from the National Medical Director of NHS England, Sir Bruce Keogh, for junior doctors to act as '*agents for change*' within the NHS (Keogh, 2013).

Specifications of Project

The authors wished to design an undergraduate teaching programme to complement the leadership and management aspects of the current undergraduate curriculum. Their aim was to provide learning resources and opportunities for those students looking to explore further the topics of medical leadership and management.

Throughout the medical undergraduate curriculum, students are required to undertake Student Selected Components (SSC), which provide opportunities to gain a greater understanding of specific areas of interest within the broad umbrella of medicine. With this in mind, the authors decided to construct a two-year SSC spanning years 4 and 5 of the five-year undergraduate medical course, providing students with the opportunity to develop their medical leadership and management experience and skills. A two-year SSC programme was chosen so that students would have adequate time to acquire relevant and useful knowledge, experience and skills. The two-year programme would also allow for a year's overlap between cohorts, thereby creating more opportunities for self-development (including mentoring) whilst aiding continuity and sustainability. In essence, the year 4 SSC students would focus primarily on the academic theory underpinning leadership and management, whilst the year 5 students would mentor the year 4 cohort and embark on extended placements of up to 5 weeks, both within and outside the healthcare setting, to obtain hands-on practical experience. The programme was piloted during the academic year 2013-14 and continued into 2014-15.

Discussion of Pedagogy/Practice

The authors and their tutor chose to move away from the traditional teacher-led methods, wherein the lecturer sets the required objectives and ensures that the students follow this prescribed pathway, towards a process that allows students to create the agenda for themselves. The relationship between the students and their academic tutor during this project was less prescriptive and more supportive. This involved adopting the thinking of educators such as Illich (1971), Freire (1970) and Neill (1969), who all considered that typical schooling restricts students' realising their full potential. The process adopted in the SSC was designed to enable students to engage fully in the 'academic weave' as described by Light and Cox (2009, 44). The academic tutor envisioned that an action learning process (such as described by McGill and Brockbank, 2003) would allow the students to create their own learning agenda and would enable them to see and reflect on how their actions and activities impacted on each other and the effects this might have on their personal development and progress, further feeding into the leadership focus of the SSC itself. The concept of self-directed learning (Brookfield, 2009) was chosen for this SSC because of the increased autonomy and motivation associated with this model of learning (O'Shea, 2003). Since effective collaboration is imperative for the development of both doctors and leaders, students are encouraged to reflect on how their actions and activities impact on the development and progress of the group. This was supported by the wider academic staff as the authors were able to meet the institution's requirements for completion of a self-directed module.

The year 4 students undertake an individual research project on which they deliver a seminar session and an 8000-word written report. These products form the basis of their assessment by the senior medical educator, in keeping with the SSC guidelines. This process was chosen to ensure strong theoretical foundations and to provide a platform for open discussion and student engagement. In addition, didactic sessions (Gundem, 1992), delivered by experienced clinicians and leaders in industry, complement the main aspects of the devised SSC syllabus, providing additional direction and guidance on key topics of leadership and management.

The focus in year 5 is on experiential learning (Kolb, 1984), enabling students to build upon the theoretical foundations established in the preceding year. The extended placements expose students to leadership and management in a practical setting in order to provide a holistic learning experience. Students are responsible for organising their own placements, encouraging them to research and identify the best learning opportunities whilst providing the platform to develop both organisational and networking skills. The mentoring role of year 5 students offers them the chance to develop further skills mandated by the GMC, such as providing feedback and taking part in appraisal, while also allowing for continuity and retention of corporate knowledge and lessons learnt from the past.

From a university perspective, through the timetable of activities created and the strong relationship between the students and academic tutor, progress through the module can be easily ensured and monitored. The medical schools' SSC model provides for a very flexible approach, meaning a variety of different learning methods can be adopted. In this respect, the authors use the combination of seminars, placement assessments, peer assessments, and written reflections and reports to provide students with a wide range of opportunities to demonstrate their progress.

The wealth of opportunity within the field of leadership and management for medical students, alongside the varied backgrounds of undergraduates, makes it difficult to determine the level of work expected from students. However, the strength of the individual projects, along with the students' undertaking of oral and poster presentations at two respective national conferences, demonstrates that student-led projects can often set higher standards than might be the case through externally-imposed benchmarks and expectations. Furthermore, the infectious enthusiasm and commitment demonstrated by students taking a leading role in their education gathered other interested students and contributed to the momentum and sustainability of this project.

Implementation

During the pilot year, self-directed study to improve participating students' understanding of leadership and management theory, and its impact, was undertaken. This involved utilising journal databases and library resources, as well as reading national guidelines and opinion pieces and attending conferences and debates. In addition to general research, each individual chose an area of interest upon which to create an oral presentation. The audience for these presentations comprised all those on the SSC, other interested students and medical educators. Audience numbers were restricted to a maximum of ten, in order to encourage inclusive participation. These seminars were bi-monthly and designed to be sequential in depth and focus: the first was an overview of leadership and management theory, the second a focus on how theory is translated into practice at a military officer training academy and the third an exploration into the evidence base for leadership and management training.

Following the conclusion of the student-led seminars, three external speaker events at monthly intervals were organised. Two of the speakers were leaders of NHS leadership and management organisations and one was a subject expert having had a career in the military, diplomacy and international-level sport. There was an open invitation to these events, the audience comprising medical students, staff (clinical, educational and managerial) from the medical school and affiliated health trust, as well as industry professionals.

In conjunction with the seminar and speaker series, some visits to industry were arranged, including oil and gas, management consultancies, private healthcare and commercial aviation. There was also the opportunity to complete courses in topics such as theoretical and practical medical simulation, medical quality improvement tailored to doctors and a leadership and management development course at NHS Staff College. The various areas explored provided opportunities to network with other like-minded individuals, ranging from other students to senior figures in healthcare and wider industry.

As part of the drive to create a sustainable SSC and to provide further opportunities for student involvement in leadership and management, a new student society, Leadership and Management in Medicine (LMM Society) was registered, with a nationally-recognised medical professor as patron. The theory behind this was that, by engaging the wider student body, especially in years 1-3, the society could act as a reservoir of students to embark on the two-year SSC. Additionally, it could prove a useful tool to disseminate to a wider cohort the message of student-led innovation and healthcare enhancement.

Early in the project, the authors created a mission statement and vision document that set out what they were trying to do, why they wanted to do this and how they were going to do it. The document constituted a statement of the authors' terms of reference, ensuring their individual efforts were united in purpose. This document also allowed the authors to convey quickly and effectively to others their initiative and rationale.

Communication between SSC students and the academic tutor was largely by electronic mail, consolidated by bi-monthly face-to-face meetings. All electronic resources, including publications of interest, meeting minutes and visit reports, were uploaded and stored on an online cloud system, allowing unlimited and shared access.

Evaluation

As with many areas of leadership and management education, evaluation of the success of this piloted programme was not straightforward. This dilemma finds an echo in the words of the late Professor Aidan Halligan, former Principal of the NHS Staff College, who stated: *"It is extraordinarily difficult to measure the results of leadership and yet the results of leadership seem extraordinarily important"* (Halligan, 2010).

That being said, when comparing the project's genesis in September 2013 with its current standing in October 2014, there are demonstrable elements of success. The SSC cohort has grown from three to seven, the society membership continues to grow and attendance at talks and events reaches seventy-five when opened up to non-members. This increase in interested and active students has enabled expansion of the number of society-led leadership and management events from five in 2013-14 to an estimated nine in 2014-2015. Furthermore, the success and growth of the society demonstrate that there is burgeoning interest in the LMM movement at the medical school and that the SSC and the society are being utilised as ways to explore this interest. Similarly, the positive feedback generated from other students and staff members on the four seminars and the human factors simulation experience further reinforced the learning value of these events. Furthermore, the acquisition of free places on a leadership and management development course run by the NHS Staff College, a quality improvement training scheme at Great Ormond Street Children's Hospital and the British Airways Crisis Resource Management Training Day demonstrates not only the numerous and varied learning opportunities made available through the activities of the SSC and the society, but also the willingness of those at a more senior level to encourage students to develop their skills in this environment.

Additionally, there have been many 'spin-off' projects conceived from the LMM SSC and the society. These include: new LMM SSC opportunities for pre-clinical students; simulation SSC opportunities for pre-clinical and final-year students; the development of student-doctor partnership schemes; instigation of a partnership between medical students and the local NHS trust to work on a Never Event Quality Improvement Project; a strong working relationship with the local NHS trust's Education Academy as part of their learner engagement strategy. To run, these projects all require the support of medical educators and clinicians from the medical school and local NHS trust, and the number and variety demonstrate the impact that the project has had in its first year.

Future formal assessment of the success of the SSC could be conducted through evaluating participant satisfaction and changes in knowledge base through the year, providing evidence

at levels 1 and 2 of Kirkpatrick's evaluation model (Kirkpatrick and Kirkpatrick, 2007). However, assessing levels 3 and 4, the behavioural changes and associated improvement in outcomes (i.e. patient safety) would be more difficult. Fundamentally, these difficulties arise from the varied definitions of 'quality of care' and 'patient safety' and from the limited validity of current tools used to assess these terms. However, there is a growing body of evidence demonstrating the importance of medical leadership on healthcare outcomes, leading to lower patient morbidity and mortality, higher patient satisfaction and higher levels of staff engagement (West *et al*, 2015).

A recent General Medical Council report found that medical students are not graduating with the leadership and management competencies needed to provide these improved outcomes. Newly-graduated doctors felt underprepared in a number of areas, including time-management, handover, effective communication and teamwork, among others (Monrouxe *et al*, 2014).

Being able to assess the impact of student-led initiatives to improve the non-technical skills of graduating doctors would encourage the dissemination of such practice with the aim of improving the preparation of students for their future careers.

The experience of developing the SSC and the society within a conducive learning environment created by the academic tutor, combined with the exposure gained from the programme, has been highly beneficial for the authors. This benefit is not just restricted to personal development of leadership and management, as it has diffused into a broad range of areas including how they approach, conceptualise, tackle and learn from challenges. This year has concluded with the authors' having more questions than when they started and, whilst initially this was uncomfortable, they now realise that this is an organic part of effective learning.

Lessons learned

Analysis of the authors' individual reflections on the project revealed six broad lessons:

Time spent in planning is rarely in vain

The authors felt that the project, to date, has developed both their leadership and management knowledge and practical abilities in a highly effective way. The significant time spent on discussing and planning the syllabus was therefore worthwhile. Although there was much peripheral organisational and administrative activity, since leadership and management pervade nearly every aspect of human interaction, these activities were conducive to their learning and development.

Communication

The fundamental importance of communication became ever more apparent over the evolution of the two-year programme, at many different levels: intra-team, intra-society, intra- and inter-university and inter-organisation. As individual timetable commitments and individual tasks kept the authors apart for much of the time, effective and succinct communication was essential in order to ensure that all were clear about their respective remits and goals. Conflicting timetabling and placement locations limited the holding of face-

to-face meetings and so e-mail proved the most practical medium of communication. Later in the programme, the authors did also consider the possible future value of web-conferencing.

Additionally, the authors maintained and up-dated their mission statement and vision document to act as a guide and allow succinct and accurate communication of their aims, intentions and actions to others.

Sustainability

Until the tutor proposed the idea of sustainability in an early team meeting, the authors had yet to discuss the formation of a society. Indeed, a long-term strategy for establishing the SSC and attracting sufficient interest had not been discussed, but the authors felt that their peers, like themselves, would be naturally attracted to the initiative. They soon realised that trying to engage the wider student community was a significant challenge and that 'selling' leadership and management as an interest to fellow students might well be confounded by the lack of a single, tangible 'product' which the society could promise to students. The authors learned that, since their fellow students were ruthless consumers, they would have to compete actively against an abundance of alternative (and arguably, at first glance, more attractive) opportunities for their interest and subsequent engagement.

Pursue and create opportunities

The networking undertaken conceived an exponential number of potential opportunities. This further inspired and fuelled the authors' enthusiasm and ambition. Even when approaching high-profile individuals and organisations without the catalyst of a third-party, the authors were still rewarded with surprising success.

Freedom of action

The authors' tutor's approach of allowing them to develop their own course, whilst advising and guiding when required, provided the freedom for the individuals to develop themselves and the project. In addition to this, the tutor's personal knowledge and experience offered a different perspective; an example was the fundamental aspect of sustainability. The authors felt that they were fortunate to have their tutor as both a generator of ideas and as a sounding board for their own. Owing to the scientific, learning objective-based nature of the medical curriculum, the authors were more used to prescriptive learning. This form of action learning was both liberating and daunting; questions did not yield binary answers. Indeed, the authors feel that they now have more questions than they had when they started. This push to ask more questions took them out of their comfort zone and therefore furthered their own personal development.

Be ambitious, then be daring

When reflecting upon the last year, the authors agree that the project's success far surpassed their expectations, perhaps because of two possible factors: firstly, underestimation of the impact a medical student can have in this field; secondly, the current climate of a complex healthcare system which is desperate for those within it to lead from the front. The project's success, with these two underlying potential factors, demonstrates that now is absolutely the right time for tomorrow's doctors to become today's leaders.

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