**Abstract**

Healthcare systems need effective leadership. All medical professionals can and should 'learn to lead' and this requires a clear focus on leadership development from the earliest stages of a medical professional's career. Undergraduate medical students should be provided with opportunities to thrive and develop their skills in terms of leadership, management and followership. Drawing from the existing evidence base, the authors' expertise and the latest 'thought leadership', these 12 Tips provide practical guidance to organisations and to academic and clinical faculty on how to integrate leadership development into their programmes. These 12 Tips will help educators provide medical education that incorporates leadership as a core part of a professional's identity, and help students gain a deeper understanding of themselves and the teams, organisations and system they work within.

## Introduction

Healthcare systems need effective leadership. It is increasingly recognised as essential for high quality care, with both theoretical and empirical arguments supporting the involvement of engaged clinicians who build strong, collaborative working relationships throughout all teams and organisations (Darzi, 2008; Dickenson and Ham, 2008; West et al., 2015).

We define leadership here as a process of social influence, occurring in a group context towards the attainment of a common goal (Northouse, 2015) requiring an interlinked set of knowledge, skills and behaviours relating equally to the activities of leadership, management and followership (McKimm and O'Sullivan, 2016). As currently framed within healthcare, leadership resides throughout organisations: it is an inclusive process, not based around hierarchical positions. The core purpose of healthcare leadership is to bring about continuous improvement of care and the health of populations within finite resources (West et al., 2014; Brook, 2016; West et al., 2017).

The values, behaviours and competencies necessary for effective leadership can be developed (Gentry et al., 2012). Medical professionals can 'learn to lead' and increasingly, leadership is explicitly integrated into the professional standards and training requirements of all healthcare professionals (NHS III and AoMRC, 2010; Frank et al., 2015). However, despite this, it has been difficult to embed leadership development in practice. Ambivalence remains about its place within the curriculum, there is uncertainty about the effectiveness and timing of interventions (Jefferies et al., 2016; Stringfellow et al., 2015; Health Education

England, 2015; Webb et al., 2014; Abbas et al., 2011; Gillam, 2011. Also, there is no "right" or "wrong" way to develop the next generation of medical leaders, developing as a leader is very much a personal journey, however, the literature and practice examples provide us with ideas about how leadership development can be integrated into already crowded undergraduate medical curricula (O'Sullivan and McKimm, 2011).

Faculty need to take collective responsibility for the sustainability of the healthcare systems that their institutions set out to serve. Working with healthcare organisations to identify the leadership and management skills they require from medical graduates is a useful first step to identify what is needed, what is possible, what faculty development may be required and how we can measure the effectiveness of leadership development. We suggest that a clear focus on leadership development should be established at the earliest stages of medical education, with content that is available, appropriate and adapted according to the student's stage of education.

**Tip 1: Understand the evidence, rationale and outcomes required for leadership development in the undergraduate curriculum**

*Understanding and articulating the evidence base, the rationale for leadership development and the outcomes required is vital to justify its inclusion in undergraduate medical programmes.*

The battle for curricula inclusion is political, linked to a range of issues from the distribution of financial resources to the personal predilections of faculty. A good understanding of the

general leadership literature, the evidence base and its clinical application is therefore vital. Drawing from regulatory or professional standards will help to identify intended learning outcomes and will help to justify the incorporation of what might be seen as an esoteric subject into the medical curriculum. This is important because leadership does not have a natural 'home' within the curriculum - in the way that biosciences such as microbiology and genetics do. Furthermore, part of learning leadership is an intensely personal, longitudinal journey in which lived experiences help students understand and interact with the world in more complex, systemic, strategic and interdependent ways. Again, medical schools tend not to have a formal part of the curriculum that focuses on personal and professional development throughout the whole programme.

Codifying this developmental process is complex but vital for future medical professionals who must be capable of leading, managing and following within ~~the~~ rapid, unpredictable, paradoxical and tangled (RUPT) healthcare systems (Till et al., 2016). It is essential to identify a 'leadership champion' who has a strong, clear and reasoned local voice and can work to ensure that leadership development for all is integrated throughout the curriculum and aligned with the values, aims and aspirations of the institution (Swanwick and McKimm, 2012). Regulatory requirements, outcomes statements or standards (such as those provided by the Medical Leadership Competency Framework (NHS III and AoMRC, 2010), The Healthcare Leadership Model (NHS Leadership Academy, 2013), FMLM Leadership and management standards for medical professionals (FMLM, 2016) or CanMEDS framework (Frank et al., 2015)) will provide clear external drivers and evidence for inclusion in the curriculum. These outcomes should be mapped onto the existing curriculum, identifying

where outcomes relating to leadership/management development already exist and where there are gaps.

**Tip 2: Reframe leadership as a core part of a medical professional's identity**

*One strategy that has been effective is to reframe leadership as a core part of a medical professional's identity and foreground it within the 'professionalism' strands of curricula.*

Professional education is just as much about identity development as it is about knowledge learning (Monrouxe, 2010). Traditional ideas about being a clinician can be hard to overcome and managing the paradoxical relationship between the needs of individual patients with wider leadership responsibilities for the overall needs of organisations and systems can be challenging without training to reframe clinical practice and leadership as complementary entities (Till and McGivern, 2017).

Medical students are 'proto-professionals' (Hilton and Slotnik, 2005) and enabling them to experiment with their 'provisional selves' through experiential 'stretch' opportunities, observe role models, receive mentoring from those providing a contrasting perspective to their own and reflect on this against their own internal standards and external feedback (Ibarra, 1999) will help with identity formation. The 'professionalism' components of the curriculum can act as an enabler, with multiple aspects related to effective leadership, management and followership (Thistlethwaite and McKimm 2016). If explored through the language and lens of leadership, leadership and management can become part of the conversation, embedded in the everyday and not seen as 'dirty' words or a side of

healthcare about which to feel threatened or suspicious. Through encouraging discussion and debate about change and opportunity within the system, learning how interprofessional teams work and how they feel in difficult situations can help students learn the 'language of leadership'. Normalising the use of leadership terminology can help build new constructs which embed leadership as a legitimate and valuable component of professional identity; providing an enlightened perspective on what being a good clinician is all about (Mannion et al 2015).

**Tip 3: Enable an exploration of self**

*Generate reflective experiences to enable students to gain greater self-awareness and develop mechanisms to sustain successful careers.*

Who you are is how you lead. A leader's personal qualities are central to how they are perceived, and it is vital that leaders attempt to better know and understand themselves, their values, attitudes and beliefs (Lake and King, 2016). With support to reflect purposively and meaningfully on themselves and their relationships with those around them, students can begin to appreciate their strengths and weakness and identify areas for improvement. Tools such as the Myers-Briggs Type Inventory, Belbin Team Inventory and 360-degree feedback assessments are available to help (see 'Further resources' section) and should be used to trigger discussions with peers, teachers and mentors to help learners make sense of the results.

Leaders must also have the ability to adapt to adverse conditions while maintaining a sense of purpose, balance and positive mental and physical wellbeing (Laws-Capman, 2012). Such resilience is more than an innate personality trait (Tugade and Fredrickson, 2004). It is developed through a personal journey that requires a deep understanding of self where students can 'rise to the occasion', look after themselves and constantly learn from their experiences (Corkindale, 2009). Accepting that 'change is the only constant' is also important and an ability to cope with this is vital for medical professionals due to the volatility, unpredictability, complexity and ambiguous (VUCA) nature of healthcare systems (Till et al., 2016).

**Tip 4: Facilitate leadership development through team working**

*Effective teams always outperform individuals and so it is essential that health professionals work collaboratively in multi-professional environments.*

Higher quality care is provided when medical professionals work together in multi-disciplinary teams (Borrill et al., 2000) and students learn more and help those around them when working co-operatively (Slavin, 1983). The benefits of effective team working are clear and students must learn that however small a role they might play, that they can lead and contribute to the collective success of the teams they work within.

As part of leadership/followership development, students should learn about the underlying principles of what constitutes a good healthcare team and some of the common barriers that prevent effective team working (West et al., 2013). To be an effective practitioner, they

need to learn to work collaboratively with the professionals around them and understand that, irrespective of their profession's traditional role, at times they might have to lead or follow for the collective success of the team. Participation in interprofessional quality improvement projects or simulation training delivered in a psychologically safe environment, with time for reflection and debriefing on performance with a particular focus on leadership and followership, or how a clinical task was managed, can be useful to foster collaboration and develop this understanding for their future practice (Frenk et al., 2010).

**Tip 5: Cultivate an understanding of the organisations and systems that deliver health and care**

*While a medical professional must prioritise the patient in front of them, they must also accept their responsibility for the sustainability of the organisations and systems within which they work.*

Medical professionals have a responsibility to their organisation and to understand how their organisation (and the people and teams within it) fit into the wider healthcare system. Whilst students would not be expected to contribute to the strategic direction of the organisation or translate policy into practice, they must understand the healthcare structures and the systems within which they are expected to work. This is particularly vital within the context of a rapid and constantly evolving landscape and when students are working in different cultural contexts, such as electives, when the cultural norms and expectations from different members of professional hierarchies may be very different from those they are used to working within (McKimm and Wilkinson 2015).

Students must be supported through education which values and holds the expertise not just in human health and disease, but in the systems within which that must be managed. The King's Fund has a great many resources (The King's Fund, 2017) which can be utilised to this end, but process-mapping patient journeys as they flow through the system, shadowing managers, taking on managerial positions (e.g. student coordinator or committee chair) of increasing responsibility and social value, and hearing insights from, for example, policy makers and economists will provide greater benefit and 'colliding perspectives' (Petrie, 2014) different from those held by the frontline clinicians they would ordinarily encounter and learn from. The engagement of patients and the public in the developmental process is key. This will also help develop students' wider contextual awareness to gain a deeper understanding of the stakeholders they will need to work with in the future.

**Tip 6: Adopt the characteristics of successful programme design**

*While maintaining flexibility, the characteristics of successful programme designs should be implemented into the design of leadership development programmes for undergraduates.*

Whilst healthcare delivery relies on a scientific, rigorous evidence base, the evidence for medical leadership development is patchy. The content delivered is rarely theoretically grounded, and typically reflects the ideology of the programme lead or programme provider (West et al., 2015). Learning opportunities often occur in isolation, delivered away from the clinical environment and away from those who students need to learn to influence. Well-designed 'horizontal leadership' can provide a framework for reflection and learning, but it

needs to be complemented with 'vertical leadership development', based around students' real experiences (Petrie, 2014). This combination will facilitate meaningful and deep learning about the leadership in practice.

At a minimum, while development offerings should remain flexible, leadership programmes should include: clear learning objectives, appropriate sequencing of progressive meaningful content linking theory to practice, a range of stretch opportunities enabling legitimate participation where students can safely test out what they are learning in practice, assessment, exposure to different perspectives, individual development with relevant and timely feedback to reflect on and learn from, and follow-up activities to review their success after completion of the programme and develop communities of leadership practice (Petrie, 2015, Swanwick and McKimm, 2014; Yukl, 2013; Lave and Wenger, 1992).

**Tip 7: Define and map a 'core curriculum' in leadership development and provide additional opportunities for those who are more interested**

*Leadership opportunities should be available and accessible for all, with additional 'stretch' opportunities for those with a particular interest or aptitude*

Medical professionals value autonomy, not just over their clinical practice, but also over their career decisions (Hewlett et al., 2009). While leadership development should be for all and not a selected few, there is no 'one-size-fits-all' methodology. Medical programmes must provide a core basic grounding in leadership, but maintain flexibility to allow a variety of approaches to be pursued by students with varying degrees of interest and enable

integration into various types of curricula. As mentioned, skills and competencies relating to leadership can be found in the standards and competences of many regulatory and professional bodies, and from these we suggest the following core knowledge and competencies should be embedded throughout the programme:

- Core concepts and models of leadership, management and followership
- Health management, systems, services and structures
- Law, ethics, morals and values
- Quality improvement, patient safety and audit
- The roles and responsibilities of different health workers
- Change and project management principles
- Communication skills: written, verbal, non-verbal
- Group and team dynamics, effective interprofessional teamworking
- Developing self-insight, cultural and emotional intelligence through reflection, feedback and conversation
- Being and becoming a professional

These broad areas can be woven into any type of curriculum, be this pre-clinical/clinical, problem or team-based, systems based or outcome/competence based. What is essential though, is to highlight the specific aspects of leadership, management and followership, using the 'language of leadership'.

Providing additional leadership opportunities should not require wholesale changes to undergraduate curricula. Many programmes already offer students the opportunity to pursue different interests through student selected components (SSCs) or modules (SSMs) or intercalated degrees – however, their availability is patchy and these should be expanded

across all undergraduate medical programmes. Students with a particular interest or aptitude should be provided with a range of opportunities to develop their talents. Through partnerships with business or management schools, faculty with specific expertise can be accessed to deliver content on leadership, healthcare management, healthcare economics, and policy. A wide range of topics and opportunities lend themselves to developing well-rounded medical leaders. Students should also be proactively supported to engage in relevant extra-curricular activities such as student societies, committee membership, or in 'intern' opportunities with external professional organisations. Combined with action learning, coaching and mentoring activities these will help students to reflect on and appreciate the inter-relatedness of these skills to clinical practice by developing a greater understanding of themselves and their interpersonal skills. In addition to the formal curriculum, many opportunities exist for students to practice and learn leadership and teamworking skills and they should be encouraged and recognised by the School. These include leading societies, projects or initiatives; running an educational programme or engaging in community based activities.

**Tip 8: Assess the development of leadership competencies, knowledge, skills and behaviours**

*Development must be assessed to stimulate reflection and learning, which combined with rewarding student's successes, encourages engagement and leads to further development.*

Acknowledging and rewarding engagement in leadership activities is important. It encourages engagement, builds confidence and provides recognition of good performance (Lohrenz, 2014). At the undergraduate level, we must be able to assess performance and track a student's progress against professionally defined standards. Assessment drives learning and, implemented thoughtfully, it can stimulate reflection and provide an impetus for further growth. Although contrasting views are held about the formal assessment of leadership knowledge, skills and behaviours (Quince et al., 2014), if leadership is integrated into the curriculum without specific learning outcomes and assessment criteria, there is a risk that leadership development will be marginalised.

Once clear outcomes have been developed and mapped onto the programme, assessments can be designed and blueprinted. Depending on whether assessment criteria are framed in terms of demonstrating knowledge or skills or exhibiting appropriate behaviours, a range of assessment modalities can be used. These include: theoretical writing; multiple choice or short answer questions on policy and healthcare systems; reflective commentaries; individual or group developmental projects or assignments; presentations, or 360-degree feedback mechanisms (such as those available through the NHS Leadership Academy or Faculty of Medical Leadership and Management). A diverse range of assessments suited and adapted to local need must be used to facilitate feedback and learning, and help students develop leadership skills. This process must be carefully managed with the most important factor being progression and demonstrable learning from rich qualitative feedback on the student's strengths and areas for development.

**Tip 9: Embrace the hidden-curriculum through near-peer learning**

*The hidden curriculum provided through near-peer learning can provide a powerful supplementary teaching mechanism for leadership development*

Near-peer learning and teaching involves a relationship between students and newly qualified clinicians, which in healthcare, provides benefits for both parties (McKenna and Williams, 2016). Perhaps in part due to tight professional regulation and the hierarchical nature of the culture within healthcare, the social proximity of peers to one another can create a safer environment to assist their learning and, through working in the zone of proximal development, can help stimulate growth (Bennett et al., 2015; Vygotsky, 1978). Without this, students training in a traditionally hierarchical culture and structure are likely to suffer.

While not intended, much learning occurs outside the formal curriculum through informal interactions between peers and near-peers: the 'hidden curriculum' (Gaufberg et al., 2010). This plays an important role in the development of professional values and behaviours (Phillips, 2013; Allan et al., 2011) therefore programmes should seek ways to harness these positive aspects and consider the overt integration of near-peer learning into medical programmes. This will help students to develop an understanding of the real world demands of healthcare as they progress through their education and training.

**Tip 10: Support specialist faculty to lead the development and integration**

*Harness multidisciplinary faculty with educational, leadership and frontline clinical expertise.*

Each programme should have a named member of faculty to lead leadership development (Jefferies et al., 2016). Whilst those with a theoretical basis for leadership development are still fairly thin on the ground, by locating leadership development alongside 'professionalism' (Tip 2), this will widen the pool of clinical and academic faculty with the knowledge and skills to engage in leadership development.

The 'leadership lead' will need to co-ordinate faculty and create a structure which draws on the expertise of those with educational, leadership and frontline clinical experience to develop evidence-based programme designs which integrate with local organisations and meet the needs of the system. They should work across boundaries to stimulate faculty development which drives self-improvement and professional growth (Steinert et al., 2010). Faculty leads can model contemporary leadership through empowerment, collaboration, community building, reflection and proactivity to create a collegial learning community which strengthens the importance of leadership in the curriculum (Lawler and King, 2000; Wilkerson and Irby, 1998).

**Tip 11: Connect and harness the power of networks**

*Centred around a common purpose, faculty should be developed across organisations to create a critical mass of intelligence capable of championing medical leadership.*

Networks provide a forum for diverse relationships to form where knowledge is created, information is exchanged and good practice is diffused across boundaries, organisations and

systems. Successful networks have a common purpose, cooperative structure, critical mass, collective intelligence, and community building (The Health Foundation, 2014).

Working within networks is very fitting for those involved in integrating leadership development into undergraduate medical programmes and must involve all professions. At the formative stage of its development, traditional silos can be broken down, cooperation fostered across professional and organisational boundaries, and intelligence and resources shared. Interprofessional education is a fertile setting for leadership development, around teamworking, healthcare systems, patient care pathways and values (Thistlethwaite, 2012). The common purpose – to develop professionals who have the skills and are willing to take leadership roles – is clear, and a critical mass and collective intelligence is building. Exposing medical students to clinical leaders who are not doctors can send a powerful message about what clinical leadership is, for example students working with a lead midwife or nurse consultant with their own case loads and autonomy or working with healthcare managers on a project. However, it is still unclear how best individuals, groups and organisations can practically work together cooperatively as a community on leadership development at undergraduate level. This will require overcoming competing priorities and siloed working between universities and national organisations to identify how interested faculty can be identified, and how information and best practice can be shared.

**Tip 12: Contribute to building the evidence base for integration of leadership development into undergraduate medical programmes**

*Proactively contribute to building and sharing the evidence base for how to integrate leadership development into undergraduate medical programmes.*

Interventions for developing medical leaders are diverse and there is little evidence for the effectiveness of any one specific leadership development programme (West et al., 2015). While good leadership development is context sensitive (Hartley et al., 2008) and difficult to measure as it is largely based on self-reports, multiple strategies can be implemented and must be pursued to share best practice and maximise the use of resources expended on this important area. Tracking student's progress through developmental assessments as outlined above should all be used to evaluate the success of any leadership programme, with students followed-up to assess their onward progression. These issues are hard to unpack, but if we are to target the right people in our efforts to develop good medical leaders we must not assume what we are doing is a good thing and, as in clinical practice, we must critically analyse what we are doing to ensure the delivery of cost-effective interventions.

Furthermore, we must make this research accessible to frontline clinicians and educators. Until recently, research into medical leadership development was mostly found in specialty specific or educational journals and whilst clinical medicine had many vehicles to disseminate and debate the evidence, medical leadership had virtually none. This has created a barrier to the implementation of evidence based medical leadership development (Lees, 2017) but recent developments in specialist medical leadership publications provide new opportunities to promote evidence based practice and provide fora for the

dissemination of original research and debate on how to improve patient care through improving medical leadership (Douglas, 2017).

**Conclusions**

Integrating leadership development into undergraduate medical programmes is challenging. However, this does not mean it cannot be achieved, and does not necessarily mean a radical redesign of programmes. We have identified that a 'one-size-fits-all' approach does not exist (and would not be appropriate) because institutions require the flexibility to tailor their leadership development offer in line with the philosophy and structure of their undergraduate medical programmes. However, through reframing traditional concepts of leadership and management in alignment with the 'professionalism curriculum' and development of a professional identity, institutions can incorporate leadership development as part of the core curriculum. Relevant outcomes 'tagged' under the leadership umbrella should be mapped onto the curriculum and a range of diverse assessments developed and blueprinted to assess achievement of the defined outcomes. We suggest that through a focus on developing students' understanding of self, teams, organisations and systems, evidence-based leadership development programmes can help to equip students with the knowledge, skills and behaviours required of a successful leader. In order to extend our knowledge and evidence base on how to deliver and integrate effective leadership development for undergraduate medical students, leadership faculty need to be provided with appropriate development opportunities themselves and supported to work collaboratively across organisations and professions.

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**Useful resources**

Businessballs has free resources for self, career and organisational development: www.businessballs.com (accessed 4 October 2017)

MindTools has many open resources and tools for organisational, self and team development: www.mindtools.com (accessed 4 October 2017)

Skillsyouneed has many free resources for self-development: www.skillsyouneed.com (accessed 4 October 2017)

CanMEDS framework (2015) http://canmeds.royalcollege.ca/en/framework (accessed 4 October 2017)

Faculty of Medical Leadership and Management (FMLM) (includes Leadership and management standards for medical professionals (2016) as well as a range of members' resources) https://www.fmlm.ac.uk (accessed 4 October 2017)

GMC resources (including standards frameworks and Leadership & management for all doctors, 2012) www.gmc-uk.org (accessed 4 October 2017)

NHS Leadership Academy (includes resources and the Healthcare Leadership Model, 2013) www.leadershipacademy.nhs.uk (accessed 4 October 2017)

The Kings Fund (includes a wide range of resources on health policy and practice) www.kingsfund.org.uk (accessed 4 October 2017)

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