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Editorial Article

## Today's agenda: Transforming curricula in a new era of collaborative patient-centred approaches to healthcare delivery



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At every turn medical schools are revising or as many state transforming their curriculum.<sup>1</sup> There is always a need to reflect on how we train doctors especially in the light of scientific progress within global health priorities. As we move swiftly into the 21st Century we continue to see changes because of the advancement of medical science such as people with complex co-morbidities living longer and disabled patients enabled to live independently. Surgical procedures are less invasive, some carried out with the use of new technologies such as robots, with surgeons concentrating on interventions to speed up or enhance recovery. Financing and managing health and social care remain core concerns. Recent falls in global economies have placed difficult ethical funding challenges on the shoulders of clinical leaders at a time of increasing public demand. Some of these challenges relate to how doctors can reduce costs by minimising unnecessary clinical interventions, through vigilance to protect resources and on cutting down on waste.<sup>2,3</sup> Today's patients are less tolerant and often present after consulting the fountain of knowledge within the World Wide Web. Some seek legal advice following negative outcomes leaving many doctors demolished and demotivated. Many others demand accessible local services for regular health checks and expect direct rapid access to rectify their problems. Globally there are shortages of doctors, especially in the underdeveloped countries and we

ignore inequalities in health at our peril, consider, for example, the lack of early response to the Ebola virus. Even within advanced economies such as the UK, 60–90% of hospital admissions come from those who live in areas of socio-economic disadvantage, which for the Western economies relate to obesity, diabetes, addiction and mental health concerns.<sup>4,5</sup> So what do these changes mean for medical educators? Obviously as a starting point, each of these new developments must be in any revised curriculum alongside the existing requirements of science and practice with the ever long-term goal of making safe, competent, professional and committed doctors. On the same note, academic expertise, qualifications, and increasing workloads should also be considered while embedding new domains in the existing curricula or while importing a brand new curriculum to the medical schools.

The emergent response for the design of medical curriculum has several aspirations; i) design learning that will result in leaders who are enlightened change agents; ii) design learning that produces doctors who can search, analyse and synthesise information; iii) provide learning that recognises the interdependence of systems for safe practice and how components interact within effective team working systems.<sup>6</sup> To address some of these issues many Medical schools are now linking the scientific learning to practical situations and ensuring early patient contact and more experiences concerning patient supervised responsibilities. These are all underpinned with higher regard for professionalism, a construct of multi-dimensional values which encompasses ethical principles and human responses for empathy and human kindness.<sup>7</sup> Alongside this are on-going aspirations for interprofessional learning to maximise the talents of the whole health and social care team.<sup>8</sup> There is also strong agreement on assuring teachers who understand the scholarship of teaching and learning and a great deal of emphasis is placed on faculty development.<sup>9</sup> Throughout

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we need to remain mindful of the growth in technology in every-day practice, such as the use of electronic devices for sharing information, for example, the iPad containing patient hand-over details and incorporate these within our teaching and learning practice. Let's examine some of these challenges.

The importance of the early science learning endorsed and established by Flexner in 1910, has been for some time incorporated within problem-based learning where students work through clinical challenges applying science.<sup>10,11</sup> The recent response of some medical schools is to shorten the early science learning through enabling the application of science to medicine in longer placements or longitudinal integrated clerkships.<sup>12</sup> Indeed the General Medical Council (GMC) in the UK, has repeatedly sought reforms to reduce the burden of science within the curriculum while seeking to introduce student assistantships.<sup>13,14</sup> Many of these changes, for example, applying anatomy and physiology, immunology, etc. during clinical exposure, reflect the importance of developing a patient-centred approach to care throughout a curriculum. Many now consider that merging early scientific building bricks with clinical reasoning (assessment, diagnosis and management)<sup>15</sup> is a better option. Indeed this ensures the felt human experience of healthcare for which today's students are often deemed lacking and might go some way to eradicating unhelpful cultural capital which prevents some students taking up specialisms for which they feel they don't fit in.<sup>16</sup> In the USA the Kaiser Permanent Integrated Care Pathways have indeed these very aspirations, to immerse students to learn from within clinical environments. On-going prospective research by Medical schools is required to make these changes, especially to see if such students are better prepared for clinical practice, a model being practiced through Early Clinical Experience by the medical schools applying a Problem-based learning (PBL) curriculum. Many claim such longitudinal placements enable better relationships with their patients, allow students to follow patient care over a period of time, with some claiming this helps develop more insights into patient safety, while enabling the retention of science knowledge.<sup>17,18</sup>

The Lancet Commission have written a great deal concerning learning about team working and '*exercising effective leadership to transform health systems*', commending the advancement of interprofessional education.<sup>6</sup> That is learning where students from different professions learn together about each other's roles, and through interactive learning modalities which, replicate the real life clinical environment. Team working has only recently been implicated within safe medical practice and is now seen as an instructional tool although difficult for many to place as a stream of possibilities through any training course, but, endorsed by the World Health Organisation on teaching and learning for patient safety.<sup>19</sup> Although great strides are being made there is much to do to promote socialisation for learning across professions and enhance our understanding of the complex nature of how professionals engage and work with one another as they interact around patient need.<sup>20</sup> However, successful models do exist such as the Swedish training wards, and our Leicester Model.<sup>21–23</sup> If for no other reason elements of dysfunctional team must be taught as these issues such as lack of trust, leadership challenges, hierarchical issues often relate to psychological

safety.<sup>24</sup> Competency frameworks for advancing interprofessional education are helping to frame our learning and assessments in this regard.<sup>25</sup>

The Lancet Commission also emphasised the need for scholarship in teaching and learning within broad faculty communities that teach future healthcare professionals stating; '*Although there is movement towards greater analytical rigour in educational research, most studies were descriptive, drawing attention to the importance of strengthening capacity to generate sound evidence building in the field*'.<sup>6</sup> Pedagogic research must as never before develop scholarship which helps us to understand how students learn, linked to changes in curriculum design, and in response to challenges for creating effective learning environments, be these in classrooms, using new technologies, in community, hospital or simulation units. This requires career pathways for doctors to become teachers of medicine which until recently received little consideration, as surely a good doctor can become a scholarly teacher? Qualifications to enhance understandings of adults' learning styles and what makes for learning combined with pathways for educational research at Masters and PhD level, are emerging. This understanding of the learning styles would help modify the teaching and instructional strategies to maximise the educational impact. A dominant theme is application of theory to the practice of learning. More articles are being published in which learning theories are understood and applied which bode well for scholarship in medical education.<sup>26,27</sup>

Finally if responding to the changes in society within curriculum reform is not enough for our concerns within medical education, then we must end with some reflection on how we consider student well-being. What support do we need to offer to those students who find themselves in difficulties, either related to physical or mental health concerns or social difficulties? How do our students come to experience distress and conversely how do those who make it remain resilient and robust.<sup>28</sup> Medical school is a time for forming and transforming young people and we must remain vigilant to support them through this process and ensure we select students who can stay the course, and once selected offer them learning from within a caring community of practice.

In conclusion, we need curricula that can rapidly respond and adapt to global and local challenges of twenty-first century medicine. We need thinking doctors, self-aware and able to navigate through ever complex scientific evidence. We need doctors who enable teams to work effectively and practice patient-centred medicine. We need medical schools that have partnerships with many different types of placement providers and recognise their responsibilities for global and community public health issues and challenges. We need more research scholarship within education so that our understanding of learning can be theoretically informed and advance the way we teach to achieve our goals.

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