Editorial

# Calculated Overhaul Versus Cultivating the Status Quo in Clinical Education

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In an era of rapid healthcare evolution, complex challenges abound from changes in patient demographics, diseases, demand and delivery; to cost, technology, and setting.[1] Such transformations, bound by political, socioeconomic, cultural, and countless other hurdles, cannot be systematically and strategically met by a workforce whose pedagogy and preparation was intended for a different breed and generation of doctors.[2,3] For decades, the approach to clinical education has not fundamentally changed, even as medical education literature has become inundated with calls for reform and restructuring.[2,3] Despite a global shift towards shortened inpatient stays and increased ambulatory care, for example, the first clinical year of medical school has retained a block model in which students rotate through discipline-specific clerkships. Notwithstanding its history and tradition, the latter model is deemed "poorly aligned with society's present and future needs", leading to ill-prepared graduates.[2]

Among the block clerkship model's shortcomings are arbitrary structure of largely inpatient rotations, limited outpatient experiences, discontinuous clinical skills development, and lack of continuity, be it with patients or faculty.[2] Evidence shows erosion of students' ethical behaviour, moral reasoning, idealism, empathy, and patient-centred attitudes.[4-6] These attributes are often undermined by unintended consequences of the hidden curriculum; one in which espoused and enacted elements of professionalism may be discordant.[3] Years of formal training and acquisition of patient-centred skills are easily jeopardised in an environment in which such behaviours are not modelled, hindering development of students' professional identity.[3]

## Longitudinal Integrated Clerkships: Calculated Overhaul

In response to contextual challenges, medical schools in Australia, Canada, South Africa, and the United States have adopted a restructured model under the umbrella of *longitudinal integrated clerkships* (LIC).[4-11] Key features of this learner- and patient-centred approach are *longitudinal* continuity of learner relationships with faculty preceptors and peers, *longitudinal* care of patients, and concurrent *integrated* exposure to multiple disciplines in tandem. A Consortium of Longitudinal Integrated Clerkships characterises the LIC as "the central element of clinical education whereby medical students (i) participate in the comprehensive care of patients over time, (ii) participate in continuing learning relationships with these patients' clinicians, and (iii) meet the majority of the year's core clinical competencies, across multiple disciplines simultaneously, through these experiences".[9] Another defining feature is the opportunity for learners to develop a meaningful connection with their "host community".[9]

As each LIC programme caters to its own educational mission, there is no one-size-fits-all template. A programme may span from 6 months to longer than a year, involve a minority or the whole of a class, and emphasize rural vs urban clinical environments.[4-9] An urban example is LIC at the University of San Francisco in which a portion of the class participates.[6,7] The curricular makeup entails 50% discipline-specific clinical activities, 30% longitudinal patient follow-up and self-directed learning, 10% acute care, and 10% didactic curriculum.[6,7] In a typical week, a student may go to medicine clinic on a Monday morning, followed by urgent care in the afternoon. On Tuesday, attend family medicine clinic, with time spent in the afternoon on self-directed learning and follow-up of patients. The following week will be structurally similar, incorporating gynaecology clinic instead of paediatrics, for example, and anaesthesia instead of surgery. This cycle continues throughout the year, underscoring continuity with panel of patients and clinical preceptors.

LIC preceptors, despite the time investment, report increased levels of professional satisfaction.[5,8] Outcome studies from LIC programmes show more meaningful student relationships with patients, faculty, and peers, with less erosion of empathy.[4,5] Academic performance is at least on a par with traditional clerkships, if not better, particularly in certain areas such as communication skills.[4-6] In one study, graduates from LIC programmes in family medicine

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residency show at least equivalent performance to peers.[10] In a collective review of LIC program outcomes, Walters et al[5] conclude that with mounting supporting evidence, proof of academic non-inferiority no longer needs to be researched.

**Plans at Duke-NUS: Cautiously Optimistic Overhaul?**

At Duke-NUS Graduate Medical School, our educational values require that, among other skills, students be indoctrinated in teamwork, collaborative learning, and critical thinking. These are accentuated throughout the first year of basic sciences with team-based learning as a primary instructional strategy. Starting with clinical clerkships in year 2, however, educational shortcomings surface similar to those highlighted above; challenges likely to become more palpable with rising competition for clinical education resources.

In response to changing healthcare needs, we propose to create a hybrid, longitudinal integrated clerkship as a small pilot programme, with theory- and literature-based education reform proposals as its curricular framework.[3] Far from a reactionary response, the overarching goal of this learner-centred programme will be to cultivate competencies to effectively and efficiently practice medicine in an evolving healthcare environment, facilitating students' longitudinal relationships with faculty, peers, and small panels of patients. Learners will be accountable for guided self-directed learning, focusing on disease progression, undiagnosed encounters in acute care and outpatient settings, chronic care, and exposure to information technology in healthcare. A cohort of interdisciplinary faculty will deliver a clinically integrated, yearlong developmental curriculum. Importantly, if LIC goals are to be realised, leadership support and concerted faculty development efforts will be instrumental,[8] as faculty must "assume collective ownership of the entire clerkship experience"[2] and hone teaching skills aligned with a developmental, competency-based curriculum.

Amidst the magnitude of challenges within clinical education, a longitudinal, integrated approach employed within a collaborative community can enhance learning and by extension, eventually improve patient outcomes.[2] Notwithstanding considerable logistical efforts required, as well as unresolved "questions of efficacy", some view LIC as "the most significant educational innovation in clinical education to have occurred in our lifetimes".[11]

We believe critical thinking skills are critical for our graduates; future doctors who are open to inquiry to the widest range of voices, question dogma, learn from mistakes, and deliberately seek out new possibilities. As educators and at times self-proclaimed role models, if we cannot be bothered to question assumptions underlying our time-honoured educational practices, we must accept any unintended modeling effect on our learners, forego an expectation to foster critical thinkers, and optimistically hope for the best as we cultivate the status quo instead.

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