Longitudinal integrated clerkships: a Model for Health Professions Education in Africa?

Ian Couper defines Longitudinal Integrated Clerkships (LICs), explaining their advantages for students, patients, and the healthcare system. He then illustrates how LICs are being applied in Health Professions Education, drawing on examples from Africa and worldwide.



Stellenbosch University Worcester Campus: Home of Ukwanda's Rural Clinical School

Longitudinal Integrated clerkships (LICs) are an increasingly common form of clinical training, used particularly in medical education. While they have come to the fore more recently, they are in fact rooted in the apprenticeship model, which is at the heart of most good clinical education[1]. Their development has been driven both by workforce factors and by educational imperatives. The earliest examples grew out of rural medical education initiatives that were implemented to address physician shortages in the USA in the 1970s and to make new opportunities available[2, 3], and subsequently these were extended and developed further across different contexts, though rural programmes dominated the field, as part of a wide range of approaches to increase rural clinical training [4]. It was the educational value of LICs that led to them being adopted more widely outside of the rural context and growing as an approach.

What then are LICs? As described by Norris et al[5], the Consortium for Longitudinal Integrated Clerkships (CLIC) defines LICs as consisting of 3 criteria, which are that medical students are involved in the comprehensive care of patients over time, develop learning relationships with the clinicians caring for these patients, and meet a majority of the particular year's core clinical competencies across disciplines through this experience.

In 2016, Worley et al [2] conducted an international study looking at clerkships that, to a lesser or greater extent, met these criteria and developed a topology of three distinct clusters of LIC types, based on 54 programmes in 44 medical schools across 7 countries [2], indicating the wide implementation and variation of LICs.

Looking at what LICs are, it is useful to unpack the term as a way to understand what the concept means in practice. Firstly, let us look at the idea of a clerkship, which is not something that necessarily resonates throughout Africa. This has been largely a North American term for a period of clinical training experience, introduced by William Osler in the late 19th century [1], though its origins

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Context is critical: Rural woman at work in fields



Student Learning Centre at Ceres District Hospital: a LIC training site

appear to have come from Europe and the UK, where clinical clerks, mostly medical students, were appointed as junior assistants in hospitals and "taking histories" became known as "clerking patients". This is interesting because it cements the link of the LIC to apprenticeship, because a clerk was somebody helping the clinician mentor for whom he (they were all male at that time) was working by carrying out clerical duties such as taking histories from patients. Across Africa, "clerkships" might also be called blocks, rotations, placements, attachments or postings. In South Africa, the two institutions that have LICs have made different decisions around the name, with Stellenbosch University calling it a Longitudinal Integrated Model[6] and Walter Sisulu University calling it an Integrated Longitudinal Community Clerkship[7].

Secondly, why longitudinal? Here, the focus is on continuity. Through these programmes there is continuity of involvement of the clinical student with the healthcare context, be that a health facility or a community, with patients for whom the students care, and with clinicians who are the supervisors or preceptors of these students. Many of the extensive benefits that have been described around the value of LICs relate to this continuity. These benefits include greater learner centredness, development of patient trust and consequent enhanced learning opportunities, being incorporated into a practice team and becoming an integral part of a community[7, 8]. Continuity promotes authentic learning and formative assessment, allows for flexibility and self-regulated learning, develops confidence and preparedness for practice, and supports professional identity formation [9,10]. Students feel they are making a meaningful contribution to the care of patients [11]; benefits to patients have indeed been shown, including the provision of emotional and social support, improved patient responsiveness to students' advice, and the potential to enhance patients' engagement with care[12].

An important part of the continuity is relationship. One of the greatest needs for the healthcare system is to receive graduates who have a patient-centered understanding and are able to treat patients as people within the context of families and communities. Thus, enabling students, through longitudinal exposure, to understand the importance of interpersonal connection and relationships is critical. Relationships are central to LICs, and have been shown to influence clinical supervision and the usefulness of feedback, support effective working relationships between peers and contribute to professional identity formation[3].

Thirdly, why integrated? In the traditional post-Flexner medical education system, clinical learning has been focused on coming to grips with and understanding bodies of specialized knowledge through working in specialist wards and units. This may make sense in the light of the rapidly expanding knowledge base required by doctors in training, and particularly for those who may go on to function in specialized environments, but it has been argued that this system in the global North has created an excellence in science that has not been accompanied by a comparable excellence in clinical caring [13]. The greatest need in Africa, certainly, is to produce doctors who understand the whole patient and are able to synthesize and integrate the knowledge of different systems (body systems, healing systems, belief systems) to address the multiple and complex problems that individual patients present with. An integrated approach where students learn from the patients who present to them rather than from textbooks enables them to function not only in primary care but to offer rational, person-centered care regardless of specialty choice, which is an approach that students are more likely to emerge with if they undertake an LIC [3], given that this integration across disciplines is a key element of the LICs.

The benefits described above are not exhaustive; there are a number of reviews of the benefits of LICs [3, 12, 14]. It is important to note that the benefits for patient care extend what has already been reported across Africa in terms of the involvement of students as active participants in health care systems [15], which is the kind of role that the LIC apprenticeship model facilitates.

LICs's have mostly been described in terms of medical



Dr Harry Surtie Regional Hospital, Upington: a LIC training site

education, that is training of doctors or physicians. However, there have been similar models described across other health professions. Benefits of LIC-type programmes have been reported in the clinical training of students in pharmacy [16], dentistry and oral hygiene [17] nursing [18] and midwifery [19].

Currently, the model is mostly used in high income countries. Based on data from the CLIC website (https://clicmeded.com/lic-programs/), the majority of LICs are in the USA and Canada; there are a number in Australia, and increasing numbers in the UK and Ireland. Examples can also be found in Japan, the Netherlands, New Zealand, Norway, South Africa, Taiwan, and Thailand. In Africa, there are only two programmes formally described as LICs, as mentioned above. The LIM programme at Stellenbosch University (SU), established in 2011 as part of the SU Rural Clinical School, involves a small but steadily increasing number of students who apply to complete their final year in district hospitals (6), which will be expanded significantly as part of the curriculum renewal process currently underway. The ILCC programme at Walter Sisulu University, established in 2014 to provide a patient-centred community-based clinical experience, places the entire 5th (pre-final) year class of medical students for twenty consecutive weeks in rural district hospitals throughout the Eastern Cape [7].

However, it may be that more examples exist across Africa that are not named or identified as LICs. Extended community-based education and service (COBES), Community-based medical education (CBME), or community-based health science education (COBHSE) programmes, which are common across many countries in Africa, might very well fit into the model of an LIC. Under the auspices of CLIC there is an attempt to update the typology and, through this, also to recognise more examples of possible LIC programmes (https://clicmeded.com/lic-programs/).

I believe LICs hold potential for expanding health professions education in Africa by providing opportunities for clinical training through apprenticeship. This can happen across the healthcare system and is not limited by the constraints of a large hospital. This also fits the need to have a much greater Primary Health Care focus in the training of all health professionals. It is likely to produce health professionals who are greater advocates for their patients and the communities they work in, and change agents in the healthcare system [11]. They could thus be instruments for driving greater change across medical schools in Africa.

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