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Commentary

# The needs and concerns of clinical educators in radiography education in the face of COVID-19 pandemic

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It has been over 8 months since Singapore reported its first COVID-19 case on January 23rd, 2020.<sup>1</sup> Since then, there have been more than 57,000 cases and 27 deaths in Singapore from the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which was first detected in Wuhan, China.<sup>2</sup> Having experienced the SARS outbreak in 2003, which resulted in 33 deaths (including healthcare workers), the feeling of *déjà vu* was vivid.<sup>3</sup> Risk measures were implemented and strengthened progressively as the situation escalated, both globally and in Singapore.

Initially, public health interventions were raised to contain the first COVID-19 wave, allowing schools and most businesses in Singapore to remain open.<sup>4</sup> However, despite the measures to contain the outbreak, community cases increased, and infections began to surface in the population of foreign workers housed in dormitories across the island.<sup>4</sup> In response, nationwide strict restrictions in the form of a “circuit breaker” was instituted by the Singapore government – resulting in closure of schools and all non-essential businesses, forcing the majority of the population to be confined to their homes.<sup>4</sup> In tandem, education of healthcare professionals was also affected, including the clinical training of radiographers.<sup>5</sup>

Like nursing, midwifery, and many allied health education programmes, clinical training is an important cornerstone of radiographer education – equipping students to safely and competently transit into complex healthcare environments.<sup>6,7</sup>

During clinical training, students are supported by clinical educators who are usually registered professionals who facilitate clinical education alongside clinical and academic colleagues.<sup>8</sup> Collectively in Singapore, a clinical educator may be a radiographer formally appointed by an academic institution or have an education and training role recognised within their job role. Formally appointed clinical educators differ from the latter, since they are primarily responsible for signing off on competency and evaluation, based on standards provided by academic institutions. Nonetheless, all clinical educators are expected to support students in the workplace to gain appropriate experience and skills.

Similar to Singapore, many countries have undertaken drastic measures to prevent further spread of the virus. This has substantially affected clinical training where clinical placements are suspended or clinical exposure has significantly reduced.<sup>9</sup> Thus, it is important to ensure that clinical educators are successful at responding to this challenge of maintaining high-quality clinical training amid the pandemic. This paper aims to provide insights on the needs and concerns of clinical educators in the face of the COVID-19 pandemic. Drawn from the first-hand experiences as clinical educators from one of the tertiary hospitals in Singapore, this paper examined the challenges clinical educators faced during the health crisis while facilitating clinical radiography teaching. This will serve as a springboard for other educators who must overcome the massive and rapid change made during this period to continue to facilitate and improve clinical training.

The SARS epidemic posed many challenges in radiography service, but valuable lessons learnt enabled progression in many areas, including clinical education.<sup>10</sup> Lessons from SARS could be translated to COVID-19 – innovations and contingency plans that allowed clinical teaching to continue without actual patient contact.<sup>11</sup> As the majority of the young clinical educators did not experience the uncertainties and damage caused by the 2003 SARS outbreak, many could

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not relate to that painful chapter of the outbreak. Inevitably, it was difficult for some to stay calm when this new and unknown bug emerged in Wuhan and was subsequently imported into Singapore.

The clinical educators' ability to deal with disruptions was first tested at our hospital when international students' clinical training was disrupted at the onset of the outbreak. Such a decision not only caused the students to suffer financial losses, but also the loss of opportunities of acquiring additional competencies gained in a foreign healthcare system.<sup>7</sup> Nevertheless, it was clear that such decisions were deliberated and never made lightly, with priority and emphasis on the health and well-being of all students, staff, and patients. However, as all the overseas students were self-financed, the potential of additional emotional and psychological challenges had to be considered.<sup>12</sup> Clinical educators had to communicate the sudden decision and answer any anxious queries that the students might have, avoiding protracted uncertainty of not knowing the continuity of placement or reimbursement of placement training fees. Frequent check-in with the students was performed until the departure of students from Singapore. It was of utmost importance to create a sense of security to reduce the feeling of helplessness.<sup>13</sup> While this crisis has deeply disruptive implications, it demonstrated the clinical educators' readiness and capacity to react effectively and efficiently.

As the restriction on clinical placement remains enforced as the pandemic unfolds, there is a growing concern on the supply of radiographers, along with the prolonged suspension of clinical placements. With significant legwork done by the academic institutions, hospitals, and the department education team, approval was granted for safe resumption of clinical placements in June 2020. The clinical educators were motivated to have students back, but not without an element of anxiety and doubt regarding the capability of dealing with the rapidly changing impact of COVID-19 while providing the same high quality of clinical training amid the uncertainty and risk measures. Fortunately, working in healthcare requires a remarkable amount of flexibility, resilience, and adaptability.<sup>14</sup> Moreover, as a radiographer, creativity is desirable since every patient is unpredictable, and these inherent attributes are cornerstones in our care of patients, proactively driving change.<sup>15</sup>

In the COVID-19-era hospital, healthcare professionals must adhere to strict infection control measures, work in segregated teams, and must work with minimum manpower due to the deployment of colleagues to community care facilities and mandatory 5-day medical leave for colleagues with acute respiratory infection symptoms. These strict infection control measures pose extraordinary challenges to the resumption of clinical training. However, it is imperative that clinical educators remain committed to their role as teachers in the students' professional education. Clinical educators can make use of the present unique

circumstances to provide learning opportunities for the COVID-era students and to cultivate attributes that they can carry forth with them into their careers in the face of adversity.<sup>16</sup>

However, this is indeed a herculean task to many clinical educators, especially in such unprecedented times. Many clinical educators had to grapple with lost time with family members and disruptions to their personal routines and plans. In tandem, some of the clinical educators were young parents who could not afford their worst fear to happen – transmitting the virus to their offspring. Similarly, clinical educators also feared bringing the virus home and spreading it to their comparatively more vulnerable elderly parents; the well-being of the family weighed heavily on the clinical educators. In circumstances where both spouses were frontline responders, the intensity of fear increased. Indeed, such cumulative stressors from COVID-19 had potential strain on households and these clinical educators risked developing mental health problems.<sup>17</sup> It was during this myriad of challenges that supportive family environments might serve as protective factors - morale boosters for each other.<sup>18,19</sup>

One of the ways of support for the clinical educators came in the form of encouragement from notes of appreciation and gifts from the public, and the hospital senior management to all frontline heroes - showing how much their efforts were valued through these gestures of care and appreciation. Moreover, as highlighted in the editorial by Gibbs,<sup>20</sup> the pandemic has driven team working of radiographers, supports motivation, and improves psychological well-being. Coupled with encouragement among colleagues, there was a sense of safety and togetherness.<sup>19</sup> This provided much-needed encouragement for the clinical educators to work even harder, to remain unfazed, and to press on for the education of the future radiography profession.

As the clinical educators prepared to welcome the return of radiography students in their penultimate year, it was essential to understand the perspectives from these students who had to recover lost ground after missing months of clinical experience while dealing with the threat of delayed graduation.<sup>21</sup> Through exploring their feelings and expectations about resuming clinical placement during the pandemic, clinical educators could then understand their educational needs and offer vital support.<sup>22</sup> In fact, many COVID-19-era publications surfaced, advocating the importance on reporting students' perspectives.<sup>16,23-25</sup> These publications were also timely, as many of our current students were Generation Z (born in 1997 or later), and educators (Baby Boomer/Generation X and Millennial); preventing a "culture clash" as a result of generational difference in medical education.<sup>9</sup> Generation Z consists of active problem solvers, independent learners, and learners who are technologically integrated, but also have an increased risk of suffering from psychological distress.<sup>9</sup> Indeed, these characteristics of Generation Z students will

certainly affect how clinical educators provide education in the COVID-19 pandemic.

In the radiography profession, clinical placement is crucial to develop knowledge and skills acquired theoretically – allowing students to consolidate knowledge, socialising into the radiographer role, and acquiring values.<sup>26</sup> In a Commentary on the perspectives of student radiographers in Singapore, the students highlighted their need to put theories into practice to bridge the gap between the two.<sup>24</sup> This phenomenon of theory-practice gap had been identified across multiple healthcare disciplines and might have implications on professional competence and future progression from student to novice professional.<sup>27</sup> As clinical educators, they are well positioned to play a vital role in supporting students to bridge this gap – sharing of experiential knowledge and helping students to recognise the value of linking theory with clinical practice.<sup>27</sup>

While clinical placements had resumed, the duration, movement, and rotation were reduced. The return of students for clinical placement was also staggered and numbers of students kept to minimal. This was in line with the practices in the United Kingdom (UK), Australia, and North America where students were to learn in much smaller and stable social bubbles.<sup>28</sup> Modification was also made to the clinical assessment – previous summative clinical examination conducted by an academic institution's appointed examiner had been replaced with multiple formative assessments throughout the duration of the clinical placement. Like the medical students, radiography students must comply with strict personal hygiene and physical distancing and were not allowed to enter high-risk areas nor participate in risky, aerosol-generating procedures.<sup>4</sup> Clinical educators were instituted to ensure that students comply with the risk control measures, while focusing on the students' core clinical learning outcomes and competencies.<sup>4</sup> These made teaching and supervising students in clinical settings more challenging than pre-COVID. In a similar vein, midwifery educators who shared comparable workplace characteristics with the radiographers – mainly not possible to maintain physical distancing in the line of work, but had to deliver effective education safely – echoed similar concerns.<sup>7</sup>

It was undeniable that academic institutions tried to reduce demands on the overstretched clinical educators through various strategies. While it was evident that there was no sacrificing of important clinical components where standards and examinable domains remained, the judgement of pass-fail criterion now lay in the hands of the appointed clinical educator. Efforts had to be made by the clinical educators to maintain authenticity and validity of the assessments.<sup>4</sup> This resulted in significant emotional distress for the clinical educators who might face the task of providing negative feedback in assessing a range of competencies, or even failing a student.<sup>29,30</sup> Yepes-Rios et al.<sup>31</sup> highlighted the inhibiting factors to fail an underperforming trainee and concluded that they were common

across many professions. This was echoed by Davenport and colleagues, who suggested in their Narrative Review that 'failure to fail' was a real phenomenon that was present for educators and had emotional impact on both students and educators.<sup>32</sup> Currently, educators are often seen as an 'agent', assisting students to pass.<sup>32</sup> However, clinical educators have a duty and responsibility towards the patients, society, and the profession.<sup>33</sup> Hence, it is vital to safeguard the profession and uphold standards, but not without dilemma when required to safeguard the profession and to fail an underperforming student.

A potential growing dilemma began to arise from clinical educators recognising that students may have their current studies jeopardised because of the reduced practical lessons that comes against a backdrop of the pandemic.<sup>24</sup> Moreover, with some students on their very first clinical placement, some clinical educators were reluctant to fail the underperforming students as they deemed the students being early in their training and they believed the students had time to improve.<sup>31</sup> From a humanistic aspect of learning, clinical educators had to manage emotions and relationships, which added to the complexity of failing a student, resulting in pressure to pass students.<sup>32</sup> This could be attributed to the culture in many Asian countries, resulting in clinical educators being sensitive to failing a student because of the emphasis on enduring relationships and social networks.<sup>34</sup> Indeed, relationships with educators was rated as the most critical aspect of learning by the Generation Z students.<sup>35</sup> Fortunately, the clinical educators were able to mitigate the challenge with support from fellow experienced clinical educators and colleagues. Colleagues were essential in sharing their evaluation of underperforming students and to confirm or support with observations.<sup>31</sup> Clinical educators could also be further supported by academic institutions through having a clear paper trail of documentation to fail a student if necessary, and clear institutional policies and procedures, recommendations on how to manage a failure – minimising the potential distress from failing a student.<sup>31,32</sup>

Learning can take place everywhere, and COVID-19 has forced us to rethink the educational strategies for the Generation Z students. As the COVID-19 situation evolved, all non-essential appointments and elective procedures had to be deferred as part of enhanced safe-distancing measures. Radiographic examinations were reduced and impacted on the students' hands-on opportunity. Their movements were restricted, and they could only have placement in low risk areas. These posed a potential challenge to the Generation Z students, who preferred hands-on experience and on-the-job-learning.<sup>36</sup> As clinical educators, they had to mitigate the loss in learning opportunity based on the profile of the students. The student-to-educator ratio of 2:1 was reduced to 1:1, and it allowed an increased direct observation of the assigned student and other teaching opportunities, such as self-reflection and role-playing.<sup>35</sup> With the new ratio, clinical educators were able to provide the students with more

guidance, frequent immediate feedback, and encouragement to learn from their mistakes – meeting the *Generation Z* students' learner perspectives.<sup>36,37</sup>

As the COVID-19 situation in Singapore became more stabilised, more healthcare services resumed after a two-month lockdown period. Clinic sessions and elective surgeries delayed had ramped up, and this resulted in a backlog of patients requiring imaging services. Clinical educators had to now ensure that students gained necessary clinical experiences to qualify as radiographers while managing the overwhelming patient load. Coupled with other responsibilities amid the pandemic due to multiple portfolios/responsibilities, there were time constraints in providing enough contact time with the students. As such, it placed a burden on the clinical educators who must balance between operational and teaching needs. A similar picture was painted by the nursing field where it resulted in colleagues who were reluctant to be supervisors and even labelled supervision of students as a heavy burden.<sup>38</sup> Such constraint of time for clinical teaching including competing demands and other responsibilities were well-documented.<sup>39</sup>

Since it was emphasised to all clinical educators at the onset that they had to jointly teach and meet service requirements, clinical educators were more prepared. Academic institutions had facilitated a clinical educator workshop prior to appointing clinical educators, fostering a sense of being a clinical educator through the talks, discussion and role-playing activities.<sup>40</sup> The importance of such workshops were echoed by the College of Occupational Therapists in the UK.<sup>41</sup> They could also learn from the experiences of their precedent and equip themselves with efficient teaching frameworks, in tandem, developing a sense of agency.<sup>40</sup> In fact, clinical educators who enjoyed the act of teaching often found the benefits of supervision outweighing the limitations. The presence of students and the act of clinical teaching encouraged clinical educators to maintain clinical competence, credibility, and knowledge of current practice issues while re-evaluating their practice and enhancing their quality of teaching.<sup>42,43</sup>

With the youngest generation now entering clinical placement, clinical educators had to modify their teaching strategies to account for the new learner perspectives. Transformation includes strong mentoring relationships, collaborative work with ground radiographers, reflective activities, real-time feedback, frequent interactions, case-based learning and, more importantly, technology in education.<sup>35–37</sup> The pandemic had caught the clinical educators unprepared in the incorporation of technology into teaching, and presented a diversion from the traditional methods of teaching. Perhaps it would be timely for clinical educators to start to consider creative methods such as interactive tutorials and the use of social media sites.<sup>35,36,44</sup>

In times of uncertainty, it was crucial for clinical educators to actively manage the well-being of students. The COVID pandemic would likely lead to increased distress and burnout of the students given the dramatic changes to their learning

environment and plans.<sup>6,9</sup> The negative sense of well-being could lead to depression, burnout, and anxiety.<sup>45</sup> This was of great concern since Generation Z was shown to be more prone to psychological distress than earlier generations.<sup>37</sup> When a radiographer working at the community care facility was reported to have tested positive for COVID-19, there was fear that the student's psychological well-being would be affected.<sup>46</sup> In concordance with the approaches adopted by the medical educators, clinical educators checked-in with the students through electronic communication and provided reassurance on the risk measures in the clinical environment.<sup>9,47</sup> It was crucial for the clinical educators to be available on demand while providing support to normalise stress. In addition, clinical educators worked to develop a sense of belonging and safety for the students.<sup>47</sup> Routine instructions from the hospital disease outbreak taskforce were disseminated regularly to the students. Students were also invited to attend radiographers' continuing professional development sessions and radiographer led tutorials – creating a community for the students in the face of physical distancing.<sup>47</sup> In addition, like the radiographers, students were also issued tokens of appreciation – recognising them for their dedication and hard work, supporting their esteem and well-being needs.<sup>47</sup>

With no silver bullet in sight to end COVID-19, clinical education will be subjected to further circumstances beyond our control. However, regardless of the circumstances, it is still fundamental that students need the opportunity, under supervision, to experience and learn to practice safely in a pandemic work environment. Moreover, clinical educators must now consider the new generation's learning perspective and help appropriately support that learning. The battle may be long, but with creativity, resiliency and perseverance, clinical educators can adopt clinical teaching practices to meet the dynamic and complex student demands complicated by the evolving pandemic. This will future-proof the radiography workforce in preparation for the next global challenge, and avoid not having sufficient numbers of radiographers ready to meet Singapore's evolving healthcare demands.

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