

COVID-19 SPECIAL COLLECTION

EDITORIAL

The effects of the COVID-19 pandemic on pharmacy education, staff and students in an Australian setting

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Worldwide, COVID-19 has changed the way Pharmacy Education is being delivered. In Australia there was a rapid shift to online delivery, implementation of new technologies and new models for remote online teaching. The effects of the pandemic on pharmacy education, students and staff are discussed as well as strategies of how to maintain workforce development goals to ensure quality education.

The COVID-19 pandemic rapidly changed the lives of people globally. In Australia, cases were reported in travellers as early as January 2020. By March, the cases were increasing exponentially. This prompted government restrictions including international border closures, physical distancing rules, closure of non-essential services (including schools and universities to students) and movement restrictions with residents only allowed to leave home for four permitted activities (essential work, shopping, caregiving, exercise). These restrictions halted the initial outbreak, and for a short period, restrictions were eased and Australians felt some relief. The state of Victoria, the second most populous in Australia, then experienced a second and larger wave in June-August. By August, a 'state of disaster' was declared, with tighter government restrictions, including a curfew (8pm until 5am).

Impact on pharmacy education in Australia

The pandemic first struck at the beginning of the academic year for Australians. A ban on non-essential indoor gatherings of more than 100 people was announced on 18th March by the Australian Prime Minister with the exclusion of universities. Nevertheless, universities across Australia took the cautious approach to limit face-to-face teaching, thus transitioning lectures and tutorials to remote online delivery while rescheduling laboratory and practical classes to a future date (Universities Australia, 2020). This shift in curriculum delivery posed challenges due to the uncertain nature of the pandemic and the constant changes in government and university restrictions for both students and staff. Whilst the new Accreditation Standards for Pharmacy Programs in Australia and New Zealand came into effect

on 1st January 2020 (Australian Pharmacy Council [APC], 2020a), it was understood that interim changes to delivery of pharmacy education would be required given the ever-changing circumstances of the pandemic, and that Pharmacy programme providers would monitor and assess any programme changes internally (APC, 2020b). The continuation of experiential placements, however, proved a challenge as some hospital and community placement sites were unable to host students. National principles for clinical education were released by the Australian Health Practitioner Regulation Agency (AHPRA) on 17th April 2020 providing guidelines for student clinical education during the pandemic (AHPRA, 2020). This was followed by the Council of Pharmacy Schools in Australia and New Zealand highlighting the importance of continued experiential placements as a means of preparing graduates (Council of Pharmacy Schools: Australia and New Zealand, 2020).

Impact on pharmacy education at Monash University

As a result of the pandemic, many changes had to be implemented in Pharmacy Education at Monash University. The International Pharmaceutical Federation (FIP) Workforce Development Goals were an important guide to these changes (International Pharmaceutical Federation, 2020). For example, Goal 3 - quality assurance, was particularly important. We needed to ensure the quality of the workforce was still achieved despite the interim changes to the development and delivery of education and training. We also sought input into any changes made from critical stakeholders including the students and teaching staff. More than ever, our education also needed to encompass Workforce Development Goal 8, Working with Others. To promote unity, our education programme necessitated a collaborative learning environment, teaching our students that healthcare teams working together achieve better health outcomes.

A pragmatic approach was taken to develop a new way of delivering teaching and learning materials (Lyons, Christopoulos, & Brock, 2020b), factoring considerations including access to the internet, educational software and technologies. The virtual online pharmacy simulation platform, MyDispense, developed by Monash University was an asset in the delivery of teaching and learning during the pandemic. It reduced the impact of the pandemic on teaching, not just to our own University, but globally, as a freely shared resource to other Universities. A consistent approach across the degree was also taken to provide a coherent structure for student learning and for staff developing and converting materials.

As described by Lyons and colleagues (2020b), much of the curriculum was found suitable for conversion to online delivery in asynchronous/synchronous lectures and workshops. What proved most challenging was the continued development of soft skills (e.g. problem solving, oral communication, written communication, empathy, reflective practice, integrity, teamwork and inquiry (Lyons *et al.*, 2020a)). A range of mechanisms were employed, including role play, team-based and reflection activities (Lyons *et al.*, 2020b), and virtual workshops to inspire inter-professional collaborations (Kent *et al.*, 2020). Students continued to meet online in small groups with a 'skills coach' every few weeks to help develop their skills (Lyons *et al.*, 2020b). The integrity of assessments was a further challenge. At Monash, we opted for online non-invigilated open book assessments using the university's platform, e-Assessment, while oral assessments were undertaken over Zoom. The style of questions was updated to ensure robustness in open book exams.

In line with the recommendations from National Advisory Bodies regarding experiential placements, the Faculty continued to provide valuable educational placements where possible. Replacement sites were found for students with adaptation of learning activities due to COVID-19. The virtual simulation, MyDispense, previously used by other Pharmacy programmes to meet practice standards (Ferrone *et al.*, 2017), was utilised to enhance learning during placements and ensuring learning objectives were met.

Impact on Faculty academic and teaching staff

In the midst of uncertainty, staff were required to work from home and teach remotely online. Some staff found this challenging due to a limited work set up at home (e.g. poor internet access, inadequate space and/or equipment). Some faced additional challenges of parental and carer responsibilities due to closure of schools and childcare facilities. These challenges had a predictable impact on the mental and physical wellbeing of staff with an increase in stress and anxiety.

In order to combat the impact, the faculty 'family' came together, and the scope of positions was renewed. There was a re-distribution of workload across the faculty to better support needs. Together as a team, ideas were brainstormed for how to effectively and efficiently adapt teaching virtually. An online community of practice site was developed to share effective strategies, streamline processes and increase academic capacity. This ensured both consistency and sustainability. Monash University recognised the challenges faced by staff and also offered a

range of support services, flexible work arrangements as well as carer's leave for staff.

As educators we strive to provide pedagogical excellence for our students. In a pandemic, these expectations cannot always be fulfilled and even the best laid plans can fall through. The most important lesson we can give our students is to support each other, develop empathy for others and to know there is help available when needed. At the second wave of the pandemic, we now have the structure and tools in place to teach, we now need to shift our focus on wellbeing and connection with our students and ourselves.

Impact on pharmacy students

As the pandemic occurred at the start of the 2020 academic year, our students only had one day on-campus before the University closure. First year students had limited opportunity to meet other students and staff, and to explore their campus. To circumvent the lack of social interactions, regular weekly check-ins and smaller workshop groups were utilised to develop a sense of belonging and to build a connection with the Faculty. Approximately 35% of pharmacy students at Monash are international students and considerations were made for scheduled activities to be delivered at a reasonable hour internationally. Some students experienced issues with access to the internet and appropriate technologies. Monash University raised funds to provide financial support to these students to obtain the required technologies (Monash University, 2020).

The initiation of online learning required an extensive shift in student learning behaviour. Prior to COVID-19, our students were accustomed to self-directed learning through completion of pre-learning material before lectures. Students who completed pre-learning material were also found to perform better in examinations (Lyons *et al.*, 2020a). To adapt for online delivery, some lectures were asynchronous to overcome equity challenges amongst students and, as such, required a higher level of self-motivation for completion. Workshops provided opportunities for students and staff to clarify any misunderstandings and to practice key skills. As workshops were conducted virtually, students needed to be proactive to seek clarification of any misunderstandings. In traditional face-to-face education, staff can also gauge student understanding from non-verbal cues and conversations amongst students during small group classes, as well as questions asked by students (Taylor *et al.*, 2013). This allows instructors to provide live feedback

and adapt their teaching to students' needs. In contrast, we found that students needed to be more self-directed and motivated online. Students also needed to engage more in alternate forms of communication including online discussion forums, study groups and feedback via e-mail or other means due to the limited contact with staff.

Whilst students may prefer on-campus experiences, they acknowledged the benefits of remote online learning. These included the ability to complete asynchronous lectures at their own pace, decreased travel time and reduced anxiety when completing assessments in the comfort of their own home. In response to online learning experiences, one student stated:

'The way the material is presented has allowed me to stay up to date (if not more than if we were face-to-face). I am very grateful to be a student in this faculty, I miss my friends but prefer this online situation.'

The greater flexibility of online learning also enabled students to choose when they study most efficiently and to allow adaptability to schedule part-time employment. Many pharmacy students have employment in pharmacies and are considered an essential worker during the strictest lockdown measures. They were able to observe and experience the vital role pharmacists have during a pandemic and apply first-hand the knowledge and skills they were developing and learning in their course. Overall, students are adapting their learning behaviours through this experience to enhance deeper learning as well as developing grit and resilience.

Moving forward

Globally, healthcare workers have been on the frontline of the response to the COVID-19 pandemic. The imposed restrictions impacted the mental health and physical wellbeing of students and staff alike. We all need a human touch. Unfortunately, the pandemic has perhaps disproportionately affected those with limited financial resources and/or with carer responsibilities. However, it has not been without benefits. The immediate need to teach online has forced us to embrace online learning sooner than anticipated. Although a steep learning curve, online learning has improved the use of technologies to enhance learning. We have been able to retain the best aspects of our curriculum including workshops, skills coaching, interprofessional and experiential experiences. Students and staff are looking forward to returning to campus for small group workshops and practical classes.

We will continue to embrace the changes to online activities arising from the pandemic. There is potential to re-think our teaching in future, share our curriculum globally and ensure we continue to embrace the International Pharmaceutical Federation's workforce development goals around Quality Assurance to ensure appropriate competency-based education and training (International Pharmaceutical Federation, 2020). This ensures that our graduating students are ready to practice and are vibrant contributors to the global healthcare workforce.

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