



MyDispense: Taking pharmacy education into the future together

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Last year, 2020, was an interesting year for us all. In academia, we were suddenly faced with no students on our campuses and thus were confronted with the challenge of taking our teaching and learning online in what was commonly called Emergency Remote Teaching. Not only were we faced with not having our students in the classroom, but because of the risks that came with COVID-19, most of our students were not able to get into pharmacies, so they missed out on valuable work-based learning experiences.

In this context, Rhodes University turned to MyDispense, which is a web-based pharmacy simulation application developed by the Faculty of Pharmacy at Monash University. The application is an online virtual pharmacy environment where students are provided with the opportunity to practise their dispensing skills in a safe, low-risk context.

The MyDispense virtual pharmacy environment incorporates interactive dispensing exercises designed to simulate patient-based scenarios that students would likely encounter in real life. It provides the opportunity for creating total dispensing experiences through all stages of the dispensing process, from the initial greeting of the patient to giving professional advice when handing the dispensed medicines to the patient. It allows for taking a medication history from the patient, responding to patient questions, and communicating with the prescriber to query prescribed medicines.

Central to the application is a dispensing system that includes many aspects of commercial dispensing programmes to provide students with an authentic experience in a fully simulated manner. Students can view patients' dispensing histories and patient notes; they can also select prescribers, record repeats, and create and print out dispensing labels. The programme allows for movement through the pharmacy and provides for selecting products from the shelves in various parts of the pharmacy, including a fridge and a secure area for schedule six medicines. Students are also required to scan products and place dispensing and ancillary warning labels on the medicine containers. There is even an optional facility for tablet counting.

The application provides for developing OTC or prescription-based dispensing exercises and patient scenarios in either a

community pharmacy or in a hospital dispensary setting. In the hospital dispensary, it is possible to create multiple scenarios that the student has to deal with simultaneously, including dispensing medicines for patients and/or responding to doctors' or nurses' questions. It requires students to prioritise and plan their workflow. The programme provides many opportunities for students to engage in clinical decision-making during the dispensing process.

MyDispense was first introduced into South Africa by Monique Klitsie at Nelson Mandela University, where it formed the basis of her Masters degree.¹ Monique explored how MyDispense could facilitate the integration of clinical knowledge-based cognitive skills into the dispensing process. In her study, simulated patient scenarios that require higher-order cognitive skills integrated with the dispensing process were explicitly developed. The scenarios were evaluated to assess the cognitive skills necessary to complete them, and were then piloted with pharmacy students. Focus groups were used to explore the students' experiences of MyDispense.

Students reported that the scenarios had assisted them in learning to apply their clinical knowledge and make clinical decisions while completing the dispensing exercises. Monique's study demonstrated that simulation-based education and, more specifically, MyDispense could be a valuable educational tool for teaching the application of complex clinical knowledge-based cognitive skills to the dispensing process. It also provides a useful means of preparing students for work-based pharmacy practice experiences.

Monique's study paved the way for introducing MyDispense into the South African context through the localisation of pharmaceutical product selection and tailoring the simulation experience. Monique, who is now based in Dublin, Ireland, assisted us at Rhodes University with the development of our first twenty patient scenarios when we urgently needed to find other work-integrated learning experiences for our students last year.

One of the remarkable things about MyDispense is that not only is it provided free of charge by Monash University, but they also provide ongoing support and are willing to customise the programme for local or national needs. In 2010 the Faculty of

Pharmacy at Monash University, in the interests of global workforce development in pharmacy, made a conscious decision to share MyDispense openly. Costelloe writes that "Since the launch of the project in 2010, the ongoing use and development of MyDispense has proven to be a compelling case study for the open sharing of resources, the value of ongoing dialogue between institutions, and the success of global collaboration in pharmacy education. The system is now in use at 32 pharmacy schools globally, across the United States (USA), United Kingdom (UK), Australia, Africa and the Middle East."² With the COVID-19 pandemic, there was a surge of international demand for MyDispense. There are now over 120 schools of pharmacy using it worldwide.

MyDispense is currently being used by three pharmacy schools in South Africa, but eight of the nine universities that offer pharmacy education have expressed interest in using it. In the spirit of generosity and collegiality fostered by Monash University, we are forming a South African MyDispense Forum to be launched

in May 2021. It is envisaged that through the Forum, we can negotiate the adaptation of MyDispense for the South African context and share resources ideas and provide mutual support.

Thus, the pandemic of 2020 (and unfortunately, 2021) has seen pharmacy education in South Africa springboarded into the technological dimension of online teaching and simulation programmes. More importantly, it has linked us with a global community of pharmacy educators and has provided us nationally with the potential for greater collegiality and collaboration as we seek to prepare pharmacists for the future.

References

1. Klitsie M. Simulated learning: Integrating clinical knowledge into the dispensing process. MPharm Dissertation, Department of Pharmacy, Nelson Mandela University; 2019.
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