

Clinical case illustration is important for pharmacy students to understand the application of pharmacology and therapeutics knowledge that they have learned in class. However, actual ward round in the acute setting may not be feasible with a student group size of 50. Therefore, the use of micro-modules for clinical case presentation will be ideal for better translational applications in real world clinical environment. I have developed 51 micro-modules for the 5 areas of cardiology therapeutics including hypertension, coronary artery disease, lipid lowering management, heart failure and blood clotting disorders. The clinical cases were based on actual cases that we encounter at the acute cardiology ward at the Prince of Wales Hospital. PHAR 3413 is the second Pharmacology and Therapeutic Course of the Pharmacy curriculum covering the drug action on the cardiovascular system, urinary system and endocrine system. Cardiovascular system covers over 50% of the course in the 6 major areas listed above. The objectives of each of the micro-modules were (1) to prepare students to understand the clinical use of drugs in the cardiovascular system; (2) to use evidence-based medicine for positive clinical outcomes; and (3) to enhance translational teaching and learning environment. The current project had achieved its stated objectives. We have developed a total of 51 micro-modules and case studies in (1) hypertension, (2) heart failure, (3) dyslipidaemia, (4) thromboembolic diseases, and (5) acute coronary syndrome. The current number of micro-modules prepared has exceeded by 155% than the original plan. Each disease topic has 8 micro-modules on related topic materials plus 2-3 micro-module e-cases on Blackboard. Additionally, another 1-3 clinical cases were further discussed in class for more student-teacher interactions to facilitate teaching and learning. We have an accumulated hit rates of over 18,000 for PHAR 3413 cardiology micro-modules with an average of 11.37 hours spent per student during the course on e-learning. The micro-module with the highest hit was hypertension while the lowest hit was the coronary artery disease. One of the possible reasons was because hypertension was the first topic that was introduced in class and coronary artery disease was introduced during the time when mid-term occurred that may affect the access rates of students. In addition, the pre-post test results showed that students found the micro-modules enhanced their understandings and positive attitude towards cardiology therapeutics. Seventy percent of students found the micro-modules were very helpful in their learning. From the teacher's perspective, I found that the case studies and micro-modules enhanced more teacher-student interaction in class and brought more real-life clinical scenarios in class.