Office of Education Development and Gateway Education

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# Active learning through the veterinary curriculum: Translating pathology reports into problem-based learning (PBL) cases

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Problem-based learning (PBL) is a pedagogical concept that is widely used in medical and veterinary medical education. As opposed to conventional teaching methods that typically create a passive learning environment and provide unidirectional knowledge transfer, PBL utilizes the benefits of an active learning environment to support the development of professional skills that are crucial components of medical professions. Learning through PBL cases, that are essentially modelling a thought process, provides students the experience of dealing with a real-life clinical scenario and helps them improving their medical reasoning skills, evidence-based thinking and clinical problem-solving abilities.

The veterinary curriculum of the Jockey Club College of Veterinary Medicine and Life Sciences includes PBL-based courses to achieve the above-mentioned professional development goals. One of these courses is VM3100 “Function and Dysfunction”, which is currently under development and will be first available in Semester B of the academic year 2019/2020. This multidisciplinary course incorporates fundamental modules of the veterinary programme, including general pathology, physiology, pathophysiology, clinical pathology and pharmacology. Several PBL cases are already available from an external source, provided by our partner university in the United States. While these PBL cases are highly valuable to teach medical concepts, our students would benefit from further clinical cases that reflect the specific animal health scenario of Hong Kong.

One of the fundamental features of PBL cases is that they must provide specific and realistic details of facts to represent an effective model of a real-life professional scenario and to enhance learning experience. This is one of the two reasons why diagnostic cases specifically deriving from Hong Kong’s animal population, provided by City University’s Veterinary Diagnostic Laboratory (VDL) as a local veterinary diagnostic service centre should be used to create new PBL teaching materials for the ongoing education of locally trained veterinarians. However, even more importantly, locally derived cases should be used because these reflect the incidence and type of infectious animal diseases that are specific to Hong Kong and the region, so that these adequately prepare veterinary students for their future career in Hong Kong. Some examples of locally present infectious diseases that might be more common or might occur in a different form than elsewhere are leptospirosis, babesiosis and staphylococcosis. These represent potential diagnostic cases from the VDL’s caseload for developing PBL teaching materials.

After the implementation of these local cases in the “Function and Dysfunction” course, students will be able to describe pathological mechanisms underlying relevant infectious diseases, critically evaluate the diagnostic value of laboratory tests and approach animal diseases in a clinically appropriate way. By providing an active learning environment, these PBL cases will enhance our students’ problem-solving

abilities and by requiring them to progress though self-directed learning they will also make them independent learners, which is in line with the concept of life-long learning and City University's discovery-enriched curriculum.