

Primary topic: Education: continuing professional development

2nd topic: Education: methods of teaching & learning

3rd topic: Sport & sports injuries

Title: ENHANCING CLINICAL REASONING AND PRACTICAL SKILLS EDUCATION USING VODCASTS IN POSTGRADUATE STUDY OF INJURY IN PAEDIATRIC AND ADOLESCENT SPORTS AND PERFORMING ARTS

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Text: Background: With the world-wide growth in youth sport and performing arts participation it is important to provide education on prevention and management of athletic injuries in young people. For this reason a unique postgraduate Paediatric and Adolescent Sports and Performing Arts Injury (PASPAl) module has been created. Development of advanced clinical skills is a key learning objective of the module.

Traditional approaches to teaching clinical skills include lecturer demonstrations and clinical reasoning case studies. An inability to guarantee either models with specific clinical injuries or pathologies on specific term dates, or standardised high quality demonstration are amongst the challenges faced by educators. Large classes gathering around a single model preclude adequate repetitive exposure to the correct techniques. Vodcasts are a form of e-learning technology whereby video files can be made available to students via the internet, to download to mobile devices. Mobile or m-learning provides the learner with the opportunity to access these vodcasts whenever, wherever and however they want to and has opened up new ways that skills-based education can be delivered.

Purpose: The aim of this project was to create a bank of vodcasts for postgraduate students on the PASPAI module related to the expert clinical assessment and treatment of specific body region injuries in young athletes and to explore the influence of this pedagogical approach on student learning.

Methods: Over a 3 year period, a bank of videos of clinical experts undertaking assessments and treatments of young athletes were created. The videos were carefully edited to create 6-10 minute vodcasts with high definition close-up shots, slow-motion repeats, text and voice-overs to emphasize key points. Vodcasts were streamed via the University virtual learning environment Moodle and made available for the duration of the PASPIA module.

Evaluation included an anonymous online student feedback questionnaire, focus group discussion and analysis of student Objective Structured Clinical Exam (OSCE) results over a 3 year period. Quantitative data were analysed descriptively and qualitative data reported thematically.

Results: A total of 54 students have undertaken the PASPAI module in the past 3 years. Feedback evaluation via an anonymous online questionnaire was received from 40/54 (75%) students. 100% of respondents rated the vodcasts highly as helpful learning resources. Themes from the focus group and open questions in the questionnaire included; module preparation and revision, visio-motor learning, sports context based learning. International students found the vodcasts particularly helpful, as many techniques were new to them and the videos gave them the opportunity for repeated viewing and helped them not only with practical skills but also evidence based clinical reasoning skills.

Grades for the PASPAI OSCE where vodcasts had been created for particular sports and body regions have improved year on year. In the first year, the attainment gap between OSCE stations where related vodcasts were available was 6% compared to those where vodcasts were not available. By year 3, when all stations had supportive vodcasts, the attainment gap had closed to a 1% difference between stations.

Conclusion(s): Vodcasts enhance clinical skill development education outside of tutor led sessions. This multisensory, mobile and blended learning approach may offer the optimum learning experience for skills based teaching.