

Development and Evaluation of Online Learning Resource targeted at Junior Medical Staff to facilitate safer after-hours care (December 2015)

EXECUTIVE SUMMARY

In collaboration with Onthewards.org, we have developed online educational resources to help Junior Medical Officers (JMOs) provide better clinical care to patients. Given that junior doctors work after-hours and rotate to many different hospitals, one of the aims of our project has been to help develop a portal for learning that may be accessed at any time and at any place. This was based on our literature review which demonstrated a lack of practical online resources to cater for cover and after-hours situations for junior doctors. In this way, the content is available to Junior Doctors when it is most relevant to them. In addition, we selected our topics to specifically address practical skills that are frequently expected of recent graduates in the clinical environment.

During 2015, we worked hard to develop a process to brainstorm, research, film and publish video content. The process included a two-layer supervision model to ensure content produced by Junior Doctors is peer-reviewed and accurate. As of December 2015, our videos have received over 500 unique views. We are incredibly happy that our efforts are helping to smooth out the steep learning curve that we also faced when transitioning from medical student to junior doctor. In order to evaluate our project, we are currently running an online survey to help improve our content.

We are deeply grateful for the support given to us by the PMCV and the team at Onthewards.org. Our project would not have been possible without the funding we received as part of the PMCV Research Incentive Grant. Thank you to all who have guided us through this project.

BACKGROUND

Online learning resources are effective methods of teaching due to their flexibility of access (i.e. independent of location or time). There is currently a large variety of useful online resources available for doctors, however only one resource specifically targets Junior Medical Officers (JMOs); www.onthewards.org. [1] JMOs are often the first responders to clinical problems and are responsible for assessing patients, particularly on cover or after hours shifts. Examples of such scenarios are assessing patients with chest pain, hypertension and low urine output. In spite of this, there is little formal education regarding a practical and structured approach to manage such situations. This poses challenges with regards to safe patient care by junior staff after hours. In addition, JMOs rotating to rural and regional sites have little access to their parent health services' education sessions.

Literature Review

The use of online learning modalities is only growing when it comes to delivering Continued Medical Education (CME) to health professionals and has been demonstrated to have positive outcomes in satisfaction and knowledge in clinicians. [2] One such example which requires sign-up and subscription is BMJ Learning [3]. Many medical schools such as Deakin University who have a large cohort of students in rural areas, are already embracing this culture and utilising online platforms as the main modality to deliver their lecture and learning content.

Nursing, for instance, is another profession that already heavily utilises online learning. Karaman et. al. showed through their study that nurses found online learning was a convenient and flexible option for their work schedules.[4] This can be applied directly to JMOs who share some features with nurses when it comes to their work schedule, for instance shift work and rural rotations. We believe therefore that JMOs will likely find the use of computer-based teaching to be a viable way to learn, in spite of time and location constraints inherent to their work. A parallel study by Lakshmanan et. al. analysed the utilisation by residents, of web-based resources, taught by neonatology fellows. It found that this peer-to-peer model of online teaching successfully encouraged the utilisation of web-based resources, which in turn supplements traditional teaching methods. [5]

Video tutorials have been found to be an effective method of information delivery, particularly when it comes to approaching practical clinical situations. A randomised controlled trial by Buch et. al., which compared the use of videos to text-only learning, found that the former was indeed a far superior method of teaching practical clinical skills.[6] Furthermore, a systematic review on CME for GPs showed that in terms of affecting changes in skills and behaviour, internet-based CMEs were equivalent to traditional forms of teaching. [2]

References

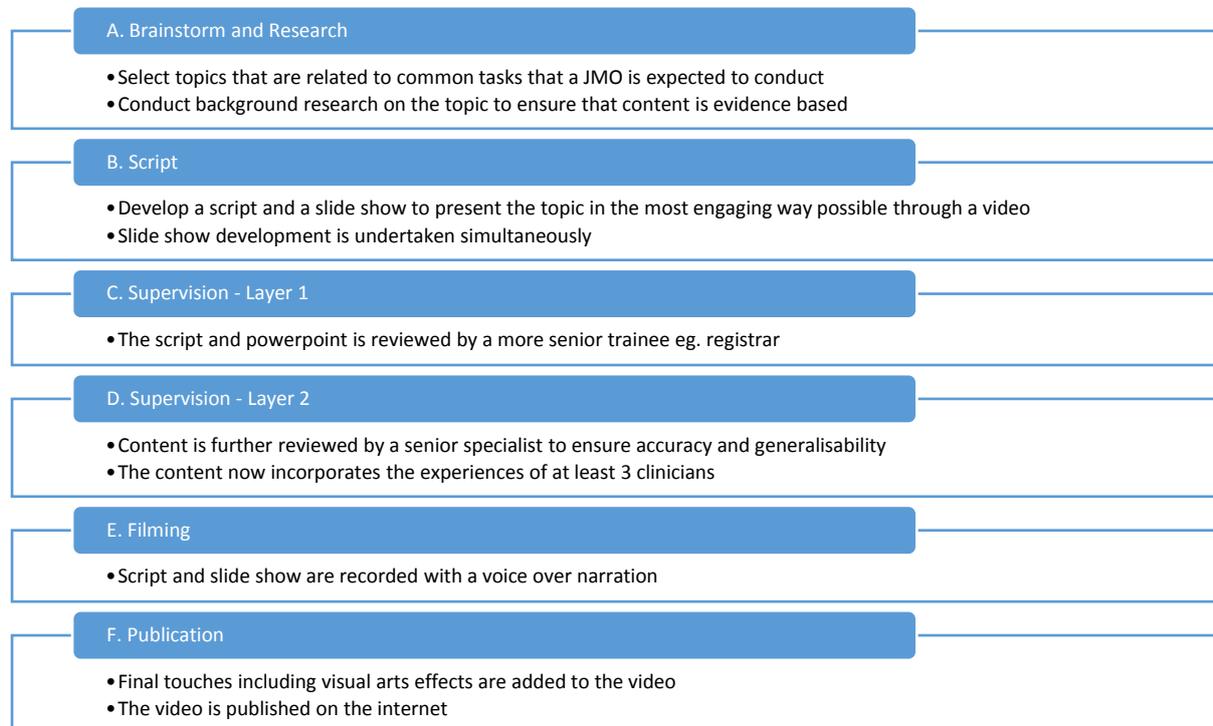
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AIMS

1. Develop relevant and accessible online learning materials for JMOs relating to cross cover scenarios in collaboration with the team at OnTheWards.org
2. Evaluate the effectiveness of online medical education targeting after-hours care through a survey.
 - a. Assess perceived safety of care provided by JMOs in an after-hours setting, from a JMO perspective.
 - b. Improve confidence of JMOs in conducting cover shifts by providing knowledge with regards to common cover clinical scenarios

METHODOLOGY

1. Development of online learning materials using the 2-layer supervision model



2. Evaluation of learning materials



OUTCOMES AND FURTHER WORK

1. Learning materials

We have published three videos, to date, through the Onthewards.org Youtube channel, which was specifically developed to host our videos. The videos address common after-hours tasks and clinical scenarios faced by junior doctors. As of December 2015, our videos have received more than 500

unique views. Eighty percent of the viewership has been from Australia, and nine percent from New Zealand. As a second order effect of our work, we have established an online learning platform, which can be added to by other members of the Onthewards team.

2. Ongoing resource development

At this stage of the project, there is one more video in the process of being finalised for publication. In addition, a further 2 videos are continuing to undergo the review process to make them suitable for publication. We hope that ongoing resource development will be continued by interested JMOs from PMCV as well as member of the Onthewards.org team.

3. Online survey

The online survey to assess the outcomes of the project is still underway. We expect this close the survey by February 2016. Once the results have been analysed and collated, publication will occur on the Onthewards.org website.

If you have any comments or are interested in becoming part of our project, please do not hesitate to contact us: ankitg420@gmail.com.

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