EVALUATING VIDEO-BASED INSTRUCTION FOR OMS-III’S ROTATING IN OBSTETRICS AND GYNECOLOGY

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ABSTRACT

Introduction: There is currently no standard recommendation among osteopathic medical schools regarding appropriate obstetrics and gynecology (OB/GYN) surgical procedure videos for third-year medical students (OMS-III) in preparation for their OB/GYN rotations. OMS-III student doctors may encounter two of the most commonly performed procedures in OB/GYN: cesarean section and robotic hysterectomy, on their very first day of clinical rotations. In an effort to adequately prepare medical students for their clinical rotations, video-based instruction is necessary. According to a recent study published in the Journal of Surgical Education, YouTube is the most frequently accessed educational video source when students are preparing for surgical-based rotations and procedures.

Hypothesis: It is suspected that there is a lack of ideal videos which meet the checklist to sufficiently prepare the third-year medical student for OB/GYN rotations.

Methods: A checklist for the definition of an ideal instructional video for a third-year medical student was developed for cesarean section and robotic hysterectomy with expert review by VCOM Obstetricians and Gynecologists. Upon completion of the checklist, videos were reviewed by entering the search phrase, “Step by step cesarean section procedure” or “Step by step robotic laparoscopic hysterectomy procedure” for robotic hysterectomy; the top 20 in each category for a total of 40 videos were selected. Two student researchers reviewed 20 videos for one procedure, and the other two student researchers reviewed 20 videos for the other procedure. Binary data was collected on whether the video met the checklist item (yes or no) and the two student researchers responsible for that procedure then met to compare data and ensure consensus. Videos were scored based on how many checklist items the video met.

Results: No single video met all defined checklist items. Each video viewed lacked two or more critical elements with the majority lacking three or more, and thus does not serve as a complete educational resource for a third-year medical student.

Conclusion: The hypothesis that adequate video instruction for a third-year medical student entering their OB/GYN rotation was lacking was true based on the checklist developed. A natural follow-up project would be to create a video which meets all recommended checklist items along with VCOM faculty; make this video a recommendation for OMS-III students, and disseminate to all VCOM campuses.

BACKGROUND

Today’s medical student prefers a multi-media approach to learning; textbooks largely replaced with easy-access videos. The article, “YouTube is the most frequently used educational video source for surgical preparation,” describes this change (Rapp et al., 2016). The article explains how YouTube has become the main platform in which medical students are learning surgical techniques. The student of today wants fast and easily accessible videos and YouTube has made this possible. In addition to multi-media education being easily accessible, Friedl, R. et al. (2006), explains how technology is improving student learning and student performance in their article, “Multi-media driven teaching significantly improves student’s performance when compared with a print medium.” This demonstrates that the current generation of students not only prefer multi-media technology for learning, but that they are learning more than from reading a printed source. Thus, the available research suggests that resources for video-based learning for the third-year medical student entering rotations are absolutely crucial. Students are likely to observe or participate in a surgical procedure on their very first day of rotations and it is critical to adequately prepare them. This project aimed to determine if any ideal resources exist. Performance of a literature review also concluded that this research is novel and has never been completed before in the field of obstetrics and gynecology.

OBJECTIVES

- Define “an ideal OB/GYN video-based instruction for third-year medical students” with the help of experts in the field of obstetrics and gynecology
- Quantify the adequacy of available video-based instruction based on a standardized checklist
- Determine if there is a need to develop an ideal instructional video to prepare third-year medical students for their OB/GYN rotation

METHODS

Our literature review revealed YouTube to be one of the most commonly accessed platforms for video-based instruction on surgical procedures. The two most commonly observed surgical procedures on OB/GYN rotations were identified through consultation with the two Discipline Co-Chairs for Obstetrics and Gynecology (C-section and robotic hysterectomy). The question was posed, “What characteristics define the ideal OB/GYN video-based instruction for third-year medical students?” A checklist of essential components was then created for each procedure (Fig. 1 & 2). The top 20 videos for each procedure were identified by entering the search phrase, “Step by step cesarean section procedure” and “Step by step robotic laparoscopic total hysterectomy procedure”. The first 20 videos to appear for each procedure were assumed to be the videos that a medical student would view. We then applied our “ideal video” checklist to each video.

RESULTS

The 20 cesarean section videos and the 20 robotic hysterectomy videos reviewed were all devoid of a minimum of 2 checklist items, with the majority missing greater than 3. When reviewing cesarean section videos, 13 out of 20 videos lacked over half of the checklist items (Graph 1.1). For robotic hysterectomy, 17 out of 20 videos lacked over half of the checklist components (Graph 2.1). Thus, 30 out of 40 videos (75%) met less than 50% of the necessary components to adequately prepare third-year medical students for OB/GYN rotations as defined by experts in the field.

CONCLUSIONS

Medical students commonly utilize YouTube to prepare for clinical rotations yet a thorough review of the literature has identified no recommended videos for third-year medical students starting their OB/GYN rotation. Utilizing an expert panel we created a checklist of the essential components of an ideal third-year medical student video. We applied that checklist to the top 20 videos for two procedures based on our search criteria. Based on our checklist, we found no existing YouTube videos that feel are completely adequate for the third-year medical student preparing for the most common OB/GYN procedures. Our checklist provides a guideline for the creation of an ideal educational video for third year medical students entering their OB/GYN rotation.