

## Use of Google Glass for Interactive Live Streaming in Medical Student Education

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### **Background:**

While wearable smart glass devices had mixed results in the consumer sector, certain industries such as manufacturing, insurance, inspection, and healthcare have started incorporating these devices in daily use. These devices are commonly used to help with documentation, live feedback, and instruction. Currently, there has been an increased popularity of live streaming in the consumer sector popularized by companies such as Facebook, YouTube, and Snap Inc. owned Snapchat. While commercial hardware is sparse, eventual widespread adoption of live streaming will change this. Use of this new service, creates a whole new venue to enhance the medical educational experience that was not previously able to be achieved.

**Methods:** Google Glass units were tested out in two different clinical settings. A headset unit was placed on anesthesiologist prior to performing a post-operative femoral catheter placement in the PACU. This was live streamed to a lecture hall composed of approximately two hundred M1 students using the Pristine EyeSite application available for Google Glass. Medical students could ask questions to both the anesthesiologist performing the procedure as well as to the one present in the lecture hall. The headset unit was also tested out on the OB floor where an anesthesiologist was performing a labor epidural. The procedure was live streamed to M4 students who asked questions while the procedure was being performed.

**Results:** The initial trial to incorporate Google Glass and interactive live streaming into medical school curriculum was successful. Medical students reported satisfaction with video and audio quality of the live stream. Specific comments indicated being content with the unobstructed view of the procedure. Headset wearers reported ease of use of simultaneously wearing the headset and performing the procedure with minimal interference with patient care. Issues occurred with initial setup of the live stream feed while connecting to the Pristine EyeSight application. However, there was no issues after a connection was established. Other issues, included rapid head movements and poor line of sight of the procedure when the practitioner was not directly looking at the procedure. This was remedied by training the practitioner to make slower head movements and adjust their field of view.

**Conclusions:** A new way in incorporating technology into medical school education was explored. The advantages of using Google Glasses for interactive live streaming is the ability to provide an unobstructed view of the procedure with minimal interference on the practitioner. Other advantages include the ability to live stream to another location when having a larger number of observers are not feasible. Future exploration by the medical school includes testing out headset units in other medical specialties such as pathology, surgery, medicine, and ER. Further studies need to evaluate effectiveness of interactive live streaming versus traditional viewing.

