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Interactive Video-assisted Procedural Curriculum for Uncommon Emergency Medicine Procedures

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opportunity and risk: accelerated change is an occasion to reimagine how we teach. It also strains the limits of our traditional didactic structures and challenges medical educators and institutions alike to keep pace. This rapidly expanding space between new opportunities and the pace at which current educators and institutions are able to implement them is what we call the “education gap.”

**Educational Objectives:** For medical education to remain engaging and relevant we must address this gap. To do this requires expanding our conception of what is an educational tool, and integrating new structures within our institutions that provide ongoing access to this 21st century zeitgeist. Our objective was to develop a educational tool (the design challenge) to integrate new technology, engage residents and faculty, promote collaborative projects and mentorship, and provide an formal system for the residency program to keep pace with new tools and educational opportunities.

**Curricular Design:** Here we present our experience with the implementation of a Design Challenge model.

Participants were introduced to concepts for effective learning, asked to identify barriers to their learning, and then challenged to overcome them during the 8 hour design challenge. Participants were introduced to collaborative social media platforms as well as novel tools that could be harnessed for education and then divided into small groups. At the end of the day, each group’s work was uploaded to our social platform and presented.

**Impact/Effectiveness:** Feedback from the day suggested that this was a powerful tool for medical education: it empowered participants to actively engage in their own learning, revealed an untapped reserve of potential talent among our residents to be educators, and laid the groundwork for iterative student and resident-driven change within our program. Since the design challenge multiple resident driven and student research projects and content development have been initiated. Several conference and education days have highlighted work that was created as a direct result of our design challenge. This appears to have had a significant impact on our program’s educational direction.

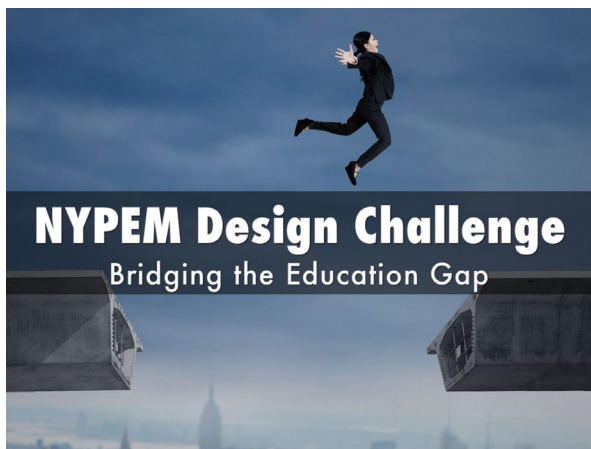


Figure 1.

## 38 Interactive Video-assisted Procedural Curriculum for Uncommon Emergency Medicine Procedures

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**Background:** Procedural competence is required in the management of uncommon conditions in the emergency department, and mastery of these skills is essential in the practice of Emergency Medicine.

**Educational Objectives:** We developed a weekly interactive and video-based curriculum to hone uncommonly utilized procedural skills for our program of 36 emergency medicine residents. Objectives includes procedural competence for essential emergency medicine procedures, as well as competence in interactive medical education for resident instructors.

**Curricular Design:** First, we performed a needs assessment by polling our faculty physicians as well as emergency medicine residents to determine which uncommon procedures required additional training in our program. Examples of procedures included pediatric jet ventilation, perimortem cesarean delivery, transvenous pacing, advanced airway techniques, regional nerve blocks, fracture reductions, and penile injection and aspiration for priapism. After the needs assessment, we searched for the highest yield instructional videos of each procedure. We developed a 52 week procedural curriculum. Second-year residents with attending physician mentors were assigned as lead instructors for each weekly 30 minute procedural morning report. Lead instructors guide the learners through the selected video. Selected videos include those from academic faculty around the country, Youtube.com, NEJM, or other online resources. Each resident learner then performs the procedure on mannequins or tissue models.

**Impact/Effectiveness:** The procedural morning report curriculum has enabled our program to further hone more than 50 uncommon procedural skills that are essential to the practice of emergency medicine. This enables residents and rotating learners to gain hands-on competence in these essential procedures. The 52-week curriculum receives excellent reviews from learners, and we utilize surveys to continuously review and improve the procedural curriculum.

## 39 Invasive Procedure Team Contributes to Procedural Mastery in a Combined Residency

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**Background:** Combined Emergency/Internal/Critical Care Medicine (EM/IM/CC) residents occupy a unique niche