Mobile device applications (Apps) can be a useful vehicle to provide information and educational material to busy medical professionals and trainees. Education of pain management in children is much needed but variable for non-anesthesiology residents. We report on our design and development of a Cross-Platform Pediatric Pain Educational Mobile App for non-anesthesia residents (OuchApp).

**Design/Method**

- Study approved by CUMC IRB.
- Content of OuchApp was based on “OUCH Card”\(^1\), literature review, and consensus expert opinion.
- Using the online App design tool (AppArchitect), we iteratively developed a prototype iPhone app.
- To develop OuchApp as a cross-platform Android and iPhone App, we next used a commercially available software redesigning the OuchApp.
- Design includes usage data tracking for real world evaluation.

**Screenshots**

**Results**

- Pilot testing of the OuchApp was performed with 8 PGY-1 anesthesia residents. Their feedback mostly involved improvement in *layout and user-friendliness*.
- We then pilot-tested the OuchApp with 7 pediatric anesthesiology fellows, 3 PGY-4, 3 PGY-3, and 3 PGY-2 anesthesia residents. Their feedback specifically provided improvements in *content*.
- The finalized OuchApp will be initially released to pediatric residents at all levels of training.

**Conclusions**

- Iterative development strategy with multiple pilot testings led to production-ready OuchApp.
- **Advantages**
  - Easy feature and content updates.
  - Links to online resources for up-to-date drug information.
  - Evaluation of OuchApp features with real-time usage data to inform future app updates.
- **Lessons Learned**
  - App content should be designed independently of the technology platform.
  - Technology needs to balance ease of use, stability and longevity.
  - Mechanisms to track trainee usage should be included at the outset of app design.

**References**