

iJLR: an Ergonomic Intervention

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Description

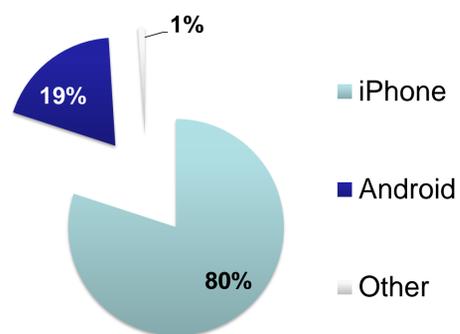
The researchers reviewed the means of data dissemination used by JLR Medical Group's anesthesiologists, CRNAs and ADU's SRNAs working at any given time across >40 clinical sites in Central Florida. This has led to increasing effort for coordination and data throughput for JLR's administration to handle. Additionally, the CRNA who travels from one location to the next relies heavily upon data retrieval through his or her mobile device, and these data points have proven to be burdensome and cost additional time and money. A mobile redesign of retrieving this information by greatly streamlining the consolidation of data across multiple sources and be accessible via their mobile devices was presented to JLR Medical Group. The feedback from this team was a strong positive response to the presentation and solution proposal. One participant asked for a full solution within 6 months if possible.

Selected References

- Chaudet, H., Anceaux, F., Beuscart, M.C., Pelayo, S., & Pellegrin, L. (2013). Ch. 18: Human factors and ergonomics in medical informatics. In A. Venot, (2013). *Medical informatics, e-health: Fundamentals and applications* (1st ed.). Dordrecht: Springer Paris. doi:10.1007/978-2-8178-0478-1
- Chinniah, P., & Muttan, S. (2012). HL7 standard based hospital information system. *International Journal of Biosciences and Technology*, 5(7), 32. Retrieved from <http://search.proquest.com/docview/1221243251>
- Colton, S., & Hunt, L. (2016). Developing a smartphone app to support the nursing community. *Nursing Management*, 22(9), 24. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26938912>

Literature Review

Usage of smartphone types by physicians



87%

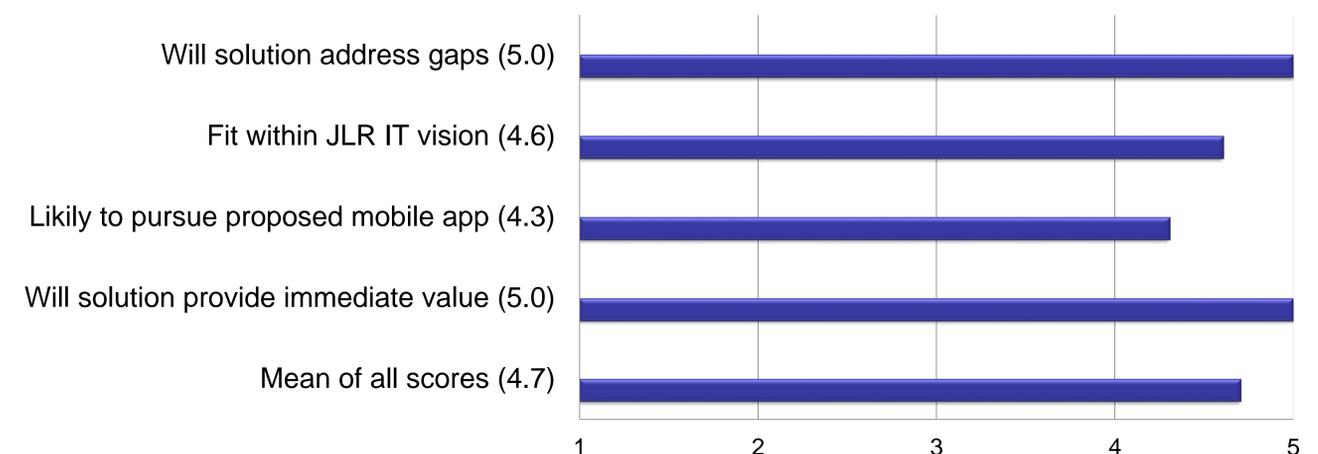
of anesthesia providers are using a smartphone/tablet in the workplace

Cognitive distribution systems must be designed to reduce the mental capacity and work of the practitioner. Studies recommend evaluation of fundamental qualities, specifically: utility, usability, and acceptability.

The ergonomics of a system (mobile app) with the user (practitioner) may be evaluated based on a work situation analysis identifying the users, tasks, task activities, and the environment of this relation.

Outcomes

Survey Responses from the Proposed Mobile Solution (using the Likert Scale 1 = Strongly disagree; 5 = Strongly agree)



Conclusions

The survey results demonstrated a strong positive reaction to the proposed mobile solution. The positive response reflected a need within JLR and a desire to fill that need among the leadership team. The investigators concluded that implementation of a mobile platform which integrates all the technological platforms for smooth dissemination of real-time data to all JLR/USAP anesthesia providers could improve patient safety and efficiency of anesthesia services.

Some of the limitations of this project included the complex dynamic of maintaining compliance with three technological landscapes as JLR merged with USAP while serving Florida Hospital, as well as the ever changing needs of technology in healthcare.

Sample Proposed Mobile App

