There's An App For That: Smartphone App Use Among Anesthesia Providers

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Background/Introduction: Health care related apps provide valuable facts in different hospital settings, including the perioperative and ICU surroundings. To date no study has reviewed the use of anesthesia apps and how they can help integrate technology into clinical practice.

Methods: The authors studied various mobile apps relevant to anesthesia providers in google play store, apple play store and Windows play store. These apps were organized into various categories (Figure-1). In the second part of the survey, we focused on the utilization of anesthesiology apps among practitioners, including anesthesiology residents, anesthesiology fellows, certified registered nurse anesthetists (CRNA), student CRNA's, and anesthesiology attending staff. A total of 416 anesthesia providers participated in the survey.

Results: Among the survey participants 99.27% (n=410) were using smartphones and 0.73% (n=03) of participants were not using the smartphones. Among smartphone users 18.09% were using Android OS, 81.66% were using iPhone OS, 0.24%(n=1) was using windows mobile OS, and none of the participants were using the mobile phones utilizing blackberry OS, Symbian or Palm OS.

Among the participants, 11.36% never used a smartphone apps related to anesthesiology,12.37% were using less than once per month, 6.06% were using once per month, 12.12% using 2-3 times per month, 13.64% were using once per week, 20.96% were using 2-3 times per week, and 23.48% were using daily.

Participants rated the usefulness of app in various categories on a scale of 0-100. Most of the participants consider dosage/pharmaceutical apps to be more useful and given a mean score of 78.73 on a scale of 0-100. In addition, the survey queried questions related to how much participants were willing to pay for an app if it saves 5-10 minutes per day or up to 30 minutes/week. 24.59% of participants were only willing to pay less than $2.00 , 25.14% were willing to pay up to $5.00, 30.33% were willing to pay $5-$10.00, 9.56% were willing to pay $10-$25.00 , 5.19% were willing to pay $25-$50.00, and 5.19% were willing to pay more than $50.00. Finally, 84.15% were interested in newer apps in anesthesiology and 15.85% were not interested in new anesthesia related apps.

Conclusion: There are more than 100 anesthesia apps available in the market today. In this age of smart phones, it was hardly surprising to see that more than 99% of the participants had access to anesthesia apps in our survey. This survey answered some of the important questions

about the utilization of mobile apps by anesthesia providers. This survey illustrates the convenience of apps for health care professionals at the point of care, due to portability and quicker access to information. The perturbing aspect to this new trend is the authenticity of some of these apps, with many of them not being reviewed and the absence of a regulatory body. Some of these apps, like opioid dosage conversion apps, was not reliable and accurate, lacked information on evidence-based content and no peer reviews in some cases, compromising patient safety. These issues could be some of the reasons why 16% in our survey felt they didn't need more apps in their practice, indicating an apparent lack of trust in mobile apps. Another interesting observation was that only 20% of participants were willing to pay for an app that was $10 or more. The data from this research could potentially be helpful In future development of mobile apps for anesthesia providers.
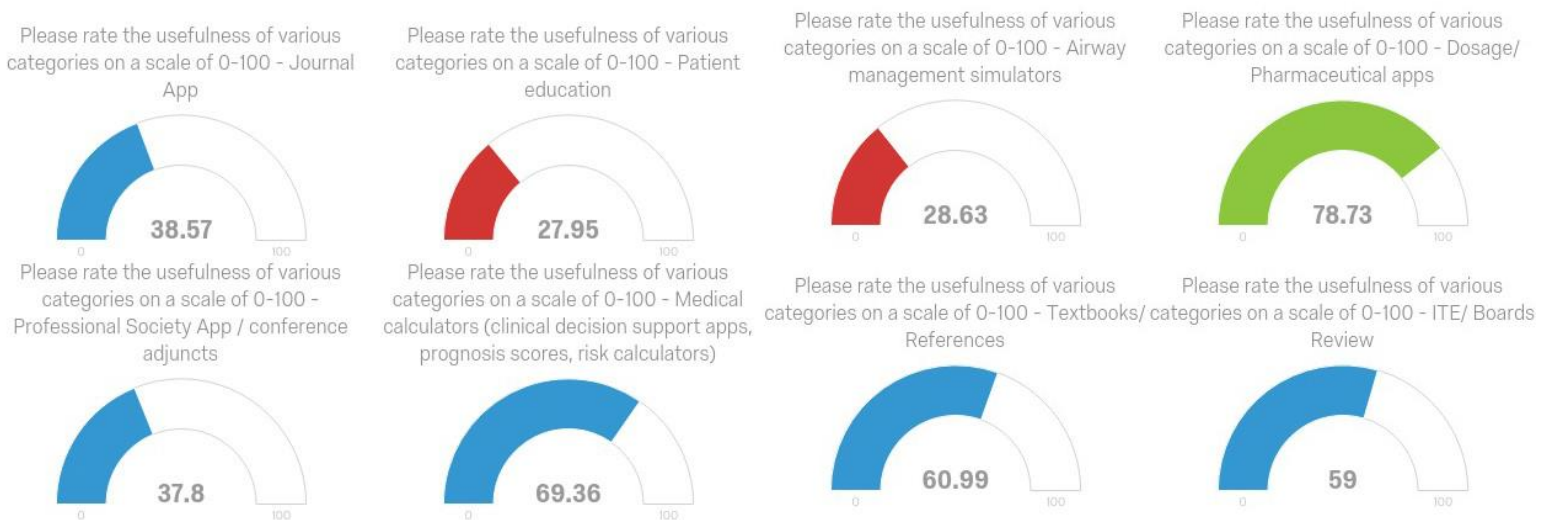

Figure 1- How the Anesthesia Providers rated the usefulness of various Anesthesiology Application.
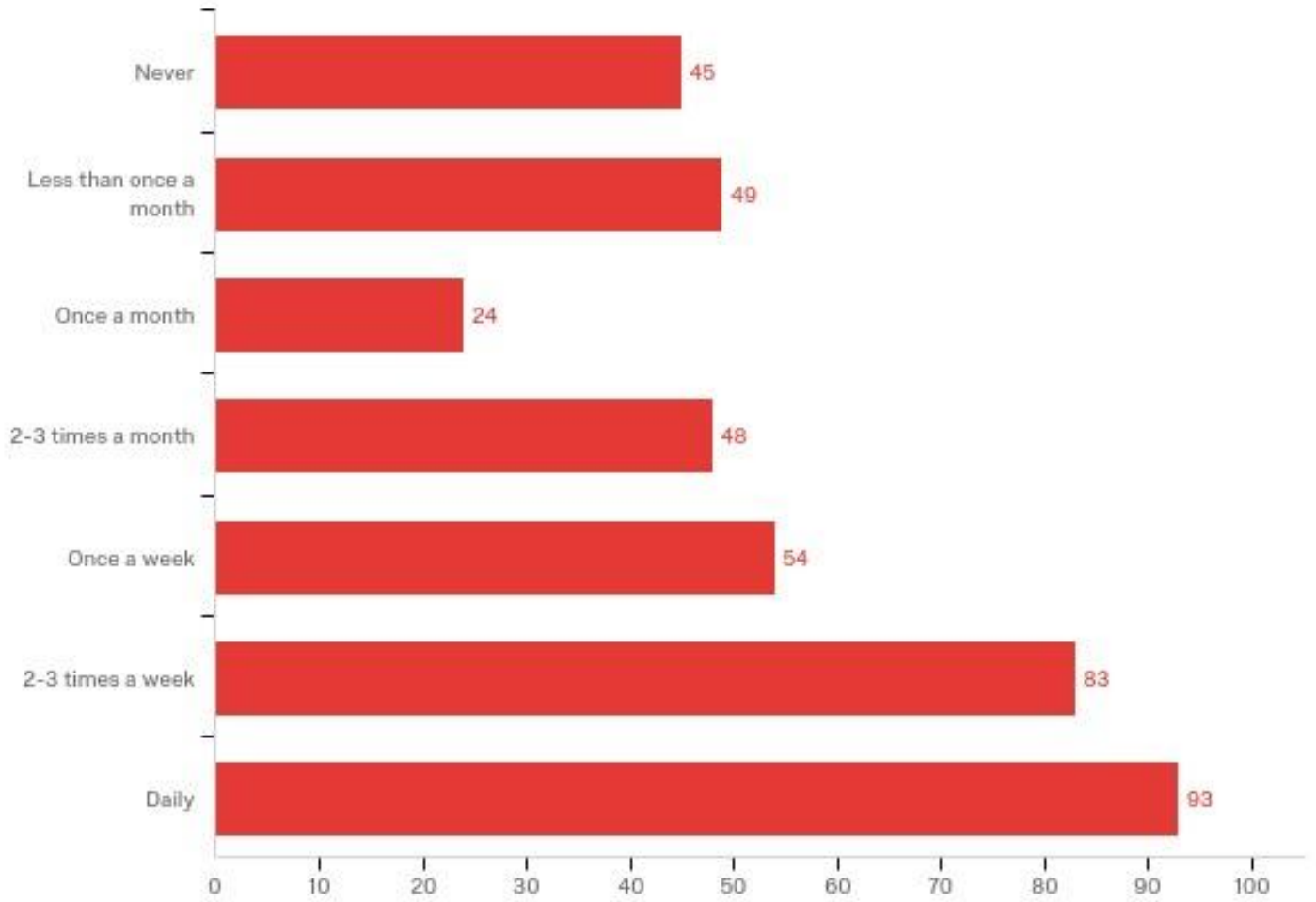
Figure 2. How Frequently Anesthesia Providers Used Smartphone Apps related to anesthesiology.