

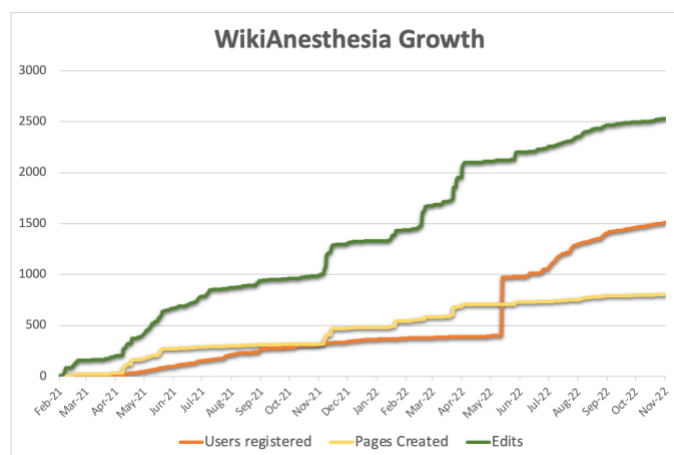
WikiAnesthesia: A Crowd-sourced Anesthesia Knowledge Repository

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Background: "Crowdsourcing" was coined in 2006 and has since had widespread impact across many industries. Within healthcare, its myriad applications include research, education, and genetics. Traditionally, anesthesia knowledge is sourced from textbooks, online resources, and word of mouth from peers or mentors. There has been a recent push to create institutional standards, such as ERAS (enhanced recovery after surgery) protocols, but the static nature of these resources prevents dynamic updating with changing practice. WikiAnesthesia.org is an open-access non-profit online knowledge collaboration with a goal of making anesthesia knowledge easily accessible, crowdsourced, and constantly updated. WikiAnesthesia was launched with the goal of presenting relevant information in an easily retrievable manner during periods of acute need to meet the goals of the anesthetic provider.

Methods: In partnership with providers at all levels of anesthesia care (attending, residents, CRNAs) from a multi-institutional background, WikiAnesthesia is a user-friendly platform with initial content centered around surgical case plans. Early articles were curated by core WikiAnesthesia members covering the most common and challenging surgical cases to attract a wider base of interested providers willing to contribute in the future. Subsequently, other types of articles (drug information, techniques, etc.) have been added. In parallel with community content creation, additional features such as drug dosage and physiological calculators were built to support the needs of the users. Outcomes to measure the success of this platform include number of users, number of articles created, and number of total edits. These data were provided by MediaWiki, the engine that drives the site, and Google Analytics, a web service that tracks and reports website traffic.



Results: From its launch 21 months prior, WikiAnesthesia has grown from a core group of a few founding members to >1500 registered contributing members affiliated with at least 16 institutions and from all levels of practice, including attending anesthesiologists, residents, CRNAs, and students. A total of 11,635 public edits have been made over this time, contributing to a total of 261 public articles subject to real-time, continuous crowdsourcing that allows for this content to be produced quickly and on a large scale. These articles have been accessed by a total of >18,000 unique users from a total of >38 countries, and this traffic is continuing to grow at a rapid pace.

Discussion: WikiAnesthesia is rapidly growing, and with future marketing and outreach, we anticipate that this platform will rapidly expand. While initial growth relied on word-of-mouth, ongoing awareness-building strategies include a social media campaign across Instagram, Twitter, and Facebook, a "badge incentive system to encourage contribution, and appearances on podcasts such as ACCRAC, all of which have resulted in tangible growth. Additionally, we plan on growing into the unique needs of other institutions to increase adoption on an institution-wide level. For example, we have moved residency rotation guides into private institution-specific practice groups. In future research, we plan to use the Technology Adoption Model to better understand how users accept and utilize WikiAnesthesia based on perceived usefulness and ease-of-use. This information will help us identify areas which can be targeted to improve adoption of WikiAnesthesia.