

Informatics Approaches for Monitoring Recruitment of Patients and Practitioners through the National Dental PBRN

Sharmeen Hamid¹, Janelle Urata², Sayali Tungare¹, Muhammad Walji¹, ¹ The University of Texas Health Science Center at Houston, School of Dentistry, Houston, Texas, USA ²University of California San Francisco

Objectives: Current practices for post-operative discomfort following a dental procedure include either prescribing pain medication in advance or having the patient call/visit the dental clinic before the scheduled follow-up time period. Both approaches are unsatisfactory for the patient and carry the risk of either under/overprescribing analgesics—including opioids. This research is a part of an ongoing longitudinal, prospective cohort study seeking to provide insight into pain experienced by patients caused by dental procedures. For this study, approximately 150 National Dental PBRN practitioners from 6 geographic regions will be recruited who will enroll a targeted maximum of 3147 total patients who will undergo a surgical dental procedure. These patients will receive push notifications through text messages via FollowApp.Care platform at designated time intervals on days 1, 3, 5, 7, 14, and 21 following their procedure. We expect to identify specific post-operative pain experiences and pain management strategies precisely. To ensure patient recruitment with minimal errors in the mHealth platform, we aim to monitor their enrollment by leveraging data analytics and visualization tools.

Methods: In this study, we collect recruitment data using REDCap and FollowApp.Care that requires dynamic monitoring and use Tableau as an analytical tool to combine and monitor data for accuracy and appropriate recruitment. This helps us track daily errors in recruitment, enrollment counts, and response rates for each group level (region) and at an individual level (provider and patients).

Results: We were able to establish a multi-faceted approach to monitor study enrollment through a set of Tableau visualizations and workflow tracking that helps ensure minimal errors with recruitment and maintains high-quality data for future objective analysis.

Conclusion: A data-centric approach is indispensable to any e-clinical solution. An analytical approach with robust data connectivity and quality is required for such data-driven clinical study recruitment and screening.

This study was supported with funding received from the NIDCR Grant Number: 4 UH3 DE029158-03.