

Enhancing Recruitment: A Quality Improvement Strategy for a Prospective Research Study

Priya D Bolikal, MD^{1,2}; Tess Guzman, BS²; Richa Patel, BDS, MPH²; Ryan Schuetter, BS²; Sarah M Eickmeyer, MD³; Brad G Kurowski, MD, MS^{1,2}

1. University of Cincinnati College of Medicine, Department of Pediatrics and Neurology and PM&R 2. Cincinnati Children's Hospital Medical, Center Division of Pediatric Rehabilitation Medicine 3. University of Kansas School of Medicine, Department of Physical Medicine and Rehabilitation



Background

Recruitment of participants for prospective studies is critical for the success of the research studies and generalizability of data. Previous studies have highlighted skilled communication of the research team, development of partnerships with clinical teams, and adequate resources to perform recruitment activities as key components in successful recruiting.^{1,2}

The process of recruitment within the division of Pediatric Rehabilitation at Cincinnati Children's Hospital Medical Center has historically been challenging.

Previous strategies to improve recruitment involved research faculty attending clinical meetings and sharing information about research studies with clinical faculty, but no standardized strategy for implementation has been developed.

The goal of this project is to improve recruitment for research studies within our division using quality improvement methodology with the objective of developing standardized processes to optimize recruitment.

Study Recruitment Opportunity

A principal investigator (BGK) has obtained NIH funding for a study aimed at developing a tool that predicts the risk of development and/or worsening of mental health sequelae after mild traumatic brain injury in youth ages 11-17 years (MOST-mTBI). The recruitment goal is 1000 patients over a 4-year recruitment period.

Recruitment for this study began in July 2024 and occurs in a variety of settings including the Emergency department, through school athletic departments, and in outpatient clinics. The focus of this project is recruitment of subjects from outpatient clinics.

Clinic Settings

Patients with mild traumatic brain injuries are seen within the Brain Health and Wellness Center (BWHC) which is a multi-divisional center that includes PM&R, Sports Medicine, and Neurology.

Clinic Types:

1. Head Injury/Concussion Clinics (HI/con) – exclusively patients with concussions (Sports Medicine or PM&R)
2. Advanced Clinic – exclusively patients with concussions who have risk factors for prolonged recovery (Sports Medicine, PM&R, or Neurology)
3. Sports Medicine General Clinics – variety of diagnoses including concussions

SMART AIM Statements

By December 2024, 90% of eligible patients seen in Brain Health and Wellness outpatient clinics will receive information about MOST-mTBI study.

By December 2024, 50% of eligible patients seen in Brain Health and Wellness outpatient clinics will enroll in the MOST-mTBI study.

Methods

Initial Planning: Clinical research coordinators (CRC), principal investigator, and I met to discuss challenges and key drivers for successful recruitment.

Fishbone Diagram for Recruitment Challenges in Clinics

Improving Recruitment for Prospective Studies Key Driver Diagram

Baseline Data:
In a recent research study examining school re-entry of patients who sustained mild traumatic brain injuries, 32.6% of eligible clinic patients were informed about the study, and 21% enrolled.

Results

Run charts:

Patients Notified about Research Study in Clinic

Percent of Eligible Patients Enrolled

- Initial Interventions
- 1. Research team identified point-people in each clinic as primary points of contact when eligible patients were scheduled in clinic and shared study information with them via virtual meeting or email
- 2. Research team met with sports medicine BHW leader. This provider shared information about the study at Sports Medicine Clinical Meeting
- 3. CRC sent emails to point-people prior to each clinic, notifying them of which patients were potentially eligible for the study
- 4. Research team sent monthly recruitment email updates to clinic teams with awards for successful information sharing and recruitment
- 5. Smart-phrase was created to share study information in patient After Visit Summaries
- 6. Tear-off pads with study information were created and distributed to clinical sites

Results continued

**** Data Collection Standardization**
At this time, it was noted that there were slight differences in how CRC's were reaching out to clinic point-people and in how data was being recorded. A standardized workflow for CRC recruitment process was created, and previously recorded data was revisited to ensure that it was recorded correctly

***** Interventions re-examined**
There was a decline in percent of eligible patients notified about research studies in October. CRC's and point-people identified barriers as:

1. Several clinical staff were out including point-people who were very engaged in the recruitment process
2. Clinics were very busy, so staff frequently forgot to mention the study to potential participants
3. There was a disproportionate drop in general sports medicine clinics compared with concussion-only clinics

In response, site visits were conducted to the various clinical sites with goals of

1. Identifying passive ways to share study information (potential locations for informational posters, tear-off pads)
2. Re-engaging clinical staff with in-person contact
3. Identifying potential barriers to providing research study information

Conclusions / Lessons Learned

- We did not reach our goal of 90% of patients receiving information about the study in clinic, but we did reach our recruitment goal of enrolling >50% of eligible patients.
- The success of enrolling patients who did not receive information in clinic may be due to strong follow up and communication between CRC's and all eligible patients.
- A multi-faceted approach to participant recruitment was helpful for this study.
- Implementation of a standardized workflow helped ensure consistency in recruitment strategy.
- Engagement of the clinical team through ongoing communication and flexible communication modalities was key for continued participation.

References

1. Morton A, et al. Optimizing Recruitment Strategies and Physician Engagement for Stroke Recovery Research. J Neurol Phys Ther. 2021 Jan;45(1):41-45. doi: 10.1097/NPT.0000000000000334. PMID: 32969840; PMCID: PMC7895449.
2. Ferreira IS, et al. Recruitment challenges in stroke neurorecovery clinical trials. Contemp Clin Trials Commun. 2019 Jul 5;15:100404. doi: 10.1016/j.conctc.2019.100404. Erratum in: Contemp Clin Trials Commun. 2020 Dec 10;20:100689. doi: 10.1016/j.conctc.2020.100689. PMID: 31360793; PMCID: PMC6639562.