

# Racial Disparities in Emergency Department Return After Orthopaedic Surgery

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## The Problem:

A quality improvement study found that Black patients at Duke were more likely to return to the emergency department after orthopaedic surgery without needing readmission compared with white patients.



## Finding the root causes:

- Leveraging machine learning and large language models to understand drivers of this disparity
- Holding focus groups to hear what community members think
- Piloting text messages for greater touchpoints between patients and provider teams

## Team Structure

### Team 1

Data analysis utilizing machine learning and large language models

### Team 2

Patient facing focus groups and collaboration with community partners

### Team 3

Implementation of text message check-ins with patients and an AI chatbot