Leveraging Mobile Application Technology to Facilitate Enhanced Recovery Provider Education

Brittany Kruse, DBH, MA, Innocent Rukundo, PA-C, Darren Skeete, and Vijaya Gottumukkala, MD, MBBS

The University of Texas MD Anderson Cancer Center, Houston, Texas

THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center
Making Cancer History®

Background

Enhanced recovery has revolutionized management of patients to improve outcomes. Provider education has emerged as essential to successfully build enhanced recovery into the fabric of patient care activities at MD Anderson Cancer Center. In 2016, our team identified challenges in sharing elements of the enhanced recovery pathway across various phases of care to all care providers.

To overcome this adoption barrier, a reference pamphlet was developed to distribute a standard pathway to multidisciplinary teams. Over time, this pamphlet transformed into a "pocket guide". This guide provided a quick reference of specific orders designated for the patient's journey, including information on medications, ambulation, diet, symptom management, and more.

To facilitate timely updates, and readily available ERP information to the providers, a collaborative effort with the Enterprise Development and Integration (EDI) team was established. A smartphone application was developed and released in July 2020.

The objective of the enhanced recovery mobile application is to provide an electronic, easily accessible education tool for multidisciplinary team members.

Methods

Software was developed using the Agile Scrum methodology, a project management process that relies on incremental development. Each iteration consisted of two-to four-week sprints, where each sprint's goal was to build the most important features first and deliver a functioning product. Initially, the application was designed and developed for the Cystectomy and Nephrectomy ERP pathways.

After presentation to institutional ERP members for feedback, additional seven surgical pathways were added. A six-question survey was distributed to all ERP members to obtain end user feedback and identify further improvement opportunities.
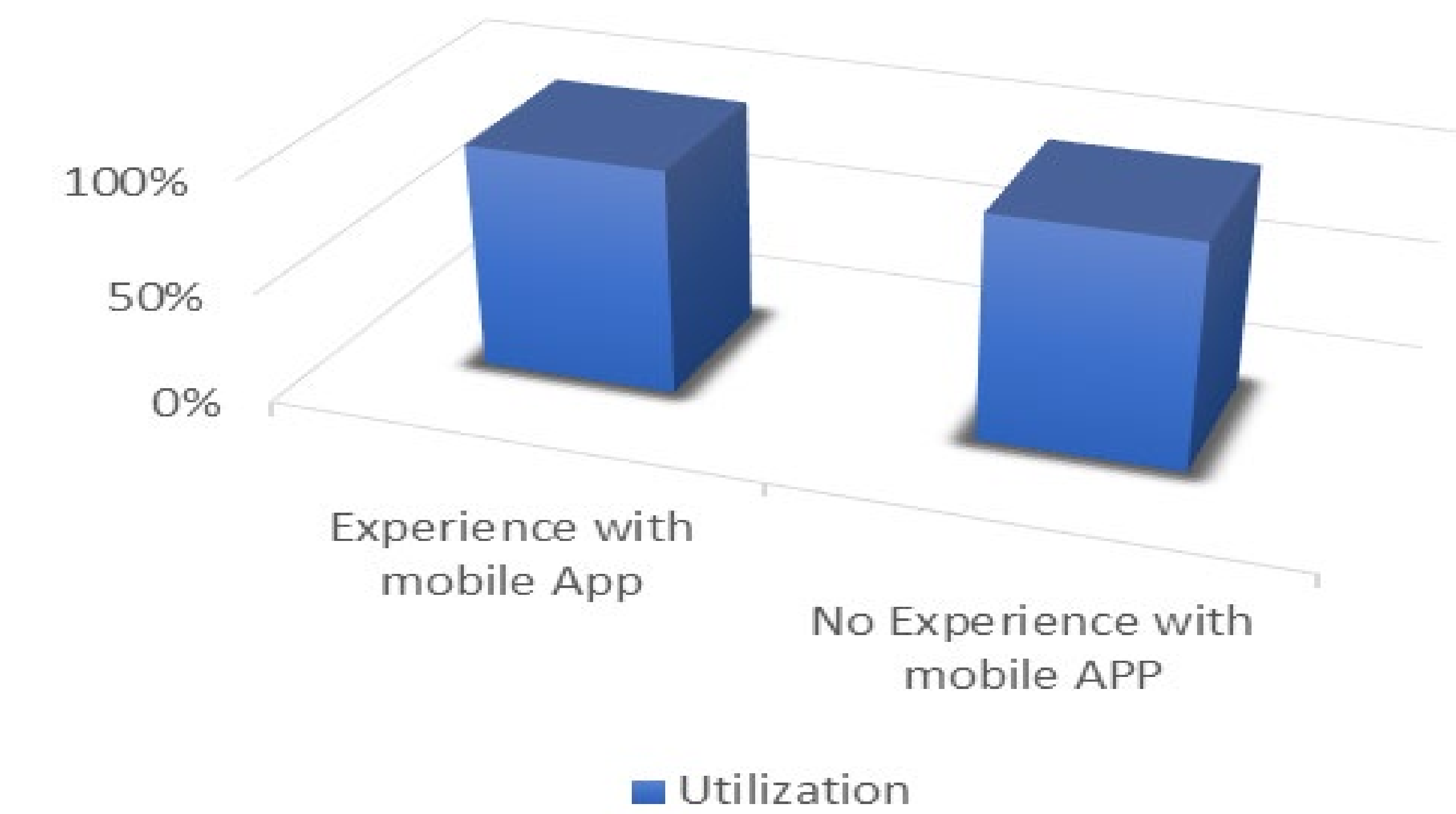
Figure 1: Experience with mobile application

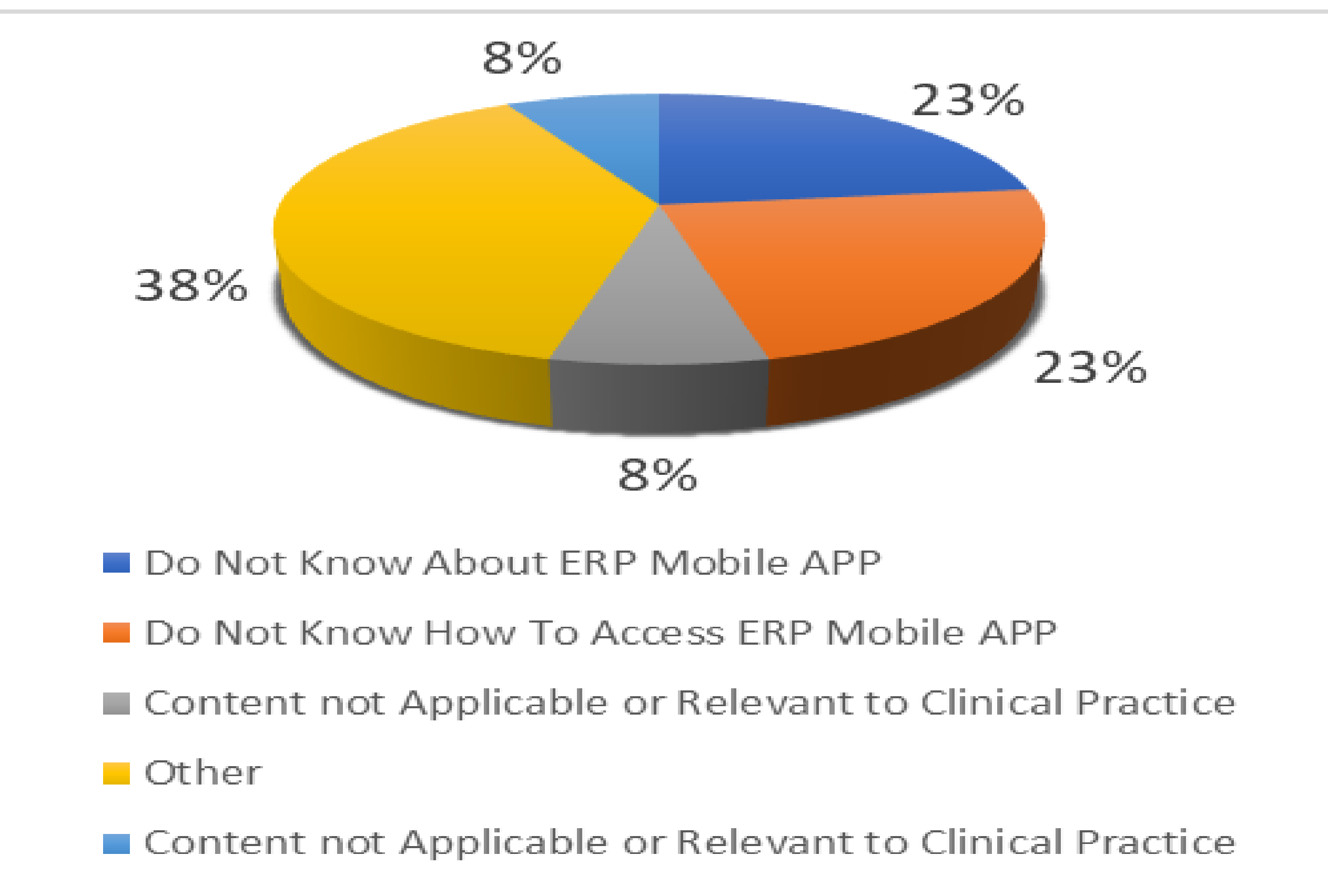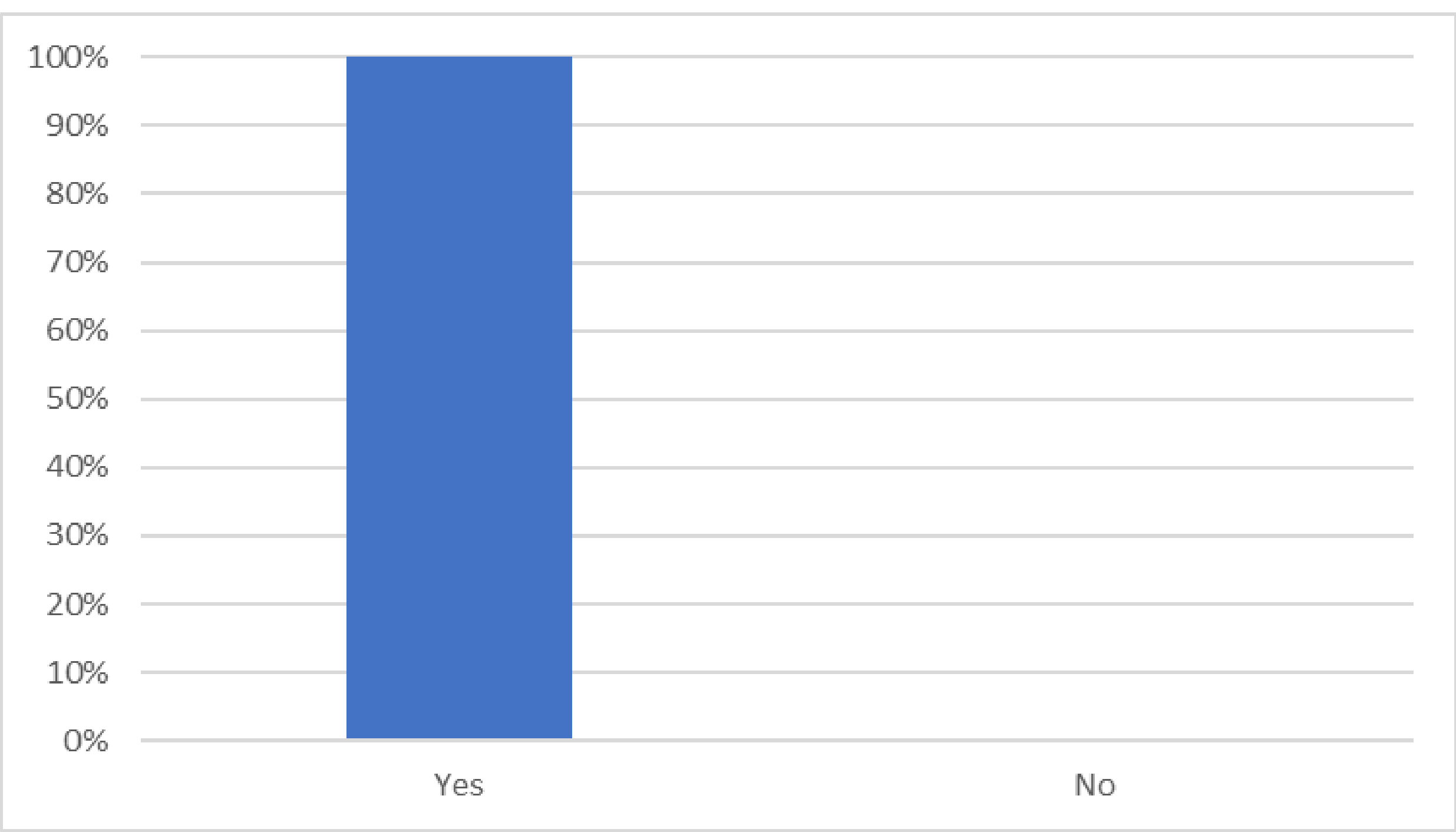Figure 2: Reasons to not use mobile application

- Do Not Know About ERP Mobile APP
- Do Not Know How To Access ERP Mobile APP
- Content not Applicable or Relevant to Clinical Practice
- Other
- Content not Applicable or Relevant to Clinical Practice

Figure 3: Mobile application met expectations

Results

Survey response rate was 18% (n = 26), with 13 respondents having used the mobile application and 13 with no experience using the application (Figure 1).

Main reasons listed for not using the mobile application were content not available for specific protocol, did not know about the mobile application, and did not know how to access the mobile application (Figure 2).

100 percent of respondents who use the application indicated it met their expectations (Figure 3). Since implementation, six additional ERP service lines have requested their pathways be added.

Conclusions

The enhanced recovery mobile application is an innovative approach to streamline provider education across all phases of care. The mobile application tool has the advantage for periodic updates to the pathways as new information becomes available.

Future work on this tool will be to actively monitor and track mobile application usage and meet provider expectations for timely information on individual pathways.

Acknowledgments