The Impact of Online Self-Scheduling Platform Optimization on Patient Directed Access to Screening Mammography Appointments During the COVID-19 Pandemic

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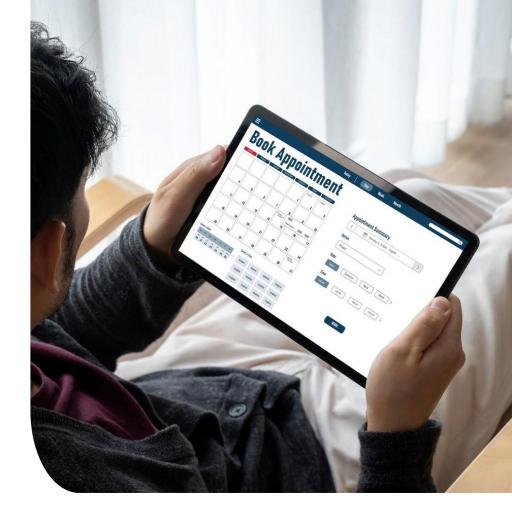The University of Texas MD Anderson Cancer Center, Houston, Texas

Disclosures

The authors have no relevant financial conflicts of interest to disclose.

Introduction & Methods

During the COVID-19 pandemic, screening mammography (SM) utilization declined nationally by nearly 65% compared to pre-pandemic volumes. This study assessed the impact of screening mammography online self-scheduling platform (OSS) optimization on patient scheduling, rescheduling and cancellation rates during the COVID-19 pandemic at a multi-site academic breast radiology department.

A retrospective review of online SM scheduling utilization between October 1, 2019 and December 31, 2022 was performed. The electronic health record (EHR) was queried to extract the total number of SMs performed, online scheduling, rescheduling and cancellation rates during the busiest screening mammography months of October through December in 2019 and 2022.

Screening Mammogram Scheduling Workflow

Our original online screening mammography scheduling platform consisted of a static web-based form with a series of preliminary intake screening questions.

The static online form was routed to a diagnostic imaging scheduling work queue for manual appointment scheduling into the EHR by phone with a 48-hour turnaround.

A series of optimizations were deployed over the span of 24 months, involving phased integration into the EHR-tethered patient portal.
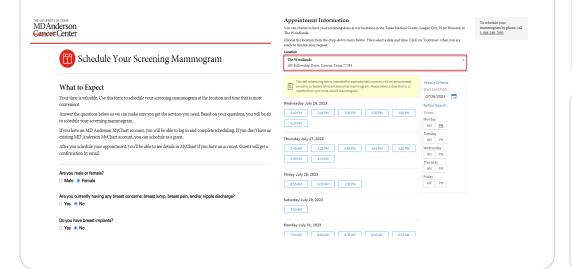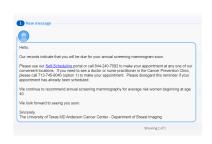
Interventions

The following interventions were employed sequentially for online self-scheduling platform optimization.

Optimization #1 | September 2020 - Simplification of the online intake scheduling questionnaire for triage to the centralized scheduling team.

Optimization #2 | December 2021 - Open Scheduling: Integration of the OSS platform directly into our EMR clinical scheduling templates.

Optimization #3 | April 2022 - EHR SM scheduling eligibility push notification to established breast imaging patients with a documented normal mammogram the year prior.

Optimization #4 | September 2022 - MyChart direct scheduling option activated on the appointment scheduling dashboard for all female EHR users ages 39 years and older with a series of questions to determine screening mammogram exam eligibility.
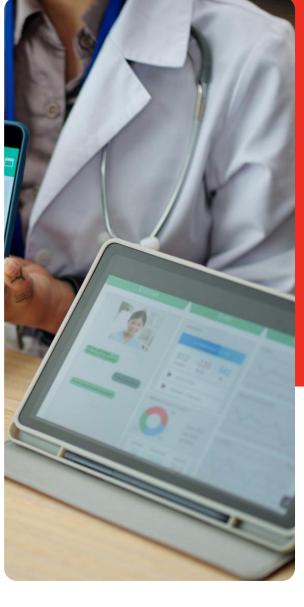

We also collaborated with our Marketing and Strategic Communications team to create branded material for institution-wide socialization.

Use of Quality Tools & Analysis

Paired sample T-tests were used to evaluate mean monthly self-scheduling, cancellation and rescheduling rate performance pre- and post-platform self-scheduling platform optimization intervention. A p-value <.05 was considered statistically significant.
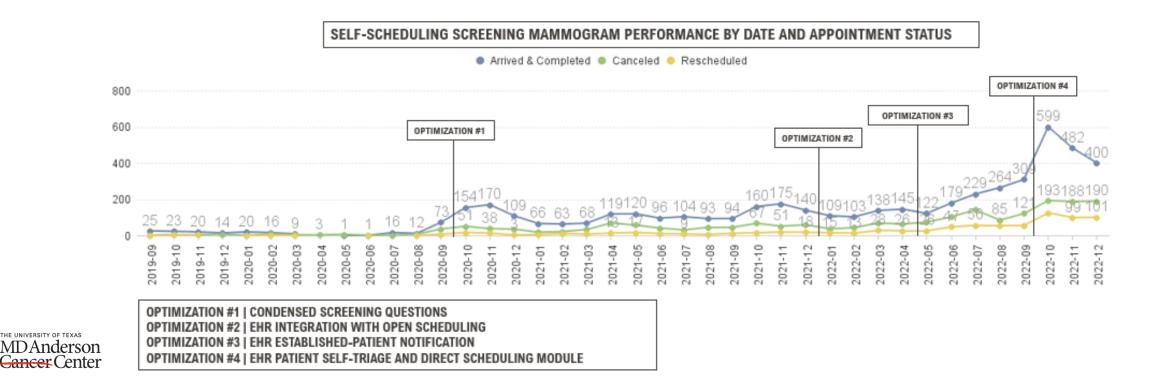
Results

October through December online screening mammography scheduling patient activity rose from 57 to 1481 patients when comparing 2019 and 2022 performance, representing a 26-fold increase in online platform utilization after EHR-tethered scheduling integration (p=0.013). This resulted in a concurrent 16x fold reduction in patient access specialist screening mammogram scheduling engagement. Concurrently, screening mammography scheduling automation resulted in increases in appointment rescheduling and cancellation rates, from 14% to 22% (p=0.005) and 18% to 38% (p=0.000), respectively.

SELF-SCHEDULING SCREENING MAMMOGRAM PERFORMANCE BY DATE AND APPOINTMENT STATUS

OPTIMIZATION #1 | CONDENSED SCREENING QUESTIONS
OPTIMIZATION #2 | EHR INTEGRATION WITH OPEN SCHEDULING
OPTIMIZATION #3 | EHR ESTABLISHED-PATIENT NOTIFICATION
OPTIMIZATION #4 | EHR PATIENT SELF-TRIAGE AND DIRECT SCHEDULING MODULE

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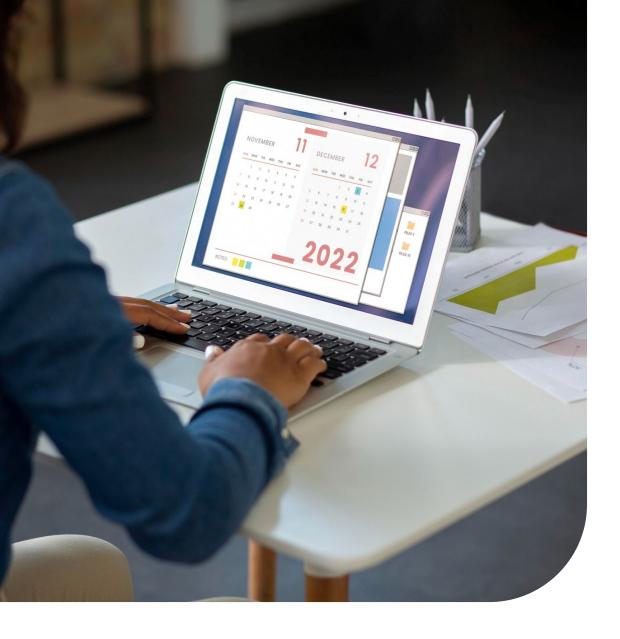MD Anderson
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Revenue Enhancement

Online self-scheduling platform optimization improved stewardship of centralized scheduling team resources by providing automated triage and appropriate appointment options to SM eligible patients. These resources are now allocated for coordination of higher complexity diagnostic imaging exams.

Mammo Self-Scheduling

Conclusion

Screening mammography is a low complexity exam for scheduling coordination. Optimization of our online self-scheduling platform with EHR integration resulted in a 26-fold increase in patient utilization and a 16-fold reduction in patient access team hands-on screening mammogram scheduling engagement.

The rates of patient appointment rescheduling and cancellation also increased but the overall net gain in self-scheduling automation should not deter continued use and implementation of this program.

With improved platform specificity, the operational benefits and 24-hour patient access afforded by EHR directed scheduling can be scaled for utility across additional appointment platforms, reducing the number of manpower resources utilized in low complexity diagnostic imaging exam scheduling.

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