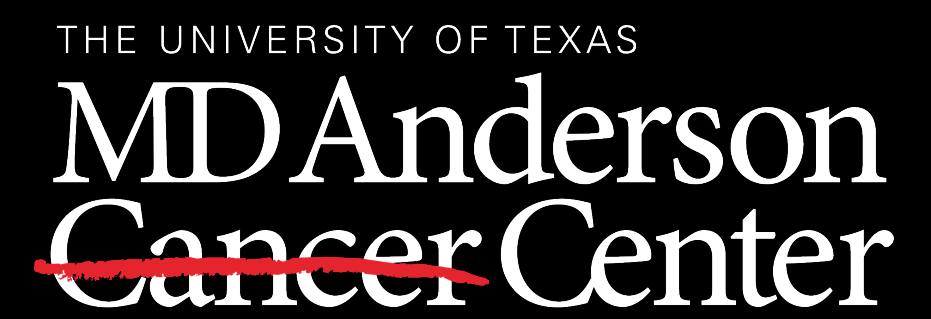




The Impact of Online Self-Scheduling Platform Optimization on Patient Directed Access to Screening Mammography Appointments During the COVID-19 Pandemic

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Aim Statement

The primary aim of this study was to assess the impact of screening mammography (SM) online self-scheduling (OSS) platform optimization on patient scheduling, rescheduling and cancellation rates during the COVID-19 pandemic. The secondary aim was to evaluate the downstream impact of scheduling automation on the DI patient access specialist (DI-PAS) team workflow for preventative screening appointment coordination.

Baseline Data & Measure

Annual SM for age-appropriate asymptomatic women remains the only imaging modality proven to significantly reduce breast cancer mortality. During the peak of the COVID-19 pandemic, national screening and diagnostic mammogram utilization declined by an estimated 63.7% and 42.1% when compared to pre-pandemic volumes. In a coordinated effort to improve mammography screening engagement, patient access and scheduling automation during the pandemic and beyond, our OSS platform tool underwent a series of optimizations with electronic health record (EHR) portal integration.

The baseline measure was comparing OSS platform utilization performance between October and December 2019, making up 1% (57/5762) of total SMs performed during that time frame. We also baselined the associated rate of self-scheduled cancellations and reschedules at 22% (10/57) and 17% (8/57), respectively. Additionally, at baseline, the DI-PAS team processed and completed 100% of online-scheduling appointment requests.

Process

Our original online SM scheduling platform consisted of a static web-based form with a series of preliminary intake screening questions. The form routed to a DI-PAS team member queue for an appointment scheduling phone communication 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.

Use of Quality Tools & Analysis

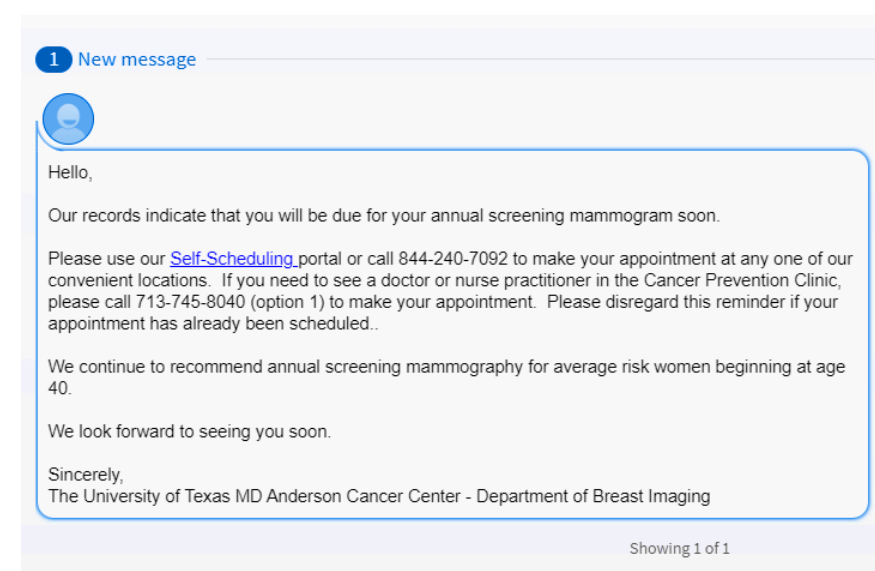
The team performed paired sample T-tests to evaluate mean monthly self-scheduling, cancellation and rescheduling rate performance pre and post platform optimization intervention. We determined a p-value <.05 to be statistically significant.

Interventions

The below figures depict the series of interventions employed for SM OSS platform optimization.

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

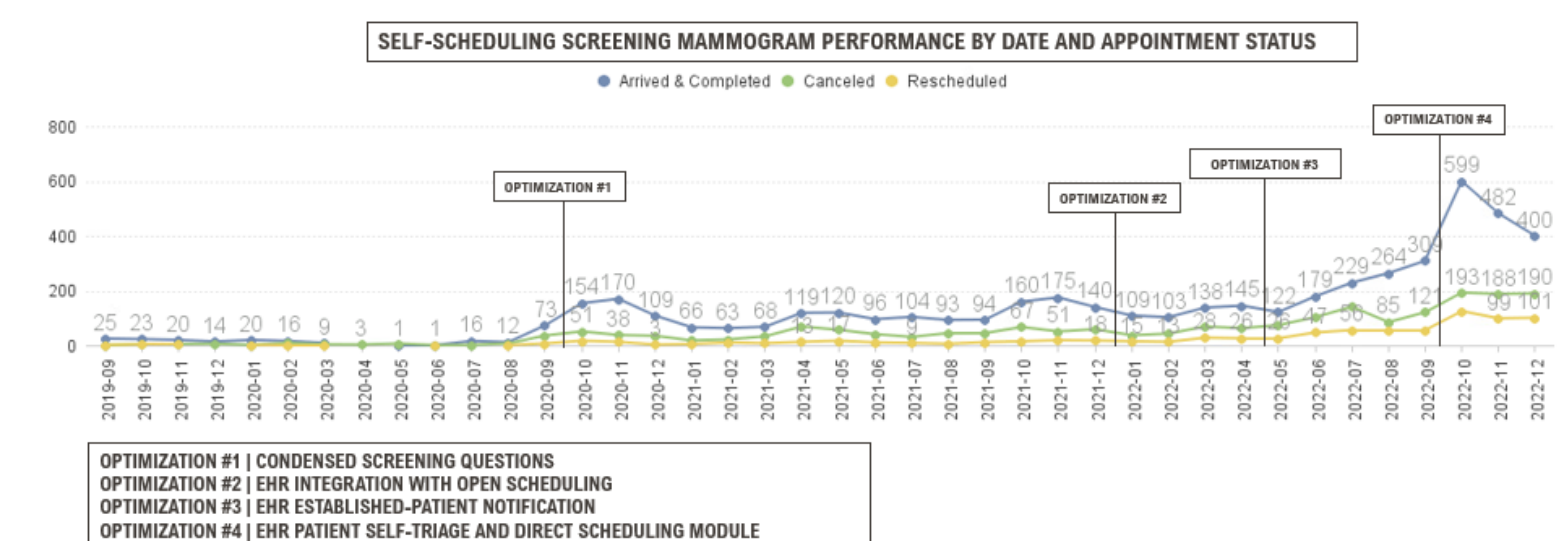


- Optimization #4 | September 2022 - MyChart direct scheduling option activated on the appointment scheduling dashboard for all female EHR users ages 39 years and older with a series of questions to determine screening mammogram exam eligibility.



Results

OSS ENGAGEMENT | October to December online SM 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). Concurrently, automation resulted in increased appointment rescheduling and cancellation rates, from 14% to 22% (p=0.005) and 18% to 38% (p=0.000), respectively.



Revenue Enhancement

DI-PAS STEWARDSHIP | Providing OSS optimization improved stewardship of DI-PAS 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.



Conclusion

SM is a low complexity exam for scheduling coordination. Optimization of our OSS platform with EHR integration resulted in a 26-fold increase in patient utilization and a 16-fold reduction in DI-PAS hands-on SM scheduling engagement. The rates of patient appointment rescheduling and cancellation increased, but the overall net gain in self-scheduling automation should not deter continued use and program implementation.

Next Steps

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. The rates of appointment rescheduling and cancellation should continue to be monitored and mitigated where possible.