King's Daughters Medical Center Gives Back 100+ Hours to Nurses With MEDITECH Expanse Patient Care

SNAPSHOT

Challenge

Give nurses overburdened by the pandemic a better tool to reduce time on everyday tasks.

Solution

MEDITECH Expanse Patient Care with Point of Care mobility

Benefits

- Resulted in more than 100 hours of saved time (over the course of six months) for nurses, allowing them to provide direct patient care instead of spending time on their EHR

- Experienced a 60,000-pixel reduction in mouse movement and a 33% decrease in clicks, indicating upward trends in nurse efficiency

- Achieved a System Usability Score of 88.13, well above the 68-point industry threshold for acceptable usability, which indicates a strong degree of user satisfaction with the EHR workflows

- Attained closer collaboration between nurses and physicians. Workflows have become more cohesive and consistent due to the use of similar tools.

Profile

Located 60 miles from Jackson, King's Daughters Medical Center (Brookhaven, MS) is a nonprofit, acute care hospital with 99 beds. It provides primary and specialty care across five clinics and serves a five-county region with a population of 100,000.

Introduction

Giving nurses time back in their day has never been more important as it has in recent years, as these clinicians continue to cope with staff shortages, burnout, and the COVID-19 pandemic. Like many healthcare organizations in early 2020, King's Daughters Medical Center was dealing with the complications and heavy workloads that come with rising volumes of higher acuity patients. Facing overwhelm, KDMC nurses needed immediate relief.

That's why, even in the midst of the pandemic, KDMC decided to move forward with Expanse Patient Care, MEDITECH's web-based, mobile solution for nurses and therapists. As an early adopter, KDMC nurses and leaders would have the opportunity to contribute clinical input to the development of the solution and ensure nurses' needs were incorporated. Moreover, MEDITECH would assist KDMC with a usability study to confirm both short- and long-term efficiency improvements.

New solution, better user experience

As part of its digital transformation strategy, KDMC wanted to provide nurses with an EHR experience consistent with their physician colleagues, who were already using MEDITECH Expanse. Collaboration among the care team was a key objective driving KDMC's decision, but the organization also wanted a solution that would increase nurse satisfaction and efficiency. Upon go-LIVE, KDMC quickly noticed three significant benefits: improved nurse workflow and satisfaction and better collaboration with physicians.

Immediate results with a modern, sophisticated tool

KDMC nurses were eager to follow in the footsteps of the physicians and leverage Expanse's agility, intuitive design, and personalized navigation. Expanse Patient Care provided immediate results for nurses, improving workflows and giving them easy access to important information. Since Expanse Patient Care is fully mobile and updated in real time, nurses have more flexibility; they can focus on delivering quality care by using tablets or other handheld devices to perform hand-offs, review patient education, and document at the patient's bedside rather than later on at the nurses' station.

"Everything is at our fingertips in a more user-friendly layout," said Eric Rowland, RN, an ED nurse at KDMC. "It is amazing having easy access to everything we need to know about our patient basically on one screen rather than clicking through several tabs and pages to find what we need."

Improved patient experience

In addition to an improved clinical experience, Expanse Patient Care is improving interactions by helping to put the patient at the center of care.

"I was recently assisting our nurse practitioner treating a woman in the ER who had a fracture in her shoulder. With a mobile tablet, I was able to open up the image of her X-ray, zoom in, and show her the problem," said Farr. "Patients are the consumer, it's our job to help them with decision making. We don't want them outside of the team, they are part of it and it's a win for everybody."

Joe Farr, BSN, RN, Clinical Applications Coordinator
King's Daughters Medical Center

Better nurse and physician collaboration

Throughout the transition to Expanse Patient Care, physicians and nurse practitioners helped guide nurses through the new solution and answered their questions to assist in the go-LIVE.

Now that both physicians and nurses are using Expanse, communication among care team members has improved. In addition, clinical workflows are more cohesive and consistent across solution sets. Nurses see the full patient chart in the same manner as KDMC physicians and employ similar tools to care for their patients more efficiently.

Notable ease of use

In their feedback, KDMC nurses expressed how easy it is to find critical information in Expanse Patient Care. Quick access to favorites and other frequently used information such as orders, the summary panel, discharges, MyWidget, and Search Chart is increasing efficiency and expediting care. Clinical involvement in the development process ensured nurses would experience ease of use from Expanse Patient Care's user-friendly layout. In addition, nurses can clearly view lab test results and imaging scans, as well as any trends revealing significant changes in a patient's status.

"The fact that the solution meets the nurses' needs was evident in the absence of night calls the week of our go-LIVE, which was phenomenal," said Joe Farr, BSN, RN, the clinical applications coordinator at KDMC. "We're seeing more nursing engagement than we ever have before, even from those who don't normally engage or have positive feedback."

"From a leadership standpoint, you measure the things that matter and if you can measure it, you can manage it. The ROI data takes time to collect, but it's worth it because it shows your processes are working."

Carl Smith, CIO
King's Daughters Medical Center

Usability study

While KDMC staff and leaders could see the benefits of Expanse Patient Care firsthand, the usability study provided them with quantitative data that proves the solution's effectiveness. Advanced usability studies are needed to ensure new products are providing intuitive and efficient workflows; MEDITECH's partnership with KDMC improved understanding of the importance of usability metrics for customers leveraging Expanse Patient Care.

Methodology

After working with MEDITECH to assemble a usability group, KDMC underwent a 120 days post go-LIVE (DPL) study to measure the benefits of Expanse Patient Care in more detail. They did the same study pre-LIVE to compare results, which included medical-surgical and ED tasks.

KDMC knew that quantitative research — rather than raw numbers — provides context and would enable them to communicate objective data that can be compared to internal and external sources.

To evaluate the usability of primary nursing workflows, the MEDITECH nursing product manager on the strategy team tracked three general tasks consisting of multiple steps:

· Chart reviews
· Home medication reconciliations
· Hand-off reports

After each participant completed their task, the nursing product manager asked follow-up questions that summarized their experience so users could provide more details on the functionality.

The nursing product manager then administered to participants a user satisfaction survey utilizing the System Usability Scale, an industry-standard usability scale that helps quantify participant responses to the system.

"The thing I love the most about Expanse Patient Care is that when you open the patient's chart, there is so much information right in front of you and if you need more, you can click on it from the first page and it will take you directly to what you need."

Brianna Errington, RN (Med-Surg)
King's Daughters Medical Center
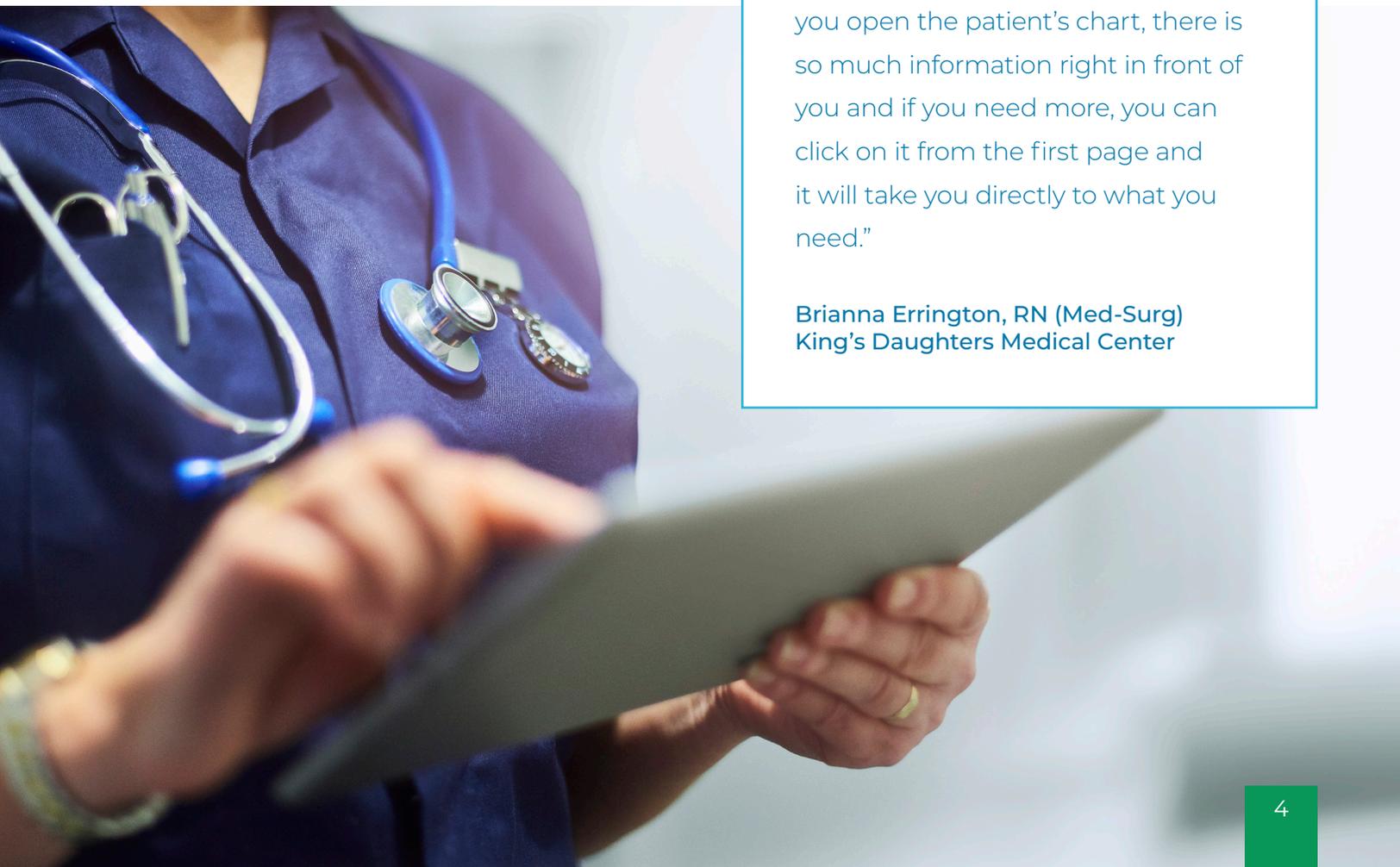
Results

KDMC saw consistent performance gains in efficiency metrics, compared to previous studies in the 120 DPL round and in end-user satisfaction scores. Metrics indicated users' growing confidence in Expanse Patient Care; nurses performed the same tasks better than they did in the previous legacy system, which led to efficiency gains in core areas.

1. Reduced average time by task

Average time by task is a key metric for clinician efficiency. In the 120 DPL study, KDMC staff reduced three tasks — chart review, home medication reconciliation, and hand-off reports — by four minutes, compared to the baseline. Extrapolating this data over a longer time period of six months showed that using Expanse Patient Care resulted in more than 100 hours of saved time for nurses, based on KDMC's daily average of nine admissions. Instead, the nurses were able to spend more time on direct patient care.*

KDMC also measured the number of times a user clicked during a task, seeing marked improvement in the 120 DPL study; total clicks dropped 33 percent, indicating further efficiency gains.

> *** Breakdown of 100-hour time savings**
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> Average time saved to complete core workflows = 4.03 minutes per user
>
> Approximately 9 admissions per day x 4.03 minutes = 36.27 minutes saved per day
>
> 36.27 minutes x 7 days = 4.23 hours saved per week
>
> 4.23 hours per week x 6 months (26 weeks) = 109.98 hours saved

2. Mouse movements

The 120 DPL study also measured pixel count — the amount of mouse movement across a screen — for the three tasks: chart review, home medication reconciliation, and hand-off reports. Using Expanse Patient Care, the med-surg and ED end users performed 60,000 fewer pixels of mouse movement to complete the same tasks — a 30-percent improvement.

At 55,000 pixels, medication reconciliation had the highest mouse movement in the 120 DPL study; performing 60,000 fewer pixels of movement equates to an entire medication reconciliation routine saved in mouse movement, reducing cognitive load and burnout for nurses.

3. User satisfaction

KDMC also used the System Usability Scale to help measure user satisfaction with Expanse Patient Care. After implementation, the solution's average SUS score increased to 88.13 — a 6.82-percent increase. Well above the 68-point industry threshold for acceptable usability, this score is equal to an "A+" or "best imaginable" usability performance, a very positive sign that Expanse Patient Care has successfully improved end-user workflow. Shifting to the web, KDMC also saw increases in SUS scores for Order Management (15.49 percent), Home Screen (11.16 percent) and Discharge Routine (2.90 percent).

"Whether by survey or testing, it is clear there is improved user satisfaction on the home screen, chart navigation, and overall functionality," said Farr. "Nurses really value having a system that looks and feels like the physicians'. Less mouse movement, fewer clicks, easier access — people really like it."
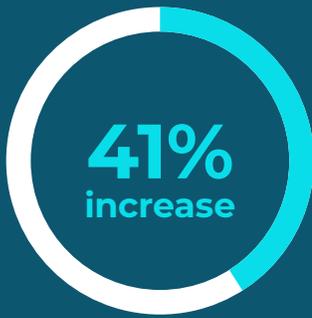
41% increase

Expanse Patient Care's Point of Care

KDMC's usage and adoption report indicates that these components have a 77.69% voluntary usage rate — a 41% increase compared to pre-LIVE voluntary usage. This growth attests to Expanse Patient Care's efficiency, as nurses and therapists are empowered to use the best device for the task.

Lessons learned

Looking back on their Expanse Patient Care implementation, KDMC leaders recommend involving nurses and other clinicians early in the process to find out what they want from the solution.

"You'll get great feedback, so you can get it right the first time," said Farr.

One example, Farr noted, was nurses' suggestion to add COVID-19 results on the main list of patient names. KDMC worked with MEDITECH to make the change because "we value each other's input, and use the flexibility of Expanse to deliver on it."

Another recommendation from KDMC is to conduct user satisfaction surveys while clinicians are undergoing pre-LIVE training on their devices. Staff find it more convenient than filling out surveys when they're back on the unit, improving the response rate. After tabulating the results, organizations are able to provide a more clinically relevant interpretation of the survey to project stakeholders, ensuring it resonates.

Next steps

To provide the best care possible for the community, KDMC will continue to work with MEDITECH to stay at the forefront of healthcare IT innovation. The next phase of KDMC's digital transformation strategy includes implementing features in Expanse Patient Care that weren't included in the initial go-LIVE, such as an on-call process and pre-anesthesia teaching. As these new features are implemented, KDMC will continue to measure Expanse Patient Care's return on investment, in partnership with MEDITECH.

"MEDITECH has been a trusted partner with King's Daughter Medical Center since 1995," said Carl Smith, the CIO. "They continue to find ways to optimize our systems for us to provide the absolute best health care for our patients."

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