



Leading the CHARGE

Banner Health, one of the nation's largest not-for-profit health systems, is carrying the flag of nursing informatics to advance a more connected staff and patient-centric future.



One of the largest public health systems in the country is leveraging nursing informatics to boost efficiency, connectedness, and provide vital tools in the fight to keep their communities healthy and thriving. Serving over 1 million people in a vast six-state catchment area, Banner Health is applying state-of-the-art information technology to improve outcomes and increase patient satisfaction.

Celebrating its 20th anniversary this year,

Phoenix-based Banner is a fully integrated, not-for-profit Accountable Care Organization health system. The largest employer in Arizona, Banner operates 30 hospitals and 350 care sites across that state and California, Colorado, Nebraska, Nevada, and Wyoming, and operates its own insurance plan and network. The system, which includes an academic medicine division, also boasts a 55-bed simulation medical center, one of the largest "virtual hospitals" of its kind.

Developed in the 1980s, the discipline of nursing informatics is continually changing healthcare, and is especially important for an organization of Banner Health's size and scope. Banner's Chief Nursing Informatics Officer, Sherri Hess, explained, "We focus on nursing informatics as the science and practice of integrating nursing knowledge and information with information technologies to promote outcomes of people, their families, and communities. We consider



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“When informaticists make any decisions we think about how to make healthcare easier so life can be better for all our Sophias.” Sherri Hess, Chief Nursing Informatics Officer

what those outcomes look like, and include the design of technology to support all those areas that, as a large organization, we standardize.”

That standardization is essential to ensuring consistent care across multiple sites. “It does not matter what site you go to, you’re going to get the same care. We

have those same decision supports and the same type of order set, and that’s a big piece of what we do from an informatics perspective,” she said.

“As nursing informaticists we speak two languages: nursing or the clinical part, and technology. We also understand care throughout the continuum, so whether that’s an ambulatory site

that my team is involved in or hospital or urgent care setting, we’re always thinking about the persona of our customer.” That persona, named Sophia, is a female in her 40s with young kids, parents and in-laws she’s responsible for making healthcare decisions. “When informaticists make any decisions we think about how to make healthcare





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“Our focus is on improving outcomes in quality, safety, and patient satisfaction. Another major focus is improving efficiency for our clinical staff to give them more time with their patients.”

Sherri Hess

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Hess’ team consists of RNs with a select group of masters-prepared nurses certified in nursing informatics through the American Nurses Credentialing Center, as well as other specialists such as surgical technicians. “Their passion is to innovate

with technology. By leaning into the Gemba—the place where the work is done—they are able to observe the clinicians at work, ask pertinent questions and follow the data to understand how and why a tech solution or approach is right for the organization. “In any kind of technology implementation, if you don’t understand the process, observe their current state, their pain points, and what they need, you’re not going to get to an improved future state,” she reminded.

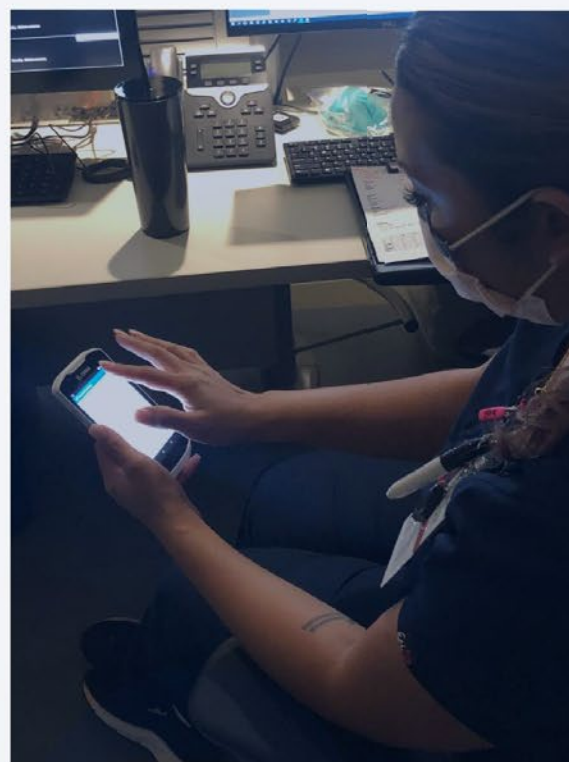
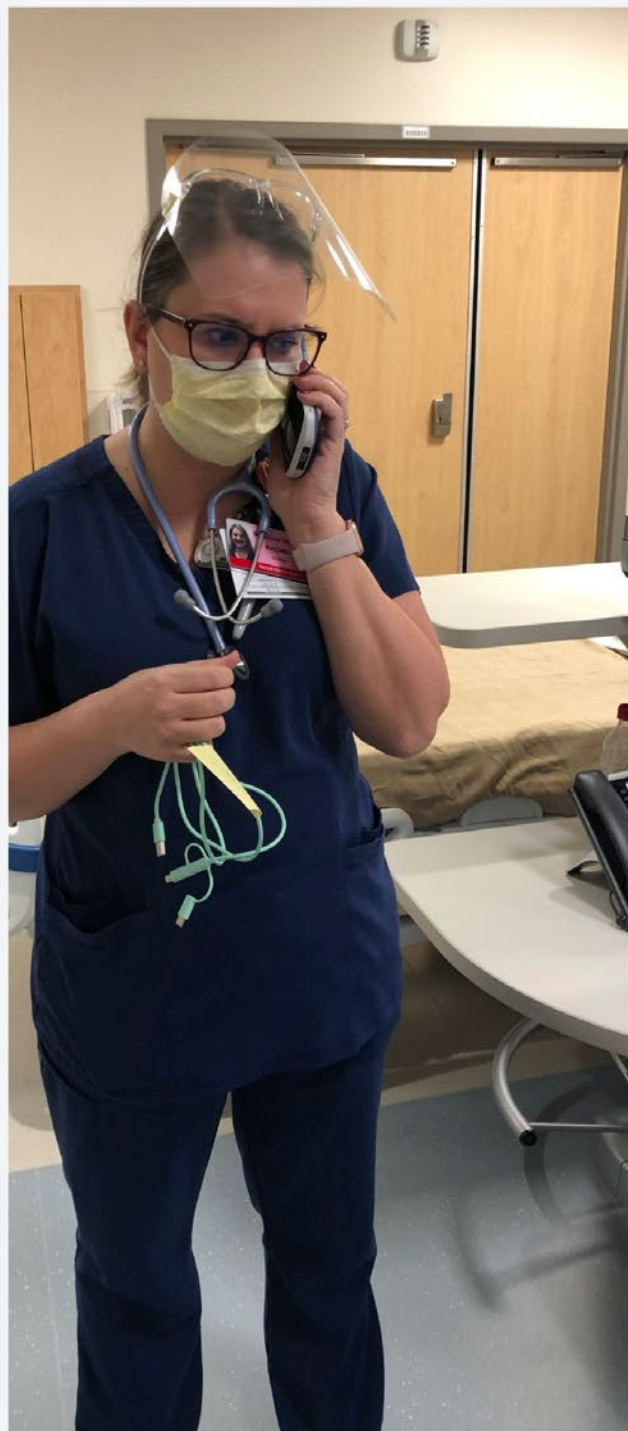
When choosing technology partners, Hess



finds that honesty and a grasp of the nursing perspective are critical considerations. “Right up front it’s important to ensure that we’ll be partners from the beginning and after we go live. It’s key the solutions are truly making the difference that we’re saying they will.” When the implementation is specific to nursing we need to have qualified vendor staff a part of it. Both sides need to be open to listening to feedback and find ways to work together to continually improve outcomes.”

Boosting Responsiveness and Quality through Technology

The organization recently collaborated with longtime partner and EHR provider, Cerner, and Zebra Technologies to introduce CareAware Connect, a handheld mobile device and communications solution with a single platform to connect nurses, clinicians, and all the departments in the hospital. The initial rollout took place at the newly opened Banner Ocotillo Medical Center in Chandler, Ariz. “We put the Zebra devices in the hands of all our employees. Most



organizations focus on their nurses or their clinical staff, and I really felt it was important for everybody to have the same access,” Hess said.

“We have Cerner CareAware Connect secure text messaging so anyone that uses the Zebra device or has downloaded the app on their personal phone, like the physicians or the leaders, they have direct access to each other in an instant. We also have a desktop version, which gives all the staff multiple options.” Rich in functionality, CareAware Connect enables nurses or clinicians to review and administer medications on the spot. Nurses can also connect directly with the laboratory to review specimens and arrange for lab draws without having to make a trip or phone calls to the lab. The system’s mobile printers enable them to print out lab specimen labels at the moment they’re needed.

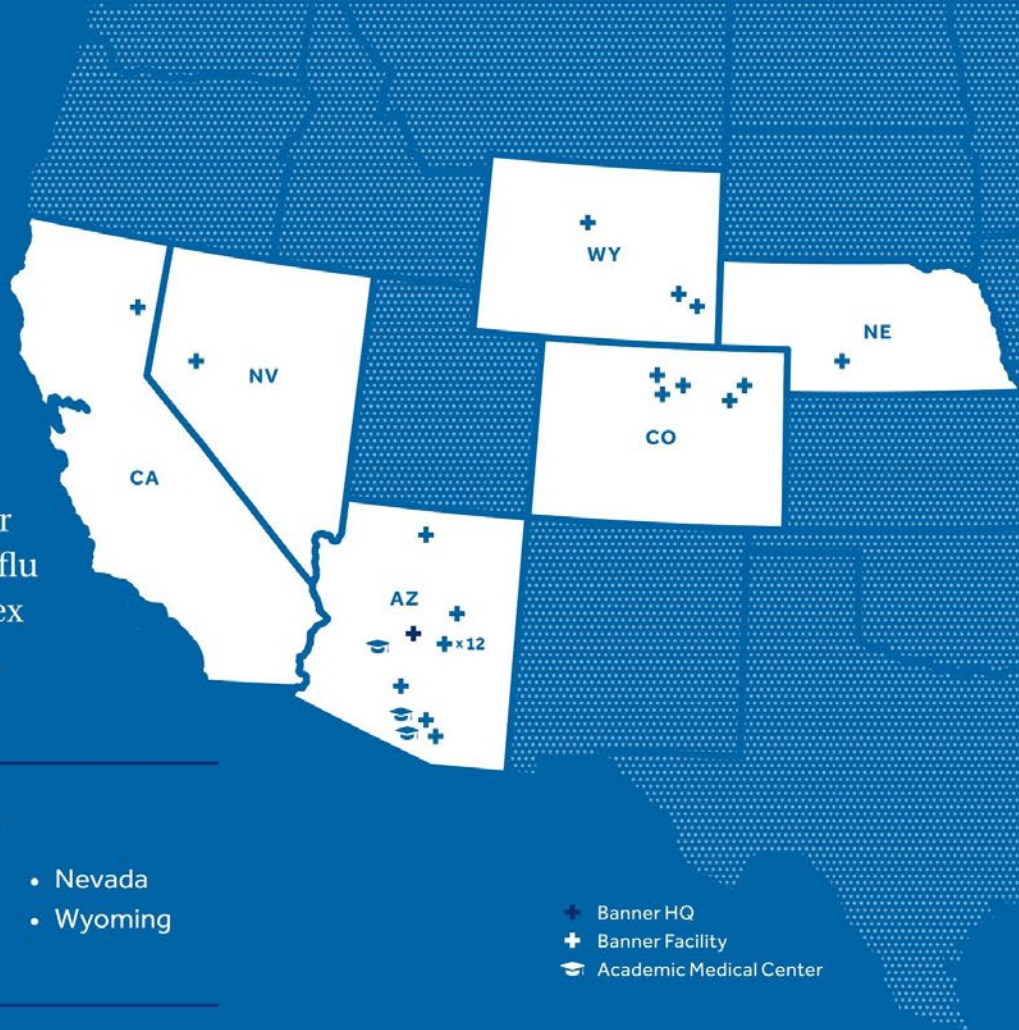
“We draw the lab and print the labels on the spot, which decreases any error to almost zero, and the efficiency is also improved,” Hess noted. “In the past, a critical lab needing to be

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Sherri Hess

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- Wyoming

- Banner HQ
- Banner Facility
- Academic Medical Center

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<p>10</p> <p>pediatric-prepared emergency rooms</p>	<p>40+</p> <p>physical therapy centers & rehabilitation hospitals</p>	<p>03</p> <p>academic medical centers</p>	<p>23</p> <p>imaging centers</p>



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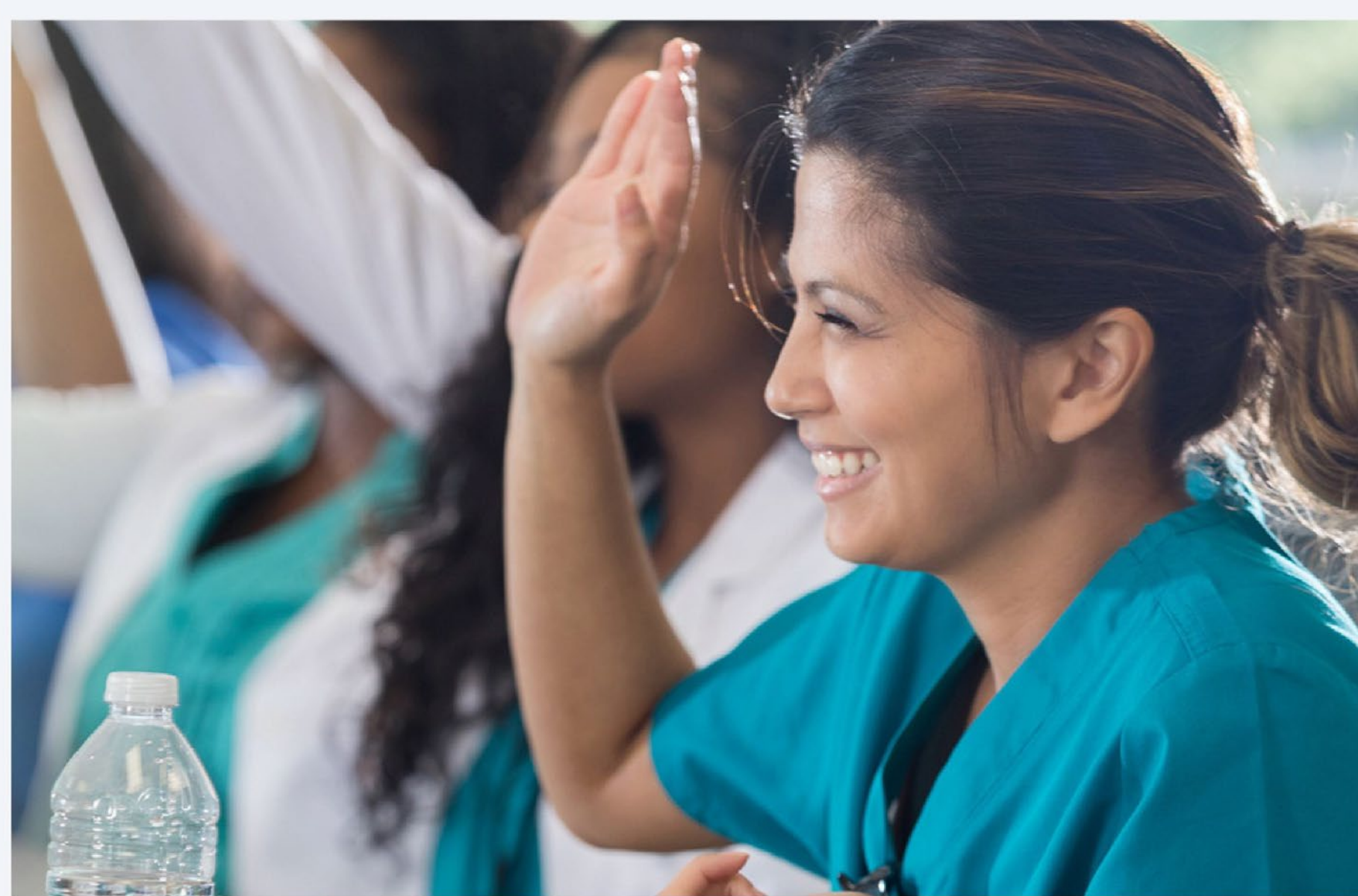
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called to the nurse meant playing phone tag, but now we have a much quicker turnaround time. In order to improve safety, a great example is when a bed alarm notification is sent directly to the caregivers Zebra device that a patient is at risk of falling. This adds additional notification to the care teams to enable a faster response.”

Critical notifications are delivered to the appropriate staffers without disrupting

or unnerving patients. “Let’s say the respiratory therapist, doctor, nurse, and pharmacy staff have been deemed a part of the code blue team. The alert comes directly to their phone. Ideally, we want to eventually take away that overhead page that causes anxiety when patients hear that. We’re pushing a lot of the barriers of what we’ve always done.”

Hess is hopeful that CareAware Connect can

decrease the number of steps in certain nursing processes. “There’s so much functionality that truly is changing how we give care. Our collaboration between Cerner and Zebra Technologies is truly remarkable. Patient and staff satisfaction and improved efficiency, that’s the goal.”

Nurses make operational goals a reality. “I’ve seen other organizations that

may have a chief medical informatics officer but failed to have a chief nursing informatics officer,” she reflected. “It’s time for those organizations to understand that if you have a physician executive in this role you should also have that complementary nursing perspective. We work very closely together and it really helps bring our disciplines all closer together. Nurses understand the workflow,

and we’re the eyes and ears for the patient.

“Our senior leadership team and all the employees at Banner have come together over this last year to really do more than we ever thought was possible, especially during the most trying times any of us will probably ever see. We focused on keeping employees safe and saving as many lives as possible. Whether creating drive

through testing sites in Arizona, partnering to create our own PPE or looking how we can reuse PPE, we all came together and worked with our elected officials in every state to ensure that we were doing the right things,” she said. “I’ve never been prouder to be in an organization than I have at Banner. Much of that is due to the senior leadership team that set expectations for us all.” ■