Healthcare Goes High-Tech:

How Technology is *Solving* Healthcare's Operational Challenges

In recent years, the healthcare industry has been dealing with a storm of challenges. First and foremost has been managing the COVID-19 pandemic. As new variants emerge and surges occur, the Centers for Disease Control (CDC) have **continually updated guidelines** and recommended new protocols ranging from surge mitigation to optimizing limited personal protective equipment (PPE).

Pandemic pressures have contributed to another healthcare challenge: a growing labor shortage. According to the American Nurses Association (ANA), nurses are retiring or leaving the profession (many citing burnout) in large numbers: **an estimated 1 million will retire by 2030**. As a result, nursing programs cannot produce enough graduates to keep up with demand and are turning away thousands of qualified applicants because of a shortage of faculty and facilities. As a result, nurses and other remaining medical staff are overworked and exhausted.

The stresses of the pandemic and the labor shortage add to a third major challenge: the need to reduce medical errors. On-the-job mistakes range from misdiagnoses and surgical errors to patient misidentification and medication errors (all of which account for **between 7,000 and 9,000 US deaths annually**). Integrating technology to assist hardworking medical professionals can significantly reduce these tragic errors.

Tech Solutions Help Hospitals, Clinics, and Pharmacies Overcome Challenges

Ever-shifting pandemic protocols, fewer available professionals, and an increased need for efficiency and accuracy are major healthcare pain points. However, technology is available to help clear these hurdles. Take a look at how these **solutions** can provide relief.

Label Printers

Label printers can streamline processes throughout a patient's treatment or stay, producing labels for everything from prescription bottles and essential documents to visitor name badges. Labels with barcodes are highly efficient, saving time and lessening mistakes when doling out medications or meals with special diets. Linerless label printers can print labels that stick to almost any surface yet can be easily removed without leaving messy residue on reusable items, making cleanup easier. Linerless labels have no backing to remove and can be printed and applied with one hand, making them an excellent option for hospitals, clinics, and pharmacies.

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Barcode Scanners

Barcode solutions in healthcare allow caregivers to work with greater efficiency and accuracy. For example, **barcode scanners** can be used at a workstation on wheels to scan everything from patient ID wristbands to prescription bottles, providing immediate verification that meds and care are being administered properly. They can also create instant records that are shared with the patient's electronic health record (EHR).

Scanning a barcode wristband ID can significantly reduce or eliminate patient misidentification or medical errors resulting in a patient getting the wrong medications or surgery. Over a three-year span in New York City alone, **27 cases of patients received the wrong invasive procedure**, having significant physical and financial consequences for both patients and providers. A barcode scanner can confirm prescription medications, ensuring that the right patient gets the correct dosage at the right time, avoiding complications such as drug interactions, allergic reactions, or fatal overdoses.

Star's white handheld scanners help lower the spread of microbes

In healthcare environments, more importance is placed on preventing the spread of infection. In addition to having antimicrobial agents incorporated into the materials from which they are constructed, Star's white handheld scanners are:

- **Washable:** able to withstand regular sanitation without compromising the housing.

- **Disinfectant-ready:** durable enough that disinfectants can be used without destroying the antimicrobial coverings or materials.

- **Easy to maintain:** requires minimal time for cleaning.

Handheld scanners such as the **BSH-HR2081** and the wireless **BSH-HR2081BT** models from Star are ergonomically and durably designed, having a drop resistance of 1.2 meters. With an Ingress Protection (IP) rating of 42, these scanners are protected against solid objects over 1mm and direct water sprays.

The white models also feature an antimicrobial agent and are disinfectant-ready (may be cleaned repeatedly) to reduce the spread of germs. In addition, these 1D/2D scanners can read barcodes and QR codes physically printed (even if distorted) or displayed on a screen.

Stands and Enclosures

Healthcare settings also need their tech dependably in the right places. Tablet enclosures and display stands serve multiple functions, like protecting valuables and keeping them accessible in one place. Enclosures such as the **Universal mEnclosure** (which works with any tablet) protect and secure tablets onto display stands with VESA mounting. They're compatible with **mUnite tablet display stands and mounts**, including wall mounts, desktop stands, and floor kiosk stands.

These stands make the tech available for:

- **Creating ID tags and name badges at check-in:**
  Select a stand that also houses and protects a printer, such as the **mUnite EZ3 or EZ100**, which keep printers secured.

- **Accepting copays and printing receipts:**
  Again, consider a tablet display stand that also accommodates a printer. The mUnite EZPOS desktop stand perfectly houses our **TSP143IV** receipt printer, which comes Cloud Ready.

- **Streaming educational information in the waiting room:**
  The best choice for this use might be a floor kiosk stand or a **wall mount**.

- **Accessing updates on patients by family and friends:**
  This use might also work best with a **floor kiosk stand**, which is sleek, freestanding, and has a weighted bottom for stability.

These solutions facilitate processes such as e-registration and can free up staff time better spent on patient care, particularly when employees are in short supply.

Solutions for the Pharmacy

Integrated Scale

A good scale is essential for any pharmaceutical laboratory (and for veterinary labs and cannabis dispensaries as well). The **mG-S322 Precision POS Scale** is highly accurate, has a mobile power supply, and connects to the hospital system so that data is logged and integrated. It's also National Type Evaluation Program (NTEP) certified to ensure reliability.

Secure Rx Printing

Prescriptions can be printed easily at patient discharge with a solution such as the **TSP847IIRx** thermal printer, which offers speed and security.

The TSP847IIRx can print receipts or prescriptions from cloud-based applications that integrate with patient records, using electronic medical record (EMR) software to produce accurate, legible prescriptions.

- High-speed printing: accurately print 37 prescriptions per minute (180mm per sec)

- Supreme security: a Kensington lock and printer cover prevents prescription theft and resists tampering. Printer can also be secured to counterspace and a handy wall mount is also an option.

- Future-proof: a swappable interface allows updates to printer connectivity without having to buy a new printer. Bluetooth connectivity is also available.
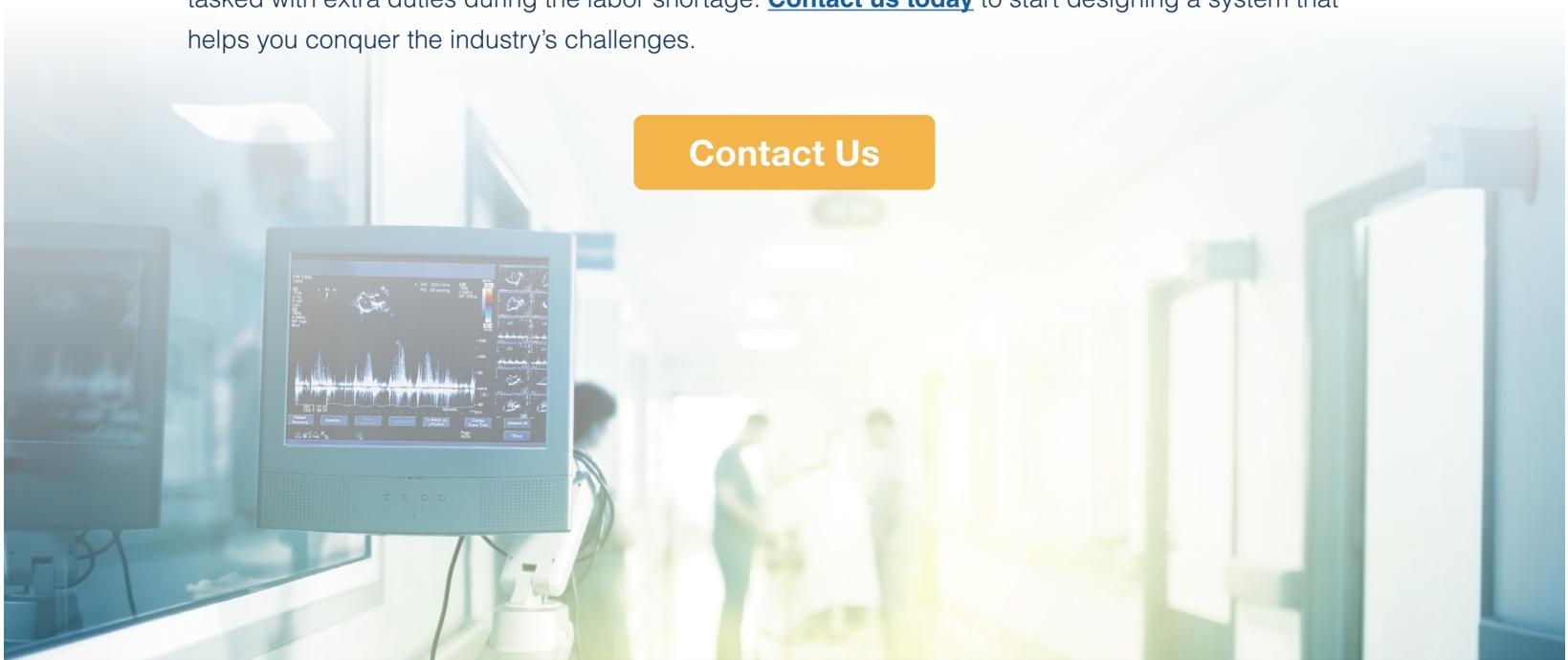
Healthcare providers will also benefit from low-tech solutions with state-of-the-art design. **POSShield** is a portable, durable plexiglass virus barrier that protects employees and patients at check-in and other touchpoints.

The Benefits of Single-Suite Solutions with Cohesive, Integrated Designs

Having one provider for all your tech solutions ensures that all devices and components integrate and perform optimally. Elements sourced from different vendors may not be compatible, and when something goes wrong, it may take longer to troubleshoot, figure out which vendor to contact, and correct issues. Some vendors may try to "pass the buck" and deny that a problem lies with their product.

As your single-suite solutions provider, Star will exceed your expectations for performance right out of the box. Star Micronics backs each product with above-and-beyond service and support. With Star, it's easy to build **a total solution that meets the needs of your healthcare facility**, from patient check-in to care and discharge. Our systems will streamline processes, increase accuracy, and save time for staff tasked with extra duties during the labor shortage. **Contact us today** to start designing a system that helps you conquer the industry's challenges.

Contact Us

About Star Micronics

Star Micronics America, Inc. is a subsidiary of Star Micronics Company Ltd., one of the largest printer and POS manufacturers world-wide. Star Micronics also manufactures high precision machine tools and precision parts. Star Micronics Company Ltd. is ranked as one of the Top 50 "Most Stable" Japanese companies on the Japanese Nikkei. For more information, visit www.starmicronics.com or call 800-782-7636.