ZEBRA DS6707-DP:

Improve patient safety and workforce productivity through real-time accurate inventory counts in the operating room and beyond

With the unique capabilities of the Zebra DS6707-DP, you can now capture 1D/2D bar codes, direct part marks, including dot peen – all with a single device.

THE CHALLENGE

Medical errors have a profound impact on the healthcare industry, taking a significant toll on the cost of care, as well as patient safety and well being. Even with preventative measures in place, unnecessary medical mistakes still occur. For example, a study published in The New England Journal of Medicine found that surgical teams across the U.S. leave sponges, clamps and other equipment in approximately 1,500 patients each year[1]. At best, this mistake results in a major inconvenience, but in other cases, patient health is seriously compromised, with untold time and dollars spent on follow-up treatments and a significant liability exposure for the healthcare organization.

Hospitals have established procedures to eliminate the risk of lost medical equipment, such as requiring operating room staff to count all instruments and sponges before and after surgery. While such measures are having a positive effect, the fast pace and hectic nature of the operating room – particularly in emergency and trauma cases – open the door to inaccuracies.

Automated data capture and bar code technology can be employed to track instruments in the operating room and throughout the facility to improve patient safety and reduce liability. However, implementing the right data capture solution in the healthcare environment is challenging. A wide variety of labels and marks are needed to meet the range of shapes, materials and surfaces found in medical equipment – from sponges and scalpels to clamps, monitors and retractors. Dot peen and laser etched marks are often used on the curved, irregular and shiny surfaces of surgical equipment. The complexity of reading these types of direct part marks (DPM) marks traditionally required a high-end, expensive DPM-based solution that cannot be moved easily – not an ideal fit for the dynamic hospital environment.

THE SOLUTION:

Zebra DS6707-DP — versatile scanning optimized for the healthcare environment

The handheld, easy-to-use DS6707-DP brings a new level of performance, flexibility, affordability and mobility to healthcare data capture applications. The versatile scanner is capable of scanning virtually all 1D, 2D and direct part marks regardless of size, surface, contrast and density – including dot peen, laser etch, ink mark, chemical etch, inkjet mold, cast and thermal spray. Ideal for the challenging surfaces found in healthcare assets, the DS6707-DP features advanced illumination technology to effortlessly capture marks

KEY BENEFITS

Fewer devices to purchase and manage – reduces capital and operational expenses

Cost-effective end-to-end track and trace for surgical instruments, medical equipment and other assets

Improved asset availability and utilization

Reduced risk and liability associated with misplaced assets

Increased worker productivity by significantly decreasing paperwork, providing more time to deliver better patient care

Reduced safety stock levels, potentially reducing capital expenditures and storage space requirements

on any type of surface. A built-in diffuser provides the indirect light needed to capture marks printed on shiny and reflective surfaces – such as on scalpels, retractors or other metal instruments. Special light pipes provide additional lighting around the edges of bar codes on curved surfaces, and a glancing direct light mode provides the bright light needed for successful reads on irregular surfaces.

Zebra's advanced DPM technology creates a new class of high-performing, mobile DPM readers that are easy to hold, affordable and capable of rapid, on-the-fly reading of DPM, 1D and 2D codes – critical for the fast pace of the operating room. And the DS6707-DP accurately captures marks and labels, regardless of whether they are dirty, damaged, very dense or low-contrast – so healthcare workers can get a quick read each time and spend more time focused on the patient.

Designed for ease of use, the DS6707-DP delivers true point-and-shoot performance for all bar code types. A viewfinder and aiming bulls-eye ensures accurate first-time aim, especially on very small bar codes. In addition to a handheld mode, the optional stand provides a hands-free mode that allows healthcare workers to scan by simply passing instruments and other items in range of the scanner. Hands are free to ensure a secure grip on objects and to perform other more crucial tasks. The ability to dynamically switch back and forth between handheld and hands-free mode provides maximum application flexibility.

End-to-end track and trace of surgical tools

The ability to track and trace surgical tools as they move throughout the hospital — from the operating room to the high temperature washer, the maintenance or kitting area, the autoclave and back into the operating room — is crucial. By providing the ability to scan standard bar codes as well as direct part marks of any size on any surface, the DS6707-DP heavily automates the data collection required for end-to-end track and trace of all surgical tools. Paper is virtually eliminated, and the result is cost-effective highly accurate data that improves patient safety, reduces risk and reduces costs.

After surgery, instruments transported from the operating room are separated and placed into a high temperature washer to begin the cleaning process. After washing, the direct part mark on each instrument is scanned, and the items are either placed in the proper storage area or sent in for maintenance or repair. At this point, the inventory

that was removed from the washer can be automatically compared to the starting inventory of medical instruments prior to kitting for instant identification of any missing items, ensuring that any instruments or medical supplies that were inadvertently left in a patient are promptly removed.

As instruments are selected to create a specific kit for a specific physician to perform a specific surgery, workers scan the 1D bar code label on the front of the kit as well as the direct part marks on all medical instruments as they are placed in the kit.

After the kit is created and placed in the autoclave for final sterilization, the 1D paper label on the front of the kit is scanned again, and the kit is delivered to the proper operating room. After the surgery, the process begins again.

As a result of the rich scanning functionality of the DS6707-DP:

- Equipment utilization is improved: The ability to track and trace these high-value assets helps ensure availability for other procedures.

- Costly delays in surgery start times and during surgery are significantly reduced: Visibility into the complete list of inventory in any kit allows physicians to verify that the right instruments are on-hand for surgery before the start of a procedure — including any special custom-requested equipment the surgeon may have requested.

- Patient safety is improved and hospital liability is reduced:

  - Critical equipment is available when and where it is needed, and any risk associated with misplaced items (such as sponges or clamps) that could jeopardize patient health is identified and addressed immediately.

  - A quick scan of the labels on the surgical kits entering and leaving the autoclave provides indisputable documentation on when and where instruments were sterilized. A well-designed cleaning and sterilization process with accurate asset tracking procedures for all direct part marked medical instruments ensures that inadvertent contamination and any ensuing infection or illness is prevented, and also provides a thorough, yet cost-effective audit trail for regulatory compliance.

- Healthcare worker productivity is improved: The need to complete paper forms and then enter the information into the computer is replaced with a few scans with the DS6707-DP. Healthcare workers have more time to devote to patient care. And data inaccuracies as well as incomplete and missing forms are eliminated.

Optimize asset management with real-time visibility

Scanning medical equipment and instruments also provides an up-to-the-minute audit trail of asset location as items move from room to room or floor to floor. Armed with real-time location information, hospital staff can locate needed items quickly and efficiently. Productivity and patient care are improved, as nurses and physicians spend less time searching for critical assets throughout the facility. And this real-time visibility improves asset availability and utilization rates — enabling hospitals to reduce their levels of safety stock and maintain a smaller number of supplies.

Since the DS6707-DP can scan virtually any kind of bar code of any size and density, a single solution can be used to track virtually all assets in the hospital environment — from wheelchairs and beds to surgical tools in the operating room, medical supplies and lab equipment. This application versatility significantly reduces the need to purchase and maintain separate scanning devices, providing a single cost-effective solution to address the time-sensitive asset management needs in the hospital.

Reduce errors and improve nurse productivity for enhanced patient care

Easy to use and optimized to support the challenging marks found on surgical instruments, the DS6707-DP automates asset tracking in the operating room and throughout the healthcare facility. Through automation, the possibility of errors inherent in manual procedures is virtually eliminated — improving the quality of patient care, reducing potential risk and liability, and increasing the confidence of healthcare workers. Free from the administrative burden of manual counts, paper forms and the need to physically search the facilities for assets, nurses can spend more time on direct patient care — enabling hospitals to keep quality of care high in the face of today's global nursing shortage. And with

broad versatility to support any bar code or mark used throughout the hospital, the DS6707-DP offers a single solution for all data capture and inventory applications, significantly reducing capital and operational costs.

For more information on how the multiple data capture options of the DS6707-DP can benefit your healthcare operations, please visit us on the Web at www.zebra.com/ds6707dp access our global directory at www.zebra.com/contact or contact your local Zebra authorized partner.

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1. Surgeon's tools left inside 1,500 patients a year; USAToday.com; January 16, 2003;
    http://www.usatoday.com/news/health/2003-01-16-surgical-tools_x.htm