BYTESCOUT

LIFE SAVING SOLUTIONS FOR YOUR BUSINESS

We face challenges every day: more and more data, numbers, images to be stored, organized, archived, searched, protected. Samples to be processed, lives to be saved, information to be accessed, stored, transmitted. Faster, bigger, better. Flawlessly.

CHALLENGES

There are still industries that are not using barcodes. Can you imagine what the world would be like if barcodes didn't exist today? Paper-based recording and manual processes simply can't suffice for growth, demand, progress or competition. Imagine how much would take a doctor to access a patient's file or to process samples. Or how much it will take to provide results in a lab processing 10000 – 100000 samples a day. This would make the difference between life and death. Or right from wrong.

In a before-and-after, quasi-experimental study conducted in an academic medical center that was implementing the bar-code there were assessed rates of errors in order transcription and medication administration on units before and after implementation of the bar-code. The study analyzed 14,041 medication administrations and reviewed 3082 order transcriptions. Observers noted 776 non timing errors in medication administration on units that did not use the bar-code (an 11.5% error rate) versus 495 such errors on units that did use it (a 6.8% error rate) — a 41.4% relative reduction in errors ($P<0.001$)

Algoma Public Health (APH) in Ontario and four First Nations (FN) communities in Alberta participated in a study that compared the recording of client immunization data (vaccine name, lot number, expiry date) using barcode scanning of vaccine vials vs. pre-existing methods of entering vaccine information into the systems. From July until November 2012, 628 (282 barcoded) vials for the APH study and 749 (408 barcoded) vials for the study in FN communities were processed. Barcode scanning led to significantly fewer immunization record errors than using drop-down menus (APH study: 0% vs. 1.7%) or typing in vaccine data (FN study: 0% vs. 5.6%).

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The Institute of Medicine (IOM) estimates that, on average, a hospitalized patient is subject to one medication administration error per day, and deems medication administration error a priority for patient safety intervention (Institute of Medicine. Preventing Medication Errors, Washington DC, The National Academies Press, 2007)

In hospitals, the medication administration stage accounts for 26% to 32% of adult patient medication errors and 4% to 60% of pediatric patient medication errors

Experts estimate that as many as 98,000 people die in any given year from medical errors that occur in hospitals. That's more than die from motor vehicle accidents, breast cancer, or AIDS--three causes that receive far more public attention.

SOLUTIONS: BARCODE GENERATOR SDK AND BARCODE READER SDK

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SAMPLE MANAGEMENT

- Barcode Generator SDK can be used to label laboratory samples, to make the processing workflow much more effective and to greatly reduce the chance of mismatching.

- Barcodes are used to generate Datamatrix barcodes for stickers on tubes in a lab. Datamatrix barcodes are the ones of the physically smallest square shaped barcodes so they work perfectly for physically small things.

- After putting barcodes on tubes these tubes are tracked in the lab environment using web camera and ByteScout Barcode Reader SDK that decodes Datamatrix barcodes from live videos and photos made by web camera. Sometimes labels with barcodes are damaged but ByteScout Barcode Reader SDK supports damaged, skewed and noisy images as input.