

Positive patient identification systems and products

vices began evaluating patient identification systems for general phlebotomy four years ago and now uses the Sunquest Collection Manager, says Yvonne Betts, laboratory business director. The laboratory turned to Sunquest because it was already using the vendor's LIS, and Collection Manager is an add-on module to the LIS.

"We had experience with bar-coding technology for identification in our point-of-care instrumentation," explains CentraCare's Angell. "For general phlebotomy, however, we would carry multiple patient labels or requisitions with us to compare to the demographic data on the patient wristband. At times, information was verbally conveyed from the phlebotomy dispatching area via phone or pager. As the result of the potential for error inherent in this system, we were seeing about a dozen errors or more per quarter."

Though the laboratory has not yet quite reached zero errors, Collection Manager itself has yet to make a mistake. "The errors that have occurred have been caused by the user—not the system," Angell says.

Laboratory Director Cindy Johnson says the system's speed is remarkable. "It generates faster turnaround time because it populates the orders coming from the hospital's order transmittal interface in real time," she explains.

CentraCare's physicians have praised the system's speed, Johnson says, adding that this real-time environment is a big switch from the dispatching, phone calls, and messages required previously.

The laboratory plans to extend the system to the local nursing homes it services, Angell says. "That's an area where we struggle with identifying patients. Their ability to communicate is one component, but any type of wristband identification is essentially nonexistent."

The all-wireless system has worked so well that it has drawn interest from many other parts of the health system, including the critical care and emergency departments.

"In our emergency trauma center, we train the staff who perform phlebotomy," explains Angell. "But they don't currently use this type of technology there, and we still see a certain level of patient and sample identification errors on that unit as a result."

Our Lady of the Lake Regional Medical Center adopted a patient identification system in 1999, says Nancy Luttrell, clinical nurse specialist and director of nursing informatics for the 750-bed community hospital in Baton Rouge, La.

"We were an early adopter," she says. "We partnered with Cerner in 1999 because we shared their vision of an integrated medical record."

Now the hospital relies on a Cerner suite of products, including the patient identification system for medication administration and specimen collection.

"What we've seen is an increase in the reporting of near misses with medication admin-



Johnson



Luttrell

<p>Part 1 of 9</p> <p>See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32</p>	<p>Cardinal Health (formerly Care Fusion) Rob Finizio robert.finizio@carefusion.com 12120 Sunset Hills Rd., third floor Reston, VA 20190 571-521-8937 www.cardinal.com/us/en/brands/carefusion/</p>
Name of positive patient ID system/product	CareFusion medication administration, specimen collection verification, transfusion verification
Components of positive patient ID system/product	bar-code-enabled medication administration, specimen collection, blood administration (also printers, page 32)
<p>Company is a reseller of this product(s)?</p> <ul style="list-style-type: none"> • For which vendors is company a reseller? <p>Company sells its products through distribution partners?</p> <ul style="list-style-type: none"> • With which vendors does company partner? 	<p>no</p> <p>—</p> <p>yes</p> <p>—</p>
<p>First ever/most recent installation of positive patient ID system/product</p> <p>Date of last major product release</p> <p>No. of contracts for U.S. sites where system/product is installed and operational</p> <p>No. of contracts for foreign sites where system/product is installed and operational</p> <p>No. of contracts signed since May 1, 2007</p> <p>No. of facilities where system/product is installed and operational</p>	<p>2002/2008</p> <p>spring 2008</p> <p>18 (medication administration), 36 (specimen collection verification), 16 (transfusion verification)</p> <p>0</p> <p>32</p> <p>63</p>
<p>Techniques to verify patient ID when creating a wristband on admission</p> <p>Techniques for patient ID prior to each intervention/specimen collection</p> <ul style="list-style-type: none"> • How RFID tag is affixed to patient • Approximate dimensions of RFID tag • Data fields on RFID tag or wristband 	<p>—</p> <p>ID card, one- and two-dimensional bar-code wristband, passive and active radio-frequency identification, manual entry of wristband ID No.</p> <p>—</p> <p>—</p> <p>any demographic information</p>
System functionality	general laboratory specimen collection, patient and medication matching prior to medication administration, patient and blood unit matching prior to blood transfusion, nursing data collection
<p>Techniques for specimen identification at the time of specimen collection</p> <p>Data elements encoded on specimen label</p>	<p>bar-code label printed centrally and added to tube, radio-frequency ID tag created centrally and added to tube, radio-frequency ID tag placed on tube in tube manufacturing process, bar-code label printed at bedside and applied to tube, peel-off label removed from wristband, radio-frequency ID tag created at bedside and applied to tube</p> <p>accession No., container ID, specimen type, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No., specimen collection requirements, tube type</p>
<p>Bedside technology for blood transfusion offered via positive patient ID system/product</p> <ul style="list-style-type: none"> • Symbology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units 	<p>verification that a physician order is on record for the transfusion, verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record</p> <p>two-dimensional, Codabar, ISBT 128, manual entry of bar code</p> <p>one- and two-dimensional bar code, radio-frequency ID, manual</p>
<p>Medication tracking offered via positive patient ID system/product</p> <ul style="list-style-type: none"> • Techniques used to read labels on medications 	<p>order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration</p> <p>one- and two-dimensional bar code, radio-frequency ID</p>
<p>Handheld workstations</p> <ul style="list-style-type: none"> • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on 	<p>3 x 5.5 in.</p> <p>11 oz.</p> <p>real-time infrared (802.11a, 802.11b, 802.11g)</p> <p>general-purpose PC, pocket PC, mobile tablet PC</p>
<p>Is system/product designed to be used with EKGs?</p> <p>Is system/product designed to be used with glucometers or other point-of-care testing devices?</p>	<p>no</p> <p>no</p>
<p>FDA 510(k) approval</p> <ul style="list-style-type: none"> • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval? 	<p>yes</p> <p>—</p> <p>—</p>
Hospital and laboratory information system interface(s)	Meditech, Cerner, Siemens, Misys, IDX, Mediware, McKesson, GE, Eclipsys, Sunquest, SCC Soft Computer, Wyndgate
<p>Cost</p> <ul style="list-style-type: none"> • General license fee per facility • Single handheld workstation • Information system interface 	<p>—</p> <p>—</p> <p>—</p>
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • transfusion verification: ability to use rapid infusion workflow to document and verify blood products in the operating room • specimen collection verification: allow laboratory and other locations to monitor the status of collections in real time • dispatcher or collector can assign and unassign collection lists to phlebotomists by unit, collector, or patient ID

Positive patient identification systems and products

Part 2 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	Cerner Bridge Medical Regan Baron regan.baron@cerner.com 2900 Rockcreek Parkway Kansas City, MO 64136 816-885-4273 www.cerner.com	Cerner Corp. Regan Baron regan.baron@cerner.com 2900 Rockcreek Parkway Kansas City, MO 64136 816-885-4273 www.cerner.com
Name of positive patient ID system/product	Cerner Bridge Medical	Cerner Millennium CareAdmin, CareMobile, Specimen Collection, CareAware for CareMobile
Components of positive patient ID system/product	software for positive ID of medications, specimen collections, blood transfusions; programming of IV smart pumps	software for positive ID of medications, specimen collections; programming of IV smart pumps
Company is a reseller of this product(s)? • For which vendors is company a reseller?	sell Cerner products and resell other vendors' products Honeywell, Motorola, Intermec, others	sell Cerner products and resell other vendors' products Honeywell, Motorola, Intermec, IBM, Dell, others
Company sells its products through distribution partners? • With which vendors does company partner?	no —	no —
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	1998/2008 April 2008 — — — 60	2000/2008 April 2007 — — — 41
Techniques to verify patient ID when creating a wristband on admission	wristband reseller: ID card with or without a photograph, bar code	wristband reseller: ID card with or without a photograph, bar code
Techniques for patient ID prior to each intervention/specimen collection	one- and two-dimensional bar-code wristband, passive and active radio-frequency identification, fingerprint	ID card, one- and two-dimensional bar-code wristband, fingerprint, passive and active radio-frequency identification
• How RFID tag is affixed to patient	wristband	wristband
• Approximate dimensions of RFID tag	—	—
• Data fields on RFID tag or wristband	encounter-specific No. (e.g., financial No.), can accommodate any request	encounter-specific No. (e.g., financial No.), can accommodate any request
System functionality	general laboratory specimen collection, patient and medication matching prior to medication administration, patient and blood unit matching prior to blood transfusion, IV smart pump programming	general laboratory specimen collection, patient and medication matching prior to medication administration, EKG reporting, IV smart pump programming
Techniques for specimen identification at the time of specimen collection	bar-code label printed at bedside and applied to tube	bar-code label printed centrally and added to tube, bar-code label printed at bedside and applied to tube
Data elements encoded on specimen label	accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No.	accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No.
Bedside technology for blood transfusion offered via positive patient ID system/product • Symbolology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units	verification that a physician order is on record for the transfusion, verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code	verification that a physician order is on record for the transfusion, verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code
Medication tracking offered via positive patient ID system/product • Techniques used to read labels on medications	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code
Handheld workstations • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on	—† —† real-time infrared (802.11a, 802.11b, 802.11g) general-purpose PC, pocket PC	—† —† real-time infrared (802.11a, 802.11b, 802.11g) general-purpose PC, pocket PC
Is system/product designed to be used with EKGs? Is system/product designed to be used with glucometers or other point-of-care testing devices?	no no	yes no
FDA 510(k) approval • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval?	yes no unnecessary	no no yes
Hospital and laboratory information system interface(s)	Sunquest, Cerner, Meditech, McKesson, Siemens, Pyxis, Eclipsys, A4, IDX, Medware, GE	no interfaces required (integrated with Millennium solutions)
Cost • General license fee per facility • Single handheld workstation • Information system interface	— — —	— — —
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • No. 1 KLAS-ranked vendor in medication administration specialty niche category for the last three of four years • integrated medication reconciliation process provides complete support for JCAHO mandates • Bridge IV smart pump auto-programming functionality is live and installed 	<ul style="list-style-type: none"> • can alert for lab/drug interactions real time at the point of scan • can use real-time checking on ad hoc or stat orders with electronic co-signature of those orders • ability to auto-program infusion devices and accept data from bedside devices for inclusion in the electronic health record

† software can be used on any full-screen device or on handheld device with pocket PC

† software can be used on any handheld device with pocket PC or with tablets or full-screen PCs

Positive patient identification systems and products

Part 3 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	DataRay Brent Scales brents@datarayusa.com 1141 S.E. Grand Blvd., Suite 107 Oklahoma City, OK 73129 800-477-5317 www.datarayusa.com	Endur ID Robert Chadwick bchadwick@endurid.com 360 Merrimack St., Bldg. 9 Lawrence, MA 01843 978-686-9700 www.endurid.com
Name of positive patient ID system/product	bar-code integration solution, DataRay Healthcare Advanced Printserver, DataRay MedMap	Endur ID
Components of positive patient ID system/product	intelligent print server, bar-code scanners, RFID wristbands (also printers/labels, page 32)	wristbands (also printer labels, page 32)
Company is a reseller of this product(s)? • For which vendors is company a reseller?	sell DataRay products and resell other vendors' products Zebra Technologies, Code Corp., Metrologic, Motorola, Honeywell, Intermec, CipherLab, PDC	sell Endur ID products and resell other vendors' products Bio-Optronics
Company sells its products through distribution partners? • With which vendors does company partner?	yes —	no —
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	1986/2008 December 2007 57 2 (Canada) 15 94	2003/2008 April 2008 32 0 5 23
Techniques to verify patient ID when creating a wristband on admission Techniques for patient ID prior to each intervention/specimen collection • How RFID tag is affixed to patient • Approximate dimensions of RFID tag • Data fields on RFID tag or wristband	bar code one- and two-dimensional bar-code wristband, passive radio-frequency identification wristband 2 x 1 in. patient account/admission No., medical record No., will accommodate hospital specifications	ID card with or without a photograph, face recognition, photograph on wristband, bar code one- and two-dimensional bar-code wristband — — —
System functionality	—	general laboratory specimen collection, patient and medication matching prior to medication administration, bedside point-of-care testing, patient and blood unit matching prior to blood transfusion
Techniques for specimen identification at the time of specimen collection Data elements encoded on specimen label	bar-code label printed centrally and added to tube, radio-frequency ID tag created centrally and added to tube, bar-code label printed at bedside and applied to tube, radio-frequency ID tag created at bedside and applied to tube —	bar-code label printed centrally and added to tube, bar-code label printed at bedside and applied to tube, peel-off label removed from wristband accession No., patient name, patient location, date, patient account/admission No., patient medical record No., other patient identifiers
Bedside technology for blood transfusion offered via positive patient ID system/product • Symbology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units	— two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code, radio-frequency ID	verification that a physician order is on record for the transfusion, verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code
Medication tracking offered via positive patient ID system/product • Techniques used to read labels on medications	— one- and two-dimensional bar code, radio-frequency ID	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code
Handheld workstations • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on	— — — —	n/a n/a n/a general-purpose PC, pocket PC
Is system/product designed to be used with EKGs? Is system/product designed to be used with glucometers or other point-of-care testing devices?	yes yes	uncertain yes
FDA 510(k) approval • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval?	no no uncertain	no no unnecessary
Hospital and laboratory information system interface(s)	Siemens, McKesson, Eclipsys, TDS, Cerner, Meditech, Misys, others	Meditech, McKesson, Siemens, Cerner
Cost • General license fee per facility • Single handheld workstation • Information system interface	— — —	— — —
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • DataRay PPID and bar-code integration solution includes the DataRay Advanced Printserver that provides plug-and-play thermal wristband and label printing on any hospital information system • offer a wide range of optional components to meet the specific requirements of DataRay's hospital and pharmacy customers • DataRay Integration Services assists health care organizations with project planning, on-site implementation, end user training, bar-code workaround prevention, and workflow process integration 	<ul style="list-style-type: none"> • flexible and user-configurable for a variety of facility types • wristband media are designed to be easy to produce and easy to use—carry a host of patient-centric information and require no assembly • eliminates the need for additional color-coded alerts and warnings by incorporating the information into the primary identification wristbands

Positive patient identification systems and products

Part 4 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	General Data Company Ralph Moher moher@general-data.com 4354 Ferguson Drive Cincinnati, OH 45245 800-733-5252 www.general-data.com/healthcare	General Data Company Ralph Moher moher@general-data.com 4354 Ferguson Drive Cincinnati, OH 45245 800-733-5252 www.general-data.com/healthcare
Name of positive patient ID system/product	ID/Positive laboratory specimen identification and tracking	Personal ID patient identification wristbands
Components of positive patient ID system/product	cassette markers, cassettes (also printers/labels, page 32)	wristbands, middleware (also printers/labels, page 32)
Company is a reseller of this product(s)? • For which vendors is company a reseller?	sell General Data products and resell other vendors' products —	sell General Data products and resell other vendors' products —
Company sells its products through distribution partners? • With which vendors does company partner?	yes TimeMed Labeling Systems	yes TimeMed Labeling Systems
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	2004/2008 April 2008 188 — 30 220	2004/2008 October 2007 117 — 15 142
Techniques to verify patient ID when creating a wristband on admission	bar code, patient photograph	bar code, patient photograph
Techniques for patient ID prior to each intervention/specimen collection	one- and two-dimensional bar-code wristband	one- and two-dimensional bar-code wristband
• How RFID tag is affixed to patient	—	—
• Approximate dimensions of RFID tag	—	—
• Data fields on RFID tag or wristband	—	—
System functionality	—	—
Techniques for specimen identification at the time of specimen collection	—	—
Data elements encoded on specimen label	accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No., any data specified by the lab	—
Bedside technology for blood transfusion offered via positive patient ID system/product	—	—
• Symbology that system/product accepts for bedside transfusion	—	—
• Techniques for reading labels on blood units	—	—
Medication tracking offered via positive patient ID system/product	—	—
• Techniques used to read labels on medications	—	—
Handheld workstations	—	—
• Approximate size of handheld/point-of-care workstation	—	—
• Approximate weight of handheld/point-of-care workstation	—	—
• How handheld workstation communicates with host LIS	—	—
• Systems that ID-matching software runs on	—	—
Is system/product designed to be used with EKGs?	no	—
Is system/product designed to be used with glucometers or other point-of-care testing devices?	no	—
FDA 510(k) approval	—	—
• Is positive patient ID system/product FDA 510(k) approved?	no	no
• Have applied for, but not yet received, FDA 510(k) approval?	—	—
• Intend to apply for FDA 510(k) approval?	unnecessary	unnecessary
Hospital and laboratory information system interface(s)	Cerner, McKesson, Misys, Impac	Cerner, McKesson, Misys
Cost	—	—
• General license fee per facility	—	—
• Single handheld workstation	—	—
• Information system interface	—	—
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • reliable, permanent, and cost-effective bar-code identification of tissue cassettes and slides • on-demand cassette and slide production streamlines workflow and eliminates mismatching 	<ul style="list-style-type: none"> • can integrate bar-code wristband printing into existing hospital information system without modifying HIS • wristbands are extremely durable and provide excellent scanning of bar codes • can use any thermal printer from any manufacturer

Positive patient identification systems and products

Part 5 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	Intellidot Corp. Michael Donner mdonner@intellidotcorp.com 13520 Evening Creek Drive North, #400 San Diego, CA 92128 877-368-3687 www.intellidotcorp.com	Korchek Technologies, LLC Matt Lund matt@korchek.com 115 Technology Drive, Suite B206 Trumbull, CT 06611 877-567-2435 www.korchek.com
Name of positive patient ID system/product	CAREt	CareChek
Components of positive patient ID system/product	handheld device for medication administration, laboratory specimen collection, vital sign collection, others	workstations, servers, others
Company is a reseller of this product(s)? • For which vendors is company a reseller?	no —	sell Korchek products and resell other vendor's products Digi-Trax
Company sells its products through distribution partners? • With which vendors does company partner?	yes —	yes Digi-Trax
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	2002/2008 April 2008 — — — 34	2004/2008 2008 1 0 1 0
Techniques to verify patient ID when creating a wristband on admission Techniques for patient ID prior to each intervention/specimen collection • How RFID tag is affixed to patient • Approximate dimensions of RFID tag • Data fields on RFID tag or wristband	bar code one- and two-dimensional bar-code wristband — — —	bar code one- and two-dimensional bar-code wristband — — —
System functionality	general laboratory specimen collection, patient and medication matching prior to medication administration, patient and blood unit matching prior to blood transfusion, others	general laboratory specimen collection, patient and medication matching prior to medication administration, patient and blood unit matching prior to blood transfusion, others
Techniques for specimen identification at the time of specimen collection Data elements encoded on specimen label	bar-code label printed at bedside and applied to tube accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No., order type, container/tube description, patient date of birth, time of collection	bar-code label printed centrally and added to tube, bar-code label placed on tube in tube manufacturing process, bar-code label printed at bedside and applied to tube, peel-off label removed from wristband accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No., user defined
Bedside technology for blood transfusion offered via positive patient ID system/product • Symbology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units	verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code	verification that a physician order is on record for the transfusion, verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one-dimensional bar code
Medication tracking offered via positive patient ID system/product • Techniques used to read labels on medications	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code
Handheld workstations • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on	7 x 2.75 x 2.75 in. 8.7 oz. real time (using 802.11b, 802.11g) via Intellidot servers interfaced to host LIS CAREt handheld	5 x 3 x 1.5 in. 12 oz. intermittent docking (802.11b, 802.11g) general-purpose PC, pocket PC, Windows Mobile 5.0
Is system/product designed to be used with EKGs? Is system/product designed to be used with glucometers or other point-of-care testing devices?	no no	no no
FDA 510(k) approval • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval?	— yes yes	yes — —
Hospital and laboratory information system interface(s)	Meditech, Cerner, Epic, McKesson, Eclipsys	—
Cost • General license fee per facility • Single handheld workstation • Information system interface	— — —	— — included
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • can link to any hospital information system • 12+-hour battery life • easy to use—learn in one shift; clinical implementation in four months 	<ul style="list-style-type: none"> • unique verification for specimen collection allows use of any specimen labels • wireless or hard-wired configuration

Positive patient identification systems and products

Part 6 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	Lattice Pat Heniff pat.heniff@lattice.com 1751 Naperville Rd. Wheaton, IL 60187 630-949-3250 www.lattice.com	McKesson Kerry Bruning kerry.bruning@mckesson.com 5995 Windward Parkway Alpharetta, GA 30005 515-992-3186 www.mckesson.com
Name of positive patient ID system/product	MediCopia	Horizon Admin-Rx
Components of positive patient ID system/product	handheld computers, bedside specimen collection software (also printers/labels, page 32)	software to support positive patient ID and five rights of medication administration
Company is a reseller of this product(s)? • For which vendors is company a reseller?	no —	sell McKesson products and resell other vendor's products Symbol Technologies
Company sells its products through distribution partners? • With which vendors does company partner?	no —	no —
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	1996/2008 March 2008 61 0 22 53	1988/2008 March 2008 127 (an additional 21 in implementation phase) 2 (Canada) 17 127
Techniques to verify patient ID when creating a wristband on admission	bar code	bar code
Techniques for patient ID prior to each intervention/specimen collection	ID card, one- and two-dimensional bar-code wristband, passive radio-frequency identification	one- and two-dimensional bar-code wristband
• How RFID tag is affixed to patient	—	—
• Approximate dimensions of RFID tag	—	—
• Data fields on RFID tag or wristband	—	—
System functionality	general laboratory specimen collection, patient and blood unit matching prior to blood transfusion	general laboratory specimen collection, patient and medication matching prior to medication administration, bedside point-of-care testing
Techniques for specimen identification at the time of specimen collection	bar-code label printed at bedside and applied to tube	—
Data elements encoded on specimen label	accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No.	—
Bedside technology for blood transfusion offered via positive patient ID system/product • Symbology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units	verification that a physician order is on record for the transfusion, verification of informed patient consent, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code, radio-frequency identification	— — —
Medication tracking offered via positive patient ID system/product • Techniques used to read labels on medications	— —	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code
Handheld workstations • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on	6 x 3 x 1.5 in. 12 oz. — general-purpose PC, pocket PC	6 x 3.1 x 1.5 in. 12 oz. protocol, 802.11b general-purpose PC, pocket PC
Is system/product designed to be used with EKGs? Is system/product designed to be used with glucometers or other point-of-care testing devices?	yes no	no no
FDA 510(k) approval • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval?	no yes —	no — unnecessary
Hospital and laboratory information system interface(s)	Sunquest, GE, Cerner, Meditech, McKesson, SCC Soft Computer, homegrown LIS	integrated with McKesson Horizon Clinicals clinical information system
Cost • General license fee per facility • Single handheld workstation • Information system interface	based on number of users and size of facility based on number of users and size of facility based on number of users and size of facility	size dependent ~ \$1,700/unit integrated with clinical information system
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • prints specimen labels for drawn specimens only • operates in a wireless and batch environment • easy to use 	<ul style="list-style-type: none"> • complete integration with enterprise clinical information system • continuity of information flow from CPOE to pharmacy to administration • depth and history of experience

Positive patient identification systems and products

Part 7 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	McKesson Joseph R. Stabile joseph.stabile@mckesson.com 5995 Windward Parkway Alpharetta, GA 30005 404-338-4363 www.mckesson.com/laboratory	Precision Dynamics Corp. Adrienne Lamm info@pdcorp.com 13880 Del Sur St. San Fernando, CA 91340 818-897-1111 www.pdcorp.com/healthcare
Name of positive patient ID system/product	Horizon MobileCare Phlebotomy	bar-code wristbands
Components of positive patient ID system/product	software to support positive patient ID for specimen collection, handheld devices, portable bar-code printers	CompuBand, ScanBand Sentry bar code, LabelBand Precision infant thermal bands, Precision bar-code tags (also printer labels, page 32)
Company is a reseller of this product(s)? • For which vendors is company a reseller?	sell McKesson products and resell other vendors' products Symbol Technologies, Zebra Technologies	no —
Company sells its products through distribution partners? • With which vendors does company partner?	no —	yes Cardinal, Owens & Minor
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	1988/2008 April 2008 20 0 6 29	1984/2007 2007 — — — —
Techniques to verify patient ID when creating a wristband on admission Techniques for patient ID prior to each intervention/specimen collection • How RFID tag is affixed to patient • Approximate dimensions of RFID tag • Data fields on RFID tag or wristband	bar code one-dimensional bar-code wristband — — —	ID card without a photograph, bar code one- and two-dimensional bar-code wristband, passive radio-frequency identification wristband — —
System functionality	general laboratory specimen collection, patient and medication matching prior to medication administration	general laboratory specimen collection, patient and medication matching prior to medication administration, bedside point-of-care testing, patient and blood unit matching prior to blood transfusion
Techniques for specimen identification at the time of specimen collection Data elements encoded on specimen label	bar-code label printed centrally and added to tube, bar-code label printed at bedside and applied to tube accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered, patient account/admission No., patient medical record No., others	bar-code label printed centrally and added to tube, bar-code label printed at bedside and applied to tube, peel-off label removed from wristband —
Bedside technology for blood transfusion offered via positive patient ID system/product • Symbology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units	— — —	— two-dimensional, Codabar, ISBT 128 one-dimensional bar code
Medication tracking offered via positive patient ID system/product • Techniques used to read labels on medications	order for medication, history of allergies, route of administration, intended recipient, correct dosage, rate of administration one- and two-dimensional bar code	— one- and two-dimensional bar code
Handheld workstations • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on	1.3 x 3.1 x 5.7 in. 10.8 oz. real-time radio frequency (802.11b, 802.11g) pocket PC	— — — —
Is system/product designed to be used with EKGs? Is system/product designed to be used with glucometers or other point-of-care testing devices?	no no	uncertain yes
FDA 510(k) approval • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval?	no no unnecessary	— — —
Hospital and laboratory information system interface(s)	add-on module to McKesson Horizon Lab	Meditech, Cerner, McKesson
Cost • General license fee per facility • Single handheld workstation • Information system interface	size dependent ~ \$1,700/unit integrated with laboratory information system	— — —
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • co-exists with McKesson's medication administration and vitals/intake and output on the same handheld device • integrated with Horizon Lab • supports nurse-centric and lab-centric collection models with support for preprinted and point-of-care-printed specimen labels 	<ul style="list-style-type: none"> • crisp, clear, human readable text; compliant bar codes (linear and 2D) that can be scanned easily; photo ID and graphics for enhanced patient ID • meets the requirements of JCAHO for positive patient ID, HIPAA for protection of patient privacy, and AHA to reduce the risk of lost or transferred data • pioneering in patient safety through positive identification

Positive patient identification systems and products

Part 8 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	Siemens Medical Theresa McGillvray-Dodd theresa.mcgillvray-dodd@siemens.com 18724 66th Ave. N.E. Kenmore, WA 98028 425-487-0179	Sunquest Information Systems Sylvia Rothrock sylvia.rothrock@sunquestinfo.com 250 S. Williams Blvd. Tucson, AZ 85711 877-239-6337 www.sunquestinfo.com
Name of positive patient ID system/product	Patient Identification Check (PIK)	Sunquest Collection Manager
Components of positive patient ID system/product	wristbands, handheld, bar coding	handhelds, laptops, computer on wheels (also printers/labels, page 32)
Company is a reseller of this product(s)? • For which vendors is company a reseller?	yes Zebra Technologies, Motorola	no —
Company sells its products through distribution partners? • With which vendors does company partner?	no —	no —
First ever/most recent installation of positive patient ID system/product Date of last major product release No. of contracts for U.S. sites where system/product is installed and operational No. of contracts for foreign sites where system/product is installed and operational No. of contracts signed since May 1, 2007 No. of facilities where system/product is installed and operational	2005/2007 2007 7 — 1 7	2004/2008 May 2007 76 0 7 ~90
Techniques to verify patient ID when creating a wristband on admission	bar code	—
Techniques for patient ID prior to each intervention/specimen collection	one- and two-dimensional bar-code wristband	one- and two-dimensional bar-code wristband
• How RFID tag is affixed to patient	—	—
• Approximate dimensions of RFID tag	—	—
• Data fields on RFID tag or wristband	—	—
System functionality	general laboratory specimen collection, patient and medication matching prior to medication administration, bedside point-of-care testing, patient and blood unit matching prior to blood transfusion	general laboratory specimen collection
Techniques for specimen identification at the time of specimen collection	bar-code label printed at bedside and applied to tube	bar-code label printed centrally and added to tube, bar-code label printed at bedside and applied to tube
Data elements encoded on specimen label	accession No., container ID, specimen type, patient name, collector ID, patient location, date, tests ordered	accession No., container ID, specimen type, patient name, patient location, date, tests ordered, patient account/admission No., patient medical record No.
Bedside technology for blood transfusion offered via positive patient ID system/product • Symbology that system/product accepts for bedside transfusion • Techniques for reading labels on blood units	verification that a physician order is on record for the transfusion, detection of potential mistransfusion, documentation of transfusion data, documentation of final transfusion record two-dimensional, Codabar, ISBT 128 one- and two-dimensional bar code	— — —
Medication tracking offered via positive patient ID system/product • Techniques used to read labels on medications	order for medication, history of allergies, intended recipient, correct dosage two-dimensional bar code	— —
Handheld workstations • Approximate size of handheld/point-of-care workstation • Approximate weight of handheld/point-of-care workstation • How handheld workstation communicates with host LIS • Systems that ID-matching software runs on	8 in. 4 oz. protocol, 802.11a, 802.11b, 802.11g general-purpose PC, Windows CE, Windows Mobile 5.0	1.3 x 3.1 x 5.7 in. 10.5 oz. intermittent docking (802.11a, 802.11b, 802.11g) general-purpose PC, Windows CE 3.0, Windows CE 4.0
Is system/product designed to be used with EKGs? Is system/product designed to be used with glucometers or other point-of-care testing devices?	— no	no no
FDA 510(k) approval • Is positive patient ID system/product FDA 510(k) approved? • Have applied for, but not yet received, FDA 510(k) approval? • Intend to apply for FDA 510(k) approval?	yes — —	no no unnecessary
Hospital and laboratory information system interface(s)	Siemens, Cerner, Sunquest, Meditech	Sunquest
Cost • General license fee per facility • Single handheld workstation • Information system interface	— — —	— — —
Distinguishing features (supplied by vendor)	<ul style="list-style-type: none"> • label alignment guide helps ensure proper alignment of bar code for instrument readability • container verification helps ensure sample is collected in correct container • intuitive user interface with four easy steps 	<ul style="list-style-type: none"> • technology is being used throughout the country by laboratory and nursing-based phlebotomy teams in acute and ambulatory settings • clients have reduced specimen collection errors to zero • simple user interface; device mimics Sunquest Laboratory functionality so existing Sunquest users can be trained quickly and effectively

Positive patient identification systems and products

Part 9 of 9 See accompanying article, page 16 See survey of printers/labels for positive patient ID, page 32	The St. John Companies customer service cs@stjohninc.com 25167 Anza Drive Valencia, CA 91355 800-435-4242 www.patientidexpert.com	Ultra-Scan Corp. Michael Amalfi mamalfi@ultra-scan.com 4240 Ridge Lea Rd. Amherst, NY 14226 716-832-6269 www.ultra-scan.com
Name of positive patient ID system/product	Bio-Logics	TouchLink Biometric EMPI
Components of positive patient ID system/product	wristbands (also printer labels, page 32)	biometric fingerprint reader, digital camera, wristbands (also printers/labels, page 32)
Company is a reseller of this product(s)? • For which vendors is company a reseller?	sell St. John products and resell other vendors' products Avery Dennison, TabBand	no —
Company sells its products through distribution partners? • With which vendors does company partner?	no —	no —
First ever/most recent installation of positive patient ID system/product	1973/—	2004/in progress
Date of last major product release	—	June 2007
No. of contracts for U.S. sites where system/product is installed and operational	654	3
No. of contracts for foreign sites where system/product is installed and operational	0	0
No. of contracts signed since May 1, 2007	—	1
No. of facilities where system/product is installed and operational	654	6
Techniques to verify patient ID when creating a wristband on admission	ID card with and without a photograph, bar code	fingerprint, patient photo on wristband, bar code
Techniques for patient ID prior to each intervention/specimen collection	ID card, one- and two-dimensional bar-code wristband	one-dimensional bar-code wristband
• How RFID tag is affixed to patient	—	—
• Approximate dimensions of RFID tag	—	—
• Data fields on RFID tag or wristband	—	—
System functionality	general laboratory specimen collection, patient and medication matching prior to medication administration, patient and blood unit matching prior to blood transfusion	—
Techniques for specimen identification at the time of specimen collection	bar-code label printed at bedside and applied to tube	—
Data elements encoded on specimen label	—	—
Bedside technology for blood transfusion offered via positive patient ID system/product	—	—
• Symbology that system/product accepts for bedside transfusion	—	—
• Techniques for reading labels on blood units	—	—
Medication tracking offered via positive patient ID system/product	—	—
• Techniques used to read labels on medications	—	—
Handheld workstations		
• Approximate size of handheld/point-of-care workstation	—	—
• Approximate weight of handheld/point-of-care workstation	—	—
• How handheld workstation communicates with host LIS	—	—
• Systems that ID-matching software runs on	—	general-purpose PC, pocket PC, palm handheld, Linux, Windows Mobile 5.0
Is system/product designed to be used with EKGs?	—	no
Is system/product designed to be used with glucometers or other point-of-care testing devices?	—	no
FDA 510(k) approval		
• Is positive patient ID system/product FDA 510(k) approved?	—	no
• Have applied for, but not yet received, FDA 510(k) approval?	—	no
• Intend to apply for FDA 510(k) approval?	—	unnecessary
Hospital and laboratory information system interface(s)	—	Siemens, Meditech
Cost		
• General license fee per facility	—	based on No. of patients in ID database
• Single handheld workstation	—	—
• Information system interface	—	—
Distinguishing features (supplied by vendor)	distinguishing features not provided	<ul style="list-style-type: none"> • accurate real-world patient identification technology using state-of-the-art ultrasonic imaging for reading patient fingerprints • biometric patient identification system can be integrated into an existing EMR without the cost or oversight associated with involving the EMR vendor • designed to reduce fraud, speed patient registration, and improve overall patient experience

Printers/labels for positive patient identification

Company contact information	Product(s) for positive patient ID	Year company entered market	Percentage of customer base in U.S. Outside U.S.	Printer reseller? Brand name of printers	Labels reseller? Brand name of labels	Distinguishing characteristics of printers and labels
AMT Datasouth Kim Stovall, kstovall@amtdatasouth.com 803 Camarillo Springs Rd., Suite D Camarillo, CA 93012 800-215-9192 www.amtdatasouth.com	printers and labels	1990	100% 0	no Fastmark	yes from various vendors	printers: intelligent printers that are compatible with all software platforms labels: can provide any size and variety of label materials
Cardinal Health (formerly Care Fusion) Robert Finizio, robert.finizio@cardinalhealth.com 12120 Sunset Hills Rd., Third Floor Reston, VA 20190 571-521-8937 www.cardinal.com/us/en/brands/carefusion/	printers	2003	—	yes Zebra QL 220, 320, and O'Neil 2t	—	printers: durable and lightweight
DataRay Brent Scales, brent@datarayusa.com 1141 S.E. Grand Blvd., Suite 107 Oklahoma City, OK 73129 800-477-5317 www.datarayusa.com	printers and labels	1986	97% 3%	yes Zebra Technologies	yes Zebra Technologies (also sell labels for DataRay Foam Newborn & Premie Bands)	printers: designed specifically for bar coding; long-lasting, durable bar codes; cost efficient and reliable labels: antimicrobial coating to resist infection-causing bacteria (including MRSA); direct thermal polypropylene media produce lasting, durable bar codes with exceptional readability
Endur ID Robert Chadwick, bchadwick@endurid.com 360 Merrimack St., Bldg. 9 Lawrence, MA 01843 978-686-9700 www.endurid.com	labels	2003	95% 5%	—	no Endur ID	labels: waterproof; no assembly; produced using standard desktop laser printers
General Data Company Ralph Moher, moher@general-data.com 4354 Ferguson Drive Cincinnati, OH 45245 800-733-5252 www.general-data.com/healthcare	printers and labels	2004	90% 10%	yes Datamax, Sato, Citizen, Zebra, Intermec, Cognitive Solutions	no StainerShield	labels: high-resolution print surface; hypoallergenic; withstand solvents, stains, and reagents
LaserBand info@laserband.com 120 S. Central Ave., Suite 450 St. Louis, MO 63105 800-238-0870 www.laserband.com	labels	1997	75% 25%	—	no LaserBand Integra	labels: self-laminating wristbands (laser and/or thermal print); direct printing
Lattice Pat Heniff, pat.heniff@lattice.com 1751 S. Naperville Rd. Wheaton, IL 60187 630-949-3250 www.lattice.com	printers and labels	1996	100% 0	yes Zebra Technologies	yes confidential	printers: small footprint; portable and durable labels: provide excellent background for printing contrast; adhesive is the best for refrigeration use
Precision Dynamics Corp. Adrienne Lamm, info@pdcorp.com 13880 Del Sur St. San Fernando, CA 91340 818-897-1111 www.pdcorp.com/healthcare	labels	—	—	—	no DataMate	distinguishing characteristics not provided
Sunquest Information Systems Sylvia Rothrock, sylvia.rothrock@sunquestinfo.com 250 S. Williams Blvd. Tucson, AZ 85711 877-239-6337 www.sunquestinfo.com	printers and labels	2004	100% 0	yes Zebra QL 220+, Printek MTP 300, Cognitive Code Ranger	yes Zebra, Printek, Cognitive Solutions	distinguishing characteristics not provided
The St. John Companies customer service, cs@stjohninc.com 25167 Anza Drive Valencia, CA 91355 800-435-4242 www.patientexpert.com	labels	1965	99% 1%	—	no St. John/Conf-ID-ent	distinguishing characteristics not provided
Zebra Technologies Corp. Cristina DeMartini, cdemartini@zebra.com 333 Corporate Woods Parkway Vernon Hills, IL 60061-3109 800-423-0442 www.zebra.com	printers and labels	1985	46% 54%	no Zebra (company markets its printers through authorized resellers)	no Zebra (company markets its labels through authorized resellers)	printers: reliable and rugged; meet mobile, desktop, high-performance industrial, and card needs; included on the list of approved output devices with the leading health care information technology systems labels: wide selection of stocked labels for unit dose, specimen, or blood labeling; depending on the application, offer moisture, alcohol, Xylene, and other resistance; meet adhesive safety standards to apply directly onto blood or IV bags; withstand refrigeration, freezing, or high temperatures; glove compatible; wide selection of wristbanding options; adhesive, clip, and foam bands