A Single Source of Truth
Connecting Devices to the Electronic Medical Record

Connecting medical devices to the electronic medical record (EMR) is an important next step for healthcare organizations as information technology adoption prevails. Healthcare organizations must leverage clinical information from both the EMR and devices in order to make informed decisions. This scenario has created an environment in which devices are often “too smart” or “too dumb.” Devices that are too smart come with software and functionality that duplicates work and confuses the source of information truth and the end user. Devices that are too dumb lack the ability to share information in the correct context of care.

Global Device Connectivity
To help hospitals address this knowledge gap between devices and the EMR, Cerner created the CareAware® connectivity architecture. CareAware connects medical devices to the clinical record, infusing them with the appropriate knowledge of the care process. This connectivity architecture places the EMR at the center of all information created and stored on the patient to create a single source of truth within the EMR. With CareAware, healthcare organizations can:

- Infuse devices with the appropriate knowledge of the care process
- Support clinician workflow by connecting medical devices to the patient record, creating a single source of truth within the EMR
- Manage devices across the enterprise organization with a flexible, scalable, available solution

Optimize Your Technology Investment
CareAware connects devices to the EMR through a unique combination of hardware and software solutions. Built on the most widely accepted messaging framework, the Enterprise Messaging System (EMS), Cerner designed CareAware to meet healthcare organizations’ most stringent demands.

Key Benefits
Clinicians and Information Technology leaders will achieve benefits from CareAware, including:

- Reduced interface implementation and maintenance costs
- Elimination of costly gateways that slow the transfer of data
- Consolidation of devices and systems for streamlined management and maintenance
- Increased time to provide direct patient care — less time spent charting values
- Reduction in transcription errors as data is available real-time

Cerner Millennium® organizations can optimize their technology investment, while non-Cerner clients can interface CareAware with their existing HCIT system.

Key Architectural Differences
Much like a USB port that quickly and easily connects peripheral devices to a computer, the CareAware iBus enables plug-and-play connectivity between devices and the EMR. The CareAware iBus is Cerner’s USB for healthcare.

The CareAware iBus ensures healthcare providers can connect medical devices to the EMR in a way that supports clinical workflow. Departments that will benefit from CareAware connectivity include:

- Intensive care units, including NICU and PICU
- Surgery and anesthesia
- Emergency
- Medical-surgical and step-down units
- Laboratory

Solution at a Glance
The CareAware connectivity architecture provides healthcare organizations with:

- Plug-and-play connectivity
- True unification of the EMR with medical devices
- The ability to manage medical devices throughout the organization
Both legacy and emerging medical devices connect to better use a healthcare organizations past and future investments.

In addition to the CareAware iBus, the CareAware architecture contains unique, flexible features and functions to better connect and manage medical devices. These include the:

- **CareAware Connectivity Engine (CE)**, a component of the CareAware iBus and resides on the device itself, acting as a wired or wireless communicator to assist with plug-and-play connectivity.
- **CareAware Device Lifecycle** sends “device heartbeats” to the CareAware iBus, verifying device status and managing a list of currently connected devices.
- **CareAware iCommand™** was developed to centralize device management by providing content, control and real-time status of all devices on the network. iCommand works seamlessly with the CareAware iBus leveraging real-time data to understand the status of medical devices and ensure data is transferred quickly and accurately to the electronic medical record.

**Transforming Healthcare**

Industry experts recognize the knowledge gap between devices and patient information. Manual data transcription errors and workflow inefficiencies that arise from the separation of the EMR and medical devices can prevent healthcare organizations from realizing the full benefits of automation, such as:

- Consolidated systems management and maintenance
- Increased data accuracy and completeness
- Improved decision making at the point-of-care
- Enhanced accessibility & organization of device and patient information

Connectivity among devices and information systems must be easy for healthcare organizations to implement and use. Likewise, it must be flexible to meet future connectivity demands and platforms. The technology behind CareAware will change how healthcare organizations deploy, use and manage devices. Using the CareAware framework, providers will be able to connect to devices in a way that truly supports the care processes. Whether your care process is a medication workflow or remote monitoring of patients and devices, the CareAware architecture enables you to automate it.

For more information about the CareAware global device connectivity architecture, please call 866.221.8877 or visit www.cerner.com/careaware.

Certification

The Cerner Certification Program for medical device manufacturers incorporates device specifications into the CareAware architecture. Devices go through a thorough testing process. Benefits of using a Cerner Certified device include:

- Optimization of data exchange through the CareAware iBus
- Better management of device upgrades and maintenance from a single location
- Inclusion in the CareAware Device Manager library

CareAware iBus™ has received 510(k) clearance from the FDA and is available for sale within the United States.