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Executive Insight:
Now is the Time for Interoperability

With the government call for the nation's healthcare providers to adopt electronic health records (EHRs) by 2014, another development is likely to permanently change the medical device industry—that of widespread interoperability.

For EHRs to truly be effective and accomplish the goals of improved care, coordination and reduced medical errors and duplicative care, they must be interoperable. Interoperability across systems enables distinct health information systems to connect and communicate with each other to share patient information and link the healthcare system's disconnected "islands of data." Device vendors and healthcare providers that embrace this type of connectivity will be positioned to thrive and be at the forefront of providing better, safer and more cost-effective patient care.

Some medical device suppliers are already designing and manufacturing interoperable systems that seamlessly interact with hospital networks, devices and other technology from multiple vendors. Other device companies don't want to give up control of the integration process of their own systems, sacrificing long-term growth in exchange for short-term revenue.

Meanwhile, a number of healthcare providers have been resistant to large-scale interoperability. Some hospitals have expressed uneasiness about sharing patient records with other institutions due to privacy concerns, and worry that the seamless transfer of health records could facilitate patients switching to competing providers.

These concerns are legitimate, but don't take into account the current capabilities and future benefits of interoperability. For example, with proper data encryption and other security protocols, sharing electronic information can be more secure than physically transferring medical records. And patients whose providers share information can avoid duplicative tests and procedures, driving costs out of the healthcare system and enhancing the quality of care.

Interoperable technology can also positively impact patient safety by providing closed-loop control of medication delivery. For example, when a clinician orders medication for a patient, the patient's drug information is transferred electronically from the network to a medical device such as a smart pump. The infusion pump then uses a set of barcodes on a patient's wristband, the intravenous bag and the pump to pull data from the EHR and confirm the five "rights"—right medication, right dose, right patient, right time and right route of administration—before administering the medication. The patient's EHR can then be automatically updated with the new medication history data.

Even before the government's push for EHR implementation, some technically-savvy healthcare systems and institutions had already started adopting EHRs and linking them with other technologies—taking advantage of the benefits of interoperability.

Demand for interoperable devices will increase, and forward-thinking device makers will grow with it. Other suppliers will eventually have to catch up, as hospitals of every size and caliber focus on implementing EHRs and carrying out related upgrades to their health information technology infrastructure.

There's no doubt that interoperability will require many device makers to evolve their business models, rethinking how they design and sell products. In no time, interoperable medical devices that effortlessly exchange information will be expected by the industry and necessary to drive improvements in care, cost and safety. The sooner the entire device industry gets on board with interoperability, the quicker tomorrow's new products can be brought to market and implemented within technically sophisticated hospitals of the future.