

Barriers to Medical Device Integration: CNO Survey Results

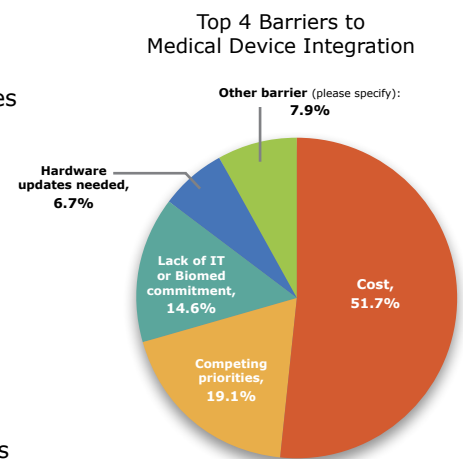


Executive Summary

In December, 2014, Iatric Systems surveyed more than 4,000 hospital Chief Nursing Officers (CNOs) to identify barriers to Medical Device Integration (MDI). MDI is the exchange of patient data from bedside devices — vital sign monitors, smart pumps, ventilators, etc. — to Electronic Health Records (EHRs). Medical device integration is sometimes referred to as medical device connectivity.

Despite the nationwide push for Meaningful Use and interoperability, MDI remains elusive for many hospitals today. Yet without it, hospitals risk documentation errors, delays in treatment, and even adverse events. According to survey results, 57 percent of CNOs reported they currently do not interface any medical devices to their EHR. And of the 43 percent that do, the vast majority send data to their EHRs primarily from vital sign monitors.

So, what are the barriers to MDI? Why aren't hospitals already connecting all of their medical devices with their EHRs? Survey results show the number one barrier is cost, indicated by 52 percent of responding CNOs. To find out how other barriers ranked, refer to the pie chart at right, and read the Survey Questions and Answers section below (question #4).



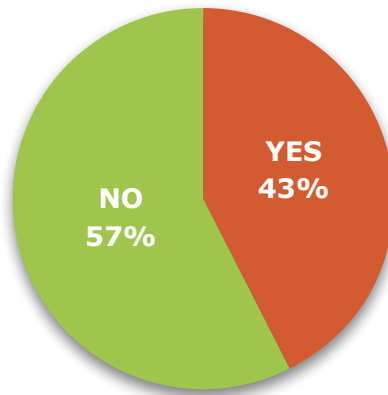
CNOs surveyed also identified reducing errors and adverse events as their top goal in connecting medical devices to their EHRs. The Association for Advancement of Medical Instrumentation (AAMI) reports that between January 1, 2005, and December 31, 2009, more than 56,000 adverse events and 710 deaths associated with infusion pump devices were reported to the FDA.¹ Smart pumps — and smart pump integration with EHRs — offer huge leaps forward in patient safety. But according to KLAS research, as of July 2013, only nine organizations are live with smart pump EHR integration.² Despite the fact that smart pumps are interfaced to EHRs at so few hospitals today, nearly half of the responding CNOs (44 percent) said smart pumps would be their number one choice if they could integrate just one medical device type with their hospitals' EHR.

Fortunately, the outlook for the future remains positive. Decreasing adverse events and increasing staff productivity remain high priorities, and the number of hospitals connecting medical devices to their EHRs is on the rise. All signs indicate medical device connectivity will continue to accelerate, despite the barriers.

Survey Questions and Answers

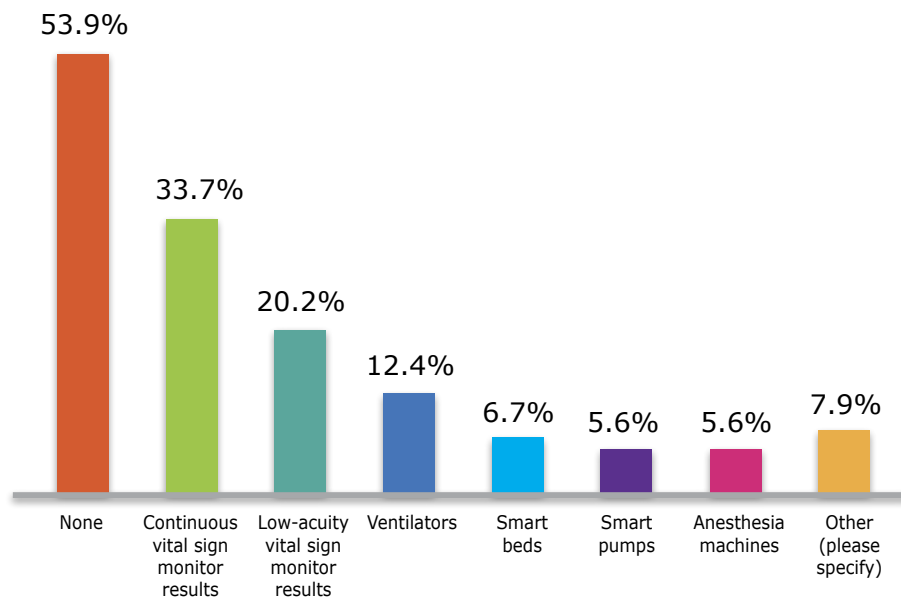
Question #1:

Are any medical devices (vital sign monitors, smart pumps, etc.) currently interfaced to your hospital's EHR?



Question #2:

Which of the following medical devices are currently interfaced to your hospital's EHR? Select all that apply.

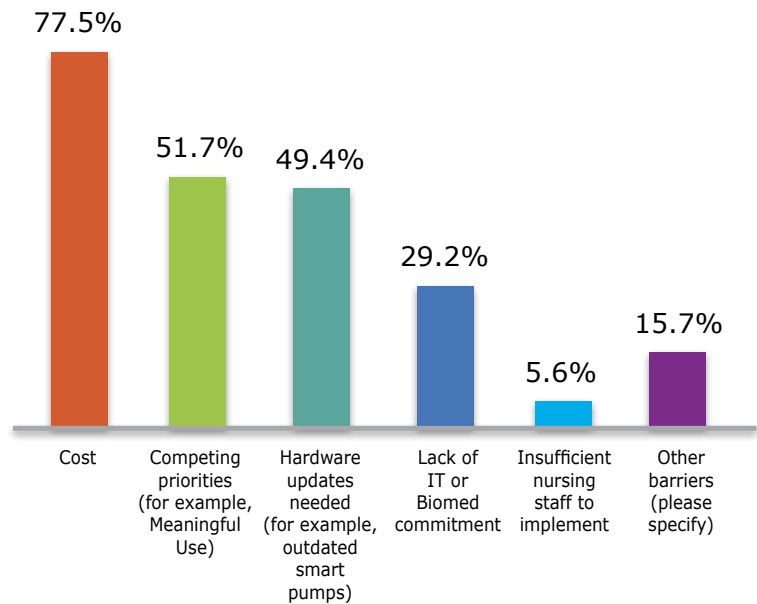


NOTE: "Other" responses included devices such as fetal monitors, ECGs, glucometers, etc.

Question #3:

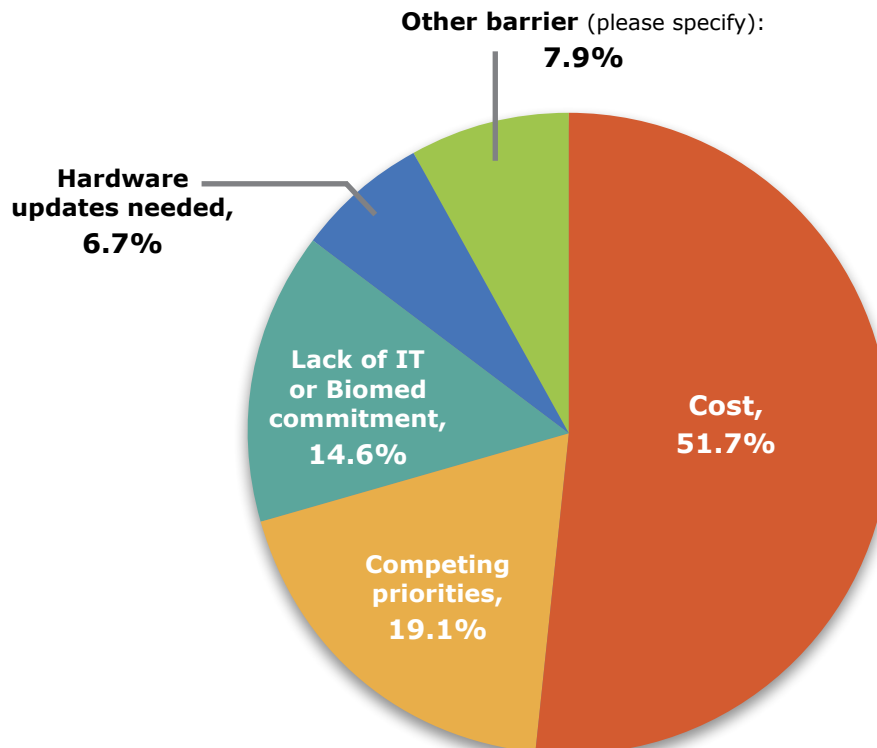
What barriers are preventing you from integrating other medical devices with your hospital's EHR? Select all that apply.

NOTE: In question #3, respondents were asked to select *all* that applied, while in question #4, below, respondents were asked to select their *greatest* barrier. Additionally, "other" barriers that were specified here included EHR platform limitations, and one hospital indicated no EHR in place.



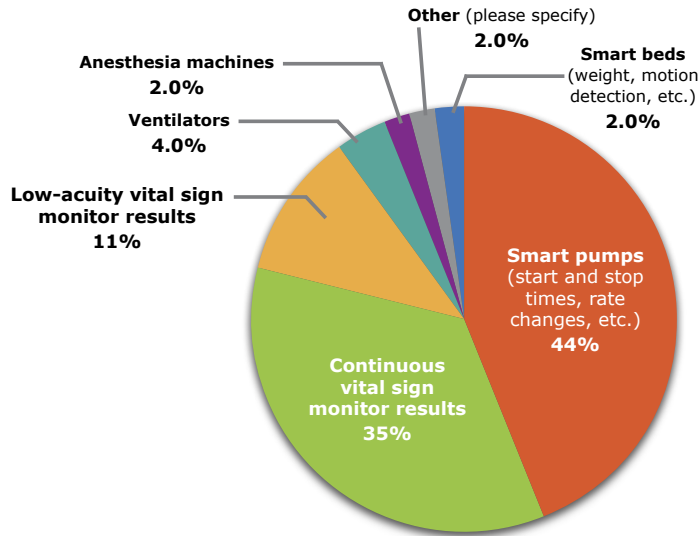
Question #4:

Which barrier is the greatest obstacle? Choose only one.



Question #5:

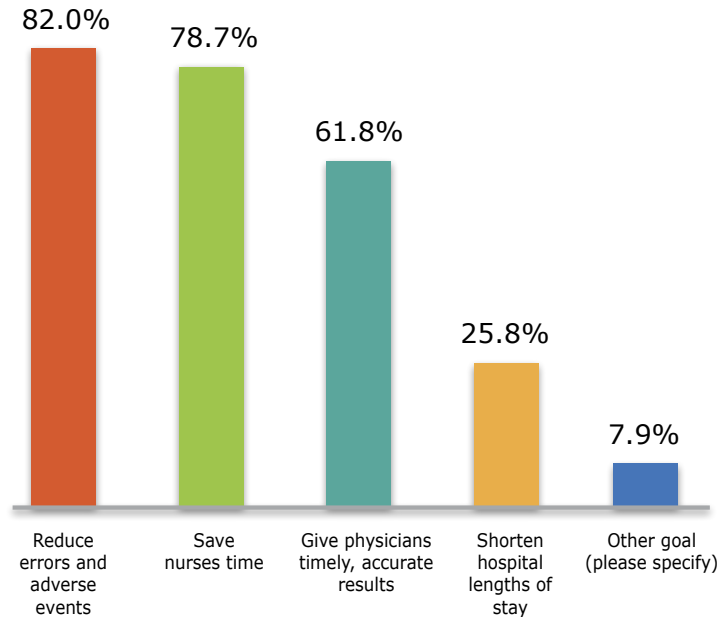
If you could integrate more of your medical devices with your EHR today, which device type would be your top priority? Choose only one.



NOTE: Although not technically a device type, patient alerts were specified under "other."

Question #6:

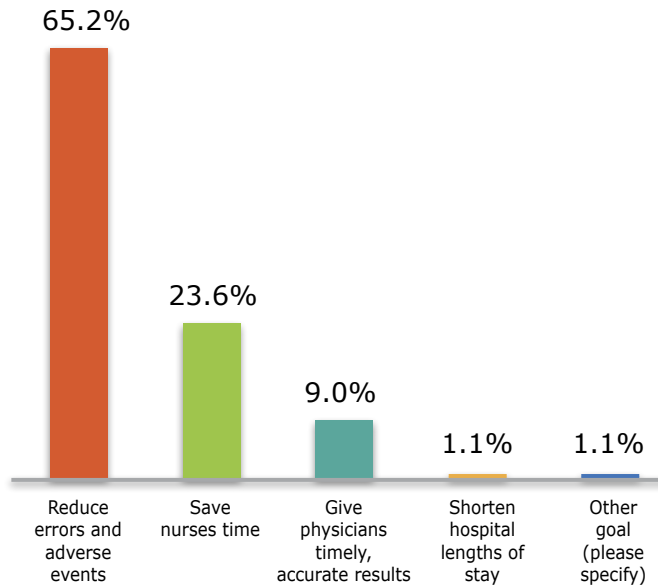
What are the goals you would like to achieve by integrating medical devices with your EHR? Select all that apply.



NOTE: In question #6, respondents were asked to select *all* goals that applied, while in question #7, below, respondents were asked to select their *top* priority. Additionally, "other" goals here included increased nurse and physician satisfaction, improved charge capture, bi-directional communication (vents responding to monitors, pumps responding to vents or monitors, etc.).

Question #7:

Which goal is your top priority? Choose only one.



"Other" top priorities included improved charge capture and complete documentation.

Medical device connectivity can reduce errors, improve patient outcomes, save nurses time, and shorten hospital lengths of stay. Thank you for taking the time to review these CNO Survey Results. We hope they have been informative.

Iatric Systems is pleased to offer your hospital a free MDI Assessment. Our MDI Assessments are customized to each organization's unique needs, and contain:

- An outline (including visual diagram) of your hospital's current medical device and EHR environment
- Key information, based on our staff's extensive knowledge and experience, about each medical device type and manufacturer in use at your organization
- Recommendations, including which medical devices to integrate with your EHR and when, so you can form a realistic, cost-effective path to complete medical device connectivity

To learn more about medical device connectivity or obtain a free MDI Assessment, please contact us today using the information at the bottom of this page.

References:

1. Association for the Advancement of Medical Instrumentation (AAMI): Infusing Patients Safely. 2010.
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Accessed April 20, 2015.
2. Smart Pump/EMR Integration Harder Than Expected, but Worth It. July, 2013. © 2013 KLAS Enterprises, LLC. All rights reserved.
http://www.klasresearch.com/news/pressroom/2013/Smart_Pumps.
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