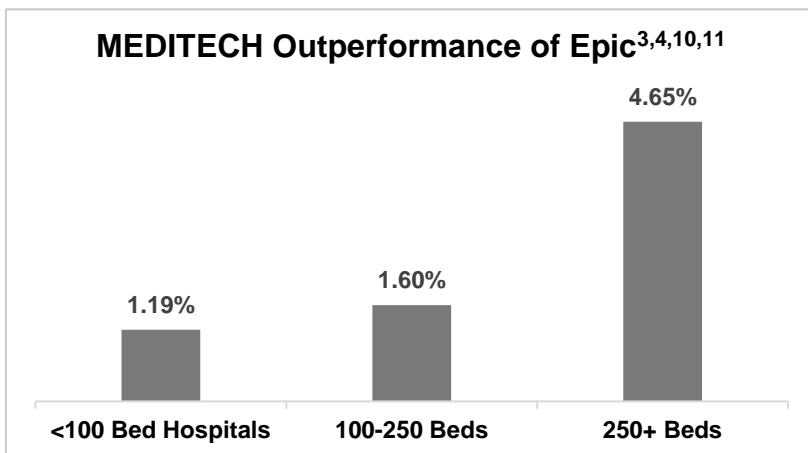
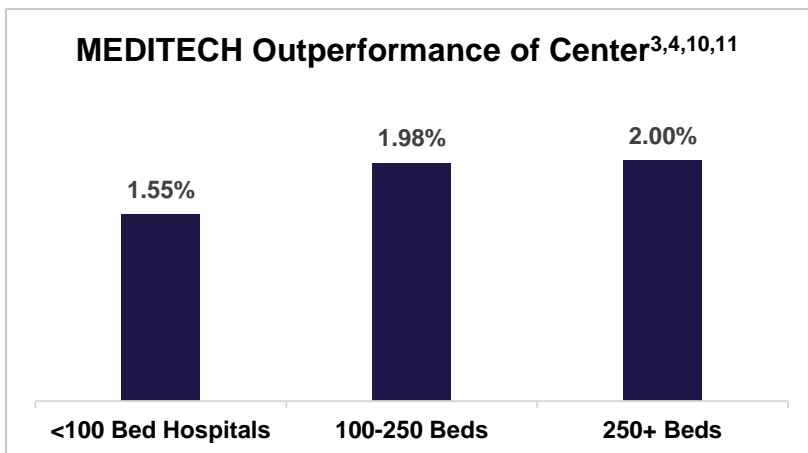


Hospitals Implementing MEDITECH 6.x Improve Profitability in Comparison to Hospitals Implementing Cerner or Epic



Navin Haffty assessed the pre-LIVE to post-LIVE impact of implementing Cerner, Epic, or MEDITECH on hospital operating margins. This study was conducted to aid hospitals in understanding how an EHR upgrade impacts the bottom line over the long term, as well as how implementing Cerner, Epic, or MEDITECH relates to that financial impact.

Average Comparative Improvement in Same Hospital Operating Margin Two Years Pre-LIVE to Two Years Post-LIVE



NOTES:

- Improvement in operating margin was calculated based on the increase or decrease in operating margin from the year two years prior to the year of implementation to the year two years after the year of implementation.

For a 100-250 bed hospital with an NPR of \$140m, a difference of 1.98% in operating margin would equate to an improvement of \$2.772m in annual operating margin.

Key Conclusion

Hospitals that implemented MEDITECH realized significant operating margin improvements in comparison to those that implemented Cerner or Epic across all bed size tiers.

Overview

This study used Centers for Medicare & Medicaid Services' (CMS) cost report data as collected by Definitive Healthcare to understand the impact of implementing Cerner, Epic, or MEDITECH in 2011, 2012 or 2013^{1,2} on hospital Operating Margins^{3,4}. The study included 1,833 hospitals in total. 130 of these hospitals implemented Cerner, Epic, or MEDITECH in 2011, 2012, or 2013 and the remaining 1,703 did not implement an EHR.



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Inclusion Criteria

All short-term acute and critical access hospitals in operation from 2009 through 2015 (as defined by Definitive Healthcare), were included in the study. Hospitals were excluded from the study only if operating margin, NPR, or operating expense data were not available for two years prior to and two years after the year of implementation. Clear outliers^{5,6,7,8,9}, as well as hospitals that implemented an EHR other than Cerner, Epic, or MEDITECH in 2011, 2012, or 2013 were omitted from the data set.



Study Methodology

To understand the financial impact of implementing Cerner, Epic, or MEDITECH, hospital operating margin from the fiscal year two years prior to the year of implementation was compared to operating margin at the same hospital two years after the fiscal year in which the hospital went LIVE. The results of this same hospital pre- to post-LIVE comparison were then averaged by vendor. Changes in pre- to post-LIVE operating margin in hospitals which implemented Cerner, Epic, or MEDITECH in 2011, 2012, or 2013 were compared to changes in operating margin at hospitals that did not implement an EHR from 2009 to 2015¹² to provide the context of industry-level changes in financial performance.

¹ EHR Implemented and Year Implemented are from the Definitive Healthcare database.

² EHR implementations in 2011, 2012, and 2013 were studied to allow for collection of steady state NPR, Operating Expenses, and Operating Margin from the year two years prior to the year of implementation and the year two years after the year of implementation to reduce the possibility that expenses from the implementation itself would impact hospital financials. Based on our experience, implementation related expenses start up to 18 months prior to Go LIVE and it may take up to one year for a hospital to return to steady state operations post Go LIVE.

³ Change in Operating Margin – Change in operating margin from the year two years prior to the year of implementation to the year two years after the year of implementation.

⁴ Operating Margin - "Patient Care" margins, i.e. (operating income) / (net patient services revenue) was chosen as the method of calculating Operating Margin because it best represents hospital performance that could be impacted by implementation of an EHR.

⁵ The only subjective choice in the study was determining outlier values and defining clear rules for excluding data which was likely incorrect or caused by a significant one-time event unrelated to the implementation of an EHR. To understand whether the choice of +/- 15% in each category, NPR Growth, Change in Operating Expenses, and Change in Operating Margin and Annualized Operating Margin Change studied impacted the conclusions, the study was rerun using bands of +/-20%, +/-25% and +/-30%. In each case the conclusions of the study remained the same.

⁶ Outlier Definition for NPR – NPR CAGR of +/- 15% - Any hospital with compound annual NPR growth of greater than 15% or less than -15% from the year two years prior to the year of implementation through the year two years after implementation.

⁷ Outlier Definition for Operating Expenses - Operating Expense CAGR of +/- 15% - Any hospital with compound annual Operating

Expense growth of greater than 15% or less than -15% from the year two years prior to the year of implementation through the year two years after implementation.

⁸ Outlier Definition for Operating Margin - Operating Margin of +/- 15% - Any hospital that, in either the year two years before the year of implementation or the year two years after the year of implementation, had an operating margin of more than +15% or less than -15%.

⁹ Outlier Definition for Change in Operating Margin - Change in Operating Margin of +/-15% - Any hospital that saw a total change in operating margin of more than 15% between the year two years prior to the year of implementation and the year two years after the year of implementation.

¹⁰ The number of hospitals by EHR implemented and bed tier included in the study are: "All Bed Sizes" Cerner 43, Epic 43, MEDITECH 44, No EHR Implemented 1,703; "<100 Beds" Cerner 27, Epic 16, MEDITECH 28, No EHR Implemented 726; "100-250 Beds" Cerner 10, Epic 9, MEDITECH 12, No EHR Implemented 529; "250+" Cerner 6, Epic 18, MEDITECH 4, No EHR Implemented 448.

¹¹ The average same hospital changes in operating margin from two years pre-live to two years post live by bed size grouping and EHR implemented which were found in this study are the following, with parentheses indicating a negative value: "All Bed Sizes" Cerner (2.09%), Epic (1.58%), MEDITECH (0.61%), No EHR Implemented (0.46%); "<100 Beds" Cerner (2.93%), Epic (2.57%), MEDITECH (1.38%), No EHR Implemented (0.80%); "100-250 Beds" Cerner (2.37%), Epic (1.99%), MEDITECH (0.39%), No EHR Implemented (0.47%); "250+" Cerner 2.15%, Epic (0.50%), MEDITECH 4.15%, No EHR Implemented 0.09%.

¹² For hospitals which did not implement an EHR, the steady state pre LIVE year chosen was 2010 and the steady state post LIVE year chosen was 2014 as these were the middle pre and post LIVE years in the study.

