

3-24-2010

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Recommended Citation

Phillips, K., Wheeler, C., Campbell, J., Coustasse, A. Electronic medical records: Is it working in long term health care? Midwest Business Administration Association Conference. Chicago, Illinois. 24 Mar 2010.

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Electronic Medical Records: Is It Working in Long Term Health Care?

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Research Shows These Interesting Facts About Paper Records:

- The average paper medical record weighs **1.5 pounds**.
- Physicians spend up to **38%** of their time writing up patient charts.
- Nurses spend up to **50%** of their time writing up patient charts.
- Medical records are misplaced or missing in **30%** of patient visits.



Paper vs. Electronic

Paper

- Incomplete
- Torn and worn
- Misplaced
- Lost or damaged
- Expensive upkeep

Electronic Record

- More accessible
- Enhanced communication between groups
- Improves quality of care
- Compliance with federal regulations

Electronic Health Record – Concept Overview

The EHR represents the integration of healthcare data from a participating collection of Systems for a single patient.

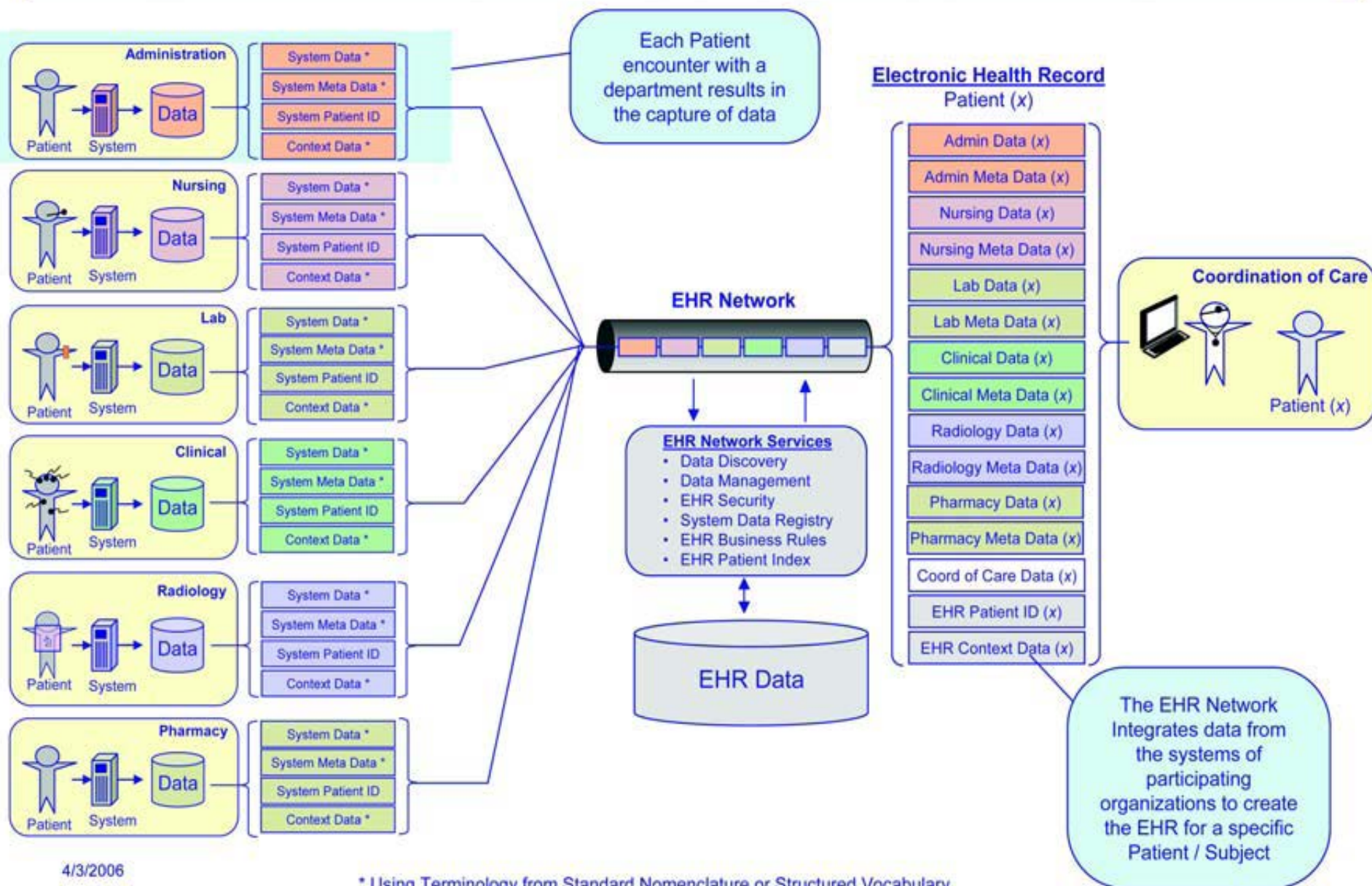
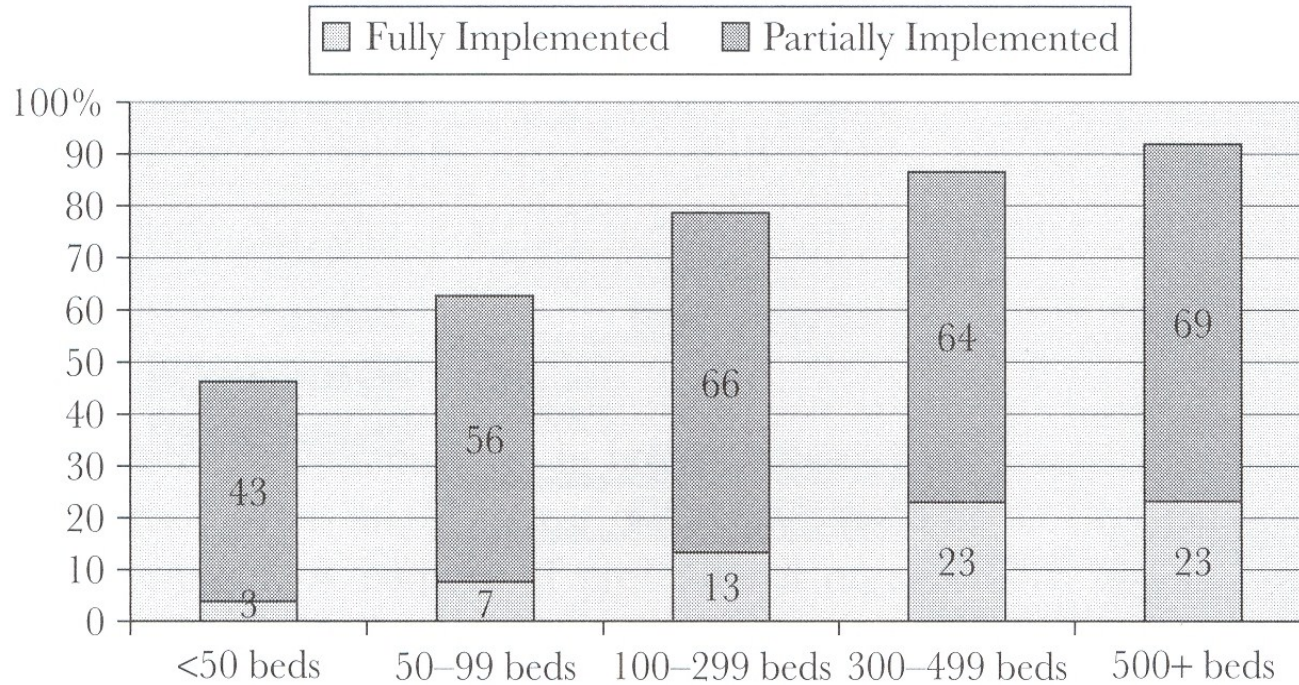


FIGURE 5.3. *Percentage of Hospitals Reporting EMR Use, by Bed Size*



Source: Adapted from American Hospital Association, 2007.

INTRODUCTION

- ⦿ Long term health care facilities by its nature are recognized by the need for:
 - Very descriptive and extensive historical patient data, while having little provider communication coupled with minimal treatment information.
- ⦿ The focus of LTC is on a population requiring care encompassing all aspects associated with quality of life rather than simply acute treatment.
- ⦿ Because this focus is of a larger scale than traditional medical facilities, the priorities in the implementation and utilization of EMRs are higher in accessing patient history information.

Purpose of the Study

- ◎ The purpose of this research study was to determine the effectiveness of EMR utilization in the long term health care settings.

METHODOLOGY

- The literature review used in this study followed the normal methodologies of a systematic search and was limited to articles and databases published in the English language.
- All electronic articles came from (1) four electronic databases including EBSCOHost, Medline, Springer, and Pub Med and (2) the Internet, such as Google Scholar and Dogpile search engines.
- Focus on Three Topics
 - Benefits
 - Limitations
 - Effectiveness

METHODOLOGY (CONT)

- All articles referenced and researched for the literature review were published within the last ten years (1999-2010).
- The majority of articles used for the research were compiled through the following search terms:
- “Electronic medical record”, or “electronic health record” AND “long term care health care settings”, OR “nursing homes.”

Results: Adoption by Nursing Homes*

| Use of Electronic Information System | % Nursing Homes in United States |
|--|----------------------------------|
| Greater than one form of electronic clinical data | 99.6% |
| MDS Reporting | 96.4% |
| Billing | 95.4% |
| One or multiple parts of medical record: nursing notes, physician notes, MDS forms | 43% |

*Resnick, Manard, Stone and Alwan. J Am Med Inform Assoc. 2009 Mar-Apr; 16(2):179-86.

MDS: Minimum Data Set (CMS).

Results: Adoption by Nursing Homes*

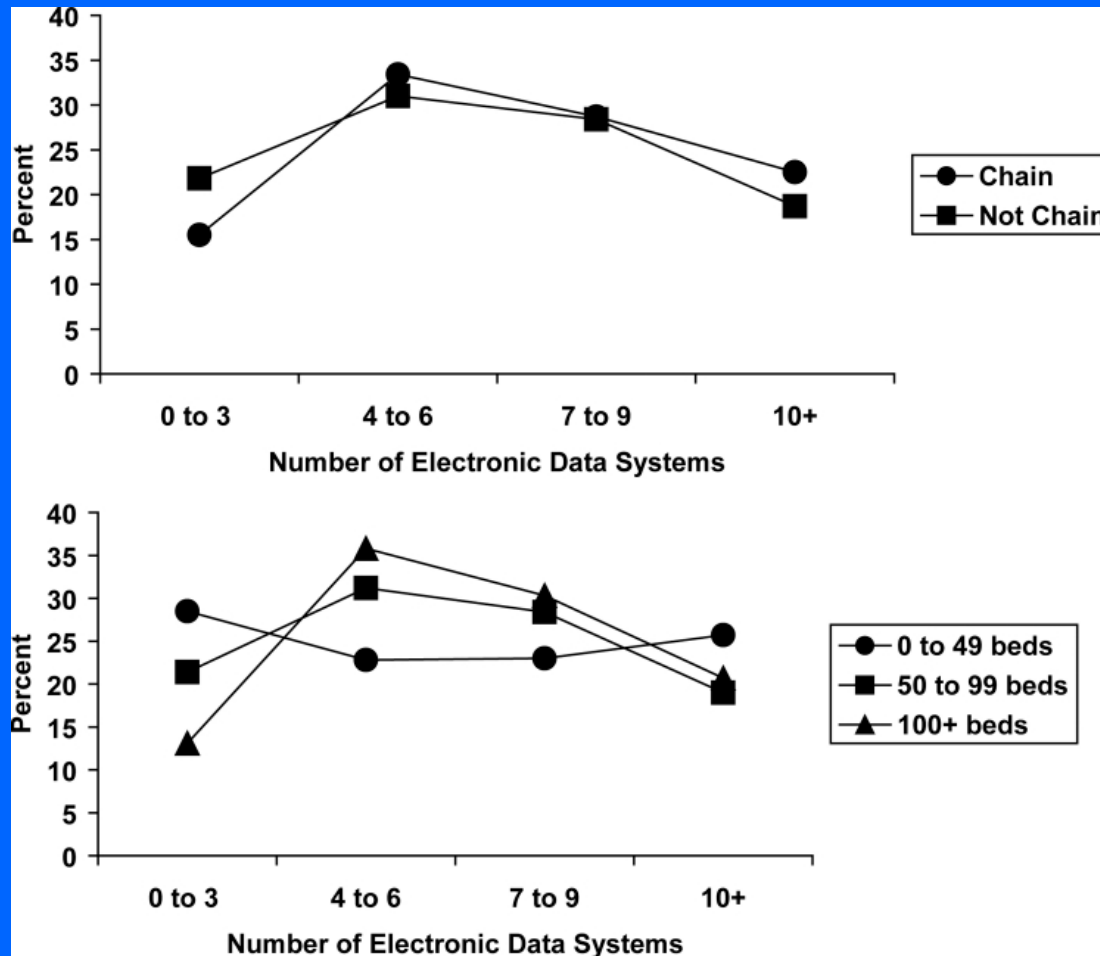


Figure 1: Number of electronic information systems by chain membership and bed size.

Results: Adoption by Nursing Homes

- The MDS is part of the U.S. federally mandated process for clinical assessment of all residents in CMS certified NH.
- This process provides a comprehensive assessment of each resident's functional capabilities and helps nursing home staff identify health problems.
- MDS assessment forms are completed for all residents in certified nursing homes, regardless of source of payment for the individual resident.
- MDS information is transmitted electronically by nursing homes to the MDS database in their respective states and then submitted to the national MDS database at CMS.

Results – Benefits

- ⦿ Reduction in adverse drug events.
- ⦿ Streamlining of regulatory compliance.
- ⦿ Ensuring providers with available and most accurate data.
- ⦿ Improved coordination in patient care.
- ⦿ Increased efficiency.

Results – Reduction in Adverse Drug Events

- High risk population
- Per implementation of a Computerized Physician Order Entry (CPOE) system
 - Baycrest Centre for Geriatric Care
- Benefit towards improved patient safety
- Cost savings
 - No events = No costs

Results – Reduction in Adverse Drug Events

The screenshot displays a medical software interface titled "Enter Orders" with a window title "1 Marked (of 1)" and a date "Wed, May 26". The patient information at the top includes "E.G. - 89/F", "180.3cm 86.182kg", "Allergies/ADRs: [],", "HC3E H3E82/A", "ADM IN", "Unit No: H0000004", and "Acct No: IC000003/03".

The main area contains a table of orders with columns for "Order", "Pri", "Ser", "Date", and "Time". The first order is "Haloperidol 1 Mg Po Qhs" with a priority of 1, serial number 1, date "26/05/04", and time "1511".

A "Rule Processing" dialog box is overlaid on the table, displaying a warning: "WARNING - OVERSEDATION RISK". The drugs involved are listed as "HALOPERIDOL", "AMITRIPTYLINE", "TRAZODONE", and "HALOPERIDOL". The warning text states: "Use of multiple psychoactive medications increases the risk of oversedation, confusion, delirium, falls and injury. Evaluate the need for each psychoactive medication. Use the lowest feasible dose."

On the right side of the interface, there is a vertical menu of buttons: "Allergies", "Order Sets", "Medications", "IV Fluids", "Orders", "Laboratory", "DI", "Nursing", "Diets", "Consults", "Modify/View", "? Check", "Save as Set", "Refresh", "Submit", and "Back".

At the bottom of the interface, there are several buttons: "Recent Results", "Patient Alerts", "Order History", "Review/PCI", "References", "Orders", and "Submit".

Results – Streamlining of Regulatory Compliance

- ⊙ Different regulatory and reimbursement requirements comparative to acute care.
- ⊙ Regular assessment and maintenance of compliance can be accomplished (CMS).
- ⊙ Augmentation of regulatory and reimbursement requirements
 - In 2004, 99.6% of active U.S. nursing homes were already using an electronic information system for CMS reporting (Linderner, et al, 2007).

Results – Effectiveness

- ◎ **Minimal representation in literature overall**
- ◎ San Francisco VA Medical Center, 2004 study:
 - Included participating clinicians in the design.
 - Clinicians were supportive of Implementation.
 - Study site confined to one singular nursing home ensuring a small implementation force.
 - Used quality and scientific improvement techniques.
 - Increased completion rate of provider advanced directive assessments from 4% to 63% in three month period.

Results – Improved Coordination in Patient Care

- ⦿ Tools to summarize trends in patient care.
- ⦿ Evidenced-based disease protocols.
- ⦿ Improved documentation.
- ⦿ Improved records management.
- ⦿ Simultaneous, multiple information access.

Discussion

- ⊙ Depending on which source is cited, nursing homes country-wide are paving the way in the adoption of EMRs compared to other healthcare entities and driven by CMS.
- ⊙ VA is also in the lead as has been using long time same EMR with same standards.
- ⊙ Benefits largely will revolve around quality of care.

Questions?

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