Adoption of Electronic Health Records among Long Term Care Facilities in Maryland

An Information Brief

September 2013

Introduction

The Maryland Health Care Commission (MHCC) conducted an environmental scan (scan) to assess electronic health records (EHR) adoption among independent long term care (LTC) facilities in the State. Maryland has about 235 LTC facilities and about half of these are independently owned. LTC facilities provide health care services for residents who often transition between acute, post-acute, and long term care settings. These frequent transitions can potentially increase the risk of communication failures, inadequate coordination, and adverse drug events.[1] A recent study indicates about 60 percent of medication errors occur during care transitions.[2]

LTC facilities benefit from electronically storing clinical information to assist in managing their patients' health data. Using EHRs enables physicians working with LTC facilities to better coordinate patient care across various delivery settings.[3] EHRs have the potential to prevent treatment delays, reduce hospital readmissions, and increase health care quality by enabling LTC facilities to electronically track information needed to provide care for patients.[4, 5, 6]

This is the third year MHCC has administered the scan; the scan was previously conducted in 2009 and 2010. The questions were aimed at identifying the current status of EHR adoption among independently owned LTC facilities. Questions related to leading benefits and challenges of EHR adoption were also included in the scan. The findings are used by MHCC to develop strategies to advance EHR diffusion and in building awareness of how electronic health information exchange (HIE) can benefit LTC facilities in the State.

Scan Method

In April 2013, MHCC administered the scan via an electronic survey to approximately 25 independently owned LTC facilities in Maryland. The selection process was based on geographic distribution across five regions in Maryland: Baltimore City, Central, Eastern, Southern, and Western. Responses were received from about 96 percent of the LTC facilities surveyed.

Limitations

The findings are based on responses from LTC facility administrators and may have been influenced by their interpretation of the survey questions. Scan results are based on EHR adoption activity among a small group of

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[1] Office of the National Coordinator for Health Information Technology, *Health IT in Long-term and Post Acute Care Issue Brief,* March 15, 2013. Available at: http://www.healthit.gov/sites/default/files/pdf/HIT_LTPAC_IssueBrief031513.pdf.

[2] National Transitions of Care Coalition, *Improving Transitions of Care: The Vision of the National Transitions of Care Coalition*, May 2008. Available at: http://www.ntocc.org/Portals/0/PDF/Resources/PolicyPaper.pdf.

[3] Rosenfeld, Jonathan, *Is It Time for Nursing Homes to Embrace Electronic Medical Records?* January 2010. Available at: http://www.nursinghomesabuseblog.com/national-nursing-home-issues/is-it-time-for-nursing-homes-to-embrace-electronic-medical-records.

[4] California HealthCare Foundation, *Health Information Technology: Are Long Term Care Providers Ready?* April 2007. Available at: http://www.chcf.org/publications/2007/04/health-information-technology-are-long-term-care-providers-ready.

[5] Cherry, BJ, Ford, EW, and Peterson, LT, Experiences with electronic health records: early adopters in long-term care facilities, *Health Care Management Review,* Jul-Sep 2011, 36(3):265-74.

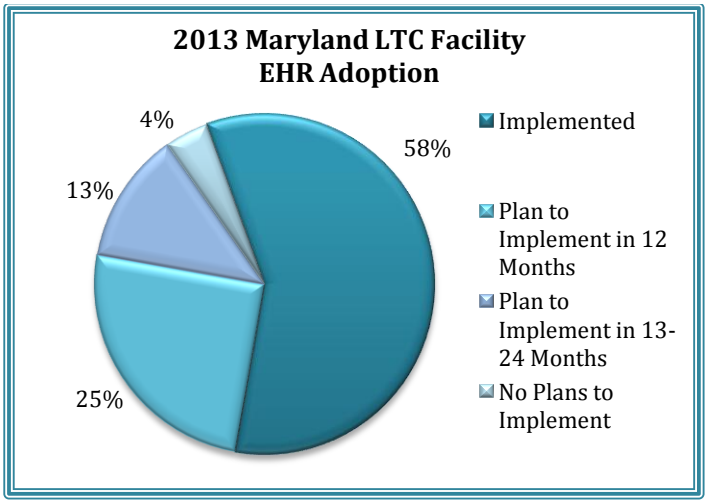
[6] AHIMA, *EHR Adoption in LTC and the HIM Value,* January 2011. Available at: http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_048551.hcsp?dDocName=bok1_048551.

LTC facilities. The scan was not intended to produce statistically significant results and the responses were not audited.

Findings

EHR Adoption

The use of EHRs is expected to improve care coordination, reduce cost, and improve patient outcomes.[7] About 58 percent of LTC facilities surveyed indicated they have adopted an EHR, and roughly 38 percent plan to adopt an EHR within the next two years. As compared to 2009 data, LTC facilities in Maryland show a 33 percent increase in EHR adoption, and about a 5 percent increase since 2010. National data indicates that EHR adoption among LTC facilities ranges between 20 and 30 percent.[8]



Maryland LTC Facility EHR Adoption Since 2009

EHR Adoption	2009 *n=51* *% of LTCs*	2010 *n=53* *% of LTCs*	2013 *n=24* *% of LTCs*
Yes	25	53	58
No	75	47	42

Facilities with an EHR

Length of Time Using an EHR

Approximately 43 percent of LTC facilities surveyed have been using their EHR for less than one year. About 29 percent have been using their EHR between two and three years, and nearly the same percent have been using EHRs for more than three years. Nationally, LTC facilities have been slow to adopt EHRs as compared to other areas of the health care sector, such as hospitals and physician practices.[9] Hospitals and physicians are eligible to receive federal financial incentives for EHR adoption.[10] The slow growth in LTC facilities investing in EHRs is attributed to the lack of federal financial incentives. The leading benefits of EHR adoption reported by LTC facilities are consistent with the nation and in descending order include: improved health outcomes, improved care coordination across settings, improved workflow, and improved access to data.[11]

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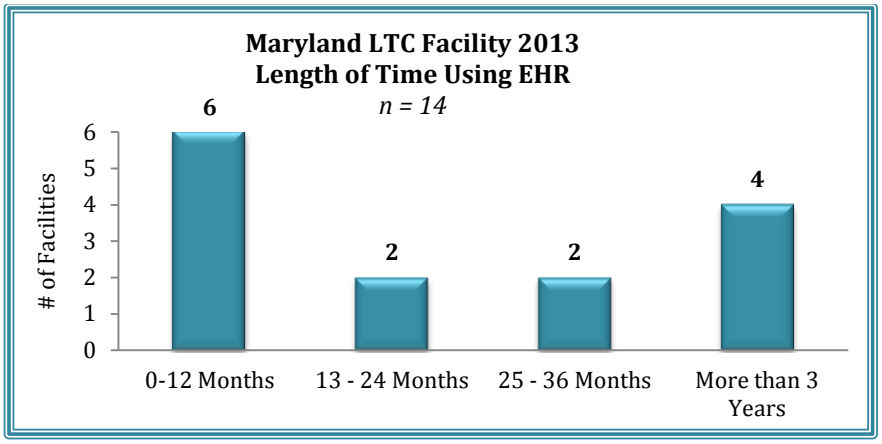
[7] Office of the National Coordinator for Health Information Technology, *Health IT in Long-term and Post Acute Care Issue Brief,* March 15, 2013. Available at: http://www.healthit.gov/sites/default/files/pdf/HIT_LTPAC_IssueBrief031513.pdf.

[8] AHIMA, *EHR Adoption in LTC and the HIM Value,* January 2011. Available at: http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_048551.hcsp?dDocName=bok1_048551.

[9] iHealthBeat, *Electronic Health Records Hold Great Promise for Long-Term Care Facilities,* September 2013. Available at: http://www.ihealthbeat.org/articles/2013/3/22/onc-long-term-post-acute-providers-lagging-in-health-it-adoption.

[10] Medicare and Medicaid electronic health records incentive programs: http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html?redirect=/ehrincentiveprograms/.

[11] AHIMA, *EHR Adoption in LTC and the HIM Value,* January 2011. Available at: http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_048551.hcsp?dDocName=bok1_048551.



Use of EHR Functions

EHRs can be used to record various aspects of a patient's health status, such as diagnoses, allergies, vital signs, past medical history, prescribed medications, laboratory data, and treatment plans. The LTC facilities surveyed reported using a variety of EHR functions. Over the last two reporting periods, LTC facilities reported an increase use in system functionality by nearly 50 percent. While computerized physician order entry (CPOE) and electronic prescribing (e-prescribing) have been successfully implemented in many acute care hospitals, workflow challenges to support the functionality have slowed diffusion in LTC facilities. Variation in sampling is largely attributed to the decrease in functionality reported between the two collection cycles.

Maryland LTC Facility EHR Function Use 2010 & 2013

EHR Function	2010 *n = 28* *% of LTCs*	2013 *n = 14* *% of LTCs*	EHR Function (cont.)	2010 *n = 28* *% of LTCs*	2013 *n = 14* *% of LTCs*
Activities of Daily Living	89	86	Electronic Medication Administration Record	57	57
Advance Directives	-*	29	Electronic Prescribing (e-prescribing)	36	21
Allergy List	-	79	Infection Surveillance Software	21	21
Assessments other than Minimum Data Set[12]	93	79	Medical History	-	50
Barcode Medication Administration	6	21	Medication List	-	57
Care Plan	21	79	Resident Demographics	-	93
Clinical Guidelines Based on Resident Problem List, Gender, Age	-	29	Treatment Plan	68	57
Computerized Provider Order Entry (CPOE)	57	21	Vital Signs and Laboratory Data	-	64
Diagnosis or Condition List	-	79	Other	-	43

** Dashes for 2010 indicate that data was not collected.*

[12] MDS (minimum data set) is used to assess the health status of residents in an LTC facility and is required by Medicare.

EHR Data Exchange with Other Systems in the Facility

LTC facilities use different systems in care delivery and in managing the facilities financial matters. Interfacing systems is a way to minimize dual entry of data that is required in both systems. An increase of about 7 percent was reported in interfacing EHRs with financial systems between the two reporting periods. Most EHR systems do not connect to payroll systems; the 2010 data likely includes reporting anomalies.

Maryland LTC Facility EHR Data Exchange in 2010 & 2013

Other Systems in the Facility	2010 *n=28* *% of LTCs*	2013 *n=14* *% of LTCs*
Accounting/Billing	79	86
Minimum Data Set	89	86
Payroll	11	0
Other	0	7

EHR Adoption Challenges

LTC facilities that have not adopted an EHR indicated a number of challenges that, in descending order, include: the cost to update and/or maintain an EHR system, staff education and training, availability of facility technical resources, and the initial cost to acquire an EHR system. A study by the Chief Information Officer Consortium estimates that the five-year costs for an LTC facility to implement EHR technology range from approximately $250K to $350K.[13] These estimates include investments in software and interfaces, computing devices, systems hosting, technical and clinical-technical support staff, systems to manage support, and telecommunications costs for bandwidth and wireless networks.

Maryland's Health Information Exchange

Electronic health information can improve communication, quality of care, and reduce unnecessary emergency room use and hospital admissions.[14] In LTC, access to electronic health information during care transitions can lead to better outcomes.[15] LTC facilities reported the greatest need to exchange health information with hospitals, pharmacies, laboratories and other LTC facilities. The MHCC has an ambitious plan to advance the use of electronic health information in Maryland. In 2009, through a competitive process, the MHCC designated the Chesapeake Regional Information System for our Patients (CRISP) as the State-Designated health information exchange. CRISP offers a number of information sharing services to enable appropriately authorized and authenticated individuals access to patient demographics, laboratory results, radiology reports, discharge summaries, operative and consult notes, and medication fill history through a web portal. LTC facilities constitute about 12 percent of CRISP's users and accounted for about 1 percent of the activity as of June 2013.[16]

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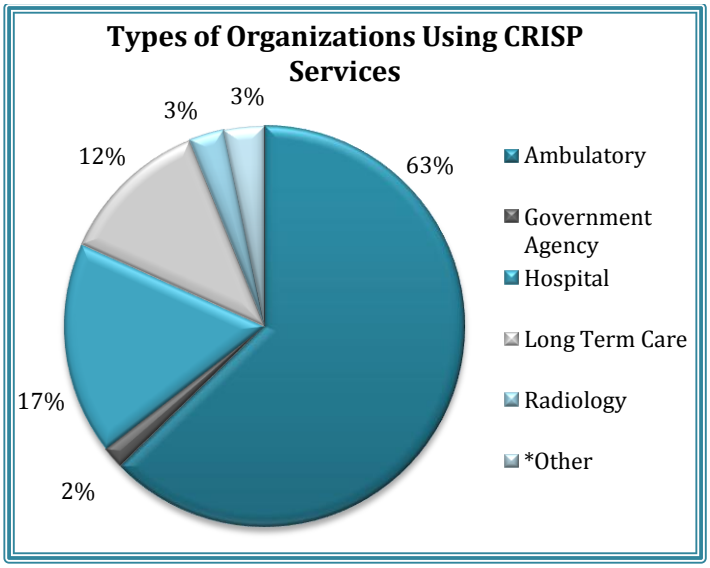
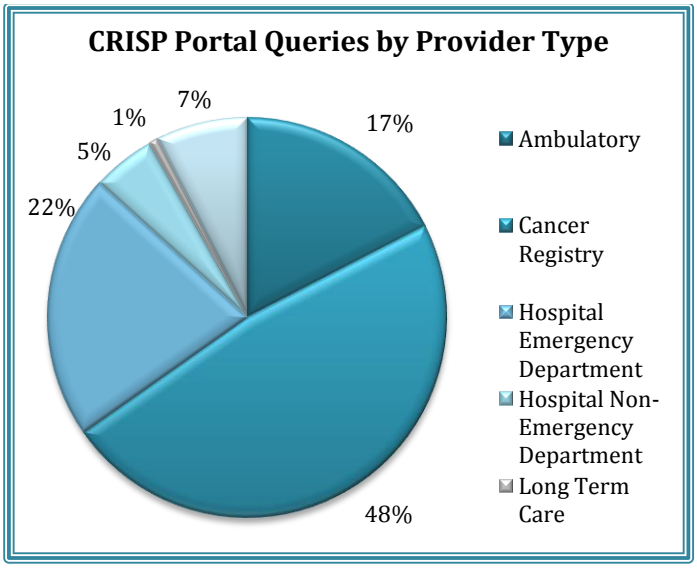
[13] Chief Information Officer Consortium, *Electronic Medical Records (EMR) Cost Study - Final Report,* February 2011. Available at: http://www.leadingage.org/uploadedFiles/Content/About/CAST/Resources/CIO_Consortium_EMR_CostStudy.pdf.

[14] Office of the National Coordinator for Health Information Technology, *Health IT in Long-term and Post Acute Care Issue Brief,* March 15, 2013. Available at: http://www.healthit.gov/sites/default/files/pdf/HIT_LTPAC_IssueBrief031513.pdf.

[15] Ibid.

[16] MHCC and CRISP, *Monthly Reports.* Available at: http://mhcc.maryland.gov/mhcc/pages/hit/hit_hie/documents/HIE_CRISP_Mon_Rpt.pdf.





** Other includes laboratory, federally qualified health center, and payer.*

Remarks

The use of EHRs and electronic health information exchange are essential components of health care reform. Increased use of technology in LTC has the opportunity to strengthen current reform initiatives. Broad use of EHRs and health information exchange can lead to innovative ways to coordinate and manage the needs of LTC residents. Over the next year, MHCC will work with two long term care associations in Maryland, Health Facilities Association of Maryland and LifeSpan Network, to develop strategies aimed at increasing EHR adoption and connectivity to CRISP.