Physician Adoption of Health Information Technology

An Information Brief
September 2016

Background

Widespread adoption and meaningful use of health information technology (health IT) is an essential component of health care reform and can improve quality of care, increase efficiencies, and reduce health care costs. The Maryland Health Care Commission (MHCC) is responsible for advancing the diffusion of health IT statewide. Annually, MHCC assesses the adoption and use of health IT among practicing physicians in the State. Health IT includes electronic health records (EHRs), health information exchange (HIE), and telehealth. EHRs are real-time, patient-centered records that include the medical and treatment histories of patients, as well as a variety of tools to assist in the clinical decision-making process.[1] An EHR that is connected with an HIE allows providers in various health care delivery settings to share clinical information. Enhanced electronic access to patient information can help to prevent medical errors, improve care coordination, and limit duplicative services. Telehealth is the delivery of health education and services using telecommunications and related technologies in coordination with health care providers. Telehealth allows increased access to care, patient engagement, and facilitates preventative care.

Approach and Limitations

The MHCC uses information from the Maryland Board of Physicians license renewal application in its analysis of physician adoption of EHRs and telehealth. Physicians are required to renew their license every two years. The application includes questions about practice location, size, specialty, EHR adoption, and telehealth use and adoption, among other things. Responses to questions used in this analysis are self-reported and are not audited. Responses may be influenced by physician's interpretation of the questions. Health IT questions are only included in the license renewal application; physicians who received their initial license in 2014 or 2015 are not included in this brief. The State-designated HIE, the Chesapeake Regional Information System for Our Patients (CRISP), provides updates on ambulatory practice connectivity to the HIE on a monthly basis, which MHCC uses to assess HIE adoption. The accuracy of this information has not been independently verified.

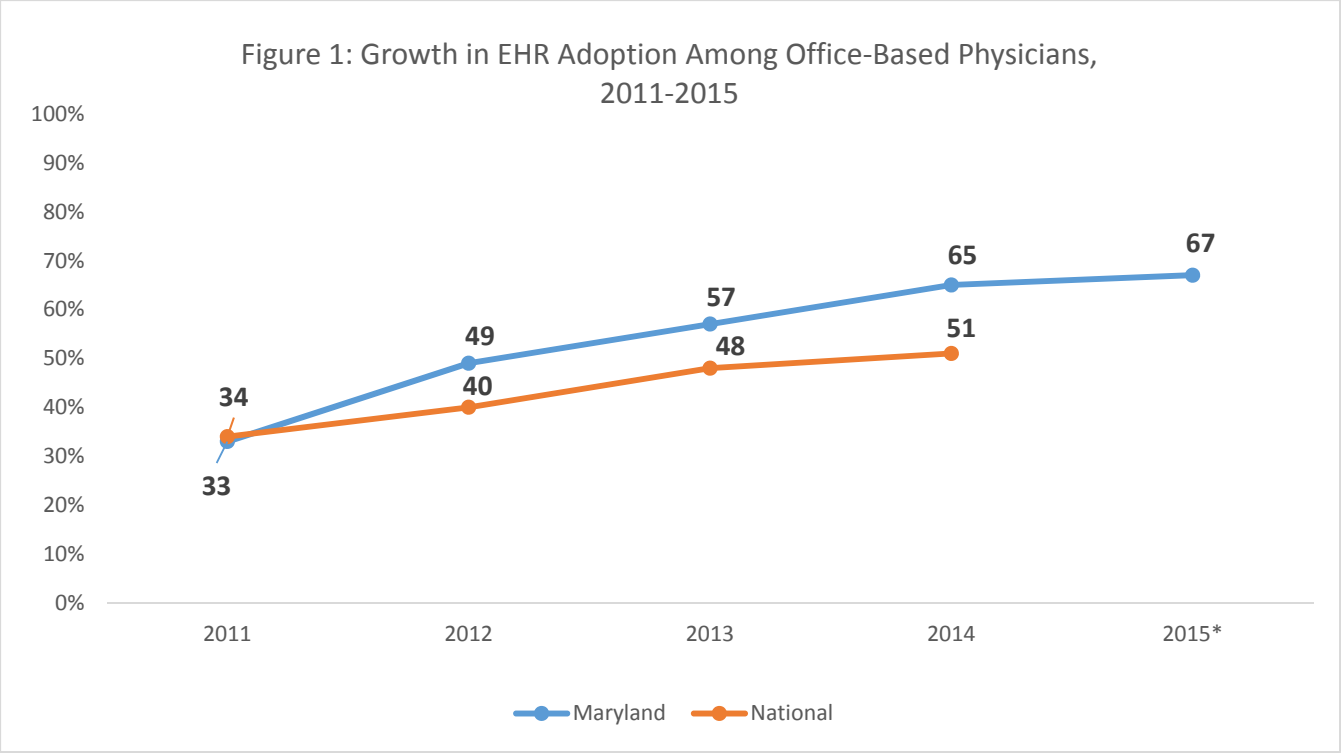
Findings

EHR Adoption and Use

EHR adoption among office-based physicians has increased steadily both locally and nationally since 2011. This increase is primarily attributed to the incentives made available under the American Recovery and Reinvestment Act of 2009 (ARRA),[2] which authorizes the Centers for Medicare & Medicaid Services to provide payments to

[1] Certified EHRs offer Clinical Decision Support tools that makes available knowledge and person-specific information, intelligently filtered or presented at appropriate times, to enhance health and health care. These tools include computerized alerts and reminders to care providers and patients; clinical guidelines; condition-specific order sets; focused patient data reports and summaries; documentation templates; diagnostic support, and contextually relevant reference information, among others.
[2] Pub.L. 111-5 was signed into law on February 17, 2009.

eligible providers that adopt, implement, update, or demonstrate meaningful use of an EHR.[3] EHR adoption among Maryland office-based physicians increased above the national rate in 2012 and has remained fairly consistent with the national trend over the last several years. This initial increase is likely attributed to Maryland initiatives that were launched in 2011: The State-Regulated Payor EHR Incentive Program (State incentive program) and the Maryland Multi-Payor Patient Centered Medical Home Program (MMPP).[4] The State incentive program offers an additional financial incentive to primary care practices that adopted an EHR.[5] Practices that participated in the MMPP were required to adopt an EHR to qualify for shared savings payments.



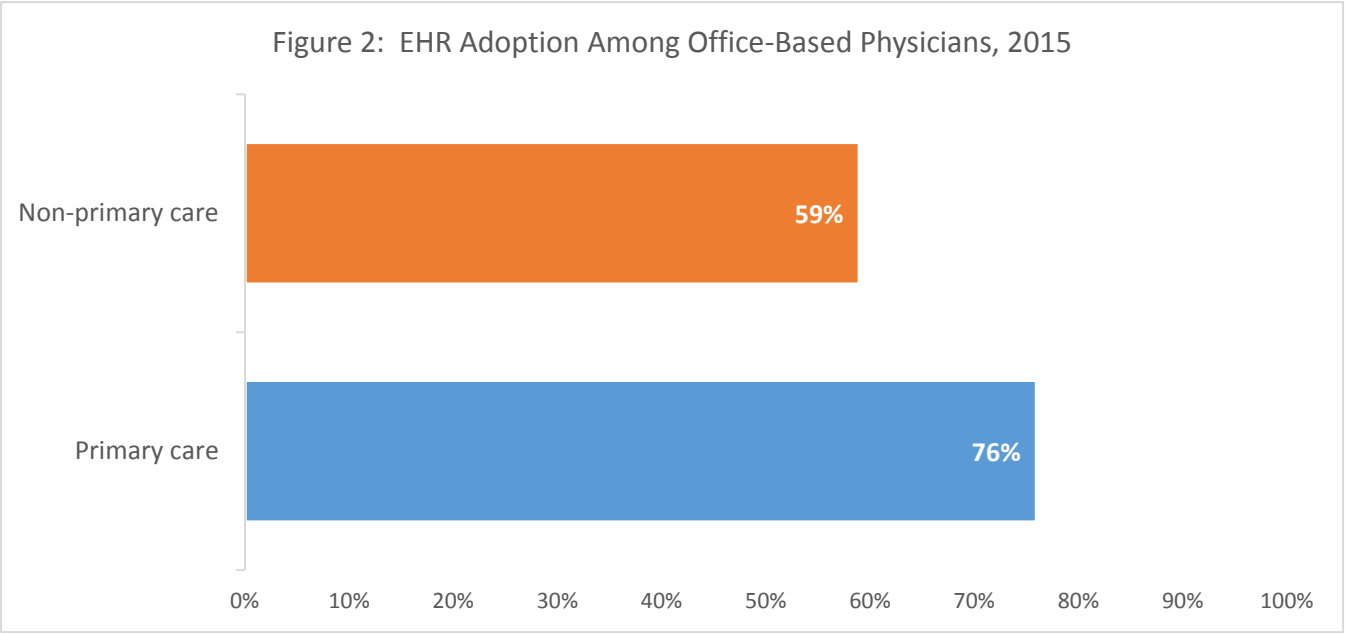
* Maryland Data: 2011-2015 Maryland Board of Physicians Licensure data files
** National Data: https://www.healthit.gov/sites/default/files/briefs/oncdatabrief28_certified_vs_basic.pdf
***National EHR adoption statistics are not available for 2015

EHR adoption among Maryland office-based primary care physicians exceeds specialists by nearly 17 percent (Figure 2). Nationally, EHR adoption by office-based primary care physicians also outpaced specialists.[6] Variation in the adoption rate is due in part to the emphasis that the Office of the National Coordinator for Health Information Technology (ONC) has placed on expanding EHR adoption among primary care physicians. Nearly 62 regional extension centers received grants from ONC to assist primary care providers in the adoption and meaningful use of EHRs.[7] EHR adoption decisions among primary care physicians may have also been influenced by the Medicare

[3] More information about the Medicare and Medicaid EHR Incentive Programs is available here: https://www.healthit.gov/providers-professionals/ehr-incentive-programs.
[4] More information about the MMPP is available here: http://mhcc.maryland.gov/mhcc/pages/apc/apc/apc.aspx.
[5] More information about the State incentive program is available here: http://mhcc.maryland.gov/mhcc/pages/hit/hit_ehr/hit_ehr_state_incentive.aspx.
[6] Dawn Heisey-Grove; Vaishali Patel. ONC Data Brief (December 2014). Physicians Motivations for Adoption of Electronic Health Records. Available at: https://www.healthit.gov/sites/default/files/oncdatabrief-physician-ehr-adoption-motivators-2014.pdf?utm_source=x&utm_medium=HHSPress&utm_campaign=AdoptionMotivatorsBrief.
[7] Regional Extension Centers offer local support to practices in the adoption and meaningful use of EHRs. More information about the ONC's Regional Extension Centers is available here: https://www.healthit.gov/providers-professionals/regional-extension-centers-recs.

financial penalties that began in 2015. Anecdotal information suggests that specialists are not adopting EHRs as quickly as primary care providers as most EHR systems have been developed for primary care and lack many of the features and templates required by specialists.

Figure 2: EHR Adoption Among Office-Based Physicians, 2015



Health Information Exchange

Office-based Physician (providers) use of HIE has increased significantly since 2012 (Table 1). The MHCC designated CRISP as the State-Designated HIE in 2009. Approximately 14 percent of ambulatory practices have a direct messaging account (DMA), which allows for secure emailing of protected health information, 11 percent of ambulatory practices percent receive Encounter Notification Service (ENS) alerts when their patients have a hospital encounter, and 13 percent of ambulatory practices lookup patient information through the portal.[8]

Table 1: Ambulatory Practice Engaging in HIE Services

CRISP Service	2012 (N=4,547)		2013 (N=6,537)		2014 (N=5,153)		2015 (N=5,099)	
	#	%	#	%	#	%	#	%
CRISP Portal Live (portal)	80	1.8	253	3.9	469	9.1	670	13.1
Encounter Notification Services (ENS)	53	1.2	128	2.0	272	5.3	569	11.2
Direct Messaging Accounts (DMA)	13	<1	96	1.5	422	8.2	686	13.5

In general, providers view HIE as a way to enhance care delivery. Connecting EHRs to HIE is essential to the seamless exchange of electronic health information. CRISP has made considerable progress integrating the most

[8] A practice is considered actively connected to CRISP if it is querying the CRISP portal, receiving ENS alerts, or using the direct messaging service.

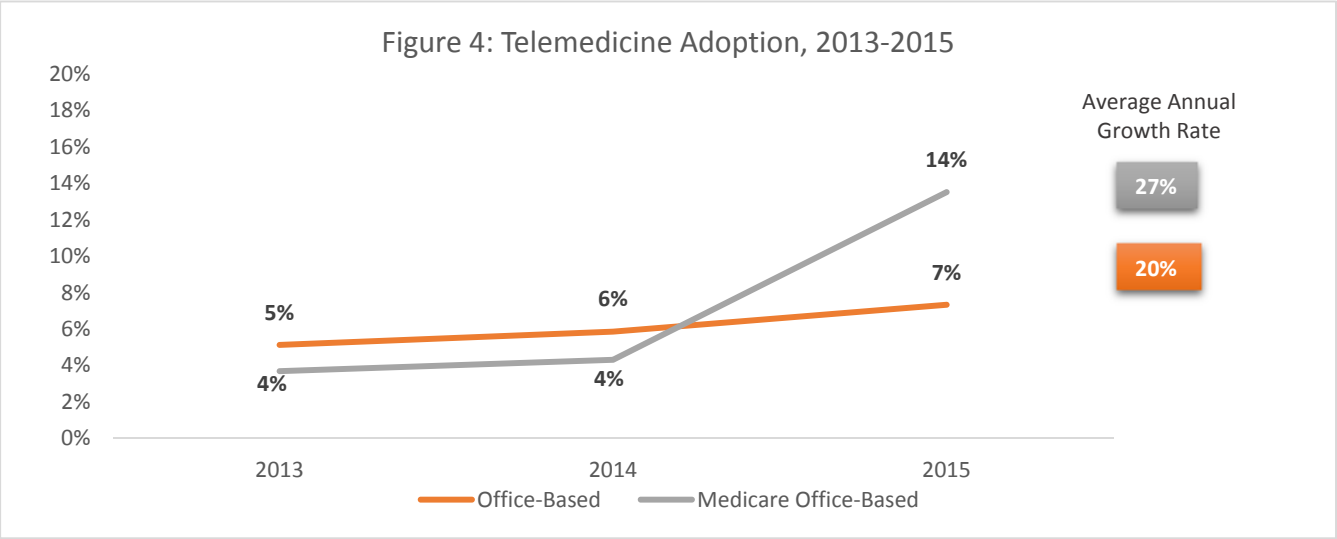
frequently used EHR vendors with the HIE (Table 2). Integration enables providers to access HIE services within the care delivery workflow process.

Table 2: Top EHR Vendors Among Ambulatory Practices as of 2015		
EHR Vendor	**Proportion of Ambulatory Practices in Maryland Using EHR Vendor (N=4696)**	
	#	**%**
eClinicalWorks	322	6.9%
Allscripts	248	5.3%
NextGen	188	4.0%
Epic	175	3.7%
GE Health Care	150	3.2%
athenaClinicals	114	2.4%
AmazingCharts	111	2.4%
Cerner	75	1.6%
Quest 360	69	1.5%
McKesson	64	1.4%

Telemedicine

Approximately 11 percent of physicians statewide reported using telemedicine (referred to as telehealth in Maryland) in 2015.[9, 10] The growth in the adoption of telemedicine is attributed to office-based physicians participating in Medicare (Figure 4). Currently, Medicare reimburses for about 37 telemedicine services. As of October 2012, commercial payors operating in the State are required to reimburse for telemedicine under certain situations.[11] Consumer demand for more affordable and accessible care has contributed to the adoption of telemedicine nationally.[12] Payment reform initiatives included in the Affordable Care Act (ACA)[13] have generated interest in telemedicine among many providers.[14] The ACA has been a catalyst for developing new health care delivery and payment systems. Implementing telemedicine requires a physician to make changes to their traditional health care delivery approaches. Telemedicine will likely experience slow growth for the next several years while health care transitions from fee-for-services to value-based care reimbursement.

[9] 2014- 2015 Maryland Board of Physicians Licensure data files.
[10] Telehealth encompasses a broad range of technologies and tactics utilized to deliver virtual medical, health, and education services whereas telemedicine, as defined by Maryland law, is limited to the use of interactive audio, video, or other telecommunications or electronic technology by a licensed health care provider to deliver a health care service.
[11] Md. Insurance Code §15-139.
[12] https://www.foley.com/five-telemedicine-trends-transforming-health-care-in-2016/
[13] Public Law 111–148 was signed in to law in 2010.
[14] http://californiahealthline.org/news/the-aca-and-telehealth-mutually-beneficial/



Remarks

The Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the ARRA, is intended to promote the use of technology in a meaningful way to improve health care delivery, patient outcomes, and population health. The effect of HITECH can be seen in Maryland and across the nation. EHRs are an essential component of health care reform, and physicians in Maryland have made notable progress in adopting this technology. The value of EHRs is increased when the information can be made available at the point of care delivery. Mobilization of clinical information generally requires connecting EHRs to an HIE. Connecting physicians to CRISP has been a slow process.[15] The challenges are not unique to Maryland and include: resistance from EHR vendors; costs for integrating EHRs; lack of incentives to develop interoperability; and determining a funding model. Lastly, the expanded telehealth payment policies by Medicare and commercial payors will be impactful as providers implement new care delivery models. Over the next year, MHCC plans to continue working with physicians and other health care stakeholders to develop policies and programs to foster health IT diffusion statewide.

[15] In 2009, MHCC and the Health Services Cost Review Commission designated CRISP as the State-Designated HIE. For more information, visit: www.crisphealth.org.