JUN 21 2012

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Office of the National Coordinator
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/S/

FROM: Stuart Wright
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SUBJECT: Memorandum Report: *Use of Electronic Health Record Systems in 2011 Among Medicare Physicians Providing Evaluation and Management Services*, OEI-04-10-00184

This memorandum report responds to a request from officials of the Office of the National Coordinator for Health Information Technology (ONC), who expressed interest in information about physicians' reported use of electronic health record (EHR) systems. ONC officials made this request in connection with an ongoing evaluation on the extent of documentation vulnerabilities of evaluation and management (E/M) services using EHR systems (OEI-04-10-00182), which will be issued separately. ONC officials also wanted to know how many and which EHR systems were being used and whether the Medicare physicians in our study were using certified EHR systems to document E/M services. We are also sending this report to the Centers for Medicare & Medicaid Services (CMS), which may find this information helpful as it continues administering its EHR incentive program.

SUMMARY

We found that 57 percent of Medicare physicians used an EHR system at their primary practice location in 2011. Overall, 95 percent of physicians who used an EHR system to document E/M services first began using it between 2001 and 2011. Of these physicians, the largest percentage (22 percent) began using EHR systems in 2011, the year that CMS commenced its incentive program. Additionally, three of every four Medicare physicians with an EHR system used a certified system to document E/M services. Finally, although

many EHR systems can assist physicians in assigning codes for E/M services, we found that most Medicare physicians manually assigned E/M codes.

BACKGROUND

Meaningful Use of Certified EHR Technology

The HITECH Act of 2009 established the goal of achieving meaningful use of EHR technology in Medicare.[1, 2] Meaningful use means that Medicare physicians use certified EHR technology in ways (e.g., electronic prescribing) that can be measured to improve the quality of health care for patients and adhere to the standards and criteria of the EHR incentive program.[3, 4] Starting in 2015, physicians will be subject to Medicare payment reductions if they do not demonstrate meaningful use of certified EHR systems.[5]

An EHR system is a computerized recordkeeping approach that allows physicians to record patient information electronically instead of using paper records.[6] ONC is responsible for coordinating nationwide efforts to use health information technology, such as certified EHR systems, and for the electronic exchange of health information.[7]

ONC has promulgated regulations pertaining to the initial set of standards and certification criteria and to the temporary and permanent certification programs.[8] For instance, ONC's rules contain security provisions, such as requiring that an EHR system be capable of maintaining audit logs, have automatic logoff, have access control, and permit emergency access.[9] Additionally, ONC has coordinated with CMS to promulgate

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[1] Title XIII of the American Recovery and Reinvestment Act of 2009, P.L. 111-5. See also, Department of Health and Human Services (HHS) News Release, *Accelerating Electronic Health Records Adoption and Meaningful Use*, August 2010.

[2] EHR technology includes both certified EHR systems and add-on modules.

[3] Social Security Act (SSA) § 1848(o)(2). CMS issued regulation that defines "meaningful use" for its EHR incentive program. CMS, *EHR Incentive Program Regulations and Notices*, May 2012.

[4] To participate in the EHR incentive program, Medicare physicians must attest that their certified EHR system is secure, can maintain data confidentiality, can work with other EHR systems to share information, and can perform a set of well-defined functions. ONC, *Standards & Certification Criteria Final Rule*, March 2011.

[5] SSA § 1848(a)(7). Regardless of whether physicians participate in the Medicare EHR incentive program, they will be subject to Medicare payment reductions beginning in 2015 if they do not demonstrate meaningful use of certified EHR systems. See also CMS, *Medicare and Medicaid EHR Incentive Program Basics*, October 2011.

[6] EHRs can include information about patient demographics, progress notes, medications, medical history, and clinical test results from any health care encounter. CMS, *Electronic Health Records Overview*, October 2011.

[7] Public Health Service Act § 3001, as enacted in the HITECH Act. See also ONC, *About ONC*, October 2011. Accessed at http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov__onc/1200 on February 7, 2012.

[8] See ONC's initial set of standards and certification criteria at 75 Fed. Reg. 44590 (July 28, 2010). ONC promulgated the rules for its Temporary Certification Program and its Permanent Certification Program at, respectively, 75 Fed. Reg. 36158 (June 24, 2010) and 76 Fed. Reg. 1262 (Jan. 7, 2011).

[9] 45 CFR §§ 170.302(o)-(r).

the meaningful use criteria for the first stage of the EHR incentive program.[10]

Physicians must demonstrate the meaningful use of certified EHR systems to avoid payment reductions beginning in 2015.[11] EHR systems are certified by an Authorized Testing and Certification Body (ONC-ACTB) according to certification processes defined by ONC.[12, 13] As of March 2012, approximately 1,200 EHR products were certified by ONC-ACTB. Certification criteria require that EHR systems have the necessary technological capability, functionality, and security to meet the applicable meaningful use criteria. These criteria can include the capability to maintain active medication allergy lists and provide clinical summaries for patients for each office visit, as defined in CMS regulation.[14] However, companies (i.e., vendors) that develop and market EHR systems can include additional capabilities that are not required for the purposes of certification.

In 2011, CMS began a three-stage, 5-year EHR incentive program with objectives that physicians must meet to demonstrate their meaningful use of certified EHR technology.[15] Each stage requires increasing use of EHR technology and electronic information exchange. For Stage 1, physicians must meet 15 core objectives (e.g., maintain active medication list) and 5 of 10 menu objectives (e.g., submit electronic data to immunization registries) to receive an EHR incentive payment.[16] In March 2012, CMS issued a notice of proposed rulemaking to delineate the Stage 2 meaningful use requirements for certified EHR technology. Stage 3 meaningful use requirements are expected to be proposed in early 2014.

E/M Services
Physicians and nonphysician practitioners can use EHR systems to document E/M services, which are visits to assess and manage a patient's health. Hereinafter, we refer to physicians and nonphysician practitioners as physicians.[17] In 2010, approximately 65 percent of all Medicare physicians billed for E/M services, accounting for $33.5 billion of $110 billion (30 percent) in total payments for Medicare Part B goods

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[10] See CMS's meaningful use regulations at 75 Fed. Reg. 44314 (July 28, 2010).

[11] Social Security Act § 1848(a)(7).

[12] See 75 Fed. Reg. 36158 (June 24, 2010) and 76 Fed. Reg. 1262 (Jan. 7, 2011).

[13] ONC selected six organizations as ATCBs. ONC, *ONC-Authorized Testing and Certification Bodies*, March 2012.

[14] 45 CFR §§ 170.302, 170.304, and 170.306.

[15] See 75 Fed. Reg. 44314 (July 28, 2010). Starting in 2011, physicians can receive up to $44,000 over 5 years under the Medicare EHR incentive program. See 75 Fed. Reg. 44314, 44551 (July 28, 2010). See also CMS, *EHR Incentive Programs: Overview*, April 2011.

[16] 42 CFR § 495.6.

[17] Nonphysician practitioners are health care providers (i.e., nurse practitioners, clinical nurse specialists, and physician assistants) who practice either in collaboration with or under the supervision of a physician.

and services.[18, 19] E/M services also represented 45 percent of the top 20 procedure codes billed to Medicare in 2010.[20]

E/M services are grouped into visit types. Each visit type reflects the type of service, the place of service, and the patient's status. For example, there are two types of office visits (new patient and established patient). Similarly, there are two types of hospital visits (initial and subsequent).

Most E/M services are billed using codes that reflect the complexity of the service, ranging from lower level (i.e., less complex and less expensive) to higher level (i.e., more complex and more expensive) codes.[21] Within each visit type, Medicare payment for the E/M service depends on the complexity of the visit.

EHR Systems and E/M Coding
Numerous EHR systems with various capabilities and features are available for purchase from vendors. For example, some EHR systems have add-on modules that automatically assign E/M codes based on the information provided by the physician.[22] However, ONC has not established standards for how physicians should use EHR systems to create medical records that meet CMS documentation requirements for E/M services.[23, 24]

Vendors can market these additional capabilities to physicians as tools to enhance E/M coding accuracy and efficiency, as well as to ensure that the highest E/M code is used to optimize revenue.[25] Depending on the vendor, add-on modules may include broader applications of the coding software, such as generating diagnosis and complexity levels associated with an E/M code. Other modules can also provide feedback to describe how the code was derived.

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[18] Office of Inspector General (OIG) analysis of 2010 National Claims History (NCH) File and 2010 Part B Analytic Reports (PBAR) National Procedure Summary File.

[19] Medicare payment refers to total Medicare-allowed amounts, which are 100 percent of the payment made to a physician by both Medicare and the beneficiary. Medicare pays 80 percent of allowed charges and the beneficiary is responsible for paying the remaining 20 percent.

[20] OIG analysis of 2010 PBAR National Procedure Summary File.

[21] American Medical Association (AMA), *Current Procedural Terminology*, 2010.

[22] American Health Information Management Association (AHIMA), *Automated Coding Software: Development and Use To Enhance Anti-Fraud Activities* (HHSP23320054100EC), July 2005.

[23] Per CMS policy, physicians must use either the *1995* or *1997 Document Guidelines for Evaluation and Management Services* to document the medical record with the appropriate clinical information to support the E/M code billed. CMS, *Evaluation and Management Services Guide 2010*, December 2010.

[24] AMA's comments on ONC's proposed rule, *Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition*, May 2012.

[25] AHIMA, *Automated Coding Software: Development and Use To Enhance Anti-Fraud Activities* (HHSP23320054100EC), July 2005.

Related Work
This evaluation is part of a series of studies by OIG on E/M services. OIG previously examined the coding trends of E/M services from 2001 to 2010 and identified physicians who consistently billed higher level (i.e., more complex and more expensive) codes in 2010.[26] Subsequent evaluations will determine the appropriateness of Medicare payments for E/M services and the extent of documentation vulnerabilities of E/M services using EHR systems.

The Centers for Disease Control and Prevention (CDC) provides an annual report that describes trends in the use of EHR systems and physicians' intentions to apply for EHR incentive payments. This report is based on a survey of office-based physicians who provide direct care to patients.[27] In 2011, CDC found that 57 percent of office-based physicians reported using an EHR system at their practice location. CDC also found that 34 percent of these physicians had an EHR system that met some of the meaningful use requirements. Additionally, 52 percent of office-based physicians reported their intention to apply for EHR incentive payments in 2011.

METHODOLOGY

Scope
This memorandum report describes the extent to which Medicare physicians used EHR and certified EHR systems to document E/M services through 2011. Using claims data from a companion study on E/M services, we selected a simple random sample of 2,000 Medicare physicians from a population of 441,990 physicians who provided at least 100 E/M services in 2010.[28]

Data Collection and Analysis
We conducted an electronic survey on our simple random sample of 2,000 Medicare physicians. We received responses from 1,506, for a 75-percent response rate. We conducted our survey between October 2011 and January 2012.

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[26] OIG, *Coding Trends of Medicare Evaluation and Management Services,* OEI-04-10-00180, April 2012.

[27] CDC, *Electronic Health Record Systems and Intent to Apply for Meaningful Use Incentives Among Office-Based Physician Practices: United States, 2001–2011*, November 2011. CDC defined office-based physicians as nonfederally employed physicians located in the 50 States and the District of Columbia, excluding radiologists, anesthesiologists, and pathologists.

[28] OIG, *Coding Trends of Medicare Evaluation and Management Services,* OEI-04-10-00180, April 2012. We used the National Provider Identifier (NPI) field from the NCH carrier file to determine the number of physicians. We did not verify whether those NPIs were valid. Claims submitted by physicians who provided fewer than 100 E/M services represented less than 2 percent of Medicare payments and 30 percent of all physicians who provided E/M services.

We collected descriptive information about physicians' use of EHR systems for documenting E/M services. We asked Medicare physicians whether they currently used an EHR system at their primary practice locations.[29] We defined "use" as having an EHR system that was purchased, installed, tested, and being utilized at the physician's primary practice location.[30] If physicians reported using EHR systems, we asked whether they used EHR systems to document E/M services.[31]

We also asked Medicare physicians who currently used EHR systems to document E/M services to name the year they first started using this technology. We also asked these physicians how often they used EHR systems to document E/M services and whether E/M codes are manually assigned by the physician or staff. Additionally, we asked Medicare physicians which EHR system they used to document E/M services and whether their EHR system was certified. We then used ONC's list of certified EHR technology to determine whether each physician's EHR system was certified by an ONC-ACTB.[32]

All estimates in this report are projected to the specified population or subpopulation of Medicare physicians who provided E/M services in 2010, at the 95-percent confidence level. Appendix A shows the sample size, point estimates, and 95-percent confidence intervals for all statistics in this report.

Limitations
This study relies on self-reported data from Medicare physicians. We did not request documentation to verify their responses.

Standards
This study was conducted in accordance with the *Quality Standards for Inspection and Evaluation* approved by the Council of the Inspectors General on Integrity and Efficiency.

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[29] We defined an EHR in our survey as an electronic health record of patient health information generated by one or more encounters to streamline the workflow in care-delivery organizations.

[30] We did not consider billing software as an EHR system. We excluded responses from 34 Medicare physicians because they reported using billing software instead of an EHR system.

[31] Seventy-five respondents indicated that either they do not use or do not know whether they use an EHR system to document E/M services. We excluded responses from eight Medicare physicians because later in our survey, they indicated not using EHR systems to document E/M services. We also excluded responses from two Medicare physicians because they indicated first using an EHR system to document E/M services in 2012.

[32] ONC, *Certified HIT Product List*, December 2010. Accessed at http://oncchpl.force.com/ehrcert?q=CHPL on June 14, 2012.

RESULTS

Fifty-Seven Percent of Medicare Physicians Used EHR Systems at Their Primary Practice Locations in 2011

Of the physicians who had an EHR system, 90 percent used their systems to document E/M services. See Table A-1 in Appendix A for the percentage of physicians who used an EHR system.

Overall, 95 percent of physicians who used an EHR system in 2011 to document E/M services first began using an EHR system between 2001 and 2011, as shown in Table 1. During that time, the largest percentage of physicians (22 percent) began using EHR systems in 2011, the year that CMS commenced its EHR incentive program.[33] See Table A-2 in Appendix A for the percentage of physicians who first used EHR systems to document E/M services each year from 1981 to 2011.

Table 1: Medicare Physicians Who First Used an EHR System to Document E/M Services From 2001 to 2011

Year	Percentage of Physicians
2001	0.53%
2002	0.80%
2003	2.26%
2004	5.59%
2005	8.51%
2006	7.85%
2007	8.91%
2008	10.64%
2009	12.10%
2010	15.82%
2011	22.47%
Total	**95.48%**

Source: OIG analysis of EHR survey data, 2012.

Approximately 72 percent of Medicare physicians who used an EHR system to document E/M services always used it to document E/M services. The remaining 28 percent used their EHR systems to document E/M services some of the time. Specifically, 16 percent of Medicare physicians used their EHR systems to document E/M services more than

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[33] This percentage of physicians in 2011 was statistically higher than all other percentages for the years listed in Table 1 at the 95-percent confidence level.

75 percent but less than 100 percent of the time, 8 percent from 50 to 75 percent of the time, and 4 percent less than 50 percent of the time.

Although EHR systems can automatically assign codes for E/M services, 88 percent of Medicare physicians assigned codes manually in 2011. The remaining 12 percent had codes assigned manually by staff (e.g., professional coders).

Three of Every Four Medicare Physicians With an EHR System Used Certified EHR Technology To Document E/M Services
Of the Medicare physicians who used EHR systems at their primary practice locations, 73 percent used a certified EHR system to document E/M services in 2011. Overall, physicians used more than 135 different EHR systems from more than 110 vendors. See Table A-3 in Appendix A for the percentage of Medicare physicians who used specific EHR systems by vendor. Sixty percent of Medicare physicians used a certified EHR system from one of nine vendors (see Table 2). See Table A-4 in Appendix A for the percentage of Medicare physicians who used certified EHR systems by the nine vendors listed in Table 2.

Table 2: Nine Vendors of Certified EHR Systems Used By Most Medicare Physicians to Document E/M Services in 2011

Vendor	Percentage of Physicians
Allscripts	10.90%
eClinicalWorks, LLC.	9.04%
GE Healthcare	8.64%
NextGen Healthcare	8.24%
Epic Systems Corporation	7.45%
Greenway Medical Technologies, Inc.	5.19%
Cerner Corporation	3.99%
McKesson Corporation	3.72%
Sage	3.06%
Total*	**60.24%**

*Total exceeds column sum because of rounding.
Source: OIG analysis of EHR survey data, 2012.

CONCLUSION

ONC officials expressed interest in additional information about physicians' use of EHR systems. They also wanted to know how many and which EHR systems were being used and whether the Medicare physicians in our study were using certified EHR systems to document E/M services. We provide this memorandum report to inform ONC about the use of both certified and noncertified EHR systems in 2011 among Medicare physicians who provided E/M services in 2010. Our results are consistent with CDC's 2011 annual report on the use of EHR technology among office-based physicians.

Additionally, CMS may find this information helpful as it continues administering its EHR incentive program. The use of EHR systems among Medicare physicians will likely continue to rise as more physicians participate in CMS's EHR incentive program. Also, physicians will likely continue to adopt and implement certified EHR technology to avoid Medicare payment reductions starting in 2015. Information in this report can also provide CMS with insights regarding its EHR incentive program.

This report is being issued directly in final form because it contains no recommendations. If you have comments or questions about this report, please provide them within 60 days. Please refer to report number OEI-04-10-00184 in all correspondence.

Appendix A

Table A 1: Sample Sizes, Point Estimates, and Confidence Intervals for Medicare Physicians Who Used an Electronic Health Record System in 2011			
Estimate Description	**Sample Size**	**Point Estimate**	**95-Percent Confidence Interval**
Medicare physicians using an electronic health record (EHR) system at their primary practice locations	1,472	56.73%	54.18%–59.24%
Medicare physicians using an EHR system to document evaluation and management (E/M) services	835	90.06%	87.83%–91.92%
Medicare physicians using an EHR system to document E/M services who first began using an EHR system between 2001 and 2011	752	95.48%	93.73%–96.75%
Medicare physicians using an EHR system to document E/M services 100 percent of the time	752	71.68%	68.34%–74.79%
Medicare physicians using an EHR system to document E/M services more than 75 but less than 100 percent of the time	752	15.96%	13.51%–18.76%
Medicare physicians using an EHR system to document E/M services from 50 to 75 percent of the time	752	8.24%	6.48%–10.44%
Medicare physicians using an EHR system to document E/M services less than 50 percent of the time	752	4.12%	2.91%–5.81%
Medicare physicians manually assigning E/M codes	752	87.77%	85.22%–89.93%
Medicare physicians whose staff manually assign E/M codes	752	12.23%	10.07%–14.78%
Medicare physicians using a certified EHR system at primary practice location	752	73.01%	69.71%–76.07%
Medicare physicians using a certified EHR system from one of nine vendors*	752	60.24%	56.70%–63.67%
*The nine vendors were Allscripts, eClinicalWorks, LLC., GE Healthcare, Epic Systems Corporation, Greenway Medical Technologies, Inc., Cerner Corporation, McKesson Corporation, and Sage.			

Source: Office of Inspector General (OIG) analysis of EHR survey data, 2012.

Appendix A

Table A 2: Point Estimates and Confidence Intervals of Medicare Physicians Who First Used an EHR System to Document E/M Services From 1981 to 2011 (n 752)		
Year	Point Estimate	95-Percent Confidence Interval
1981	0.13%	0.02%–0.94%
1990	0.13%	0.02%–0.94%
1991	0.13%	0.02%–0.94%
1994	0.40%	0.13%–1.23%
1995	0.40%	0.13%–1.23%
1996	0.13%	0.02%–0.94%
1997	0.53%	0. 20%–1.41%
1998	1.20%	0.62%–2.29%
1999	0.27%	0.07%–1.06%
2000	1.20%	0. 62%–2.29%
2001	0.53%	0.20%–1.41%
2002	0.80%	0.36%–1.77%
2003	2.26%	1.40%–3.61%
2004	5.59%	4.15%–7.48%
2005	8.51%	6.71%–10.73%
2006	7.85%	6.12%–10.00%
2007	8.91%	7.07%–11.17%
2008	10.64%	8.62%–13.06%
2009	12.10%	9.95%–14.64%
2010	15.82%	13.38%–18.62%
2011	22.47%	19.62%–25.60%
Total	**100.00%**	**--**

Source: OIG analysis of EHR survey data, 2012.

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor* (n=752)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
Acura Medical Solutions, Inc.	mMD.Net EHR	0.13%	0.02%–0.94%
Advanced Data Systems	MedicsDocAssistant	0.40%	0.13%–1.23%
Advanced Health Management Systems	Advanced Health Management Systems EHR	0.13%	0.02%–0.94%
Advanced MD	Advanced MD EHR	0.27%	0.07%–1.05%
Allmeds, Inc.	Allmeds EMR	0.66%	0.28%–1.59%
Allscripts	Allscripts Enterprise	0.53%	0.20%–1.41%
Allscripts	Allscripts MyWay	0.80%	0.36%–1.76%
Allscripts	Allscripts PayerPath	0.13%	0.02%–0.94%
Allscripts	Allscripts Professional	1.46%	0.81%–2.62%
Allscripts	Allscripts Tiger	0.13%	0.02%–0.94%
Allscripts	Did Not Specify	5.32%	3.93%–7.17%
Allscripts	MediNotes	0.53%	0.20%–1.41%
Allscripts	Sunrise Ambulatory Care	0.13%	0.02%–0.94%
Allscripts	Sunrise Ambulatory Care Module Set	0.13%	0.02%–0.94%
Allscripts	Sunrise Clinical Manager	0.27%	0.07%–1.05%
Allscripts	TouchWorks	1.46%	0.81%–2.62%
Allscripts-Misys Healthcare Solutions, Inc.	MISYS Allscripts EHR	1.20%	0.62%–2.28%
Altapoint Data Systems, LLC	Altapoint EHR	0.40%	0.13%–1.23%
Altos Solutions, Inc.	OncoEMR	0.13%	0.02%–0.94%
AmazingCharts.com, Inc.	Amazing Charts	2.26%	1.41%–3.60%
American Medical Software	American Medical Software EMR	0.13%	0.02%–0.94%
Antek HealthWare, LLC	Alteer Office	0.80%	0.36%–1.76%
*Vendors use the terms EHR and electronic medical record (EMR) systems interchangeably.			

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor * (n=752) (Continued)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
Aprima Medical Software, Inc.	Aprima EHR	0.80%	0.36%–1.76%
ASP.MD, Inc.	ASP.MD Medical Office System (AMOS)	0.13%	0.02%–0.94%
Bizmatics, Inc.	PrognoCIS EMR	0.27%	0.07%–1.05%
Cerner Corporation	Cerner PowerChart	3.59%	2.48%–5.18%
Cerner Corporation	Cerner PowerWorks	0.40%	0.13%–1.23%
ClearPractice	ClearPractice	0.13%	0.02%–0.94%
Community Computer Service, Inc.	MEDENT	2.13%	1.31%–3.44%
Compulink Business Systems	Compulink	0.13%	0.02%–0.94%
Comtron, Inc.	Medgen EHR	0.27%	0.07%–1.05%
Covemed Systems, Inc.	Covemed EMR	0.13%	0.02%–0.94%
Data Tec, Inc.	PowersoftMD	0.27%	0.07%–1.05%
Datanational	eConnect Portal	0.27%	0.07%–1.05%
DOX Podiatry	DOX Podiatry EHR	0.13%	0.02%–0.94%
eCast Corporation	eCast EMR	0.27%	0.07%–1.05%
eClinicalWorks, LLC	eClinicalWorks	9.04%	7.19%–11.31%
EDIMS, LLC	EDIMS	0.13%	0.02%–0.94%
EHR Scope, LLC	CareSeries EHR	0.40%	0.13%–1.23%
Elekta-IMPAC Medical Systems, Inc.	Mosaiq	0.66%	0.28%–1.59%
e-MDs, Inc.	e-MDs Solution Series	0.27%	0.07%–1.05%
Emergisoft Corporation	Emergisoft EHR	0.13%	0.02%–0.94%
Encite, Inc.	Encite EHR	0.13%	0.02%–0.94%
*Vendors use the terms EHR and EMR systems interchangeably.			

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor * (n=752) (Continued)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
Epic Systems Corporation	Epic Care	0.40%	0.13%–1.23%
Epic Systems Corporation	Epic Care Ambulatory EMR	6.91%	5.31%–8.96%
Epic Systems Corporation	Excellian	0.13%	0.02%–0.94%
Falcon, LLC	Falcon EHR	0.27%	0.07%–1.05%
First Insight Corporation	MaximEyes SQL	0.13%	0.02%–0.94%
Forerun, Inc.	Forerun EHR	0.13%	0.02%–0.94%
Gateway EDI	Gateway EDI	0.13%	0.02%–0.94%
GE Healthcare	Centricity EMR	6.38%	4.85%–8.37%
GE Healthcare	Centricity Practice Solution	1.86%	1.11%–3.12%
GE Healthcare	IDX	0.27%	0.07%–1.05%
GE Healthcare	Logician EMR	0.13%	0.02%–0.94%
GEMMS	GEMMS One	0.93%	0.44%–1.94%
Glenwood Systems, LLC	GlaceEMR	0.27%	0.07%–1.05%
gMed	gGastro EMR	0.13%	0.02%–0.94%
Greenway Medical Technologies, Inc.	PrimeSUITE EHR	5.19%	3.81%–7.02%
Health Innovation Technologies, Inc.	Revolution EHR	0.27%	0.07%–1.05%
Health IT Services Group	Acumen EHR	0.66%	0.28%–1.59%
Healthcare Management Systems, Inc.	HMS Ambulatory EHR	0.27%	0.07%–1.05%
HealthFusion	MediTouch	0.27%	0.07%–1.05%
Healthland	Healthland EMR	0.13%	0.02%–0.94%
Holt Systems	eMedRec	0.27%	0.07%–1.05%
* Vendors use the terms EHR and EMR systems interchangeably.			

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor * (n=752) (Continued)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
iMedCORE	iMedCORE EMR	0.13%	0.02%–0.94%
Infinite Software Solutions, Inc.	MD-Reports	0.13%	0.02%–0.94%
Infor-Med Medical Information Systems, Inc.	Praxis EMR	0.53%	0.20%–1.41%
InteGreat, Inc.	IC-Chart	1.33%	0.72%–2.45%
Intelligent Medical Objects, Inc.	IMO Diagnosis Code Check	0.13%	0.02%–0.94%
Internally Developed System	Internally Developed System	1.20%	0.62%–2.28%
Intuitive Medical Software, LLC	Urochart EHR	0.13%	0.02%–0.94%
iSALUS Healthcare	OfficeEMR	0.27%	0.07%–1.05%
ISM, Inc.	OmniMD	0.13%	0.02%–0.94%
iton	MedicsDocAssistant	0.40%	0.13%–1.23%
Kaiser Computers, Inc.	Drs Enterprise	0.13%	0.02%–0.94%
Lake Superior Software, Inc.	Medical and Practice Management (MPM) Suite MAGIC	0.27%	0.07%–1.05%
Liquid Medical Office, Inc.	Liquid EMR	0.13%	0.02%–0.94%
LSS Data Systems	LSS	0.27%	0.07%–1.05%
MacPractice, Inc.	MacPractice MD	0.13%	0.02%–0.94%
McKesson Corporation	Horizon Ambulatory Care	0.66%	0.28%–1.59%
McKesson Corporation	Horizon Clinicals	0.27%	0.07%–1.05%
McKesson Corporation	iKnowmed EHR	0.80%	0.36%–1.76%
McKesson Corporation	Medisoft Clinical	0.40%	0.13%–1.23%
McKesson Corporation	Practice Partner Patient Records	1.46%	0.81%–2.62%
McKesson Corporation	Did Not Specify	0.13%	0.02%–0.94%
* Vendors use the terms EHR and EMR systems interchangeably.			

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor * (n=752) (Continued)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
MD Productivity, Inc.	MD Dictate	0.13%	0.02%–0.94%
MED3000	MED3000	0.40%	0.13%–1.23%
Medamation, LLC	Medamation	0.13%	0.02%–0.94%
MedAptus, Inc.	MedAptus EMR	0.13%	0.02%–0.94%
MedcomSoft	MedcomSoft Record	0.13%	0.02%–0.94%
Medhost, Inc.	Medhost	0.27%	0.07%–1.05%
Medical Informatics Engineering	Did Not Specify	0.13%	0.02%–0.94%
Medical Information Technology, Inc.	MEDITECH	0.40%	0.13%–1.23%
Medical Software Associates	IMS EMR	0.66%	0.28%–1.59%
MedInformatix	MedInformatix Enterprise Practice Management	0.93%	0.44%–1.94%
MediSYS	MediSYS EHR	0.40%	0.13%–1.23%
Meditab	IMS Clinical	0.13%	0.02%–0.94%
meridianEMR, Inc.	meridianEMR	0.80%	0.36%–1.76%
Microfour, Inc.	PracticeStudio	0.27%	0.07%–1.05%
Navinet, Inc.	Navinet EMR	0.13%	0.02%–0.94%
NexTech Systems, Inc.	NexTech	0.13%	0.02%–0.94%
NextGen Healthcare	NextGen	8.24%	6.48%–10.43%
Noteworthy Medical Systems, Inc.	NetPracticeEHRweb	0.13%	0.02%–0.94%
OCERIS, Inc.	FlexMedical	0.13%	0.02%–0.94%
Office Ally	Office Ally EHR 24/7	0.27%	0.07%–1.05%
* Vendors use the terms EHR and EMR systems interchangeably.			

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor * (n=752) (Continued)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
Practice Fusion, Inc.	Practice Fusion	1.73%	1.01%–2.95%
Prime Clinical Systems	Patient Chart Manager	0.40%	0.13%–1.23%
ProMED Clinical Systems	ProMED	0.40%	0.13%–1.23%
Propractica, Inc.	StreamlineMD EMR	0.13%	0.02%–0.94%
Pulse, Inc.	Pulse EHR	0.66%	0.28%–1.59%
QuadraMed	QuadraMed EHR	0.13%	0.02%–0.94%
Quest Diagnostics Incorporated	Care 360	0.53%	0.20%–1.41%
Sage	Sage Intergy EHR	3.06%	2.04%–4.56%
Siemans	INVISION	0.13%	0.02%–0.94%
Siemans	Soarian	0.27%	0.07%–1.05%
SOAPware, Inc.	SOAPware	1.73%	1.01%–2.95%
SRS Software, Inc.	SRS Chart Manager	0.66%	0.28%–1.59%
STI Computer Services, Inc.	ChartMaker Clinical	0.40%	0.13%–1.23%
SuccessEHS	SuccessEHS	0.53%	0.20%–1.41%
Treasure Coast Management Group	HealthMatics EHR	1.46%	0.81%–2.62%
T-System, Inc.	T-System	0.13%	0.02%–0.94%
U.S. Department of Veterans Affairs	Computerized Patient Record System	0.13%	0.02%–0.94%
Ulrich Medical Concepts	Team Chart Concept	0.27%	0.07%–1.05%
University of California Los Angeles Healthcare System	UCLA Healthcare System Medical Record	0.13%	0.02%–0.94%
Urgent Care Works	Urgent Care Works EMR	0.13%	0.02%–0.94%
Varian Medical Systems	ARIA	0.27%	0.07%–1.05%
* Vendors use the terms EHR and EMR systems interchangeably.			

Appendix A

Table A 3: Point Estimates and Confidence Intervals for Medicare Physicians Who Used an EHR System by Vendor * (n=752) (Continued)			
Vendor	**EHR System**	**Point Estimate**	**95-Percent Confidence Interval**
VersaForm Corporation	VersaForm EHR	0.13%	0.02%–0.94%
Visionary Medical Systems, Inc.	Dream EMR	0.27%	0.07%–1.05%
Waiting Room Solutions	Waiting Room Solutions EHR	0.13%	0.02%–0.94%
Wyoming Department of Health	Total Health Record	0.13%	0.02%–0.94%
Don't Know	Don't Know	0.27%	0.07%–1.05%
Unknown	CarePlus	0.13%	0.02%–0.94%
Unknown	digital medicine	0.13%	0.02%–0.94%
Unknown	MD Logic	0.13%	0.02%–0.94%
Unknown	Urgent Care	0.13%	0.02%–0.94%
* Vendors use the terms EHR and EMR systems interchangeably.			

Source: OIG analysis of EHR survey data, 2012.

Appendix A

Table A 4: Point Estimates and Confidence Intervals for Nine Vendors With Certified EHR Systems (n 752)		
Vendor	**Point Estimate**	**95-Percent Confidence Interval**
Allscripts	10.90%	8.87%–13.34%
Cerner Corporation	3.99%	2.80%–5.65%
eClinicalWorks, LLC.	9.04%	7.19%–11.31%
Epic Systems Corporation	7.45%	5.78%–9.55%
GE Healthcare	8.64%	6.84%–10.87%
Greenway Medical Technologies, Inc.	5.19%	3.81%–7.02%
McKesson Corporation	3.72%	2.58%–5.34%
NextGen Healthcare	8.24%	6.48%–10.43%
Sage	3.06%	2.04%–4.56%

Source: OIG analysis of EHR survey data, 2012.