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Using Health IT for Care Coordination: Insights From Six Medicare Accountable Care Organizations

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What **OIG** Found

Overall, health information technology (health IT) tools have enabled the six Medicare accountable care organizations (ACOs) we visited to better coordinate patient care. (An ACO is a network of doctors, hospitals, or other healthcare providers that come together voluntarily to coordinate high-quality care for their patients.) ACOs that used a single electronic health record (EHR) system across their provider networks were able to share data in real time, enhancing providers' ability to coordinate care. A small number of ACOs had access to robust health information exchanges, which give ACOs access to patient data even when patients see providers outside the ACOs' networks. Most of the ACOs we visited used data analytics to inform their care coordination by identifying and grouping patients according to the potential severity and cost of their health conditions.

However, the ACOs we visited still face challenges in these areas. ACOs that used multiple EHR systems had to rely on other means to share data among providers, either using additional health IT tools or relying on phone calls and faxes. Although EHRs are intended to streamline, coordinate, and improve care, ACOs report that EHRs can also be burdensome and frustrating for providers. ACOs also faced challenges from physician burnout due to the workload of managing EHRs. Most of the ACOs had access to health information exchanges with little or incomplete data, making it difficult to coordinate care when patients saw providers outside the ACOs' networks. Few of the ACOs use analytics to customize care to an individual patient's needs. Finally, few ACOs offer health IT tools to patients, other than online portals to their EHRs.

What **OIG** Concludes

The ACOs we visited have used health IT to aid in care coordination in a variety of ways. However, the full potential of health IT has not been realized. ACOs vary in the extent to which they can rely on health IT tools, in some cases because those tools cannot reach all providers involved in a patient's care, or because the tools lack the necessary information that ACOs need. Achieving the interoperability needed for seamless care coordination places burdens on ACOs to either invest in a single EHR system or use other methods, such as non-health IT means, to communicate health information.

Full report can be found at oig.hhs.gov/oei/reports/oei-01-16-00180.asp

Key Takeaway

The six accountable care organizations we visited have used health IT tools to better coordinate care for their patients. However, the promise of seamless integration and coordination across providers and care settings has not yet been realized.

Why **OIG** Did This Review

This evaluation provides insights into how select ACOs have used health IT tools to better coordinate care for their patients. It can help ACOs anticipate challenges they might face, and it can help the Centers for Medicare & Medicaid Services (CMS) and the Office of the National Coordinator for Health IT (ONC) assist ACOs in overcoming those challenges. Health IT has significantly enhanced providers' opportunities to coordinate patient care across healthcare settings. Medicare patients often have chronic medical conditions that require care from multiple providers. Care coordination helps ensure that patients' needs for health services are met over time and across multiple encounters and settings. CMS has identified care coordination as integral to achieving better care, improved health, and lower costs. CMS has implemented various payment models for promoting these goals in Medicare, including models that use ACOs.

How **OIG** Did This Review

We based this data brief on interviews we conducted during site visits to six Medicare ACOs (four were Next Generation ACOs and two participated in the Medicare Shared Savings Program). We considered the following factors when selecting ACOs: their performance on a quality measure focused on care coordination and patient safety, a minimum of 3 years of experience as a Medicare ACO, geographic variation, and recommendations from CMS and ONC. We discussed with ACO administrative staff and providers how ACOs use health IT to coordinate care for their patients.

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Background

Medicare patients often have chronic medical conditions that require care from multiple providers. In fact, more than half of Americans older than 65 require significant medical or functional support. This care comes at a considerable cost to the program, even as quality outcomes may not reach desired goals.¹ As a result, alternative payment approaches to healthcare have emerged in which providers have financial incentives to identify risky patients and coordinate their care before those patients' complex needs result in even higher costs. Accountable Care Organizations (ACOs) are one type of this alternative approach. An ACO is a network of doctors, hospitals, or other healthcare providers that come together voluntarily to coordinate high-quality care for their patients and be accountable for the total cost and quality of the care provided.

Care Coordination

According to the Centers for Medicare & Medicaid Services (CMS), coordinated care aims to ensure that patients get the right care at the right time, while avoiding unnecessary duplication of services and preventing medical errors.² The goal of care coordination is to facilitate the appropriate and efficient delivery of healthcare services both within and across systems of care.³ The Department of Health and Human Services (HHS or the Department) is focused on transforming the healthcare system from one that pays for procedures and sickness to one that pays for outcomes and health. Two focus areas of the shift to value-based care are maximizing the promise of health information technology (health IT), including through promoting interoperability and removing barriers to care coordination.⁴

¹ Bruce Chernof and Mark McClellan, "Form Follows Funding: Opportunities for Advancing Outcomes for Complex Care Patients Using Alternative Payment Methods," *Health Affairs Blog*, August 10, 2018. Accessed at <https://www.healthaffairs.org/doi/10.1377/hblog20180803.928422/full/> on November 1, 2018.

² CMS, *Coordinating Your Care*. Accessed at <https://www.medicare.gov/manage-your-health/coordinating-your-care/coordinating-your-care.html> on November 1, 2018.

³ Agency for Healthcare Research and Quality, *Care Coordination Atlas*, ch. 2. Accessed at <https://www.ahrq.gov/professionals/prevention-chronic-care/improve/coordination/atlas2014/chapter2.html> on November 1, 2018.

⁴ HHS, *Secretary Priorities*. Accessed at <https://www.hhs.gov/about/leadership/secretary/priorities/index.html#value-based-healthcare> on April 19, 2019.

Health Information Technology

Health IT refers to the hardware, software, and network infrastructure that enables patient data to be recorded and shared on an ongoing basis among multiple providers and across care settings.⁵ Providers can enhance care coordination with health IT tools to create data and facilitate data exchange. Health IT can help reduce duplicative or unnecessary testing, provide clinicians with comprehensive information for decisionmaking, and prevent medical errors. It can be particularly useful for beneficiaries who see multiple specialists and transition among care settings within a provider network, as all the providers involved can have up-to-date information as the patient transitions among these different settings.⁶

Health IT is the computer hardware and software that facilitates the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decisionmaking.

Electronic Health Records (EHRs) are real-time, patient-centered records that contain information about medical history, diagnoses, medications, immunization dates, allergies, radiology images, and lab and test results. EHRs may also include medication lists and treatment plans.⁷ In 2011, CMS implemented regulations for the Medicare and Medicaid EHR Incentive Programs, now known as the Promoting Interoperability Programs, to encourage eligible providers and hospitals to adopt, implement and meaningfully use certified EHR technology.⁸ Between May 2011 and July 2018, CMS paid incentive payments totaling nearly \$25 billion to providers through this program.⁹ EHRs are part of a broader suite of health IT applications used to coordinate health management. Below, see a glossary of health IT terms that this report uses.

⁵ Office of the National Coordinator for Health IT (ONC), *Health IT Terms—Glossary of Selected Terms Related to Health IT*. Accessed at <https://www.healthit.gov/topic/health-it-basics/glossary> on February 19, 2019. See 42 U.S.C. § 300jj(5) for the complete statutory definition of health IT.

⁶ ONC, *Benefits of EHRs*. Accessed at <https://www.healthit.gov/topic/health-it-basics/benefits-ehrs> on November 1, 2018.

⁷ ONC, *What is An Electronic Health Record (EHR)?* Accessed at <https://www.healthit.gov/faq/what-electronic-health-record-ehr> on November 1, 2018.

⁸ 75 Fed. Reg. 44313 (July 28, 2010). The Health Information Technology for Economic and Clinical Health Act (HITECH Act), enacted as part of the American Recovery and Reinvestment Act of 2009, P.L. No. 111-5, established the Medicare and Medicaid EHR incentive programs to promote the adoption of EHRs and to improve healthcare quality, safety, and efficiency through the promotion of health IT and electronic health information exchange.

⁹ CMS, *Data and Program Reports*. Accessed at <https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/DataAndReports.html> on November 1, 2018.

Glossary of Health IT Terms That This Report Uses

Electronic health record (EHR): a digital health record that generally includes medical history, lab results, charts, and treatment plans.

Health information exchange (HIE): a network that provides the capability to electronically move clinical information among disparate healthcare information systems, and maintain the meaning of the information being exchanged.

Population-level analytic tools: software applications that allow organizations to identify trends and assess risk using large data sets made up of their patient populations' health information.

Patient-facing tools: health IT tools that patients can interact with directly, such as Internet-based portals to their EHRs.

Other types of health IT include networks over which health data are exchanged. HIEs are a common example of this kind of network. HIEs are networks that allow healthcare providers to securely access, update, and share data in a beneficiary's EHR across multiple systems.¹⁰ HIEs can exist within a single care organization or across multiple care organizations. They may receive and transmit data from a variety of different EHRs, and because of interoperability, ensure that the information is useful when received by disparate systems.¹¹

HIEs vary in both type and reach. They can be State, nonprofit, or government-sponsored networks that serve local, regional, or State-wide areas. In some cases, ONC has administered funding to States to expand HIEs.¹² EHR vendors and national exchange networks may also provide HIE services.

Interoperability enables the secure exchange of electronic health information with, and use of electronic health information from, other health IT without special effort on the part of the user.

Accountable Care Organizations

ACOs are composed of doctors, hospitals, or other healthcare providers that come together voluntarily to coordinate high-quality care for their patients and agree to be accountable for the total cost and quality of the care provided. ACOs also work to improve what is known as population

¹⁰ ONC, *Health Information Exchange (HIE)*. Accessed at <https://www.healthit.gov/providers-professionals/health-information-exchange/what-hie> on November 1, 2018.

¹¹ See 42 U.S.C. § 300jj(9) for the complete statutory definition of interoperability.

¹² ONC, *Getting Started with HIE*. Accessed at <https://www.healthit.gov/topic/health-it-basics/getting-started-hie> on November 1, 2018.

health—i.e., the health outcomes of a group of individuals, including the distribution of such outcomes within the group.¹³

ACOs that participate in CMS’s alternative payment models can reward providers financially for improving quality of care and reducing unnecessary costs. When ACOs meet certain benchmarks for reducing Medicare spending while also achieving certain scores on quality measures, they can share in the savings.¹⁴

Two of CMS’s alternative payment models in which ACOs participate are the Medicare Shared Savings Program (MSSP), a permanent national program, and the Next Generation ACO Model (Next Generation), a model tested under the authority of the Center for Medicare and Medicaid Innovation. These models differ in how much risk the ACOs accept and how much of any savings the ACOs can share. Next Generation ACOs typically accept greater risk than MSSP ACOs, and some MSSP ACOs can currently accept no downside risk.¹⁵

ACOs in the MSSP must have at least 5,000 fee-for-service Medicare beneficiaries, and Next Generation ACOs must have at least 10,000 beneficiaries; both types of ACOs must also agree to participate as an ACO for a minimum number of years, which varies according to the program and the model and starting year. ACOs are accountable for the total cost of care for the beneficiaries they serve even if those patients receive care outside the ACOs.¹⁶ To be eligible for financial rewards and avoid financial penalties, ACOs must report data to CMS and meet quality performance standards and financial benchmarks that CMS sets.¹⁷

ACOs can be networks of hospitals, specialists, and providers of post-acute care. Primary care physicians can coordinate a patient’s medical care in an effort to deliver high-quality care while avoiding unnecessary services such as duplicative tests. For example, a primary care physician’s staff could coordinate care by organizing a patient’s services, such as visits to specialists, post-acute care treatment, and social services such as Meals on Wheels.

Departmental Initiatives

HHS has proposed or is part of several initiatives that would further the role of health IT in care coordination and would affect ACOs. HHS is also

¹³ David Kindig, MD, PhD and Greg Stoddart, PhD, “What is Population Health?” *American Journal of Public Health*, March 2003; 93(3): 380–383.

¹⁴ CMS, *Accountable Care Organizations*. Accessed at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/index.html> on September 25, 2018.

¹⁵ CMS, *Next Generation ACO Model*. Accessed at <https://innovation.cms.gov/initiatives/Next-Generation-ACO-Model/> on November 1, 2018.

¹⁶ 42 CFR § 425.100.

¹⁷ 42 CFR § 425.500.

engaged in the Regulatory Sprint to Coordinated Care, a multi-agency initiative to address barriers to care coordination.¹⁸

ONC's Initiatives: In January 2018, ONC published a draft of its Trusted Exchange Framework and Common Agreement, designed to help achieve nation-wide interoperability and data exchange across disparate health information networks. ONC plans to achieve this by outlining a common set of principles as well as minimum terms and conditions for trusted data exchange.¹⁹ In March 2019, ONC issued a proposed rule implementing certain provisions of the 21st Century Cures Act with the purpose of advancing interoperability and supporting the access, exchange, and use of electronic health information.²⁰

CMS's Initiatives: CMS has recently introduced regulatory changes and new initiatives that could significantly affect both ACOs and health IT. In December 2018, CMS published a final rule that makes changes to MSSP to encourage ACOs to transition to performance-based risk more quickly. The rule also expands telehealth payments for certain services regardless of a patient's geographical location.²¹ In March 2019, CMS issued a proposed rule seeking to improve patients' access to their electronic health data and enhance interoperability and care coordination across healthcare payers.²²

ONC and CMS's Strategy To Reduce the Administrative Burden of Health IT and EHRs: In November 2018, ONC and CMS released a draft strategy to reduce the burden that frontline healthcare providers face in using health IT tools. The strategy aims to:

- reduce the effort and time required for healthcare providers to record information in EHRs at the point of care;
- reduce the effort and time required to meet reporting requirements for clinicians, hospitals, and healthcare organizations; and
- improve the functionality and ease of use of EHRs.

¹⁸ HHS, "Secretary Azar Highlights Recognition of HHS as Top Agency for Regulatory Reform." Accessed <https://www.hhs.gov/about/news/2018/10/17/secretary-azar-highlights-recognition-of-hhs-as-top-agency-for-regulatory-reform.html>, on April 19, 2019. See 83 Fed. Reg. 64302 (Dec. 14, 2018), 83 Fed. Reg. 43607 (Aug. 27, 2018), and 83 Fed. Reg. 29524 (Jun. 25, 2018).

¹⁹ ONC, *Draft Trusted Exchange Framework*, January 5, 2018. Accessed at <https://www.healthit.gov/sites/default/files/draft-trusted-exchange-framework.pdf> on November 1, 2018.

²⁰ 84 Fed. Reg. 7424 (Mar. 4, 2019).

²¹ 83 Fed. Reg. 67816 (Dec. 31, 2018).

²² 84 Fed. Reg. 7610 (Mar. 4, 2019).

The draft strategy also recommends actions for HHS to take to address these issues.²³

MyHealthEData initiative: In May 2018, the White House Office of American Innovation announced the MyHealthEData initiative, a Government-wide collaboration that aims to ensure that patients can access and control their healthcare data easily, safely, and securely. Several HHS agencies are part of the initiative, including CMS, ONC, and the National Institutes of Health.²⁴ Through the MyHealthEData initiative, CMS launched Blue Button 2.0, which is a software tool (i.e., an application programming interface, or API) that contains data from Medicare Parts A, B, and D for 53 million beneficiaries. Blue Button 2.0 is designed to create a standards-based API that allows software developers to design applications that enable Medicare beneficiaries to connect their claims data to services they trust.²⁵ CMS's March 2019 proposed rule seeks to expand the use of the APIs similar to the Blue Button 2.0 to Medicare Advantage organizations, State Medicaid programs, Medicaid managed care plans, and others.²⁶

Related Work

The Office of Inspector General (OIG) has conducted work on both ACOs and health IT. For ACO-related work, OIG found that over the first 3 years of the program, most MSSP ACOs reduced Medicare spending and generally improved the quality of the care they provided.²⁷ OIG is currently evaluating ACOs' specific strategies to reduce spending and improve quality.²⁸

Related OIG work on health IT has examined hospitals' use of antifraud safeguards in their EHRs, hospitals' contingency plans for EHR outages, and CMS's EHR incentive payments. OIG found that nearly all hospitals with EHR technology had in place the recommended safeguards against fraud and abuse, but that such hospitals may not be using them to their full extent.²⁹

²³ ONC and CMS, *Strategy on Reducing Regulatory and Administrative Burden Relating to the Use of Health IT and EHRs—Draft for Public Comment*. Accessed at <https://www.healthit.gov/topic/usability-and-provider-burden/strategy-reducing-burden-relating-use-health-it-and-ehrs> on December 12, 2018.

²⁴ CMS, *Trump Administration Announces MyHealthEData Initiative at HIMSS18*. Accessed at <https://www.cms.gov/newsroom/fact-sheets/trump-administration-announces-myhealthedata-initiative-himss18> on August 21, 2018.

²⁵ CMS, *Blue Button 2.0*. Accessed at <https://bluebutton.cms.gov/#value-and-use-cases> on August 21, 2018.

²⁶ 84 Fed. Reg. 7610 (Mar. 4, 2019).

²⁷ OIG, *Medicare Shared Savings Program Accountable Care Organizations Have Shown Potential for Reducing Spending and Improving Quality*, OEI-02-15-00450, August 2017.

²⁸ OIG, *Accountable Care Organizations' Strategies Aimed at Reducing Spending and Improving Quality*, OEI-02-15-00541.

²⁹ OIG, *Not All Recommended Fraud Safeguards Have Been Implemented in Hospital EHR Technology*, OEI-01-11-00570, December 2013. OIG has done additional work on ACOs, including A-09-17-03010.

CMS and ONC concurred with OIG's recommendation that audit logs, which capture data elements such as date, time, and user stamps, be operational at all times. ONC issued proposed rules for the certification of health IT that included proposals addressing the operational status of audit logs.³⁰ However, ONC received mixed reactions to the proposal and decided that no further changes to the certification criteria were necessary.³¹ OIG also found that almost all hospitals reported having written EHR contingency plans, and that most hospitals also reported having implemented recommended practices, such as maintaining backup copies of EHR data offsite, supplying paper medical record forms for use when the EHR is unavailable, and training and testing staff on contingency plans.³² Finally, OIG audited CMS's EHR incentive payments to providers and found that CMS paid hundreds of millions of dollars to providers who did not comply with Federal requirements.³³

Methodology

Scope. We based this data brief on our analysis of interviews that we conducted during site visits to six Medicare ACOs. We considered the following factors when selecting ACOs:

- high performance on a quality measure focused on care coordination and patient safety;
- a minimum of 3 years of experience as a Medicare ACO;
- geographic variation; and
- recommendations from CMS and ONC regarding ACOs with well-established infrastructures for health IT.

The site visits took place during April and May 2018.

Interviews. Each site visit consisted of interviews with ACO administrative and technical staff as well as separate interviews with clinical staff. We asked specifically about the ACOs' EHR systems, the extent to which they use HIEs, how they leveraged population-level data, their patients' use of health IT tools, and any other areas in which the ACOs used health IT to coordinate care. Interviews with clinical staff generally covered the efficacy, efficiency, and usefulness of health IT in their respective practices.

Questionnaire. Prior to the site visits, we sent each ACO a questionnaire that sought basic demographic information (e.g., the type of ACO, how long the ACO had been a Medicare ACO, its number of providers, its number of Medicare beneficiaries, etc.) and whether it uses common health IT tools.

³⁰ 79 Fed. Reg. 10904 (Feb. 26, 2014) and 80 Fed. Reg. 16846 (Mar. 30, 2015).

³¹ 80 Fed. Reg. 16846 (Mar. 30, 2015) and 80 Fed. Reg. 62656 (Dec. 11, 2015).

³² OIG, *Hospitals Largely Reported Addressing Requirements for EHR Contingency Plans*, OEI-01-14-00570, July 2016.

³³ OIG, *Medicare Paid Hundreds of Millions in Electronic Health Record Incentive Payments That Did Not Comply With Federal Requirements*, A-05-14-00047, June 2017.

Analysis. We conducted qualitative analysis of our interviews to identify commonalities, differences, and challenges in how the ACOs with which we spoke use health IT to coordinate care. We used the content of our interviews to analyze how the ACOs use health IT to facilitate care coordination at the point of care for each patient as well as for their entire patient populations. In examining health IT at the point of care, we considered how ACOs use EHRs and HIEs and the challenges that they face in using these tools. We also assessed whether and how the ACOs leveraged population-level analytics to enhance care and the extent to which their patient populations engaged with the health IT tools available to them. We based the bulk of our analysis on our discussions with the ACOs' administrative and technical staff. Where appropriate, we included information from our discussions with providers.

Limitations. We based our analysis on information that the ACOs provided during OIG's site visits. We did not independently verify the information provided by the ACOs during the interviews beyond confirming basic demographic information provided by the questionnaires sent prior to the site visits. We do not endorse any of the strategies that ACOs discussed with us. We also based our analysis on the six ACOs that we visited for this study, and the results are not generalizable to a larger population of ACOs.

Standards

We conducted this study in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

A Brief Profile of the Medicare Accountable Care Organizations We Visited

We visited six Medicare ACOs with established health IT infrastructure. Our purposive selection of the six was based in part on suggestions by CMS and ONC.

ACO 1	
Number of Medicare beneficiaries	7,000
Number of physicians	152
Years as a Medicare ACO	6
ACO type	MSSP
Other notes: ACO 1 is physician-led and works directly with teams of clinicians, care coordinators, and support staff to coordinate care.	

ACO 2	
Number of Medicare beneficiaries	30,524
Number of physicians	2,145
Years as a Medicare ACO	7
ACO type	Next Generation
Other notes: ACO 2 is physician-run and includes partnerships with regional practices, hospitals, labs, and nursing homes.	

ACO 3	
Number of Medicare beneficiaries	30,000
Number of physicians	1,400
Years as a Medicare ACO	7
ACO type	Next Generation
Other notes: Sixty percent of ACO 3's physicians are independent or part of a physicians' group.	

ACO 4	
Number of Medicare beneficiaries	72,651
Number of physicians	5,173
Years as a Medicare ACO	6
ACO type	MSSP
Other notes: ACO 4 is a physician-led partnership composed of 10 smaller physician organizations.	

ACO 5	
Number of Medicare beneficiaries	22,000
Number of physicians	750
Years as a Medicare ACO	7
ACO type	Next Generation
Other notes: ACO 5 is a network of healthcare providers including general practices, specialists, and hospital partners.	

ACO 6	
Number of Medicare beneficiaries	51,918
Number of physicians	2,996
Years as a Medicare ACO	7
ACO type	Next Generation
Other notes: ACO 6 is a partnership among multiple hospitals, primary care practices, specialty practices, and other healthcare providers.	

Coordinating at the Point of Care: Electronic Health Records

The promise of EHRs

EHRs hold the potential to integrate and organize a patient's health information and facilitate its instant distribution among all providers involved in the patient's care. EHRs can offer access to evidence-based tools that providers can use to make decisions about a patient's care, both improving patient outcomes and avoiding harm. EHRs also hold the potential to reduce unnecessary costs by avoiding duplicative tests or treatments and by lowering the administrative costs of information-sharing.

Key Takeaways

- Some ACOs avoided interoperability challenges by using a single EHR system across their provider networks.
- ACOs that used multiple EHR systems had to rely on other means to share data between providers and to coordinate care.
- Whether using single or multiple EHR systems, ACOs faced challenges from physician burnout stemming from the workload of managing EHRs and "alarm fatigue" due to constant EHR alerts.

Discussion

ACOs Using a Single EHR: Using a single EHR system enhanced ACOs' ability to overcome interoperability challenges and coordinate care. For example, in one ACO that mandates a single EHR across its network, all providers have access (through the EHR system) to a provider portal that contains a patient care checklist. As a result, all members of a patient's care team can stay up to date on the patient's current health status and any tasks for which they are responsible. Providers consult this checklist at the point of care. Any new data that they enter—such as vital signs or referrals—are available in real time to all providers in that ACO's network. Alerts that the portal generates are routed to the appropriate members of a care team, and are also kept in a central inbox, similar to an email inbox. Items are removed or "checked off" once they are addressed. Users can customize the provider portal by practice specialty to best reflect their particular needs. Hospitals in the ACO can also access the data through a Web portal. Notes made in the portal can also be forwarded to care teams and other caregivers (such as specialists).

Another ACO we visited also mandates a single EHR for its providers. Its EHR system has built-in templates, but it also has tools that allow the ACO to use feedback from providers to develop its own care-management templates. As providers enter new data into the EHR, all providers have instant access to the data. Care-management teams receive daily reports for all admissions to, discharges from, and transfers to and from any hospital that provides data to the State's HIE.

The Physician Perspective on Using a Single EHR System

Providers have access to up-to-date data regarding patient needs, gaps in care, and areas where they need to focus. This reduces duplication.

ACOs Largely Using a Single EHR: Seamless care coordination is more challenging when ACO providers use more than one EHR system. One ACO that we visited employs about half of its providers directly, and these providers must use a single EHR system. Of the remaining providers, about a third use compatible systems from the same vendor. Thus, for the majority of the physicians in this ACO, data collected at the point of care are shared easily and instantly. However, the rest of the ACO's providers used EHR systems that could not easily share data with other providers in the ACO's network. For these providers, the ACO suggests templates that the providers can use to customize their EHRs to be similar to those in the single EHR system that the ACO requires for the providers it employs directly. However, these providers do not have to use the template, and in some cases their respective EHR systems do not support it. Furthermore, these providers have only read-only access—not "write access"—to the EHRs that the directly employed providers use, and they do not receive data from those EHRs in real time. These providers must take the additional step of checking the EHRs to see information about their patients.

ACOs that Use Many EHRs: The ACOs that use many EHR systems do not rely on them to play a central role in coordinating care. Providers in one such ACO's service area cannot easily share data electronically, even when using the same EHR vendor, because they have different versions of the EHR software. Instead, these providers generally coordinate care by telephone or email at the practice level rather than at the ACO level. This could impose greater burden on providers. To assist providers, the ACO has established a committee for clinical management oversight with clinician leads from its various providers. The committee discusses issues that arise across providers and shares best practices regarding care coordination.

Another ACO that we visited uses a third-party tool to enable providers to share information to coordinate care, given the variety of EHR systems in use. This third-party tool includes a dashboard, updated daily, with information on patients such as recent events, lab results, diagnoses, medications, and gaps in care. The tool—effectively acting as an HIE—allows the ACO to gather data from 80 percent of participating providers across 44 different EHR systems. Four local hospitals also use the tool, which gives the ACO discharge data on 75 to 80 percent of its patient population. The providers get information on each patient’s status and can then begin to work on the patient’s post-discharge care. The ACO covers the cost of the tool for providers in its network.

The Physician Perspective on Working With Multiple EHR Systems

A physician who worked with two different EHR systems in his practice saw firsthand the need for data standardization, particularly when trying to integrate nonelectronic data from outside providers.

Challenges

EHR Burnout: Staff from some of the ACOs cited provider weariness from EHRs as a challenge, regardless of whether the ACOs used a single or multiple EHR systems. This includes everything from the additional workload from managing EHRs to “alarm fatigue” resulting from constant EHR alerts for things such as potential drug interactions and notifications when patients are admitted to or discharged from hospitals. Providers report that the extra time required to work with EHRs detracts from time spent with patients. Some ACOs are trying to address this by reducing the amount of data that providers see without adversely affecting providers’ ability to coordinate care. One of these ACOs is shifting its model away from alerts in favor of a more on-demand approach at the point of care, so that providers see data pertinent to their specific needs.

The Physician Perspective on EHR Burnout

According to one physician, providers are leaving primary care for other areas to avoid information overload.

Another ACO uses a care coordination team to triage the data that providers see. The team analyzes the data to understand the various services that patients need or have already received, and it then conducts outreach to patients. Providers do not get all information about their patients; some data goes directly to a care coordinator, who drives the outreach. The ACO sends providers aggregate data on patients who have already received services, which allows the providers to identify those patients who have *not* received services. This results in a much smaller list of patients for whom providers must actively coordinate care.

Coordinating at the Point of Care: Health Information Exchanges

The promise of HIEs

HIEs can enable care coordination by allowing interoperability across EHRs and other health IT systems, and they can create a repository from which disparate providers can obtain standardized data. The use of HIEs has the potential to bolster care coordination by avoiding readmissions, avoiding medication errors, improving diagnoses, and decreasing duplicative testing.

Key Takeaways

- Some ACOs had access to robust HIEs that supply a great deal of useful patient data.
- However, most of the ACOs we visited had access to HIEs with little or incomplete data, making it difficult to coordinate care when patients saw providers outside the ACOs' networks.

Discussion

Robust HIEs: Two of the ACOs we visited use HIEs that provide useful patient data. One of these ACOs has an independently run, member-supported HIE developed and maintained by a private entity and partially funded by its State. Through the HIE, ACO staff have a single data source—available to them in real time—for nearly all patients. This allows care management teams to support patients according to patients' risk levels and their needs for condition management. These teams receive daily reports for all admissions to, discharges from, and transfers to and from any hospital providing data to the HIE. Not all hospitals in the State participate in the HIE (e.g., hospitals near the State border and in more rural settings are less likely to participate); however, most do.

One ACO uses two HIEs, each of which covers part of the ACO's service area. The ACO helped to develop one of these HIEs. Both HIEs offer alerts on admissions, discharges, and transfers as well as tracking of prescription drugs. According to the ACO, provider adoption of the HIEs is high as a result of assistance from ONC and a State incentive program; however, not all of the providers with which the ACO works use the HIEs. The ACO is considering using a third-party vendor to obtain data from providers that do not participate in the HIEs.

HIEs With Little or Incomplete Data: In some cases, ACOs had access to HIEs but could not get useful data from them. One such ACO has access

to a State-wide HIE but does not find it as useful because of the lack of provider adoption. The HIE has not yet reached a “critical mass” where it has enough participants to make it useful. According to the ACO, participation in the HIE is currently limited to “big players” because smaller entities cannot afford to participate or choose not to participate.

Another ACO that has access to a State-wide HIE does not use it, because the ACO has concerns about the accuracy of the HIE’s data (other than data on admissions and discharges, which the ACO said were accurate). This ACO is examining potential ways it can use the HIE.

In one State, two ACOs reported relying on alternative solutions for health IT because providers have not yet widely adopted the State’s HIE. One of these ACOs uses a health IT system that offers some

The Physician Perspective on HIEs With Little or Incomplete Data
“It’s like having an ATM card that’s only accepted at one bank.”

interoperability within the State. The ACO’s providers have access to a daily feed of patient utilization of services at different points of care. As a result, providers are able to maintain some level of care coordination for their patients, at least for patients who see providers within the ACO’s network. The other ACO uses a different third-party health IT tool to facilitate interoperability across its provider network. This tool enables the ACO to obtain standardized data for 75 to 80 percent of its patient population.

Challenges

Getting Data From Providers Outside the ACO: Some ACOs we visited faced challenges when sharing data with providers who are outside the ACO network and do not participate in an HIE. For example, one ACO told us about a situation in which an oncology patient had been hospitalized and the hospital physician was unable to retrieve records from the patient’s oncologist. Some ACOs receive data from outside providers via nonsearchable PDF files or other types of files that are not easily searchable, which means that providers need extra time to find the information they need at the point of care.

The Physician Perspective on Getting Data From Outside Providers
Searching for data from an outside EHR system can take so long that it is often faster to redo a test.

To overcome such challenges, one of the ACOs uses a Web portal as a stopgap method to obtain data from providers outside the ACO network. The Web portal includes a feed of admissions, discharges, and transfers that automatically alerts physicians at the ACO of patient admissions and emergency department visits. Nurses and case managers use discharge information to coordinate post-discharge care.

Coordinating at the Population Level: Analytics

The promise of population-level analytics

Aggregated electronic health data can enable health care providers to measure population health to better understand prevention, diagnosis, and treatment. Providers and healthcare organizations can use information generated by population health tools to track and improve clinical outcomes and lower healthcare costs.

Key Takeaways

- Most of the ACOs we visited use population-level analytics to inform their care coordination by identifying and grouping patients according to the potential severity and cost of their health conditions.
- Fewer ACOs use analytics to customize care to an individual patient's needs.
- ACOs see value in including data on social determinants of health, but they face challenges in collecting these data.

Discussion

Prediction and Risk Stratification With Population-Level Data: Most of the ACOs we visited use population-level analytics to identify and group patient populations according to the potential severity and cost of their health conditions, a practice known as risk stratification. By identifying such patients, ACOs can use specialized outreach and coordination strategies to help the patients better manage their conditions and improve their health outcomes.

The Physician Perspective on Population-Level Analytics

Analytics have improved the ACO's ability to identify gaps, reduce duplication, and create safety nets.

For example, one ACO analyzes data such as claims from CMS and admissions to identify patients who have more complex needs and require a greater level of care coordination. This ACO uses analytics to begin coordinating care for patients before their initial visit to the ACO's providers. The ACO prospectively analyzes claims and other available patient data as soon as CMS sends the list of the ACO's patients. The ACO assesses each patient's risk level and preemptively sets up care management strategies. For example, the ACO identifies patients with chronic conditions—such as end-stage renal disease—and focuses its care coordination on these patients. Patients can consent to increased care

coordination to help them better manage these types of complex conditions. If the patients consent, the ACO shares their data with all relevant providers who are then able to see special flags (e.g., high risk, gaps in care) at the point of care.

Some ACOs we visited had a well-developed method to stratify risk, while others' methods were still in more nascent stages. One ACO said that its current method is "manual and creative." This ACO is considering both services available from outside companies and in-house development to improve its methods to stratify risk. Another ACO described its use of predictive analytics as being "in its infancy," but stated that it is devoting significant resources to expanding its capabilities.

Another ACO that we visited uses data from claims and EHRs to create predictive models focusing on specific aspects of population management, such as hospitalization, emergency room use, and total costs of care. It analyzes the data and assigns risk scores to patients. These risk scores appear in the patients' EHRs, making them available for providers to review and act on at the point of care.

A third ACO described a targeted outreach program in communities in which it identified high rates of tobacco use. ACO staff work with staff from home health agencies to develop strategies to manage chronic obstructive pulmonary disease in these communities.

Using Population Data To Customize Patient Care: Fewer ACOs use analytics to customize care to the needs of individual patients. One of these ACOs developed a registry for high-risk patients who frequently visit emergency rooms, and it designed care plans for those patients. These care plans rely on coordination across multiple providers. When a patient on the registry arrives at the emergency room, an "ER Navigator" nurse is notified and performs an assessment to see whether the patient can be diverted to an alternative care setting. This alert is sent electronically and is integrated with the patient's EHR. The alert also goes to other members of the care team, such as the primary care physician and (in the case of patients with end-stage renal disease) a nephrologist. On the patient's discharge, the care team coordinates a plan for the patient, follows up with the patient to make sure she adheres to the care plan, and works to address any barriers to adherence. This ACO has a similar registry for patients who are at high risk of being readmitted to the hospital. The ACO also uses population-level data to determine where it should focus its clinical interventions and whether these interventions are effective. Additionally, these data help identify potential gaps in care as well as connections to community resources to improve care management.

Challenges

Volume of data: ACOs face a challenge in finding the best uses for all the available data. One ACO explained that as data are becoming increasingly available, questions emerge at both the population level and point of care about how to best use them. Several providers stated that it is challenging to determine how to use all of the data to actually benefit patients.

Conversely, lack of data can also present challenges to effectively using population-level analytics to coordinate care. Claims and other data from outside an EHR may be untimely, incomplete, or of poor quality. As a result, an ACO may have difficulty developing a comprehensive understanding of the patient population's needs and risks.

The Physician Perspective on Having Too Much Data

"How is this information valuable?
How does this actually help the patient?"

Data on social determinants of health: Several of the ACOs are in the early stages of incorporating data on where patients live, patients' access to food and transportation, and other factors that shape the conditions of daily life—into their population health analytics. These factors are commonly called social determinants of health.³⁴ Other ACOs plan to collect these data in the future. However, ACOs cited challenges with collecting social determinants data, including where and how to collect them.

Half of the ACOs that we visited currently incorporate data on social determinants into their analytics to some extent. One of these ACOs has a large population that is dually eligible for Medicare and Medicaid, and its patients may face greater difficulty in accessing basic resources. This ACO incorporates data directly from EHRs on patient housing, nutrition, and access to transportation. ACO providers and staff obtain the data from patients during new patient visits, and by going onsite to various community organizations where they manually abstract records. Another ACO encourages patients to provide such data through a survey that providers administer electronically at the beginning of visits. Because the ACO's EHR system has no standard format for recognizing data on social determinants, the ACO is developing a way to automatically identify and capture these data from patient narratives in EHRs.

One of the ACOs that is currently unable to integrate social-determinants data and other external population-level data into its EHRs is working with an outside company to develop this capability.

³⁴ HealthyPeople2020, *Social Determinants of Health*. Accessed at <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health> on August 20, 2018.

Coordinating at the Patient Level: Patients' Use of Health IT

The Promise of Patient-Facing Health IT Tools

Giving patients access to health IT tools can allow them to become active participants in their care. Patients can use these tools to monitor their conditions and to better track their medications and follow their care plans. Patients can also use these tools to communicate remotely with providers, often allowing patients to talk with specialists in areas underserved by such providers.

Key Takeaways

- ACOs offer patients few health IT tools other than online portals to EHRs.
- ACOs cite payment limitations as a challenge to implementing telehealth.

Discussion

Patient Portals: At a minimum, each ACO offered patients access to an online portal that allowed patients to access their EHRs in the ACO's EHR systems; CMS's Meaningful Use incentive payments require EHRs to include this feature.³⁵ Patients can access lab results, view upcoming appointments, and send messages to their providers. The ACOs told us that patient use of these portals varied. At one ACO, younger patients had the highest utilization of the portal, whereas at another ACO, staff said that their patient population overall was highly engaged with the portals (though staff acknowledged that some of this use by older patients is likely through proxy users like patients' children). Among the ACOs that each used multiple EHR systems, the features of the patient portals differed across the EHR systems and their corresponding groups of providers.

Telehealth: Several ACOs use some kind of telehealth system by which patients can speak with providers from a remote location. One of these ACOs uses telehealth routinely, while the others are piloting various services. The ACO that regularly uses telehealth offers both asynchronous services (in which the patient and provider do not talk in real time) and synchronous services (in which they do speak in real time). For the asynchronous services, patients can consult with specialists; the patient sends a message to which the specialist replies at a later time. For the synchronous services, patients in areas with fewer behavioral health

³⁵ 42 CFR § 170.314(e)(1).

specialists can have real-time, remote appointments with those specialists. Care managers work with patients to set up the appointments. Patients must travel to their primary care provider's office, and can speak remotely with the specialist from there. Two other ACOs are piloting telehealth services for behavioral health. One of these ACOs offers the services via telephone, but patients in crisis can have a "virtual visit" with a specialist at their primary care provider's office. The other ACO offers telehealth services via computer, smartphone, and tablet.

Interactive Voice Response Systems: Two ACOs use interactive voice response systems (i.e., automated phone calls). These systems call patients to remind them of wellness and preventive care visits, and—for high-risk patients—to give them educational information. The systems also assess patients' conditions. For example, patients who experienced heart failure will get a daily call at home. If a patient's responses to questions contain certain keywords, the system notifies a nurse who then calls the patient. ACOs have the ability to assign specific voice-response modules to patients according to their respective situations (e.g., post-discharge from a hospital). The system also helps avoid duplication of services and educates patients' caregivers, especially in transitions between care settings.

Other Patient-Facing Health IT Tools: One ACO is piloting several different health IT tools, though these pilots are mostly for a small number of patients:

- Software applications for management of health conditions (e.g., diabetes). The goal is to expand to populations that may not need complex care management, but do need coaching.
- A medication-tracking application that notifies designated people when patients miss taking medications. The application runs on smartphones or ACO-provided tablets.
- An automated medication dispenser that alerts patients when it is time to take the medication. It is monitored remotely by a pharmacy.

Challenges

Telehealth Availability: ACOs cited the limitations on payment for telehealth services as a challenge to implementing such services. In a 2018 report to Congress, CMS acknowledged potential barriers in current fee-for-service coverage that might prevent the expansion of telehealth services among Medicare beneficiaries. Such barriers include restrictions on the types of originating sites that are eligible for payment under Medicare fee-for-service (e.g., requiring the site to be located in certain types of rural areas and not allowing a patient's home to be an originating site).³⁶ Another ACO considered a telehealth pilot, but logistical issues regarding behavioral health were one of the reasons it did not go forward with it. For example,

³⁶ CMS, *Information on Medicare Telehealth*, November 15, 2018.

some providers were apprehensive about how the ACO could establish protocols for managing treatment and liability for patients with depression.

CONCLUSION

The six Medicare ACOs we visited have used health IT to better coordinate care for their patients in a variety of ways. However, the full potential of health IT has not yet been realized. ACOs differ as to the extent to which they can rely on health IT tools, in some cases because those tools are not sufficiently robust. Achieving the interoperability needed for seamless care coordination places burdens on ACOs to either invest in a single EHR system, or use additional methods, such as non-health IT means like faxes and phone calls, to communicate health information.

In the ACOs we visited, it appears that those ACOs that use single EHR systems were able to maximize that tool for care coordination. This may be in part because those ACOs have full access to patient information for all the providers in their networks. These ACOs still had to rely on other health IT tools to obtain data from providers outside their networks.

The impact of other health IT tools—such as HIEs, population analytics, and patient-facing tools—on coordinating care for patients is less apparent across ACOs. This may stem partly from the range of challenges that ACOs face in using these tools for care coordination. One such challenge is the cost of expanding the functionality of these tools. Another challenge is the limited nature of some HIEs' data, which hampers ACOs' ability to manage data across patients, providers, and health systems. These challenges are not unique to ACOs; in fact, many types of healthcare organizations experience them as well. Many see a network of high functioning and comprehensive HIEs as a linchpin of interoperability, but the promise of such a network has not yet been realized.

Some of HHS's proposed initiatives might address concerns and challenges that we heard from ACOs. For example, ONC's Trusted Exchange Framework and Common Agreement has the promise of facilitating interoperability across health IT networks, which might mitigate the problem that ACOs had in accessing data from HIEs with little or incomplete data. With interoperability, an ACO would be able to access patient data even when patients visit providers outside the ACO.

ONC's and CMS's draft *Strategy on Reducing Regulatory and Administrative Burden Relating to the Use of Health IT and EHRs* could address the concerns regarding physician burnout that ACOs told us about. The strategy calls for the following actions: reducing the regulatory burden of documentation requirements for patient visits, partnering with clinical stakeholders to encourage adoption of best practices related to documentation requirements, and leveraging health IT to standardize data and processes related to ordering services.

Finally, CMS's December 2018 final rule changing the MSSP ACO model also expands telehealth payments for certain services regardless of a patient's geographical location. This expansion may address the concerns we heard from ACOs about the financial barriers to offering telehealth services.

HHS has invested heavily in promoting the use of health IT tools because of the promise they hold to help patients achieve better outcomes at lower costs. This work showcases some of the advances that ACOs have made as well as remaining challenges to fulfilling that promise.

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