



2005 Market Street, Suite 1700 215.575.9050 Phone
Philadelphia, PA 19103-7077 215.575.4939 Fax

901 E Street NW, 10th Floor 202.552.2000 Phone
Washington, DC 20004 202.552.2299 Fax
www.pewtrusts.org

May 31, 2019

Seema Verma
Administrator
Centers for Medicare & Medicaid Services
Department of Health and Human Services
P.O. Box 8016
Baltimore, MD 21244-8016

RE: CMS-9115-P: Medicare and Medicaid Programs; Patient Protection and Affordable Care Act; Interoperability and Patient Access for Medicare Advantage Organization and Medicaid Managed Care Plans, State Medicaid Agencies, CHIP Agencies and CHIP Managed Care Entities, Issuers of Qualified Health Plans in the Federally-Facilitated Exchanges and Health Care Providers

Dear Administrator Verma:

Thank you for soliciting feedback on the Centers for Medicare & Medicaid Services' (CMS') proposed regulations that aim to give patients access to their medical information and advance the exchange of data among health care providers treating the same patient. These proposed regulations have the potential to equip patients with information they need to be more involved in their care, though some gaps remain—particularly for patients that rely on medical implants, such as cardiac stents and artificial hips. The proposed regulations—along with policies that CMS could implement in response to the agency's requests for information—can further improve the quality and coordination of care for patients by enhancing the exchange of data among health care providers.

The Pew Charitable Trusts is a non-profit research and policy organization with several initiatives focused on improving the quality and safety of patient care, facilitating the development of new medical products and reducing costs. Pew's health information technology initiative focuses on advancing the interoperable exchange of health data and improving the safe use of EHRs.

These proposed regulations address one of the Trump administration's and Congress' priorities: ensuring that patients and clinicians have individuals' complete health history and other information they need to improve medical decision-making and the coordination of care. In the proposed rule, CMS takes several steps toward that end. First, CMS proposes to implement new policies to enable patients to download their medical claims and other information maintained by health plans. Second, CMS proposes to require hospitals to release event notifications—alerts that allow other health care providers treating a patient to know whether the facility has admitted, discharged, or transferred the individual. Finally, CMS seeks input on ways that the agency can further advance the exchange of information—including through improvements to patient matching, which refers to the ability to link records for the same patient across different sites of care, and interoperability writ large.

These CMS regulations also align with provisions in a recent proposed rule from the Office of the National Coordinator for Health Information Technology (ONC), the federal agency that oversees EHRs. Pew has also submitted comments via regulations.gov on that proposed rule, which implements provisions from the 21st Century Cures Act (Cures), passed in 2016.

On the whole, this proposed rule from CMS takes several critical steps to improve the effective exchange of health data, also known as interoperability. As CMS acknowledges in the proposed rule, though, these are and should only be the first steps taken by the agency. Additional action by CMS—including through future payment rules—can further advance interoperability to give patients and clinicians the information they need to foster better health outcomes.

Patient access to claims data important, but gaps remain

In this proposed rule, CMS advances policies that would equip patients with data held by health plans, including claims information. Previously through the Blue Button 2.0 program, CMS ensured that patients can download their Medicare claims data. Now, via these regulations, CMS proposes to extend that capability for patients with insurance coverage by private health plans, thus giving them a holistic understanding of the services and treatments that they have received from different health care providers.

Equipping patients with this information builds on previous efforts from CMS to leverage claims to enhance care, including by providing increased access to the data by researchers working to identify ways to improve care quality and reduce costs. For example, in prior policies CMS has underscored that the analysis of claims data can help identify opportunities to improve care quality and made Medicare Advantage, Children’s Health Insurance Program, and Medicaid claims data available for researchers.¹

Claims are especially useful for patients and research purposes because, unlike other information sources, they contain data for nearly every encounter with the health care system for a specific individual. For example, claims information collected over many years may contain data showing that a patient received a specific prescription drug, had surgery, and visited the emergency department. Claims transmissions from health care providers to payers are already standardized, resulting in easier aggregation of information across the health care system. It is precisely this characteristic of claims that has made them a valuable source of information for researchers to evaluate quality and safety.

CMS indicates that it has advanced these policies around claims data because of challenges in aggregating clinical data from EHRs. As CMS states in this proposed rule, “Whereas EHR data is frequently locked in closed, disparate health systems, care and treatment information in the form of claims and encounter data is comprehensively combined in a patient’s claims and billing history.”

CMS has rightly advanced policies to better leverage claims and other data held by health plans. Pew supports the proposed policy to ensure patient access to their claims data, as it will further enable individuals to have the information they need to understand and take ownership over their care.

Specific recommendations on open, standards-based interface tools

In addition to applauding CMS' overall effort to grant patients access to data, Pew supports the approach the agency takes in this proposed rule to leverage standards-based application programming interfaces (APIs), which are tools that allow two systems or software applications to communicate with each other. APIs are the backbone of the modern internet. These tools allow websites to aggregate flight information, track personal financial habits, and display social media posts in real time. APIs operate in the background, connecting and transferring information between different systems. Specifically in response to CMS' proposal:

- *Standards-based APIs:* In the proposed rule, CMS indicates that the APIs used to extract data from health plan systems should leverage the Fast Healthcare Interoperability Resources (FHIR) standard for exchanging health data and, where applicable, specific implementations of the standard referenced in regulations by ONC.

The use of standards, and specific implementations of those standards, will help ensure that different technology developers can more easily integrate data into their applications. As a result, this approach promotes competition by allowing patients to choose the applications they want to use to receive their health information—as opposed to being forced into using an application that, for example, uses proprietary standards from the health plan.

- *Open and accessible documentation:* Consistent with ONC's proposed regulations on APIs to extract clinical data from EHRs, CMS proposes that health plans must publicly disclose the documentation on how to use APIs for patient access to their information. CMS indicates that the business and technical documentation must be made available on a publicly accessible website for free. CMS states that health plans may not require individuals seeking the documentation to take any additional steps beyond downloading the documentation—such as viewing promotional material or signing up for future communications from the company. In addition, CMS indicates that the documentation must include the necessary information—including function names and data parameters—for individuals to build technology to use the APIs.

This approach taken by CMS will ensure that technology developers have the information they need to build software applications to access and use health plan data. The public availability of this documentation should also not introduce an undue burden on technology developers. Organizations in many other industries make API documentation, which is much like an instruction manual, publicly available.² The documentation instructs third-party vendors how to request information and how the information they'll receive is coded. For APIs to be used, the documentation would need to be developed regardless of whether it is made public. As a result, developers will already create this documentation, and making it available will not add significant burden.

Claims data lack key information for patients that rely on implants

CMS' efforts to have patients access their claims data and provide researchers with this information, while laudable, omit one critical element particularly important for the Medicare population. Currently, claims only indicate that a particular procedure was performed—for example, a total knee replacement—but not the brand and model of implant used. However, the unique device identifier system developed by the Food and Drug Administration (FDA) provides each medical device with a code corresponding to its brand and model. Adding the device identifier (a portion of the unique device identifier) to claims can fill the gap, and provide patients, clinicians, and researchers with additional information on products used to sustain life and support care.³

Along with equipping patients with this information, adding device identifiers to claims would help detect problems sooner—averting patient harm associated with faulty implants. Some medical implants, according to analyses of data submitted to FDA, have accounted for tens of thousands of patient injuries—including death.⁴

Incorporating device identifiers in claims can also generate savings. The Department of Health and Human Services Office of the Inspector General (OIG) has found that the failures of just seven types of cardiac implants cost Medicare \$1.5 billion to treat affected patients, and an additional \$140 million directly to beneficiaries in out-of-pocket costs. OIG recommended the addition of device identifiers to claims to detect these problems sooner, saving lives and money.

This policy also has support from the Medicare Payment Advisory Commission and other groups from across the health care system—including health plans, large hospital systems, clinical societies that represent physicians who implant these products, patient groups, and many other organizations.⁵ Adding device identifiers to claims has also generated bipartisan support in Congress. The private committee—called X12—responsible for maintaining the standard claims transaction used by Medicare, Medicaid and other health plans has issued draft recommendations to add device identifiers to claims as part of the next update to the transaction.

For CMS to effectively meet its objectives of ensuring that patients have access to their data—including from claims—and provide researchers with information to evaluate care, the agency should ensure that claims contain critical information on the products used, especially given that Medicare beneficiaries frequently receive implanted devices. Consequently, we urge CMS to help further advance this commonsense policy by supporting the addition of device identifiers to claims in the final X12 recommendation and adopting this change through rulemaking.

Exchange of ADTs can enhance care coordination

In the regulations, CMS also proposes requiring hospitals to send an electronic notification to a health care providers caring for an individual whenever that patient is admitted, discharged, or transferred to another facility as a condition of participation in the Medicare program. These notifications—known as admission, discharge, and transfer (ADT) messages—must include the patient's name, treating practitioner, sending institution, and, if not prohibited by law, patient diagnosis.

In this proposed provision, CMS recognizes that the admission, discharge or transfer of patients to or from the hospital represent significant milestones in their care. Proper notification of these events to primary care physicians, specialists, and other clinicians can provide continuity and coordination of care that would otherwise not occur. For example, ADT notifications can alert physicians when their patients' health status changes, prompting the appropriate follow-up care. ADT notifications can also provide data for analysis to improve care. For example, a health information exchange in Maryland used data extracted from ADT messages to develop reports on inpatient encounters, the frequency with which patients returned to the emergency room within 72 hours, and 30-day hospital readmissions.⁶

Pew supports CMS' commitment to the exchange of ADT notifications given the centrality of this information to care coordination. As CMS implements this policy, the agency should build on this requirement in three ways.

First, CMS should work with ONC to address patient matching, which refers to the ability to accurately link individuals' records across multiple doctor's offices or hospitals. Match rates can vary widely; when facilities exchange records, match rates may fall to as low as 50 percent, even when facilities have the same EHR vendor.⁷ Those same matching deficiencies could inhibit proper ADT notifications of clinicians caring for a shared patient. By including a request for information (RFI) in these regulations on patient matching, CMS recognizes matching as a key challenge to interoperability. Recommendations for CMS to work with ONC are included below in response to that RFI.

Second, CMS also requests information on whether future rulemaking should build on the ADT notification requirements to support the exchange of other data, including clinical information, such as imaging and diagnoses, via the same mechanism. As ADT message exchange further becomes the standard of care for health care providers that participate in Medicare, CMS should take the opportunity to build on this capability to support the exchange of other data, including electronically providing patients with discharge instructions and a summary of care.

Third, CMS should work with ONC to ensure that hospitals have EHRs with this capability. CMS notes in the proposed rule that ONC does not require EHR systems to be able to send ADT notifications to obtain certification. However, ONC reports that ADT notification capabilities have been widely adopted across the health care system.⁸ Not all organizations, though, may be sending these notifications consistently (e.g. only upon discharge), and there still may be some organizations that have yet to adopt ADT notification systems at all. Therefore, implementation of this proposed requirement is already well underway even absent specific ONC requirements for EHRs. Regardless, CMS should work with ONC to ensure that hospitals that currently lack these capabilities in their systems can more seamlessly upgrade their technology to be able to send ADT notifications.

Enhancements to patient matching necessary to improve interoperability

CMS' proposed rule includes an RFI on patient matching to obtain input on steps the agency can take to address this challenge. In issuing this RFI, CMS correctly recognizes that to achieve

interoperable exchange of medical data, health organizations must also know that they are communicating about the same person. Presently, up to half of the information exchanges made by health care organizations may fail to accurately match records for the same patient.⁹ Congress, in Cures, also recognized that ineffective patient matching can inhibit interoperability by commencing a Government Accountability Office (GAO) study, which was released in January of this year.¹⁰

Ineffective patient matching can have patient safety and cost ramifications. Patients may receive inappropriate care and face the possibility of medical errors if information used for treatment is missing or inaccurate; one in five hospital chief information officers surveyed said that patient harm occurred within the last year due to a mismatch.¹¹ In an extreme example, the care for an 11-month-old twin was documented in her sister's record, resulting in the failure of the health system to recoup \$43,000 in costs from the insurer.¹²

To accurately match records held at different health care facilities, organizations typically compare patients' names, dates of birth, and other demographic data to determine if records refer to the same individual. Health care facilities use algorithms to conduct these matches, and also employ staff to manually review records. This process often fails to accurately link records because of typos entered into the system; similarities in names, birth dates or addresses among different patients; changing information, such as when individuals move or get married; and many other reasons.¹³

While some private sector technologies—such as referential matching, wherein third-party data are used to support matches—show promise, market forces have been unable to solve the patient matching problem for decades. In fact, patient matching requires collaboration between unaffiliated organizations, even competitors, that lack incentive to agree to a set of standards or develop systems that seamlessly exchange information.

Pew conducted two years of research—including interviews with health care providers, focus groups with patients, and contracted studies—to examine different ways to address matching challenges. This research revealed two critical ways that the federal government can improve patient matching. CMS should collaborate with ONC to ensure that these steps are taken.

Standardize certain demographic data already collected

First, CMS should work with ONC to require the use of standards for certain demographic data elements—an approach long recommended by many other organizations, including Audacious Inquiry in a report contracted by ONC.¹⁴

In Pew-funded research published recently in the *Journal of the American Medical Informatics Association*, experts at Indiana University studied whether the standardization of different data elements improves patient matching rates.¹⁵ Researchers attempted to match records in four databases, standardized the data in those databases, and then retried matching the records to determine whether that standardization yielded better results. The researchers used tens of thousands of records from the Indiana Health Information Exchange; a county public health registry; Social Security's Death Master file; and a newborn screening laboratory. Each of these

databases had already been reviewed to ensure that the record matches were accurate, which allowed researchers to understand the number of correct and inaccurate matches both before and after the standardization of select demographic data.

The research revealed that the standardization of address to the standard employed by USPS, which details the preferred abbreviations for street suffixes and states, for example, would improve match rates by approximately 3 percent. An organization with a match rate of 85 percent, for example, could see its unlinked records reduced by 20 percent with standardization of address alone. One technology developer indicated that this would help their system match an additional tens of thousands of records per day. Separately, standardizing last name to the standard used by the Council for Affordable Quality Healthcare—while showing limited utility on its own—would further improve match rates when coupled with address standardization. The research indicated that standardizing last name in conjunction with address could improve match rates from, for example, approximately 81 to 91 percent, which would reduce the number of unmatched records by half.

As part of ONC's proposed rule, the agency includes phone number and address in the U.S. Code Data for Interoperability (USCDI), a collection of critical health information that should be exchanged and made available by EHRs via APIs. ONC could further improve match rates by requiring use of the USPS standard for address within the USCDI. To further promote use of this standard, ONC and CMS should also coordinate with USPS to ensure that health care organizations can use the postal service's online, API-based tool—or another easily accessible mechanism—to convert addresses to the USPS standard. There may also be scenarios—such as for military personnel stationed abroad—where the use of the USPS standard is not feasible. ONC could restrict use of the USPS standard to domestic, non-military addresses if challenges arise in the broader use of the standard.

Adopt additional data elements for patient matching

Second, CMS should encourage ONC to facilitate the availability of other regularly collected demographic data elements for patient matching. ONC currently requires EHRs to make some demographic data—such as name, birth date, and sex—available, and proposes to add address and phone number to the USCDI. However, health records contain other demographic data routinely collected that aren't typically used or made available to match records.

For example, research published in 2017 showed that email addresses are already being captured in more than half of patient records.¹⁶ The documentation of email is likely higher today given the adoption of patient-facing tools, like portals, that often require emails to register.

CMS should encourage ONC to improve match rates by identifying and including in the USCDI readily available data elements—such as email address, mother's maiden name, or insurance policy identification number—that health information technologies should use for matching.

Specific comments on CMS' patient matching RFI

CMS seeks input on a variety of steps the agency can take to address patient matching.

First, CMS requests information on whether the agency should advance more standardized data elements across all appropriate programs for matching purposes, perhaps leveraging the USCDI proposed by ONC. As mentioned above, CMS should work with ONC and then adopt enhanced standards for demographic data. Specifically, CMS should encourage ONC to use the USPS standard for address and facilitate the addition of other regularly collected demographic data, such as email address, to the USCDI.

Second, CMS solicits input on whether to require use of a patient matching algorithm or solution with a “proven” success validated by the Department of Health and Human Services or a third-party. While not requiring the use of a specific technology, benchmarking different approaches would help shed a spotlight on matching deficiencies and the wide variation in quality across different algorithms. Technology developers could then use that information to improve their algorithms, and health care providers could adopt the most promising approaches. CMS should work with ONC to determine how to benchmark different matching approaches; this likely requires the identification of a large, real-world data set to test different algorithms. The use of real-world data, rather than synthetic data, is essential given that some innovative approaches—such as referential matching—use third-party databases to support their algorithms. This benchmarking could assess duplicate creation rates, the number of records correctly matched, and the frequency with which records are incorrectly merged.

Third, CMS requests input on whether to expand recent efforts to issue new Medicare identification numbers to support patient matching. Implementing an agency-wide identifier may help CMS better serve beneficiaries and improve matching. However, this approach is still insufficient to address matching on a nationwide scale. A unique identifier would still face limitations in matching patients to information prior to enrollment in federal health insurance programs, and they may still be susceptible to errors (e.g. typos that exist today with the use of Social Security numbers). Pew conducted focus groups with patients on patient matching that highlighted frustration with having to remember a number or card that could be lost or stolen, just like Social Security numbers. Health care providers interviewed by Pew in collaboration with the Massachusetts eHealth Collaborative also voiced concerns with adoption, implementation costs, and human errors that affect data quality. Given those limitations, even if CMS pursues broader use of a CMS-wide identifier, the agency should still push forward with optimizing the use of other demographic data, including adoption of the USPS standard for address and the use of additional data elements.

Fourth, CMS seeks information on the number and type of third-party data sources to use for identity proofing and verification, as well as limitations. Referential matching, for example, has shown promise for improving patient matching.¹⁷ However, use of third-party data also has limitations. These data sources may contain inaccuracies, and lack information for some populations.¹⁸ For example, these data sources do not contain information on children, and therefore have limitations in providing an added benefit for matching pediatric records.

Finally, CMS request information on how patient-generated data can complement patient matching efforts. Pew collaborated with the RAND Corporation to examine patient involvement in record matching.¹⁹ The research revealed two key ways for patients to support record matching. For one,

patients could validate their demographic information by verifying their mobile phone number and other data. Matching algorithms could give more weight—which means to increase the reliance on—to validated or verified data, which could enhance match rates. In addition, EHRs could support smartphone applications that use standard APIs to allow patients to update their demographic data. CMS could coordinate with ONC and the technology industry to pilot these patient-led approaches. In addition, Pew research revealed a promising approach to patient matching that has not yet been widely used in health care: biometrics, such as fingerprint or facial recognition scans. In Pew-led focus groups on patient matching, patients overwhelmingly preferred the use of biometric over other options.²⁰ Patients in the focus groups indicated that they already use biometrics in other aspects of their lives—such as to unlock smartphones or board airplanes—and should be able to use the same approach for record matching. Pew intends to conduct further research on how the health care system could use biometrics to match records across different organizations while protecting patient privacy and the security of data.

CMS should advance interoperability via new innovation models

CMS also includes an RFI in the proposed regulations on how the Center for Medicare and Medicaid Innovation (CMMI) can promote interoperability by promoting patient access to their data; encouraging interoperability among health care organizations; and piloting the use of new standards.

By examining novel approaches to interoperability, CMMI can identify innovative approaches to data exchange that could improve care coordination, enhance the quality and safety of care, and reduce costs, such as by eliminating duplicate tests. Giving patients access to data can also make them more active participants in their care, which can improve patient outcomes.²¹ When patients received access to their physician’s clinical notes, some individuals—particularly those who are older, less educated, non-English speaking, and non-white—reported the greatest benefit.²² CMMI can advance interoperability in several ways.

First, CMMI could examine how innovation models can better leverage FHIR-based APIs for data exchange across health care providers. With adoption of the recent ONC regulations, health care providers will have EHRs with FHIR-based APIs within a few years (based on when ONC finalizes its rule and the implementation timeline included). These standard APIs can help easily extract data from EHRs, and allow health care providers to only receive the select information they need. Despite the availability of these APIs, health care providers may still rely on document-based exchange, or the practice of sending full clinical documents rather than specific pieces of information about a patient’s care. However, this practice often contributes to clinicians receiving too much unnecessary information, which results in time sorting through superfluous data rather than providing care to patients. CMS should examine pilots to encourage the exchange of data among health care providers via these APIs instead of documents.

Second, CMS requests information on how it can leverage non-traditional data, such as on food insecurity and homelessness. As 80 percent of health outcomes are associated with social determinants of health (SDOH), not with medical care, considering these other factors can help patients live longer, healthier lives. Despite the contribution of SDOH to patient outcomes, EHRs

often do not enable the capture, use, or exchange of this information in a consistent and effective manner.

To use SDOH, health care organizations must determine what data should be broadly captured (such as food or housing insecurity) and how. Once determined, this information should also be recorded in a consistent way, such as through existing standards. Some organizations have begun advancing standards for SDOH, including a national coalition led by community health centers that created the “Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences” (PRAPARE) toolkit, and the American Medical Association and UnitedHealthcare, which are establishing new codes for SDOH to trigger referrals to social and government services.²³ CMMI should consider how to leverage this existing work to best capture SDOH in EHRs. Aside from capturing SDOH at the point of care, which may introduce burdens on some clinicians, CMMI should also examine use of neighborhood-level data to inform clinical care.²⁴ For example, clinicians could use patients’ addresses to obtain neighborhood-level risk indicators, such as on poverty; CMMI could examine how to promote access to and use of those neighborhood-level data to inform clinicians’ discussions with patients.

Finally, CMMI also asks for information on technology-enabled patient engagement platforms. As previously mentioned, Pew funded a RAND Corporation study to examine ways to involve patients in matching their records, and the research revealed the potential of using smartphones as a virtual clipboard for patients to enter their medical information.²⁵ These smartphone-based applications could replace the paper clipboard for demographic data and medical history that patients must fill out in hospital and physician waiting rooms. Smartphone applications that rely on common EHR standards, such as FHIR, could transmit several key pieces of data to health records. For example, these virtual clipboards could send core demographic information—such as address—that the patient can regularly update as needed and ensure is accurate; unique identifiers that the patient may have, such as a driver’s license number; or other data typically provided by patients, such as on medication allergies. For this functionality to take effect, EHRs need to have APIs that have the ability to write—or input—data into EHRs, rather than just access and read data. Common standards and workflows would need to be adopted to ensure the effectiveness of this approach and the security of data. CMMI should examine how the addition of write capabilities can improve patients’ engagement in their care and reduce the administrative burden on clinicians.

CMS can further advance interoperability through its payment policies

As part of these proposed rules, CMS requests information on additional steps it can take to foster “interoperability activities” among health care providers that could be included in future payment policies.

In future rulemaking, CMS should consider advancing the exchange and effective use of clinical data from EHRs, including via APIs for sharing information. CMS should clarify that hospitals having EHRs with APIs for the exchange of data is insufficient on its own; hospitals must also use those APIs for data exchange—both to patients and applicable third parties, including other health care providers or clinical decision support tools.

To that end, CMS should consider new measures in its Promoting Interoperability Program on whether hospitals have and use APIs that meet the criteria laid out in ONC's new proposed regulations once finalized. CMS could measure, for example, whether health care providers have sent data to patients and other third parties using APIs, or implemented third-party clinical decision support tools.

Similarly, ONC's proposed regulations would require EHRs to be able to extract all data—referred to as electronic health information (EHI)—stored by or accessible to the system. CMS should consider measures that demonstrate that the hospital is providing EHI to patients upon their request. CMS could also consider whether the provision of records to patients occurs within a certain timeframe of the request.

CMS requirements to upgrade EHRs positive for interoperability

While not addressed explicitly in this proposed rule from CMS, previous regulations from the agency, coupled with ONC's recent proposed rule, mark important steps to advance the use of APIs for the extraction of clinical data from EHRs.

As part of CMS' payment policies for fiscal year 2019, the agency has required hospitals and health care providers to use EHRs that meet requirements—known as the 2015 edition certification criteria—outlined by ONC. Those ONC criteria currently require EHRs to have APIs that grant patient access to a limited set of data and do not specify the use of FHIR.

In ONC's proposed rule implementing Cures, the agency accelerates API use by requiring EHRs to have interfaces that enable the extraction of data from health records not just for patient access to data, but also to enable other uses, such as the implementation of clinical decision support tools and the interoperable exchange of information across organizations. These ONC regulations would also expand the type of data that EHRs must make available via APIs, and further advance the use of FHIR and other standards for the information.

As part of ONC's recent rulemaking, the agency makes changes to the 2015 criteria but does not create a new edition of the requirements. Instead, ONC proposed requiring EHR developers to upgrade their systems to have the new capabilities—such as for APIs—within two years of its rule taking effect. After two years, hospitals and health care providers that have not implemented EHRs that meet the new requirements will no longer be using systems that meet the revised 2015 criteria, and therefore will no longer be in compliance with CMS requirements to use EHRs that adhere to the 2015 criteria.

In effect, even absent CMS action, under existing and proposed regulations hospitals and other health care facilities will be required to upgrade to EHRs that meet the criteria in ONC's newest proposed regulations. The use of EHRs that meet ONC's new proposed specifications, as Pew details in its comments to the agency, will ensure that health care facilities have systems that provide critical new functionalities—including APIs to extract more data from records in a standardized manner.

Given the meaningful improvements that ONC proposes to require of EHRs via the updated criteria, CMS should work with ONC to maintain its policy that will result in health care facilities upgrading their systems to have the added EHR functionality even absent additional CMS rulemaking.

Conclusion

In the proposed regulations, CMS advances key policies that will better equip individuals with their data and enhance the coordination of care among clinicians treating the same patient. These proposed regulations would grant individuals access to their claims data via standardized APIs and require hospitals to alert other health care providers when their shared patients' health statuses change. In parallel, CMS seeks information on other ways to improve interoperability—including through better patient matching rates, innovative pilots, and new payment models.

In finalizing the regulations and reviewing comments, CMS should:

- Maintain its commitment to standard-based APIs for patient access to claims data;
- Support updates to claims to give patients better information on the medical implants on which they rely;
- Advance the exchange of hospital admission, discharge, and transfer notification to better coordinate care;
- Work with ONC to improve patient matching rates through standards for demographic data;
- Consider new innovation models to support interoperability;
- Assess revisions to payment policies to support the use of APIs; and
- Expedite adoption of EHRs with new functionalities that support standard access and exchange of health information.

Thank you for the opportunity to comment on these proposed regulations. Should you have any questions or if we can be of assistance, please contact me at 202-540-6333 or bmoscovitch@pewtrusts.org.



Ben Moscovitch
Project Director, Health Information Technology
The Pew Charitable Trusts

¹ Centers for Medicare and Medicaid, “Speech: Remarks by CMS Administrator Seema Verma at the HIMSS18 Conference,” news release, March 6, 2018, <https://www.cms.gov/newsroom/press-releases/speech-remarks-cms-administrator-seema-verma-himss18-conference>.

² Sarah Buhr, “Lyft follows Uber in opening up its API to third-party developers, starting with Facebook Messenger,” TechCrunch (blog), March 7, 2016, <https://techcrunch.com/2016/03/07/lyft-follows-uber-with-facebook-messenger-integration-and-opening-up-its-api-to-third-party-developers/>.

-
- ³ The Pew Charitable Trusts, “Unique Device Identifiers Improve Safety and Quality,” (2016), <https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/07/unique-device-identifiers-improve-safety-and-quality>.
- ⁴ Associated Press, “Medical devices for pain, other conditions have caused more than 80,000 deaths since 2008,” Stat News (blog), November 25, 2018, <https://www.statnews.com/2018/11/25/medical-devices-pain-other-conditions-more-than-80000-deaths-since-2008/>.
- ⁵ http://medpac.gov/docs/default-source/reports/jun17_ch7.pdf?sfvrsn=0; and <https://www.pewtrusts.org/en/research-and-analysis/speeches-and-testimony/2017/05/pew-hospitals-device-manufacturers-urge-support-for-udi-in-claims>
- ⁶ Erica Galvez, “HIE Bright Spots: How ADT Messages Support Care Coordination – Part II,” Health IT Buzz (blog), March 26, 2013, <https://www.healthit.gov/buzz-blog/state-hie/hie-bright-spots-adt-messages-support-care-coordination-part-ii>
- ⁷ Morris, “Patient Identification and Matching.”
- ⁸ Office of the National Coordinator for Health Information Technology, “Sending a Notification of a Patient’s Admission, Discharge and/or Transfer Status to Other Providers,” accessed April 22, 2019, <https://www.healthit.gov/isa/sending-a-notification-a-patients-admission-discharge-andor-transfer-status-other-providers>.
- ⁹ Morris, “Patient Identification and Matching.”
- ¹⁰ Government Accountability Office, “Health Information Technology: Approaches and Challenges to Electronically Matching Patients’ Records across Providers” (2019), <https://www.gao.gov/products/GAO-19-197>.
- ¹¹ College of Healthcare Information Management Executives, “Summary of CHIME Survey on Patient Data-Matching” (2012), https://chimecentral.org/wp-content/uploads/2014/11/Summary_of_CHIME_Survey_on_Patient_Data.pdf.
- ¹² Beth Haenke Just and Karen Proffitt, “Do You Know Who’s Who in Your EHR?” Healthcare Financial Management 63, no. 8 (2009): 68-73, https://www.justassociates.com/application/files/2514/9124/7591/HFM_August_2009_Do_You_Know_Whos_In_Your_EHR.pdf.
- ¹³ The Pew Charitable Trusts, “Enhanced Patient Matching Is Critical to Achieving Full Promise of Digital Health Records: Accurately linking individuals with their records essential to improving care” (2018), https://www.pewtrusts.org//media/assets/2018/09/healthit_enhancedpatientmatching_report_final.pdf.
- ¹⁴ Morris, “Patient Identification and Matching.”
- ¹⁵ Shaun J Grannis et al., “Evaluating the effect of data standardization and validation on patient matching accuracy,” *Journal of the American Medical Informatics Association* 26, no. 5 (2019): 447–456, <https://doi.org/10.1093/jamia/ocy191>.
- ¹⁶ Adam Culbertson et al., “The Building Blocks of Interoperability: A Multisite Analysis of Patient Demographic Attributes Available for Matching,” *Applied Clinical Informatics* 8, no. 2 (2017): 322-336, <https://doi.org/10.4338/ACI-2016-11-RA-0196>.
- ¹⁷ The Pew Charitable Trusts, “Enhanced Patient Matching Is Critical to Achieving Full Promise of Digital Health Records: Accurately linking individuals with their records essential to improving care” (2018), https://www.pewtrusts.org//media/assets/2018/09/healthit_enhancedpatientmatching_report_final.pdf.
- ¹⁸ <https://www.cujournal.com/opinion/want-better-analysis-consider-the-data>; <https://www.cnbc.com/2017/09/27/the-real-problem-with-credit-reports-is-the-astounding-number-of-errors-equifax-commentary.html>.
- ¹⁹ Robert S. Rudin et al., “Defining and Evaluating Patient-Empowered Approaches to Improving Record Matching,” RAND Corp., accessed Aug. 27, 2018, https://www.rand.org/pubs/research_reports/RR2275.html.
- ²⁰ The Pew Charitable Trusts, “Patients Want Better Record-Matching.”
- ²¹ Sigall K. Bell, et al., “When doctors share visit notes with patients: a study of patient and doctor perceptions of documentation errors, safety opportunities and the patient–doctor relationship,” *BMJ Qual Saf* 26, (2017): 262-270, <https://qualitysafety.bmj.com/content/26/4/262.citation-tools>.
- ²² Jan Walker et al., “OpenNotes After 7 Years: Patient Experiences With Ongoing Access to Their Clinicians’ Outpatient Visit Notes,” *Journal of Medical Internet Research* 21, no. 5 (2019): e13876.
- ²³ Rachel Gold, et al., “Developing Electronic Health Record (EHR) Strategies Related to Health Center Patients’ Social Determinants of Health,” *Journal of the American Board of Family Medicine* 30, no. 4 (2017): 428-447,

<https://www.jabfm.org/content/30/4/428.short>. AND <https://www.ama-assn.org/press-center/press-releases/unh-and-ama-collaborate-address-access-better-health>

²⁴ Robert L. Phillips, et al., “How Other Countries Use Deprivation Indices—And Why The United States Desperately Needs One,” *Health Affairs* 35, no.11 (2016):

<https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2016.0709>.

²⁵ The Pew Charitable Trusts, “Enhanced Patient Matching Is Critical to Achieving Full Promise of Digital Health Records.”