



Issue Brief

Accelerating Interoperability and Patient Access

Status Report on Industry Efforts to Meet the Goals of the CMS Interoperability Rule

In May of 2020, the Centers for Medicare and Medicaid Services (CMS) released its Final Interoperability and Patient Access Rule (“the Final Rule”) with the goal of improving “the quality and accessibility of information that Americans need to make informed health care decisions.”¹ The Final Rule was also intended to improve data interoperability by requiring payers to exchange patient and provider data with third-party apps using a single protocol and requiring payers to exchange data with each other, both with member consent. Subsequent federal policy, including the CMS Interoperability and Prior Authorization Final Rule (CMS-0057-F) issued in 2024, has expanded interoperability requirements and the use of HL7 FHIR-based application programming interfaces.²

Under the rule, all CMS-regulated payers³ are required to provide consumers with the ability to securely access their healthcare information using third-party apps of their choice and transfer their health information from an old payer to their current one. The rule also required plans to make their provider directories publicly accessible through an HL7[®] (Health Level Seven) FHIR[®] (Fast Healthcare Interoperability Resources) application programming interface (API).

To enable third-party app developers to access this data from payers, CMS required healthcare payers to make APIs publicly available for both patient information and directory data. Payers must also make the address where the APIs



could be accessed (i.e. the FHIR Endpoint) publicly available, along with the necessary supporting technical information without additional steps, such as a requirement to register or create an account to receive the documentation.⁴ CMS-regulated payers were required to make their Patient Access and Provider Directory APIs available under delayed enforcement by July 1, 2021.

PROGRESS

To test baseline requirements in 2021, DataSpring issued a report examining how prepared health plans were to meet these CMS requirements one year before the effective date and the barriers to adopting HL7 FHIR.⁵ As a follow up to this research, in late 2021, DataSpring conducted a study of public and private payers to determine the availability of endpoint information for the Patient Access and Provider APIs.

This study focused on payers with greater than 300k CMS covered lives.⁶ This included 97 payers representing 108 million lives.

The research found that, of all health plans subject to the rule, 64 percent make Patient Access and Provider Directory APIs endpoints available. This represents 75 percent of CMS covered lives. However, only 46 percent of payers have made these endpoints publicly available as required by the CMS Interoperability Rule. Eighteen percent of payers require registration to access their endpoint information.

For the Provider Directory API, 64 percent of payers make the endpoint available, but only 44 percent of payers make the endpoint available without registration. In addition, of the 64 percent of payers that make an endpoint available, only 27 percent publish provider listings without registration.

Overall, six months after the enforcement date, more than 64 percent of payers have complied with all or part of the Final Rule. While the quality of the data was not studied, a preliminary review of the top 50 payers⁷ found that of the 44 that had published endpoints, only 31 had APIs to which app vendors could connect.

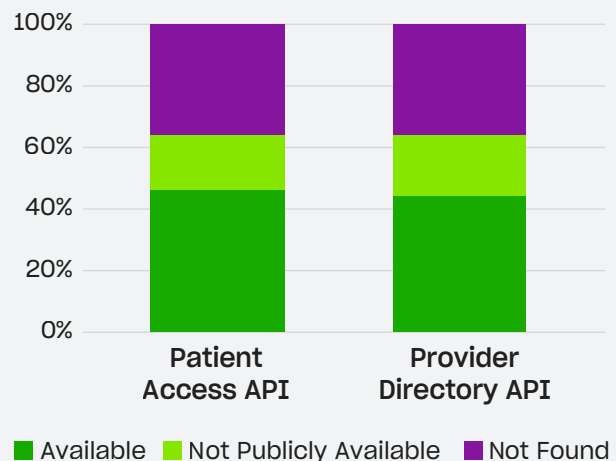
Of the Medicaid fee-for-service (FFS) payers examined, 11 percent have a Patient Access or Provider Directory endpoint available. However, no fee-for-service organization made the provider listings available without requiring registration.

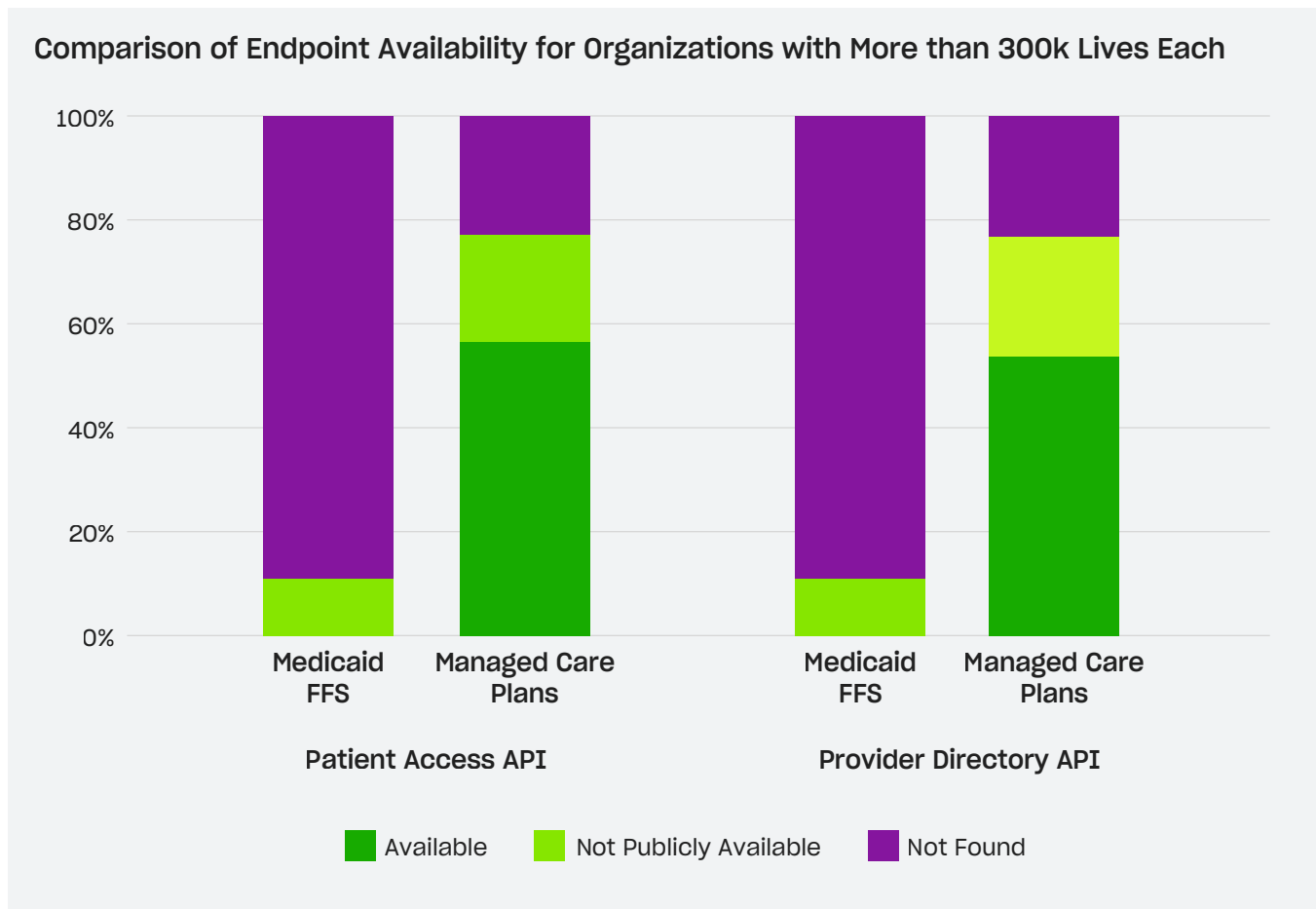
In general, private payers have made more progress in complying with the Interoperability Rule than Medicaid FFS programs. According to an October 2020 letter from the National Association of Medicaid Directors to CMS,⁸ this may be due in part to challenges state Medicaid programs faced dealing with the pandemic. However, state Medicaid FFS programs have been accelerating efforts, and more member and provider data is becoming available every month, as reported by this initial research.⁹



64 percent of health plans have published the patient access endpoint, however only 46 percent of payers make it publicly available as required by CMS.

API Availability for Organizations with More than 300k Lives Each





BARRIERS

Based on the research, several factors are hindering full compliance with the final rule. These include:

Security considerations.

Some payers are concerned that publishing the Patient Access API endpoint could result in patient data being exposed. This is evidenced by the fact that, although 64 percent of payers have published the necessary endpoint information, only 46 percent have made the data accessible publicly.

Concerns expressed over data security are understandable, however, publishing the endpoint does not, in itself, create a risk that data will be shared. The Patient Access API requires patients to input their personal security credentials and explicitly consent to sharing before data can flow to the app. This approach, “Smart on FHIR¹⁰”, is

built upon industry standard authentication and authorization security protocols designed to protect patient credentials by ensuring they are never shared with the application.

Single infrastructure for all APIs.

For the Provider Directory API, data security should be less of a concern because the API contains only publicly available information. However, many payer developer portals have implemented a single security infrastructure for both the Provider and Patient Access APIs. Because of this, most provider directory APIs also require authentication and authorization. This has resulted in only 27 percent of payers with more than 300K covered lives having publicly available provider listings, as required by the Final Rule. To address this, developer portals should follow security practices and apply the appropriate required security levels to each data type, as outlined by CMS and NIST guidelines.^{11,12}

Concerns related to the impact on payer system performance.

Some payers have expressed concern that making provider directory data available without requiring any form of security and registration will impact the performance of payer systems. To ensure that only limited data can be retrieved at a time, payers should follow HL7 FHIR standards for pagination. Payers could also investigate the use of Bulk on FHIR¹³ to alleviate concerns with processing large volumes of data.

CONCLUSION

After years of discussing how to grant patients access to their healthcare information, progress is being made. Ahead of the CMS 2020 final implementation deadline, 64 percent of payers serving more than 300K CMS covered lives have met at least one component of the Final Rule, and this percent continues to grow.

DataSpring partners with payers and other industry groups to help educate stakeholders, identify and exchange best practices, and help payers and apps connect and share information to support patients in accessing their own health information.

METHODOLOGY

To conduct this study, DataSpring sought to identify all known endpoints nationwide for payers representing more than 300K CMS covered lives. In this study, we recorded the following information for each payer:

- If an endpoint was known and published;
- Type of endpoint: Patient Access API or Provider Directory API;
- Endpoint accessibility, i.e., received a 200 Response code;
- If the capability statement URL was listed (either as json, xml or html);
- For Provider APIs if the Provider Directory could be listed by appending “Practitioner” to the Provider Directory API URL.

We characterized the data for the Patient Access and Provider Directory API endpoints as following:

- **Not Found:** No endpoint was able to be determined for the payer
- **Available:** The capability statement was accessible without requiring registration
- **Not publicly available:** The capability statement required registration or authentication to access

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1. “Medicare and Medicaid Programs; Patient Protection and ...” [FederalRegister.gov](https://www.federalregister.gov/documents/2024/02/08/2024-00895/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-advancing-interoperability), <https://www.cms.gov/files/document/cms-9115-f.pdf>
 2. “CMS Interoperability and Prior Authorization Final Rule (CMS-0057-F),” CMS, February 08, 2025, <https://www.federalregister.gov/documents/2024/02/08/2024-00895/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-advancing-interoperability>
 3. CMS-regulated payers include Medicare Advantage organizations and Medicaid Managed Care Plans, State Medicaid Agencies, CHIP Agencies and CHIP Managed Care Entities, Issuers of Qualified Health Plans in Marketplaces.
 4. 42 CFR 422.119 (d).
 5. <https://www.caqh.org/sites/default/files/explorations/fhir-issue-brief.pdf>
 6. All payers with more than 300K CMS covered lives as listed in the AIS Directory were included in the study: AIS Health Data, a Division of Managed Markets Insight and Technology, LLC, AIS’s Directory of Health plans: 2021
 7. <https://defacto.health/2022/01/20/analysis-of-top-50-payers-provider-directory-apis/>
 8. <https://medicaiddirectors.org/publications/namd-requests-extension-on-interoperability-rule/>
 9. <https://defacto.health/2022/01/18/payer-compliance-provider-directory-apis-in-the-first-six-months-since-cms-final-rule-enforcement/>
 10. <https://docs.smarthealthit.org/>
 11. <https://www.federalregister.gov/d/2020-05050/p-552>
 12. <https://www.nccoe.nist.gov/publication/1800-25/VolA/index.html>
 13. <https://hl7.org/fhir/uv/bulkdata/>