

WEBINAR

OPEN APIs in HEALTHCARE

The Future of Data Integration

Brian Murphy
August 18, 2020



ABOUT CHILMARK RESEARCH

- ⊙ Our team is united by a core belief that effective deployment and use of IT is essential to modernizing care delivery and improving the care journey.
- ⊙ Chilmark analysts monitor trends and developments in the industry with a focus on those technologies that will be transformational to healthcare delivery.
- ⊙ We provide comprehensive, objective, high quality research for busy executives. It our way to help create a more informed, future-ready market of products and customers.
- ⊙ *Clarity in an uncertain time.*

PRESENTER: BRIAN MURPHY

DIRECTOR OF RESEARCH, ANALYTICS AND INTEROPERABILITY



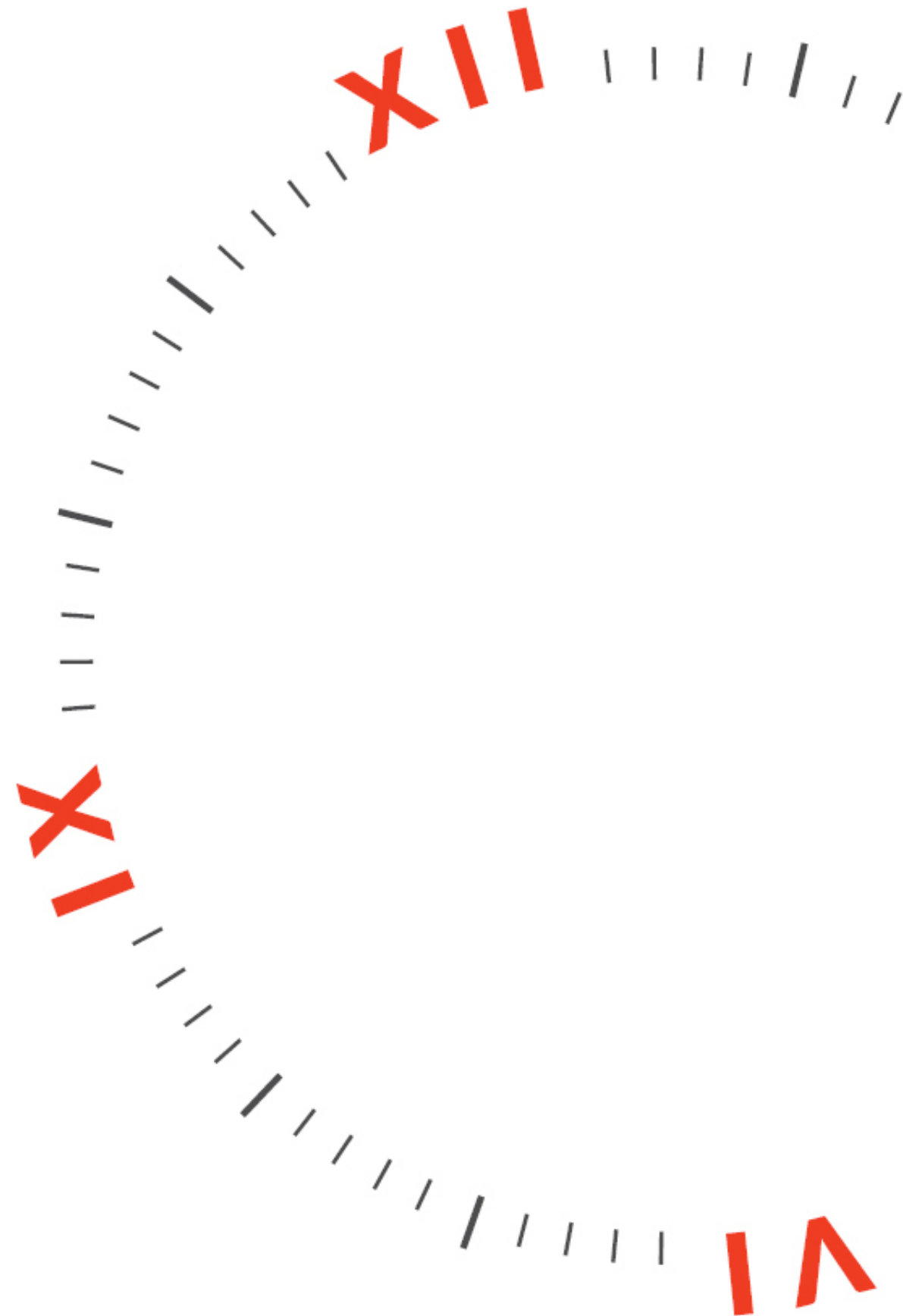
Brian joined Chilmark Research as an industry analyst in 2012. He is an outspoken advocate for true interoperability being the key to unlocking the potential of health IT and has centered the majority of his research efforts with Chilmark around this subject. He also currently heads Analytics research for the Analytics domain.

Brian has worked in the IT business for over 30 years, beginning his career in the field-sales organization of IBM. He then joined Yankee Group as an analyst, managing an enterprise software service and leading research on the dynamics of the database market. After Yankee, he joined Eclipsys (prior to Allscripts acq), where he worked with product managers to refine and harmonize value propositions in light of the organization's broader goals.

Brian is a graduate of both Harvard College and Suffolk Law School. When not thinking about health IT, he's a runner and armchair Boston historian.

TODAY'S AGENDA

- ① Key Takeaways
- ② APIs in the Context of Healthcare Interoperability
- ③ Why are we talking about APIs now?
- ④ What did the 21st Century Cures Act do?
- ⑤ Who is helping FHIR implementers?
- ⑥ What is our report about?
- ⑦ How do vendors compare?



KEY TAKEAWAYS

- ◎ New requirements for FHIR-standard APIs will impact everyone
 - ❖ Patients, Providers, Payers, Other data holders
- ◎ Healthcare Enterprises must build FHIR-standard APIs
 - ❖ Not everyone is convinced or committed
- ◎ Developers follow the path of least resistance to data sources
- ◎ Revenue models for access and usage are up in the air
- ◎ Providers lead and payers must catch up
- ◎ Privacy and security concerns can only increase



THE INTEROPERABLE HEALTHCARE DATA PLATFORM

Data-oriented APIs

- Developers access live healthcare data via a set of APIs
- Supports CRUD access
- Bidirectional data flows
- Software and services

Bulk Data Aggregation

- Ingest, process, transform, and organize raw data from multiple sources
- Unidirectional data flow
- Software and services

Interoperability Infrastructure

- Special purpose enabling software for information exchange
- Highly variable capabilities
- Primarily software-based

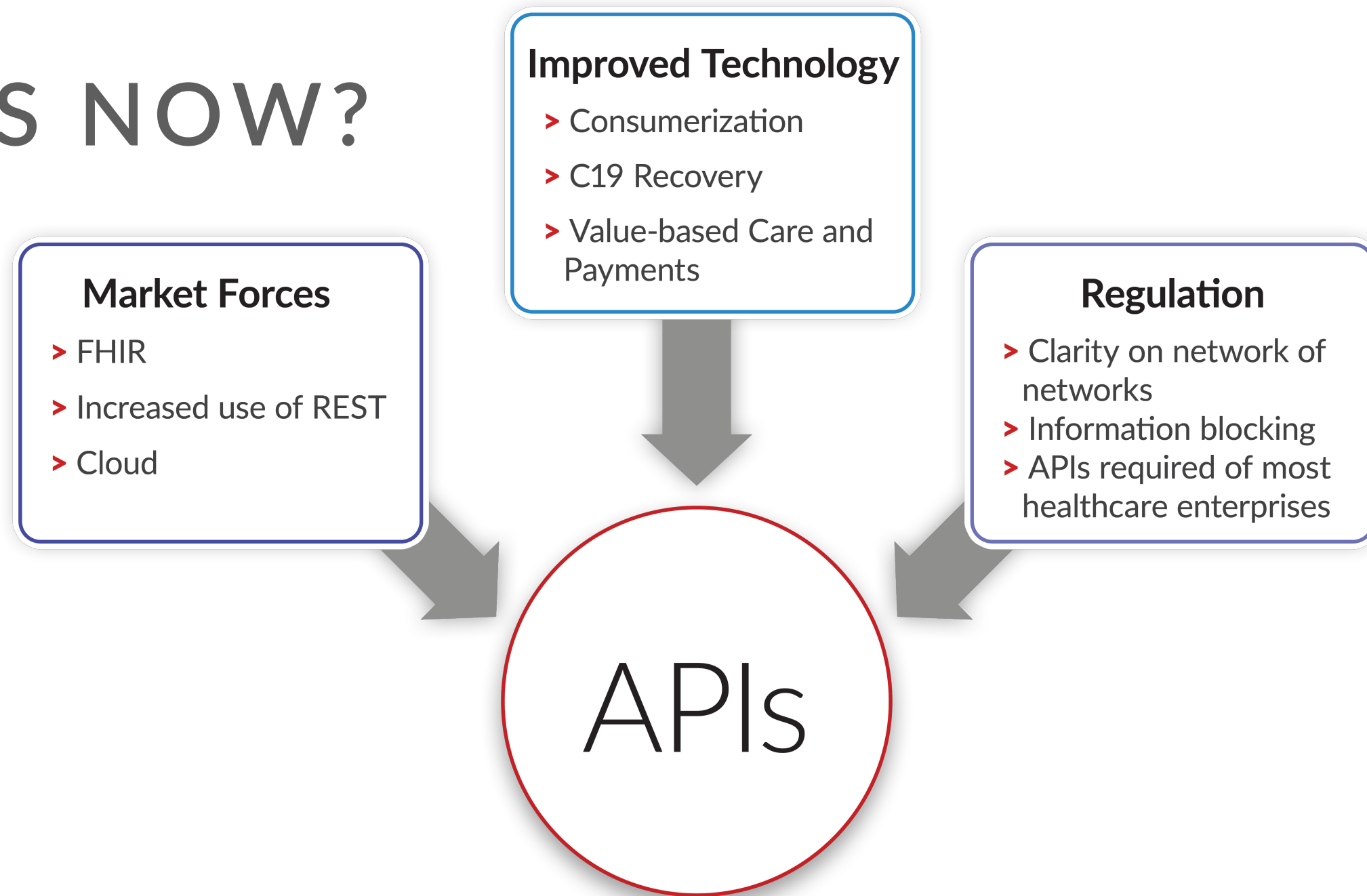
Messaging

- User-to-user or user-to-organization messaging applications
- Multi-modal messaging
- Payload driven

Patient Matching

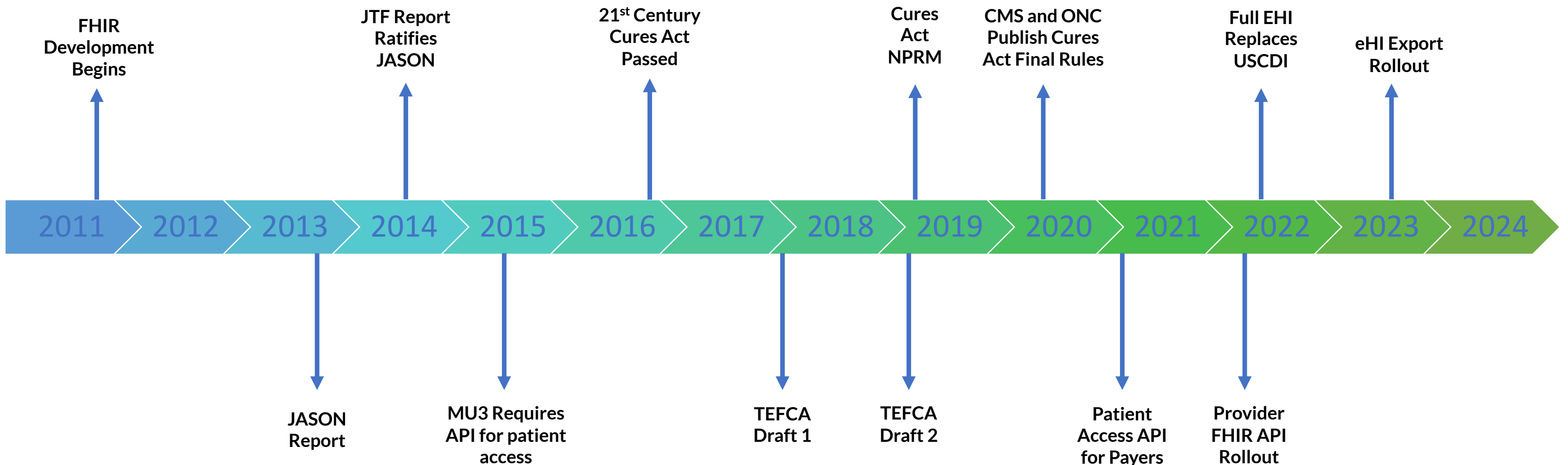
- Matching individual patients to their health records in different applications and across organizations

WHY APIS NOW?



- ⊙ Looser coupling of data and applications
- ⊙ Simpler programming model
- ⊙ Higher development and integration productivity

A BRIEF HEALTHCARE INTEROPERABILITY TIMELINE



21ST CENTURY CURE ACT RULES AFFECT...

⊙ Consumer/Patient/Member

- ❖ More cost and outcome transparency
- ❖ More choices of providers
- ❖ Apps that provide secure and private access to their data

⊙ Providers

- ❖ Must implement FHIR-standard APIs with data elements specified in USCDI
- ❖ Hospitals must send ADTs to another provider

⊙ Payers

- ❖ Some must implement set of FHIR-standard APIs

⊙ HIT Vendors

- ❖ Must build API infrastructure for customers
- ❖ Must NOT information block



PAYERS ARE NEW TO APIS

- ◎ CMS-regulated Payers must have APIs for:
 - ❖ Patient Access (July 1, 2021)
 - ❖ Provider Directory (July 1, 2021)
 - ❖ Payer-to-Payer Data Exchange (January 1, 2022)

See <https://www.cms.gov/Regulations-and-Guidance/Guidance/Interoperability/index>

THINGS THAT COULD CHANGE...

- 🎯 Covid-19 impacts

- ❖ Public health concerns bubble to the top?

- 🎯 Implementation timeline

- ❖ More likely to be stretched out

- 🎯 Population-level and broadcast query

- 🎯 REST and FHIR support in existing national networks



APP STORES

- ◎ EHR Vendors
 - ❖ Most apps are not for patient/member
 - ❖ Different levels of evolution and commitment
 - ❖ Most are element in larger partnership program
- ◎ Large Health Systems
 - ❖ Still rare
- ◎ Specialty societies
- ◎ Payers and health plans
 - ❖ None so far
- ◎ Difference between patient-facing and other users
- ◎ Who could be a third-party recommender?

WHAT INDUSTRY-WIDE EFFORTS ARE HELPING TO MAKE FHIR SUCCESSFUL?

- ◎ EHR and HIT Vendors
 - ❖ Most have FHIR and API support
- ◎ ONC FHIR at Scale (FAST)
 - ❖ Tiger Teams
 - Ecosystem
 - Identity
 - Security
 - Directory, Versions, and Scale
 - Testing and Certification
 - Exchange Process
 - Pilots
- ◎ FHIR Accelerator Program
 - ❖ Health Level Seven is all-in on FHIR



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FHIR ACCELERATOR PROGRAM



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WHAT'S IN THE REPORT?

OPEN APIs IN HEALTHCARE: THE FUTURE OF DATA INTEGRATION

```
{  
  "resourceType": "Medication",  
  "id": "12",  
  "code": {  
    "coding": [  
      {  
        "system": "http://www.nlm.nih.gov/research/umls/rxnorm",  
        "code": "1005920",  
        "display": "ULIPRISTAL ACETATE"  
      }  
    ],  
    "text": "ULIPRISTAL ACETATE"  
  }  
}
```

A CHILMARK RESEARCH MARKET TRENDS REPORT

DATA-ORIENTED APIS

🎯 Developer perspective

- ❖ Where can I find the data I need?
- ❖ Data types, organizational sources, networks, access costs, support provided
- ❖ What does the API return?

🎯 Provides access to discrete and/or current patient or member data

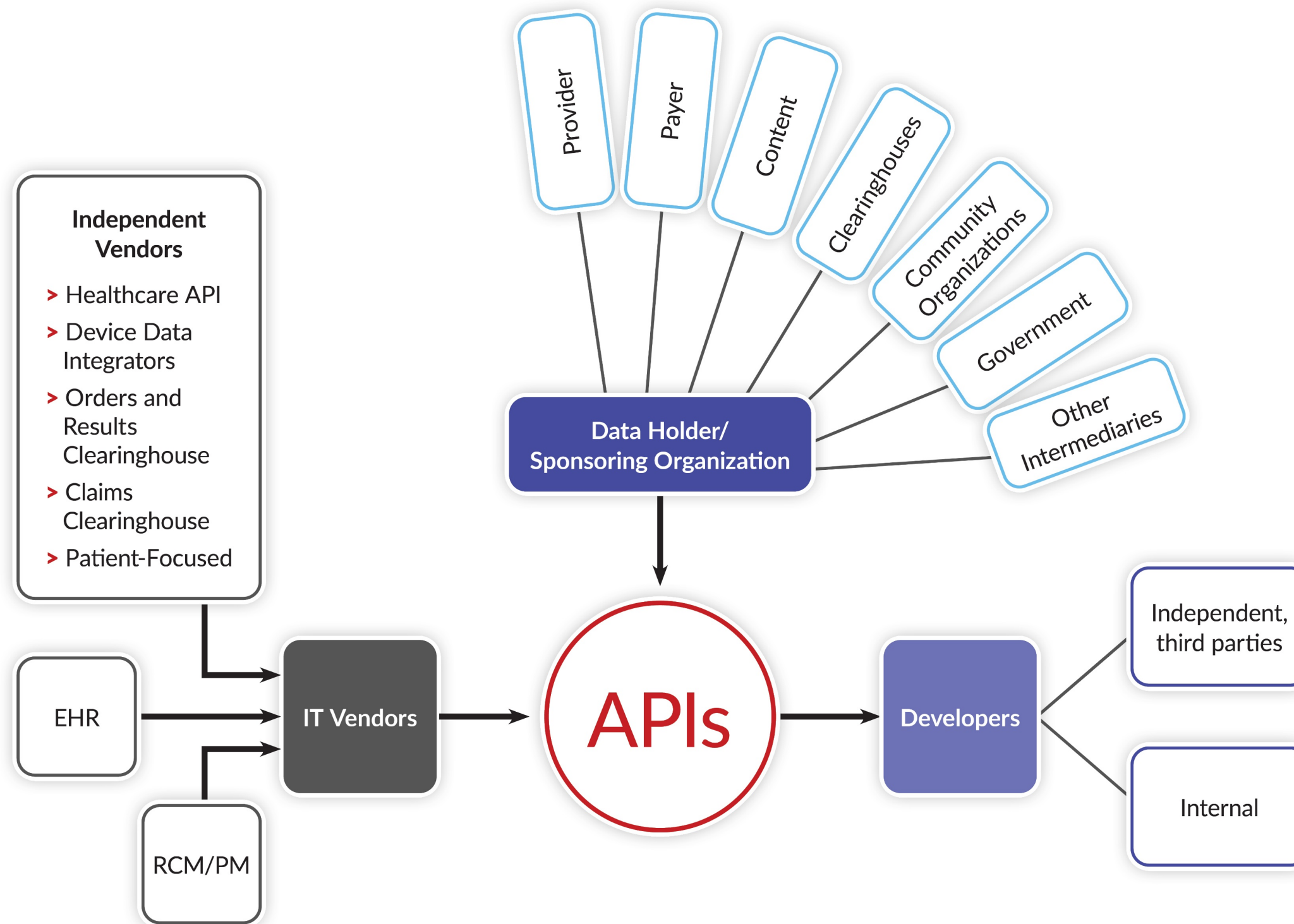
- ❖ REST-style
- ❖ Conventional APIs
 - HL7, IHE, extracts, purpose-built, SOAP, and other web services
- ❖ Typically return data using XML or JSON, (or documents, or messages)

🎯 Other kinds of API that are out of scope:

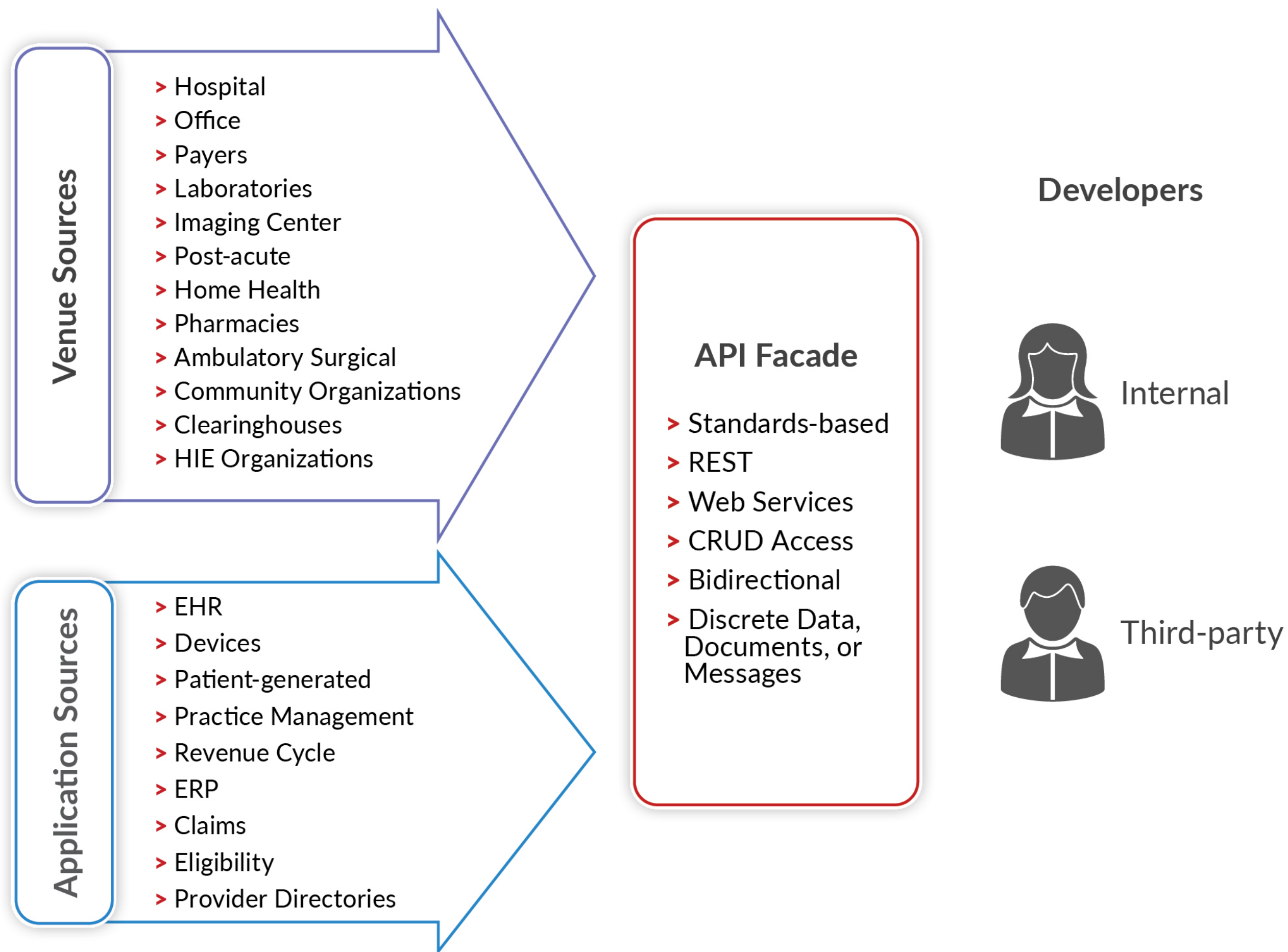
- ❖ Aggregated data
- ❖ Functional
 - Calculations, conversions, algorithms, process support, edits and checks



API PRODUCERS AND CONSUMERS



WHAT GOES INTO APIs:



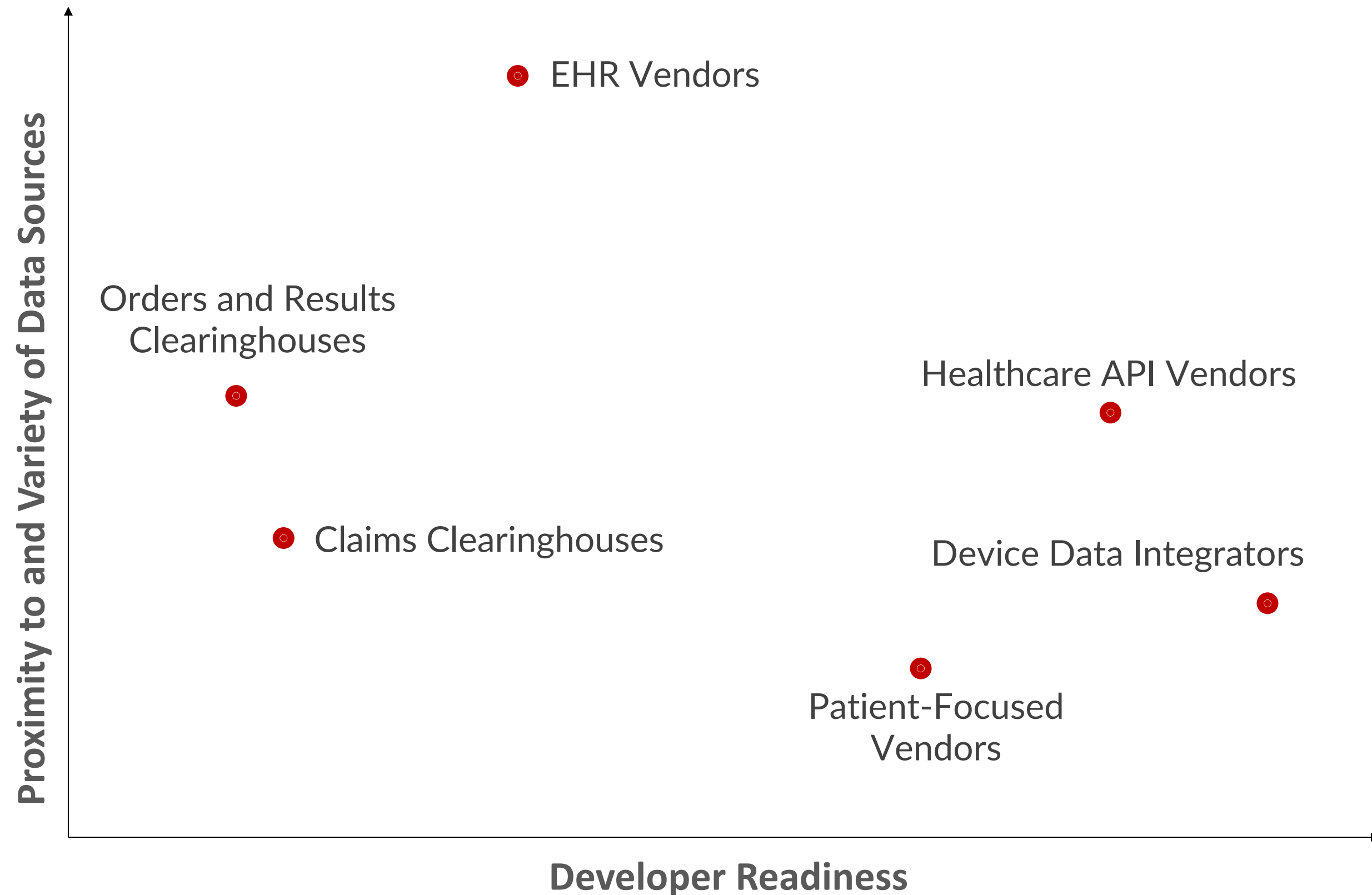
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VENDOR CATEGORIES

| Vendor Type | Profiled Vendors | Other Relevant Vendors | Proximate Data Source(s) |
|-----------------------------------|--|---|---|
| EHR Vendors | Athenahealth, Allscripts, Cerner, Epic, Meditech NextGen | eClinicalWorks, Greenway Health | Provider EHRs |
| Healthcare API Vendors | Apple, Change Healthcare, Datica, Redox, 1upHealth, Human API, Particle Health | Enterprise API builders, InterSystems, Orion Health | Many, including EHR, PM, RCM, ERP |
| Device Data Integrators | Human API, Validic | Capsule Technologies, GE Healthcare, Philips, Siemens | Medical and consumer wellness devices |
| Orders and Results Clearinghouses | 4Medica, Change Healthcare, NCPDP | Elkay, Liaison Technologies, regional and local service providers | Orders and results between HCOs and independent laboratories, imaging centers |
| Claims Clearinghouses | Availity, Change Healthcare, NCPDP, Surescripts | Emdeon, NaviNet, Remedi, Zirmed | Payer claims, eligibility, and provider directory data |
| Patient-Focused Vendors | 1upHealth, Apple, Blue Button 2.0, Change Healthcare, Particle Health | | Provider EHRs |



VENDOR CATEGORIES COMPARED



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QUESTIONS?

*Please contact me at
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for further questions or follow-up*



ANNOUNCEMENTS



‘COVID LESSONS LEARNED’ SERIES CONTINUES:

APIs FOR DATA LIQUIDITY IN PANDEMIC TIMES

VIEWS AND PERSPECTIVES FROM HEALTH IT LEADERS

Moderator



Brian Murphy
Research Director



Gautam "G" Shah
VP of Platform and Marketplace



Drew Ivan
Chief Product and Strategy Officer



Dr. Dave Levin, MD
Co-Founder, Chief Medical Officer



Wednesday September 9, 2020 at 1pm ET / 10am PT

[Register Now](#)



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NEW RESEARCH

- © Revenue Integrity Market Trends Report will be released tomorrow, August 19th, 2020
- © **Vendors Profiled:** 3M, Allscripts, athenahealth, Cerner, Change Healthcare, Hayes|MDAudit, Medicomp Systems, Optum, PatientMatters, RevSpring, Sift, and ZOLL
- © Webinar on September 3, 2020 at 1pm ET.



THANK YOU

FOR ATTENDING!

Feel free to reach out with any follow up questions directly to the analysts or John at john3@chilmarkresearch.com



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