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ツールを取得可能。  
商用利用も可能

## 2.17 License and Legal Terms

[FHIR Infrastructure](#) [Work Group](#)

Maturity Level: N/A

Ballot Status: Informative

### 2.17.1 Disclaimer and Warning of Use

FHIR Resource definitions developed by HL7 are derived from the considerable collective experience of the HL7 membership and wide community feedback from the development and application of a spectrum of health care interoperability solutions. However, Resource definitions are generalized to support multiple contexts of use. It is the responsibility of the persons or organizations using these Resources to ensure their use is fit for the particular purpose in which they are used, including validation for clinical and operational use.

See also the specific warnings associated with [use of the STU](#).

### 2.17.2 FHIR License

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ANALYTICS IN ACTION NEWS

## Amazon, Google, IBM Pledge Health Data Standards, Interoperability

Amazon, Google, and IBM joined other technology giants to pledge progress towards the adoption of health data standards, interoperability, and the Triple Aim.



Source: Thinkstock



By Jennifer Bresnick

August 13, 2018 - Half a dozen of the biggest names in technology – Amazon, Google, Microsoft, Salesforce, IBM, and Oracle – have joined together to pledge speedy progress towards true health data interoperability.

In a **letter** issued by the Information Technology Industry Council (ITI), the six tech giants stated that they are “jointly committed to removing barriers for the adoption of technologies for healthcare interoperability, particularly those that are enabled through the cloud and AI.”

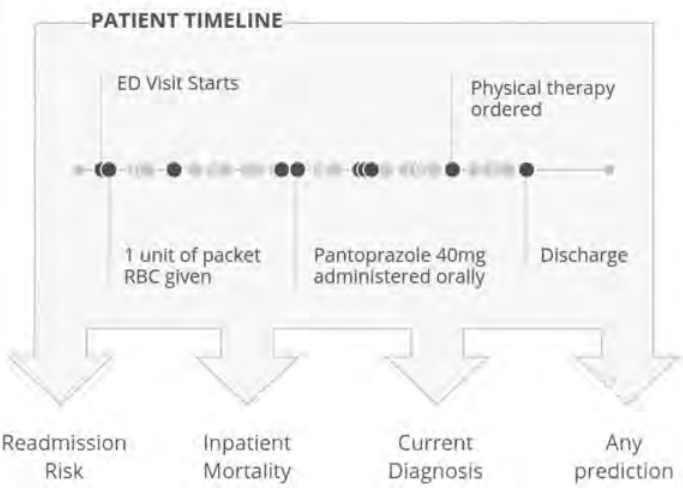
“We share the common quest to unlock the potential in healthcare data, to deliver better outcomes at lower costs,” the companies said. “Together, we believe that a robust industry dialogue about healthcare interoperability needs will advance this cause, and hence are pleased to issue this joint statement.”

米国の大手ITベンダーが  
2018年8月にFHIRのサ  
ポートを表明

Apple, Google, Microsoft, IBM  
などはFHIRを扱うクラウドサー  
ビスについて現在提供中(予  
定) 2019年1月現在



JOHN DOE



1

Health systems collect and store electronic health records in various formats in databases.

2

All available data for each patient is converted to events recorded in containers based on the Fast Healthcare Interoperability Resource (FHIR) specification.

3

The FHIR resources are placed in temporal order, depicting all events recorded in the EHR (i.e. timeline). The deep learning model uses this full history to make each prediction.

Googleで入院患者の経過予測をディープラーニングで実装。その前提となる医療情報の情報モデルとしてFHIRを採用



FHIRをGoogleのCloudに取り込み、機械学習にかけることができるエコシステムを提供予定

Scalable and accurate deep learning with electronic health records Alvin Rajkomar, Eyal Oren, effrey Dean npj Digital Medicine volume 1, Article number: 18 (2018)

# Apple announces effortless solution bringing health records to iPhone



Health Records Brings Together Hospitals, Clinics and the Existing Health App to Give a Fuller Snapshot of Health



2018年1月にiOS 11.3から標準でFHIRがサポート

## Updated Apple Health app uses FHIR to import patient health data

Apr 25, 2018

### A growing number of hospitals are encouraging patients to keep and monitor personal health information

Technology keeps the world connected like never before, offering access to a tremendous amount of data with just a simple touch. Much of that access is obtainable via mobile, and with each new app developed, more prospects and opportunities become available.



<https://www.apple.com/newsroom/2018/01/apple-announces-effortless-solution-bringing-health-records-to-iphone/>

# FHIRをサポートするクラウドサービスの発表

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## Azure API for FHIR® PREVIEW

An open protocol for healthcare data management and sharing in the cloud

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### What is FHIR®?

The healthcare industry is rapidly Resources. This robust, extensible can work together.

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## Cloud Healthcare API

Standards-based APIs powering actionable healthcare insights for security and compliance-focused environments.

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## FHIR service

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The Watson™ Platform for Health GxP Fast Healthcare Interoperability Resources (FHIR) service and REST API support high-volume ingestion of electronic data from multiple sources, including healthcare devices and mobile applications. After processing, FHIR data is accessible to analysis and reporting tools such as Spark jobs and Hive queries and for use in clinical research.

### FHIR service overview

Use the FHIR service to upload FHIR-formatted data into the FHIR repository. The FHIR repository consists of multiple data stores that manage your FHIR data logically. FHIR resources are ingested either within the context of clinical studies or programs within commercial studies. Clinical studies are often run across multiple sites and commercial studies usually include multiple programs. For clinical studies, Watson Platform for Health GxP ingests data in the context of a specified study a site. For commercial programs, Watson Platform for Health GxP ingests data in the context of an application, or an "app". The commercial data, which includes the application name and version, can then be shared between multiple programs.



<https://azure.microsoft.com/en-us/services/azure-api-for-fhir/>, <https://cloud.google.com/healthcare/>, [https://www.ibm.com/support/knowledgecenter/en/SSSMS8/content/wp4h\\_gxp\\_c\\_fhir\\_service.html](https://www.ibm.com/support/knowledgecenter/en/SSSMS8/content/wp4h_gxp_c_fhir_service.html)

# 国の機関がFHIRの導入を主導

- 米国 保健福祉省 (HHS) 傘下のメディケア・メディケイドサービスセンター (CMS)
  - Blue Button
- フィンランド議会傘下のKela (社会保険機構)
  - Kela Personal Health Record System<sup>[1]</sup>
- 英国 NHS Digital
  - API Hub<sup>[2][3]</sup>
- オーストラリア Australian Digital Health Agency
  - My Health Record FHIR Gateway<sup>[4]</sup>
- オランダ 保健・福祉・スポーツ省VWS,国立医療ICT研究所Nictiz、患者連盟NPCF
  - PHR推進プロジェクト MedMij [5]

[1] [https://www.hl7.org/documentcenter/public\\_temp\\_015E1140-1C23-BA17-0C1BEF32A59C7903/wg/mobile/Kanta%20PHR%20for%20Developers.pdf](https://www.hl7.org/documentcenter/public_temp_015E1140-1C23-BA17-0C1BEF32A59C7903/wg/mobile/Kanta%20PHR%20for%20Developers.pdf)

[2] [http://www.hl7.org.uk/doc\\_store/FHIR/NHSDigitalFHIR.pdf](http://www.hl7.org.uk/doc_store/FHIR/NHSDigitalFHIR.pdf)

[3] <https://developer.nhs.uk/apis/>

[4] <https://www.digitalhealth.gov.au/implementation-resources/national-infrastructure/my-health-record-fhir-gateway/DH-2721-2018>

[5] <https://www.medmij.nl/wp-content/uploads/2017/06/Factsheet-MedMij-FHIR.pdf>