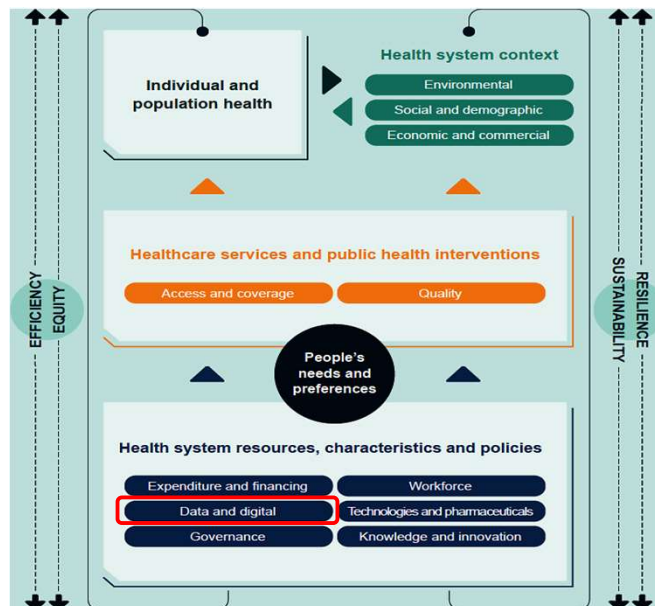# 分担報告書　資料

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新たなHealth System Performance Assessment Framework
(HSPAフレームワーク 2024年版)

https://www.oecd-ilibrary.org/social-issues-migration-health/rethinking-health-system-performance-assessment_107182c8-en

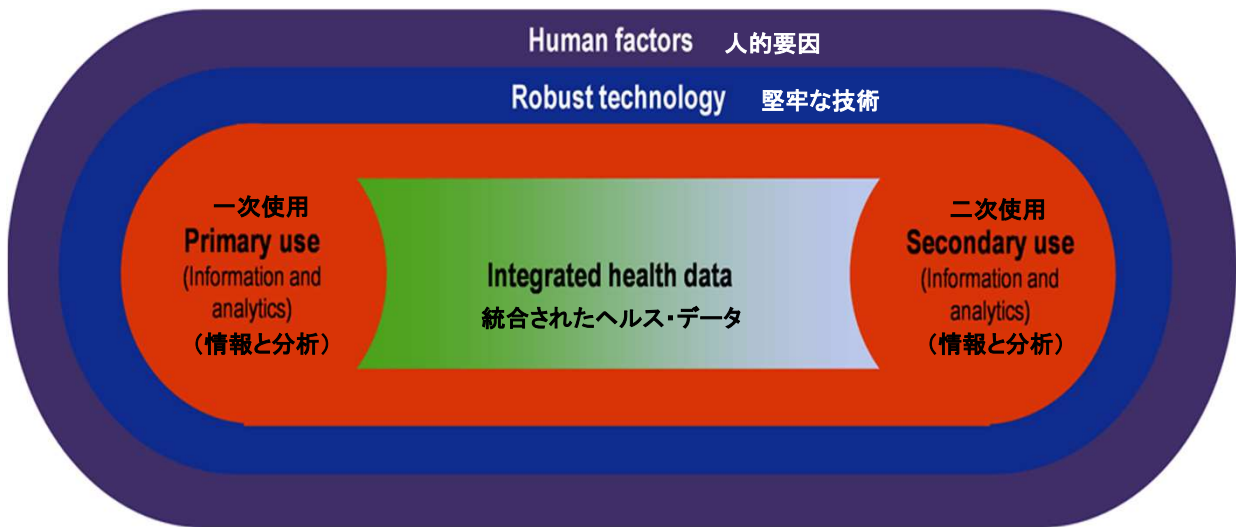**Health at a Glance 2023**
OECD INDICATORS

OECD

| 33

2 Digital health at a glance

OECD countries are struggling to maximise the value from digital health because technologies and the data environment are often outdated and fragmented. This chapter explores the concept of digital health readiness – assessing the policy, analytic, technical and social environment that enables successful use of digital health. The concept of readiness is taking on increased urgency with the realisation that digital health is an emerging determinant of health. The chapter first looks at the policy components of an integrated digital health ecosystem to establish dimensions of digital health readiness – analytic, data, technology and human factor readiness. It then compiles and analyses indicators to measure readiness in these dimensions. The chapter concludes with a brief exploration of digital transformation as a determinant of health, providing some examples of the benefits of digital health in acute care to lower costs and improve the patient experience.

HEALTH AT A GLANCE 2023 © OECD 2023

Integrated Digital Health Ecosystem
統合されたデジタル・ヘルス・エコシステム

Human factors　人的要因

Robust technology　堅牢な技術

一次使用
Primary use
(Information and analytics)
（情報と分析）

Integrated health data
統合されたヘルス・データ

二次使用
Secondary use
(Information and analytics)
（情報と分析）

Source: Sutherland, E., "Policy checklist for integrated digital health ecosystems".

ヘルス・データ・ガバナンス

Recommendation on health data governance	Dimensions of digital readiness
Engagement and participation of stakeholders in the development of a national health data governance framework	Human factors
Co-ordination within government and co-operation among organisations processing personal health data to encourage common data-related policies and standards	Human factors
Reviews of the capacity of public sector health data systems to serve and protect public interests	Human factors
Clear provision of information to individuals about the processing of their personal health data including notification of any significant data breach or misuse	Technology
The processing of personal health data by informed consent and appropriate alternatives	Data
The implementation of review and approval procedures to process personal health data for research and other health-related public interest purposes	Data
Transparency through public information about the purposes for processing of personal health data and approval criteria	Human factors
Maximise the development and use of technology for data processing and data protection	Technology
Mechanisms to monitor and evaluate the impact of the national health data governance framework, including health data availability, policies, and practices to manage privacy, protection of personal health data and digital security risks	Human factors
Training and skills development of personal health data processors	Human factors
Implementation of controls and safeguards within organisations processing personal health data including technological, physical, and organisational measures designed to protect privacy and security	Data Technology
Requiring that organisations processing personal health data demonstrate that they meet the expectations set out in the national health data governance framework	Human factors

Source: OECD (2016[9]), Recommendation of the Council on Health Data Governance, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0433.

デジタル・セキュリティのリスクマネジメント

Recommendation on digital security risk management	Description	Dimensions of digital readiness
Digital security culture: awareness, skills, and empowerment	All stakeholders should create a culture of digital security based on an understanding of digital security risk and how to manage it	Technology
Responsibility and liability	All stakeholders should take responsibility for the management of digital security risk based on their roles, the context, and their ability to act	Technology
Human rights and fundamental values	All stakeholders should manage digital security risk in a transparent manner and consistently with human rights and fundamental values	Technology
Co-operation	All stakeholders should co-operate, including across borders	Technology
Strategy and governance	Leaders and decision makers should ensure that digital security risk is integrated in their overall risk management strategy and managed as a strategic risk requiring operational measures	Technology
Risk assessment and treatment	Leaders and decision makers should ensure that digital security risk is treated based on continuous risk assessment	Technology
Security measures	Leaders and decision makers should ensure that security measures are appropriate to and commensurate with the risk	Technology
Resilience, preparedness and continuity	Leaders and decision makers should ensure that a preparedness and continuity plan based on digital security risk assessment is adopted, implemented, and tested, to ensure resilience	Technology
Innovation	Leaders and decision makers should ensure that innovation is considered	Technology

Source: OECD (2022[11]), Recommendation of the Council on Digital Security Risk Management, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0479.

デジタルIDのガバナンス

Recommendation on digital identity	Description	Dimensions of digital readiness
User-centred and inclusive digital identity systems	Designing and implementing digital identity systems that are effective, usable, and responsive to the needs of users and service providers, while prioritising inclusion, reducing barriers to access, and preserving non-digital ways to prove identity	Data
Strengthening the governance of digital identity	Defining roles and responsibilities and align legal and regulatory frameworks across the digital identity ecosystem(s). Protecting privacy and prioritising security to ensure trust in digital identity systems	Data
Cross-border use of digital identity	Co-operating internationally to establish the basis for trust in other jurisdictions' digital identity systems and issued identities. Understanding needs of users and service providers in different cross-border scenarios	Data

Source: OECD (2023[12]), Recommendation of the Council on the Governance of Digital Identity, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0491.

準備性（readiness）各指標の先進国

Dimension of digital health readiness	Indicator or proxy presented in this chapter	Leading countries
Analytic readiness	Dataset availability, maturity, and use score (OECD)	Denmark, Korea, Sweden, Finland, Latvia
	Patient access to their own health data (OECD)	Denmark, Italy, Lithuania, Luxembourg, Sweden, Türkiye
	Global AI Index (third party)	United States, the United Kingdom, Canada, Korea, Israel
Data readiness	Dataset governance score (OECD)	Denmark, Finland, France, United States, United Kingdom
	Digital Government Index (OECD)	Norway, United Kingdom, Colombia, Denmark, Japan
	Interoperability standard adoption (OECD)	Australia, Belgium, Finland, Korea, Netherlands, Norway, Sweden
Technology readiness	**Internet connectivity for individuals (OECD)**	Japan, Estonia, Finland, Denmark, Netherlands
	Digital security (OECD)	Australia, Canada, Czech Republic, France, Germany, Ireland, Israel, Korea, Netherlands, Norway, United Kingdom, United States
	Certification of vendors (OECD)	Belgium, Denmark, Finland, Hungary, Japan, Korea, Portugal, Slovenia, Switzerland, Türkiye, United States
Human factor readiness	Strategic governance	*35 countries have a digital health-related strategy*
	Literacy, capacity, and capability	Netherlands, Finland, Ireland, Denmark, Sweden
	Public, provider, and stakeholder involvement	Estonia, Korea, Latvia, France, Lithuania

Note: Items in **bold** are non-health specific. Leading countries identified in the respective analyses presented earlier in the chapter, listed by ranking or alphabetical when in a top category.

Figure 2.2. **Checklist of policies for an integrated digital health ecosystem (IDHE)**
図 2.2. 統合されたデジタル・ヘルス・エコシステム（IDHE）の政策のチェックリスト

分析と使用

Analytics and use: Creates value from data to continuously improve individual and system outcomes

使用して Uses

統合されたヘルス・データ

Integrated health data: Links data across domains with high quality, encouraging re-use with privacy protection in place

基として Built on

堅牢な技術

Robust technology: Interfaces between technologies and people optimising for security and user experience

アルゴリズム的統合
Algorithmic integrity

指標
Indicators

主な使用へのアクセス
Access for primary use

二次使用へのアクセス
Access for secondary use

商業使用へのアクセス
Access for commercial use

分析的リスク管理
Analytic risk management

デジタル・アイデンティティ
Digital identity

データ・ライフサイクル管理
Data life cycle management

所有権、管理責任と管財
Ownership, stewardship and custodianship

アクセスとプライバシー・リスク管理
Access and privacy risk management

セマンティックの相互運用性
Semantic interoperability

先住民および地域社会のデータ
Indigenous and community data

技術調達と管理
Technology procurement and management

デジタル・セキュリティ・リスク・マネジメント
Digital security risk management

技術的な相互運用性
Technical interoperability

情報アーキテクチャ
Information architecture

インターフェース
Interfaces

テレコミュニケーション
Telecommunications

人的要因 **Human factors:** Oversight, engagement, funding, capacity, and capability to sustain the IDHE and adapt
IDHEを維持し、適応させるための監督、関与、資金、収容力、能力

Literacy, capacity and capability
識字能力、包容力、能力

Knowledge management and sharing
知識の管理と共有

Public, provider, and stakeholder involvement
一般市民、プロバイダー、利害関係者の関与

Communication
コミュニケーション

Strategic governance and finance
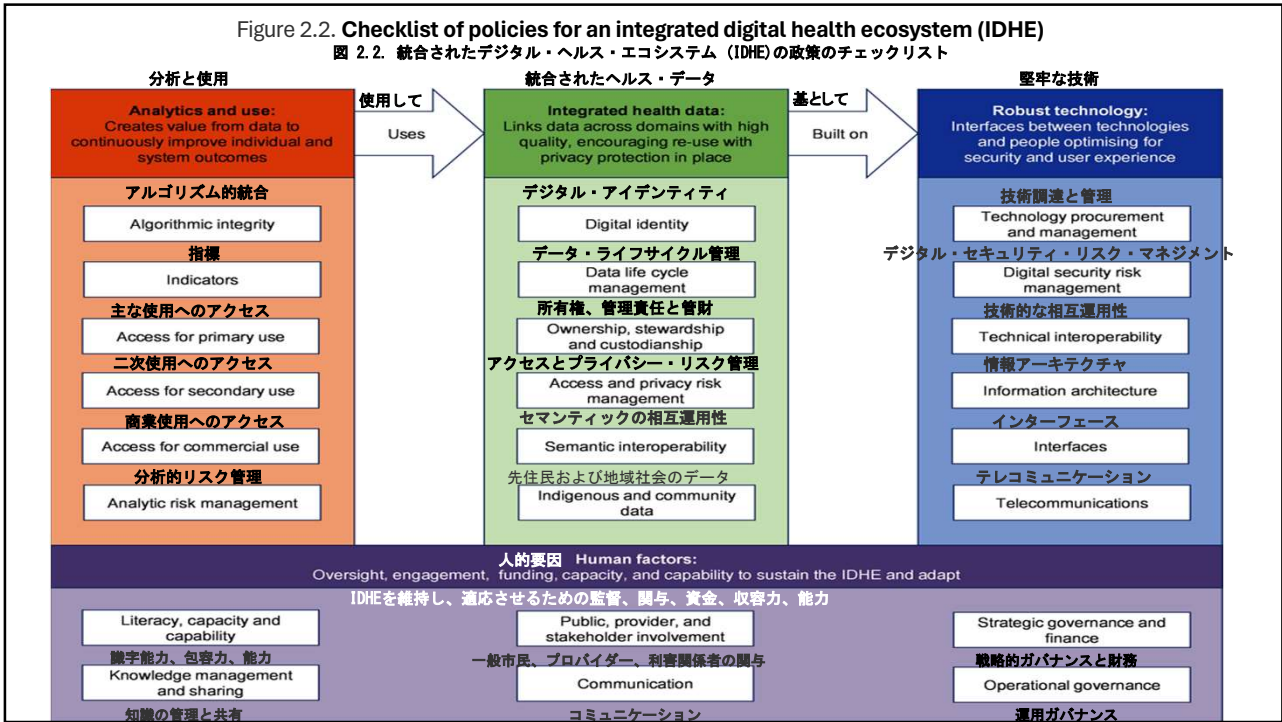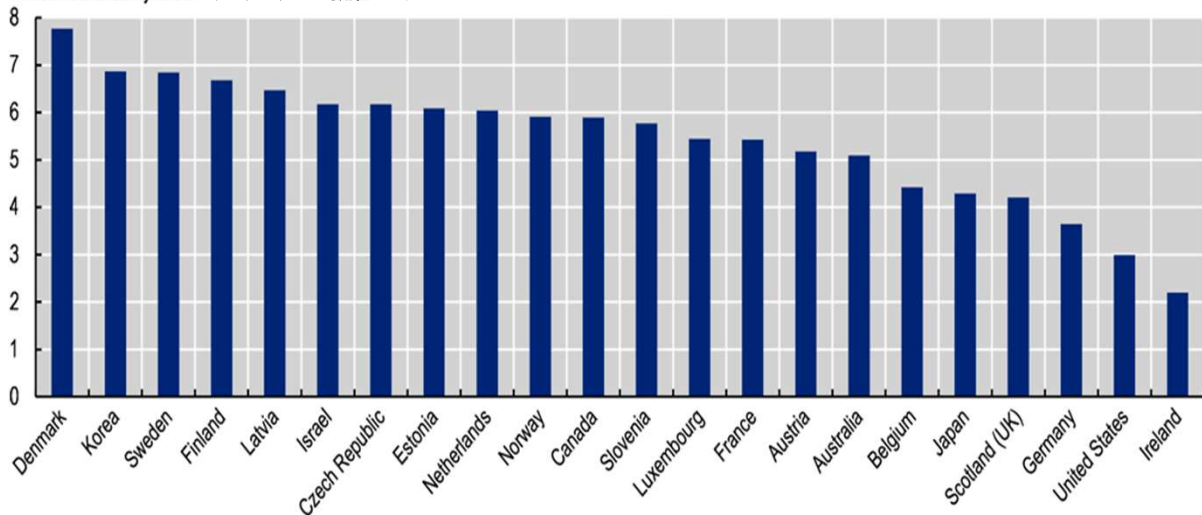戦略的ガバナンスと財務

Operational governance
運用ガバナンス

Figure 2.3. **Ability to access and link datasets in healthcare**
図 2.3. 医療におけるデータセットへのアクセスとリンクの機能

Dataset availability score データセットの可用性スコア

Denmark, Korea, Sweden, Finland, Latvia, Israel, Czech Republic, Estonia, Netherlands, Norway, Canada, Slovenia, Luxembourg, France, Austria, Australia, Belgium, Japan, Scotland (UK), Germany, United States, Ireland

Note: Lithuania and Spain have reported this capability, but no data were available in the survey when it was conducted.
注:リトアニアとスペインはこの機能を報告していますが、調査が実施された時点ではデータはありませんでした。
Source: OECD (2022[14]), *Health Data Governance for the Digital Age: Implementing the OECD Recommendation on Health Data Governance*, https://doi.org/10.1787/68b60796-en.

Table 2.2. **Patient access to and interaction with their own EHRs through a secure internet portal**
表 2.2. 患者は、安全なインターネットポータルを通じて自分のEHRにアクセスし、対話します

Access via portal Access to ALL records Interaction with portal	Access via portal Access to SOME records Interaction with portal	Access via portal Access to ALL records NO interaction with portal	NO access via portal
すべてのレコードへのアクセス ポータルとの相互作用	いくつかのレコードへのアクセス ポータルとの相互作用	すべてのレコードへのアクセス ポータルとの相互作用はありません	ポータル経由のアクセス不可
11			
Australia			
Denmark	9		
Germany	Belgium		
Italy	Canada		
Lithuania	Costa Rica		
Luxembourg	Czech Republic		
Netherlands	**Finland**		
Slovenia	**Iceland**	3	3
Sweden	**Israel**	**Estonia**	Korea
Switzerland	Portugal	Hungary	Mexico
Türkiye	United States	**Japan**	Norway

Note: Countries in **bold** reported that 100% of patients are covered. Some OECD countries, like the Netherlands, use multiple EHR portals. Spain also has this capability, but no data was available in this survey.
注：太字の国は、患者の100%がカバーされていると報告しています。オランダなどの一部のOECD諸国では、複数のEHRポータルを使用しています。スペインにもこの機能がありますが、この調査ではデータが得られませんでした。

Figure 2.4. **Dataset governance in healthcare**
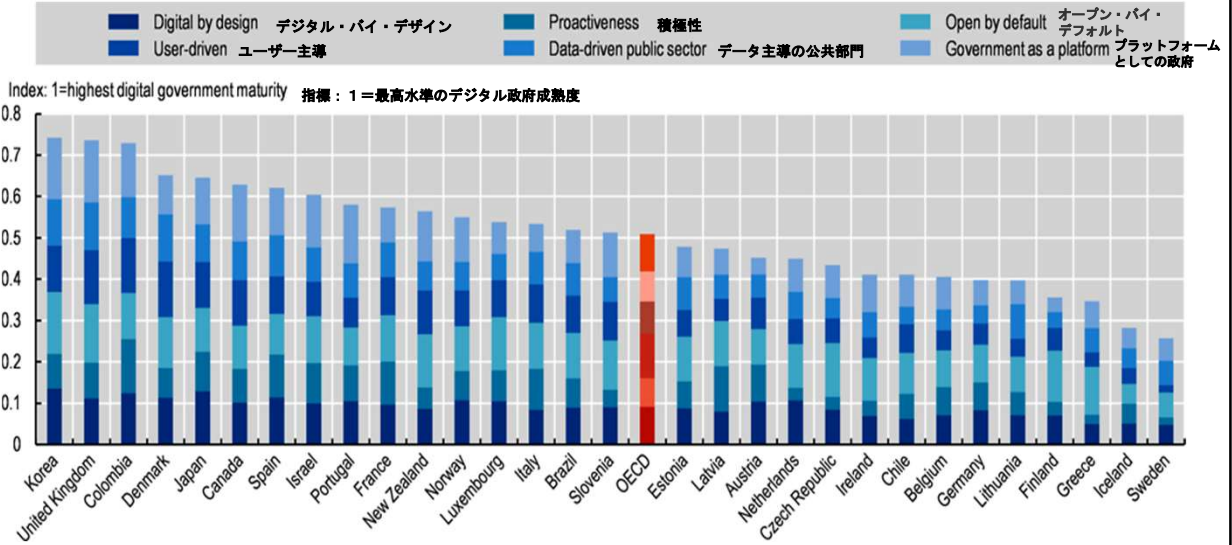図 2.4. 医療におけるデータセットガバナンス
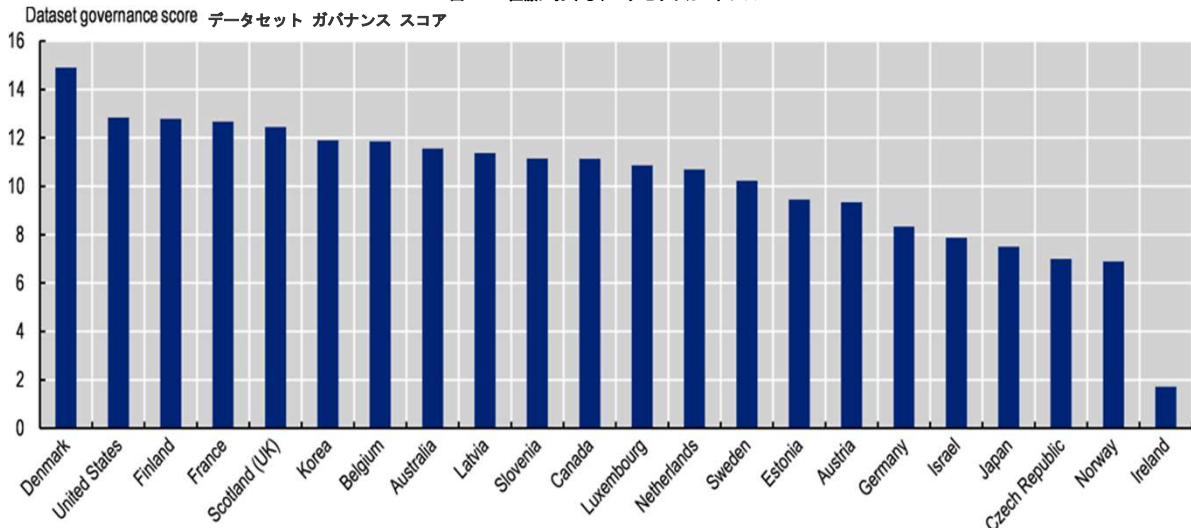
Note: Score calculated as a sum of proportions of national healthcare datasets with recommended governance elements (see source).
注：スコアは、推奨されるガバナンス要素を持つ国の医療データセットの割合の合計として計算されます（ソースを参照）。
Source: OECD (2022[14]), *Health Data Governance for the Digital Age: Implementing the OECD Recommendation on Health Data Governance*, https://doi.org/10.1787/68b60796-en.

Figure 2.5. OECD Digital Government Index (2019)
図 2.5. OECDデジタルガバメントインデックス（2019年）

Legend:
- Digital by design　デジタル・バイ・デザイン
- User-driven　ユーザー主導
- Proactiveness　積極性
- Data-driven public sector　データ主導の公共部門
- Open by default　オープン・バイ・デフォルト
- Government as a platform　プラットフォームとしての政府

Index: 1=highest digital government maturity　指標：1＝最高水準のデジタル政府成熟度

Source: OECD (2019[25]), Going Digital
Toolkit, https://goingdigital.oecd.org/indicator/58.

Table 2.4. Adoption of recent HL7-FHIR and SMART interoperability standards across OECD countries
表 2.4. OECD諸国における最近のHL7-FHIRおよびSMART相互運用性標準の採用

EHRの相互運用性 EHR interoperability Adopting HL7-FHIR Adopting SMART on FHIR HL7-FHIR，SMART on FHIRの採用	EHRの相互運用性 EHR interoperability Adopting HL7-FHIR No SMART on FHIR HL7-FHIR採用， FHIR に SMART がない	EHRの相互運用性 EHR interoperability Not adopting HL7-FHIR No SMART on FHIR HL7-FHIR を採用していない FHIR に SMART がない	相互運用性のためのプロジェクトは ありません No projects for interoperability Not adopting HL7-FHIR No SMART on FHIR HL7-FHIR を採用していない FHIR に SMART がない
10			
Australia			
Belgium			
Czech Republic			
Estonia	**6**		
Finland	**Canada**	5	
Korea	**Denmark**	**Hungary**	
Lithuania	**Iceland**	Japan	3
Netherlands	Israel	Slovenia	Costa Rica
Norway	**Luxembourg**	Switzerland[1]	**Portugal**[1]
Sweden	Italy	United States	**Türkiye**[2]

Note: Countries in **bold** also reported working on developing public application programming interfaces (APIs).
注：太字の国は、パブリック・アプリケーション・プログラミング・インターフェース（API）の開発にも取り組んでいると報告しています。

Figure 2.6. **Internet use across OECD countries and use of the internet for public authorities**
図 2.6. OECD諸国におけるインターネット利用と公的機関のインターネット利用
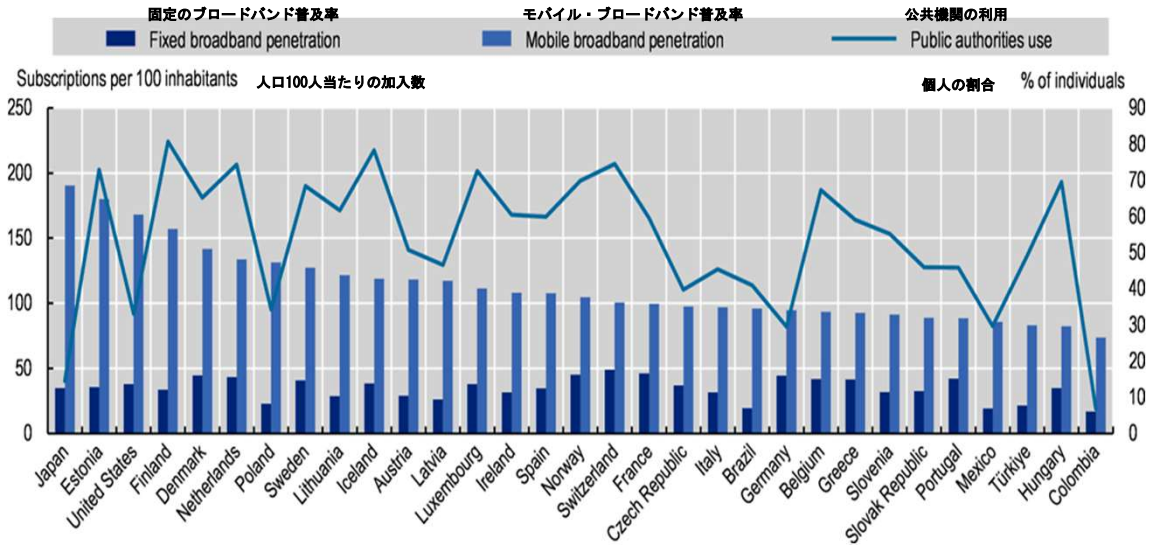
Source: OECD (2019[25]), Going Digital Toolkit, https://goingdigital.oecd.org/indicator/58, based on the OECD Broadband Portal www.oecd.org/sti/broadband/broadband-statistics and the ITU World Telecommunication/ICT Indicators Database, www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx.

Table 2.6. **Certification requirements of vendors of EHR system software**
表 2.6. EHRシステムソフトウェアのベンダーの認証要件

Messaging standards Clinical terminology National EHR requirements メッセージング標準、臨床用語、国内EHR要件	Messaging standards Clinical terminology No EHR requirements メッセージング標準、臨床用語、EHR要件なし	Messaging standards No clinical terminology No EHR requirements メッセージング標準、臨床用語なし、EHR要件なし	No standards identified 規格は特定されていません
11			
Belgium			
Denmark			9
Finland			Costa Rica
Hungary			Czech Republic
Japan			Estonia
Korea			Iceland
Portugal			Israel
Slovenia		3	Italy
Switzerland		Australia	Lithuania
Türkiye	1	Canada	Luxembourg
United States	Netherlands	Sweden	**Norway**

Notes: EHR requirements refers to standards for national EHR interoperability. Spain also implements standards to facilitate interoperability, but no data were available in this survey. Countries in "No standards identified" might have organisations responsible for the infrastructure of EHR software, but not necessarily setting standards for clinical terminology and electronic messaging.
注：EHR要件は、国内のEHR相互運用性に関する標準を指します。スペインも相互運用性を促進するための標準を実装していますが、この調査ではデータが得られませんでした。「基準が特定されていない」国では、EHRソ

Table 2.7. **Digital health strategies across OECD countries**
表 2.7．OECD諸国全体のデジタルヘルス戦略

Digital health-related strategy デジタルヘルス関連戦略			No digital health-related strategy found デジタルヘルス関連の戦略は見つからなかった
35			
Australia	Finland		
Austria	Greece	New Zealand	
Belgium	Hungary	Norway	
Canada	Iceland	Poland	
Chile	Ireland	Portugal	
Colombia	Israel	Slovak Republic	
Costa Rica	Italy	Slovenia	
Czech Republic	Japan	Spain	
Denmark	Korea	Sweden	**3**
Estonia	Lithuania	Switzerland	Latvia
France	Luxembourg	United Kingdom	Mexico
Germany	Netherlands	United States	**Türkiye**

Table 2.8. **Summary of country digital health strategy goals**
表 2.8．各国のデジタルヘルス戦略目標の概要

Ensuring coherence between regions and operators 地域とオペレーター間の一貫性の確保	Supporting learning health systems 学習医療システムの支援	Improving resilience and sustainability レジリエンスと持続可能性の向上	Moving towards People-centric system 人間中心のシステムへの移行	Improving security and data protection セキュリティとデータ保護の向上	Improving productivity of health workforces 医療従事者の生産性向上	Investing in innovation イノベーションへの投資	Focusing on health prevention 健康予防に力を入れる
24	24						
Austria	Australia						
Canada	Belgium						
Chile	Colombia						
Colombia	Costa Rica						
Costa Rica	Denmark						
Denmark	Estonia						
Finland	Finland						
Germany	France						
Greece	Germany						
Hungary	Greece	14	14				
Iceland	Hungary	Austria	Denmark	13			
Ireland	Iceland	Colombia	Germany	Belgium	12		
Japan	Ireland	Germany	Greece	Czech Republic	Australia		
Korea	Israel	Iceland	Hungary	Finland	Austria		

Figure 2.7. *Digital* skills of populations in Europe
図 2.7. 欧州の人口のデジタルスキル

Basic skills 基本的なスキル   Above basic skills 基本的なスキル以上

% of persons aged 16 to 74 years old   16歳から74歳の人の割合

Source: CBS, Eurostat, adapted from ILA (2023[31]), *Digital Health Literacy Country Reports*, www.ilabour.eu/results/digital-health-literacy-country-reports/.

Figure 2.8. Digital Citizen Engagement Index (2022)
図 2.8. デジタル市民エンゲージメント指数（2022年）

Digital Citizen Engagement Index   デジタル市民エンゲージメント指数

Source: The World Bank (2022[34]), GovTech Maturity Index (GTMI) Data Dashboard, accessed August 2023, www.worldbank.org/en/data/interactive/2022/10/21/govtech-maturity-index-gtmi-data-dashboard.