



Digital Health Lexicon and Program/Policy Evaluation Framework

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Premise for a

intersection that the eHealth landscape is therefore positioned to advance and transform health care.

Kukafka R. Digital Health Consumers on the Road to the Future. J Med Internet Res. 2019

conditions. DTC services can be synchronous or asynchronous and can include a variety of modalities, including web portals, mobile applications, audio only interactions, and audio video interactions.

Digital Therapeutics: Evidence based

the health sector. The system typically maps the business process of an organization (e.g., a hospital, a health insurance fund, disease management program) and focuses on data processing (e.g., claim reimbursement) rather than data collection only. (WHO)

Health Identification (ID) Unique personal health identifier: A unique, numerical, and lifetime

A rural

Measurement and Outcomes Glossary

Clinical quality measures: (CQM) Clinical quality measures, also called CQMs, are tools that help us measure and monitor the quality of healthcare and the contribution of those healthcare services towards improved health outcomes. In the past, quality measures primarily used data that came from claims, but as technology has improved and become more prominent in the healthcare setting, many quality measures now use data that comes from a provider's electronic health record (EHR). These electronic CQMs use EHR data to measure health outcomes, clinical processes, patient safety, efficient use of healthcare resources, care coordination, patient engagement, and population and public health improvement. (NQF)

eCQM: Electronic clinical quality measures, or eCQMs, are eMeasures specified for use in the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs. Eligible professionals, eligible hospitals and critical access hospitals (CAHs) are required to submit CQM data from certified EHR technology, to help measure and track the quality of health care services provided within our health care system. These measures use data associated with providers' ability to deliver high quality care or relate to long term goals for quality health care. (NQF)

Electronic Measure (eMeasure): standardized performance measure in an electronic format. eMeasures can promote greater consistency in measure development and in measuring and comparing performance results. (NQF)

Logical Observation Identifiers Names and Codes (LOINC): LOINC is a database and universal standard for identifying medical laboratory observations. It was developed and is maintained by the Regenstrief Institute, a US non profit medical research organization, in 1994. LOINC was created in response to the demand for an electronic database for clinical care and management and is publicly available at no cost. (NQF)

Quality Data Model (QDM) Element: A QDM element is a discrete unit of information used in quality measurement to describe part of the clinical care process, including a clinical entity and its context of use. It can include criteria for any relevant metadata about a clinical or administrative concept relevant to quality measurement. A QDM element provides an unambiguous definition and enables consistent capture and use of data for quality measurement. It may be defined for any given measure and reused when the same information is required for another measure. Reuse

- Are the data submission standards for a variety of quality measurement and reporting initiatives.

Technology Glossary:

Application Programming Interface: (API) allows two applications to communicate with one another to access data. Every action you take on your phone, like sending a direct message or checking the score of the baseball game, uses an API to access and deliver that information. (g2.com)

Artificial Intelligence (AI): A broad and general term encompassing many approaches and technologies focused on getting computers to do tasks that historically require human intelligence. The field encompasses not only computer science but also psychology, philosophy, linguistics, and other areas. (Deloitte)

Examples include:

- Deep learning
- Digital Coaching and Virtual Assistants
- Computer vision
- Machine learning
- Natural language processing
- Neural networks
- Voice

the range of digital health interventions identified in the literature and implementation practices. (WHO)

Data Infrastructure: Technology, processes, tools, and standards needed to promote data sharing and consumption. (NQF)

International Organization of Standards: (ISO) ISO (International Organization for Standardization) is a worldwide federation of national standards bodies and nongovernmental organization that comprises standards bodies from more than 160 countries, with one standards body representing each member country. For example, the American National Standards Institute (ANSI) represents the United States.

Mobile cloud applications: A software program that is designed to be accessed over the Internet by many types of portable computing devices. Mobile cloud apps and mobile web apps are similar. They both run on servers external to the mobile device, they both store data externally, and they are both accessed over the Internet with a browser. However, it is often said that, while all cloud apps are web apps, not all web apps are cloud apps. Simply put, not all mobile web apps can run in a virtual environment without being reengineered. This is because a web app may have originally been written to run and store data on a dedicated physical server in a data center. A cloud app, on the other hand, will always be written to live on virtual servers in a distributed, multi tenant architecture and store data in the cloud. (WHO)

Health Level Seven (HL7): HL7 refers to a both a set of international standards for transfer of clinical and administrative data between software applications used by various healthcare providers, and a not for profit, ANSI accredited standards developing organization. HL7 standards focus on the application layer, which is “layer 7” in the OSI model. The HL7 standards are produced by the Health Level Seven International, an international standards organization, and are adopted by other standards issuing bodies such as American National Standards Institute and International Organization for Standardization. (NQF)

Fast Healthcare Interoperability Resources (FHIR): A draft standard describing data formats, elements, and an API for exchanging electronic health records. (WHO)

United States Core Data for Interoperability (USCDI): A standardized set of health data classes and constituent data elements for nationwide, interoperable health information exchange. (ONC)

Clinical Technology Glossary

Hybrid Cardiac Rehabilitation: any combination of supervised center-based and monitored home-based exercise, where at least two of the core components of CR are addressed. (Heindl B, Ramirez L, Joseph L, Clarkson S, Thomas R, Bittner V. Hybrid cardiac rehabilitation The state of the science and the way forward. Prog Cardiovasc Dis. 2022 Jan Feb;70:175-182. doi: 10.1016/j.pcad.2021.12.004. Epub 2021 Dec 24. PMID: 34958846.)

e Iatrogenesis: harm caused to a patient directly by health information technology. (NQF)

Genomics: Genomics is the study of all a person's genes (the genome), including interactions of those genes with each other and with the person's environment. (NIH)

<https://www.genome.gov/about-genomics/fact-sheets/A-Brief-Guide-to-Genomics#:~:text=Genomics%20is%20the%20study%20of,and%20with%20the%20person's%20environment.>

Peripheral Devices: Clinical devices designed for use with telemedicine platforms. Often equipped with USB connections or Bluetooth capabilities. Common peripheral devices include (but are not limited to): dermatoscopes, glucometers, otoscopes, digital stethoscopes, vascular and abdominal ultrasound wands, pulse oximeters, blood pressure cuffs, single or 12 lead EKG devices.

Precision Medicine: Precision medicine considers an individual's genetics, environment and lifestyle in tailoring treatments and looks for patterns across diverse datasets to identify disease triggers or to explain lack of disease. <https://precision.heart.org/about>

Self Measured Blood Pressure: (SMBP) Self measured blood pressure (SMBP) monitoring refers to the regular measurement of BP by a patient at their home or elsewhere outside the clinical setting. <https://targetbp.org/patient-measured-bp/>

Remote Patient Monitoring (RPM): Personal health and medical data collection from an individual in one location, which is transmitted via electronic communication technologies to a provider in a different location for use in care and related support. (Center for Connected Health Policy) This is a broad term that also includes Remote Physiologic Monitoring and Remote Therapeutic Monitoring. The latter two are distinguished largely for billing purposes.

Remote Physiologic Monitoring: Non face to face monitoring and analysis of physiologic factors used to understand a patient's health status (CMS). Similar to RPM, but distinct to specific reimbursement service codes. These codes are covered by Medicare, but do not fall under the telehealth label in the Medicare program. They are instead remote communication technology based services. (CCHP) Physiologic data includes measurements such as blood pressure, weight, oxygen saturation, or blood sugar. For reimbursement under CMS, data must be collected

Related Agencies, Oversight, and Regulatory Glossary

American National Standards Institute (ANSI): The current ONC Approved Accreditor (ONCAA) for the Permanent Certification Program (PCP). The ONC AA will accredit organizations to certify HER technology and perform other responsibilities under the PCP. (NQF)

Health Information Technology Advisory Committee: (HITAC) The Health IT Advisory Committee provides ongoing guidance to NQF's HIT portfolio and offers specific expertise on HIT projects, including specification of testing requirements for eMeasures and maintenance of the quality data set. HITAC is a standing committee of the Board of Directors and was created in December 2009. (NQF)

Health Information Technology for Economic and Ca.

designed to communicate uniform information about medical services and procedures among physicians, coders, patients, accreditation organizations and payers for administrative, financial, and analytical purposes. CPT coding is similar to ICD-9 and ICD-10 coding, except that it identifies the services rendered rather than the diagnosis on the claim. ICD codesets also contain procedure codes, but these are only used in the inpatient setting. CPT is currently identified by the Centers for Medicare and Medicaid Services as Level 1 of the Healthcare Common Procedure Coding System (NCF)

Healthcare Common Procedure Coding System (HCPCS) is a set of health care procedure codes based on the

Real time vs. Asynchronous
Means of remote communication (single or multiple)
 Audio
 Video
 Patient entered data
 SMS/Text
 Remote monitoring devices
Frequency of interaction/monitoring
 Continuous
 Routine/scheduled recurring
 Episodic
Means of encounter initiation
 On demand by patient/parent/guardian
 On demand by remote provider
 Referred
 Scheduled
 Continuous

Use Cases

Use Case 1: Telestroke

Patient characteristics:
 Patient location: emergency department/hospital
 Communication with remote provider +/- patient
Provider characteristics
 Provider location: anywhere
 Provider discipline: multiple
 Single or multi provider (care team) interaction: generally single provider
Real time vs. Asynchronous: real time
Means of remote communication: Audio/video
Frequency of interaction/monitoring: episodic
Means of encounter initiation: on demand by remote provider

Use Case 2: Direct to Patient Tele mental health

Patient characteristics
 Patient location: home
 Direct communication with patient
Provider characteristics
 Provider location: anywhere
 Provider discipline: psychology, psychiatry, mental health counseling
 Single or multi provider (care team) interaction: usually single provider
Real time vs. Asynchronous: real time

- x Means of remote communication (single or multiple)
 - o Audio/video
- x Frequency

Telehealth / Digital Health – Related CPT® Codes

| CPT/ HCPCS Code | Description | Clinician eligible to bill code |
|-----------------|--|---|
| 99441 | Telephone E/M service provided by a physician or other qualified health professional who may report E/M services provided to an established patient, parent, or guardian not originating from a related E/M service provided within the previous 7 days nor leading to an E/M service or procedure within the next 24 hours or soonest available appointment; 5 10 minutes of medical discussion | Physician and qualified health care professionals |
| 99442 | ;11 20 minutes of medical discussion | Physician and qualified health care professionals |
| 99443 | ;21 30 minutes of medical discussion | Physician and qualified health care professionals |
| 99091 | Collection and interpretation of physiologic data | |

99421 Online digital evaluation and management service, for an established patient, for up to 7 days cumulative time during the 7 days; 5 10

Resources

Table 1 SPROUT STEM FRAMEWORK – Stakeholder’s Table

This table is intended to assist in determining how differing stakeholders may evaluate telehealth

| | | | |
|------|------|--|--|
| Cost | QALY | Provider/Health system efficiency vs. in person care | Efficiencies – cost effectiveness (need to define variables) |
| | | | |

Table 2. Strategies, tools and resources needed to capture measures



The American Heart Association is grateful to the members of the expert advisory group (EAG) who contributed to the development of this policy statement. We would like to acknowledge the following people and thank them for their input and