

# P1752 Working Group Meeting

Sponsored by IEEE Engineering in Medicine & Biology (EMB) Standards Committee

Attendance Taken by Secretary

- 19 August 2025
- Teleconference

# Attendance

- Attendance is important for determining voting rights, so please remember to “check in” **Write full name and affiliation on your zoom name or in the chat.** If you attend only by phone, please email the info to [simona@openmhealth.org](mailto:simona@openmhealth.org)
- Secretary will mark attendance for everyone
- If you attended a previous call and your attendance was not noted on the draft minutes distributed by the Secretary, please email [simona@openmhealth.org](mailto:simona@openmhealth.org)

# Voting membership

- Attendance is important for determining voting membership
- After you've attended 2 consecutive meetings you are eligible for voting membership
- If you wish to become a voting member, send an email with the request to [simona@openmhealth.org](mailto:simona@openmhealth.org)
- You don't need to be a voting member to participate in the WG or subgroup calls
- You need to be a voting member to move or second motions and to vote whenever the WG entertains a motion (e.g., to approve the agenda, to approve an action by the WG, etc.)
- If you miss 2 consecutive meetings, voting membership is revoked and can be gained again by attending 2 consecutive meeting and sending a request
- Accommodation can be made for special circumstances, which should be brought to the Chair's attention

# IEEE Policies

# IEEE SA Call for Patents

# Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

**Early identification of holders of potential  
Essential Patent Claims is encouraged**

Slide #1

# Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- **Speak up now and respond to this Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

Slide #2

# Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don't discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - **Technical considerations remain the primary focus**
  - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don't discuss the status or substance of ongoing or threatened litigation.
  - Don't be silent if inappropriate topics are discussed ... do formally object.

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For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at <http://standards.ieee.org/develop/policies/antitrust.pdf>

**Slide #3**

# Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- *IEEE-SA Standards Board Bylaws*  
(<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>)
- *IEEE-SA Standards Board Operations Manual*  
(<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>)

Material about the patent policy is available at  
<http://standards.ieee.org/about/sasb/patcom/materials.html>

**If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at [patcom@ieee.org](mailto:patcom@ieee.org)**

Slide #4

# IEEE SA Copyright Policy

# IEEE SA Copyright Policy (November 2019)

- **By participating in this activity, you agree to comply with the [IEEE Code of Ethics](#), all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.**
  - Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.
  - Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.
  - For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.

# IEEE SA Copyright Policy

- The IEEE SA Copyright Policy is described in the IEEE SA Standards Board Bylaws and IEEE SA Standards Board Operations Manual
- IEEE SA Copyright Policy, see
  - Clause 7 of the IEEE SA Standards Board Bylaws  
<https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7>
  - Clause 6.1 of the IEEE SA Standards Board Operations Manual  
<https://standards.ieee.org/about/policies/opman/sect6.html>
- IEEE SA Copyright Permission
- <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/permissionltrs.zip>
- IEEE SA Copyright FAQs
- <http://standards.ieee.org/faqs/copyrights.html/>
- IEEE SA Best Practices for IEEE Standards Development
- [http://standards.ieee.org/develop/policies/best\\_practices\\_for\\_ieee\\_standards\\_development\\_051215.pdf](http://standards.ieee.org/develop/policies/best_practices_for_ieee_standards_development_051215.pdf)
- Distribution of Draft Standards (see 6.1.3 of the SASB Operations Manual)
- <https://standards.ieee.org/about/policies/opman/sect6.html>

# IEEE SA Individual Participation

# Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - IEEE Code of Ethics
  - IEEE Code of Conduct
- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*
- The most recent versions of these Codes are available at <http://www.ieee.org/about/corporate/governance>

# Participants in the IEEE-SA “individual process” shall act independently of others, including employers

- The [IEEE-SA Standards Board Bylaws](#) require that “participants in the IEEE standards development individual process shall act based on their qualifications and experience”
- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- By participating in standards activities using the “individual process”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

# IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that *“the standards development process shall not be dominated by any single interest category, individual, or organization”*
  - This means no participant may exercise *“authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints”* or *“to hinder the progress of the standards development activity”*
- This rule applies equally to those participating in a standards development project and to that project’s leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project’s IEEE-SA Program Manager

# Determination of Quorum

# Approval of Agenda

1. Attendance
2. Call for Patents, Copyright Policy, Code of Ethics
3. Approval of agenda and minutes (if quorum present)
4. PAR expiration
5. Updates: CR subgroup
6. Other business

# Approval of Prior Minutes

(July 8, 2025)

# PAR Expiration

# Project Authorization Request (PAR)

- Current PAR expires December 31, 2025
  - PAR **Scope**: This standard defines specifications for standardized representations for mobile health data and metadata for a set of health measures pertaining to cardiovascular, respiratory, and metabolic measures. Mobile health data encompasses personal health data collected from sensors and mobile applications.
- CardioRespiratory and Metabolic subgroups' charters

# Subgroups' Scope

- CardioRespiratory subgroup scope “includes but is not restricted to the following measures of CR health: blood pressure, heart rate, heart rate variability, RR interval, respiratory rate, and O2 saturation.”
- Metabolic subgroup scope “includes but is not restricted to the following aspects of metabolic health: blood glucose, body weight, body temperature.”

# Proposal to Request PAR Extension

- Proposal Request a two-year PAR extension (to December 31, 2027) to complete the work within the current PAR
- Request process:
  - WG (voting members) to discuss proposal, craft motion and vote
  - If approved: Request EMB Standard Committee (sponsor) to approve extension
    - If approved: Request NesCom [New Standards Committee] to approve extension
- Process to be completed before current PAR expiration date

# Timeline for Requesting PAR Extension

- August 19: Proposal presentation to WG, initial discussion
- September 2: WG discussion, vote on proposal
- September: submit request to EMB SC for discussion and approval
  - SC meeting August 27; possibly present proposal so request expected
- October 20, 2025: deadline to submit request to be included in NesCom December meeting [anchor deadline]

# PAR Extension Time Allocation

- Draft standard (document + schemas on the repository) to be submitted to RevCom [Review Committee] by October 2027 to be on the December RevCom agenda to get approval from SASB [Standards Association Standards Board].
- Draft standard ballot process to be completed before October 2027 (earlier is fine)
- Ballot process defined by set-time intervals (i.e., defined series of steps, each with an associated timeline)

# For reference: 1752.1

- May 2020: WG approved submission of draft standard document (D1) to MEC [mandatory editorial review], publication of OS repository, creation of comment resolution group (for ballot comment proposed initial review and proposed handling)
- June 2021: SASB approved P1752.1 Draft → IEEE 1752.1-2021
- September 2021: 1752.1-2021 published

Update from Subgroup

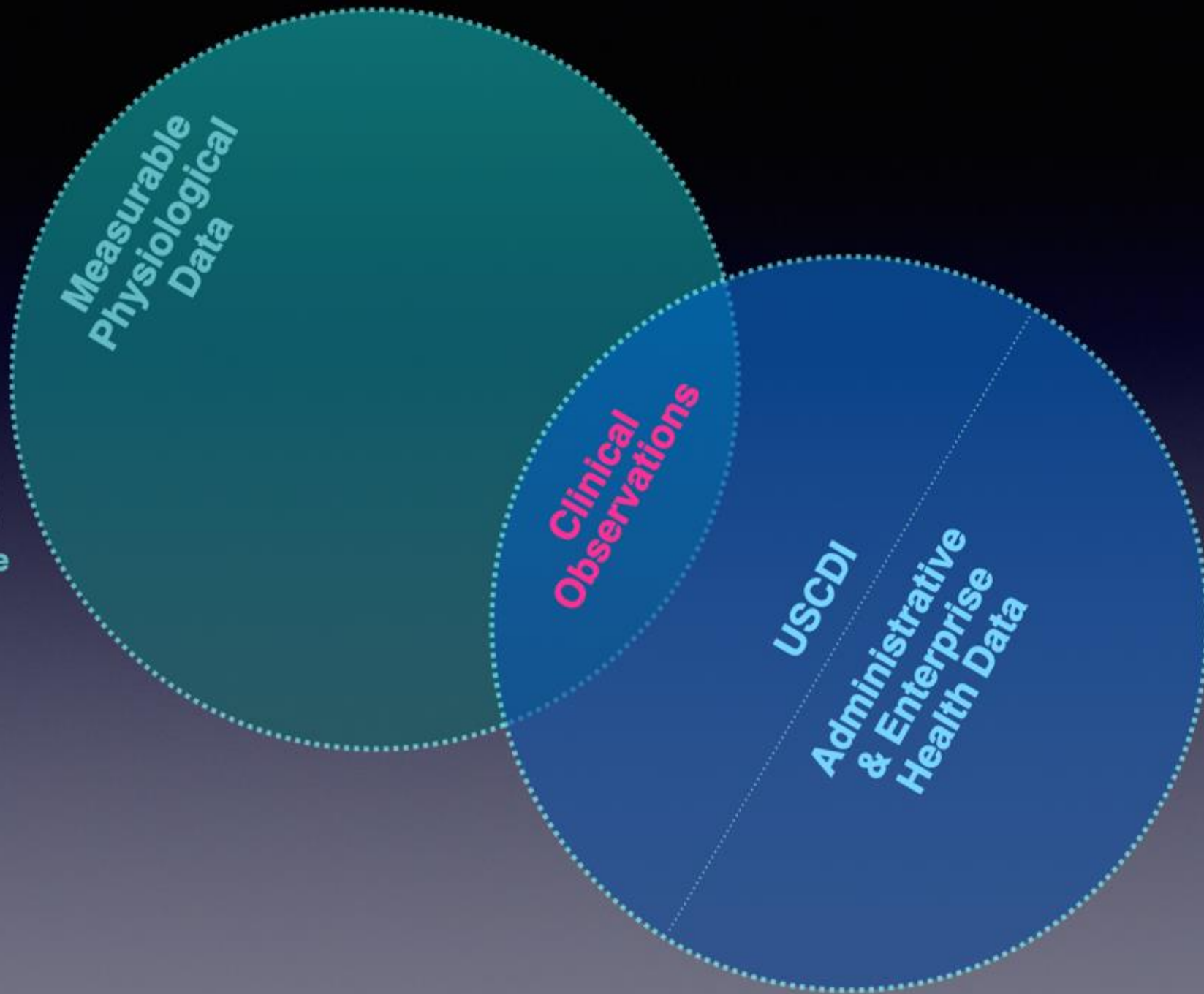
# P1752.2 Cardiorespiratory Subgroup

Meeting Summary of July 31, 2025 → Next Meeting August 28, 2025 @ 5PM PDT

- 1) Schema coded examples of generalized wrapper constructs for time series data
  - Header → Describes and labels the JSON object
  - Data Provenance
  - Data Epoch (timestamp, optional synchronization type, and maximal error)
  - Physiologic Data → Specifies the modeled data, containing multiple subsections
    - ( Optional: *Preprocessed signal from which measures derived* ) → source signal as binary64
    - Data scope & dimension: Specify common properties of the data and constraint values
    - Measured Data: The modeled data organized into value arrays
- 2) Alignment for use with: USCDI and HL7-FHIR → promoted through ONC: HIT (ONC Cures Act → **Interoperability Standards Platform**)
- 3) Data **framework** considerations for the coded schema examples (and implications for "deep" semantics and extensibility).

**IEEE  
P1752**

24/7, everywhere



**HL7  
FHIR**

POC, episodic

# USCDI → Data Class : Vital Signs

Version 6 (July 2025)

Physiological measurements of a patient that indicate the status of the body's life sustaining functions.

## ... from the 2025 Interoperability Standards Advisory Reference

### Interoperability Need: Representing Patient Vital Signs

Type	Standard / Implementation Specification	Standards Process Maturity	Implementation Maturity	Adoption Level	Federally required	Cost	Test Tool Availability
Standard	<a href="#">LOINC@</a>	Final	Production	●●●●●	<a href="#">Yes</a>	Free	N/A
Standard	<a href="#">ISO/IEEE 11073 Health informatics - Medical / health device communication standards</a>	Final	Production	●●●○○	No	\$	<a href="#">Yes</a> <a href="#">Yes</a>

Limitations, Dependencies, and Preconditions for Consideration	Applicable Value Set(s) and Starter Set(s)
<ul style="list-style-type: none"> <li>See <a href="#">Section I - Units of Measure</a> for discussion of units of measure used with quantitative observations.</li> <li>See <a href="#">LOINC collaboration with IEEE</a> for information on the Medical Device Code Mapping Table, which provides linkages between LOINC terms and IEEE EMB/11073 standard.</li> <li>ISO/IEEE 11073 is a family of standards for point-of-care medical device communication, with specific standards within the 11073 family that support collection of vital signs from medical devices, including:               <ul style="list-style-type: none"> <li>IEEE P11073-10404: Device Specialization - Pulse Oximeter</li> <li>IEEE 11073-10406: Device Specialization - Basic electrocardiograph (ECG)</li> <li>IEEE P11073-10407: Device Specialization - Blood Pressure Monitor</li> <li>IEEE 11073-10408: Device Specialization - Thermometer</li> <li>IEEE P11073-10415: Device Specialization - Weighing Scale</li> <li>IEEE 11073-10417: Device Specialization - Glucose Meter</li> <li>IEEE 11073-10201: Implantable Cardiac Devices</li> </ul> </li> </ul> <p><b>device focused standards</b></p>	<ul style="list-style-type: none"> <li>Vital Sign Result urn:oid:2.16.840.1.113883.3.88.12.80.62</li> <li>LOINC standard applies to USCDI required vital signs:               <ul style="list-style-type: none"> <li>Diastolic blood pressure</li> <li>Systolic blood pressure</li> <li>Body height</li> <li>Body weight</li> <li>Heart Rate</li> <li>Respiratory rate</li> <li>Body temperature</li> <li>Pulse oximetry</li> <li>Inhaled oxygen concentration</li> <li>BMI Percentile (2 - 20 years)</li> <li>Weight-for-length Percentile (Birth - 36 Months)</li> <li>Head Occipital-frontal Circumference Percentile (Birth - 36 Months)</li> </ul> </li> </ul>

# FHIR Resource Profile:

## *US Core Observation Clinical Result Profile*

The following data elements must always be present (Mandatory definition) or must be supported if the data is present in the sending system (Must Support definition). They are presented below in a simple human-readable explanation. Profile-specific guidance and examples are provided as well. The Formal Views below provides the formal summary, definitions, and terminology requirements.

### Each Observation Must Have:

 ... also for IEEE P1752 object

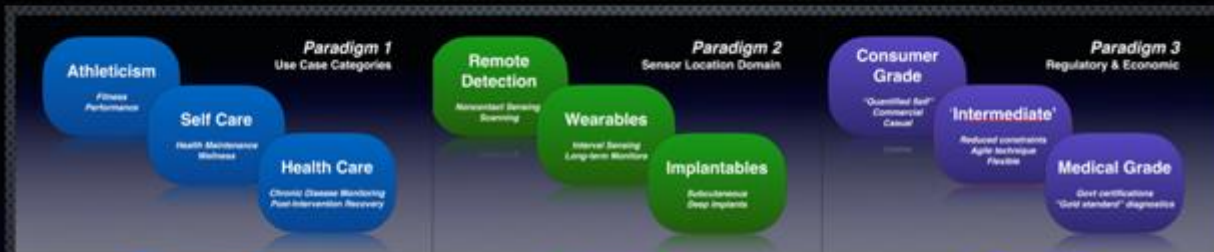
- ▶ a status
- ▶ a category code
- ▶ a LOINC code, if available, which tells you what is being measured
- ▶ a patient

### Each Observation Must Support:

- ▶ encounter associated with Observation
- ▶ a time indicating when the measurement was taken
- ▶ a performer\*
- ▶ a result value (for a numeric quantity, include a standard UCUM unit)
- ▶ a reason why the data is absent\*

**Each Observation fundamentally is structured as a clinical encounter, and aligns with USCDI "Core Data for Interoperability"...**

# Scope of Application



# Physiologic Data

contextuality



coherent labeling

F.R. Dierker, Dartmouth

## Measurement Modalities:

**Electrical**   **Magnetic**   **Acoustic**   **Mechanical**   **Optical**

Surface (QRS)  
↕  
Internal (V-EGM)

SQUID-based non-contact QRS detection

Heart Sounds:  
- Valve closure  
- Pulsatile flow turbulence

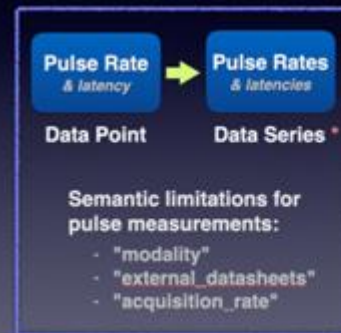
Pulse Detection:  
- Cardiac (seismic)  
- Arterial

Photoplethysmography (PPG)  
- Contact  
- Non-contact

# Scope of Measurement Modalities

# Scope of Operation

## Declaratory Data



Timestamped data points with constrained semantic depth

extreme edge

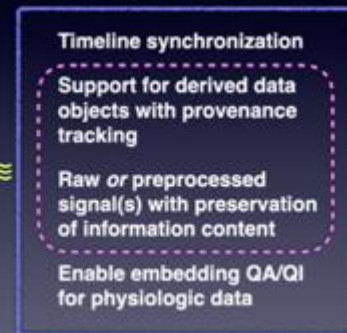
## Ecosystem Support



Data attached to time series with option for semantic depth

"core": granularity limit

## Post-Acquisition Analytics



Data attached to time series with option for semantic depth

± server-side

low complexity, sparse quantitative, primarily qualitative

support sampling, monitoring, and algorithmic triggered registration schemes

high complexity, dense quantitative, supports maximum relevant granularity

# Semantic Interoperability

basic .....▶ deep

# Semantic Interoperability

basic .....> deep

Considerations for achieving a *deep* level of semantic interoperability :

- Scope of the modeled physiologic data (*ontology*)
- Scope of the use case paradigms (*application*)
- Scope of the measurement modalities (*range*)
- Scope of operational utilization of the data

*breadth of scope ?*

**New:**

Facilitate alignment with relevant organizational constraints and guidance → *i.e.* USCDI and HL7 FHIR

*constraints*

# Schema Design Constraints

**Scope determinations: Specified in the 1752.2 PAR**

**The 80 - 20 Rule**

**Healthcare Enterprises: Emerging prospects for HL7 FHIR**

**Govt (U.S.) ONC: Interoperability Standards Platform → USCDI**

**Clinical Observations**

*OmH, IEEE 1752.1*  
declaratory & descriptive data

*PURPOSE*

**Physiologic Measurements**

*IEEE P1752.CR ?*  
granular, time series, multidimensional

# Summary of Action Items

# Future Meetings

# Upcoming Meetings

- P1752.2 WG call (Voting on PAR Extension)
  - Tuesday September 2, 2025 at 8 am Pacific
- Cardio-respiratory subgroup:
  - Thursday August 28, 2025 at 5 pm Pacific

Adjournment