Digital Measures That Matter to Patients: A Framework to guide the Selection and Development of Digital Measures of Health

Meaningful Aspect of Health

Aspect of a disease that a patient a) does not want to become worse, b) wants to improve or c) wants to prevent
• *May be shared across some conditions and diseases*

What do you wish that you could do, but your condition prevents you from doing it?

What part of your life is most frustratingly impacted by your condition?

Concept of Interest

Simplified or narrowed element that can be practically measured
• *Patients may have different symptoms*
• *Symptoms may vary over time*
• *Symptoms relevance may vary over time*

What are the symptoms that most impact you ability to do these activity?

Outcome to be measured

Specific measurable characteristics
• *Measures may be relevant to multiple symptoms*
• *Asses technical specification of sensor and whether it is suitable for measuring this outcome in this population*

Do these measures make sense to you?

Endpoint

Health research only; Precisely defined, statistically analyzed variables
• *Sensors may support multiple measures & endpoints*

How much change do we need to see in this symptom before it really starts to make a positive difference in your life?

This figure was adapted from original work by Evidation Health, with permission. This figure illustrates patient considerations that should drive digital measure selection and development, these should precede technical considerations [8]. Additional information on subsequent technical considerations are available at [36, 37, 38]