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Summary of the Delphi survey

Welcome

Instructions for the Delphi survey (2 pages)

Agreement with the GDPR statement

Demographic information (gender, age, country, education, professional field)

Through which perspective are you answering today?

	Research/education professional	Healthcare practitioner	Policy/decision makers	Patient perspective	eHealth/ IT specialist
Less than 5 years experience					
10 to <15 years experience					
15 to <20 years experience					
20 to <30 years experience					
More than 30 years experience					

What is a "medication adherence technology"?

For the purpose of this repository, we propose the following definition: **"Medication Adherence Technologies (MATech) are devices, procedures or systems developed based on evidence to support patients to take their medications as agreed with the healthcare providers (i.e. to initiate, implement, and persist with the medication regimen)."**

1) Please rate your level of agreement with the proposed MATech definition (X axis).
2) Please rate the CLARITY of the MATech definition (Y axis).

Detailed explanation of the definition and repository scope:

- **devices, procedures or systems** emphasize the inclusion of all technologies, irrespective of their mode of delivery (whether based on electronic or printed supports, delivered through human interaction, or a combination of these) with the aim to construct a comprehensive repository in which users can identify diverse technologies to fit their potentially diverse needs.

- **developed based on evidence** encompass the requirement of evidence/research that supports at least a potential contribution to either measurement or intervention on medication adherence (e.g., validation study on measurement of medication adherence, or pilot study with medication adherence among outcomes). Thus, technologies that are not (yet) supported by evidence (e.g., are in earlier stages of development and testing), or clinical practice protocols without an evidence base on at least one aspect (safety, efficacy, effectiveness, cost-effectiveness, appropriateness, social and ethical values or quality), will not be (yet) included in the repository until such evidence is produced and reported.

- **support patients to take their medications as agreed with the healthcare providers (i.e., to initiate, implement, and persist with the medication regimen)** encompass the contribution of the technology to medication adherence management – either directly in patients' self-management, or by supporting professionals to offer such services to patients through all phases of medication adherence. Thus, technologies that focus on other medication management goals, but do not target adherence specifically would be out of scope for this repository.

The MATech definition and scope of the repository is based on the WHO definition of health technologies, the WHO publication "Adherence to long-term therapies: evidence for action", the ABC taxonomy and the European Commission definition of best practice.

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D1.1 Product and provider information

The product and provider domain entails basic information about the product and provider organization as well as the description of the repository entry and source of information.

1) Please rate the RELEVANCE of this attribute group (X axis).
2) Please rate the CLARITY of this attribute group (Y axis).

Further explanation:
Domain 1 consists of one attribute group and includes the attributes for the description of basic product and manufacturer/developer information, as follows:
1. **Product** is a device, procedure or system, that could be used to manage adherence to medication described by its name, brand, type, release date, ...
2. **Provider organization** is the organization that produces and/or makes the product available for users described by its name, type, domain activity, contact details...
3. **Repository entry** is a description of a health technology by a repository author account (ID, date of entry, update, verification).
4. **Author of the product description** is a person or group of persons who enters information about at least one MATech in the ENABLE-R database (ID, name, date, contact details).

The definitions of domain 1 are based on the ITEMAS ontology. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

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Table of contents for Domain 2 – medication adherence descriptors

D2.1 Target use scenario

Target use scenario is the type of common adherence management activities that the technology is intended to be used for (i.e., for self-management of adherence or support service use).

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation:

Target use scenario entails:

1. **Adherence self-management** is the scenario in which the technology is used for adherence self-management activities and can be further defined by:
   - Person in the healthcare environment (*patient or caregiver*)
   - Patient age group (*adult, adolescent, child, infant*)
   - Patient functional status (*mental functions, sensory functions, movement-related functions*)
   - Patient literacy (health literacy, including medication literacy)
   - Patient polypharmacy
   - Patient multimorbidity

2. **Adherence support use** is the scenario in which the technology is used for activities supporting taking medication in a health/social care provision setting and can be further specified by the following user types:
   - Professional health and social care provider
   - Health (system) manager

The definitions of target use scenarios are based on several taxonomies -SNOMED-CT, and WHO International Classification of Functioning, Disability and Health (ICF), and Digital Health Interventions (DHI)- and research literature sources. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.2 Target health conditions

Target health conditions are the type of diseases or health problems the technology is intended for.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation:

Target health conditions entail:

1. Blood
2. Cancer and neoplasms
3. Cardiovascular
4. Congenital disorder
5. Ear
6. Eye
7. Infection

8. Inflammatory and immune system
9. Injuries and accidents
10. Mental health
11. Metabolic and endocrine
12. Musculoskeletal
13. Neurological
14. Oral and gastrointestinal
15. Renal and urogenital
16. Reproductive health and childbirth
17. Respiratory
18. Skin
19. Stroke
20. Generic health relevance

The definitions of target health conditions are based on The International Classification of Disease (ICD-11) and The Health Research Classification System (HRCS) from the UK clinical research association. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.3. Medication regimen

Medication regimen attributes are the prescribed schematic form/therapeutic plan of medication therapy that the technology is intended for.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation:
Medication regimen attributes entail:
1. **Type of intention** as the purpose for which the medication is prescribed (*e.g., preventive or therapeutic*).
2. **Duration of treatment** presents the intended interval of treatment and relates to the clinical course and disease conditions (*e.g., short or long-term*).
3. **Route of administration** is the route in which medications/doses are administered to unfold pharmacological effects (*e.g., oral, inhaled, injections/subcutaneous, infusion/parenteral, patches, topical*).
4. **Number of monitored medications** defines how many distinct medications are monitored by the technology, if applicable (*e.g., single medication, multiple medication*).
5. **Prescribed dosing frequency** defines the dose-taking patterns recommended for medicines administration, in which doses should be taken at defined time intervals over a defined time period (*e.g., once-daily, multiple daily dosing at fixed intervals, once per week dosing, multiple dosing per week in fixed intervals, dose adjustment recommendations*).

The definitions of medication regimen attributes are based on several taxonomies: SNOMED-CT; National Cancer Institute Thesaurus (NCIT) and Medical Subject Headings (MeSH). For a more detailed view of the respective sub-levels with lables and definitions please check the interactive graph or the Excel file under supporting information.

D2.4.1. Phase of medication adherence

A medication adherence phase is a time interval between the prescription start and end dates that is behaviourally (i.e., linked with specific determinants and outcomes) and metrically (i.e., requires specific estimation methods) distinct.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

Medication adherence phases include

1. **Initiation** is the phase of adherence that covers the start of a prescribed treatment, i.e., the period from when the prescription is issues to the first dose taken (i.e., the initiation event)
2. **Implementation** is the phase of adherence from the initiation until the last dose taken during which one can estimate the extent to which the patient's dose taking and timing are linked to the prescribed dosing regimen.
3. **Discontinuation (Persistence)** is the phase of adherence that refers to the end of treatment execution and covers the period until last dose is taken, e.g. end of therapy or termination by patient. Persistence is the period between initiation and discontinuation.

The definitions of adherence management are based on the ABC Taxonomy. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.4.2.A Monitoring/measurement type of management

Medication adherence monitoring, or measurement, is type of adherence management that refers to estimating (repeatedly) medication adherence behaviours, determinants, and/or outcomes.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

Medication adherence monitoring/measurement entails:

1. **Measurement method** is a way in which information is gathered and summarized by the technology about the patient's medication adherence. It is further specified into the following:
   - **Direct observation method** is a measurement method consisting in observing medication intake directly.
   - **Pill count method** is a measurement method consisting in calculating left over pills in containers/blisters at a specific time point.
   - **Self-report method** is a measurement method using data reported by patients or caregivers about themselves (*e.g., diary, questionnaire, interview/consultation*).
   - **Electronic monitoring method** is a measurement method using data from devices that record medication taking events electronically (*e.g., smart packages, smart pill, digital event record system*).
   - **Electronic healthcare database method** is a measurement method using routinely collected data as part of a longitudinal healthcare process (*e.g., electronic medical records, claims/dispensing, record linkage system*).
   - **Laboratory method** is a measurement method based on clinical assessment through invasive procedure (*e.g., measuring drug concentration, biomarker or treatment response in samples from body fluids*).

2. **Measurement target** is a component of the adherence causal (logic) model measured by the technology. It is further defined by:
   - **Determinant measure** is measurement targeting causal influences on the behaviour that can be modifiable (amenable to intervention with a medication adherence technology).

- **Behaviour measure** is measurement targeting a self-management behaviour (*e.g., adherence, diet, physical activity, tobacco use, symptom monitoring and management*).
- **Outcome measure** is the measurement targeting the effects of the behaviour or change of behaviour on the patient's status (*e.g., health outcome, quality of life*).

The definition of adherence monitoring/measurement is based on the ABC Taxonomy. The definitions of measurement methods and targets are based on several taxonomies -SNOMED-CT, the Train4Health (T4H) behaviour change competency framework and the behaviour change intervention ontology (BCIO)-, as well as scientific literature and the methodological expertise of the repository Steering Committee. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.4.2.B Support/intervention type of management

Medication adherence support and/or intervention is a type of adherence management that refers to generating change in medication adherence determinants and thus behaviours and outcomes.

1. **Please rate the RELEVANCE of this attribute (X axis).**
2. **Please rate the CLARITY of this attribute (Y axis).**

Attribute groups further describing medication adherence support/intervention type of management are presented for your review in the next pages.

The definitions of adherence management types are based on the ABC Taxonomy.

D2.4.2.B.1 Intervention modes of delivery

Intervention modes of delivery are the ways used to deliver a medication adherence intervention.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation
Intervention modes of delivery entails:
1. **Printed material** is the mode of delivery involving use of printed material (e.*g., brochure or printed media such as poster, newspaper/leaflet*)
2. **Human interaction** is the mode of delivery involving a person as intervention source who interacts with an intervention recipient (*e.g., face to face consultations or network/patient groups*)
3. **Electronic mode** is the mode involving electronic technology in the presentation of information or the mode of motivation to an intervention recipient (*e.g., smartphone/tablet, wearable electronic device like smart box, smart inhaler, smart tube, smart button or digital media like internet, social media, broadcast media, billboard*).

The definitions of intervention modes of delivery are based on the Behaviour Change Intervention Ontology (BCIO), specifically a taxonomy of mode of delivery of behaviour change interventions (BCI). For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

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D2.4.2.B.2 Target behaviour determinants

Target behaviour determinants are causal influences on medication adherence that can be modifiable (amenable to intervention with a medication adherence technology).

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

Target behaviour determinants entails:

1. **Capability** is a group of determinants referring to what an individual can do themselves to take medication as agreed with the healthcare provider (*e.g., psychological/cognitive capability or physical capability/skills*)
2. **Opportunity** is a group of determinants referring to the conditions in the individual's external environment that can facilitate medication adherence (*e.g., social opportunity/influences or physical opportunity/environmental context and resources*)
3. **Motivation** is a group of determinants referring to what extent the individual feels driven/willing/energized to take medication as agreed with the healthcare provider (*e.g., reflective motivation or automatic motivation*)

The definitions of target behaviour determinants are based on the Capability, Opportunity, Motivation and Behaviour (COM-B) model, the Theoretical Domains Framework (TDF) and the Behaviour Change Intervention Ontology (BCIO), specifically The Mechanisms of Action (MoA) Ontology currently in development. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.4.2.B.3 Behaviour change techniques

Behaviour change techniques (BCTs) are options/activities included in the technology that aim to influence determinants (barriers and facilitators) of medication adherence behaviours.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

BCTs entails:

1. **BCTs acting on capability:**
   - **feedback and monitoring** means the technology includes options to record medication intake and its effects and feed this info back to the user (*e.g., biofeedback, feedback or self-monitoring on behaviour, feedback or self-monitoring on outcomes*).
   - **repetition and substitution** means the technology includes options/activities to perform certain actions repeatedly and systematically in order to enforce medication adherence behaviours and replace other behaviours not beneficial for medication adherence (*e.g., habit formation, behavioural practice, graded tasks*).
   - **shaping knowledge** means the technology includes options for the user to learn about how to take medication as agreed with the healthcare provider, what they can do themselves to stick to the schedule in difficult situations, and test different ways of doing this.

2. **BCTs acting on opportunity:**
    - **demonstration of behaviour** means the technology includes an observable sample of how to take medication as agreed with the healthcare provider, directly in person or indirectly (video, pictures, drawings).
    - **prompts & cues** means the technology includes ways to prompt medication intake at the agreed time. restructuring the physical environment & adding objects means the technology includes advice on how to change the environment to make it easier to take medication as agreed with the healthcare provider.
    - **identity** means the technology includes ways of strengthening a positive identity that includes taking medications agreed with the healthcare provider.

3. **BCTs acting on motivation:**
    - **goals and planning** means the technology includes options to encourage setting goals related to adherence and planning to achieve them (*e.g., action planning, discrepancy between behaviour and goals, goals setting and reviewing, problem solving).*
    - **pros & cons** means the technology includes ways to identify and compare reasons for wanting or not wanting to take medication as agreed with the healthcare provider.
    - **regulation** means the technology includes advice and/or options/activities aiming to keep motivation for medication adherence within a range favourable for performing adherence-related behaviours (*e.g., conserving mental resources, reducing negative emotions*).
    - **self-belief means** the technology includes ways of increasing the person's confidence they can take medication as agreed with the healthcare provider.
    - **imaginary reward** means the technology includes advice on how to imagine correct performance of medication intake.

4. **BCTs acting across all three determinant groups:**
    - **social support** means the technology includes options to advise, arrange or provide social support (practical, emotional, other), or praise/reward taking medication as agreed with the healthcare provider. social reward means the technology includes verbal/non-verbal rewards when the patient shows effort and/or progress in taking medication as agreed with the healthcare provider.
    - **information about consequences** means the technology includes information about consequences (health-related, emotional, social, environmental) of medication adherence (or non-adherence) and emphasize their relevance for the person.

The definitions of behaviour change techniques are based on the Capability, Opportunity, Motivation and Behaviour (COM-B) model, the Theoretical Domains Framework (TDF), the Behaviour Change Techniques (BCT) taxonomy v1, and the Behaviour Change Intervention Ontology (BCIO). For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.4.2.B.4 Intervention provider

Intervention provider is a role played by a person who uses the technology to assist the patient in their self-management of medication adherence.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation
Intervention provider entails:

1. **Health care professional** is an intervention provider that applies scientific knowledge in medicine, nursing, midwifery, pharmacy, dentistry and/or health promotion to support patients in managing their health (*e.g., medical doctor, nursing professional, pharmacist, dentist, associated health professional*).
2. **Psychosocial care professional** is an intervention provider that applies scientific knowledge in psychology, sociology and other social sciences to support individual and families in a community in their well-being and life goals (*e.g., psychologist*).
3. **Personal care worker** is an intervention provider that delivers care, supervision and assistance for children, patients and elderly, convalescent or disabled persons in institutional and residential settings.
4. **Personal provider** is an intervention provider that is related to the person to whom the intervention is targeted through aspects of their personal lives (*e.g., family member, carer, friend, peer*).

The definitions of the intervention provider attributes are based on several taxonomies: BCIO, in particular the Intervention Source Ontology, and Gender, Sex and Sexual Orientation Ontology (GSSO). For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D2.4.2.B.5 Intervention setting

Intervention setting is the social and physical environment in which the technology is or can be used to manage medication adherence.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation
Intervention setting entails:

Physical setting is an intervention setting that consists in a physical environment where the medication adherence technology is used (*e.g., residential facility, healthcare facility, educational facility, community facility*).

Virtual setting is an intervention setting that consists in a virtual environment where the medication adherence technology is used (*e.g., telemedicine, telepharmacy*).

An intervention can be applied or applicable to one type of settings, or to both.

The definitions of the intervention setting attributes group are based on the BCIO, in particular the Intervention Setting Ontology. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

Table of contents for Domain 3 – evaluation and implementation

D3.1.1.A ISO certification

ISO certification is a general quality indicator referring to whether the MATech has obtained one or more ISO certification labels relevant for its content and purpose.

1. **Please rate the RELEVANCE of this attribute (X axis).**
2. **Please rate the CLARITY of this attribute (Y axis).**

The definitions of quality indicators are based on a checklist of e-health quality criteria (under development), Mobile Application Rating Scale (MARS), and the Consort-EHEALTH guideline.

D3.1.1.B Evidence from scientific evaluation

Evidence from scientific evaluation is a group of general quality indicators referring to whether the evaluation of MATech has been performed through the systematic, rigorous, and meticulous application of scientific methods, and the evidence obtained.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

The evidence from scientific evaluation entails:

1. **Research on development** means evidence from scientific evaluation is available to support the design of the MATech. This also encompasses the classification of quality of the presented evidence.
2. **Research on effectiveness** means evidence from scientific evaluation is available to support the effectiveness of the MATech (excluding cost-effectiveness, outlined in section D2.1.3 and implementation outcomes, outlined in section D3.2). This also encompasses the classification of quality of the presented evidence.
3. **Ethical and legal aspects** means the MATech research has ethical approval, has considered and addressed any risks for the target population, complies with the current laws on research on humans and data privacy and safety, and has shared information about how it meets these requirements.

The definitions of quality indicators are based on a checklist of e-health quality criteria (under development), the Mobile Application Rating Scale (MARS), and the Consort-EHEALTH guidelines. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.1.1.C Development standards

Development standards are a group of general quality indicators referring to whether the MATech has been developed according to standards established in the development of health technologies.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

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Further explanation

The development standards entail:

1. **Development process** means all development activities undertaken with respect to MATech are clearly described, such as activities related to preparation, development and optimization of product components as well as the manufacturing, validation and distribution process of the MATech.

2. **User-centred design process** means the MATech was developed in an iterative design process in which designers involved the target users and their needs in each phase of the design process. The users' requirements, objectives, and feedback were taken into account during the development process.

3. **Conflict of interest** means the provider's conflict of interests are clearly described to assure trust and transparency.

4. **Updates of information sources** means information sources are periodically verified (proven to still be correct and accurate) and updated (new information added or design changed).

The definitions of quality indicators are based on a checklist of e-health quality criteria (under development), Mobile Application Rating Scale (MARS), Consort-EHEALTH guideline. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.1.1.D Technological standards

Technological standards are a group of general quality indicators referring to whether a MATech corresponds to criteria commonly used to assess the technical functioning of electronic/digital components, if applicable.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

The technological standards entail:

1. **Performance** - the MATech works fast and accurately without bugs or errors (*e.g., reliability of the interactive components, design scalability*).

2. **Data protection** - collected data is properly protected to prevent sensible data leakage (*e.g., data encryptions, antivirus supported maintenance, data storage place and capacity and protection against theft or physical attacks*).

3. **System integration** - evidence of MATech meeting the technical, privacy and security requirements of health care systems.

4. **Inter-devices portability** - the MATech can be connected with several devices.

The definitions of quality indicators are based on a checklist of e-health quality criteria (under development), Mobile Application Rating Scale (MARS), Consort-EHEALTH guideline. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.1.2 Research-related quality indicators

Quality indicators that evaluate if the research on the MATech has been performed according to standards established in measurement and intervention research.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

The research-related quality indicators entail:

1. **Theory base** means the MATech is developed based on theory, evidence, theoretical framework.
2. **Validity of measurement** means the MATech is valid for certain conditions, populations, etc. (content validity)
3. **Validity of intervention** means the use of BCTs in the MATech is evidence based, i.e., there is scientific evidence that the chosen BCTs are likely to be effective in influencing the chosen behaviour determinants.
4. **Reliability of measurement** means the MATech shows a high test-retest reliability, internal consistency, and inter-rater reliability.

The definitions of quality indicators are based on a checklist of e-health quality criteria (under development), Mobile Application Rating Scale (MARS), Consort-EHEALTH guideline. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.1.3 Policy-related quality indicators

Quality indicators related to Health Technology Assessment (HTA) procedures and concepts that inform decision-making regarding implementation and use of health technologies.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

The policy-related quality indicators entail:

1. **Economic and cost evaluation (ECO)** means an economic analysis has been performed to inform value-for-money judgements about the MATech with information about costs, health-related outcomes and economic efficiency. It entails several types of analysis (e.g., cost-effectiveness, cost-utility, cost-benefit, budget impact), which can be country or system specific, thus the repository also needs to specify where these indicators apply.
2. **Current use of technology (CUR)** specifies the regulatory status (authorization and reimbursement) of the technology. These information are country or system specific, thus the repository also needs to specify where these indicators apply.

The definitions of policy-related quality indicators are based on Health Technology Assessment (HTA) Core Model, version 3.0 and O'Rourke et al. (2020). "The new definition of health technology assessment". For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.1.4 Use-related quality indicators

Quality indicators that evaluate if the MATech use meets users' expectations and provides a pleasurable experience of interaction with the technology.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

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Further explanation

The use-related quality indicators entail:

1. **Usability** means MATech qualities such as simplicity, organization, intuitiveness and reliability. High usability is indicated when MATech is simple, well organized, intuitive and reliable.
2. **Satisfaction** means satisfaction with MATech assesments were performed to control the level of satisfaction of the end user.
3. **Customization** means the MATech or some parts of it can be customized to the needs of the individual user.
4. **Aesthetics** is the perception of the product, which can be described as aesthetic (size, layout, graphic, font size etc.) as this was evaluated in a research project or external review.
5. **Readability** means the ease of understanding or comprehension achieved by the style of writing. The reader must be able to recognize (decode) the words in the medical device patient labelling as well as comprehend the meaning of the text.

The definitions of quality indicators are based on a checklist of e-health quality criteria (under development), the Mobile Application Rating Scale (MARS), and the Consort-EHEALTH guideline. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.2.1 Implementation outcomes

Implementation outcomes are characteristics of the technology regarding its implementability in clinical practice, as supported by evidence.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

Implementation outcomes entail:

Acceptability means whether stakeholders reported satisfaction with various features of the technology and the experience of using it to support medication adherence

Feasibility means whether stakeholders perceived the technology as practical and fit for use in supporting medication adherence

Sustainability means whether stakeholders perceived the technology as appropriate for routine sustained use in supporting medication adherence

Definitions of implementation outcomes and strategies are based on Proctor et al. (2011) "Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda", the Consolidated framework for advancing implementation science (CFIR), the Expert Recommendations for Implementing Change (ERIC) and the Interventienet.nl website. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

D3.2.2 Implementation strategies

Implementation strategies are characteristics of the technology that facilitate implementation and maintenance of the technology in a setting.

1. **Please rate the RELEVANCE of this attribute group (X axis).**
2. **Please rate the CLARITY of this attribute group (Y axis).**

Further explanation

Implementation strategies entail:

1. **Training** are activities to teach stakeholders about the technology and how to use it and integrate in the medication adherence support processes.
2. **Educational materials** are materials stakeholders may consult to learn about the technology and how to use it and integrate in the medication adherence support processes.
3. **Funding** are financial strategies and/or additional costs to facilitate adoption of the technology into medication adherence support practice.
4. **Expertise sharing** are information from previous implementations on what helped adopt the technology into medication adherence support practice.
5. **Technical assistance** are systems to support implementation of the technology into medication support practice
6. **Consultation** means accessing direct support from experts for the implementation of the technology into medication support practice.
7. **Accreditation & legal approvals** are credentials and/or licensing to acquire or prove to be able to use the technology in a setting in the conditions necessary for optimal safety and effectiveness.
8. **Collaborations** means involving multiple institutions in delivering the medication adherence support solution that uses the technology.
9. **Access to additional resources** means access to data, space, laboratory facilities.

Definitions of implementation outcomes and strategies are based on Proctor et al. (2011) "Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda", the Consolidated framework for advancing implementation science (CFIR), the Expert Recommendations for Implementing Change (ERIC) and the Interventienet.nl website. For a more detailed view of the respective sub-levels with labels and definitions please check the interactive graph or the Excel file under supporting information.

Thank you and see you soon!

Dear panellist,

you have made it to the end of the survey. We appreciate your effort and valuable contribution to development of the ENABLE repository of medication adherence technologies.

Please remember to visit the survey several times during the study period to reconsider your answers based on the aggregated feedback and discussions with the other anonymous panellists. Reminders will be sent every 2 weeks to remind you to log in and participate again.

Please don't hesitate to contact us on wg2costenable@gmail.com in case of any questions.

Best wishes,

The ENABLE WG2 Steering Committee