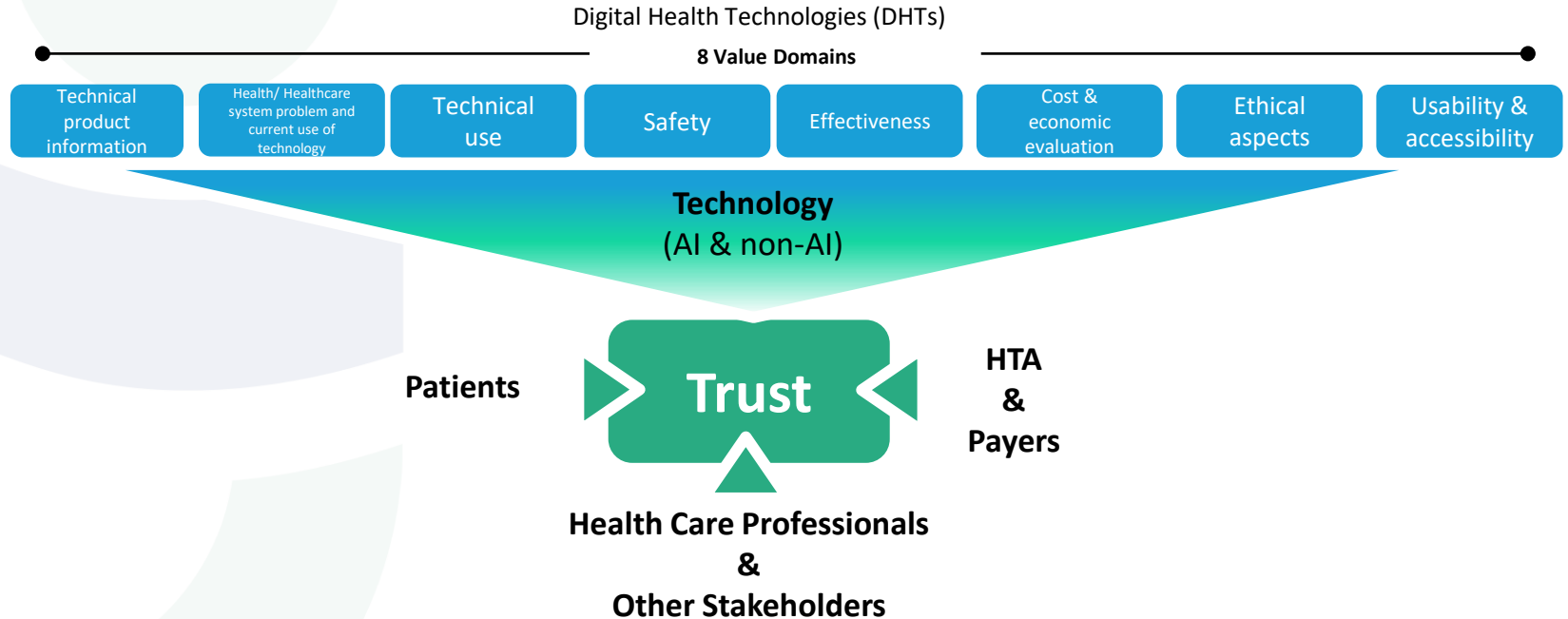# Patients & Trust in DHTs: Can We Do Better?

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DHTs = Digital Health Technologies & their primary Users, Healthcare Providers

Building Trust in DHTs

Developing fit-for-purpose frameworks for healthcare systems

Digital Health Technologies (DHTs)

8 Value Domains

| Technical product information | Health/ Healthcare system problem and current use of technology | Technical use | Safety | Effectiveness | Cost & economic evaluation | Ethical aspects | Usability & accessibility |

Technology
(AI & non-AI)

Patients

Trust

HTA & Payers

**Health Care Professionals & Other Stakeholders**

Health Care Professionals including clinicians, nurses and others.
Other Stakeholders include technologists, medical device companies, hospitals, governments and others

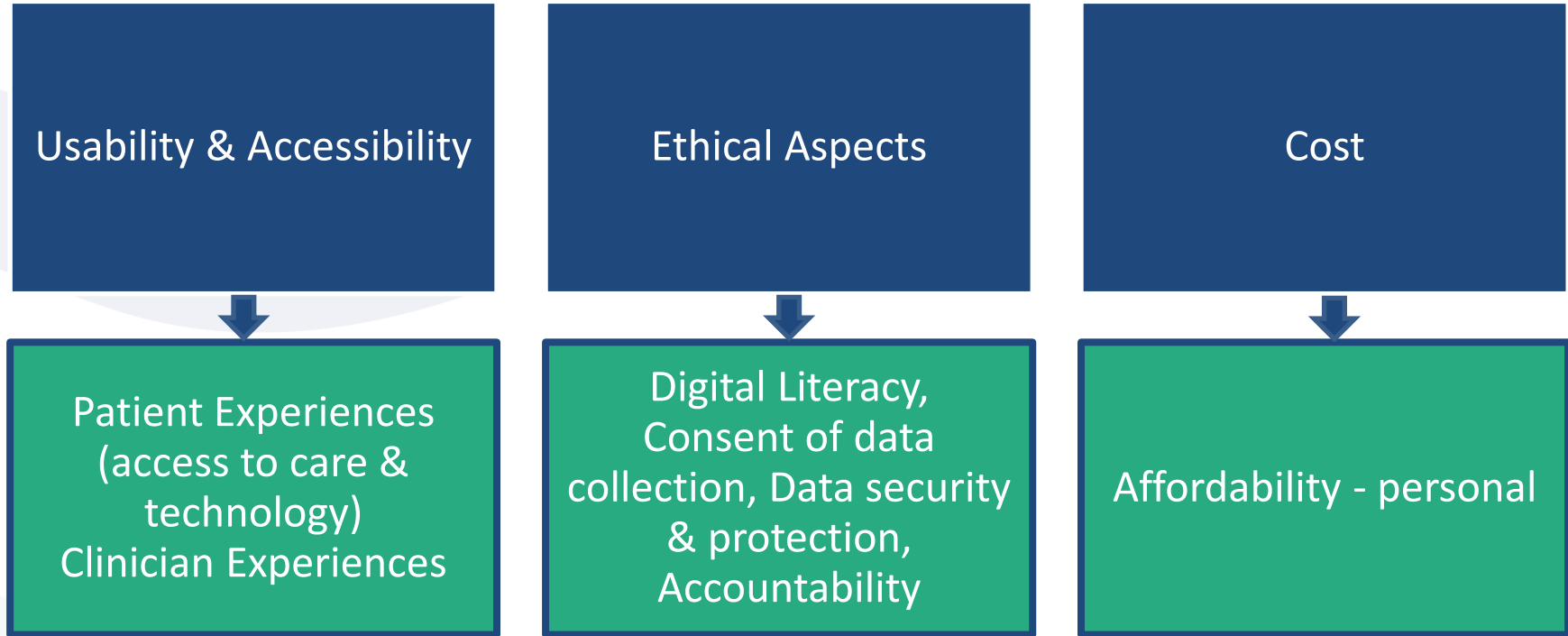# Conditions of Innovation in Digital Health

Governance

Value
Patient Experience
Clinician Experience
Trust
Evidence
Accountability
Data Protection
Data Generation

Data Generation

Health Benefit
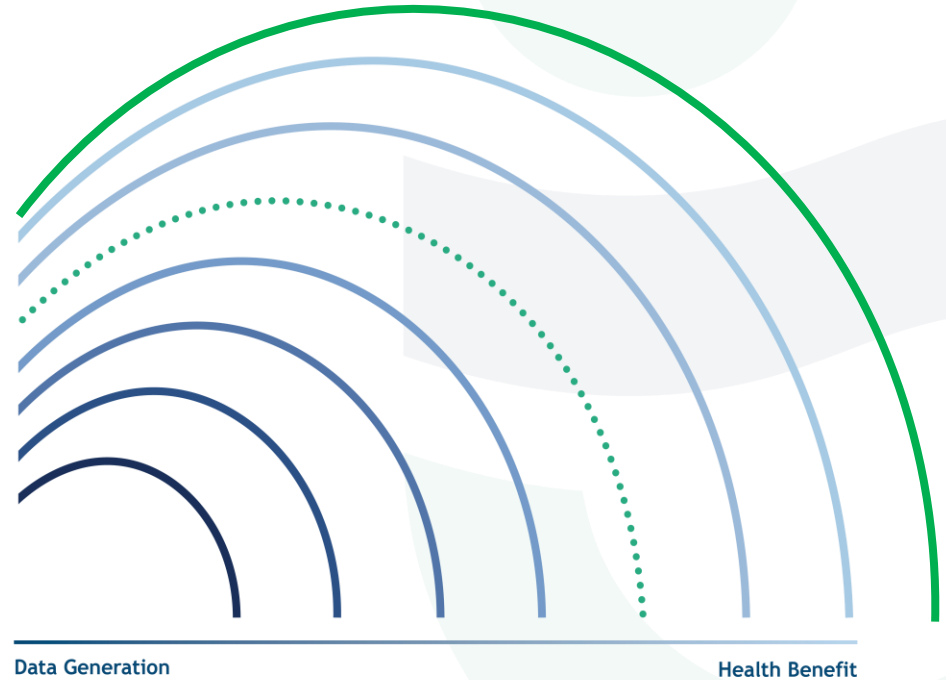
Value to Assessor or Payer for funding and reimbursement purposes

Value Domains & Sub domains: DHTs Patients Perspectives

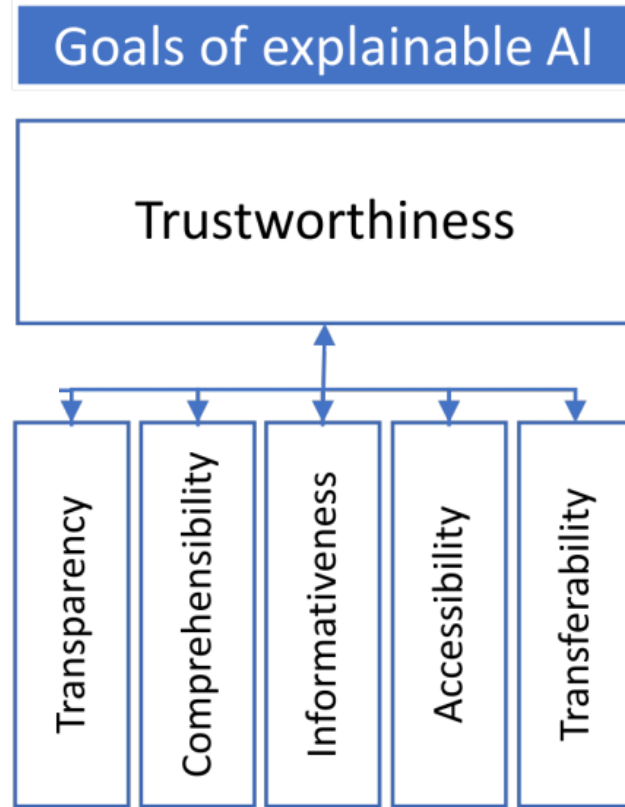| Usability & Accessibility	Ethical Aspects	Cost

Patient Experiences (access to care & technology) Clinician Experiences	Digital Literacy, Consent of data collection, Data security & protection, Accountability	Affordability - personal

Value Domains & Sub domains: DHTs Patients Perspectives

Effectiveness	Safety	Technical Use & Product Information
Patient Relevant Outcomes & clinical symptoms, Holistic approach, Personalised care	Technical reliability & stability, False positives, Delayed treatments, Communications for Safety	Interoperability, minimum data entries & users, data compliance, AI algorithm explainability & understandability

Schematic representation of achieving ==trustworthy AI== in biomedicine, including clinical decision making

- **Users:**
  - Developers
  - ==Clinicians or/& Patients==

- **Beneficiaries:**
  - Patients &/or Clinicians
  - Hospitals, data scientists
  - Insurances & others

Goals of explainable AI

Trustworthiness

Transparency | Comprehensibility | Informativeness | Accessibility | Transferability

Adpated from Lötsch, J.; Kringel, D.; Ultsch, A. Explainable Artificial Intelligence (XAI) in Biomedicine. Making AI Decisions Trustworthy for Physicians and Patients. *Biomedinformatics* 2022, *2*, 1–17.

Example on explainability criteria for the construction of sufficient understanding

Patient – Clinicians Relationships on AI Algorithms

Arbelaez Ossa et all. Re-focusing explainability in medicine. Digital Health Volume 8: 1–9. 2022
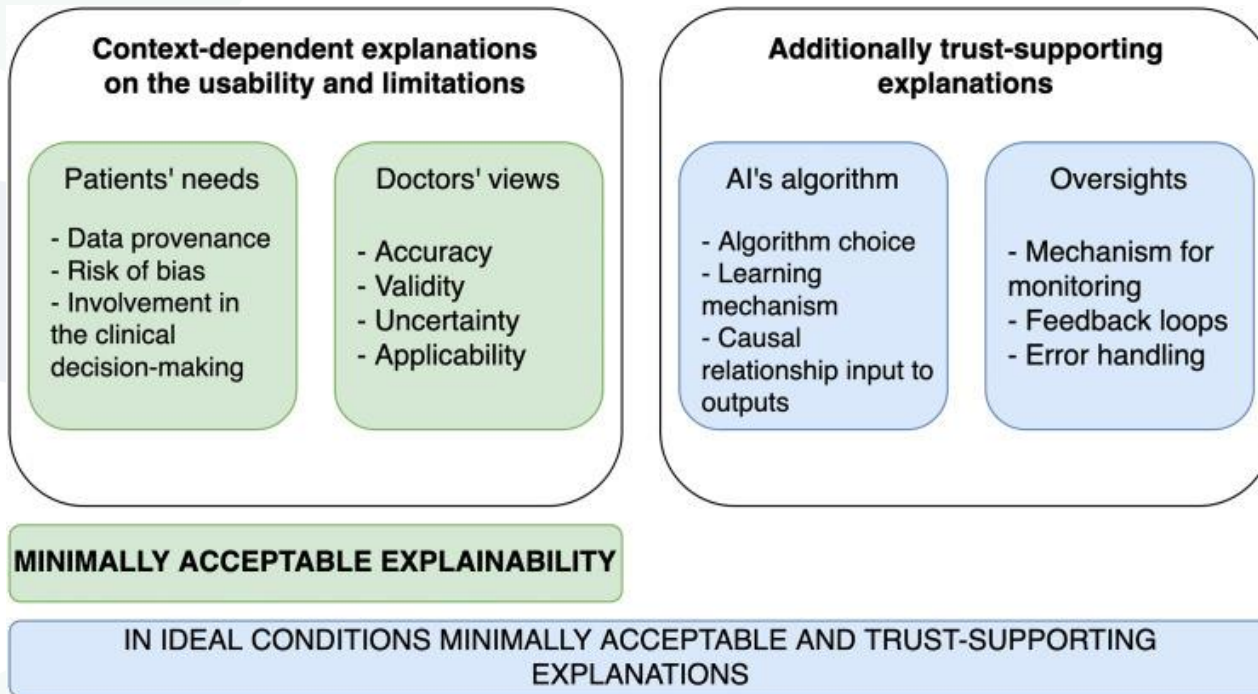
Patients & Trust in DHTs: Can We Do Better?

Thank You

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PANEL DISCUSSION

POLLING QUESTIONS

Q1. What is your main reason for wanting a successful reimbursement or funding & adoption of Digital Health Technologies in LMICs?
- where the primary user would be Health Care Providers.

Choose one response only

- Expand patient access to care

- Improve quality of care

- manage costs associated with providing care

Q2. What are the top 3 challenges for digital health innovation in LMICs? – especially, for their reimbursement or funding

Choose three responses only

- Data Generation
- Interoperability
- Data Protection
- Accountability (Roles & Responsibilities)
- Evidence
- Clinician Experience
- Patient Experience
- Societal & cultural beliefs
- Affordability

Q3. What are the 3 most important value domains for you when evaluating Digital Health Technologies for reimbursement or funding in LMICs?

Choose three responses only

- Health/healthcare system problem and current use of technology
- Technical product information and use
- Safety
- Effectiveness
- Cost & economic evaluation
- Ethical aspects
- Usability & accessibility

Q4. In LMICs, what evidence category is required to determine the value of Digital Health Technologies?

Choose one response only

- Minimum local evidence standards
- Best practice international standards

Q5. In the absence of randomised controlled trials, what types of data & data sources could be used as acceptable evidence for Digital Health Technologies in LMICs?
-for reimbursement or funding purposes.

Choose one response only

- Expert reports

- Surveys

- Observational Studies (eg cohort, case- control)

- Real World Data