HiMSS Türkiye

20-21 MART 2015
ANTALYA, TÜRKIYE

Titanic Deluxe Belek, Türkiye

www.himssturkey.org

PREVENTATIVE SELF-CARE; A real time, vital Life signs, Phenotype Patient owned PHR Approach

John P M Wubbe
EPPOSI multi stakeholder organization
EuDiPPA Digital Peer Patients Alliance

epposi

EuDiPPA

Types of prevention in health

- Primary prevention
  - *Prevent onset of disease or injury*
- Secondary prevention
  - *Halt or slow disease progression; limit disability or stop recurrence of injury*
- Tertiary prevention
  - *Prevent further deterioration, maximize quality of life*

Only by capturing good data can we set the foundation for personalized preventive health and wellbeing
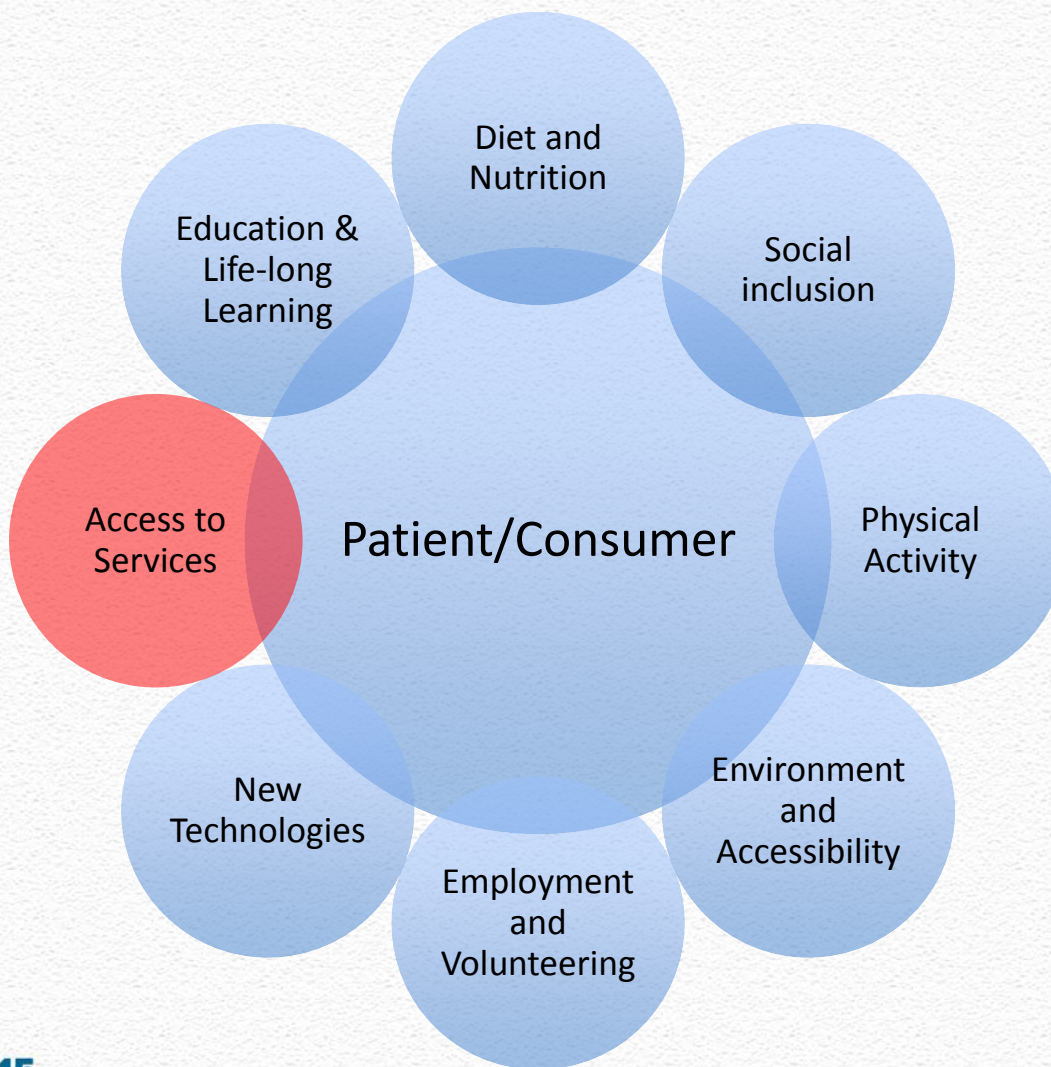
Why phenotype data driven technology?

- Thesis
  - Patient/Consumer's health is a multi-variate production function
    - WHO report on Social determinants of health
- Patient/Consumer manages and maintains his/her health by:
  - Identifying signs of good/ill health
  - monitoring what is measurable among them
  - Using measurements to drive behavior modification

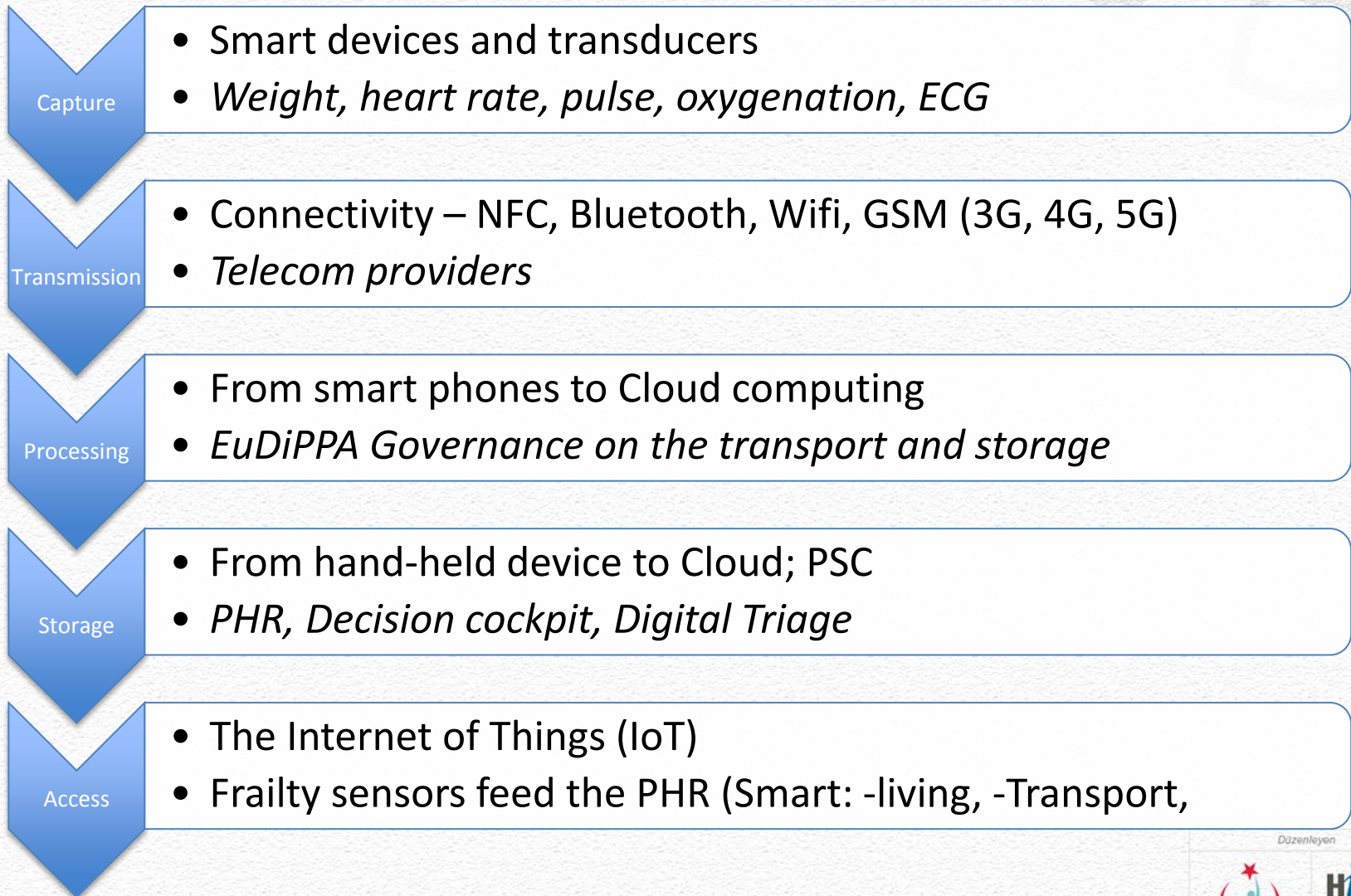# Inspired by Active and Healthy Ageing (AHA) Self care

Diet and Nutrition

Education & Life-long Learning

Social inclusion

Access to Services

Patient/Consumer

Physical Activity

New Technologies

Environment and Accessibility

Employment and Volunteering

Theoretical foundation; HTA

Identify signs of good/ill health

Monitor what is measureable

Capture and use the data for behaviour modification

Digital Technologies for various data operations

Capture
- Smart devices and transducers
- *Weight, heart rate, pulse, oxygenation, ECG*

Transmission
- Connectivity – NFC, Bluetooth, Wifi, GSM (3G, 4G, 5G)
- *Telecom providers*

Processing
- From smart phones to Cloud computing
- *EuDiPPA Governance on the transport and storage*

Storage
- From hand-held device to Cloud; PSC
- *PHR, Decision cockpit, Digital Triage*

Access
- The Internet of Things (IoT)
- Frailty sensors feed the PHR (Smart: -living, -Transport,

Identifying relevant technologies

Matrix of Frailty level and state of health literacy & eSavvyness of the patient/consumer.

| Robust | Well without active disease | Well with treated comorbid disease | Mildly frail | Moderately frail | Severely frail |

for each matrix element:

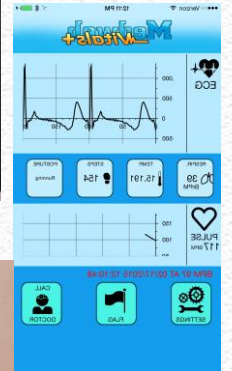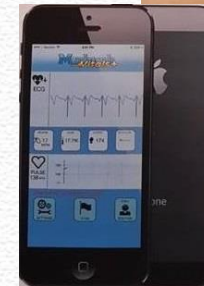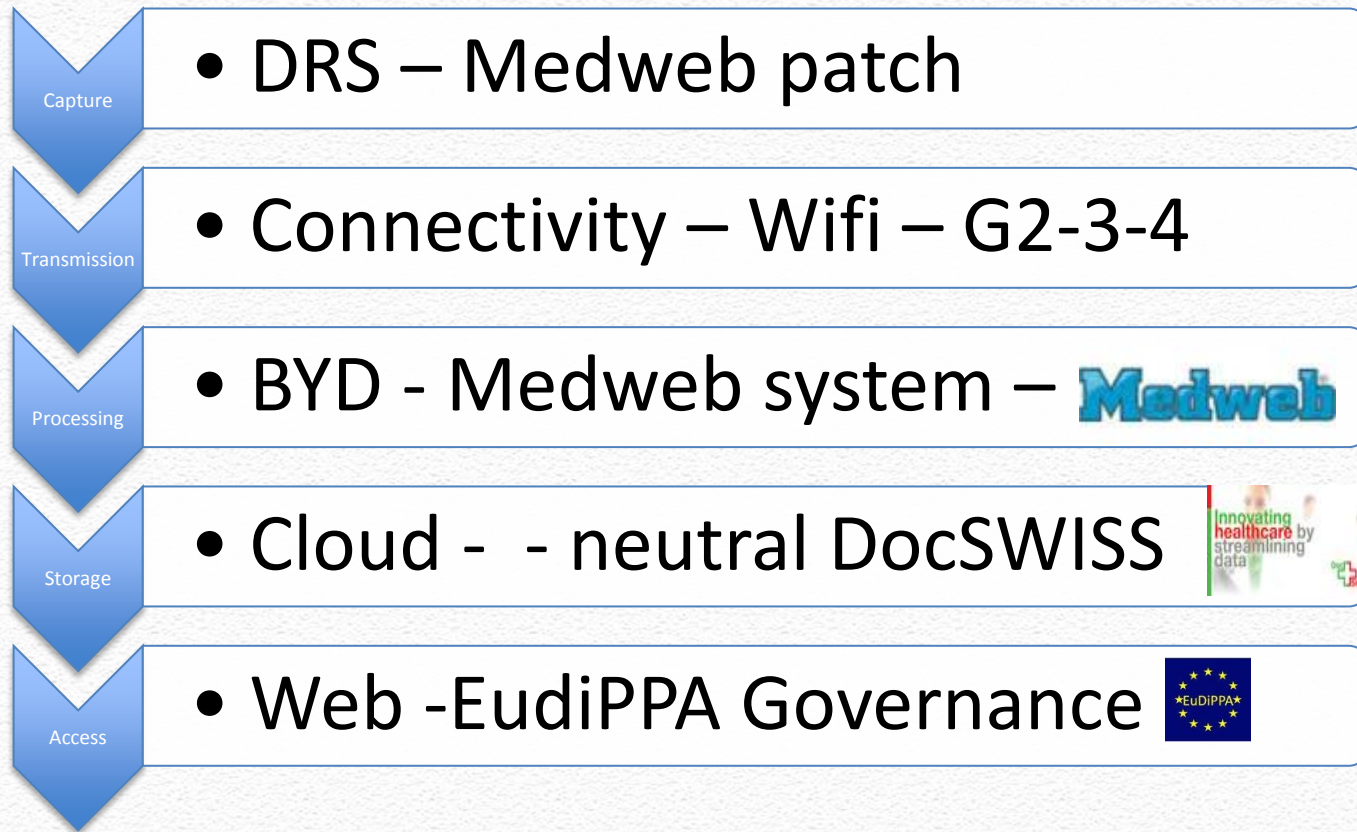| Identify requirements associated with data elements | Environmental scan of available technologies and systems | Identify best practices |

Best practice example: Burden of disease

Cause	Attributable Deaths	Attributable YLL	Attributable YLD	Attributable DALYS	Attributable DALYS rate in total DALY
Ischemic heart diseases	29.581	317.790	28.504	346.294	3.2
Hypertensive heart diseases	7.174	57.723	4.073	61.796	0.6
Ischemic Stroke	11.109	93.794	53.136	146.930	1.4
Diabetes Mellitus	7.674	73.921	78.319	152.240	1.4
Osteoarthritis	0	0	61.035	61.035	0.6
Breast cancer	724	7.141	1.718	8.859	0.1
Colon and rectum cancers	646	6.583	717	7.300	0.1
Corpus uteri cancer	235	2.079	651	2.730	0.0
Total	57.143	559.032	228.151	787.183	7.3

"Turkey Burden of Disease Study"
Benefit: prevention & DALY

Table 1: Distribution of high BMI attributed disease burden and death numbers.
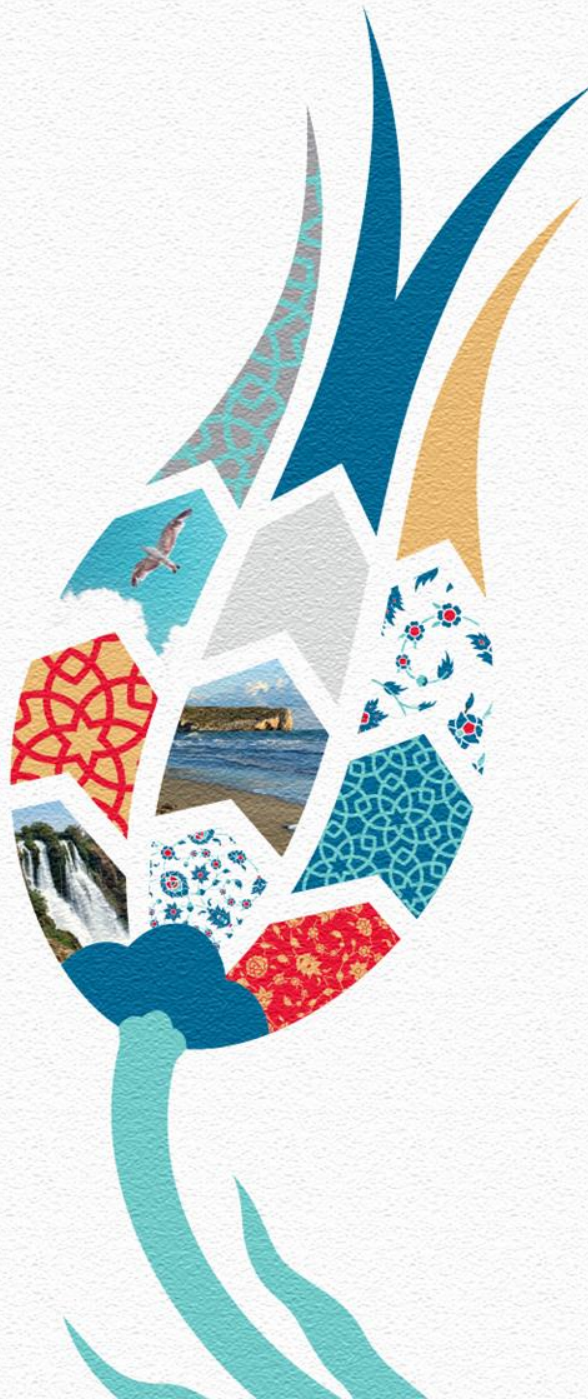
- Type of prevention – Secondary and tertiary

- Frailty levels 3 – 6
  – From Healthy with managed co-morbidity to severely frail

- Digital health literacy levels 1 – 6
  – Data capture done by trained allied health worker
  – Interpretation by qualified Health Professional

Example: Technologies for frailty monitoring

- **Capture**: • DRS – Medweb patch

- **Transmission**: • Connectivity – Wifi – G2-3-4

- **Processing**: • BYD - Medweb system –

- **Storage**: • Cloud - - neutral DocSWISS

- **Access**: • Web -EudiPPA Governance

Information courtesy of
EPPOSI/Medweb/EudiPPA/DocSWISS

- **Wearable**
  sensing:
  -Temperature
  -Heart rate
  -Respiration
  -ECG
  -Posture
- **Group Data**
  analytics available

THANK YOU

TEŞEKKÜR EDERIM

jpmwubbe@gmail.com

ykwankam@gehcs.com

Düzenleyen

T.C. Sağlık Bakanlığı

HiMSS Europe

Follow us @himsseurope #HIMSSTurkey