Health Care & Public Health Systems for Healthy Longevity: A Workshop for the Global Roadmap for Healthy Longevity Initiative

Session 6
Envisioning a System of Health and Well-Being for All

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Vision

• Health will be defined holistically as an **overall state of well-being** encompassing mental, social, emotional, functional, and spiritual health.
• We will have access to detailed information about our own **function**, we **will own our health data** and play a central role in making decisions about our health and well-being.
• **Healthcare will be centered on persons empowered to improve function** rather than seek treatment.
• We will receive personalized health **solutions in ways that are integrated seamlessly** into our daily lives.
• All of this will be **enabled by data and AI** provided within a healthcare system that is organized and regulated in an entirely new way.
1. Paradigm shift: Recognize the malleability of ageing and move away from age towards intrinsic capacity

2. Paradigm shift: not centered in the hospital and towards wellness and function, preventing disability rather than disease

3. Exploit and invest in new technologies

4. Optimizing health and social care for all (UHC with equity in access, Value based)

5. Lifecourse perspectives
Health systems around the world face several megatrends. Different health systems feel the forces of these trends to varying degrees.
“Every healthy person who undergoes whole genome sequencing will effectively become a patient, requiring further clinical investigation and follow up.”

Genome sequencing for sale on the NHS. BMJ 2019;364:l78
Ivan Illich on Public Health

• The level of public health corresponds to the degree to which the means and responsibility for coping with illness are distributed amongst the total population.

• That society which can reduce professional intervention to the minimum will provide the best conditions for health.
• We believe medicine to be a force for good, nevertheless some would agree with Ivan Illich that “The medical establishment has become a major threat to health.”

• Many might accept that increasing medical inputs will at some point become counterproductive and produce more harm than good.

• Do we want to keep developing increasingly expensive treatments that achieve marginal benefits when most in the world do not have the undoubted benefits that come with simple measures?
Public health strategies for optimizing function from a life course perspective

- Wellness, enhance reserve
- Maintain function, delay disease onset
- Slow rate of decline and disease progression

Knowledge and awareness for healthy aging
Focus: Quality of care, wellness and preventative care

Value: Improved care quality and outcomes

Payment: Value Based

Identifying Decrease of Interventions planning

Shared decision making

Implementing integrated care

Target interventions

Outcome measurement

Paid for value

Modified from: Wallstein M. Enabling Value Based Care pathways to partnerships
The future of health will be driven by digital transformation enabled by radically inter-operable data and open, secure platforms. Always-on sensors that capture data and platforms that aggregate, store, and derive insights from individual, institutional, population, and environmental data will catalyze the transformation.

NOTE: "MOVE ECG" analogic clock winner of CES INNOVATION AWARDS.
“We can choose a technological solution to the profound human disconnection that exists today in health care; a more humane medicine, enabled by machine support, can be the path forward. The triad of deep phenotyping, deep learning and deep empathy can be a major remedy.”

Eric Topol, Deep Medicine 2019
Holistic individual data will enable personalization of highly specific plans and interventions.

In the near term, once we have access to this whole set of data, the next challenge will be influencing people’s behavior through coaching, incentives, and education.
Behavioral Medicine
Biopsychosocial Aspects of Health

“How much longer do I have before I have to change to a healthy lifestyle?”
AI in Healthcare

Assisting in monotonous tasks

AI chatbots

Treatment design

Mining medical records

Virtual Healthcare Assistants

Knowledge and awareness for healthy aging
• **Prevent inequality before it cumulates over time.** Provide good quality childcare and early education, help disadvantaged youth into work and expand health spending on prevention.

• **Mitigate entrenched inequalities.** Patient-centered approach and boost efforts to help the unemployed back into work, remove barriers to retain and hire older workers.

• **Cope with inequalities at older ages.** Reforms to retirement income systems can limit the impact of socio-economic differences in life expectancy. Making home care affordable and providing better support to informal carers would also help reduce inequalities in long-term care.

**OECD 2017**

**Knowledge and awareness for healthy aging**
1. **Self care and Consumer empowerment**
   Identify and deliver on what consumers value most, putting the patient at the center. Use patient reported outcomes to measure success and support better decisions.

2. **Keeping people’s IC and function**
   Shift focus from treatment of illness to wellness and prevention of disability considering social determinants of health. Increase health literacy and encourage people to take greater responsibility for their health.

3. **Integrated care, right place and time**
   Implement new models of integrated care. Increase quality and eliminate waste. Rethink business models.

4. **Digital and analytics**
   Leverage technology and integrated data to deliver more convenient affordable and personalized prevention and care. Build cyber security capabilities to manage increased risks.

5. **Reconfigure the work**
   Build new capabilities for the future, e.g. Digital and analytics, multi-disciplinary teams, and new professions. Consider how new technologies like AI and robotics can complement human capital.

6. **Outcomes – based funding**
   Shift from volume to value, enable prevention, new care models and eliminate cost-shifting. Explore new models to drive innovation, e.g. Social benefits bonds, PPPs, Integrate behavioral incentives.

7. **Partnerships**
   Public and private organizations, State and established players, even competitors can benefit by partnering to deliver consumer-centered health services.