Tackling Europe's key health challenges

from treating disease to preventing disease

Public Hearing: Towards an mHealth Framework for Europe, 13 October 2016

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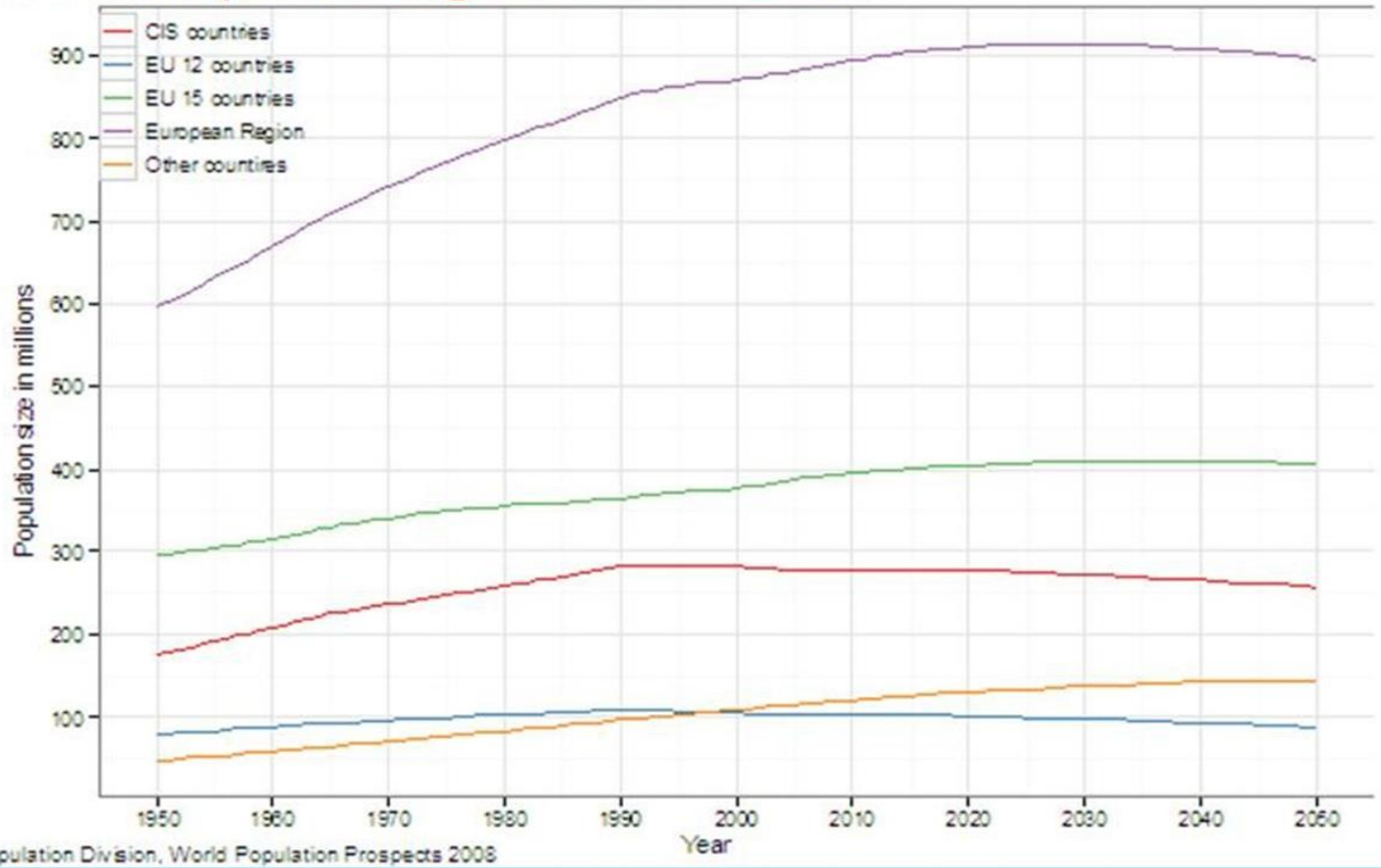
Population estimates and projections in the WHO European Region 1950–2050



Source: UN Population Division, World Population Prospects 2008

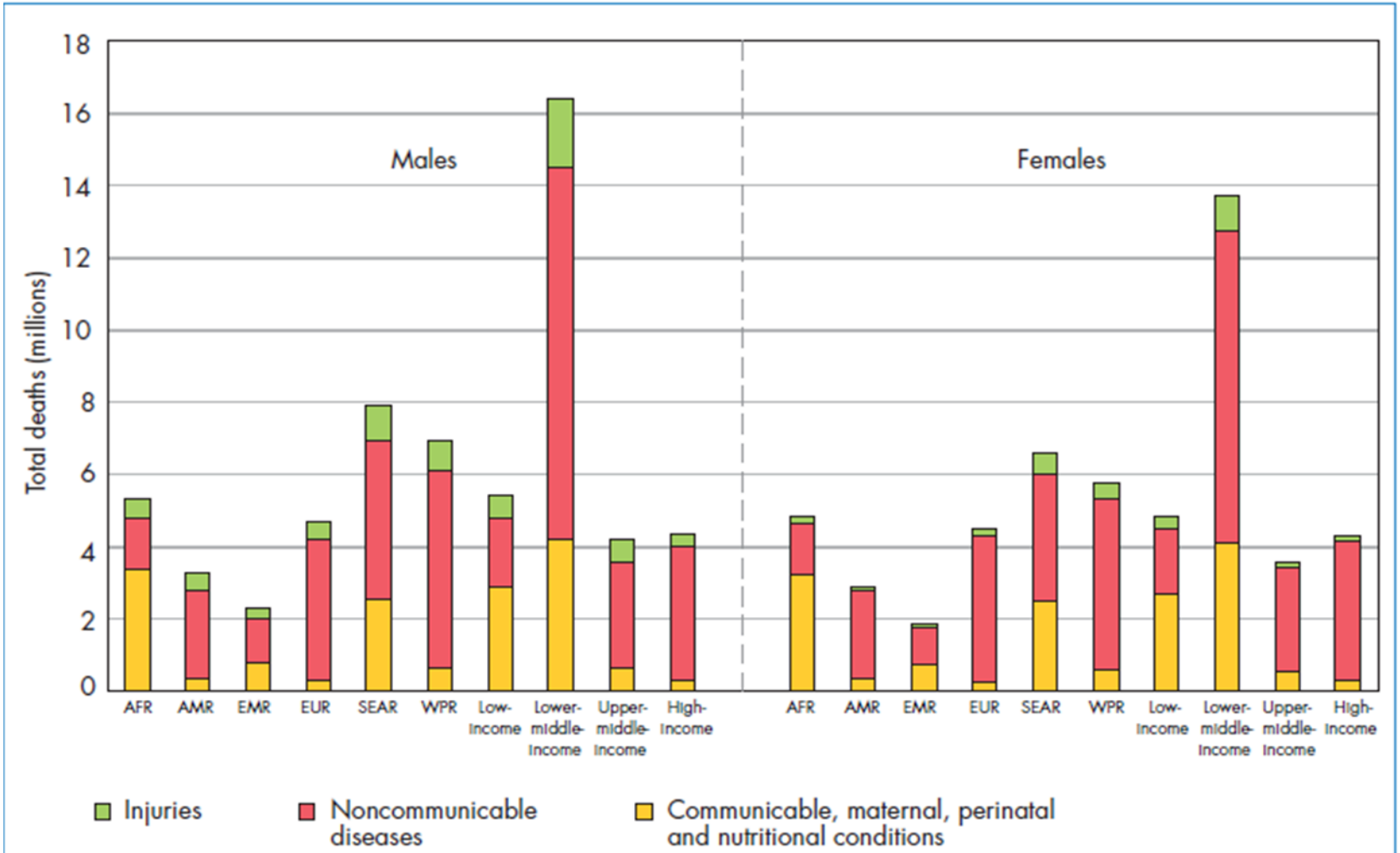
World Health Organization
REGIONAL OFFICE FOR Europe

Key health challenges

Ageing population	Sustainability of healthcare	Preventable diseases	Health inequalities	Health security
Longer life	Efficiency	Chronic conditions: 87% of all deaths	Life expectancy variability: 10 years	Identification of new threats
Steady healthy life	Sustainability	Costs (i.e. tobacco-related diseases 100 billion euros)		Multinational collaboration
Increase of dementia and Alzheimer's disease prevalence	Access	Most chronic diseases are preventable (alcohol, tobacco, exercise, diet)		

Source: http://ec.europa.eu/health/health_policies/docs/improving_health_for_all_eu_citizens_en.pdf

Figure 1. Total deaths by broad cause group, by WHO Region, World Bank income group and by sex, 2008



(Note: AFR=African Region, AMR=Region of the Americas, EMR= Eastern Mediterranean Region, EUR= European Region, SEAR=South-East Asia Region, WPR=Western Pacific Region).

Source: World Health Organization. Global status report on noncommunicable diseases 2010. http://www.who.int/nmh/publications/ncd_report2010/en/

Chronic disease burden

- 9/10 die of chronic disease in Europe
- They include cancer, heart disease, hypertension, diabetes, stroke, respiratory diseases etc.
- 80% of healthcare costs (700 billion euros p/y)
- Risk factors preventable
- Shift from focus on treatment to prevention:

Early Diagnosis and Detection

Population Screening

Patient behaviour-change techniques

Source: http://www.alliancechronicdiseases.org/fileadmin/user_upload/ECDA-poster-web.pdf

mHealth

- Definition: medical and public health practice supported by mobile devices (van Heerden et al, 2012)

- Applications vary:

a) Data collection
b) Healthcare delivery
c) Doctor-patient communication
d) Adherence support
e) Clinical decision-making
f) Patient self-monitoring
g) Information search

Patient priorities and expectations (2012)

- How I seek information (59%)
- How providers or services send healthcare information (51%)
- How I manage my overall health (49%)
- How I manage my chronic conditions (48%)
- How my healthcare providers and I communicate (48%)
- How I manage my medication (48%)
- How I measure and share my health information (47%)
- How healthcare providers monitor condition and compliance (46%)

Source: https://www.pwc.com/gx/en/healthcare/mhealth/assets/pwc-emerging-mhealth-full.pdf

Key recommendations for mHealth

1. mHealth systems need to be **interoperable** with eHealth systems
2. Use of **available standards** (i.e. Digital Imaging and Communications in Medicine (DICOM) standard for the exchange of medical images
3. mHealth should take a **participatory** approach
4. mHealth should promote **equity** in health
5. mHealth programmes need to be **sustainable**
6. mHealth need to **focus** on health not on the technology
7. mHealth needs to develop an **evidence** base

Source: Van Heerden et al: http://www.who.int/bulletin/volumes/90/5/11-099788.pdf

… Also:

8. Need to be in line with **evidence-based medicine**

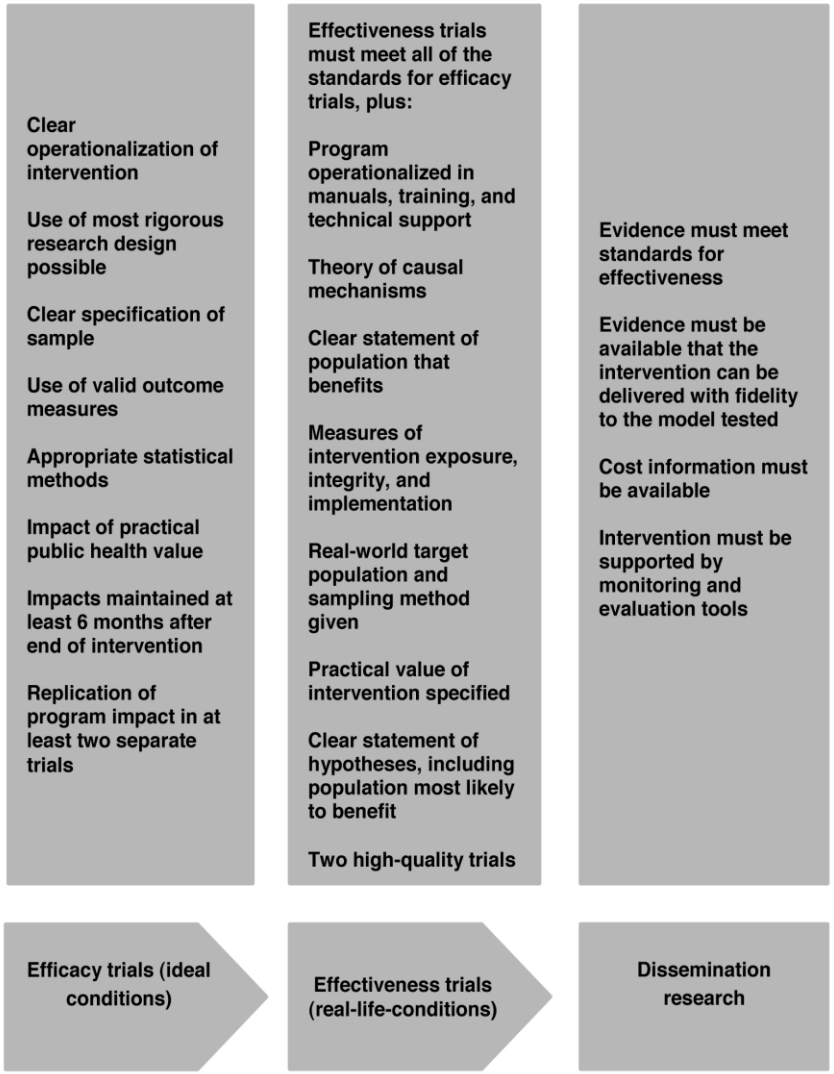
Very few are evaluated (Fiordelli et al, 2013)

Potential of mHealth

- Enormous potential to improve chronic disease management
- Improve service delivery and healthcare
- Improve patient outcomes
- Contribute towards early diagnosis and screening

(Tomlinson et al, 2013, Nglazi et al, 2013, de Jongh et al, 2012)

- There are benefits but high quality and powered clinical trials are needed (Free et al, 2013)
- The European Medicines Agency has signalled similar intentions
- For regulators more evidence on validity and efficacy are needed.



The Evidentiary Standards Model (Society for Prevention Research)

Implementation dependent on the completion of

(a) two high quality efficacy trials,
(b) two high quality effectiveness trials, followed by
(c) dissemination research that has established that the intervention can be delivered with fidelity to the model being tested
(d) information about the intervention's costs.

There are currently no mHealth interventions that meet these standards

Key messages

mHealth can be useful if co-creation strategies are followed to increase uptake (‘a lot of great innovations sit in the shelf’)	mHealth needs to be based on scientific evidence – therefore regulations need to be followed on implementation
High quality research is needed so an emphasis on funding should be prioritised.	mHealth should minimize health inequalities rather than increasing them.

Thank you for your attention.

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