



Joint Action Health Workforce
Planning and Forecasting

POPULATION AGEING – CHALLENGES FOR THE HEALTH SERVICES

A. Kerekovska, K. Dokova

Medical University – Varna, Bulgaria



Funded by
the Health Programme
of the European Union

Main points

- Ageing population of the European region – the current picture and future trends.
- Health status and healthcare needs of the older people in Europe.
- Impact of ageing population on the health services provision and organisation.
- Effects of ageing populations on health professionals competences and skills.

Definitions of an *'elderly'* person

- At the moment, there is no United Nations standard numerical criterion, but the UN agreed on **cutoff as 60+ years** to refer to an *'elderly'* or *'older'* person.
- Most developed world countries (incl. the EU) have accepted the **chronological age of 65 years** as a definition of an *'elderly'* or *'older'* person.
- While this definition is somewhat arbitrary, it is associated with the age at which one can begin to receive pension benefits.

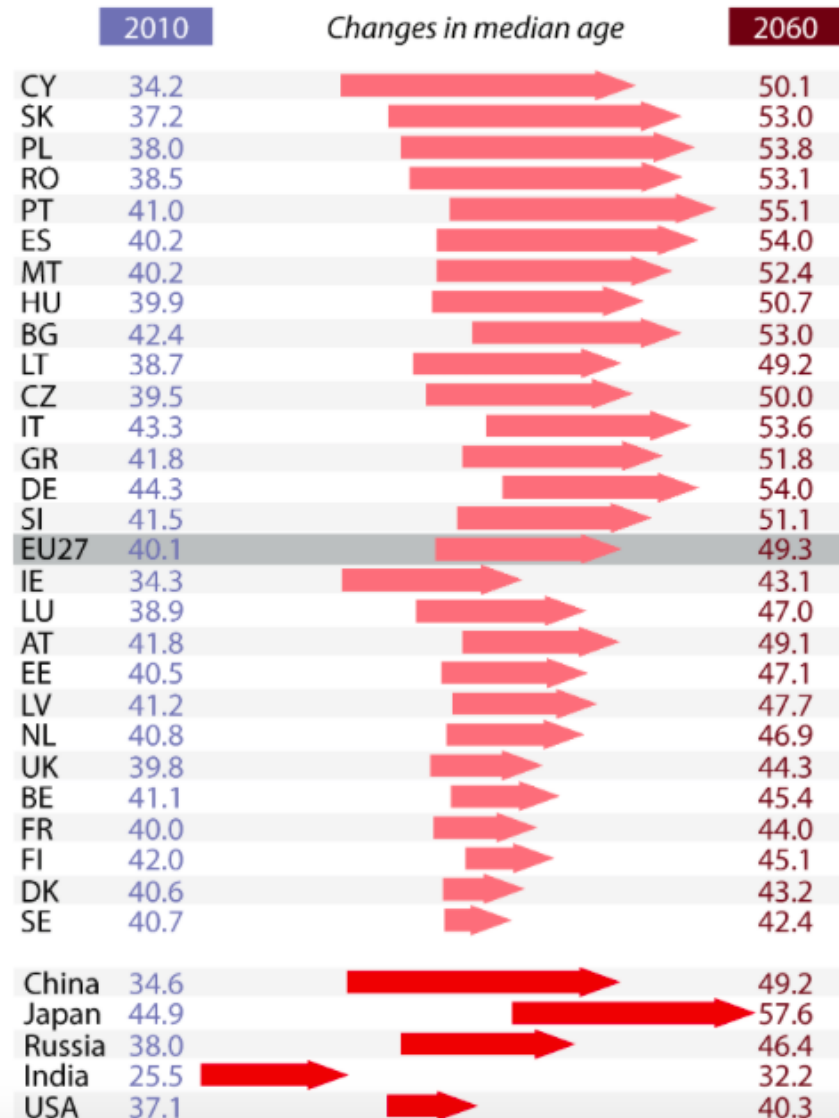
Measures of population ageing

- **Median age** – the age that divides a population into two groups of the same size, such that half the total population is younger than this age, and the other half – older;
- **Proportion of aged 65+**
- **Population age pyramid**
- **Old-age dependency ratio** - the number of persons aged **65 years and over** as a percentage of the number of persons aged **15 - 64 years**.

Europe is the world oldest continent

- **Median age** for the EU for **2010** is **40 years**
- **Median age** for the EU for **2060** is projected to become **49 years**

Median age (years)

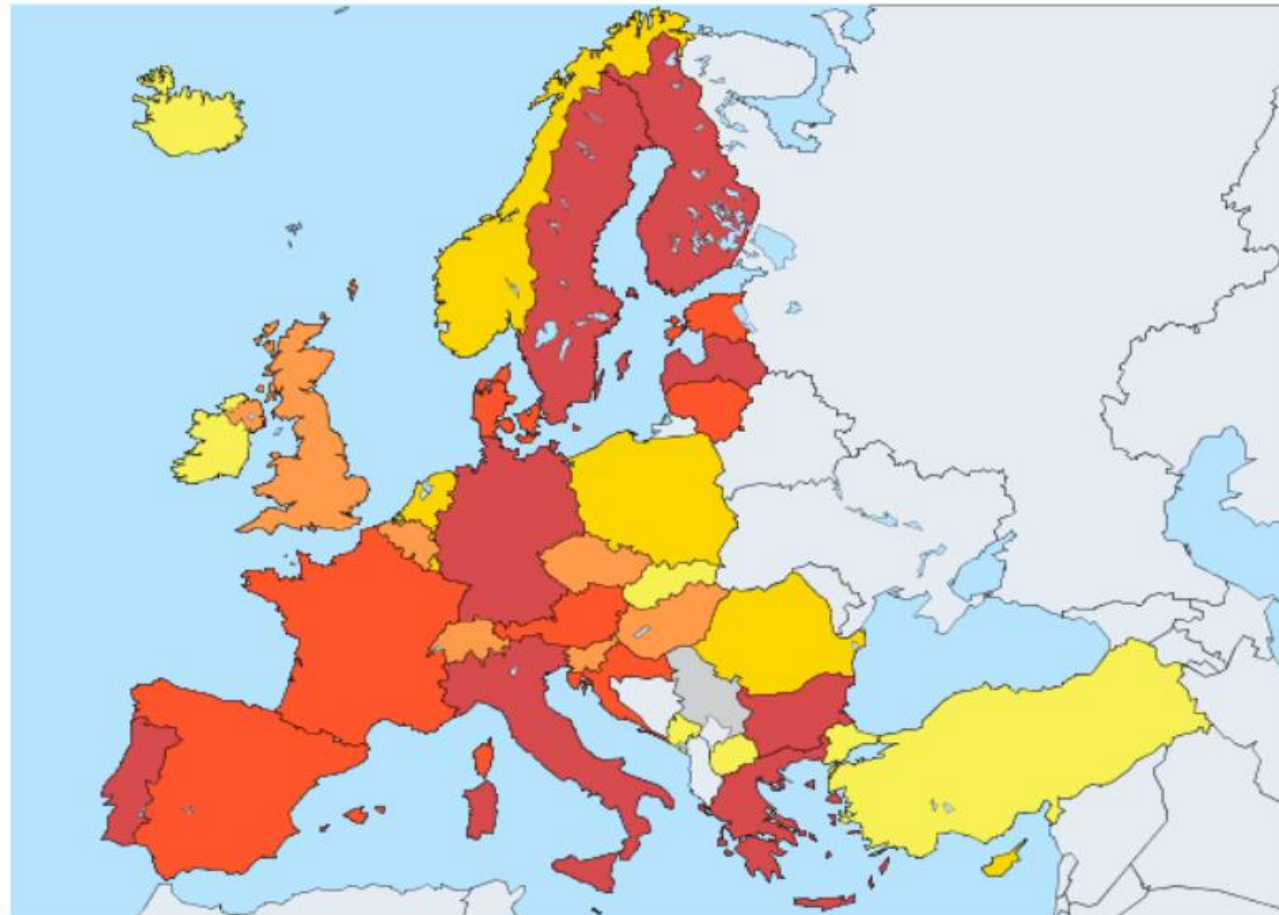


EU ageing population - % of 65+

EU28 – 18.5%

Most aged EU countries:

- Italy - 21.4%
- Finland – 20.1%
- Bulgaria - 19.6%



Legend

7.7 - 13.5

13.5 - 17.3

17.3 - 17.9

17.9 - 18.4

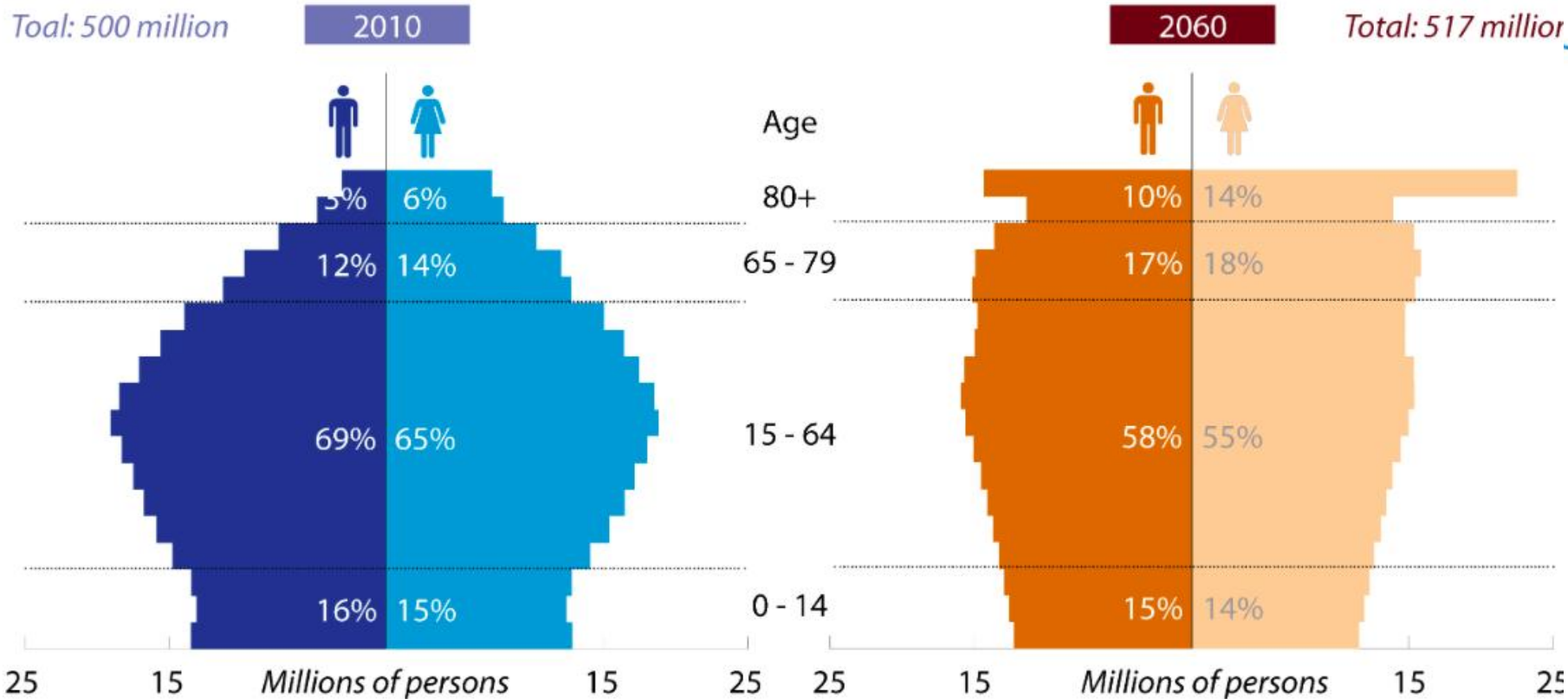
18.4 - 21.4

Not available

Minimum value:7.7 Maximum value:21.4

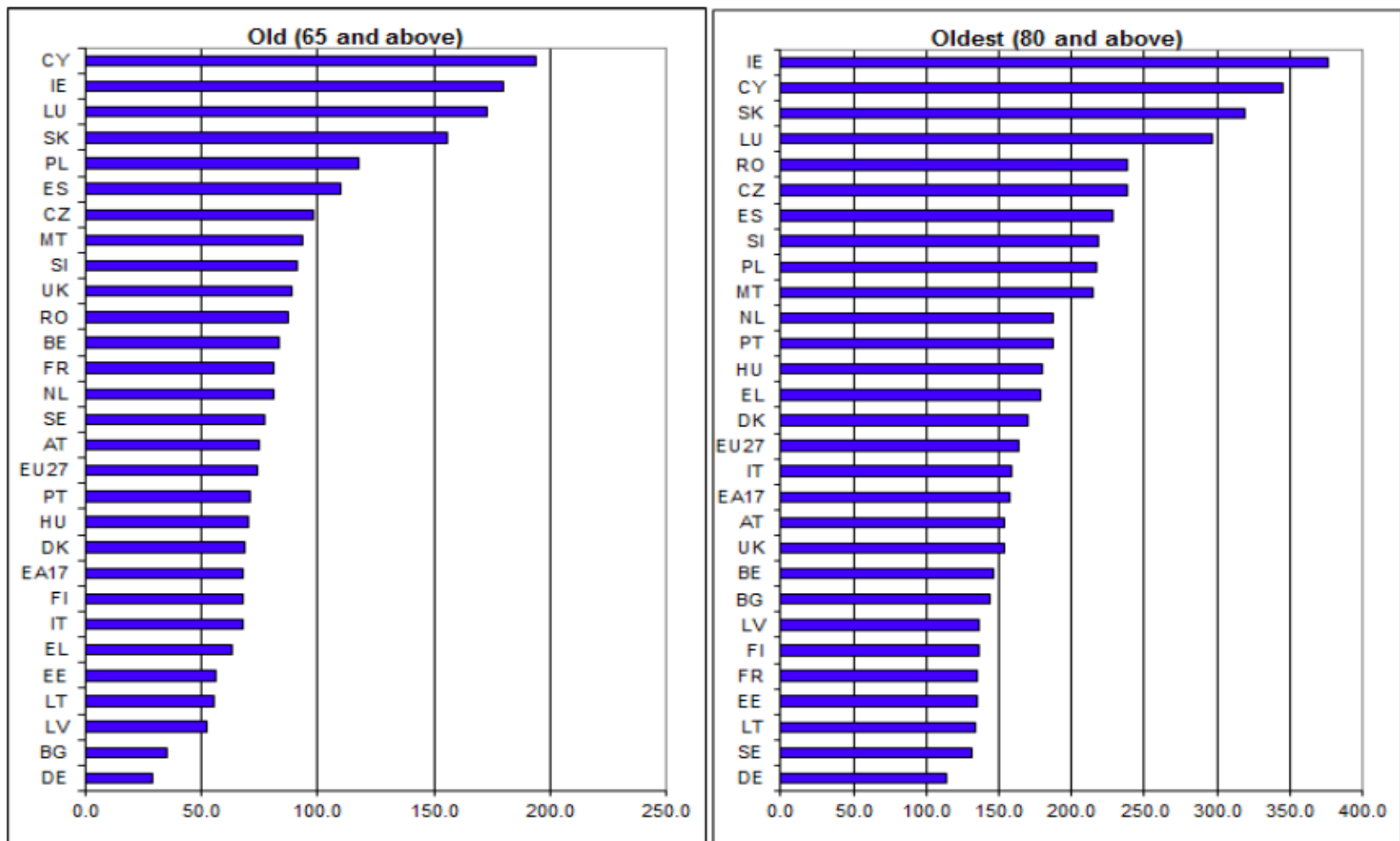
Population Pyramid, EU

2010 and projections for 2060



Source: <https://libraryeuroparl.files.wordpress.com/2013/12/fig-3.png>

Projected % increase of older population over the period 2010 - 2060 in EU countries

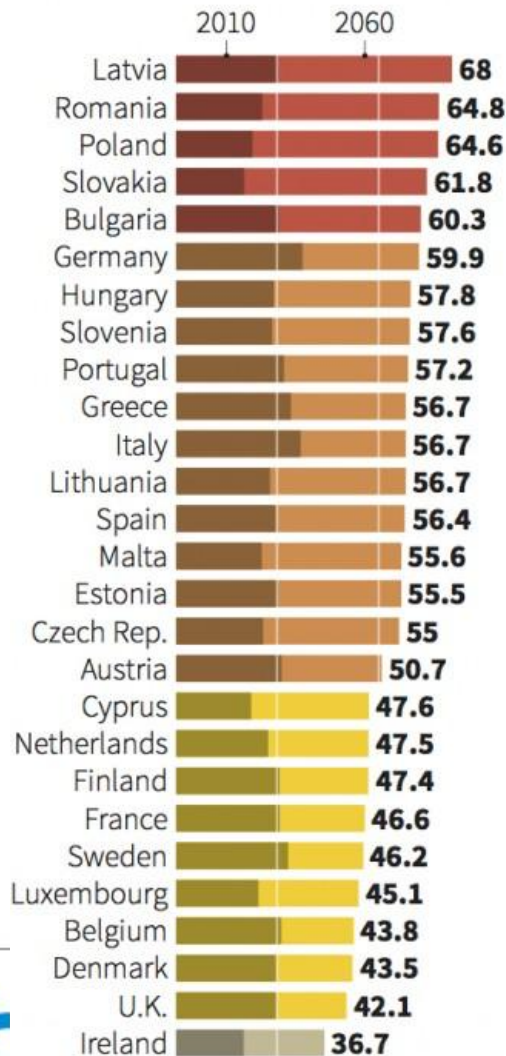


Source: <https://libraryeuroparl.files.wordpress.com/2013/12/fig-3.png>

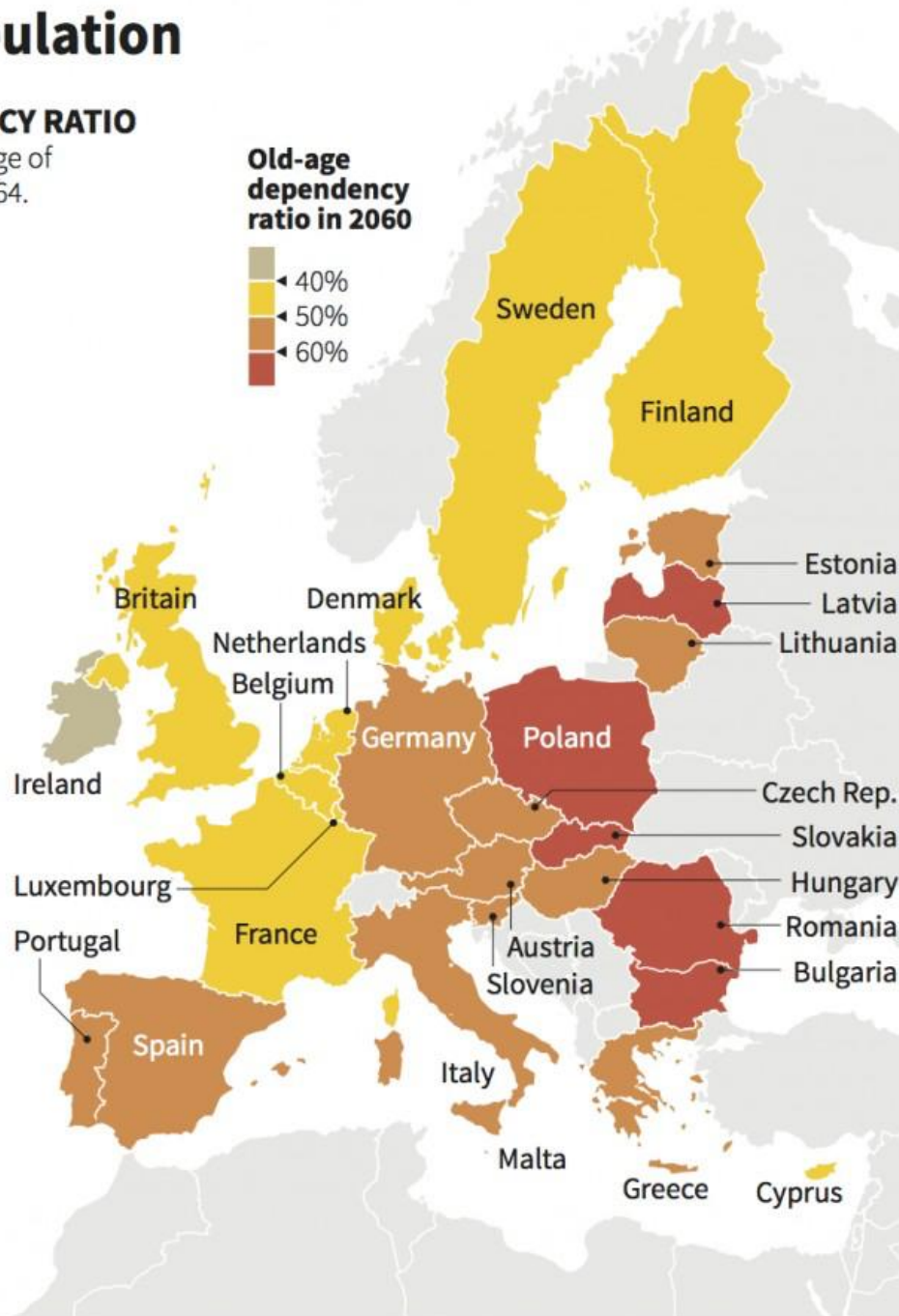
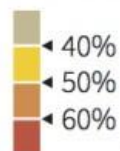
Europe's ageing population

PROJECTED OLD-AGE DEPENDENCY RATIO

Number of persons aged 65 as a percentage of number of persons aged between 15 and 64.



Old-age dependency ratio in 2060

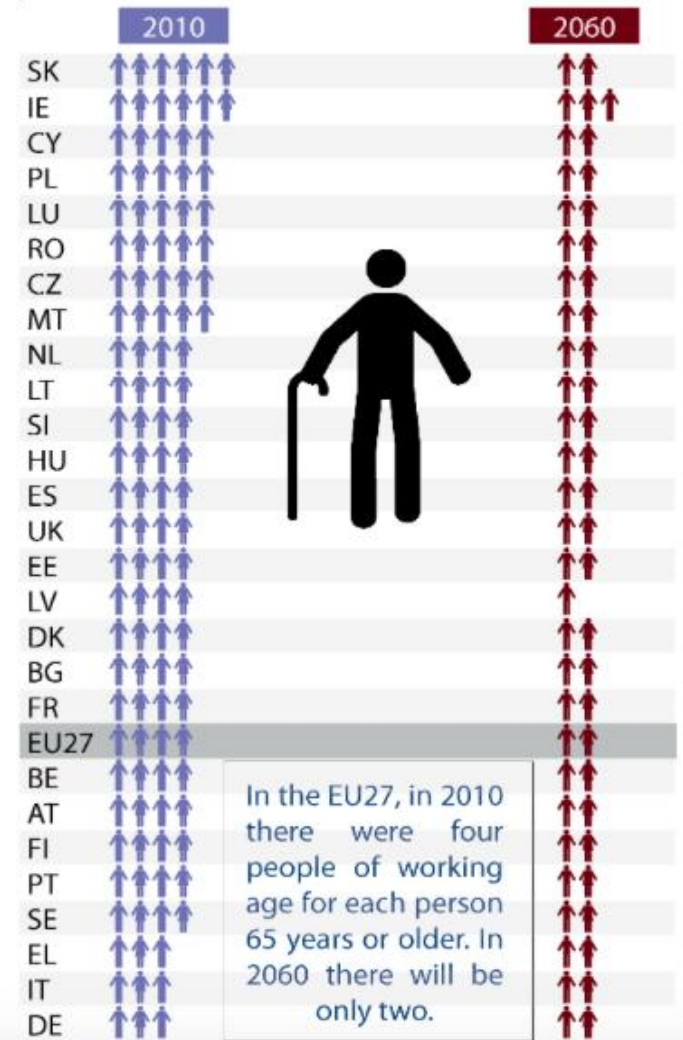


Old-age dependency ratio in EU 2010 and projections for 2060

- **4 active persons** in working age for each person 65+ in **2010**;
- **2 active persons** in working age for each person 65+ in **2060**.

Old-age dependency ratio (65+/(15-64))

Number of people of working age for each person 65 years or older

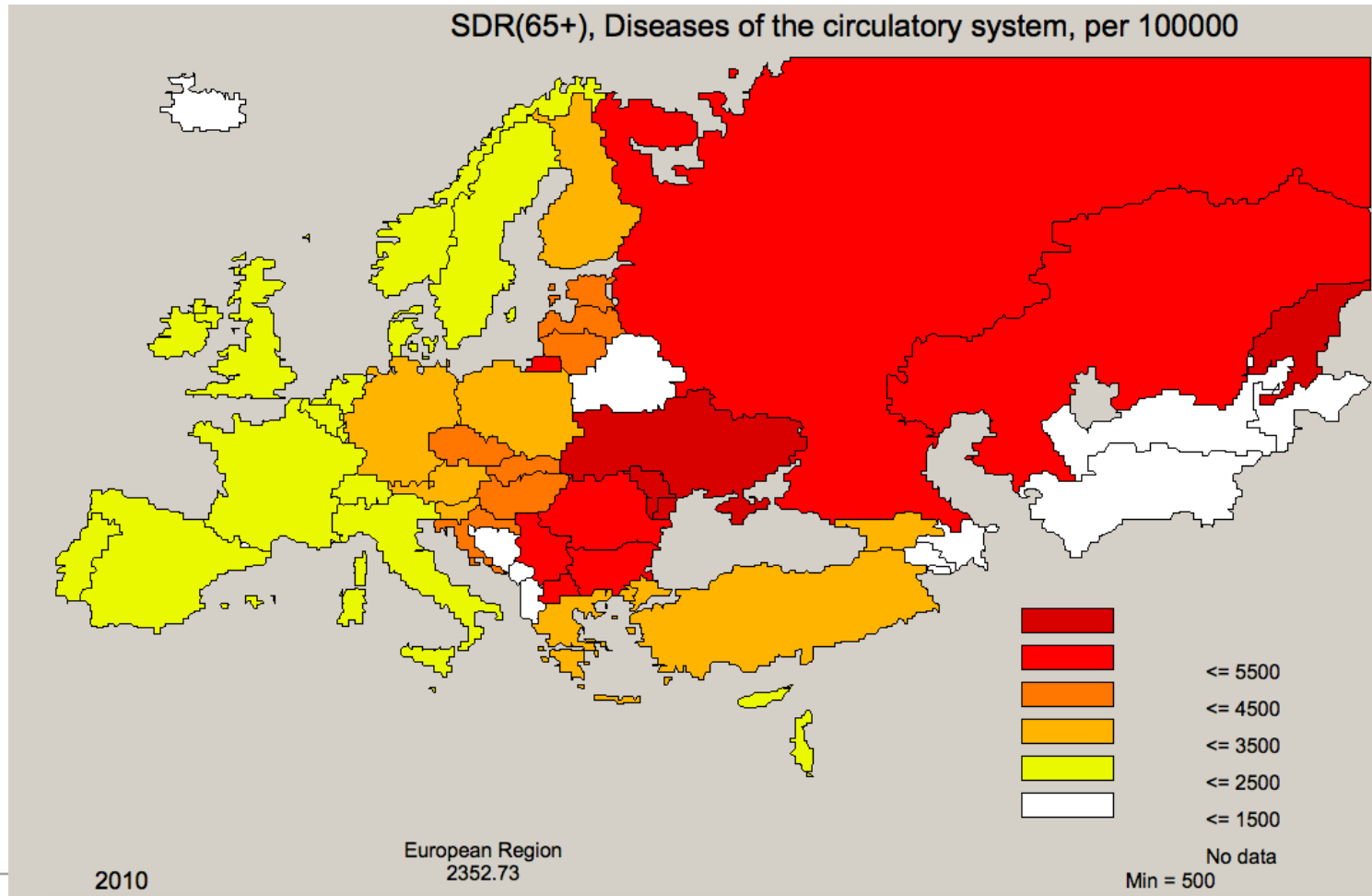


Health of the ageing population

- Burden of **chronic diseases**
- **Disability** prevalence and structure of **activity limitations** by degree
- **Life expectancy** and **Healthy Life Years** at the age of 65+

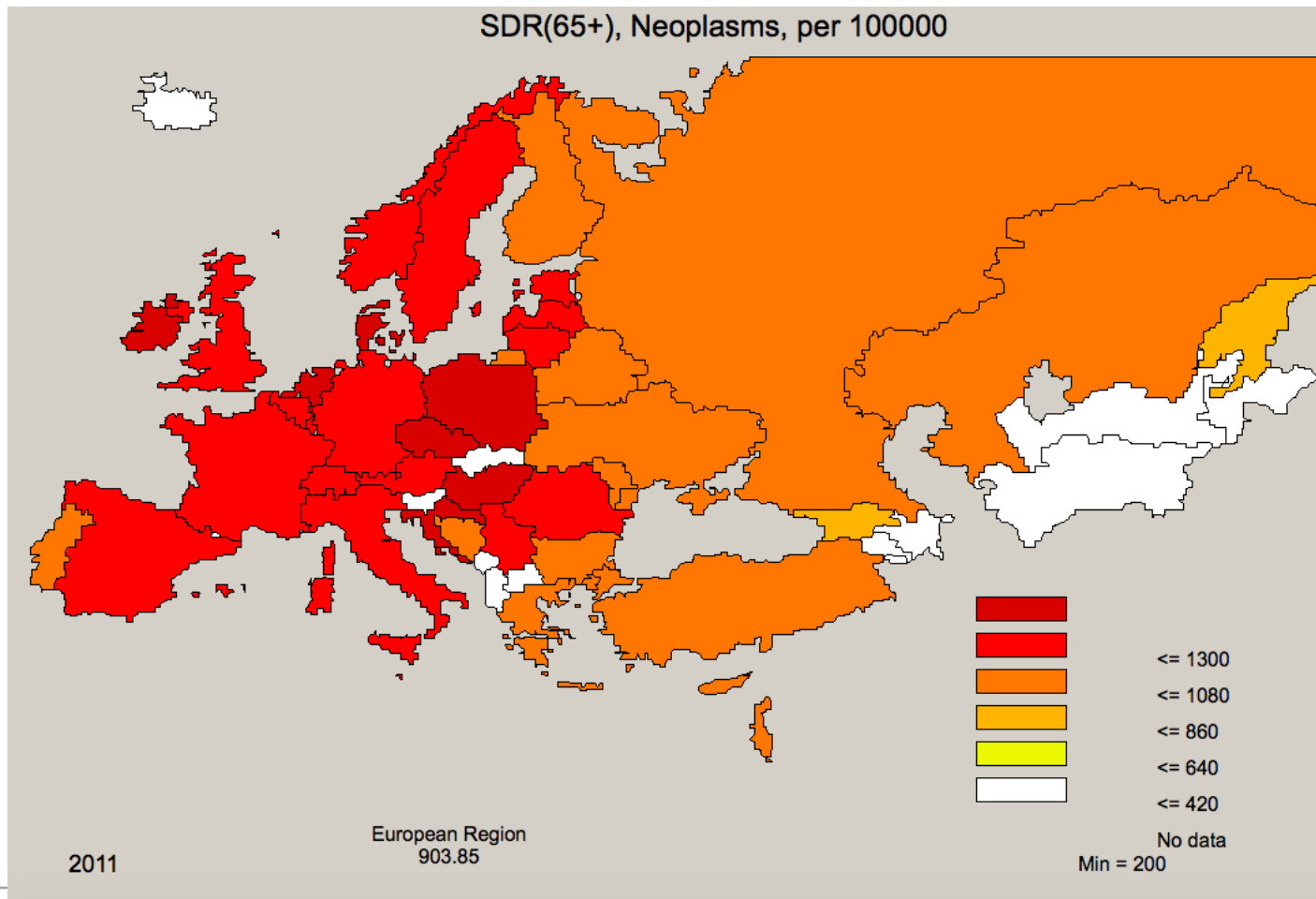
Burden of chronic diseases 65+

Cardiovascular diseases



Burden of chronic diseases 65+

Neoplasms



Burden of chronic diseases 65+

Mental disorders

- There are currently **5.5 million** people with **dementia** in Europe;
- **Alzheimer disease** affects **4% of people** over the age of 65 and is set to **double within 50 years**.
- **Alzheimer disease** prevalence rises from 2% amongst 65-69 years old to **22%** amongst **85-89 years old**.
- The number of people with **cognitive impairment** is expected to **rise by over 60%** over the **next 30 years**.

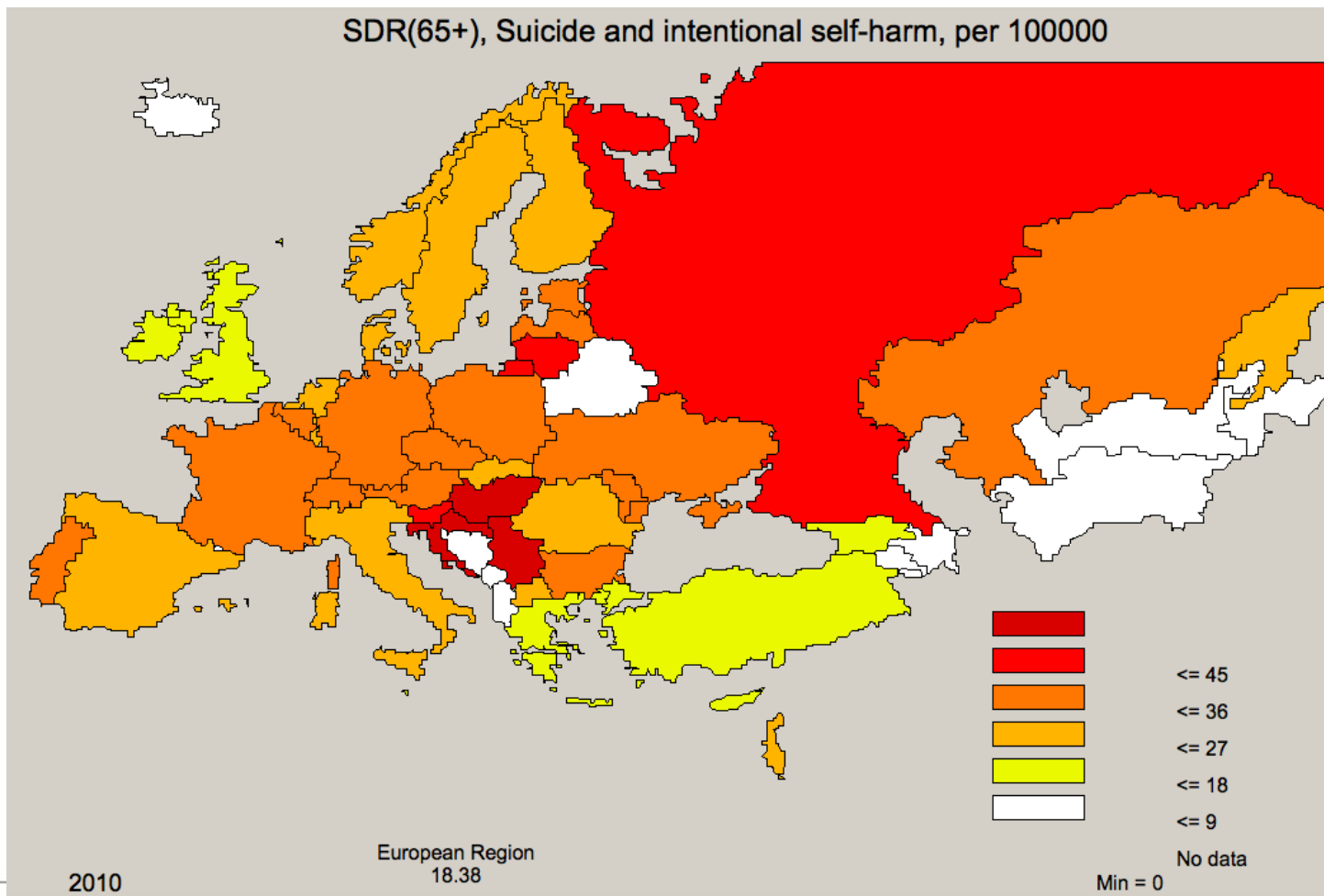
Burden of chronic diseases 65+

Mental disorders

- **Depression** in later life affects **10-15%** of persons over 65;
- Older persons with depression are 2-3 times more likely to have **2 or more chronic illnesses**; 2-6 times more likely to have one or more limitations in activities of daily living.
- **Depression** is also the major **cause of suicide** in European older people.
- Rates of **suicide** and **self harm** are 26% higher in Europeans over 65 than amongst the 25-64 age groups.

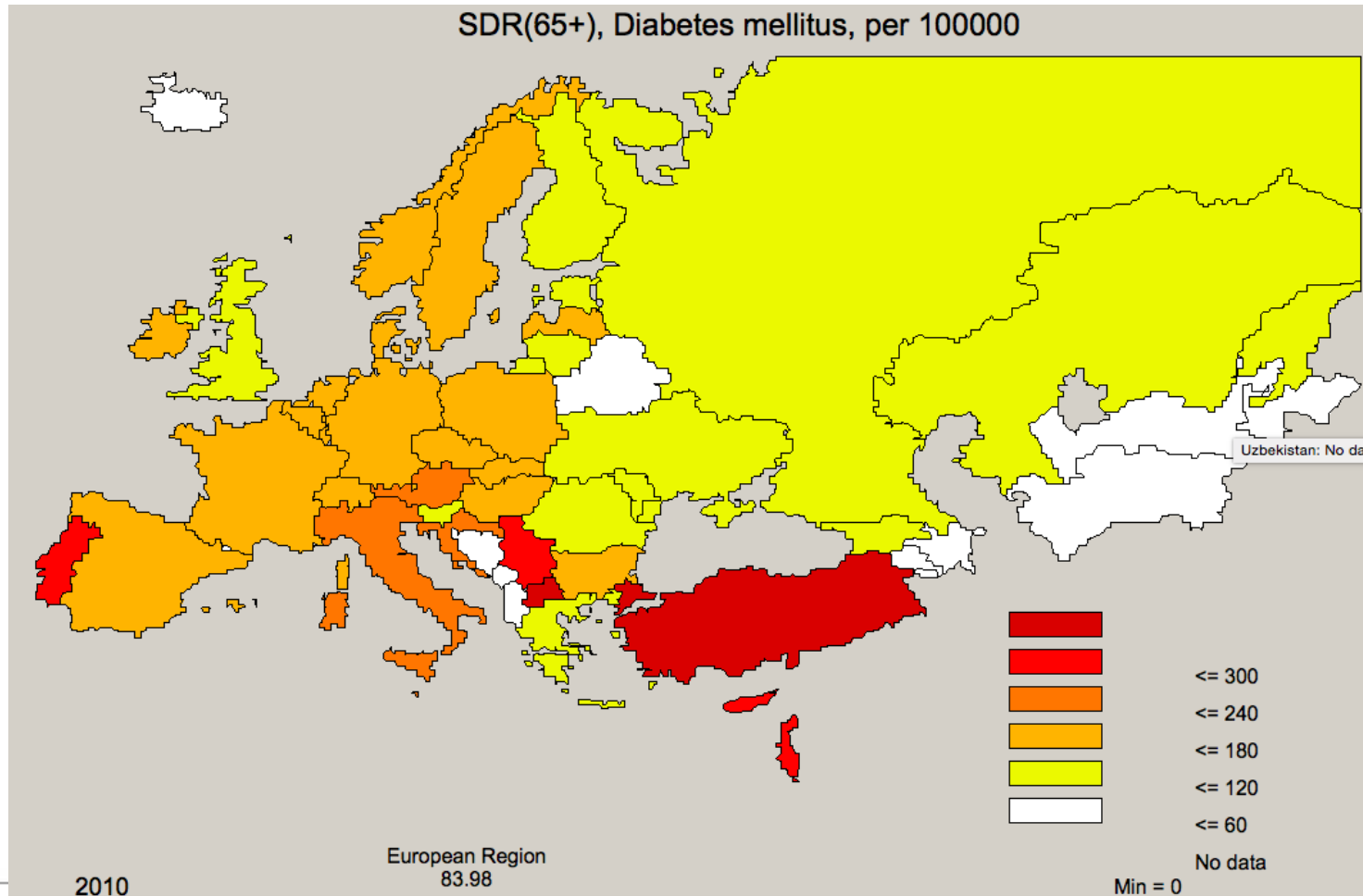
Burden of chronic diseases 65+

Suicide and intentional self-harm



Burden of chronic diseases 65+

Diabetes



Burden of chronic diseases 65+

Falls and fractures

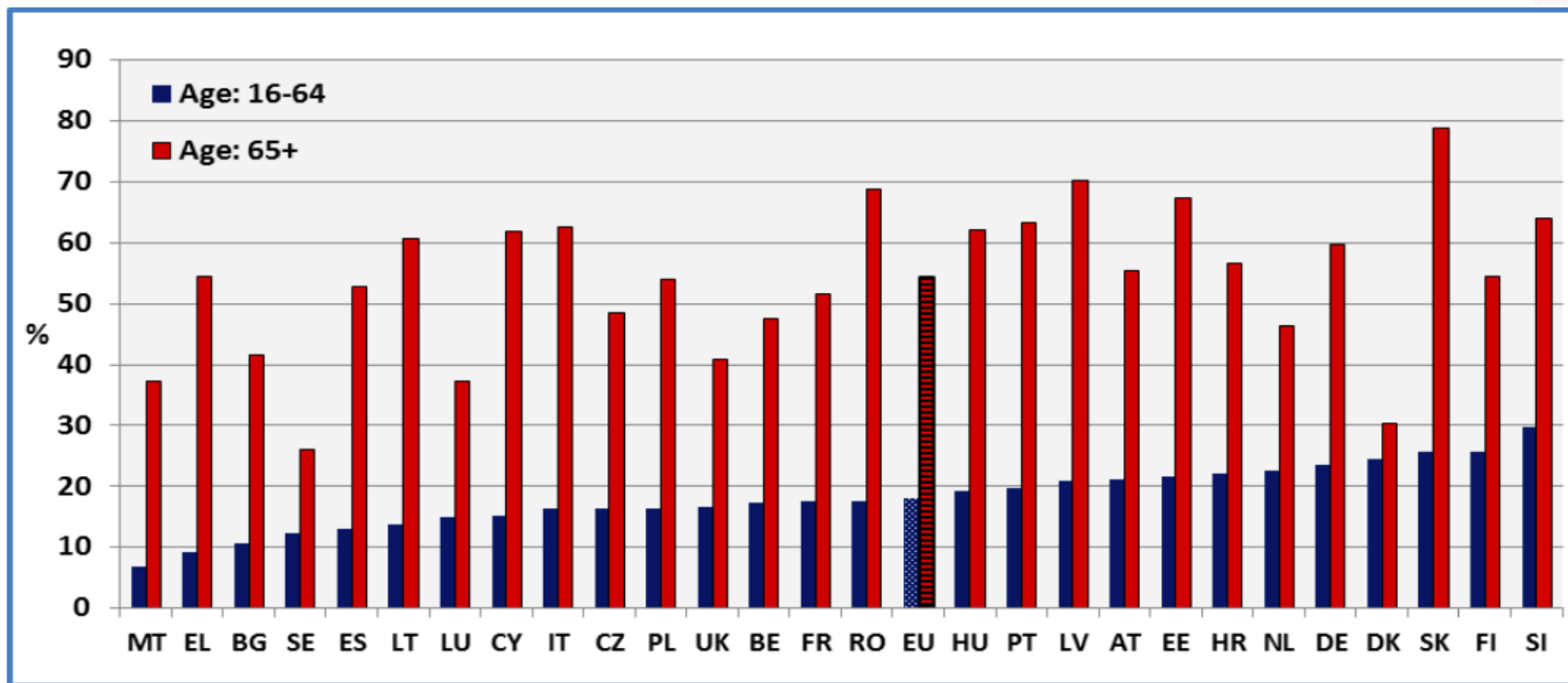
- **Falls** are a major health problem for older adults.
- **30%** of people older than age 65, and **50%** of people older than age 85, who live in the community, will **fall at least once each year**.
- **Falls** are even more common in long-term care facilities, occurring annually in more than **50%** of people older than age 65.
- Significant **injuries** occur in **4–15%** of falls, and **23-40%** of **injury-related deaths** in older adults are **due to falls**.

Ageing associated with **multimorbidity**

- As people age, they are more likely to experience **multiple chronic conditions at the same time**, and as a result the risk of declines in capacity.
- **65%** of 65-84 years old have **2 or more diseases** and
- **82%** of > 85 years old have **3 or more diseases**
- **Multimorbidity results in:**
 - Interactions among conditions;
 - Interaction between one condition and the treatment for another
 - Interaction between medications prescribed for different conditions
- As a result, the impact of **multimorbidity** on **functioning, quality of life** and **risk of mortality** is significantly greater than the sum of the individual effects that might be expected from these conditions.
- Predictably, **multimorbidity** is also associated with higher rates of health-care utilization and higher costs.

Prevalence of disability, EU27, 2011

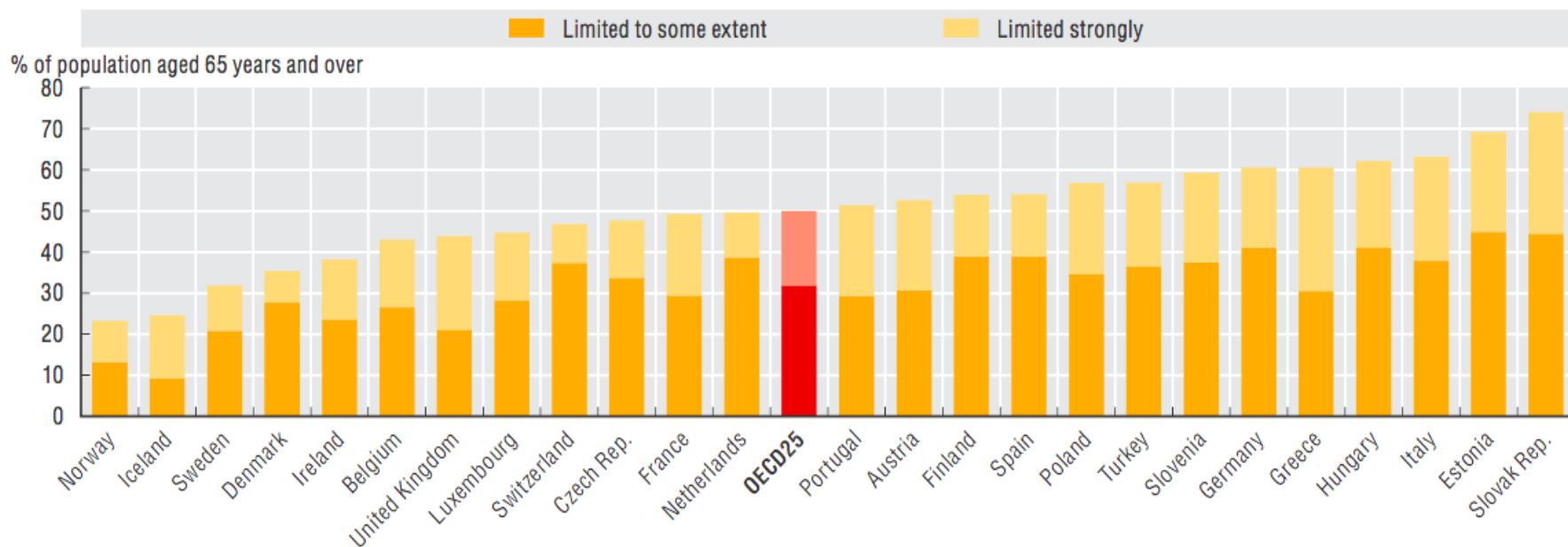
Ranging from less than 30% to almost 80% in 65+ across EU




Data source: EU-SILC 2011

Limitations of daily activity by degree in 65+ EU countries, 2013

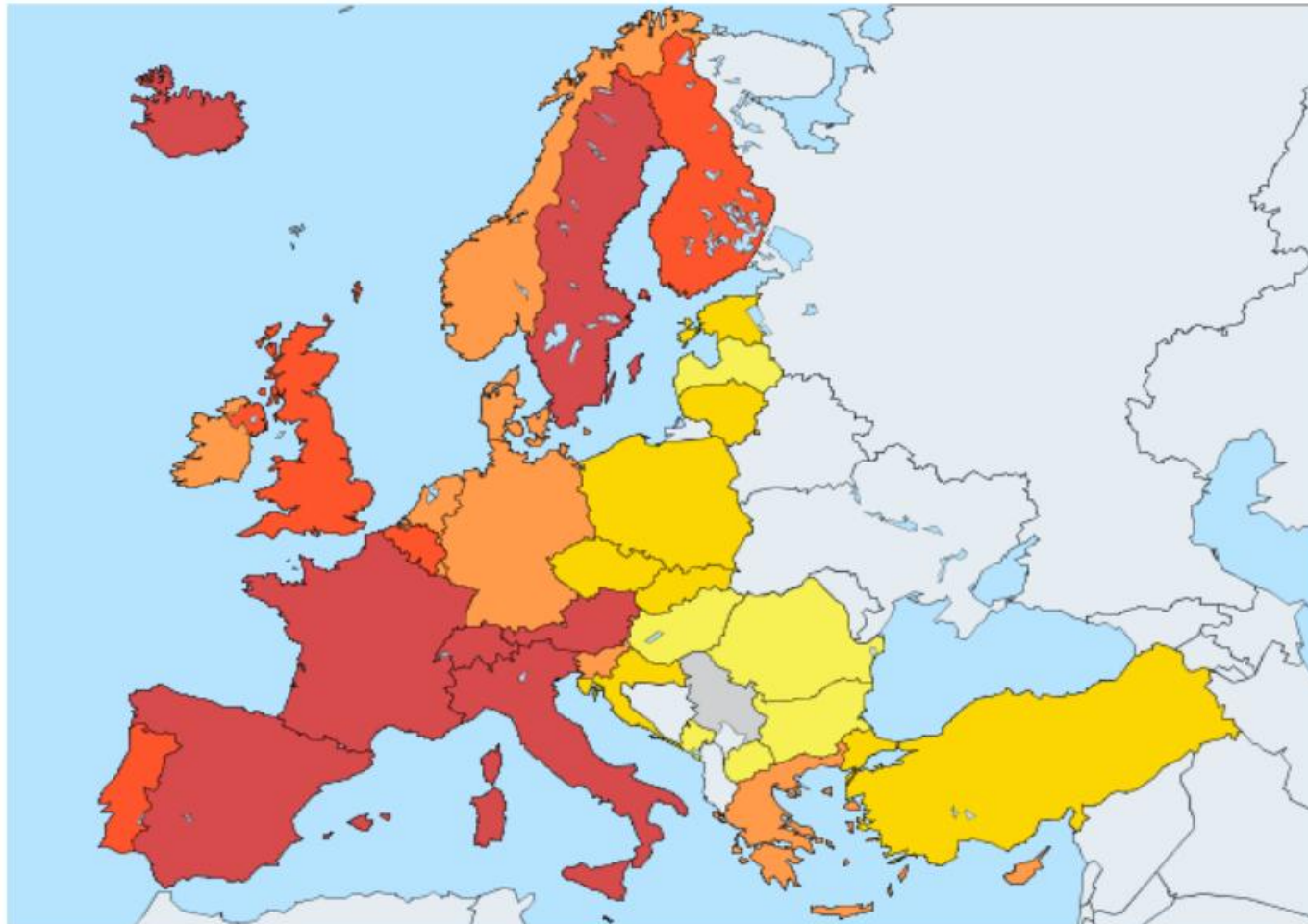
- **Great regional variation** – from 23% in Norway – to 73% in Slovak Rep.
- **Strongly limited** (dependent) – **approx. 30%** of all activity limitation



Source: Eurostat Database 2015.

StatLink  <http://dx.doi.org/10.1787/888933281398>

Life expectancy at 65+ in EU28



Legend

15.0 - 16.6

16.6 - 18.0

18.0 - 19.8

19.8 - 19.9

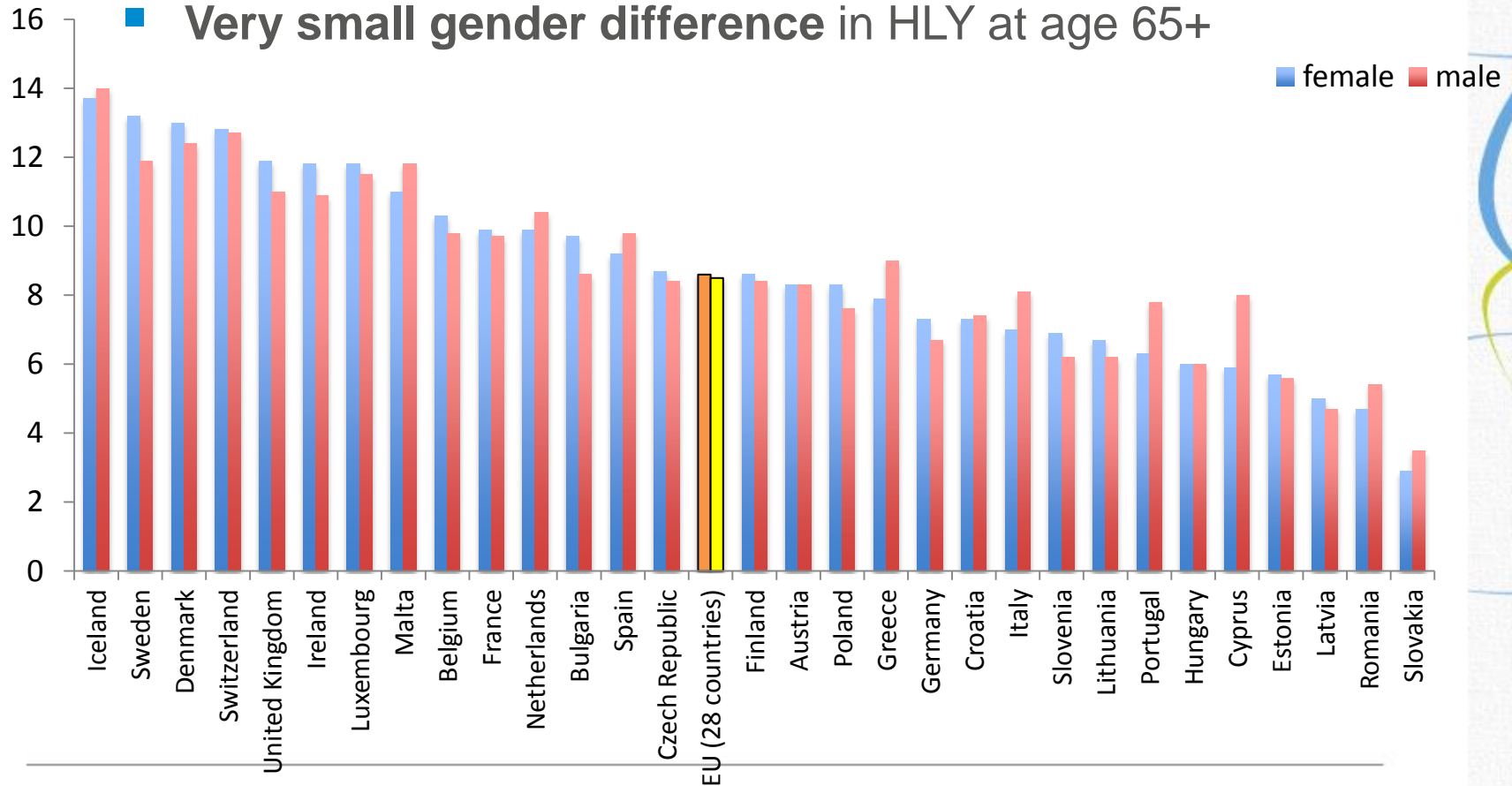
19.9 - 21.7

Not available

Minimum value:15.0 Maximum value:21.7

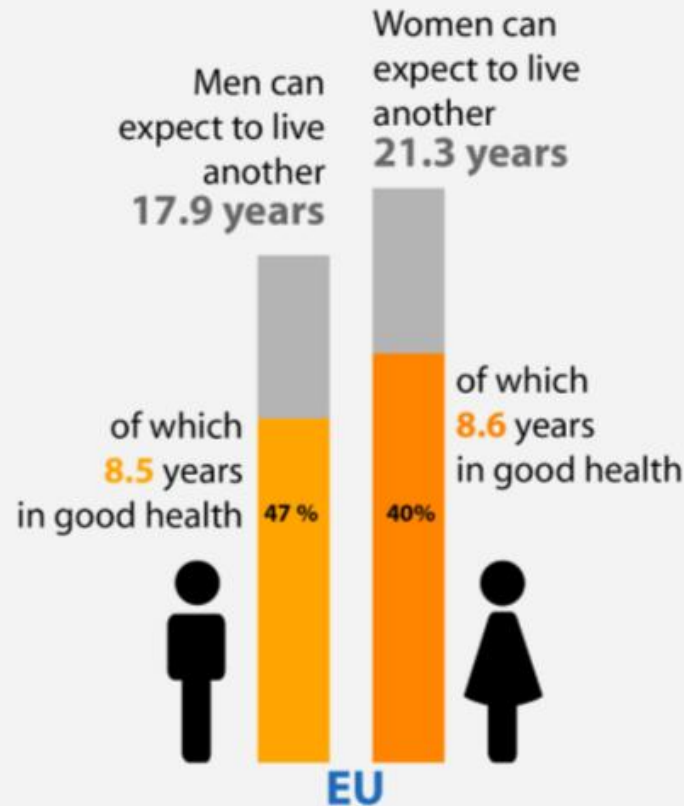
Healthy life years at age 65+ in EU28, by gender

- **Great regional variation in HLY at 65+ – between less than 4 years in Slovakia and more than 14 years in Iceland;**
- **Very small gender difference in HLY at age 65+**



Healthy life years at age 65, EU countries

Healthy life years at the age of 65



Most healthy life years at 65:

FRANCE	19.3	FRANCE	23.6
SPAIN	19.2	SPAIN	23.4
LUXEMBOURG	19.1	ITALY	22.6

Impact of ageing on health services

- **Increase in demand for elderly-centered health services**
 - ✓ multiprofile - taking into account multiple and complex disorders
 - ✓ long-term
 - ✓ non-institutional based – home care, day care, social care
- **Increase in expectations from health services**
 - ✓ new generations of older people might be wealthier, more informed and educated and have higher expectations in terms of quality of life and use of health services.
- **Ageing workforce**

Effect of ageing on health workforce

- Recognizing that **ageing affects the health workforce** is important !!!
- In many EU member states **nearly 50% of nurses** are now **older than 45 years**;
- **40% of nurses** will **leave health employment** in the next decade due to ageing;
- Only within 5 years, between 1995 and 2000, in EU
 - ✓ **physicians older than 45** - increased by more than **50%**
 - ✓ the proportion of **physicians younger than 45** - fell by **20%**

How can health systems become more age friendly?

By development and provision of older-person-centered and integrated care:

- **Different organisation and provision of services**
 - ✓ integration vertically - across different levels of healthcare
 - ✓ integration horizontally – across different types of care - health, social and community care
- **Improved public health measures** – reducing the risk of disease and promoting maintenance of function;
- **Shift from hospital-based care to adequate combination of settings for long-term care**, including both formal and informal care - community, home-based and better self-care.

By adaptation to the ageing health workforce

- retain and reinvest in the **ageing workforce**
- educate, recruit and retain **young professionals**

Other important challenges for the health services

- Rapidly developing **innovative technologies** (telemedicine, ICT) - to be directed towards the needs of the older population;
- The “**modern**” **health services consumer** – with better access to information and higher expectations – needs new type of communication with health professionals;
- The **free market** and **mobility of health professionals** – emphasize the importance of unification of educational standards and competences in response to patients expectations’ across Europe.

Challenges of ageing populations on health professionals **specific** competences and skills

- Improving **specific** knowledge and skills focused on management of problems common in older people:
 - ✓ Gerontologic and geriatric care;
 - ✓ Functioning assessment - including vision, hearing, nutritional status;
 - ✓ Depression, dementia, cognition;
 - ✓ Osteoporosis and arthritis;
 - ✓ Multimorbidity and frailty;
 - ✓ Neglect or abuse identification;
 - ✓ Healthy ageing assessments

Challenges of ageing populations on health professionals **general** competences and skills

- Improving more **general** competencies and skills in nonmedical processes:
 - ✓ Public health – prevention and screening
 - ✓ Shared decision-making
 - ✓ Implementing teamwork and team-based care
 - ✓ Information technology use
 - ✓ Communication – overcoming ageist attitudes, widely spread in healthcare settings.

- Improving **health professionals competences and skills**, both **specific** for older people problems and **general**, is a key tool for:
 - ✓ implementing **older-person-centered** and **integrated care**, and
 - ✓ supporting **informal, home-based care** and **self care**.
- The **capacity of educational institutions** needs to be developed to make it possible.

Key messages

- Ageing of the European population is an obvious reality, it is our inevitable future.
- Ageing is an achievement of the positive developments within all European societies and their health care systems.
- Older people have their specific health problems posing new challenges for the health services and health professionals.
- Options are though available to better meet the needs of ageing populations - through focus on health services content and organisation and health workforce education.
- The key words are **age-centred** and **integrated**.

*Ageing – to be seen not as a threat and a burden,
but as a welcome opportunity and dividend*



The German athlete Hildegund Buerkl, aged 80, as she heads for gold medal position and a new European and world record in the women's 100m dash, 80-84 year old age category. She was competing at the European Veterans Athletics Championships in Izmir, Turkey, in August 2014 and crossed the finishing line in 18.16 seconds. By Alex Rotas

The use of old people's experience and wisdom will bring them happiness and benefit to society



An old man playing with his great grandson in a small village in India (by Hardik Gaurav)

Source: <http://www.bbc.com/news/in-pictures-35459172>

Key sources

1. BBC (2016) Ageing the bigger picture. <http://www.bbc.com/news/in-pictures-35459172>.
2. B.Lipszyc, E. Sail, A. Xavier (2012) Long-term care: need, use and expenditure in the EU-27, ec.europa.eu/economy_finance/publications
3. B.Rechel et al. (2013) Ageing in the European Union Lancet 2013; 381: 1312–22 [http://dx.doi.org/10.1016/S0140-6736\(12\)62087-X](http://dx.doi.org/10.1016/S0140-6736(12)62087-X).
4. B. Rechel et al. (2009) How can health systems respond to population ageing? Policy Brief 10. http://www.euro.who.int/__data/assets/pdf_file/0004/64966/E92560.pdf
5. European Observatory on Health Systems and Policies Series, Human resources for health in Europe, Eds. Carl-Ardy Dubois, Martin McKee and Ellen Nolte
6. Eurostat
(2016)<http://ec.europa.eu/eurostat/tgm/mapToolClosed.do?tab=map&init=1&plugin=1&language=en&pcode=tps00028&toolbox=legend>
7. Eurostat (2016)
<http://ec.europa.eu/eurostat/tgm/mapToolClosed.do?tab=map&init=1&plugin=1&language=en&pcode=tps00026&toolbox=legend>
8. M. Harahan, R. Stone, (2009) Defining Core Competencies for the Professional Long-Term Care Workforce: A Status Report and Next Steps,
9. Institute for the Future of Aging Services, AAHSA
10. OECD (2015), “Self-reported health and disability at age 65”, in Health at a Glance 2015: OECD Indicators, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/health_glance-2015-73-en
11. OECD (2012), “Life expectancy and healthy life expectancy at age 65”, in Health at a Glance: Europe 2012, OECD Publishing. <http://dx.doi.org/10.1787/9789264183896-5-en>
12. P. Lloyd-Sherlock et. al. (2012) Population ageing and health, DOI:10.1016/ S0140- 6736(12)60519-4.
13. S. Wait, E. Harding (2006) The State of Ageing and Health in Europe, International Longevity Centre-UK and The Merck Company Foundation. www.ilcuk.org.uk/files/pdf_pdf_4.pdf
14. S. Grammenos (2013) European comparative data on Europe 2020 & People with disabilities, Centre for European Social and Economic Policy (CESEP ASBL) Academic Network of European Disability Experts (ANED) <http://digitalcommons.ilr.cornell.edu/gladnetcollect>
15. WHO (2015) World report on Ageing And Health.