

Gaps in Risk Factor Management in Europe

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Outline

- **Review of high risk patients not meeting the recommended guidelines for the risk factors**
 - Hypertension
 - Dyslipidaemia
 - Smoking
 - Physical activity
 - Obesity

ESC Prevention of Cardiovascular Disease programme Report on unmet prevention needs

Review of published data meeting the inclusion criteria:

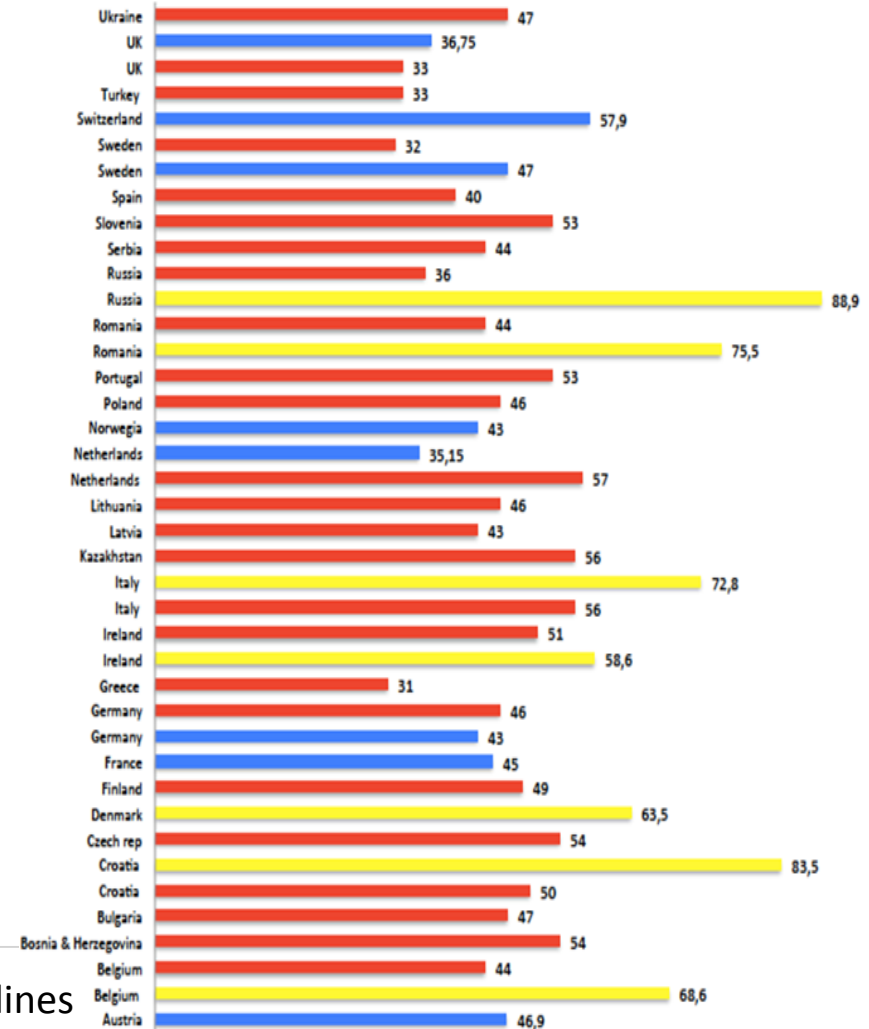
- High risk CHD patients from any country in Europe
- Papers published from 2010, reporting % of population with specific risk factor

Overview of sources

- Two core datasets included :
 - EURASPIRE V Hospital Arm Main Results **(red)**
 - SURF *Eur J Prev Cardiol*, 23, 1202-10 **(orange)**
 - Data from an additional 26 published papers **(green & purple)**
- Data from up to 31 countries

Hypertension

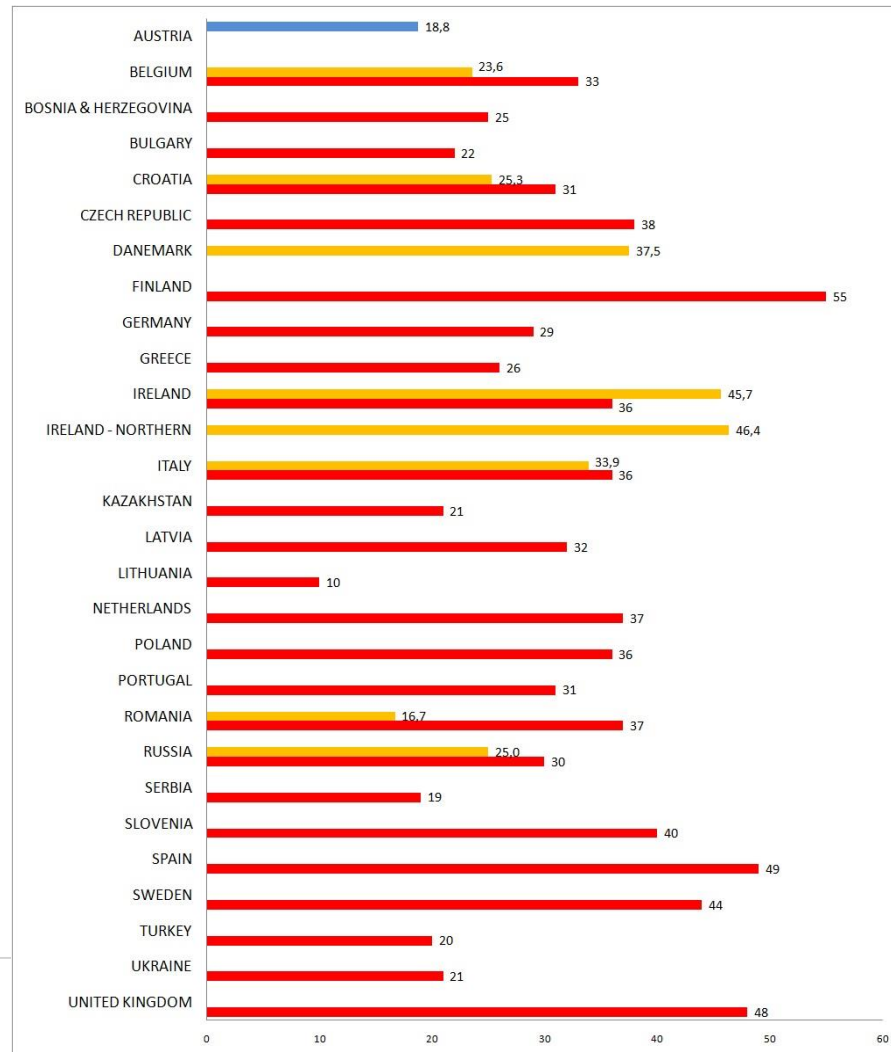
- **Recommendations from ESC 2016 prevention guidelines**
 - >140/90 and <140/80 diabetics
- **Hypertension prevalence**
 - Overall : 50%
 - Minimum: 31% Greece
 - Maximum : 89% Russia
- **10 mmHg reduction in SBP or a 5 mmHg reduction in DBP is associated with a reduction of***
 - 20% major CV events
 - 10 - 15% all-cause mortality
 - 35% stroke
 - 40% heart failure
- **50% treated hypertension patients still below the target**



*Williams et al. 2018 ESC/ESH Hypertension Guidelines

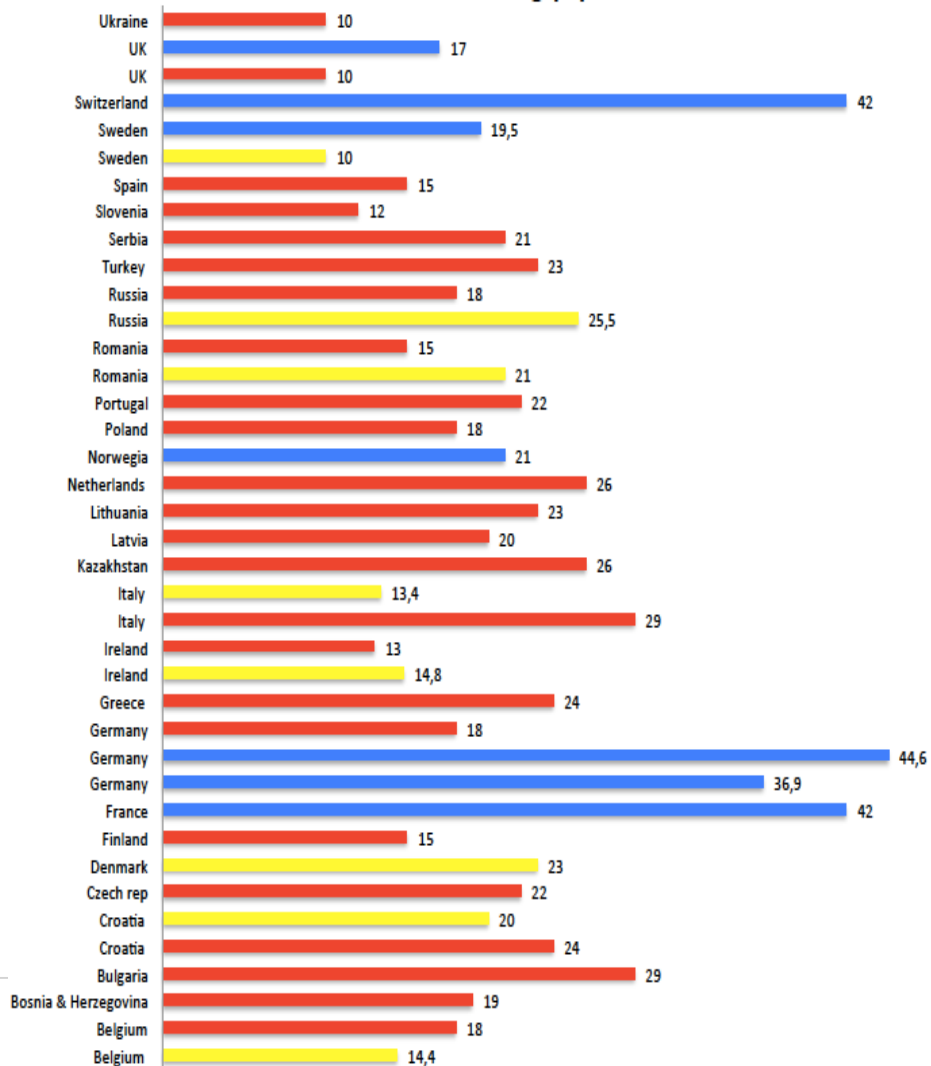
Dyslipidaemia

- **Figure: achieving patients cholesterol LDL level :<1.8 mmol/l or <70 mg/dL for high-risk CVD patients or lipid lowering drugs**
- **Dyslipidaemia prevalence**
 - 67% SURF: despite 87% statin use & 10% other lipid lowering drugs
 - 68% EUROASPIRE V (hospital arm): despite 84% being on lipid lowering drugs).
 - Minimum: 45% Finland
 - Maximum : 90% Lithuania
- **Weight reduction of 1Kg leads to an increase of .01 mmol/L HDL-C ***
- **Physical activity (25-30Km week brisk walking or equivalent) increases HDL-C by 0.08-0.15 mmol/L**
- **Smoking cessation increases HDL-C**



Smoking

- The risk charts indicate that smoking cessation generally half the cardiac risk
- Smoking increases the risk of DM, CVD and premature death
- Smoking prevalence
 - Overall : 21%
 - Minimum: 10% Sweden, UK, Ukraine
 - Maximum : 45% Germany



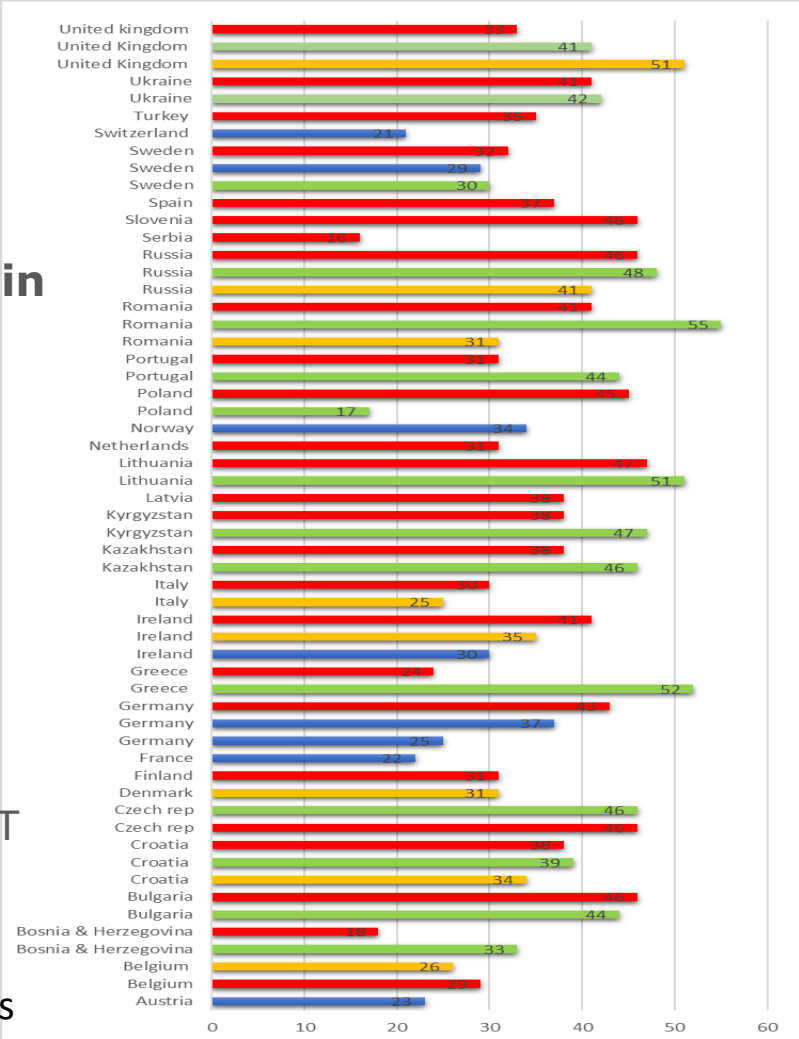
Obesity

- **Recommendations : Maintain normal or reduce weight to normal range**
- **Increasing body weight causes increases in**
 - BP, dyslipidaemia, insulin resistance, Type 2DM, systematic inflammation
 - cardiac events, CVD & all mortality
- **BMI >30 kg/m²**
 - Overall: 34%
 - Minimum: 16% Serbia
 - Maximum: 51% United Kingdom
- **Effect of weight loss**
 - 5.1Kg decreases SBP by 4.4 & DBP 3.6*
 - 10Kg decreases LDL by 0.2 mmol/Kg**
 - Moderate weight loss delays conversion of IGT to TYPE 2DM***

*Hall et al. 2015 *Cir Res* :116,991-1006

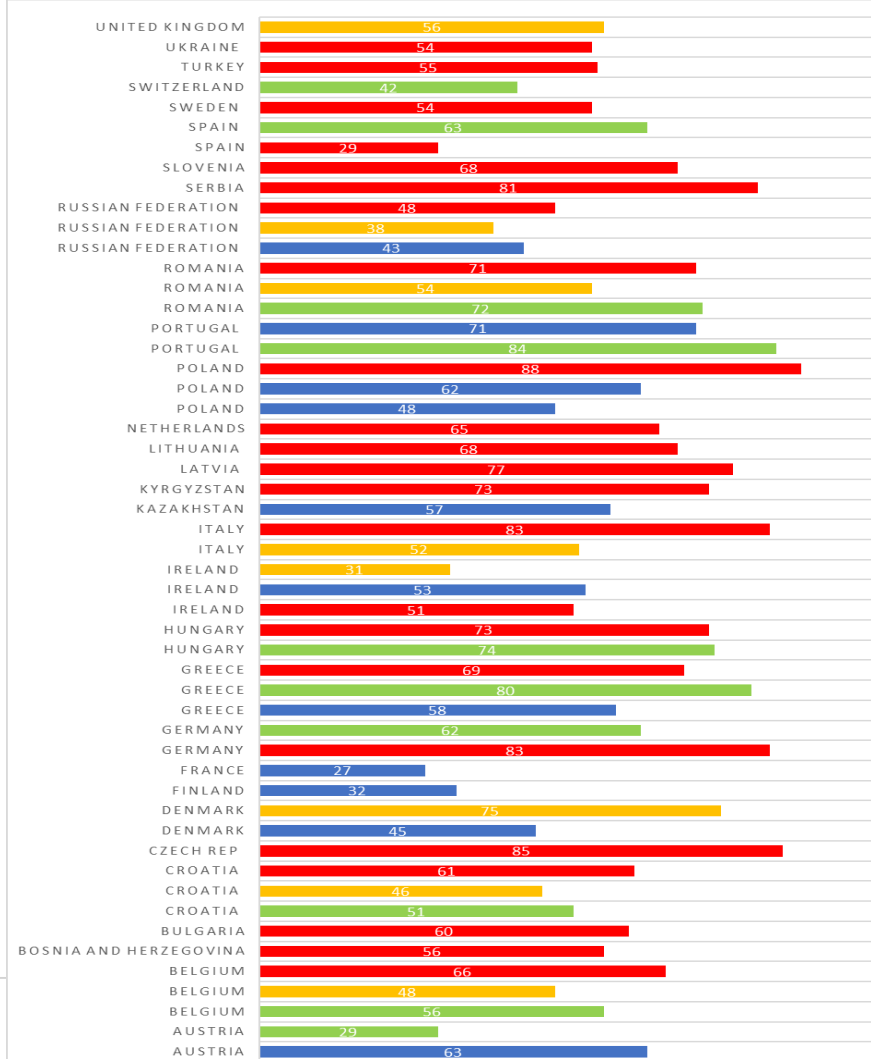
**Mach et al. 2019 ESC/EAS Dyslipidaemia Guidelines

***Cosentino et al . 2019 ESC Diabetes..... Guidelines

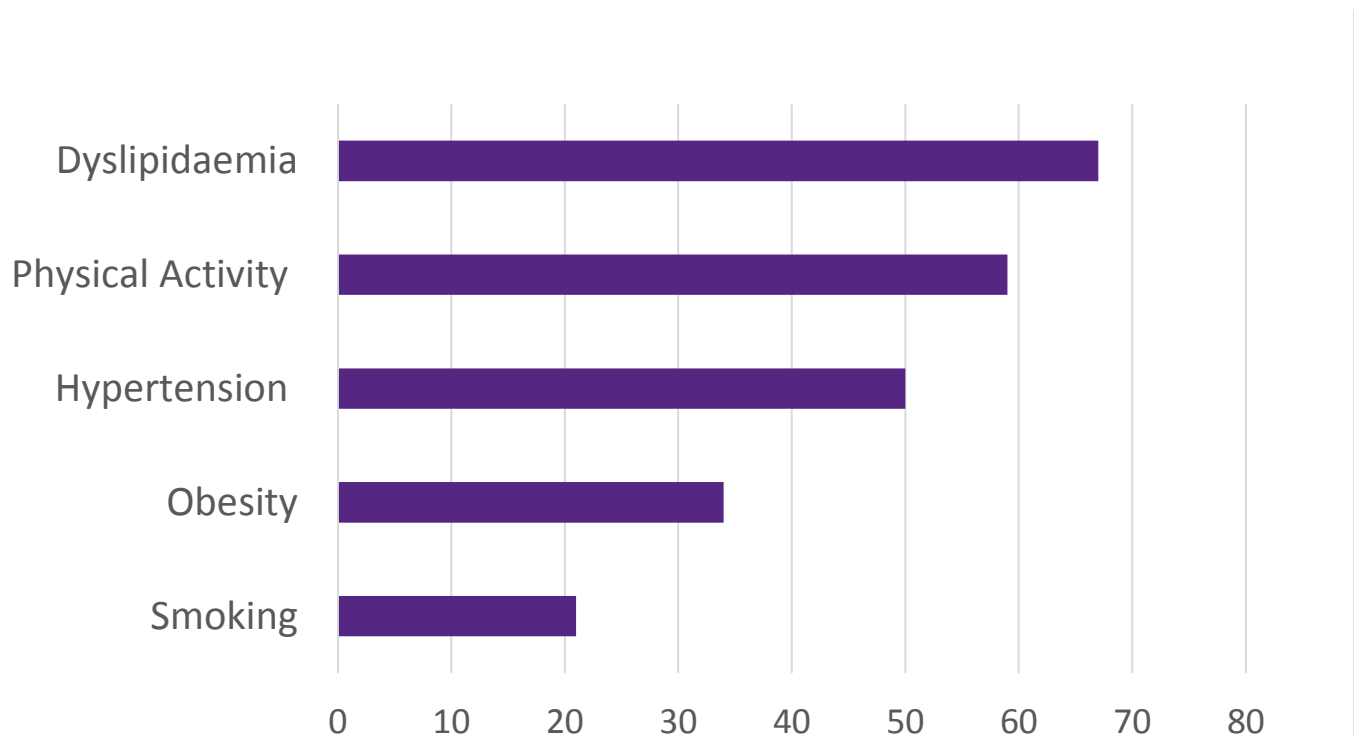


Not meeting physical activity guidelines

- **Recommendations from ESC 2016 prevention guidelines**
 - >150min moderate physical activity or 75 minutes vigorous activity per week
- **Physical activity**
 - Decreases the incidence of CVD and all cause mortality
 - Positive effect on :
 - BP, LDL, HDL, body weight,
 - delays conversion of IGT to TYPE 2DM, improves glycaemic control and CVD complications*
- **Percentage of high risk CVD population that do not meet current recommendations**
 - Overall: 59%
 - Minimum: 27% France
 - Maximum: 88% Poland



Overview



Overview

- **Of countries in the top 10 for each of the risk factors countries**
 - Russia in top 10 for 4 risk factors
- **Countries in top 10 for 3 risk factors**
 - Bulgaria
 - Czech Rep.
 - Germany
 - Italy
 - Romania

Smoking	Hypertension	Dyslipidaemia	Obesity	Physical inactivity
Germany	Russia	Lithuania	United Kingdom	Poland
Switzerland	Croatia	Austria	Lithuania	Czech Republic
Bulgaria	Romania	Romania	Bulgaria	Portugal
Italy	Italy	Serbia	Czech Republic	Germany
Kazakhstan	Belgium	Turkey	Russia	Italy
Netherlands	Denmark	Ukraine	Slovenia	Serbia
Russia	Ireland	Kazakhstan	Poland	Greece
Croatia	Switzerland	Bulgaria	Germany	Latvia
Greece	Netherlands	Belgium	Romania	Denmark
Turkey	Czech Republic	Russia	Ireland	Hungary

Thank you for you attention

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