3° Modulo

La prevenzione del rischio cardiovascolare: distanza dal target e rischio residuo

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CHECK: Geografia dello studio

Studio CHECK

Circa 5.600 soggetti

Età compresa tra i 40 ed i 79 anni, rappresenta la popolazione italiana in quell'intervallo di età.

Randomizzato: (2001-2003) da un campione di MMG

1) Calcolare il livello di rischio cardiovascolare
2) Stimare la distanza dal target del colesterolo LDL
3) Valutare il trattamento per i soggetti non a target

Criteri di categorizzazione del rischio cardiovascolare globale e corrispondenti target terapeutici per il colesterolo

Classi di rischio cardiovascolare	Criteri di categorizzazione del rischio	Target LDL-c
Basso	**RCVG <10%**	**160 mg/dL**
Medio	**10% <= RCVG < 20%**	**130 mg/dL**
Alto	**CHD conclamata, o equivalenti coronarici (diabete CVD AOP) o RCVG >= 20%**	**100 mg/dL**
Molto alto	**CHD conclamata più diabete, o fumo, o SM, o ipertensione non controllata**	**70 mg/dL**

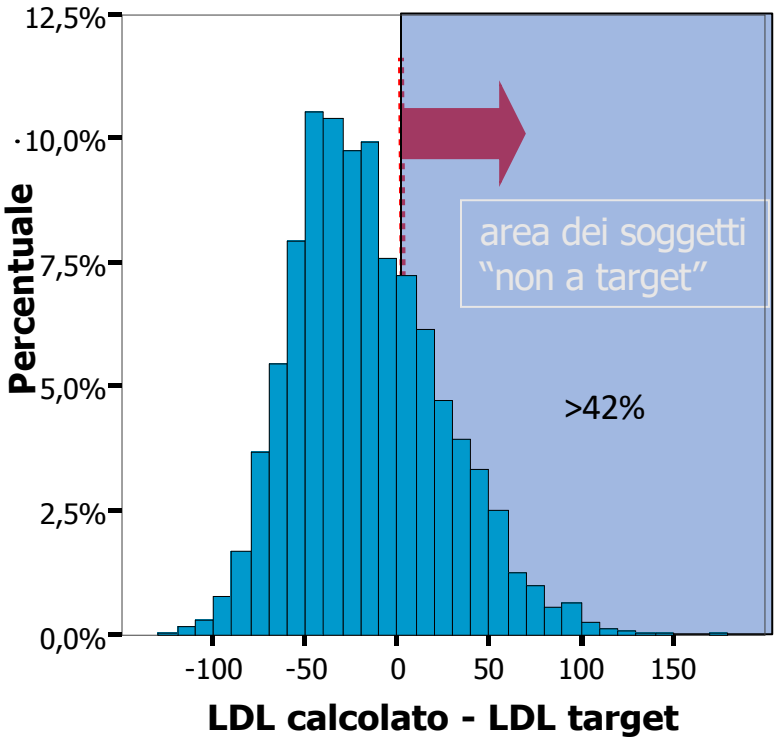
RCVG: Rischio Cardiovascolare Globale secondo l'algoritmo ISS

Proiezione alla popolazione italiana adulta di età 40-79 (n=29.010.000) dei dati del campione CHECK relativi al rischio cardiovascolare (dati in .000)

Classi di rischio cardiovascolare	Totale		Maschi		Femmine	
	n	%	n	%	n	%
Basso	18.908	65,2	7.350	52,5	11.630	77,8
Medio	3.046	10,5	2.030	14,5	1.016	6,5
Alto	5.308	18,3	3.402	24,3	1.906	12,3
Molto alto	1.740	6,0	1.204	8,6	536	3,4

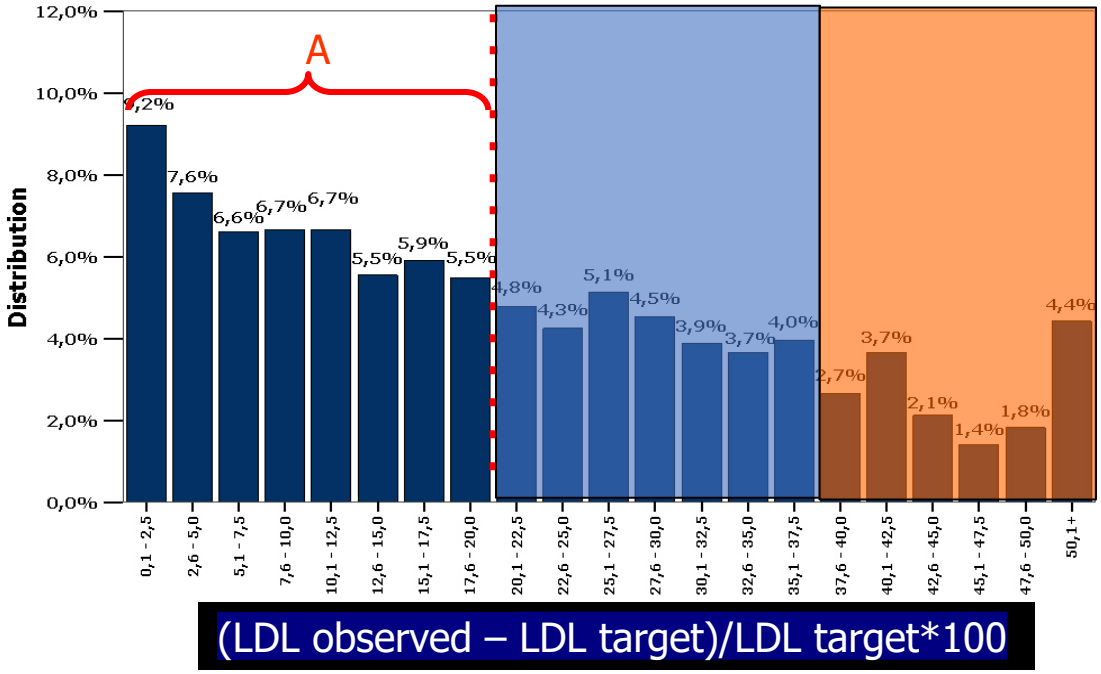
Poli A et al., NMCD 2010; DOI: 10.1016/j.numecd.2010.06.009

Distribuzione delle "distanze dal target" per LDL-c nel campione CHECK



Poli A et al., NMCD 2010; DOI: 10.1016/j.numecd.2010.06.009

Distanza dal proprio target (%) dei soggetti "non a target" del campione CHECK, e classificazione in gruppi di possibile intervento



(LDL observed – LDL target)/LDL target*100

Poli A et al., Pharm Res, in press

Qual è il rapporto prescrittivo ottimale tra statine generiche e statine ad alta efficacia, tra i soggetti ad alto o altissimo rischio di età 40-79 anni della popolazione italiana, sulla base di questi dati?

- Pazienti "non a target": 6.190.000

- Pazienti che potrebbero andare a target con dieta, fibra e fitosteroli: 1.610.000
- *Pazienti che potrebbero andare a target con le statine generiche: 2.090.000*
- *Pazienti che potrebbero andare a target con i farmaci ad alta efficacia: 2.680.000*

- Rapporto ottimale: 2,09/2,68 pari a 43/57

Poli A et al., Pharm Res, in press

LDL-C management in Europa

- LDL-C management in Europe: are we at or near the goals ? EUROASPIRE IV-V and EURIKA
- Burden of expected CVD events when our patients are not at goal (residual LDL-C risk)
- Cost associated with the burden of CVD events

EUROASPIRE SURVEYS IV-V

- Up to 27 Countries, 130 Centers, 7825 patients with CHD, 7998 Interviewes IV (2012-2013) and 8261 Interviewes V (2016-2017)

- Consecutive patients, men and women <80 yrs., hospitalized at least 6 months and at most 3 years prior the interview:

  - Elective or emergency **CABG**
  - Elective or emergency **PCI**
  - Acute Myocardial Infarction (**STEMI, NSTEMI**)

- **Proportion of coronary patients** achieving the European lifestyle, risk factor and **therapeutic targets** for cardiovascular disease Prevention as defined by the **European Societies Guidelines** on CVD prevention

Kotseva K et al. Eur J Prev Cardiol 2016 Apr;23(6):636-48; Kotseva et al Eur J Prev Cardiol. 2019 May;26(8):824-835; De Backer G et al Atherosclerosis. 2019 Apr 24;285:135-146.

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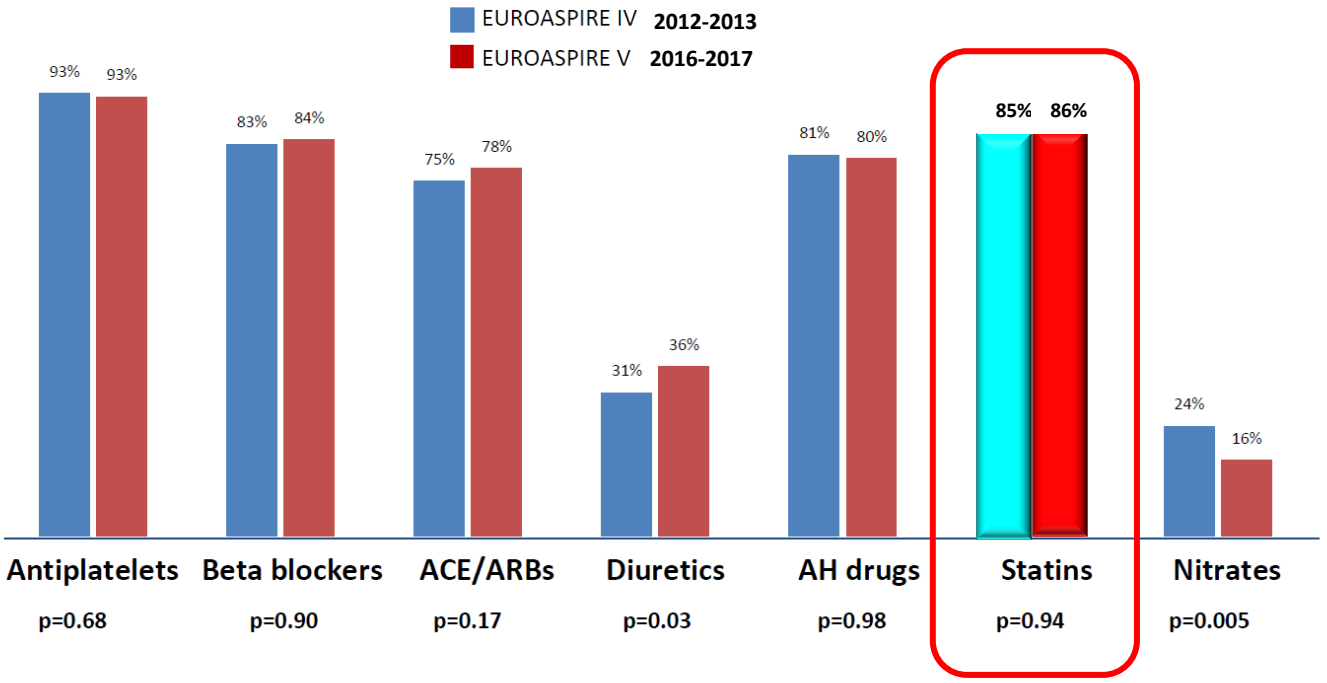

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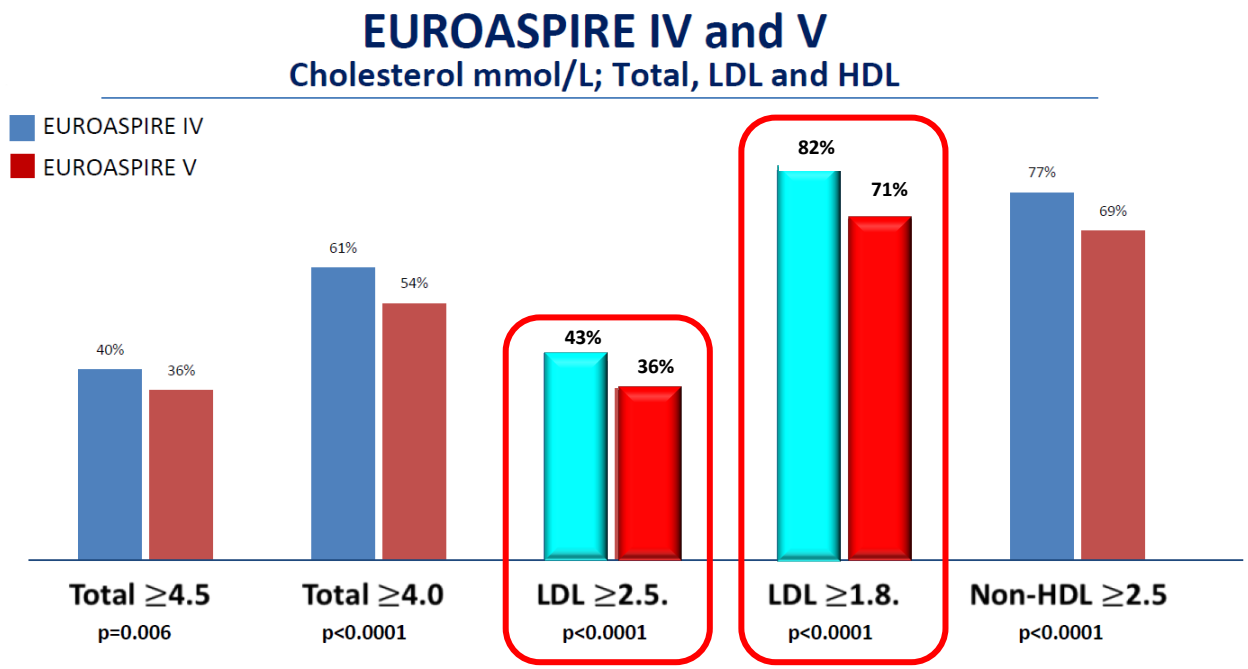

2.5 mmol/L= 100 mg/dl; 1.8 mmol/L= 70 mg/dl

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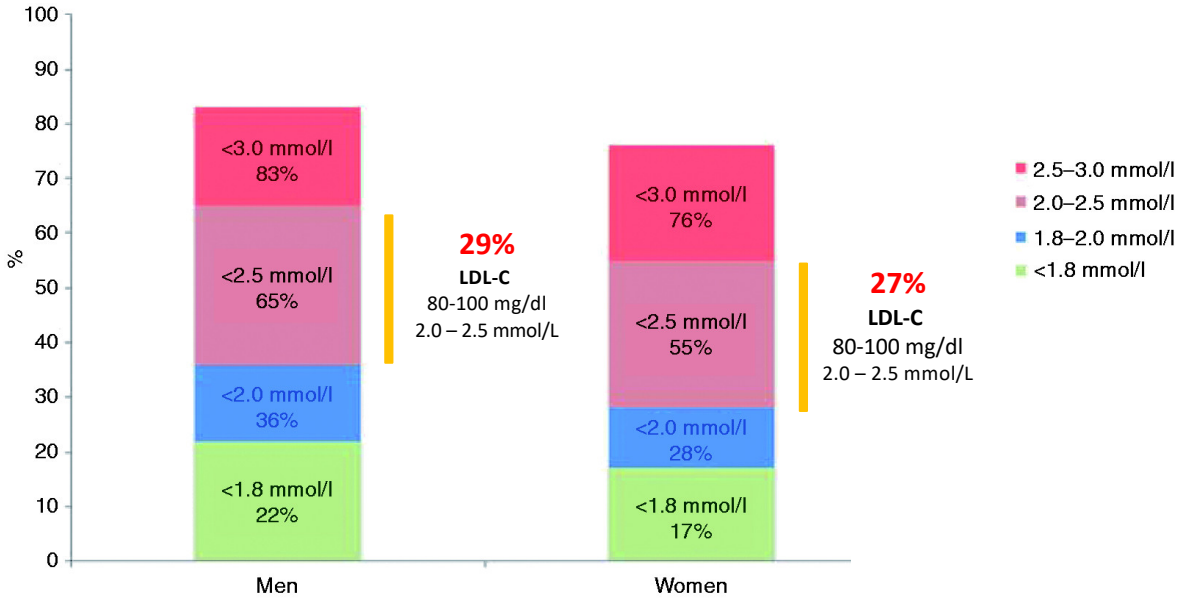
EUROASPIRE IV

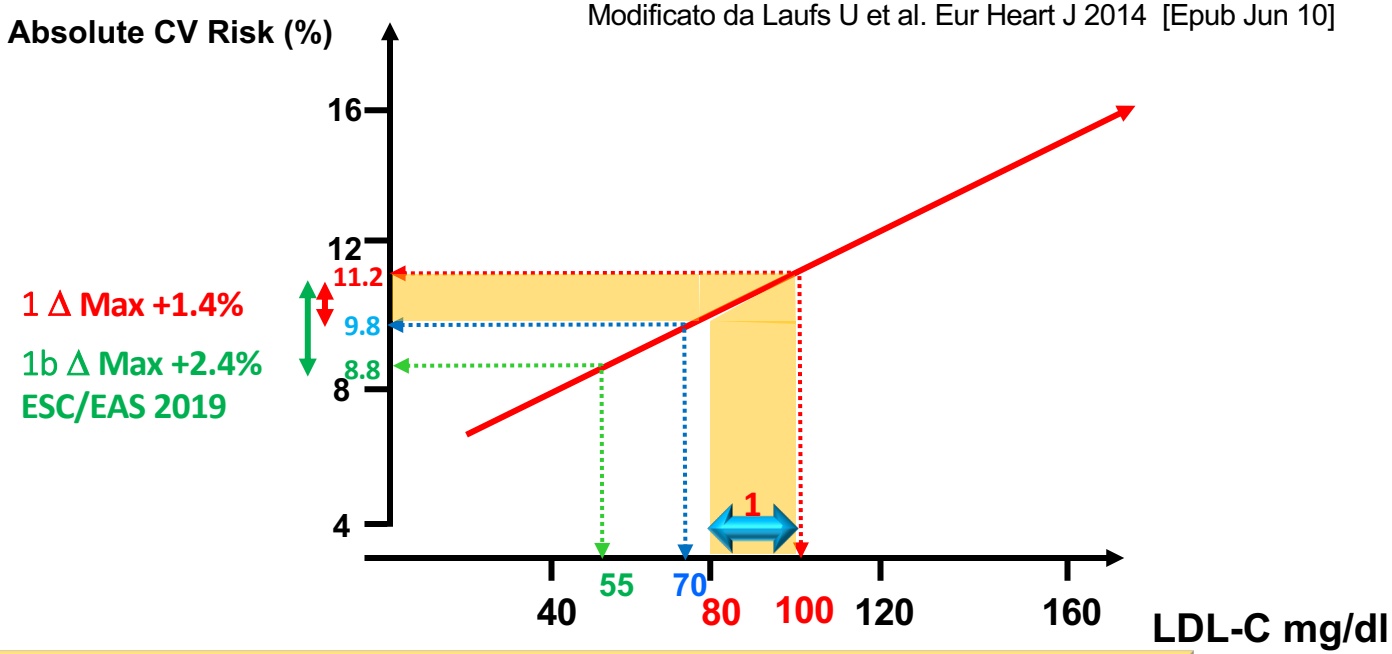


Proportions (%) at LDL-cholesterol goal in patients on lipid lowering medication by sex *at interview*.

Kotseva K et al. Eur J Prev Cardiol 2016 Apr;23(6):636-48

Diminishing risk reduction *for the same relative LDL-C lowering with lower baseline LDL-C*

Modificato da Laufs U et al. Eur Heart J 2014 [Epub Jun 10]



1) LDL-C= 80-100 mg/dl 2.0-2.5 mmol/L (≈30-35% of EUROASPIRE IV-V Population)

In this scenario we may expect **up to 3 extra CV events/100 pts over 10 yrs (ESC/EAS 2016)**
up to 4.8 extra CV events/100 pts over 10 yrs (ESC/EAS 2019)

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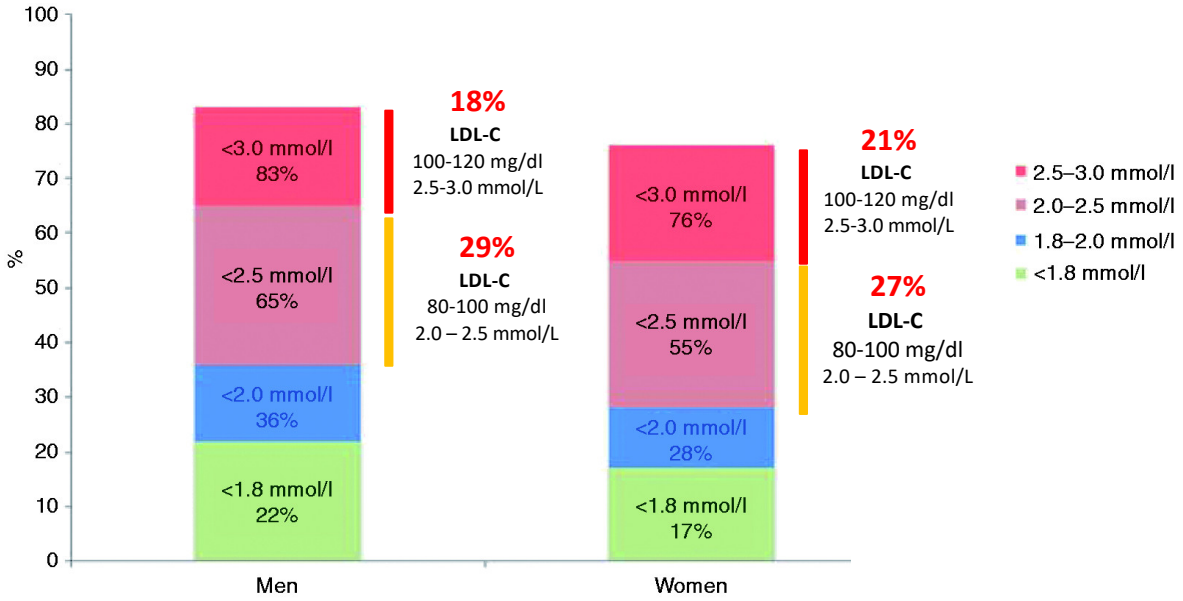
EUROASPIRE IV

EUROSPIRE V: LDL-C >2.6 mmol/L MEN 31%, WOMEN 42



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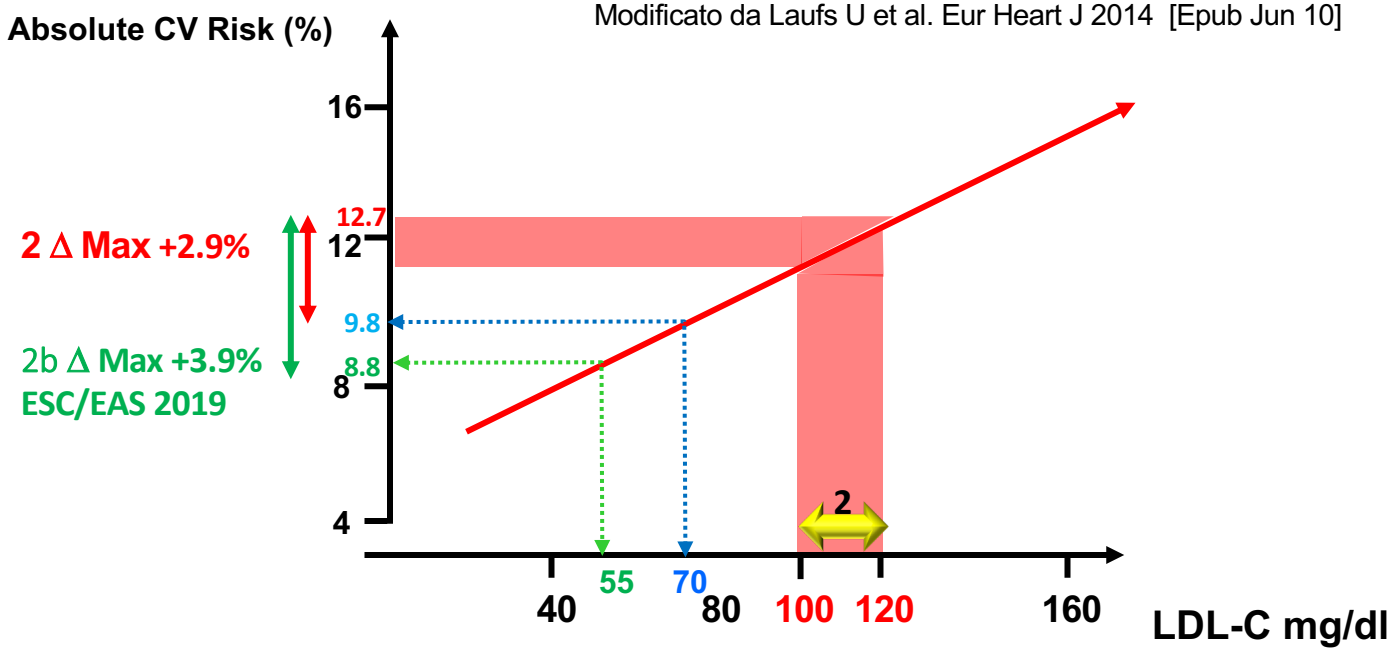

2) LDL-C= 100-120 mg/dl 2.5-3.0 mmol/L (≈20% of EUROASPIRE IV Population)

In this scenario we may expect **up to 6 extra CV events/100 pts over 10 yrs (ESC/EAS 2016)**
up to 8 extra CV events/100 pts over 10 yrs (ESC/EAS 2019)

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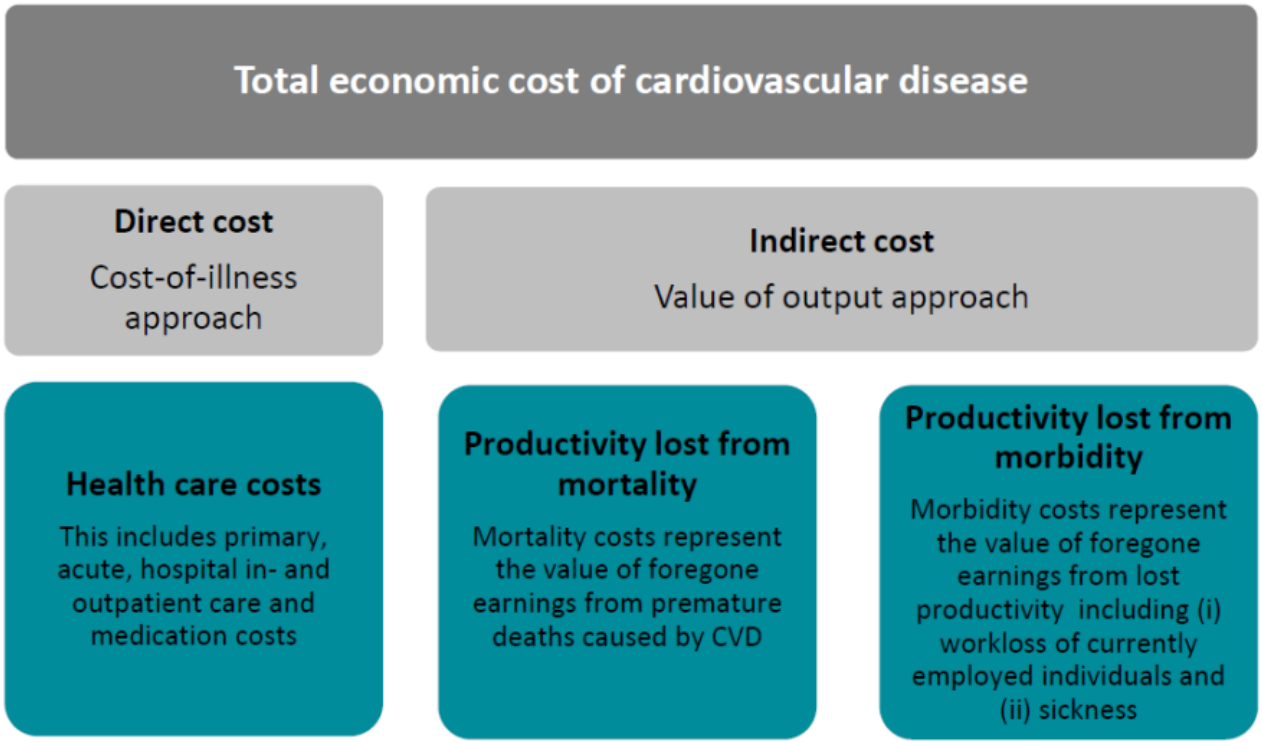
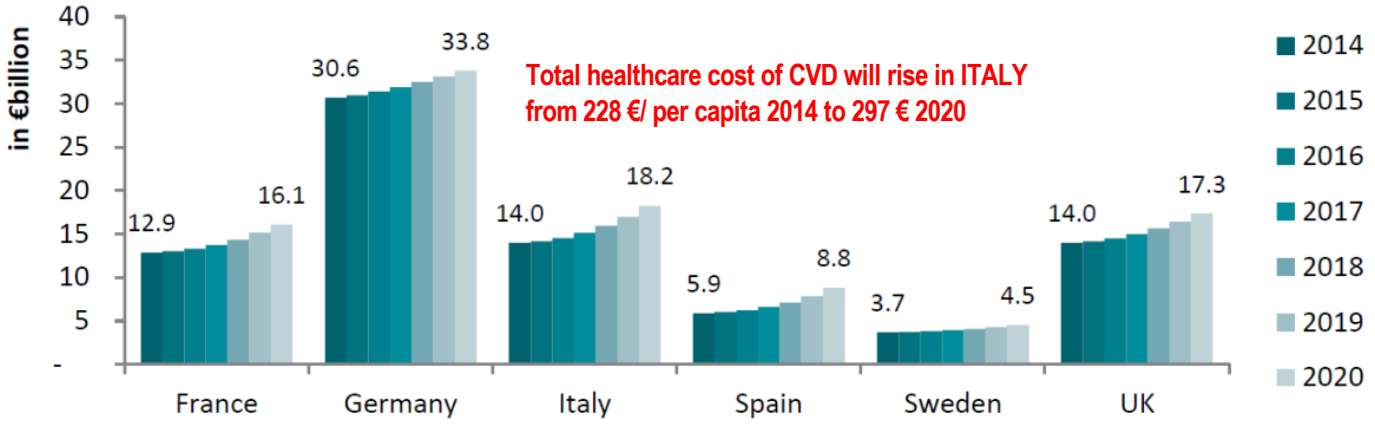
THE ECONOMIC COST OF CARDIOVASCULAR DISEASE FROM 2014-2020 IN SIX EUROPEAN ECONOMIES

Quantifying the economic cost of CVD



The economic cost of cardiovascular disease from 2014-2020 in six European economies



Total healthcare cost of CVD will rise in ITALY from 228 €/ per capita 2014 to 297 € 2020

By the end of the decade, the six countries combined will face CVD related healthcare costs of €98.7 billion from € 81 in 2014

for updates

European Journal of Preventive Cardiology

ESC European Society of Cardiology

Full research paper

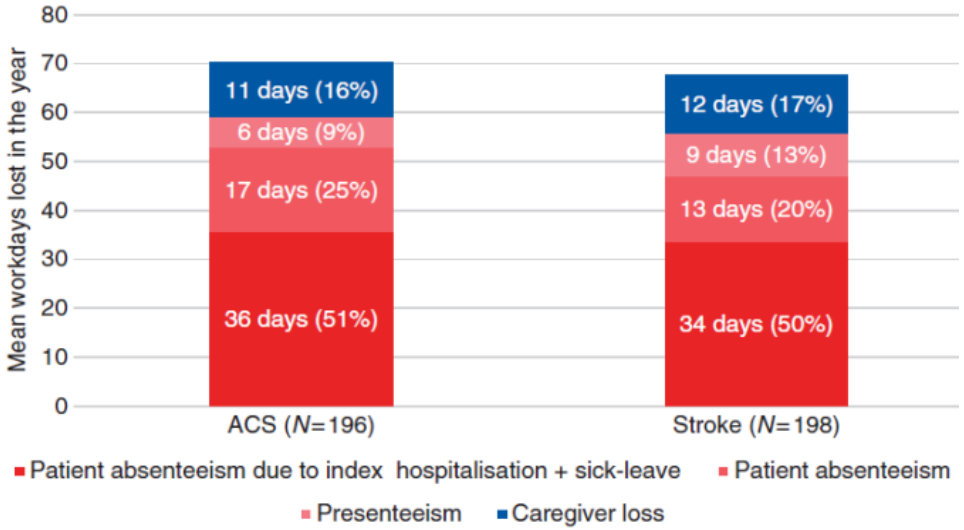
European Journal of Preventive Cardiology
0(00) 1–8

DOI: 10.1177/2047487319834770
journals.sagepub.com/home/ejpc
SAGE

Patient and caregiver productivity loss and indirect costs associated with cardiovascular events in Europe

Kornelia Kotseva[1], Laetitia Gerlier[2], Eduard Sidelnikov[3], Lucie Kutikova[3], Mark Lamotte[2], Pierre Amarenco[4] and Lieven Annemans[5]

Indirect cost €13,953 per ACS case

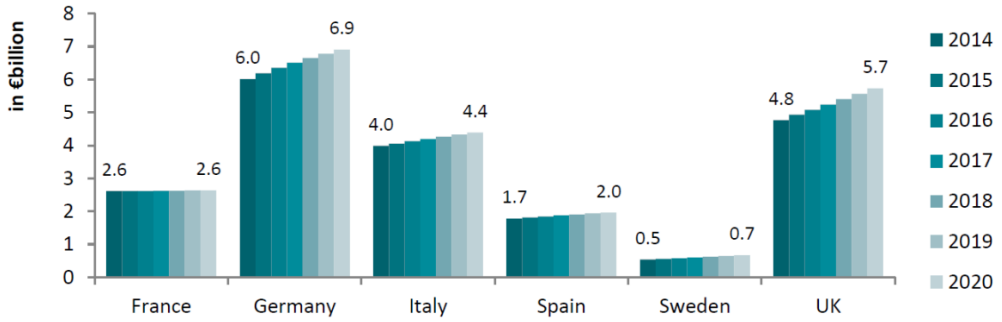


Indirect cost €13,773 per stroke case

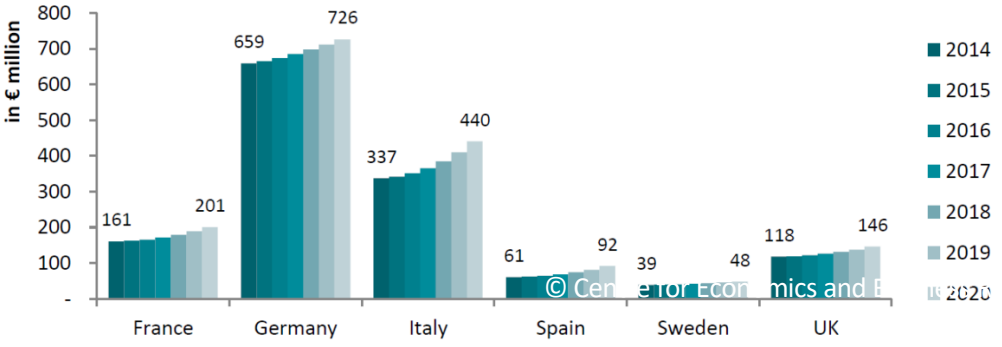
The European Cardiovascular Disease Statistics 2017 report that indirect costs account for 47% of total cardiovascular economic burden.

The economic cost of cardiovascular disease from 2014-2020 in six European economies

Premature mortality cost of CVD will rise in ITALY from 65 €/ per capita 2014 to 72 € 2020



Mortality costs attributable to CVD, forecasts 2014-2020, in €billion



Morbidity costs attributable to CVD, forecasts 2014-2020, in €million

SUMMARY

- LDL-C treatment in PATIENTS AT VERY HIGH CV RISK (LDL-C<1.8 mmol/L):
  - Primary prevention (EURIKA): up to 50% not on any lipid lowering therapy and 1 in 10 achieving the appropriate LDL-C goals
  - Secondary prevention (EUROASPIRE V): 86% on statin therapy but only 29% (1 out of 3) achieving LDL-C goals

BURDEN OF EXPECTED EVENTS

- Subjects, on statin **mildly** (80-100 mg/dl - 2.0-2.5 mmol/L) above LDL-C goals:
  up to 3 to 5 extra CV events/100 pts over 10 yrs
- Subjects **moderately** 100-120 mg/dl - 2.5-3.0 mmol/L above LDL-C goals:
  up to 6 to 8 extra CV events/100 pts over 10 yrs
- In an **extremely high** CV risk conditions (3 vascular beds affected) LDL-C at >2.5 mmol/L (>100 mg/dl) **up to 21 extra CV events/100 pts over 10 yrs**

SUMMARY

- Both direct and indirect cost are bound to rise in the near future
- **Direct healthcare costs** attributable to CVD will rise from a €81.1 billion **about 98.7 billion**
- **Indirect cost** from premature mortality will rise rom €19.6 to **22.3 billion** from morbidity from €1.4 to **1.6 billion**
- **Total costs** to the economies from CVD will **rise** from €102.1 billion in 2014 € to **122.6 billion** by the end of the decade, this is **an increase of €20.5 billion over six years.**