



#### Health inequalities. Healthy women's lives

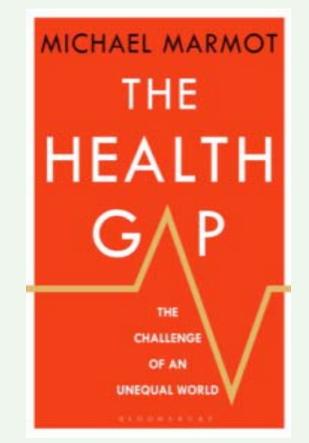
#### Japanese Medical Association 5 Sept 2016

Professor Sir Michael Marmot, Director, UCL Institute of Health Equity http://www.instituteofhealthequity.org/ @MichaelMarmot





#### What good does it do to treat people and send them back to the conditions that made them sick?



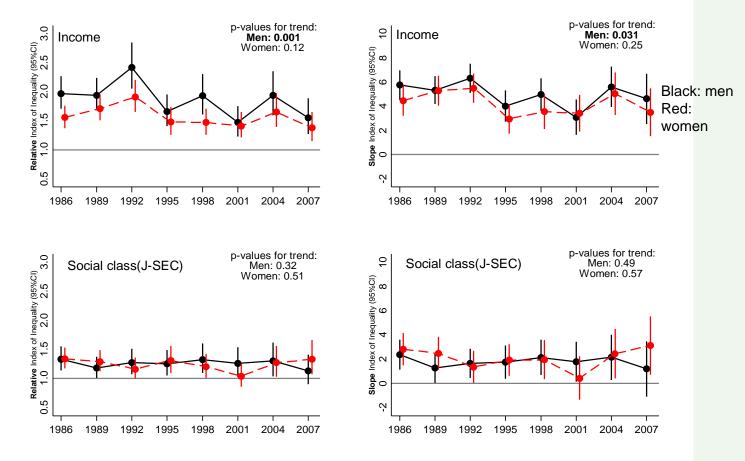
#### The Sustainable Development Goals

- Goal 3 ensure healthy lives and promote well being for all at all ages
- Children born in poverty still almost twice as likely to die before age 5 cf those born into wealthier families
- Maternal mortality still 14 times higher developing to developed regions
- In many settings adolescent girls report their first sexual experience was forced
- Source UN



# Time trends in inequalities in poor health by income and social class, 1986-2007

Slope and Relative Indices of Inequalities in self-rated health by income and social class



Source: Hiyoshi et al., 2013 J Epidemiol & Community



### Functional limitation in old age by life-course socioeconomic inequalities

Age	SES in childhood	Model 1 (adjusted for age sex)	Model 2 (model1+adult SES)	Model 3 (model 2 + health behaviour)	Model 4 (Model 3 + disease)	<b>Model 5</b> (Model 4 + marital, living alone)
65–69y	High or middle-high	Reference	Reference	Reference	Reference	Reference
	Middle	1.20 (1.06– 1.36) 1.39 (1.23–	1.14 (1.01– 1.29) 1.26 (1.11–	1.15 (1.02– 1.30) 1.27 (1.13–	1.16 (1.02– 1.30) 1.28 (1.13–	1.16 (1.03– 1.31) 1.28 (1.14–
	Middle-low or low	1.57)	1.42)	1.43)	1.44)	1.44)
70–74y	High or middle-high	Reference 1.10 (0.99–	Reference 1.06 (0.95–	Reference 1.05 (0.94–	Reference 1.05 (0.95–	Reference 1.06 (0.95–
	Middle	1.23) <b>1.30 (1.17–</b>	1.17) <b>1.19 (1.07</b> –	1.16) <b>1.17 (1.06</b> –	1.17) <b>1.17 (1.06</b> –	1.17) <b>1.17 (1.06</b> –
	Middle-low or low	1.44)	1.31)	1.29)	1.29)	1.30)
75–79y	High or middle-high	Reference	Reference	Reference	Reference	Reference
	Middle	1.11 (1.00– 1.24)	1.06 (0.95– 1.18)	1.06 (0.95– 1.17)	1.05 (0.95– 1.17)	1.05 (0.95– 1.17)
	Middle-low or low	1.31 (1.18– 1.46)	1.21 (1.09– 1.34)	1.2 (1.08–1.33)	1.20 (1.08– 1.33) <sub>Fui</sub>	<b>1.20 (1.08–</b> <b>1.32)</b> iwara 2015 J





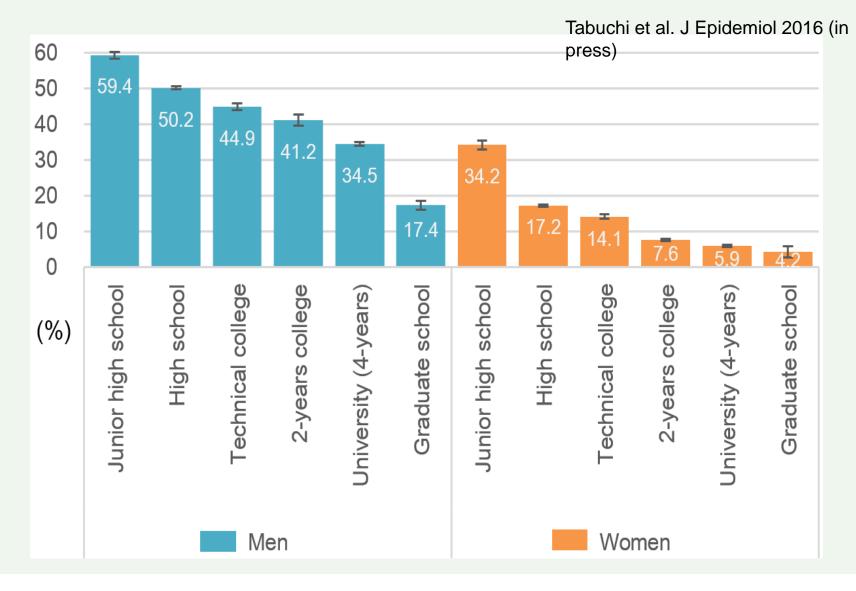
#### Smoking disparity (inequality) in Japan

#### Takahiro Tabuchi

Osaka Medical Center for Cancer and Cardiovascular Diseases

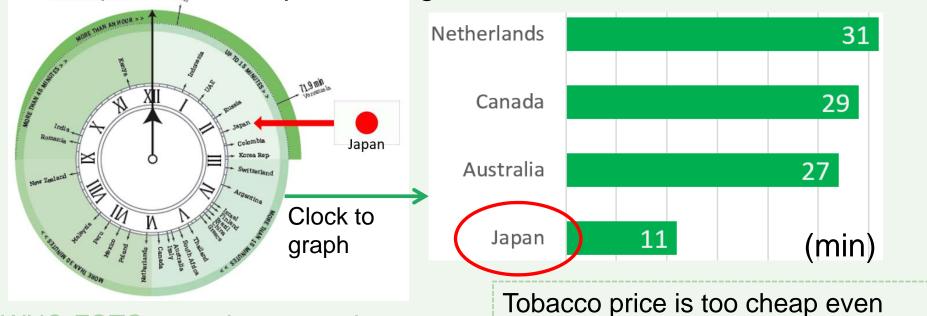
tabuchitak@gmail.com

### **Educational disparity in current** smoking 2010, Japanese adults



#### UCL Institute of Health Equility Cigarettes are too cheap in Japan

### Minutes of labor required to purchase a pack of cigarettes, 2009 The Tobacco Atlas 4<sup>th</sup> edition



*"WHO FCTC strongly suggest best practice of tobacco taxation to all* 

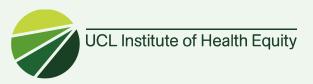
Minutes of Labor

Required to Purchase a Pack

of Cigarettes At median wage in 2009

after the increase in 2010 (15 min)

Japanese government should increase tobacco price intensively.





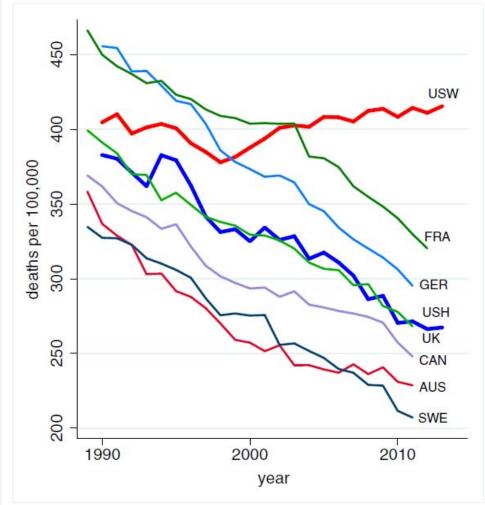
## Life expectancy at birth for men and women in the US, 2008

Years of	White	/hite Black		Black
education	women	women	men	men
<12	73	73	67	66
12	78	74	72	68
13-15	82	80	79	74
16+	83	81	81	75

Source: Olshansky et al, Health Aff. 2012



#### Alf-cause mortality, ages 45–54 for US White non-Hispanics, US Hispanics and 6 comparison countries



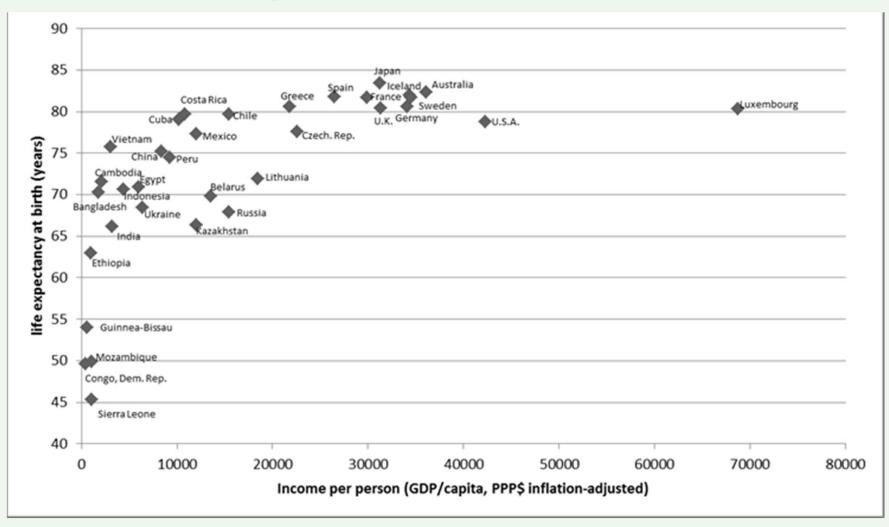
US White non-Hispanics (USW), US Hispanics (USH), France (FRA), Germany (GER), United Kingdom (UK), Canada (CAN), Australia (AUS), Sweden (SWE).

Case & Deaton, PNAS, 2015





#### The relationship between wealth and health,2012

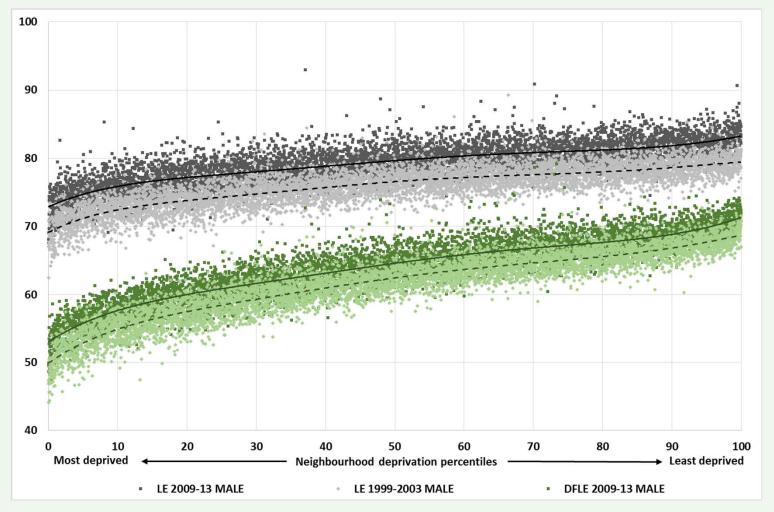


Source: Data from Gapminder





# Life expectancy and disability-free life expectancy (DFLE) at birth, males by neighborhood deprivation, England, 1999–2003 and 2009-2013



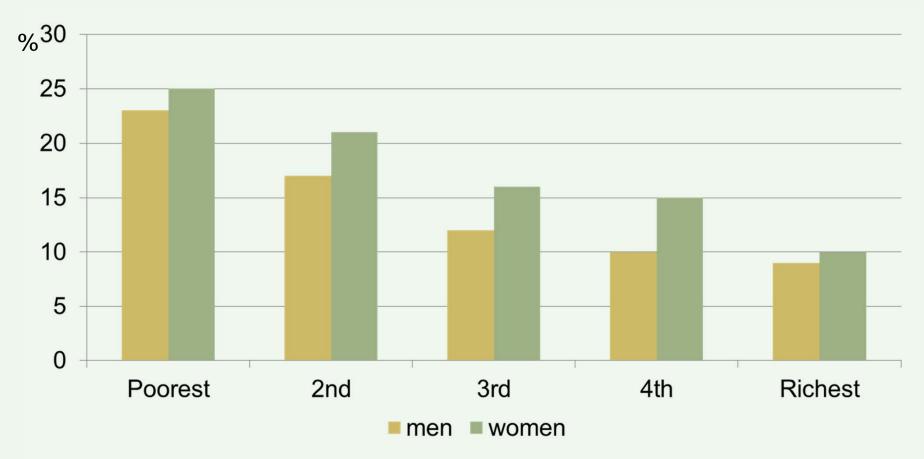




#### Fair Society; Healthy women's lives



### Proportion of people aged 16 – 64 assessed as at risk of mental illness by income quintile: England

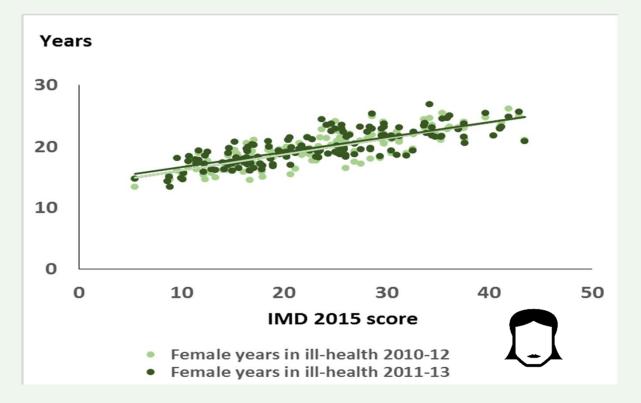


Source: Health Survey for England, DH;

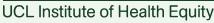
the data is the average over 2008 and 2009; England; updated Mar 2011



## The gradient in expected years in ill-health, females, 2010-12 and 2011-13 continued



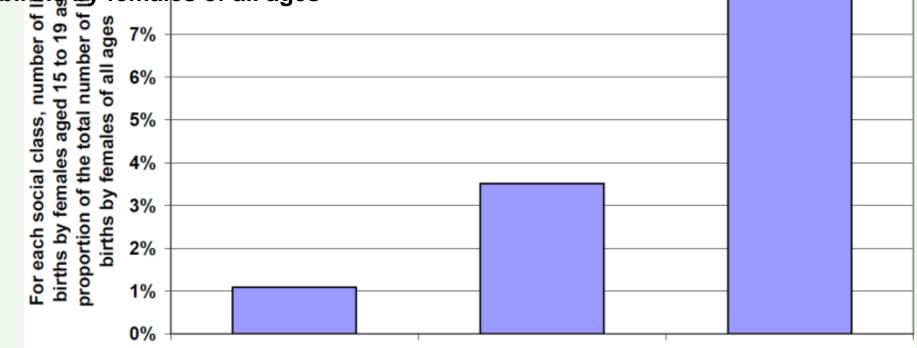
- Largest increases in **East of England.**
- As deprivation increases, so does the time women can expect to spend in ill health: **21.8 in Blackpool** to **14.8 years in Wokingham**.
- A **7 year difference** for women.





## Teenage motherhood by socioeconomic background: England and Wales

Live births by females aged 15 to 19 as a proportion of the total number of live births by females of all ages



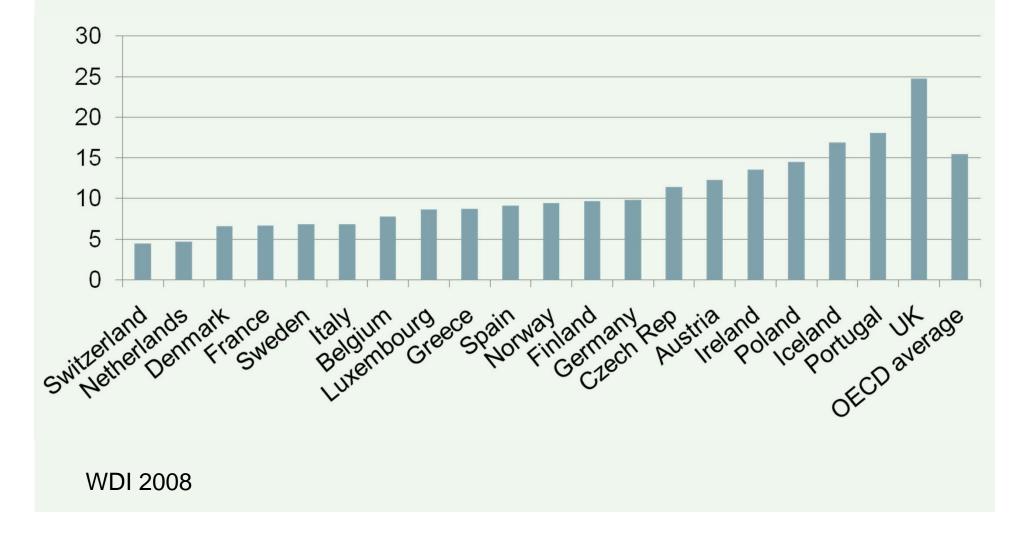
Managorial or professional Intermediate backgrounds

Politing or manual

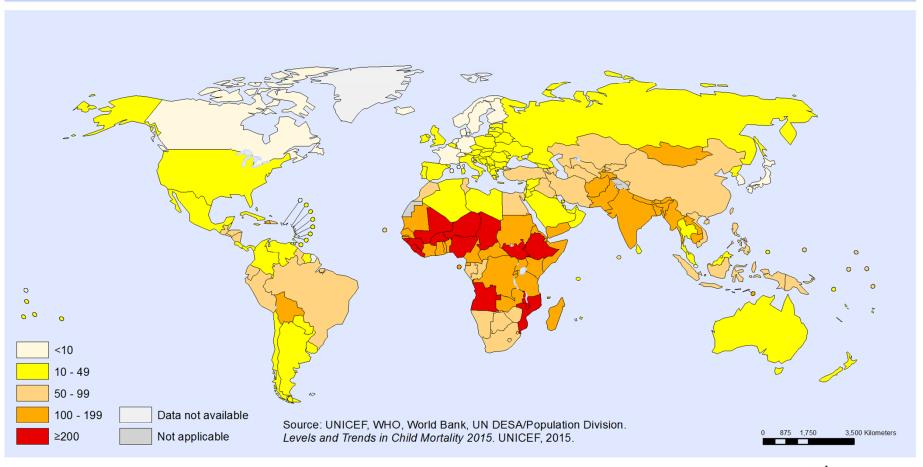




## Adolescent fertility rate: births per 1000 women aged 15-19, 2005



#### Under-five mortality rate (probability of dying by age 5 per 1000 live births), 1990



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

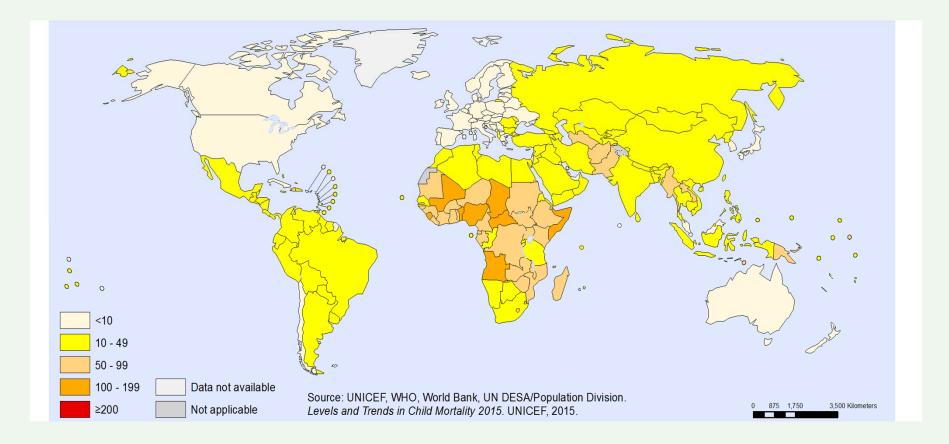
Data Source: World Health Organization Map Production: Health Statistics and Information Systems (HSI) World Health Organization



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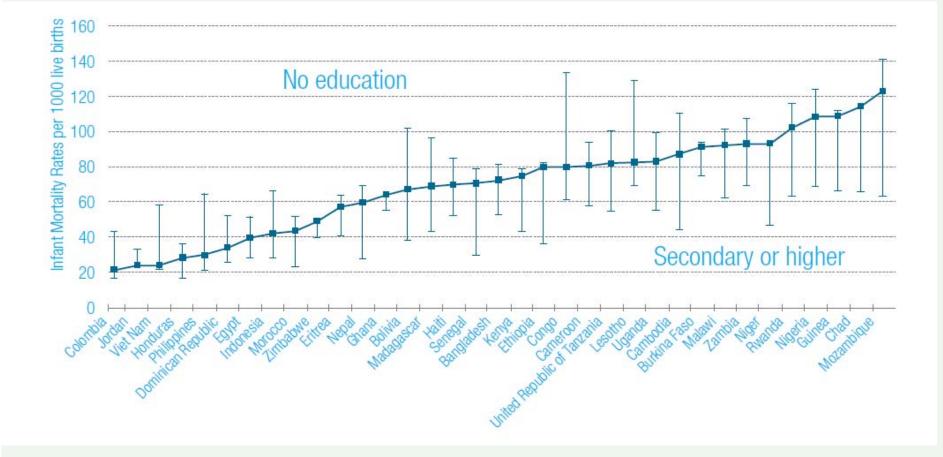
## Changes to child mortality by 2015







#### Inequity in infant mortality rates between countries and within countries by mother's education



CSDH Final Report 2008



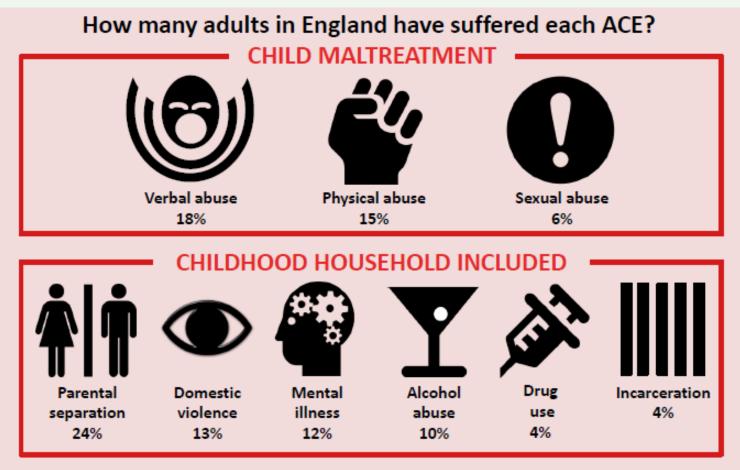


# Total Fertility rate (births per woman) according to mother's education

Country	No	Primary	Secondary	Overall
	education		or higher	
Bangladesh	3.0	2.9	2.5	2.7
India	3.6	2.6	2.1	2.7
Ethiopia	6.1	5.1	2.0	5.4
Nigeria	7.3	6.5	4.2	5.7



#### **Adverse Childhood Experiences: England**

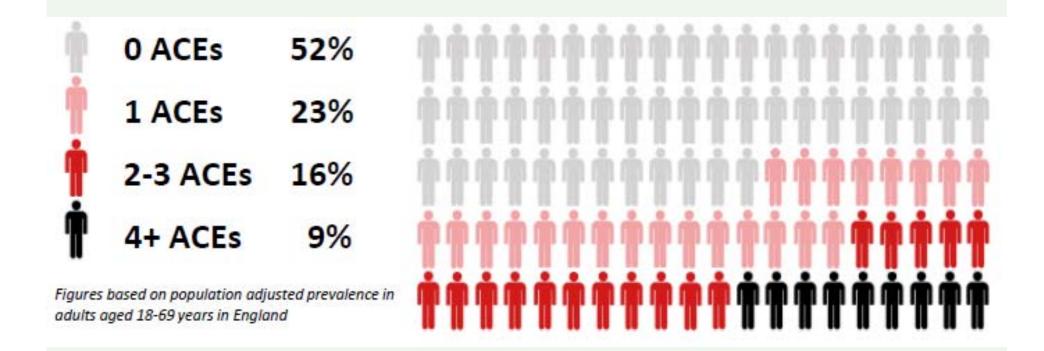


For every 100 adults in England 48 have suffered at least one ACE during their childhood and 9 have suffered 4 or more

Bellis et al., 2014



#### **Adverse Childhood Experiences: England**

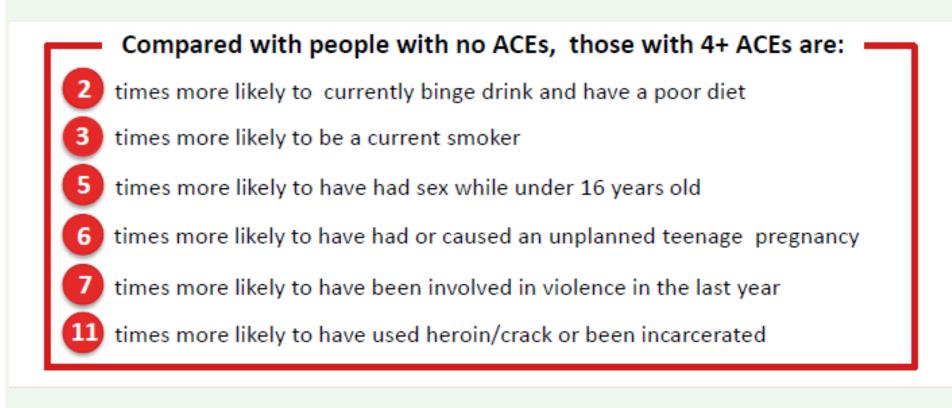


Bellis et al., 2014, National household survey of adverse childhood experiences and their relationship with resilience to health-harming behaviors in England; BMC Medicine





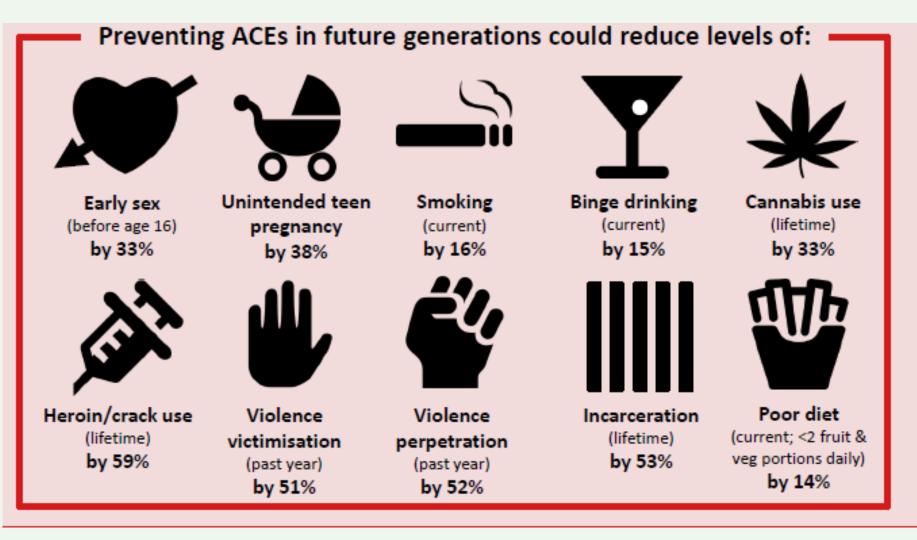
### Adverse Childhood Experiences increase individual's risks of developing health-harming behaviours



Bellis et al., 2014



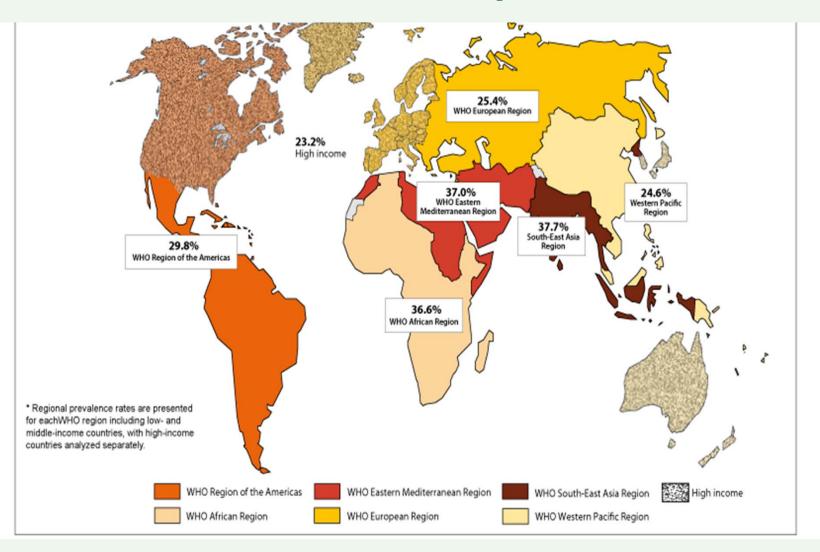
#### **Adverse Childhood Experiences: England**

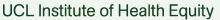


Bellis et al., 2014



#### Prevalence rates of intimate partner violence



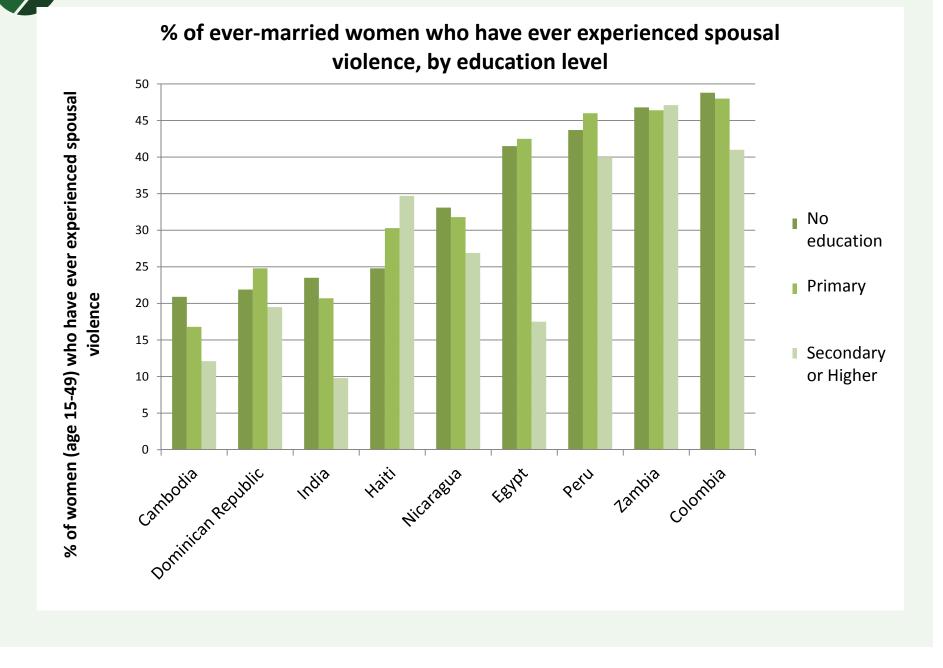




#### **Domestic Violence is a Public Health Issue**

- 35% of women suffer from it.
- 42% of these women experience injuries.
- 38% of all murdered women are murdered by partners (6% of all murdered men)

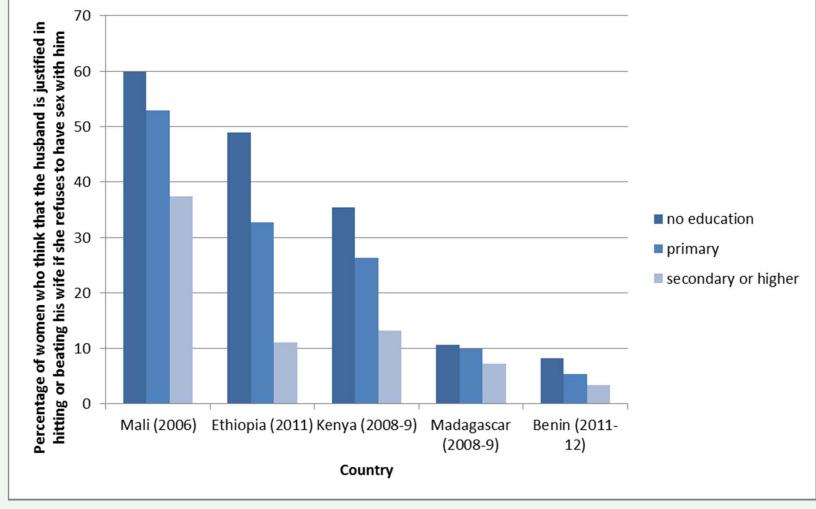
#### UCL







### % married women who believe that husband is justified to beat when wife refuses to have sex: selected countries

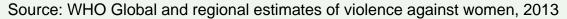


Source: DHS





#### Summary of effect size esimates for selected health outcomes and intimate partner violence 5 4.5 Effect Size - odds ratio 4 3.5 3 2.5 2 HWIADS HIS Infection Alcoholuse di Syphilis infection Alcoholuse di Alco 1.5 Low birth weight premature birth Induced abortion Alcoholusedisorders Unipolar depressive disorders suicide Disease/Injury resulting from violence



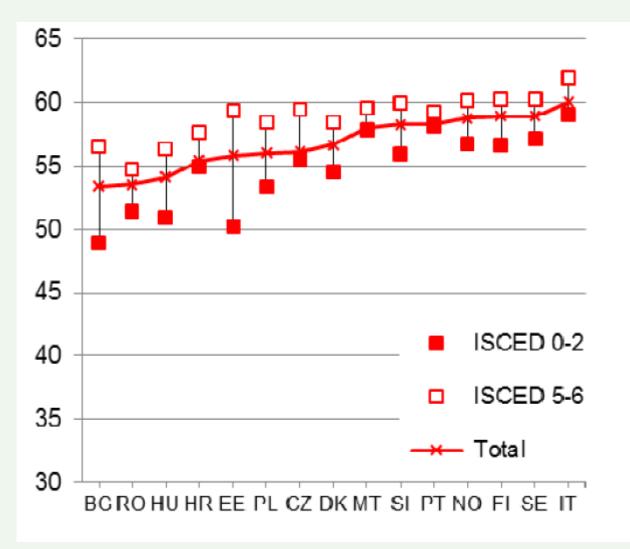


#### **Prevention and Protection**

- Dignity, respect, rights;
- Education of boys and girls;
- Peer learning: men and women;
- Identify and protect those in vulnerable circumstances;
- Community health services;
- Access to justice



#### Life expectancy at age 25 by education, women

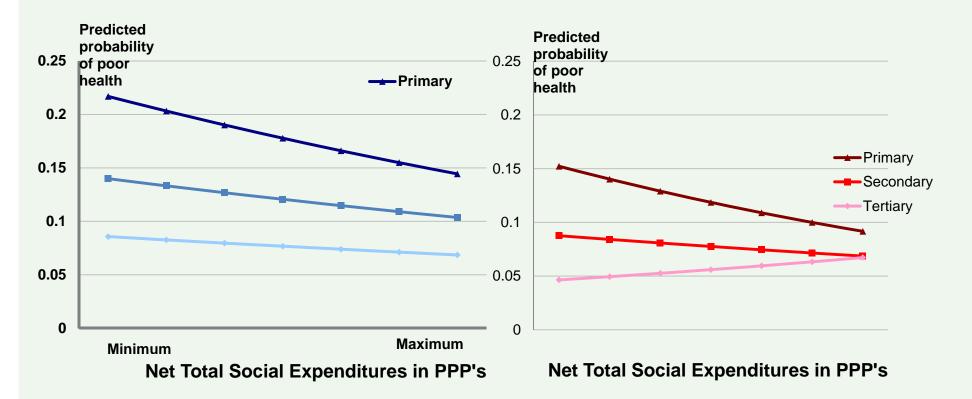


Source: Health inequalities in the EU 2013

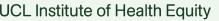




## Self reported health by education and social expenditures: 18 EU countries



Source: Dahl & van der Wel, data from EU SILC 2005, reported in: WHO Review of Socia Determinants and the Health Divide in the European Region





#### Marmot Review: 6 Policy Objectives

A. Give every child the best start in life

B. Enable all children, young people and adults to maximise their capabilities and have control over their lives

- C. Create fair employment and good work for all
- D. Ensure healthy standard of living for all

E. Create and develop healthy and sustainable places and communities

F. Strengthen the role and impact of ill health prevention







### Lifecourse

So we beat on, boats against the current, borne back ceaselessly into the past.

#### -F. Scott Fitzgerald, The Great Gatsby



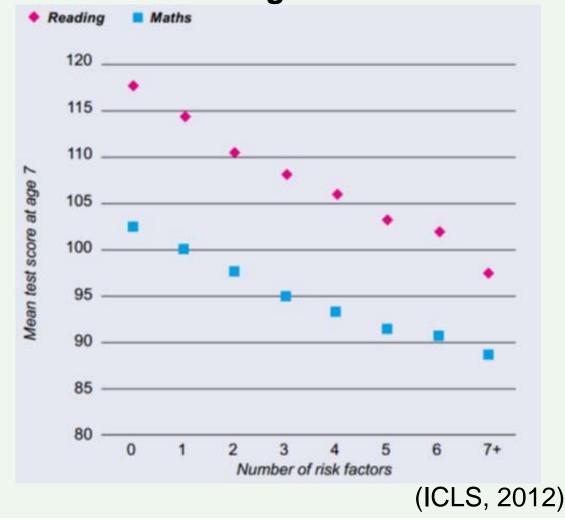


#### Jimmy, Calton, Glasgow

- Single mother with succession of partners; physical and ? sexual abuse
- Behaviour problems at school entry
- Delinquency; known to police: gangs and violence
- never had a 'proper' job temporary manual work
- any money Jimmy gets goes into drink and drugs;
- Diet of pub food, fast food and alcohol.
- a series of short-term girlfriends, alcohol-fuelled violent behaviour.
- Jimmy's life expectancy less than Indian average.



#### Inequalities in cognitive development by multiple factors, UK Cognitive test scores at age 7

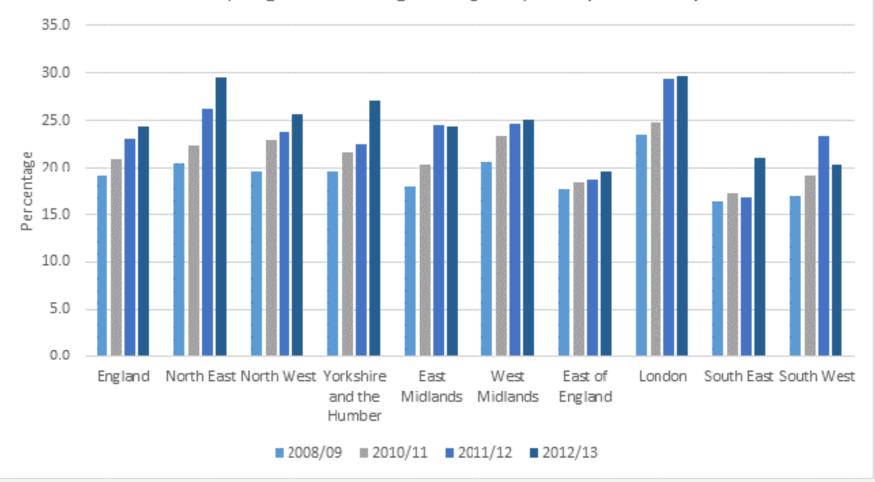


- Low birth weight
- Not being breastfed
- Maternal depression
- Having a lone parent
- Median family income <60%</li>
- Parental unemploymen
- Maternal qualifications
- Damp housing
- Social housing
- Area deprivation (IMD)



Minimum income for healthy living (MIHL)

Percentage of households not reaching the Minimum Income Standard, England and English regions, 2008/09 - 2012/13







#### **Organisation of hope**





## Health inequities are: unnecessary avoidable unjust





### Adequate social protection Social Inclusion Equity at older ages

### Action across the Social Gradient



### MICHAEL MARMOT **Do something** THE HEALTH Do more **Do better** THE CHALLENGE OF AN **UNEQUAL WORLD**