

*Ageing, Health, Mortality and the Effect of Covid-19 on  
Demographic Dynamics*

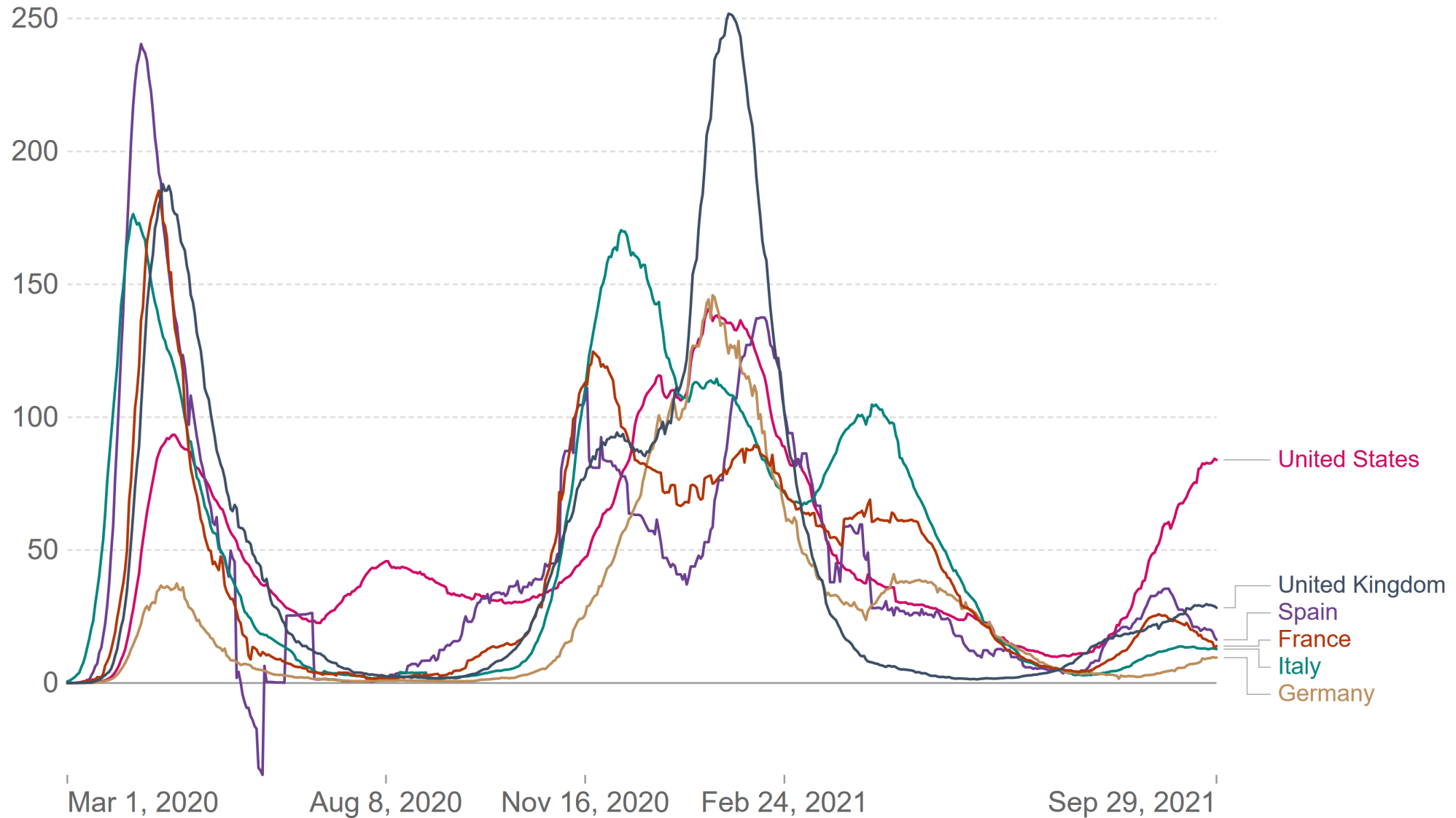
Discussant: Emily Grundy

## COVID-19: Impacts on ageing, health and demographic dynamics

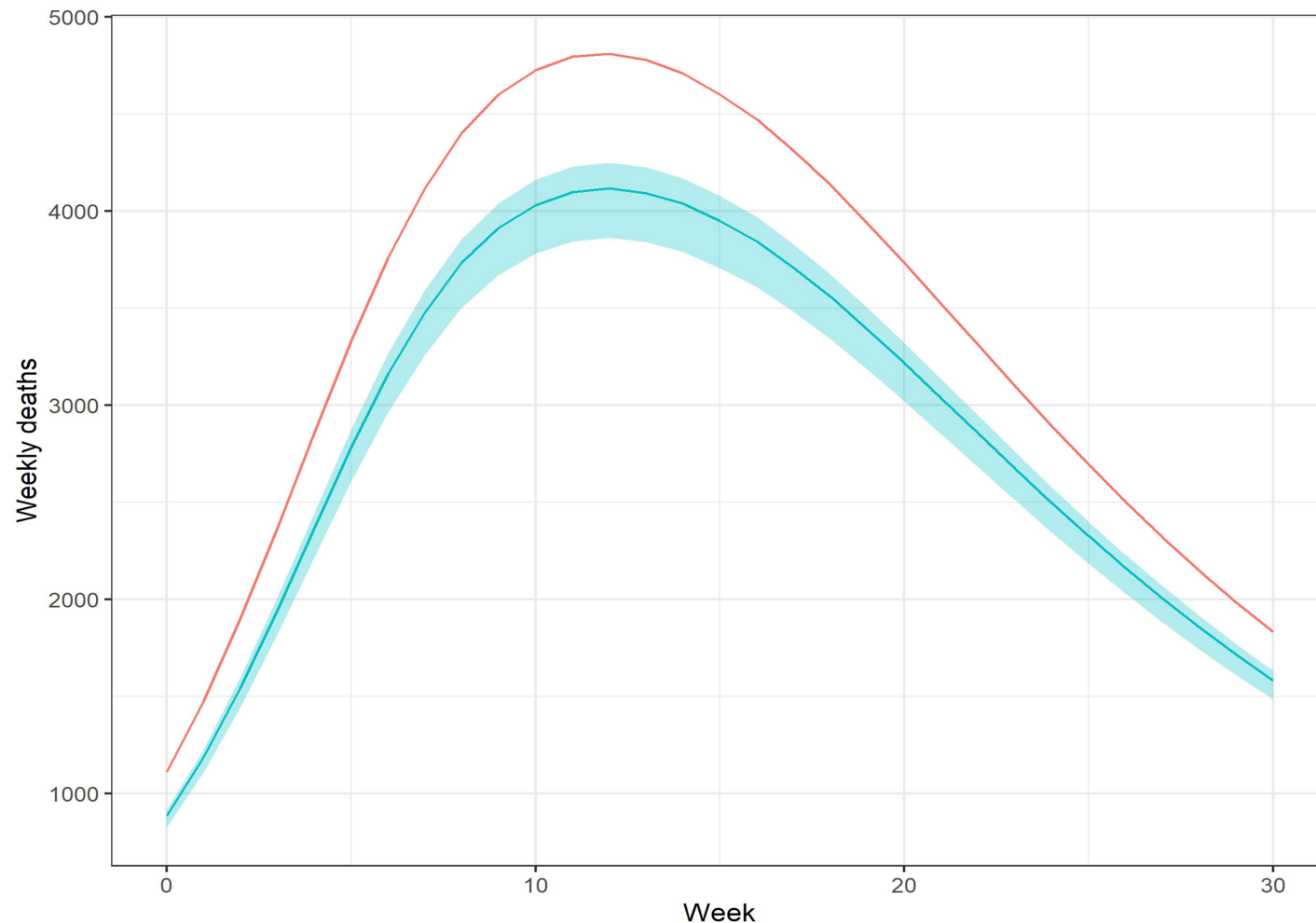
- **COVID-19 has had a large impact on mortality** –assessment of magnitude complicated by the fact that mortality improvement slowed down in many countries in past decade- so what is appropriate benchmark to assess excess deaths?
- **Long-term impacts on population health and mortality** likely but still unclear, including economic effects
- **Impacts on fertility** also unclear
- **International migration** restricted/down; in UK **internal** migration changing (moves to more rural areas); international migration affected by Brexit.
- **Substantial inequalities** in impact now and in future
- How will patterns of **social interaction and support** be affected in the long-term?
- Impacts on **older workers and retirement** decisions?
- UK one of the **worst affected** European countries. Long-term effects may be compounded by past undervaluing of groups such as care workers (and heavy reliance on international migrant labour now challenged by Brexit).

# Biweekly confirmed COVID-19 deaths per million people

Biweekly confirmed deaths refer to the cumulative number of confirmed deaths over the previous two weeks.



# Modelled COVID-19 deaths 30 September 2020 to 4 May 2021, England

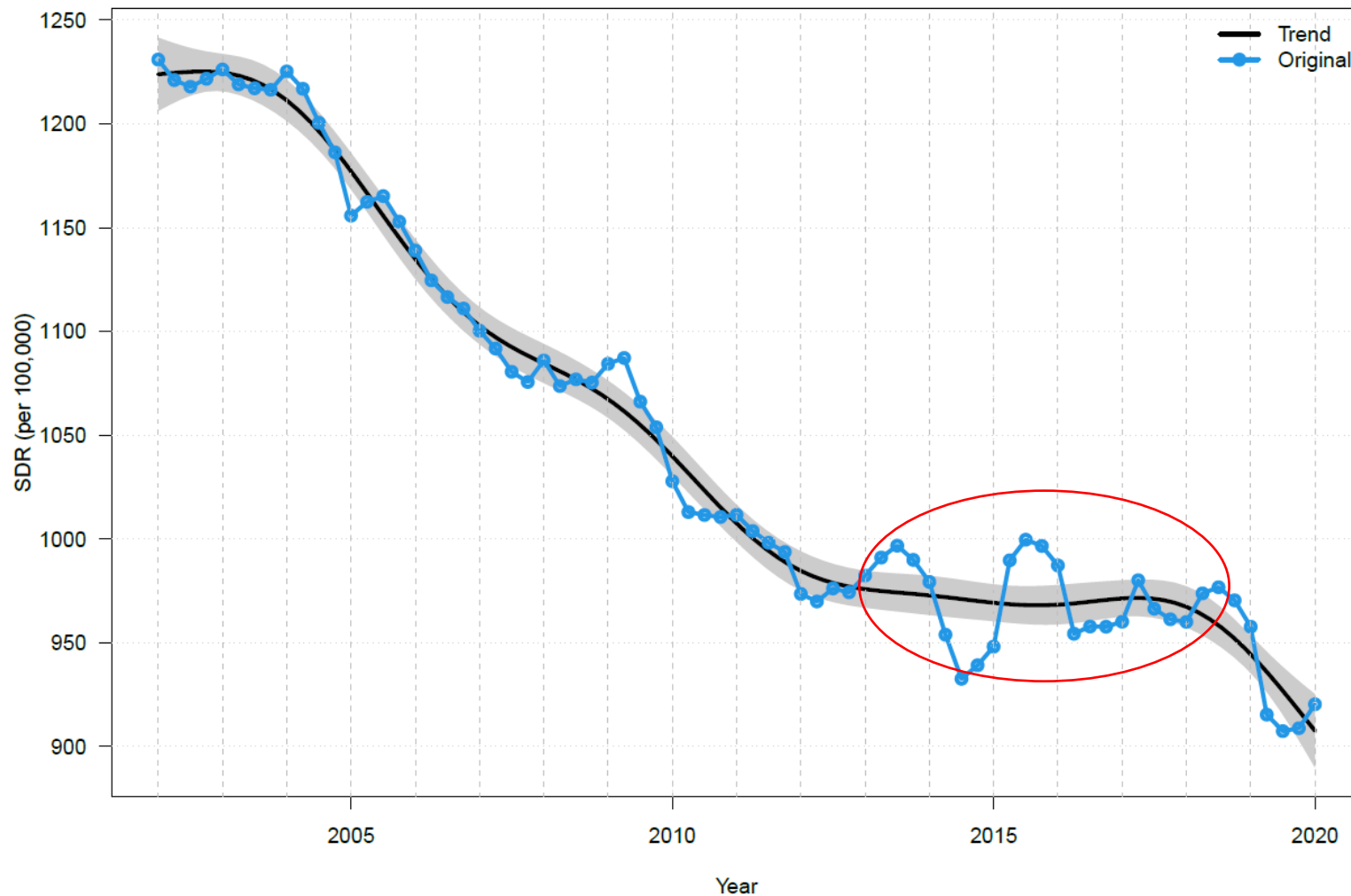


COVID-19 deaths  
Excess death

**Excess deaths:** deaths which  
Would otherwise not have  
Occurred within 12 months  
**COVID-19 was the leading cause  
of death in Waves 1 and 2 of the  
epidemic.**

Source: 'Direct and indirect effects of COVID-19 on excess deaths and morbidity'  
Dept Health & Social Care, ONS, Govt Actuary and Home Office, London December 2020

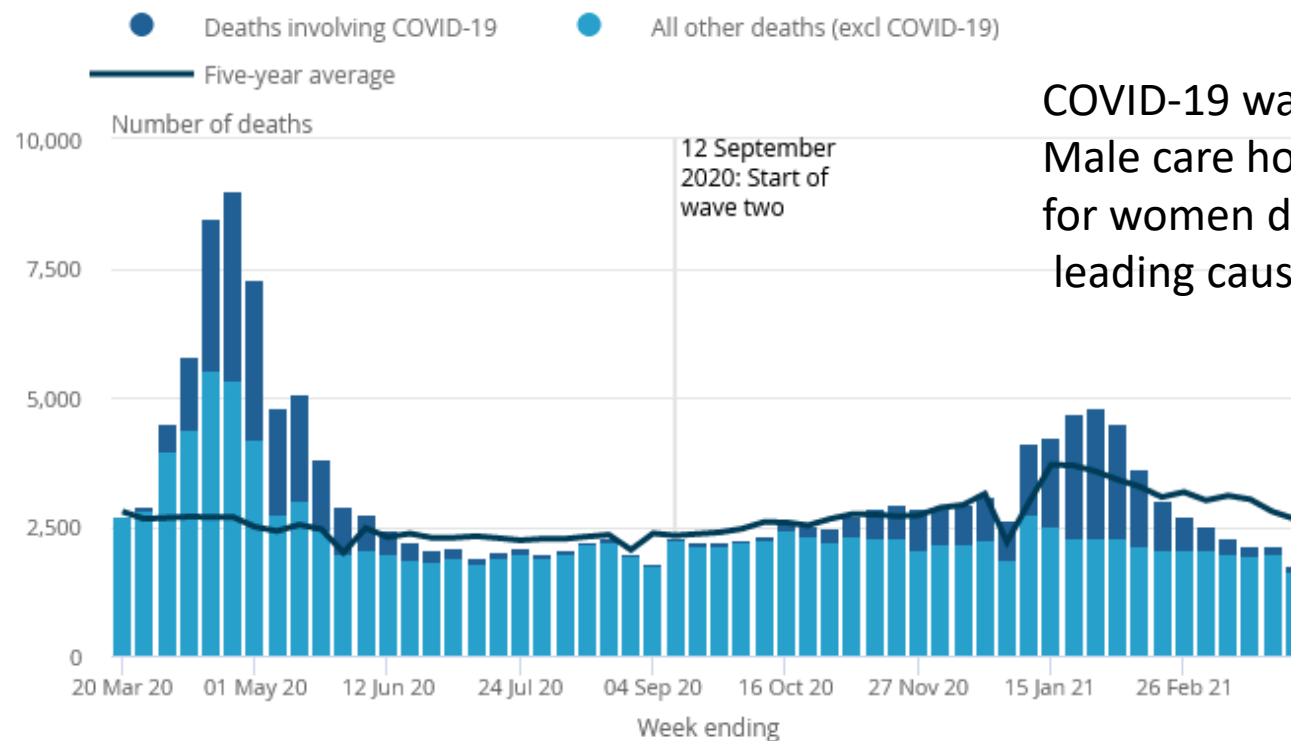
Estimation of excess deaths: what is the appropriate comparison period? England & Wales 12-month rolling Standardised Death Rate average and trend estimate



Source: based on ONS Quarterly Mortality Reports

# Deaths in care homes 14 March 2020 to 2 April 2021, England & Wales

**Number of weekly deaths of care home residents registered from 14 March 2020 to 2 April 2021, England and Wales**



COVID-19 was the leading cause of death  
Male care home residents in Waves 1 & 2,  
for women dementia/Alzheimer's remained  
leading cause, closely followed by COVID-19.

Source: Office for National Statistics, Deaths involving COVID-19 in the care sector, England & Wales. (May 2021)

## Indirect effects of COVID-19 on mortality and health (UK and other high income countries)

### Adverse

- Higher alcohol use/abuse
- Lower physical activity & more musculoskeletal problems
- More domestic violence and home accidents (elder abuse?)
- More anxiety and depressive disorders (worse among younger people)
- Reduced access to medical & care services
- Reduced social stimulation- risk for cognitive decline (especial risks for care home residents and people with sensory limitations)
- Accelerated functional decline among COVID-19 survivors – estimated 20% in nursing home residents in Padua (Greco et al JAMA 2021)

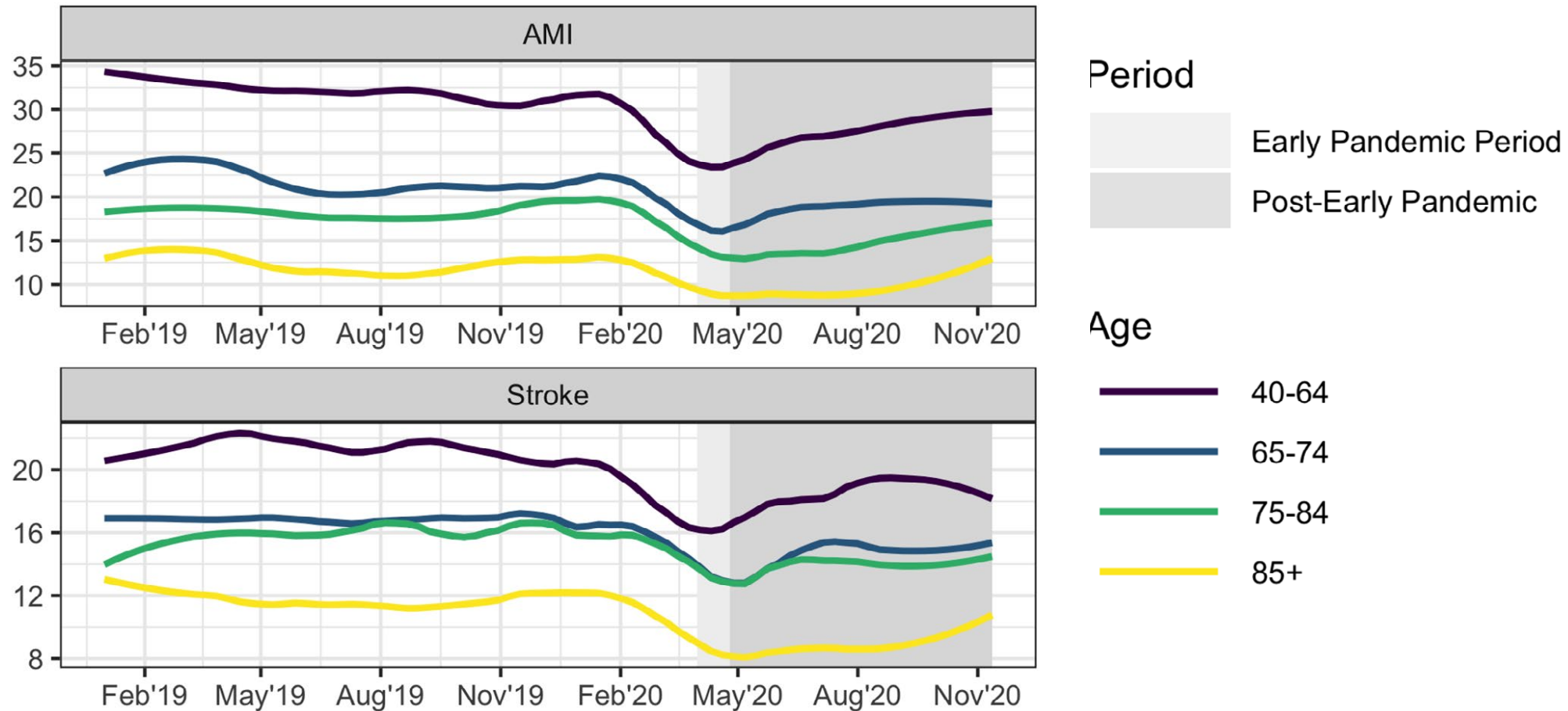
### Beneficial

- Lower tobacco & drug use
- Less air pollution, fewer other infectious diseases (due to protection measures)
- Fewer occupational accidents, road traffic accidents and violent crimes (non domestic)
- ??Long-term: Re-evaluation of value of care and service sector workers?

## Long-term effects on family and social support networks?

*Source: Partly based on 'Direct and indirect effects of COVID-19 on excess deaths and morbidity'  
Dept Health & Social Care, ONS, Govt Actuary and Home Office, London December 2020*

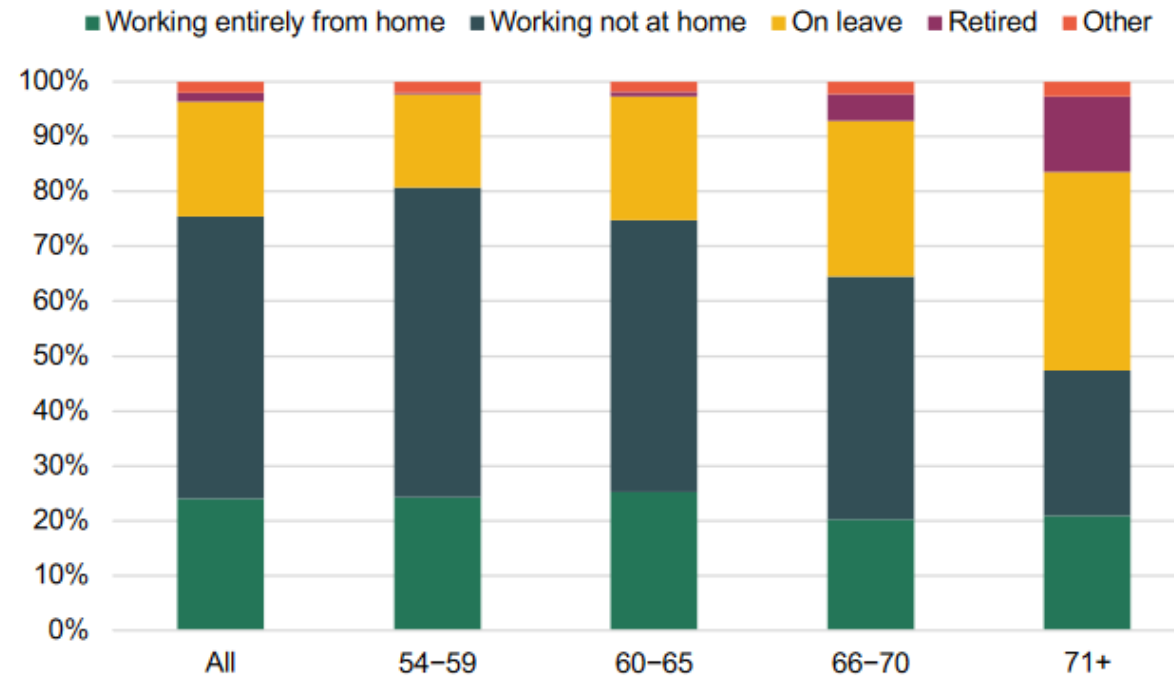
# Emergency departments visits for emergent conditions among older adults, USA



Source: Janke et al , *JAGS* 2021



## Older workers: work status June-July 2020 of those who were employed or self employed immediately before the crisis, England



Large SES differences in ability to work at home

Note: Those working immediately before the crisis only. 'Other' includes unemployed, permanently sick or disabled, and looking after home or family. 'On leave' includes employees who are on paid or unpaid leave and the self-employed who report not currently working.

## Summary and overview:

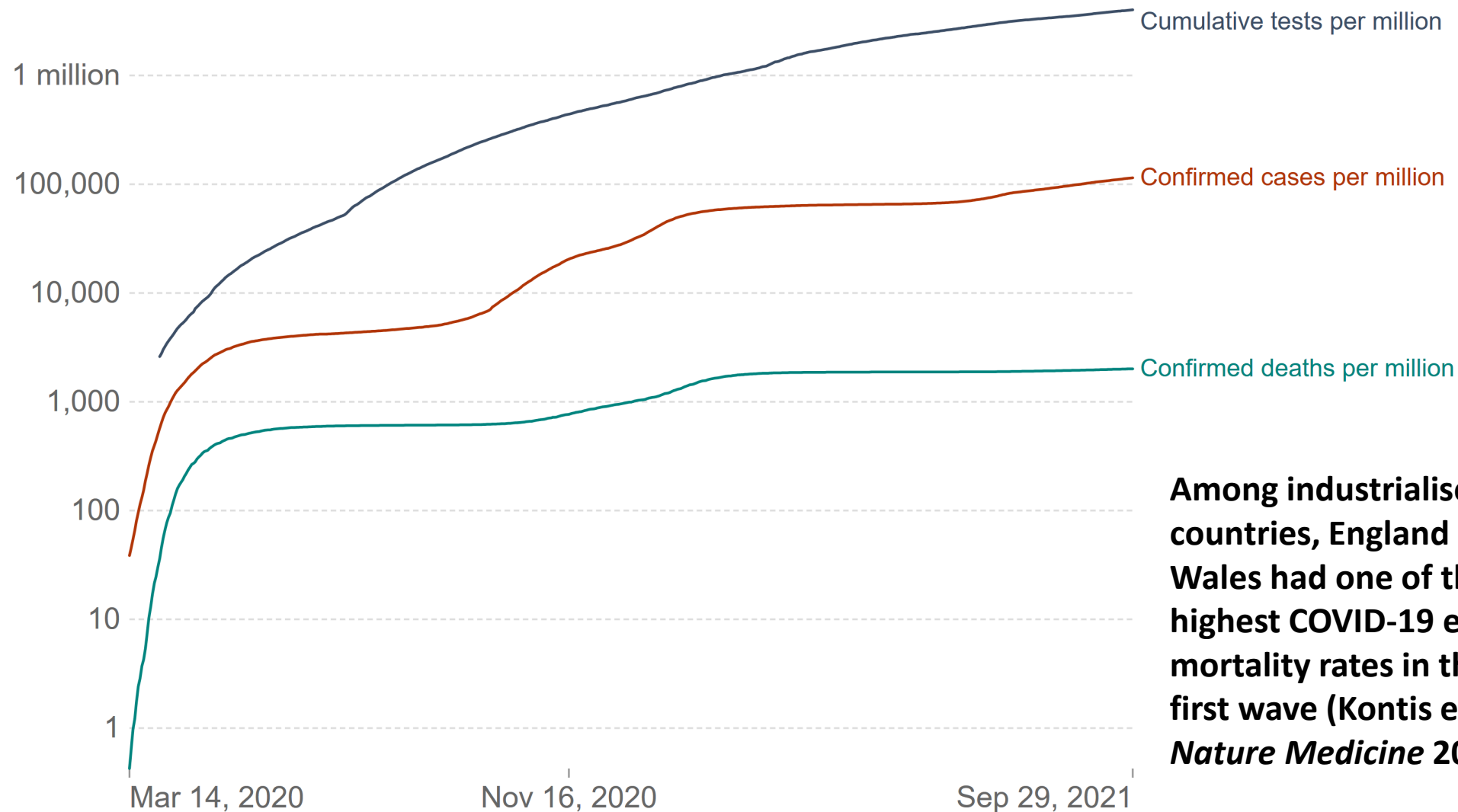
### Long-term impacts of COVID-19 on population health and dynamics unclear

- **Mortality:**
  - ‘Scarring’ versus ‘harvesting’ effects and long-term consequences of restricted access to health care and changes in health related behaviours (short or long term?)
- **Fertility:**
  - Effects of restrictions in access to family planning/ART; changes in aspirations/plans? Economic effects? Work life balance and gender relations?
- **Labour force and retirement:**
  - Working at home/hybrid options may encourage some (office workers) to continue work; but manual/service workers may be discouraged by COVID-19 threats; re-evaluation of role of care/service workers?
- **Family and social interaction:**
  - Long-term effects of restricted access? Changes in priorities?

END later slide for questions only

# Cumulative COVID-19 tests, confirmed cases and deaths per million people, United Kingdom

The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.



**Among industrialised countries, England & Wales had one of the highest COVID-19 excess mortality rates in the first wave (Kontis et al *Nature Medicine* 2020)**