From:	SGoRRWhiteboard on behalf of SGoRR Major Events
To:	First Minister; Cabinet Secretary for Health and Sport; Deputy First Minister and Cabinet Secretary for Education and Skills; Head of HSCA; Chalmers MJ (Michael) (Shielding); Foggo R (Richard); Heijmer-Mason O (Orlando); Covid-19 Director; "aziz.sheikh@ I&S "jill.pell@ I&S "Mark.Woolhouse@ I&S "sdr@st-andrews.ac.uk"; "Andrew Morris"; "devi.sridhar@ I&S Chief Medical Officer; NR Smith G (Gregor); Permanent Secretary; Evans L (Leslie); Kay L (Louise); "Tom.Evans@ I&S NR Harden J (John)
Subject:	FM Shielding Briefing - Agenda, Slides and Conference Details - Friday 15 May - 1415
Date:	15 May 2020 12:43:00
Attachments:	Webex meeting invitation FM Briefing - Shielding.msg FM Shielding Briefing - Agenda - Friday 15th May 1415.docx Shielding 15th May 2020.pptx

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Please find attached the Webex joining details, agenda, and slides for the shielding meeting scheduled to take place at 14:15 on Friday 15th May.

Please do not save the details into your calendar
Do not forward beyond the copy list without permission from Head of SGORR.

PLEASE ENSURE YOU ARE ONLINE WELL IN ADVANCE OF THE MEETING START TO AVOID DISRUPTION

Important:

Video conference protocol:
Please ensure you have joined the meeting at least 5 minutes before the video conference begins. At the start of the meeting the chair may do a roll call to confirm the names of the participants who have joined the meeting.

Key etiquette:
* Introduce yourself when speaking so everyone knows who it is
* Please mute your handset when you are not speaking. If your microphone is not muted, please take care not to rustle paper, type or make a noise that might disturb the call

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Attachment 1

From: NR
Subject: Webex meeting invitation: FM Briefing - Shielding
Attachments: Webex_Meeting.ics

Adam Shepherd invites you to join this Webex meeting.

I&S

Friday, May 15, 2020
2:15 pm | (UTC+01:00) Dublin, Edinburgh, Lisbon, London | 1 hr 30 mins

Join meeting <https://meetingsemea19.webex.com/meetingsemea19/j.php?MTID=m66fbcdaa081b516741d052f290e8e171>

Join by phone
Tap to call in from a mobile device (attendees only)
+44-20-7660-8149 <tel:%2B44-20-7660-8149,,*01*953732440%2382537358%23*01*> United Kingdom Toll
Global call-in numbers <https://meetingsemea19.webex.com/meetingsemea19/globalcallin.php?MTID=md41cdfbd032b07a0d991ae2373c55eca>

Join from a video system or application
Dial 953732440@meetingsemea19.webex.com <sip:953732440@meetingsemea19.webex.com>
You can also dial 62.109.219.4 and enter your meeting number.

Join using Microsoft Lync or Microsoft Skype for Business
Dial 953732440.meetingsemea19@lync.webex.com <sip:953732440.meetingsemea19@lync.webex.com>

Need help? Go to http://help.webex.com

Attachment 2

Agenda

Setting the scene - Professor Andrew Morris - Chair SG Covid-10 Advisory Group

1. Who needs shielding and why it matters –
   Aziz Sheikh – University of Edinburgh

2. Key Interventions –
   Jill Pell – University of Glasgow

3. Population-level consequences of an effective shielding policy –
   Mark Woolhouse – University of Edinburgh

4. International experience, strategic fit with robust surveillance, and 'test, trace, isolate, support' –
   Devi Sridhar – University of Edinburgh

5. Ethics and Behavioural science considerations –
   Stephen Reicher- University of St Andrews

Attachment 3

Shielding
Scientific and Behavioural Science Considerations

Scottish Government CMO Advisory Group

15th May 2020

Rationale for shielding

- The majority of those who contract SARS-CoV-2 infection are asymptomatic (~50%+)
- Most who develop COVID-19 experience relatively mild disease (~80%+)
- Risk of severe outcomes – in particular risk of critical care/ICU admission – is mainly in sub-populations
- Protecting those at risk of severe outcomes has the potential benefits of:
  - Saving lives
  - Reducing pressure on the NHS

Current UK/Scottish Government policy on shielding

- UK CMOs have, through expert consensus, identified those at “highest risk of death or severe outcomes” for ‘shielding’ for ≥12 weeks from 26/3
  - Solid organ transplant recipients, splenectomy (29/4) , renal dialysis(29/4)
  - Specific cancers and cancer treatments
  - Severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD
  - People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as homozygous sickle cell disease)
  - People on immunosuppression therapies that increase risk of infection
  - People who are pregnant with significant heart disease: congenital or acquired
- Equates to ~200k patients across Scotland

Current UK/Scottish Government position on "groups at risk"

- Identified mainly from those eligible for flu vaccine for medical reasons
  - Aged 70 or older (regardless of medical conditions)
  - Under 70 with an underlying health condition listed below (i.e. anyone instructed to get a flu jab as an adult each year on medical grounds):
  - Chronic (long-term) respiratory diseases, such as asthma, chronic obstructive pulmonary disease (COPD), emphysema or bronchitis
  - Chronic heart disease, such as heart failure
  - Chronic kidney disease
  - Chronic liver disease, such as hepatitis
  - Chronic neurological conditions, such as Parkinson's disease, motor neurone disease, multiple sclerosis (MS), a learning disability or cerebral palsy
  - Diabetes
  - Problems with your spleen – for example, sickle cell disease or if you have had your spleen removed
  - A weakened immune system as the result of conditions such as HIV and AIDS, ormedicines such as steroid tablets or chemotherapy
  - Being seriously overweight (a BMI of 40 or above)
  - Those who are pregnant

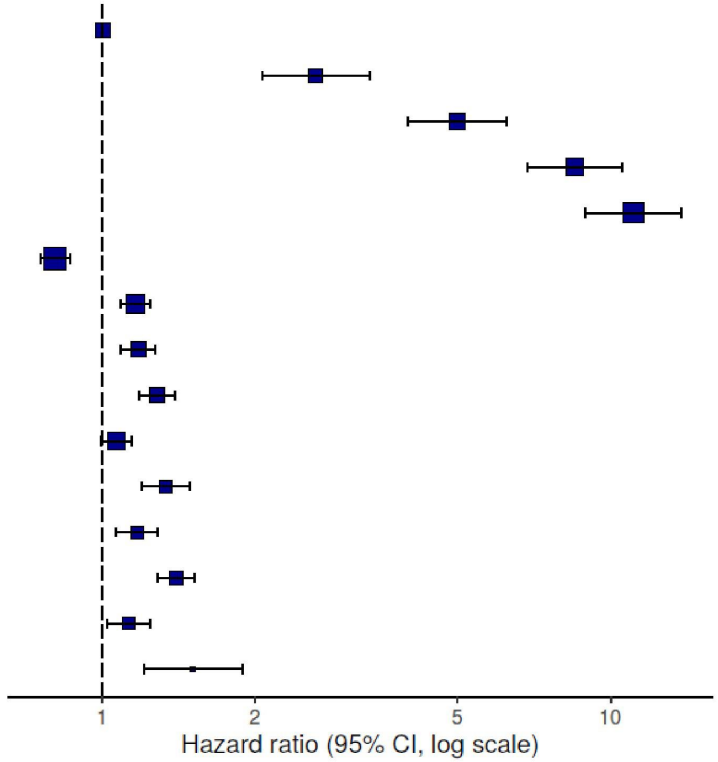
Literature review

- Key risk factors for COVID-19 deaths and severe outcomes are:
  - Age
  - Male sex
  - Black, Asian and other Minority Ethnic groups
  - Obesity
  - Chronic heart disease
  - Chronic respiratory disease
  - Diabetes

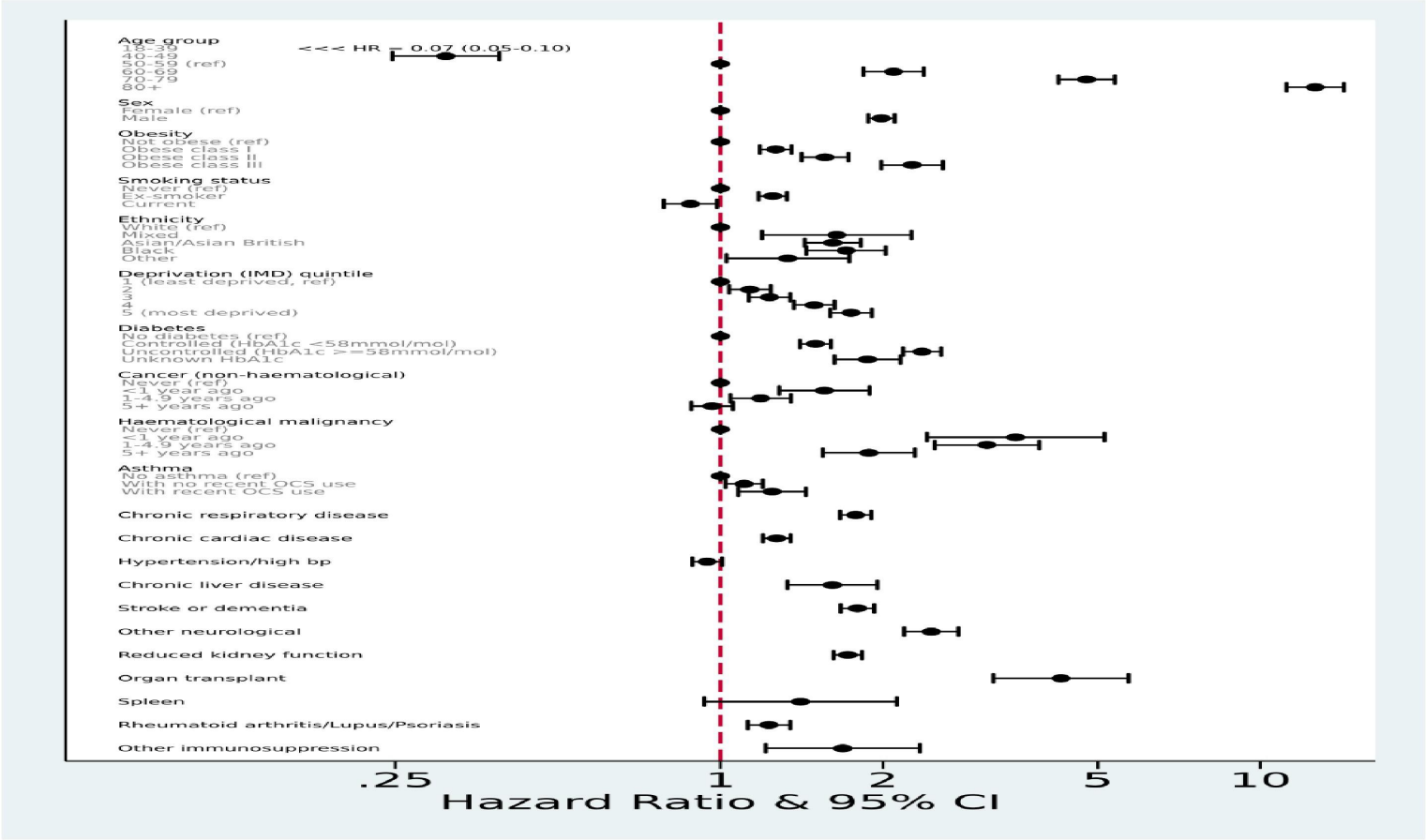
Patients at increased risk of in-hospital death from COVID-19, ISARIC (England and Wales)

Factors associated with mortality in patients admitted to hospital with Covid-19

Age on admission (years)	<50	-
	50-59	2.63 (2.06-3.35, p<0.001)
	60-69	4.99 (3.99-6.25, p<0.001)
	70-79	8.51 (6.85-10.57, p<0.001)
	80+	11.09 (8.93-13.77, p<0.001)
Sex at Birth	Female	0.81 (0.75-0.86, p<0.001)
Chronic cardiac disease	Yes	1.16 (1.08-1.24, p<0.001)
Chronic pulmonary disease	Yes	1.17 (1.09-1.27, p<0.001)
Chronic kidney disease	Yes	1.28 (1.18-1.39, p<0.001)
Diabetes	Yes	1.06 (0.99-1.14, p=0.087)
Obesity	Yes	1.33 (1.19-1.49, p<0.001)
Chronic neurological disorder	Yes	1.17 (1.06-1.29, p=0.001)
Dementia	Yes	1.40 (1.28-1.52, p<0.001)
Malignancy	Yes	1.13 (1.02-1.24, p=0.017)
Moderate/severe liver disease	Yes	1.51 (1.21-1.88, p<0.001)



Patients at increased risk of dying in-hospital from COVID-19, OpenSAFELY (England)



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Possible way forward for Scotland

- Using our own national data to identify those at risk of severe outcomes/death – including GP data – using a data-driven approach
- Dynamically updated
- Flagging such individuals within health records to enable more tailored models of care/support – for example, remote consultations, prioritised home delivery of shopping etc.
- Could be achieved within days once data are flowing with real-time updates and evaluation

What does shielding mean?

- stay at home at ALL times
- avoid ANY face-to-face contact

What does shielding REALLY mean?

People living along		
	Can't go out for groceries/medication	Practical problems
	Lose independence & choice / feel a burden	Mental health problems
	Can't go to work	Loss of income/unemployment
	Difficulties accessing health and personal care	Reduced health/personal support
	More isolated	Mental health problems
	Unable to go outdoors	Physical and Mental health problems
People living with uninfected household members		
	Shared bathrooms and kitchens	Practical problems
	Shared recreational space (e.g. TV)	Mental health problems
	Feel responsible for vulnerable person	Mental health problems in other household members
People living with symptomatic / infected members		
	Where do they quarantine ?	Practical problems Economic problems Risk of infection

Additional problems if:

- Specific dietary needs
- Young children in household
- Domestic violence
- Substance/alcohol abuse
- Household member is a key worker

Socioeconomic inequalities:

- large house
- en-suite bathrooms
- private garden

What support is needed?

- Food / medication deliveries
- Continued but low risk health/personal care
- Mental health monitoring & support
  - Formal or informal – e.g. buddying schemes
- Digital resources / connectivity to keep in touch
- Other accommodation for household cases / key workers – e.g. hotel
- Clear, ongoing communications
  - what happens after 12 weeks?
  - What happens when other people go back to work/school?

Saving Lives through Biosecurity

Shielded person wants minimal (zero) exposure to virus, which means:

- Support in the form of advice, hygiene training, PPE
- Low as possible levels of infection in regular close contacts, the 'shielders', who should be symptom-free, virus-free and (ideally) antibody-positive
- Achieved by
  - Shielders reducing their own exposure (+ apps)
  - Shielders receiving direct support themselves
  - Shielders being tested as regularly as possible
- Together this is "biosecurity" at a household level (cf. hospitals and care homes)

Biosecurity ≠ social distancing

i) protection not lockdown; ii) safe contact not isolation; iii) voluntary not compulsory; iv) eased over time; v) saves lives even if imperfect

Advice and Support to the Shielded and Shielders

Population level impacts of shielding
Saving lives and reducing R

- Shielding has a proportionate impact on transmission, but it is designed to have a disproportionate impact on burden of severe disease
- Shielding therefore starts to decouple the policy objective of saving lives from R
- Shielding is not incorporated in the epidemiological models being used to inform policy across the UK. Nor are shielders.
- There is a trade-off between shielding and relaxation of social distancing
- Indirect benefits of shielding are modest based on narrow definition of persons to be shielded but can be substantial if definition also based on age (GovUK recommends 'enhanced social distancing' for those >70).

Shielding's primary role is saving lives

Shielding: A Review of International Approaches

COUNTRIES	Shielding Strategy Adopted	Government Strategy for Each Vulnerable Group (by Date)			
		Elderly	Chronic Condition	Resource Limited	Other
China & South Korea	🔴 Little to no shielding; extensive testing				
New Zealand	🟡 Soft shielding: Govt advising	Over 70s advised to stay home (3/21)	People with respiratory conditions & immunocompromised advised to stay home (3/21)		Large flu vaccine aimed at prevention begins (3/18)
South Africa	🟡 Soft shielding: Got advising & resource mobilization	Social & economic support (4/21) Advised to shelter-in-place (4/23)	Individuals with chronic conditions directed to shelter-in-place and adopt precautions to protect self (4/23)	Hotline established for areas in need of water to contact (4/23)	Self-isolation and quarantine sites identified for those can't at home (3/27) Temporary shelters that meet the necessary hygiene standards will be identified for homeless people (3/27)
Sweden	🟢 Hard shielding: Govt mandates isolation	Hygiene measures advised as being most important approach to elderly care (5/07)			Information on risk groups updated; including behavioural recommendations (4/20) Pregnant women with risk factors advised to be extra cautious (04/29) Vulnerable persons can reach out to get support for daily needs (5/11)
UK	🟢 → 🟡 Switch to soft shielding: Govt advising	Advised to self isolate while UK open (3/12) Over 65s can get tested (4/28)	Advised to self isolate while UK open (3/12)		Helpline & grocery delivery for those most in-need (3/21) Plans to protect rough sleepers (3/27) Digital innovations tested to support vulnerable (4/24)
USA	🟡 Soft shielding: Govt advising	Meal grants (3/24) Funding for elderly services (3/25) Medicare financial relief (3/28) Recommendation issued to nursing homes (4/02) Nursing home infections must be reported (4/29)		Checklists released to State Medicaid & CHIP programme (3/22) Medicaid emergency waivers for states approved (3/27)	Telehealth expansion (3/17)

Shielding: Key Findings from International Case Studies

1. Countries worldwide have either adopted no shielding policies, soft shielding policies, or hard shielding policies.
2. Most countries in North America, Europe, and Oceania adopted soft shielding measures: communicating with and advising vulnerable groups on best practice for safety
3. Asia is a negative exception: governments focused little on shielding and extensively on containment (mass testing, contact tracing, and protective equipment production)
4. Sweden is a positive exception: governments mandated isolation of elderly but made no material changes to living arrangements, e.g. elderly concentrated in nursing homes and nursing staff not given PPE.
5. South Africa is one country to watch. More material shielding measures have been suggested to African countries due to both limited healthcare capacity and relatively large immunocompromised populations (HIV, tuberculosis, and malnutrition prevalence is higher).
6. Vulnerable populations are not fully protected in shielding strategies adopted to date. In Sweden and UK where shielding strategies were enforced, elderly in nursing homes passed away in unexpectedly high numbers.
7. None of the 18x countries studied for this report have yet adopted hard shielding: physically separating vulnerable people from environments where their risk of infection is high.
8. Hard shielding would require separation of families. A study by Qian et al. in 2020 shows that about 80% of covid-19 transmissions occur through home outbreaks. Therefore, sharing indoor space was shown to be a major risk for contracting covid-19. Moreover, many elderly people live in multigenerational households. If hard shielding were called for, these elderly people would need to move house.
9. Even if elderly people were not in the same household as their families, current trends indicate they rely upon their families for care needs. For instance, in the US, 65% of older adults rely exclusively on family and friends to provide them with assistance. Beyond family, elderly people require regular contact for medical care, groceries, and transportation. Also, self-isolation has been linked to increasing levels of loneliness and mental health challenges.
10. Hard shielding would pose challenges including coordination required to relocate vulnerable groups; provision of support, say healthcare services, to vulnerable groups without putting them at risk.

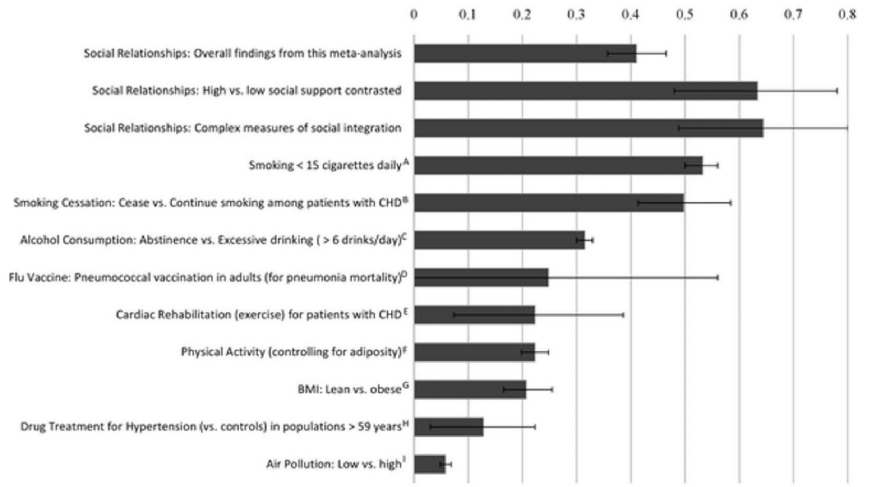
Shielding: Key Policy Takeaways

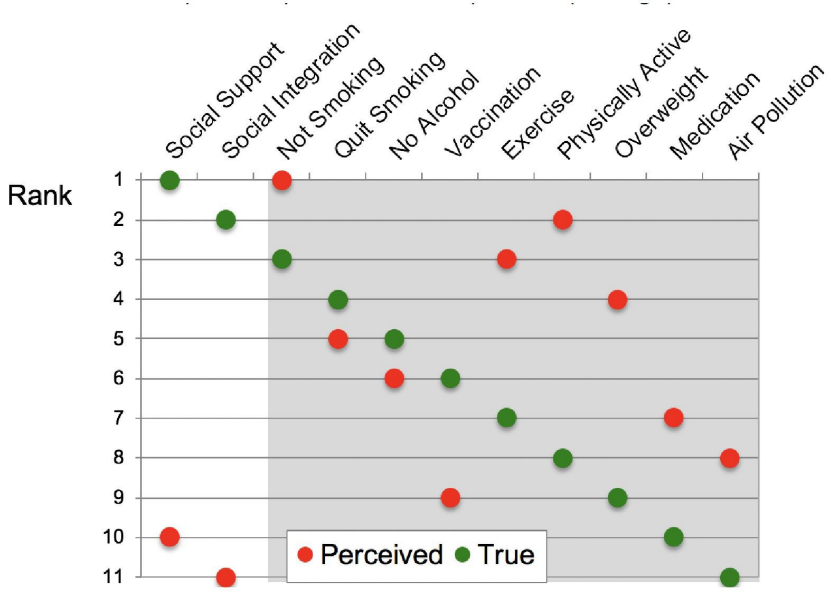
1. Vulnerable groups should not be advised to engage in home-level shielding if other household members can exit and re-enter with infectious risk. Risk diminishes if households both have a separate room or shelter for high-risk members, and can strictly adhere to isolation.
2. Effective shielding requires hard shielding, with material support offered for families and residents of care or nursing homes with relocation.
3. Support for vulnerable groups – in the forms of healthcare services, transportation, food, and social company among others – must be planned and communicated with these groups prior to any mass shielding efforts.
4. Community-level shielding has not yet been tested at a national level. But, when governments begin easing lockdown, it may be most effective for protecting the vulnerable from infection. Community-level shielding involves neighbouring households (i.e. 5-10) or members of an extended family within a defined geographic area voluntarily 'house-swapping' and grouping high-risk members into dedicated houses/shelters.
5. To facilitate community-level shielding, a devolved approach encouraging local and community-level units to coordinate groups of high-risk members would be needed.

Shielding: Behavioural Science Considerations (1)

Unlike other measures, such as lockdown and physical distancing shielding is a matter of protecting the individual from harm rather than stopping the individual from harming others. It would be a fundamental change to social and political values if the choice over shielding were to be taken away from individuals

The balance of harms between being shielded and not being shielded is far from clear. Evidence shows that social isolation has very strong physical health effects and also mental health effects. This is likely to be exacerbated if everybody else regains social contacts but vulnerable groups continue to be isolated and also if people are denied choice over shielding.

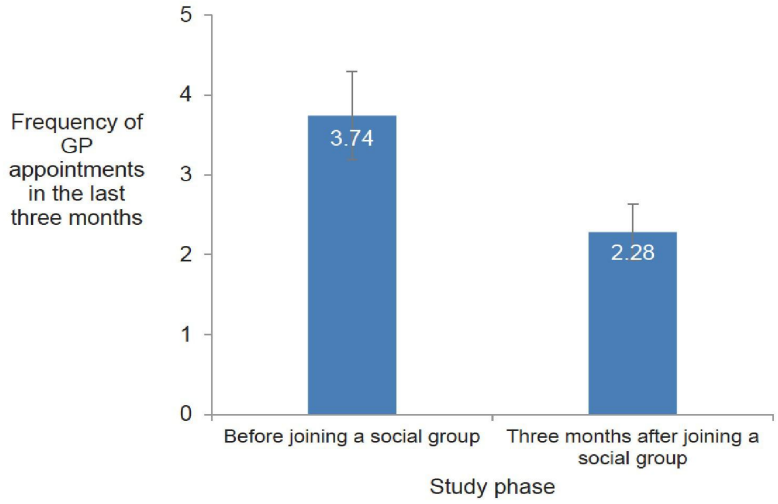


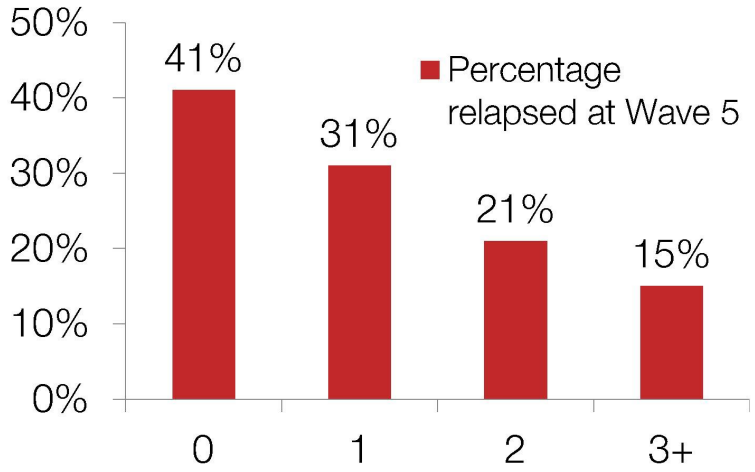


Shielding: Behavioural Science Considerations (2)

On the one hand, loneliness is a biopsychosocial stressor in adults with heart disease, hypertension, obesity, stroke, and lung disease. On the other, chronic disease leads to increased loneliness in older adults.

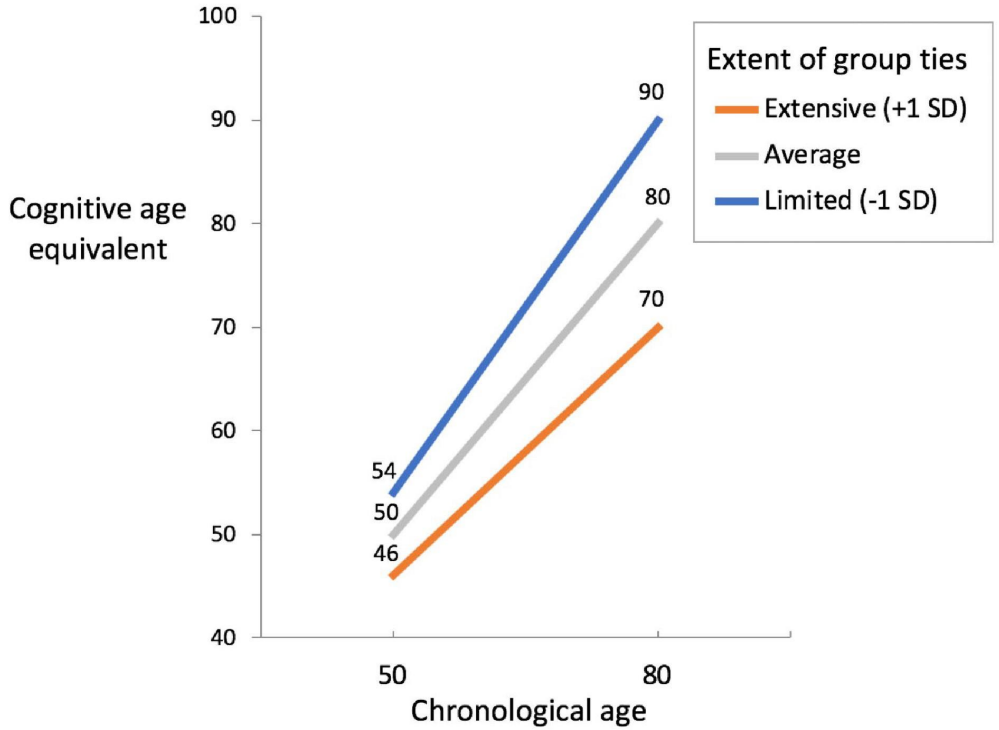
However, by providing social support – particularly by joining a social group, one can break this vicious spiral. Group support decreases visits to the GP by 40%. Support also protects mental health (relapse into depression)





Shielding: Behavioural Science Considerations (3)

Cognitive performance as a function of chronological age and social ties



Shielding: Behavioural Science Considerations (4)

Both objective risks and subjective evaluation of different risks (e.g. length of life vs. quality of life) will be highly individual). The most one can do is give the clearest possible information so as to allow informed informed decisions.

There are often differences between vulnerable people and their families in terms of decision making – families being more risk averse. While it is critical for vulnerable people to make their own decisions (if they are able) it is also important to involve families in the process.

Involving the families is important in another way. Understanding of vulnerability is important in terms of affecting the behavior of shielders: their own willingness to undertake risk (e.g. take public transport, go back to work, send their children to school) and their own protective practices (social distancing, hygiene practices outside and inside the home).

A critical aspect of shielding, then, is shielding the shielders and giving them practical support such as (a) enabling them to stay at home and avoid risks of going to work, (b) isolating them outside the home if they are infected or identified as contacts of the infected.

Finally, if people do shield, particularly those living alone, it is critical to provide not only practical support (delivery of food etc.) but also social support to avoid loneliness and the attendant physical/mental health problems.