

Brief

‘Shielding’ the Vulnerable From Covid-19: Review of Key Global Policies

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Issue

As governments worldwide consider exit strategies from lockdown, the use and efficacy of shielding measures requires evaluation.

Terms

1. *Shielding* measures protect the vulnerable, but do not affect viral spread.
2. *Containment* measures reduce viral spread, i.e. through mass testing, contact tracing, and mask-wearing.
3. *Vulnerability* is defined by risk exposure. For the purposes of this report, I've benchmarked the groups I consider vulnerable against CDC definitions.ⁱ However, doing so requires one caveat: vulnerability is dynamic.ⁱⁱ New research on covid-19 consistently expands definitions of vulnerability, as is evidenced by longer lists of groups at risk in NHS internal memos.ⁱⁱⁱ Moreover, groups not initially vulnerable at the outset of the pandemic can still be rendered vulnerable by policy responses.^{iv}

Background

In the coming days and weeks, governments worldwide will walk what Danish Prime Minister, Mette Frederiksen, called “the tightrope”^v between either maintaining complete lockdown or opening the economy. The former has, to date, been the only method that can arrest viral transmission and preserve life (Figure 1). The latter preserves livelihoods, but at the cost of increased viral spread (Figure 2). However, walking a tightrope involves a third component – taking measured steps forward. Shielding, unlike containment, has limited economic consequences (Figure 2) but has received less attention from policymakers. Despite this, examining how and to what end shielding works will determine if it is an appropriate next step.

Shielding measures and easing containment should not be considered mutually exclusive. Even in states which locked down early and completely, like California, nursing homes have still suffered thousands of deaths.^{vi} This may lead policymakers to believe shielding measures are ineffective. (Indeed, California’s reopening strategy does not yet include mention of shielding).^{vii} But, current shielding measures may not be ineffective so much as incomplete. As an exit strategy is designed, the full range of shielding measures must be explored alongside containment – albeit quickly.

Policy Alternatives

What does shielding entail? Traditionally, vulnerable populations are identified with respect to inclusion criteria based on a country’s demographics and presence of comorbidities. Then, governments might encourage or mandate three options for shielding:

1. *Home-level shielding*. Requires households have a room or shelter for high-risk members. Governments must provide clear communication, incentives, and support to households.
 - Pros: (i) Easily implemented when multi-generational living is already prevalent
 - Cons: (i) Likely ineffective if adherence to isolation is not strictly maintained or self-motivated; (ii) Difficult to implement in households without multiple rooms or shelters.
2. *Community-level shielding*. Requires neighbouring households (i.e. 5-10) or members of an extended family within a defined geographic area voluntarily ‘house-swap’ and group high-risk members into dedicated houses/shelters.^{viii} Governments must provide clear communication, incentives, and support to households.
 - Pros: (i) Minimizes contact with other residents; (ii) Feasible in dense, urban areas
 - Cons: (i) Coordination needed to relocate residents

3. *Off-site shielding*. Requires vulnerable populations be grouped (i.e. 50-100) and settled at a distance from non-vulnerable populations. Governments must coordinate, fund, and remain accountable to settlements.
 - Pros: (i) Resumed economy given vulnerable populations settled at appropriate distance.
 - Cons: (i) Unjust; (ii) Size of group heightens risk of death should any one individual be infected; (iii) Relocation requires extensive government assistance and liability.

How has shielding been implemented? The outcome of any shielding measures depends on many factors, including population demographics and environment. This gives shielding measures some distinct inter-regional variation, as seen in Table 1.

- *African countries* with the largest economies implemented some shielding (South Africa) or very little (Ethiopia & Nigeria). N.B. Future shielding has been advised for two reasons. First, healthcare capacity is low in many African countries, with very low numbers of ICU beds and ventilators. Second, immunocompromised populations are relatively large due to HIV, tuberculosis, and malnutrition.^{ix}
- *North American countries* have implemented soft shielding measures, which involve government communication, advising, and providing resources to vulnerable populations to stay home rather than formal policies mandating shielding.
- *Asian countries* have adopted more extensive containment strategies, using mass testing, contact tracing, and mask production to eliminate viral spread, but little to no shielding.
- *European countries* have implemented soft shielding measures.
- *Pacific countries* have also implemented soft shielding measures.

The shielding policies adopted by countries across the globe to target different vulnerable groups can be seen in Table 2.

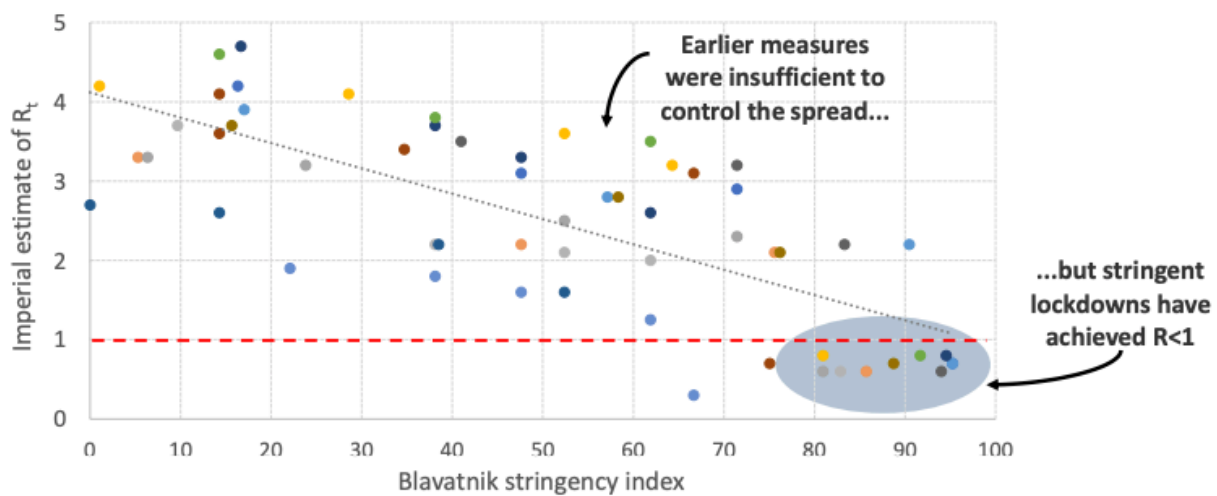
Policy Recommendations

1. Hard shielding requires separating families. A study by Qian et al. in 2020 shows that about 80% of covid-19 transmissions occur through home outbreaks.^x This study confirms that sharing a home environment is a major covid-19 infection risk. But separating families would be quite difficult. For instance, 13m elderly (>65 years) Americans live in multigenerational households.^{xi} If a full shielding of elderly were called for, alongside a full release of the rest of the household, these 13m elderly Americans would need to move house.
2. But, vulnerable populations are not necessarily protected by shielding measures. 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.^{xii} Beyond family, elderly people require regular contact for medical care, groceries, and transportation. Finally, self-isolation has been linked to increasing levels of loneliness and mental health challenges.^{xiii}
3. In the event that governments begin easing lockdown, community-level shielding may be most effective for protecting the vulnerable from infection. Concentrating vulnerable groups into one home of 5-10 people can be done relatively quickly with local and community support; is most feasible in urban areas, especially if dense; and will effectively minimize interactions between household members who re-enter society.

Appendix

Figure 1

Complete lockdown is the most effective method for arresting spread of covid-19 in Europe



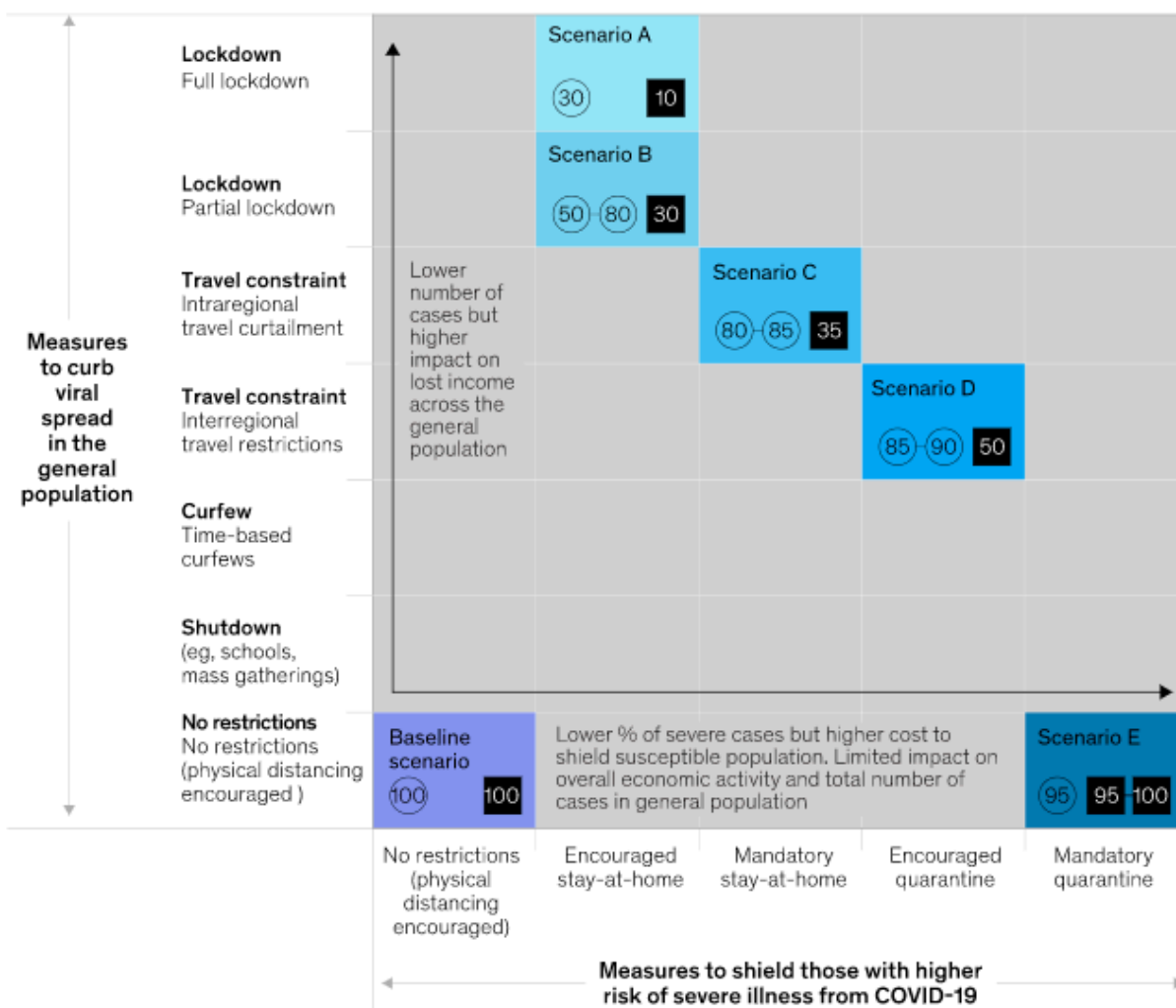
Source: Tony Blair Institute for Global Change, 'A Sustainable Exit Strategy' [Presentation](#) (April 20, 2020)

Figure 2

Complete lockdown is not a sustainable economic strategy for controlling covid-19, whereas shielding has little apparent economic consequence

Illustrative options and scenarios for a country, over a 30-day period, relative impact of restrictions on GDP and the number of cases

⊖ % Level of economic activity, % of baseline¹ ⊖ % Total number of cases, % of baseline¹



Scenario A: The government orders a full lockdown of all economic activity and movement across the entire country. This has the effect of curbing transmission of the virus in the general population but comes at great cost to its GDP.

Scenario E: The government simply provides guidelines to citizens about practicing safe physical distancing but strictly shields those most severely at risk of mortality. While the number of cases is higher, the proportion of severe cases may be low. There is significantly less impact to the economy overall.

¹Baseline refers to the cell in the bottom left corner of the matrix where economic activity continues, with no restrictions that curb the spread of the virus in either the general population or those at risk of severe illness from COVID-19. Economic activity refers to income-generating activities that contribute to GDP.

Source: McKinsey & Co, 'Finding Africa's path' Report (April 2020)

Table 1

Shielding strategies adopted across the world display inter-regional variation

Region	Country	Shielding Strategy Adopted
Africa	Ethiopia	●
	Nigeria	●
	South Africa	●
Americas	Canada	●
	USA	●
Asia	China	●
	Hong Kong	●
	Japan	●
	Singapore	●
	South Korea	●
Europe	Denmark	●
	France	●
	Germany	●
	Italy	●
	Spain	●
	UK	●
Pacific	Australia	●
	New Zealand	●

Key

- Yes
- Partial
- No

Source: [ACAPS](#) Covid-19 Government Measures Dataset, Updated: April 28, 2020
 Analysis: Yasmin Rafiei

Table 2

Breakdown of shielding strategies adopted to target vulnerable populations in select countries worldwide

		Shielding Strategy by Vulnerable Group					
		Elderly	Chronic Condition (1 or more)	Homeless	Incarcerated	Limited Resource Access	Nonspecific
Africa	Ethiopia				<p>Correctional facilities to expand and make use of other holding spaces to avoid overcrowding (Govt, 03/20)</p> <p>4,000 prisoners released in effort to prevent overcrowding in prisons and contain covid spread (Media, 03/27)</p> <p>All visitations to correctional facilities prohibited except for lawyers (Govt, 04/14)</p>		Over 134 facilities identified for quarantine, isolation and treatment (Govt , 03/27)
	Nigeria				Nigeria's president has pardoned 2,600 prisoners to reduce overcrowding in the West African country's jails and slow the spread of the novel coronavirus (Media , 04/09)		Introduction of isolation and quarantine policies (Govt , 03/13)
	South Africa	<p>Several interventions announced to provide social and economic support to elderly (Govt, 04/21)</p> <p>Elderly directed to shelter-in-place and adopt precautions to protect self (Govt, 04/23)</p>	Individuals with chronic conditions directed to shelter-in-place and adopt precautions to protect self (Govt , 04/23)	Temporary shelters that meet the necessary hygiene standards will be identified for homeless people (Govt , 03/27)		Hotline established for areas in need of water to contact (Govt , 04/23)	<p>Quarantine for those who test positive (UK gov travel advisory)</p> <p>Sites being identified for quarantine and self-isolation for people who cannot self-isolate at home (Govt, 03/27)</p>
Americas	Canada	<p>Elderly (those over 70) told to stay home (Media, 03/14)</p> <p>Pass measures to provide essential services to elderly impacted by COVID-19 (Govt, 03/29)</p> <p>Public Health Agency of Canada releases interim guidance for infection prevention and control of COVID-19 for long-term care homes (Govt, 04/13)</p>	Travellers arriving in Canada cannot isolate in place where they would be in contact with people with pre-existing conditions and with adults 65 years or over (Govt , 04/14)	Canada announces financial support for those experiencing homelessness (Govt , 03/29)	Visits to prison institutions suspended (Media , 04/11)		

		Elderly	Chronic Condition (1 or more)	Homeless	Incarcerated	Limited Resource Access	Nonspecific
	USA	<p>Dept of Health and Human Services announced grants to provide meals for older adults (Govt, 03/24)</p> <p>Reauthorization of Older Americans Act; \$250m in new funding to support elderly services (Govt, 03/25)</p> <p>Financial relief for Medicare providers (Govt, 03/28)</p> <p>Administration issues recommendations to nursing homes (Govt, 04/02)</p> <p>Relief funds to support efforts by Aging and Disability Resource Centers (Govt, 04/08)</p> <p>New regulatory requirements that will require nursing homes to inform residents, their families and representatives of COVID-19 cases in their facilities. (Govt, 04/29)</p>				<p>"Historic" expansion of telehealth access to combat covid-19 (Govt, 03/17)</p> <p>Telehealth benefits expanded for Medicare beneficiaries during covid-19 outbreak (Govt, 03/17)</p> <p>Covid-19 checklists and tools released to accelerate relief for state Medicaid & CHIP programs (Govt, 03/22)</p> <p>Administration approves 34th state request for Medicaid emergency waivers (Govt, 03/27)</p>	
Europe	Denmark	<p>Limitation of visits to hospitals, nursing homes, housing, etc.; relatives are only able to visit a dying or critically ill person; provisionally until 30th March (Govt, 03/18)</p> <p>Specific hotline for cases detected in settings with elderly or generally vulnerable persons (Govt, N/A)</p>	<p>People working in social services that are in at-risk groups (chronic conditions, elderly, immunocompromised) should not care for persons suspected with COVID-19 (Govt, 04/02)</p>	<p>Emergency accommodation for homeless people extended (Govt, 03/19)</p> <p>Further development of a previously existing app to help homeless persons find a sleeping place or shelter (Govt, 04/03)</p>		<p>Persons with mild to moderate symptoms who perform critical functions in the health care sector, the elderly, work with socially disadvantaged, or other key community functions can be referred to be tested (Govt, 03/22)</p>	<p>Specific behavioural recommendations to vulnerable people developed (Govt, 03/24)</p> <p>Recommend special attention and lower threshold for vulnerable groups for assessment and testing (Govt, 03/22)</p> <p>Bans on visits for various public and private facilities with vulnerable population groups (Govt, 04/05)</p>
	France	<p>Visits to elderly homes will be allowed again under certain restrictions (Media, 04/20)</p> <p>France will lift quarantines for all on May 11, without segmentation of age groups (Media, 04/18)</p>			<p>Camps in Calais and Dunkirk to be locked-down and refugees moved to accommodation centres (Media, 03/29)</p>	<p>Ministry of Health allowed teleconsultations (Govt, 04/04)</p>	<p>The waiting period usually applicable before the payment of daily social security benefits and the employer supplement is waived for vulnerable persons and those with child custody (Govt, 04/17)</p>

		Elderly	Chronic Condition (1 or more)	Homeless	Incarcerated	Limited Resource Access	Nonspecific
	Germany	Strengthening of safety measures in care institutions, elderly homes and institutions that care for disabled persons (Govt , 04/15)			Release of prisoners in the three states (Other org , 03/19)		
	Italy	To protect elderly people and compliance with social distancing, military is deployed to post offices to oversee pension withdrawals (Govt , 03/20) Ministry publishes clarification that people can accompany elders who they care for (Govt , 03/31) Post and Carabinieri to support delivery of pensions to elderly to avoid their increased exposure during collection (Govt , 04/07)		Specific shelters established for the homeless (Govt , 03/26)	Prisoners allowed to stay home with electric bracelets until June 2020 (Govt , 03/17)	Telemedicine opportunities established with central support for regional health professionals (Govt , 04/08)	Specific guidance for at-risk persons (Govt , 03/28)
	Spain				Release of a number of prisoners and also detainees of immigration centres that have been there for more than 60 days (Other org , 03/16)		Vulnerable people and people with symptoms asked to remain at home (Govt , 03/09)
	UK	Anyone over age 65 can get tested (Govt , 04/28)	Particularly vulnerable" people advised to 'shield' – not leave home, not attend any gatherings, not go shopping, contact others using remote technology (Govt , 03/21)	Hotels to become homeless shelters (Media , 03/21) Plans to protect rough sleepers (Govt , 03/27)			Helpline + grocery delivery for those most in need (Govt , 03/21) Digital innovations tested to support vulnerable people (Govt , 04/24)
Asia	China	Urging elderly care providers in low-risk areas to restore their services; 14-day quarantine will not be required among elderly people or staff within the area before their entrance (Govt , 04/08)					
	Hong Kong						
	Japan						

		Elderly	Chronic Condition (1 or more)	Homeless	Incarcerated	Limited Resource Access	Nonspecific
	Singapore	Eldercare facilities will suspend external excursions and large scale gatherings (Govt , 02/04) Eldercare services will limit the number of visitors to their premises (Govt , 02/07)	For patients and practitioners who are self-isolating or at high risk of COVID-19, Telehealth services are being offered (Media , 03/25)			Language barriers in parts of the Northern Territory are being broken down so all Australians can access covid messaging (Media , 03/25)	
	South Korea						
Pacific	Australia	From 1 May 2020, you must have had your influenza vaccination to visit an aged care facility (Govt , 03/18) Additional funding of \$444.6 million to strengthen the aged care industry (Govt , 03/20) Meal delivery to elderly (Media , 03/31) Visitation limits imposed to aged care facilities (Govt , 04/18)		Homeless get access to aged-care facilities to recover from coronavirus (Media , 04/10)	Personal prison restructured visits to help manage the risk to prisoners and staff; visits spotted in some jurisdictions (Govt , 03/20)		Western Australians reminded to book flu vaccination (Govt , 04/27)
	New Zealand	People over 70 years of age advised to stay home (Govt , 03/21)	People with underlying respiratory conditions and immunocompromised advised to stay home (Govt , 03/21)				"Largest ever" flu vaccine campaign begins early (Govt , 03/18)

Sources: [ACAPS](#) Covid-19 Government Measures Dataset, Updated: April 28, 2020; and desk-based research
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Citations

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