

COVID-19 Shielding  
Programme (Scotland) rapid  
evaluation

Summary report

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## At a glance



**Shielding was introduced to protect people at the highest risk of negative COVID-19 outcomes – the programme was set up to save lives.**



**All those considered to be at the highest risk (180,000 people) were identified individually and contacted directly, by letter and by phone.**



**A dedicated shielding food box delivery scheme was set up:**  
65,000 shielding people ordered and received free food boxes.



**A dedicated shielding SMS service was set up:**  
110,000 shielding people registered for SMS updates.



**There is clear evidence that shielding advice changed people's behaviour.**



**There is clear evidence that the shielding support addressed real need.**

## We have learned a lot since the start of the shielding programme:



Not all COVID-19 risk factors were known at the start.



Shielding was challenging and at times impossible for people.



The early guidance left little room for personal choice.



The support offered could not address all needs.

# Introduction

## About this report

This report is part of a series of three reports, published in January 2021, relating to the evaluation of the Scottish Government shielding programme. This summary report presents an overview of the key messages from the shielding evaluation. The other two reports in the series are the full evaluation report and a separate data report. The data report presents detailed COVID-19 test and mortality data relating to shielding.

## Evaluating the Scottish Government shielding programme

The Scottish shielding programme was introduced in March 2020 in order to protect people at the highest risk of severe illness or death in case of COVID-19 infection. The programme aimed to provide individuals with advice and guidance and with the support necessary to enable them to shield.

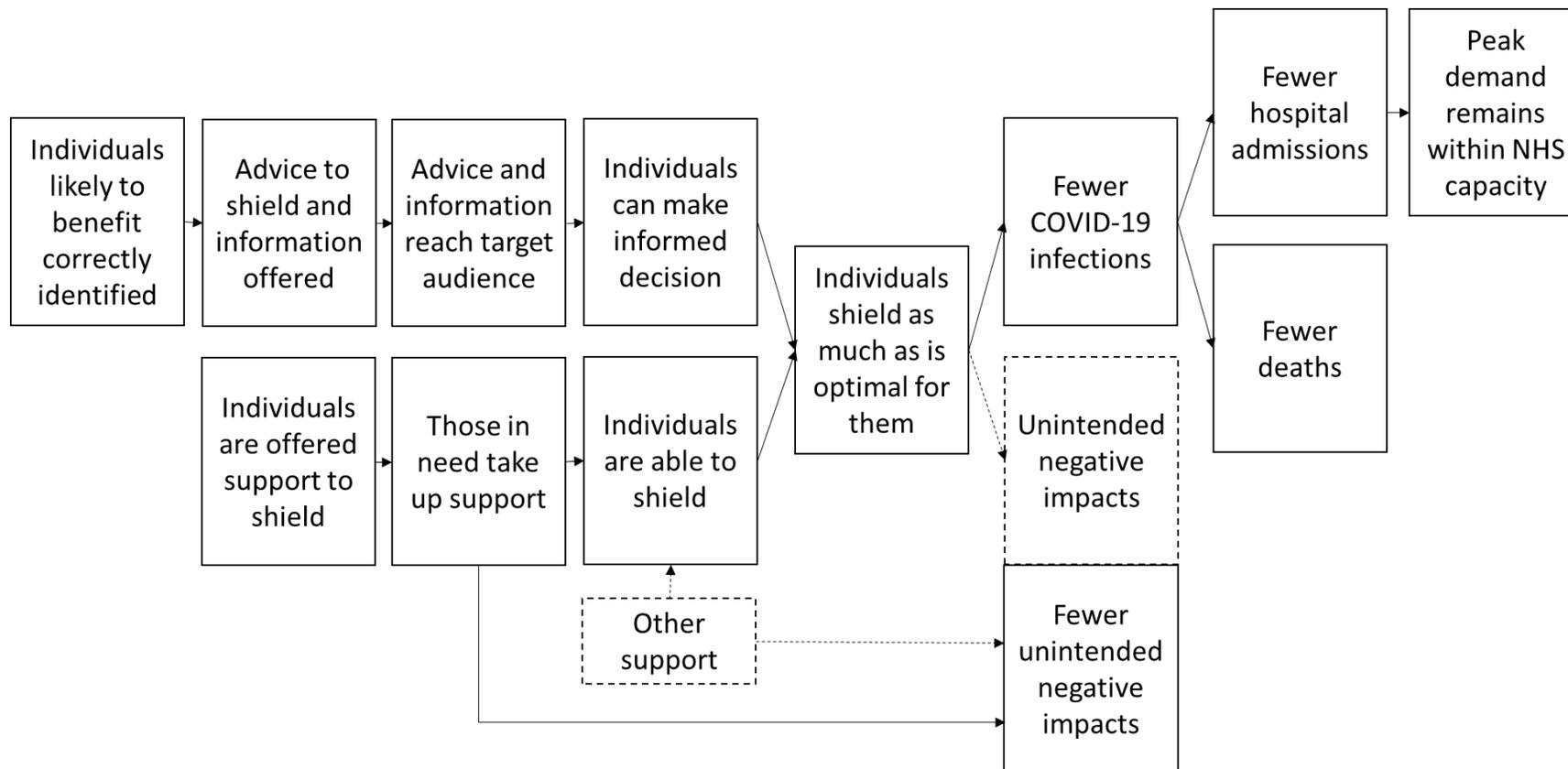
The evaluation of the shielding programme covered the period between March and August 2020. Figure 1 presents the evaluation logic model. This logic model sets out what the Scottish Government shielding programme intended to achieve and how. The evaluation aimed to answer six questions:

- 1 Who was advised to shield?
- 2 What difference did the guidance make to people's behaviour?
- 3 Did shielding reduce harm?
- 4 Did the shielding support reach the intended audiences?
- 5 Was the support fit for purpose?
- 6 What have been key process issues?

The evaluation took place against the complex backdrop of the COVID-19 pandemic. As a result, we followed a flexible, collaborative and **rapid** approach to the evaluation. The rapid approach to the evaluation means that the answers to some evaluation questions

remain uncertain. As additional evidence emerges, it is anticipated that some – but not necessarily all – of this uncertainty will lessen. The evaluation faced a number of important limitations which are discussed in the full evaluation report.

**Figure 1. Evaluation logic model**



The evaluation explicitly did not aim to establish whether it was 'right' to launch the shielding programme. Shielding was initiated in a unique context of limited evidence to guide policy-making, but acute pressure to act fast. The evaluation focused instead on lessons for the future.

# Effectiveness of the advice to shield

Evaluating the effectiveness of the advice to shield focused on the first three evaluation questions:

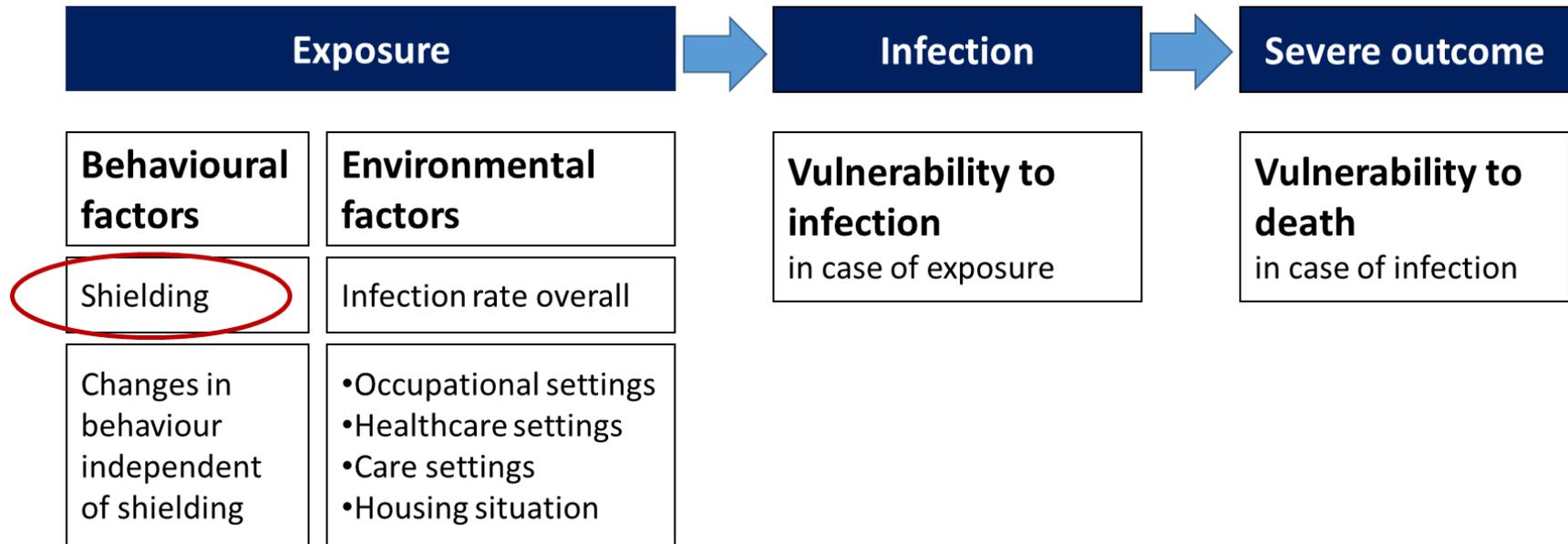
- 1 Who has been advised to shield – and were they the ‘right’ people?
- 2 What difference did the shielding guidance make to people’s behaviour?
- 3 Did shielding reduce harm – did it result in fewer COVID-19 infections or deaths and how did these positive outcomes compare to any negative impacts?

There were methodological challenges to evaluating whether shielding had a protective effect:

- First, there is no ‘counterfactual’: we do not have data on what would have happened to shielding individuals if the shielding programme had not existed.
- Second, early on, shielding coincided with population-wide lockdown restrictions. It is difficult to disentangle the impact of shielding from the impact of other COVID-19 restrictions.
- Third, **shielding can only have influenced exposure to the virus, not vulnerability to infection or vulnerability to death if infected** (see Figure 2). Moreover, shielding could only influence some aspects of exposure: it could not change where people lived or stop them from needing to access healthcare. This last point is important: shielding individuals were clinically vulnerable and likely to require healthcare. It is difficult to separate the different factors that relate to COVID-19 infection and disease progression.

Because of the methodological challenges, the evaluation did not aim to provide a conclusive answer to the effectiveness question. Instead, it aimed to **inform** discussions about the **likelihood** that shielding may have been effective.

Figure 2. Shielding as one of many influencing factors in COVID-19 disease progression

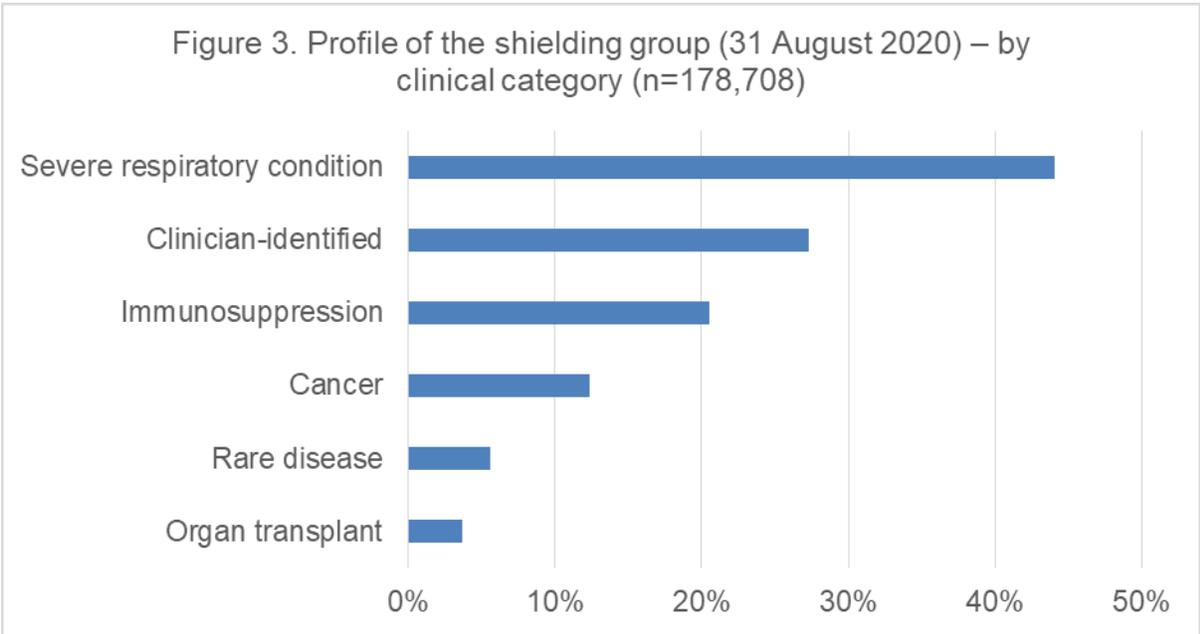


### Who was advised to shield – and were they the ‘right’ people?

COVID-19 was a new disease. When the shielding programme was first set up, there was no pre-existing evidence about who was at the highest risk of severe COVID-19 illness or COVID-19 death. Identifying the shielding conditions was done based on clinical expert opinion.

About 180,000 individuals, or 3% of the Scottish population, were included on the shielding list. Shielding individuals were more likely to be female, more likely to be older, and more likely to live in more deprived areas of Scotland than the population at large. Just over 2,000 individuals in the shielding group were care home residents.

The largest group were those who were shielding because of a severe respiratory condition (44%), followed by individuals in the ‘other’ category who had been identified by their clinician as likely to benefit from shielding (27%) and individuals who were shielding because of immunosuppression therapy (21%) or because of cancer (12%) (see Figure 3).



Source: Public Health Scotland (Shielding list).

There is evidence to suggest that the shielding programme correctly targeted individuals at higher risk of negative COVID-19 outcomes than the population at large. As part of this evaluation, Public Health Scotland led a case-control study<sup>1</sup> to explore the risk of severe COVID-19 among shielding individuals, using robust statistical methods. The study demonstrated that individuals in the shielding group **were** at higher risk of severe COVID-19. Severe COVID-19 was defined as a confirmed COVID-19 infection which

resulted in admission to an intensive care unit or death. The risk of severe COVID-19 varied between the different clinical shielding conditions. The organ transplant group was the clinical shielding condition at the highest risk of severe illness.

There is evidence to suggest that some other groups, not included in the shielding list, were also at higher risk of negative COVID-19 outcomes. For example, the shielding criteria did not include age as a factor and old age has subsequently been identified as an important risk factor.

It is not possible to directly compare, like for like, the risk of negative COVID-19 outcomes among those with clinical shielding conditions and those with other clinical conditions. Fewer negative outcomes may be observed in the shielding group **because** people were shielding; their 'real' risk, in the absence of shielding, is hard to establish. As a result, we cannot answer the question whether the 3% of the Scottish population on the shielding list were the 3% of the Scottish population at the **highest** risk of negative COVID-19 outcomes.

## What difference did the guidance make to people's behaviour?

Shielding guidance can only have had a protective effect if individuals changed their behaviour as a result of the guidance. If individuals would also have 'shielded' (minimised all interaction with others) in the absence of the guidance, any protective effect would not be the result of the guidance. If they were not aware of the guidance, were unable to follow the guidance, or chose not to follow the guidance, there is also less scope for impact.

There is clear evidence that the shielding guidance made a difference to the behaviour of individuals in the shielding group. A Public Health Scotland survey of over 12,000 shielding individuals demonstrated that four in ten of respondents were following the guidance completely. Interviews with shielding individuals confirmed that the guidance directly influenced their decision-making around shielding.

However, a group of people started to 'shield' (minimised all interaction with others) **before** the Scottish Government issued shielding guidance. There is some evidence to suggest that the size of this group may have been substantial.

There is also evidence that the guidance was not always followed. One in five respondents to the Public Health Scotland shielding survey were **unable** to follow the guidance completely. Many shielding individuals appeared to have tried to follow the guidance to the best of their ability, but caring responsibilities, practical constraints and quality of life considerations made this difficult. Others **chose** not to follow the guidance or not to follow the guidance completely.

Shielding guidance changed behaviour – but the guidance was not necessary or sufficient to change behaviour in **all** instances.

## Did shielding reduce harm?

A total of 1,839 shielding individuals (1% of the shielding group) had a confirmed COVID-19 diagnosis in the period until 31 August 2020. A total of 622 shielding individuals (0.3% of the shielding group) died with COVID-19 in the period until 31 August 2020. About one in ten (9%) of all deaths in the shielding group in this period were COVID-19 deaths: the shielding group were a clinically vulnerable group and, as such, vulnerable to death from other causes.

Although it is a key question, it is not possible to give a conclusive answer to the question whether shielding had a protective effect. Further analysis and research can contribute to building the evidence base. However, it is important to acknowledge that, because of the methodological challenges, finding a conclusive answer might not be possible.

Exploring the effectiveness question highlighted that hospital-onset infections may have been a particular risk for the shielding group. The Public Health Scotland case-control study, already mentioned above, explored risk factors for severe COVID-19 among shielding individuals. A recent hospital admission, **not COVID-19 related**, was the most

important risk factor for severe COVID-19 in the shielding group. This suggested that hospital-onset COVID-19 infections may have been an important risk for the shielding group. Transmission **within** the household was also identified as a risk.

As mentioned before, shielding could only influence some aspects of individuals' exposure to the virus: it could not stop individuals from needing to access health care. Shielding individuals were a clinically vulnerable group and more likely to require health care. Individuals in the shielding group were five times more likely than the population at large to be admitted to hospital, for any reason, in the period between March and July 2020.

Any **additional** protective effect of shielding may have been relatively modest: shielding coincided with population-wide control measures, which reduced the risk of exposure to the virus independent of shielding. Moreover, it has since been established that prevalence rates of the virus in the population at large remained relatively low overall during the shielding period. This does not necessarily mean that, in March 2020, there was no place for shielding guidance alongside other public health measures. Key elements, such as adherence to lockdown measures or the prevalence rate of the virus, were not known at the time.

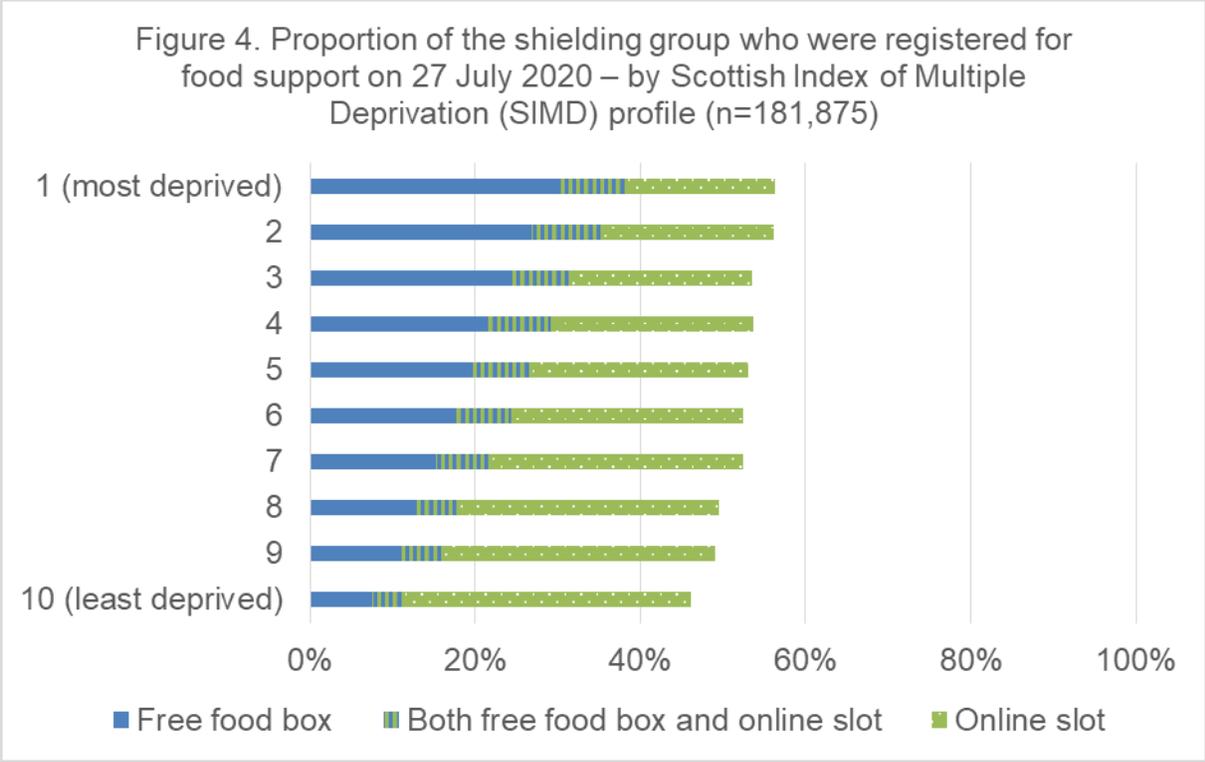
It is possible that less stringent measures – for example advising individuals that they could leave their home for exercise or physical activity – may have achieved similar outcomes. In this context, it is also important to acknowledge the negative impacts of shielding, including negative mental health impacts. The impacts of reduced access to health and care and, related to this, the impacts on unpaid carers, could only be briefly touched upon in the evaluation, but these impacts appear to have been pronounced. It is difficult to disentangle to what extent negative impacts were the result of shielding as opposed to COVID-19 restrictions more generally. However, it is clear that shielding at times added extra complications.

# Evaluating the shielding support offer

Evaluating the shielding support offer focused on the following three evaluation questions:

- 1 Did the shielding support reach the intended audiences?
- 2 Was the support fit for purpose?
- 3 What have been key process issues?

The support offer reached large numbers of shielding individuals. More than 90% of shielding individuals were contacted by their local authority. Six in ten of all shielding individuals signed up to the shielding SMS service. At the peak of the programme, more than 50,000 individuals ordered and received weekly home delivery of free food boxes. Overall, one in three of all shielding individuals ordered and received at least one free food box. Those living in more deprived areas were more likely to order and receive free food boxes (see Figure 4). More than 50,000 shielding individuals registered for a priority online supermarket slot. These support systems were set up at pace in the early stages of the pandemic.



Source: NHS Education for Scotland

The shielding support offer could not address all needs. There were also a number of logistical challenges. Questions were raised about the content and quality of the food boxes and whether the boxes were ‘necessary’ for all those who received them. However, there was also clear evidence that the support offer had addressed real needs.

## Lessons from stakeholder interviews

A clear framework underpinned the shielding programme. High levels of dedication and effort were invested in the shielding programme, by people across a range of organisations.

Some of the assumptions on which the programme rationale was based, were questioned by stakeholders. For example, they suggested that:

- The complexity and scale of the process of identifying shielding individuals, which involved a range of different mechanisms and databases, had been underestimated by some.
- The degree to which different risk factors **combine** to determine an individual's risk profile had not been considered sufficiently in the initial set-up.

In addition, some aspects of delivery were questioned. For example, some stakeholders commented that:

- The national free food box scheme had not been the most cost-effective route.
- The wording of the shielding letter had added unnecessarily to some people's anxiety.
- Initial approaches had not focused enough on person-centred, informed decision-making.

Most important are the conclusions that can be drawn from this in terms of lessons for the future.

## Lessons learnt

Key lessons can only emerge over time through further reflection and through discussion among those involved in or impacted by the programme. To help inform those discussions, we would like to offer a number of observations, based on the evaluation.

In the short term, we recommend that the strengths and limitations of the current shielding list and how it should and should not be used, are reviewed. This was identified in stakeholder interviews as a key challenge for the future. This should include

an open debate about relevant data protection issues and should involve those with lived experience of shielding.

In terms of lessons for future pandemic planning, a repeat of shielding, **in its initial format**, is not recommended. The principle of protecting those at higher risk of infection remains valid, but future programmes would benefit from considering more fully:

- Informed choice – different people approach risk differently.
- The complexity of how risk factors combine to determine individual risk profiles. Risk is not a binary concept: it lies on a continuum and has many components. There are many risk factors beyond clinical conditions, including for example socio-demographic or occupational factors.
- The risk of COVID-19 infection during a hospital admission.
- The risk of transmission within the household and the support needs of the wider shielding household.

We recommend that planning for future programmes carefully considers whether at-risk groups would need to be identified and contacted on an **individual** basis. The advantages and disadvantages of this approach would need to be explored. If groups are to be identified and contacted on an individual basis, the systems to enable this to happen efficiently would need to be established.

There are opportunities to build on co-production approaches to programme development as used in the shielding programme. There is also scope to explore opportunities to plan for future approaches to resilience planning that allow for more local flexibility. More generally, there are opportunities to further enhance collaboration between local authorities and the local public health function. At-risk groups should be involved in future planning efforts.

## Conclusions

The shielding programme was a major exercise involving collaboration among a range of partners. The shielding programme made a difference: there is clear evidence that the shielding advice changed people's behaviour and that the shielding support addressed real need. However, the shielding guidance was neither necessary nor sufficient to change behaviour in all instances. The shielding support could not address all needs.

There is evidence to suggest that the people targeted by the shielding programme were at higher risk of negative COVID-19 outcomes than the population at large. Others, not included on the shielding list, were also at higher risk. Assessing whether shielding had a protective effect, over and above the protection offered by population-wide restrictions, is challenging. No conclusive answer is possible.

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## References

1 McKeigue P et al. Risk of COVID-19 in clinically extremely vulnerable individuals advised to shield during the epidemic in Scotland – cohort and case-control study. (To be published.)

Other formats of this publication are available on request at:



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