



Kemp, O., Horne, G. A. and Soutar, R. (2020) The psychological impact of COVID19 on a shielding high-risk cohort. *Scottish Medical Journal*, (doi: 10.1177/0036933020951900).

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Deposited on: 18 September 2020

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Title: The psychological impact of COVID19 on a shielding high-risk cohort

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Word Count: 1053

Accumulating evidence suggests that patients with haematological malignancy are likely to be at increased risk of acute complications from viral respiratory infections(1). This is pertinent within the current COVID19 pandemic, where infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has led to increased morbidity and mortality, particularly amongst a hospitalised cohort(2,3). Patients with multiple myeloma have been shown to be amongst those with the highest risk, with recent data suggesting a mortality of 54.6%, likely secondary to cellular and humoral immune dysfunction, together with increasing age and multiple comorbidities(4).

In order to reduce the risk of infection amongst high-risk individuals, shielding was initiated throughout the UK, whereby all high-risk individuals, estimated at 1.5 million, were advised not to leave their property for any reason and to avoid contact with other members of the household where possible for a minimum of twelve weeks, pending review(5). As of 1st of June 2020, 179,728 people were recorded as shielding in Scotland, with 12% of these cancer patients. In order to maintain compliance, a number of initiatives were implemented, including government food parcels, priority shopping and alterations in how secondary healthcare was provided, including increased virtual consultations to avoid hospital attendance, and community phlebotomy. Most recently, it was announced that within England, patients will no longer require to shield as of the 1st August 2020, being able to return to work if unable to work from home(6). This blanket approach has not been established in other parts of the UK, with current shielding guidance under continued review.

With sudden, unexpected, change in guidance comes concern over the psychological impact that the current COVID19 pandemic will have on these high-risk patient groups, where an increased risk of anxiety, depression and post-traumatic stress disorder (PTSD) is already well documented(7,8). Previous viral outbreaks, such as from severe acute respiratory syndrome (SARS), have reported that the psychological impact of quarantine (i.e. an imposed quarantine when a person has the virus) can vary from short-term effects such as irritability, fear, confusion, anxiety and depression, to extremes of consequence, including PTSD and suicide(9). In keeping with this, a recent survey of 1077 people from Blood Cancer UK documented that more than half of respondents (51%) were struggling with mental health during COVID19, and nearly 9% reported this impact on their mental health as 'severe' (twitter: @bloodcancer_uk). It has yet to be fully elucidated, however, if 'voluntary' shielding will exhibit such psychological impact.

To ascertain the psychological impact of 'voluntary' shielding, 25 patients with multiple myeloma from the Beatson West of Scotland Cancer Centre, Glasgow, were reviewed through questionnaires and telephone consultation during weeks 8 and 11 of lockdown. The consultation was split into 6 main categories: concept understanding, compliance, triggers of anxiety, triggers of frustration/depression, changes to myeloma care and coping strategies. Demographic data is presented in table 1.

All patients stated that they understood the concept and importance of shielding, as stated through government correspondence and discussions with their clinical team. However, they often adapted this to their clinical situation. For example, those with children could not distance themselves within the household and, therefore, asked all family members in the household to shield to limit viral exposure. 24 of the 25 patients (96%) fully complied with shielding and had not left their property throughout the duration of shielding, other than to attend hospital appointments if indicated by their clinical team. Compliance was achieved through support from family, friends, the clinical team, primary care and community phlebotomy services, religion, charities, and increased support from supermarkets to allow

food delivery. 55% accepted the government food parcel, but this was often supplemented with online food shopping.

A major trigger of anxiety was when the individual lived with others, particularly when those individuals were also in a high-risk category and shielding. This was generally triggered by hospital attendance and an overarching fear of transmitting the virus. 5 patients (20%) patients described concern regarding low mood and depression. Triggers included concern regarding disease relapse, progression, and limited exercise allowance. Interestingly, all patients who described low mood stated that this coincided with the weather. Other triggers of low mood included fear of lockdown ending, and subsequent plans for high-risk patients that would continue to limit their risk.

All patients reported positive experiences of myeloma care during shielding and felt well informed. This was achieved through telephone and virtual clinics, prescription delivery, and community phlebotomy services. A minority (3 patients; 12%) still attended for day-unit led intravenous/subcutaneous treatment. Changes in myeloma care and treatment decisions were guided by national guidelines(10). In keeping with this, a number of autologous stem cell transplants had been postponed or cancelled and alternative treatment initiated. Patients understood the risk:benefit of the procedure but expressed disappointment that this had occurred.

The majority of patients felt that increased understanding allowed them to gain perspective and a practical approach for coping. Religion, hobbies, and exercise were amongst the most common coping strategies, although all patients missed social interaction. The importance of support networks and the increased use of technology was described by all, particularly in difficult life events, such as bereavement that had occurred with 1 patient. Almost 50% did not feel that shielding had greatly affected their lives in the short-term.

When asked about shielding in the longer-term, the majority of patients (96%) stated this would be 'disappointing' as it would feel 'endless', however, one patient expressed significant anxiety over the increased perceived risk.

Our data highlights the resilience of a high-risk cohort coping with voluntary isolation on a short timescale. It is important that this historical event in patient care is documented and that long-term psychological impact is considered going forward. The idea of post-traumatic growth has long been described amongst patients with cancer(11), especially when coupled with an altruistic approach to understanding of the underlying issue. However, inconsistent and sudden changes across the UK remain a concern and will likely add anxiety to an unpredictable situation. Patients may be left vulnerable and, in a position, where they feel they are choosing risk over health. In order to prevent long-term psychological sequelae, accurate information of viral risk needs to be relayed to their support network, including physicians, to enable an informed decision to be made with regards to continued shielding. A blanket approach may not necessarily be the correct way forward.

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Table 1. Demographic data

Patient Demographics	All patients n=25
Age	
Median (range)	67.5 (46-81)
Sex	
Female	10 (40%)
Male	15 (60%)
Living situation	
Living alone	7 (28%)
Living with >= 1 household member	18 (72%)
Access to garden	22 (88%)