



# NOTE: The problem of asymptomatic COVID-19 infections among care home staff and residents: emerging evidence and implications

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## 1. Introduction

In the guidance documents on how to contain the spread of COVID-19 infections in care homes in most countries (including the UK), the advice is to isolate both residents and staff who have symptoms of COVID-19, described as having a fever and or a cough.

However, there is increasing evidence of pre-symptomatic transmission that raises important questions about how effective guidance based on these symptoms is. This note summarises recent evidence on the extent of asymptomatic positive cases of COVID-19 and starts a discussion on the implications of this evidence for reducing the spread of infections in care homes.

## 2. Epidemiological evidence

There is growing evidence of pre-symptomatic transmission of COVID-19, as for example a study of COVID-19 clusters in Singapore (1). The World Health Organisation also recognises the role of pre-symptomatic transmission (2).

Specifically in care homes, a study carried out by the Centers for Disease Control and Prevention (United States) tested 76 (93%) residents in a skilled nursing facility where there was an outbreak of COVID-19. They found that 23 (30%) residents tested positive. Of these, 10 (43%) had symptoms on the date of the test. The remaining 13 (57%) were asymptomatic. 7 days after testing, 10 out of 13 of the asymptomatic residents had developed symptoms. This study suggests that symptom-based screening in long-term care facilities could fail to identify approximately half of residents with COVID-19 (3).

The official epidemiological bulletins on COVID-19 for Belgium provide details of the COVID-19 tests carried out among care home staff and residents (4). Their report of the 16th of April included data on 13,544 carried out in care homes since the 10th of April. The report shows that, among the 7,146 tests to care home staff, 954 (13%) were positive and, among the positive cases, 699 were asymptomatic, so 73% of all positive cases among care staff were asymptomatic at the time of testing. Of the 6,398 tests to care home residents, 1,279 (20%) were positive and, among these positive cases, 883 were asymptomatic, so 69% of all positive cases among care home residents were asymptomatic when tested.

## 3. Implications

### 3.1. Testing

Ideally all care home residents and staff should be tested regularly, irrespective of whether they display the “typical symptoms”. The most recent guidance from the Robert Koch Institute (Germany) covering hospital discharge published on the 17th of April that patients discharged from hospital to nursing homes who continue to experience symptoms should be isolated in their institution for at least 14 days following discharge. After this time period, and if they have

been symptom free for at least 48 hours patients can be released from isolation following medical consultation. If patient have been symptom free in hospital for at least 48 hours, they can be discharged to the nursing home without further requirements if they had two negative tests that were performed at the same time (one oropharyngeal, one nasopharyngeal) (a summary in English is available [here](#), and also a [comparison between this guidance the latest guidance for England](#)).

### **3.2. Improving awareness of atypical symptoms of COVID-19 in care homes**

In their latest [guidance on managing COVID-19 in care homes](#), the British Geriatrics Society has a section on the identification of symptoms (5). It stresses that “Public Health England have suggested that COVID-19 should be suspected in any resident with a new continuous cough and/or high temperature (at least 37.8°C). However, COVID-19 in care home residents may commonly present with non-respiratory tract symptoms, such as new onset/worsening confusion or diarrhoea. Care home staff, with detailed knowledge of residents, are well-placed to intuitively recognise these subtle signs (‘soft signs’) of deterioration.”

### **3.3. Isolation according to contacts, not just symptoms?**

Countries that, at this early stage, appear to have had relative success in preventing and containing COVID-19 outbreaks in care homes, such as Singapore and [South Korea](#), have very strict processes to isolate and test all care home residents and staff who not only have symptoms, but who may had contact with people who have COVID-19 (6).

Spain, where there have been large numbers of deaths in care homes, initially had similar guidance as the current one in the UK, based on only isolating residents and staff with symptoms. However, this was changed on the 24th of March following large numbers of deaths in care homes and also many cases of homes where so many staff were absent that care provision was no longer viable, resulting in the army and fire service (or even local politicians) having to step in. The new guidance in Spain now requires isolation of all possible, probable and confirmed cases among residents and staff. Possible and probable cases are defined as those having potentially been in close contact with someone with COVID-19 (7).

### **3.4. Measures to improve physical distancing in care homes**

It is very important to recognise that care homes were never designed to be isolation or quarantine centres. A more detailed summary of international examples of measures adopted to reduce the spread of infections in care homes is under preparation. A few of the emerging examples are:

- Reducing occupancy in care homes may improve their ability to physically isolate residents successfully and to implement measures such as "[zoning](#)" the care home.
- In a growing number of countries, [hotels and other accommodation](#) are used for this purpose. For example, care home residents who test positive for COVID-19 are transferred to converted quarantine centres or, inversely, residents that are not suspected of having the virus are transferred to hotels where they continue to receive care.
- In countries where hospital admissions due to COVID-19 are starting to decrease, there may be an opportunity to transfer more care home residents with severe infections to hospitals.

## 4. References

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