Care homes – forgotten by us, not by COVID

By Dan Ryan and Adrian Baskir for

COVID-19 Actuaries Support Group – Learn. Educate. Inform. Influence.

Introduction

In their weekly analysis of deaths, the Office for National Statistics (ONS) reported that the total number deaths in excess of 5-year averages in the 12 weeks up to 5 Jun was 58,765 in England and Wales. These numbers are much higher than the reported number of deaths from the Government briefings each evening, or the numbers where COVID-19 is reported on the death certificate. In the absence of accurate reporting, excess deaths are the clearest indicator of the impact of COVID-19, both direct and indirect.

Within this tragedy is the realisation of the scale of the devastation that COVID-19 has wreaked within care homes across the UK and elsewhere. The prioritisation of provision of sufficient personal protective equipment (PPE) to NHS hospitals over care homes resulted in staff being placed at increased risk and increased the likelihood of rapid spread within the care homes.

Moreover, the mental impact of lockdown should not be underestimated for those in receipt of care, suffering from isolation in their rooms as well as disruption to normal routines and much needed support. Over 45% of those excess deaths in England and Wales were care home residents. From 13 March to 25 June, almost 1 in 7 residents died in their care homes, doubling the toll that we might have otherwise expected.

Timeline

It is worth reminding ourselves of the timeline of the dawning recognition of COVID-19 in care homes in the UK, to compare the UK experience with that of other countries and to consider what lessons can be learned for future waves or pandemics.

25 February – Guidance issued to care homes from Public Health England (PHE) on precautions and processes in the event of COVID-19 outbreaks. The guidance stated that it was "intended for the current position in the UK where there is currently no transmission of COVID-19 in the community. It is therefore very unlikely that anyone receiving care in a care home or the community will become infected."

13 March – New guidance from PHE did not ban visits but advised care homes to "ask no one to visit who has suspected COVID-19 or is generally unwell, and emphasize good hand hygiene for visitors".

23 March – General lockdown order issued

26 March – Sarah Pickup, deputy chief executive of Local Government Association, warned the UK health select committee hearing that "access to PPE is insufficient in the care sector" and that patients discharged from hospital risked infecting others at their care home (BMJ).

9 April – Care England warns that up to 1,000 COVID-19 related deaths may have occurred in care homes whilst the latest data at that time (up to 27 March) from ONS was reporting only 20 deaths with COVID-19 mentioned on the death certificate.

28 April – Care Quality Commission (CQC) starts two new series of publications in respect of deaths of care home residents. First, a daily update to PHE of deaths notified where COVID-19 was confirmed to complement those that have been reported by NHS England since 2 April. Second, an extension to the weekly deaths release from ONS which included deaths in care homes where COVID-19 was mentioned on the death certificate, as well as more detailed data by local authorities in England for all deaths and COVID-19 notified deaths.

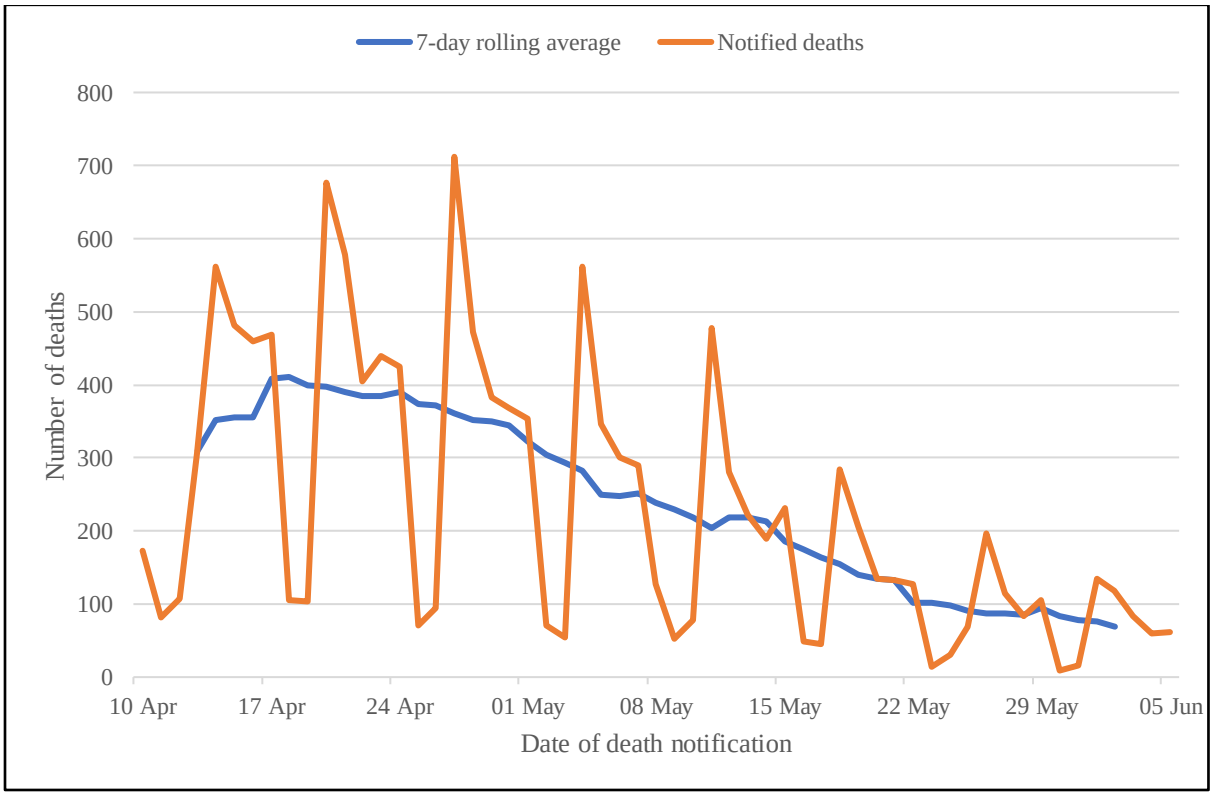
16 June – Most recent publication on deaths in care homes from CQC and ONS.

The overall reported numbers of deaths from PHE have now been updated retrospectively to the beginning of the COVID-19 pandemic, but the CQC provides separate information on deaths in care homes going back to 10 April.

Figure 1 below sets out the number of deaths that were daily notified as well as a rolling 7-day average to compensate for reduced notifications over weekends and public holidays. The peak number of deaths is almost 2 weeks later than in NHS England hospitals where the peak occurred on 8 April.

Since then the numbers have generally reduced but at different speeds in different regions, and there is a clear need to remain vigilant as lockdown restrictions are steadily eased. A more focused strategy aimed at containment within communities and/or within care homes will be needed as there is further easing. The need for shielding of care home residents will be increased in this phase where outbreaks are more localised.

Figure 1 – Deaths of care home residents notified to Care Quality Commission

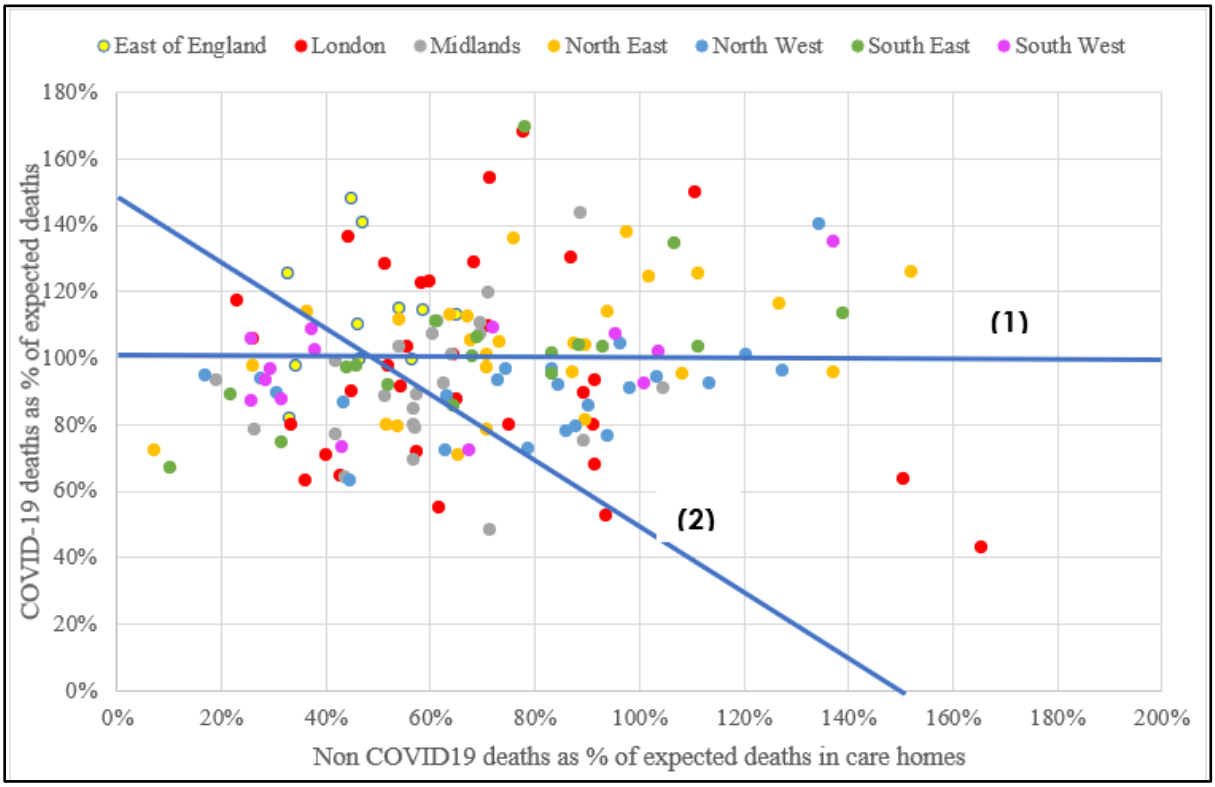


Source: CQC data on notified deaths

The CQC provides an up-to-date directory of all care homes in England, with detailed information on care homes including location, number of beds and whether they provide services for older people. The most recent version of this directory indicates that there are 411,000 such beds available with occupancy rates of 90% in 2019.

Whilst more granular analysis should be conducted with more data, the publicly available data allows us to assess the excess mortality in care homes by local authority, split between COVID19 and non-COVID19 deaths. Figure 2 and Table 1 illustrate the high degree of heterogeneity of mortality experience across different local authorities in the seven English regions. (The blue lines in the graph correspond to the respectively labelled columns in Table 1.)

Figure 2 – Mortality in nursing homes across English local authorities (10 Apr – 5 Jun)



Source: Analysis based on CQC data on notified deaths up to 5 June

Table 1 – Variation in mortality across English regions (10 Apr – 5 Jun)

Region	% of local authorities where non-COVID19 deaths alone are more than 100% of total expected deaths (1)	% of local authorities where total actual deaths are more than 150% of total expected deaths (2)
East of England	64%	73%
London	44%	63%
Midlands	35%	48%
North East	59%	78%
North West	13%	74%
South East	53%	68%
South West	50%	36%
ENGLAND	**43%**	**63%**

Source: Analysis based on CQC data on notified deaths up to 5 June

These variations could reflect significant levels of undiagnosed COVID-19 given the inability to conduct systemic testing in care homes over the period. However, it may also highlight regional and local differences in the impact of COVID-19 on frail populations and the disruption of health services and normal routines through general lockdown.

Further analysis of these datasets would be of value to care home providers and health authorities. This analysis would inform preparation for any second wave of infections, for better understanding of how to reduce the impact of future flu pandemics and benchmarking of best practice. This analysis would identify mortality and morbidity differences between different settings. Potential drivers of differences could be due to staffing levels, occupancy levels, home demographics (age, pre-existing underlying health conditions, length of prior occupancy), funding levels, availability of PPE, community transmission (carer and visitor access), and transmission from NHS transfers.

Further information and International dimension

COVID-19 has led to rapid innovation in many spheres, not least in the sharing of data and research findings. The International Long-Term Care Policy Network and the Care Policy and Evaluation Centre at the London School of Economics have been instrumental in ensuring the widest dissemination of data on care homes.

They set up a really useful website ltccovid.org on March 21 as a rapidly-shared collection of resources for community and institution-based long-term care responses to COVID-19, aiming to:

- Document the impact of COVID-19 on people that rely on long-term care (including unpaid care) and those who provide it.
- Share information about policy and practice measures to mitigate the impact of COVID-19 in long-term care and gather evidence about their success or otherwise.
- Analyse the long-term implications of this pandemic for long-term care policy.

Their blog on March 23 highlighted the international dimension to the problem of COVID-19 and care homes, sharing disturbing experiences from Spain, Italy and the USA. This has led to a living repository that collates and summarises experience in different countries.

LTCCovid.org is actively looking for contributors from elsewhere. They have developed a form to collect information on numbers of long-term care residents and staff who have had COVID-19, and numbers of deaths in different settings. This form attempts to gather data and insights on those that died with probable COVID-19, where they died and estimates the level of excess mortality. For example, in France deaths in care homes are estimated to be 34% of all COVID-19 deaths, whereas deaths of care home residents are 51% of all COVID-19 deaths as some patients transfer to hospital.

The list of countries for which data has already been collated currently includes:

- Australia, Austria, Belgium, Canada, Denmark, France, Germany, Hong Kong, Hungary, Ireland, Israel, Italy, Norway, Portugal, Singapore, South Korea, Spain, Sweden, United Kingdom, USA.

A recent report on LTCCovid.org attempted to further compare the experience of different care homes in Ireland. This followed a breakdown of 1,030 deaths in 167 Irish care homes that was published in the Irish Times and was broadly criticised for not considering the number of beds or more complex factors that would be likely to affect the outcome. In contrast, this report undertook a more intensive investigation and retrieved data for each facility from the latest HIQA inspection report on compliance, processes and occupancy, developing a multivariate binary logistic regression model of expected mortality.

The report found good compliance with standards throughout, but common challenges in obtaining appropriate testing and PPE as many care homes exist outside the traditional national health service model, a problem consistent with that in the UK. However, the report showed a significant association between the number of deaths reported and the level of occupancy. This brings into question current models of long-term care delivery during a pandemic, and highlights advantages for multi-unit care models over multi-occupancy buildings.

Lessons to be learned

"Necessity is the mother of invention". The COVID-19 pandemic has forced individuals and groups at every level to innovate and to improve outcomes with resources available. The experience of care homes around the world has identified both issues to avoid/address earlier and opportunities to innovate.

The following have been highlighted in different arenas as well as discussed in a further report from LTCCovid.org:

- Likelihood of asymptomatic transmission by both staff and residents means that regular testing is necessary rather than relying on symptom presentation. Moreover, the elderly may be more likely to display non-classical symptoms such as lethargy, lack of appetite and delirium. Furthermore, the elderly may have underlying health conditions which mask the obvious symptoms. This was acknowledged by the UK Government on 28 April when swab testing was made available to all care home residents and staff, regardless of symptoms, and when an online portal was subsequently launched.
- Changing staff patterns and care home layouts to reduce maximum occupancy and to allow for segregation zones / quarantining of possible, probable and confirmed cases respectively.
- Ensure that no patients are directly discharged from potential "hotzone" hospitals to care homes. Instead use suitably staffed "quarantine centres" or sections within the care homes as an intermediate step with final release dependent on repeated negative swabbing over multiple days.
- Better information systems that monitor outbreaks in care homes and link care homes to supplies of PPE and medications.
- Consider whether CQC ratings adequately reflect preparedness for future pandemic events.
- Rapid response teams to be deployed where outbreaks occur to maintain continuity of care for all residents as resident illness is likely to be mirrored by staff illness.
- Reduce risk of staff bringing infection by limiting staff to one care home and ensuring that staff do not feel that they have to work when ill. Where possible, staff could be accommodated on site rather than having to commute within the community.
- Use of tele-medicine to limit need for visits from offsite healthcare professionals during outbreaks.
- Blanket restrictions on visiting can intensify isolation, and alternatives such as social distancing and PPE for visitors could lead to better overall outcomes.

Further innovation will clearly be needed as both optimal infrastructure and modes of delivery of care are examined. Such innovation will be more productive if the costs and benefits of each innovation can be identified and benchmarks established to aid comparison. Some care homes may not survive COVID-19, but those that do should not only be better prepared but able to demonstrate how they are prepared. The longer term impact of the potential closure of many care homes requires further consideration particularly where there are already capacity and funding constraints in the social care sector. Before the pandemic, in the Queen's Speech on 19 December 2019, there was a commitment from the UK Government to reform the social care system but now, in our current situation, this reform is even more urgent.

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