**Title: National survey to capture information on care homes, their staff and residents to inform the public health response to COVID-19**

**Sponsor: Public Health England (PHE)**

**Funder: Department of Health and Social Care (DHSC)**

**Investigators: Dr Susan Hopkins** [**susan.hopkins@phe.gov.uk**](mailto:susan.hopkins@phe.gov.uk)**, Dr Laura Shallcross** [**l.shallcross@ucl.ac.uk**](mailto:l.shallcross@ucl.ac.uk)

**Institutions involved: Office for National Statistics, Department of Health and Social Care**

**Project summary**

The COVID-19 pandemic poses a substantial risk to elderly and vulnerable care home residents. We have national, daily data on the number of people who test postive for COVID-19 and information on COVID-19 related deaths, but we lack reliable data on the burden of infection in care homes due to the complexities of patient testing, and the lack of a national, regularly updated care home dataset. This makes it difficult to plan the public health response to COVID-19 in care homes.

The aim of this project is to survey care home managers to derive accurate data on the number of staff and residents in each care home, the prevalence of infection, and use of disease control measures. Each care home manager will receive telephone call from a trained interviewer. They will complete the survey by phone and information collected will be stored electronically. The survey will take 20-30 minutes. Indentifiable information will not be collected from the interviewee or from residents or staff. By combining the survey with SARS-CoV-2 test results, we will be able to estimate the proportion of care home staff and residents who are infected with COVID-19. This will inform decisions around the best approach to care home testing. Information on the use of disease control measures will help local public health teams provide effective guidance to care homes. Results of the survey will be synthesised as a short report and submitted for publication in a peer reviewed journal.

**Rationale & background information**

SARS-CoV-2 (COVID-19) has caused a large number of deaths worldwide and changed how people live their lives by restricting social contact and schools and workplace closures. Early evidence pointed to the disproportionate impact of COVID-19 on the elderly,1 ethnic minorities2 and people with co-morbidities.1 The reasons why these population groups are at increased risk of severe outcomes is unclear. Care home residents are at particular risk, due to the combination of age, comorbidity and frequent exposure to infection, and through contact with care home staff or other residents.

By 1 May 2020, over 33,000 deaths involving COVID-19 had been reported in England and Wales since the start of the outbreak, of which 6,811 were in care homes3. In the week ending 1 May 2020, 37.8% of all deaths in care homes were associated with COVID-194. This spike in documented COVID-19 associated deaths has coincided with a scale up in testing and mandatory weekly reporting from care homes3.

In the UK an estimated 400,000 care home residents live in approximately 11,000 care homes5. Systems have been rapidly put in place to enable rapid testing of all care home staff and residents (using nasal swabs), but it is complex, and involves three systems. This is compounded by the fact that there is no national, regularly updated care home database, which means accurate data on the number of staff and residents in each care home is lacking. Consequently, it is very challenging to derive estimates of the prevalence of SARS-CoV-2 infection among staff and residents by care home. This undermines efforts to plan the best approach to testing across care homes during the current pandemic and in future waves.

Local health protection teams are providing support to a large number of care homes with outbreaks, but we lack information on the uptake and effectiveness of disease control measures such as cohorting across all care homes. This makes it difficult to identify opportunities for intervention in care homes that are reporting cases, but it also limits the inferences that can be drawn about the effectiveness of different control measures.

To the best of our knowledge, only one care home study has taken place during the pandemic, known as “The Easter Six”, which was led by Public Health England (study number NR0204). PHE undertook intensive testing in six care homes in London, all of which were reporting outbreaks. A total of 268 residents and 250 staff were tested for SARS-CoV-2. 107/268 (49.1%) residents and 51/250 (20.4%) staff were SARS-CoV-2 positive. There is an urgent need for estimates of infection prevalence across all care homes. The results of this survey will support this goal.

**Aims and objectives**

To estimate the prevalence of SARS-CoV-2 infection, use of disease control measures and population at risk (staff and residents) in each care home in England, by surveying care home managers

* To collect data on the number of staff and residents in each care home
* To record care home characteristics
* To estimate the prevalence of infection among staff and residents by care home
* To collect information on the use of disease control measures by care home

**Study Design**

This study is a cross-sectional survey. All care home managers in England are eligible to participate. We aim to complete the telephone surveys within 4 weeks.

**Methodology**

Care homes will be identified from an existing list which is held by the Care Quality Commission and has been shared with the Office for National Statistics (ONS). We aim to interview all care home managers, but will start by contacting care homes that have been prioritised for PCR testing ie. Care homes with outbreaks and larger care homes. The list of care homes that have already been tested will be supplied each week by DHSC’s Pillar 2 testing team.

The questionnaire will be piloted with a small number of care home staff by ONS (who have expertise in designing questionnaires) and refined before it is deployed. A list of questions will be sent to the participants with an introductory letter before the interview to give them time to think about the questions and collect any additional information that may be required.

A trained interviewer from a company subcontracted to ONS will telephone each care home, ask to speak to the care home manager and seek informed consent to undertake a telephone interview. The interviewer will follow a script, , complete the consent form and work through each of the questions with the interviewee. Consent forms will be emailed to the interviewee. We will record the name of the care home but no identifiable information will be collected from the interviewee or about care home staff or residents. Interviews will last approximately 30 minutes. Information collected during the survey will be recorded electronically by the interviewer and stored in a secure database. The dataset will be summarised using descriptive statistics (counts and proportions). A formal sample size calculation has not been included as we aim to recruit all care homes in England. Results will be written up as a short report and submitted for publication. The dataset will be held by PHE, and shared with the NHS Foundry to allow care home level information to be linked to test results for each care home.

This proposal poses a low risk to participants as it only requires a telephone interview. We will only use trained interviewers. We aim to complete the project within 4 weeks. Drs Hopkins and Shallcross will oversee delivery of the overall study, the analysis and production of a short report. ONS will oversee questionnaire design, the telephone interviews and data collection. . We will comply with the General Data Protection Regulations 2018.

Ethical approval for this study has been obtained from Public Health England’s Research Ethics and Governance Group (REGG).. We will obtain informed consent form care home managers prior to their participation.

**References**

1. Zhou, F. *et al.* Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet* **395**, 1054–1062 (2020).
2. Aldridge et al. Black Asia and Minority Ethnic groups are at increased risk from COVID-19: indirect standardisation of NHS mortality data. 2020 https://wellcomeopenresearch.org/articles/5-88
3. Office for National Statistics. Comparison of weekly death occurrences in England and Wales: up to week ending 1 May 2020. https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/articles/comparisonofweeklydeathoccurrencesinenglandandwales/uptoweekending1may2020 (2020).
4. Office for National Statistics. Deaths registered weekly in England and Wales, provisional: week ending 1 May 2020. https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/latest (2020).
5. Age UK. Later life in the UK 2019. https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/later\_life\_uk\_factsheet.pdf?dtrk=true+