# A study of universal SARS-CoV-2 RNA testing of residents and staff in a large group of care homes in South London

#### (Cross-sectional Study)

Dr Agnes Marossy <sup>1</sup>	Consultant in Public Health, agnesmarossy@nhs.net
Dr Stefan Rakowicz <sup>2</sup>	Lead GP, Stefan.Rakowicz@nhs.net
Dr Angela Bhan <sup>3</sup>	Bromley Borough Director, Consultant in Public Health, angela.bhan@nhs.net
Sarah Noon <sup>2</sup>	Practice Manager, <u>Sarah.Noon4@nhs.net</u>
Amanda Rees <sup>3</sup>	Care Home Quality Liaison Nurse, Amanda.Rees9@nhs.net
Manjinder Virk <sup>4</sup>	Biomedical Scientist and Operations Manager, <u>Manjinder.Virk@nhs.net</u>
Ayazali Nazafi <sup>4</sup>	Biomedical Scientist, <u>Ayazali.Nazafi@nhs.net</u>
Evie Hay <sup>4</sup>	Research Assistant, <u>Evie.Hay@nhs.net</u>
Louise de Thomasson <sup>4</sup>	Research Assistant, I.dethomasson@nhs.net
Christina Windle <sup>3</sup>	Chief Operating Officer, Christina.Windle@nhs.net
Dr Mark Zuckerman <sup>4</sup>	Consultant Virologist, Mark.Zuckerman@nhs.net

<sup>1</sup>One Bromley, Global House, 10 Station Approach, Hayes, Kent, BR2 7EH, UK

<sup>2</sup>Bromleag Care Practice, Kelsey Park Farmhouse, Beckenham Beacon Hospital, BR3 3QL, UK

<sup>3</sup>NHS South East London CCG, 160 Tooley Street, London SE1 2TZ, UK

<sup>4</sup>South London Specialist Virology Centre, King's College Hospital NHS Foundation Trust, Denmark Hill London SE5 9RS, UK

#### **Corresponding Author**

Dr Agnes Marossy, Consultant in Public Health

One Bromley, Global House, 10 Station Approach, Hayes, Kent, BR2 7EH, UK

agnesmarossy@nhs.net Telephone: +44 20 3930 0127

#### Alternate Corresponding Author

Receive

Dr Mark Zuckerman, Head of Virology, Consultant Virologist and Honorary Senior Lecturer

South London Specialist Virology Centre, King's College Hospital NHS Foundation Trust, 2nd floor, Cheyne Wing, Bessemer Road London SE5 9RS, UK

Mark.Zuckerman@nhs.net Telephone: +44 20 3299 9000 ext. 36970

#### Summary

The evidence from this study suggests that asymptomatic COVID-19 infection is still a significant issue in care home residents and staff, indicating that any testing strategy in this cohort must not be symptom led.

#### Abstract

#### Background

Care homes have experienced a high number of COVID-19 related deaths of residents since the onset of the pandemic. However, up to May 2020, there has been a lack of information about the extent of SARS-CoV-2 infection in residents and staff in care homes and limited testing in this setting.

#### Methods

Combined nose and throat swab testing for SARS-CoV-2 RNA was carried out in 2455 residents and staff across 37 care homes in the London Borough of Bromley across a three-week period. Results were reported within 24 hours of sample delivery and data were collected on the presence or absence of symptoms.

#### Results

Overall, the point prevalence of SARS-CoV-2 infection was 6.5% with a higher rate in residents (9.0%) than in staff (4.7%). A key finding was the high proportion of asymptomatic infection detected in staff (69%) and residents (51%) with evidence of under-detection of symptoms by care home staff.

#### Conclusions

The high proportion of asymptomatic infection combined with under detection of symptoms by care home staff indicates that offering a test to all residents and staff in care homes with rapid reporting of results would assist accurate identification of infected individuals, facilitating prompt infection prevention and control action.

Key Words: Coronavirus; COVID-19; SARS-CoV-2; Care Homes; Diagnostic Testing

#### Lay Summary

Care homes have been disproportionally affected by COVID-19 infection. Small studies in single care homes, triggered by the onset of cases have reported on the rapid transmission of infection in care homes and high proportions of asymptomatic cases.

This is the largest study of SARS-CoV-2 RNA testing in Europe to date carried out in the care home setting and is the only one testing residents and staff regardless of reported cases. The evidence from this study suggests that asymptomatic COVID-19 infection is still a significant issue in care home residents and staff, indicating that any testing strategy in this cohort must not be symptom led. Swabs were also delivered, collected and tested that day or the following day in order to provide a timely clinical diagnostic service. Our recommendation is that testing should be undertaken simultaneously in both residents and staff if effective infection control measures are to be implemented and the spread of infection contained.

#### Background

Between March 2 and May 1 2020, deaths of care home residents in the United Kingdom accounted for 27% of deaths from COVID-19 [1]. A review by Public Health England [2] showed that, over the same time period, there were 2 - 3 times the number of deaths in care homes than expected. Less than half of these were attributed to COVID-19, suggesting excess deaths from other causes or underreporting of deaths from COVID-19.

During April 2020, SARS-CoV-2 swab testing was only available to care homes with outbreaks (defined as two or more cases which met the case definition of possible or confirmed case, within a 14-day period among either residents or staff in the care home) and was limited to five tests restricted to symptomatic patients. Testing was also available for patients attending hospital and to NHS, social care and wider critical key workers and their families who were in self or household isolation, to support their return to work as soon as possible [3].

The 400,000 residents of UK Care Homes Care home residents are particularly vulnerable to COVID-19 and have a particularly guarded prognosis if they become hypoxic [4]. In addition, Black, Asian and Minority Ethnic (BAME) groups, of whom there are a higher than population average proportion in the social care sector [5] and social care workers have suffered increased mortality from COVID-19 [2].

Prompt identification of an outbreak in a care home, typically less than three days [6], is required for providers to coordinate an effective response, in addition to routine/standard infection control precautions. Such measures include introduction of contact and droplet precautions such as use of Personal Protective Equipment (PPE), isolating cases, and cancelling group activities and meals [7].

Clinical recognition of COVID-19 infection can be difficult in the care setting since residents are likely to present with atypical symptoms and one study showed that 57% of residents testing positive were asymptomatic [8].

For these reasons, testing all residents and staff regardless of symptoms was considered to be appropriate to identify asymptomatic individuals and allow prompt action to prevent transmission.

#### **Bromley Care Homes**

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Forty-one of the 58 Care Quality Commission (CQC) registered care homes in the London Borough of Bromley comprise nursing and residential or Extra Care Housing provision for older people. The remaining 17 homes house people with learning disabilities, mental health problems or people requiring neuro rehabilitation.

The residents of 40 of the 41 care homes for older people are registered with one General Practice, the Bromleag Care Practice.

Between 1<sup>st</sup> March 2020 and 1<sup>st</sup> May 2020 there were 254 deaths amongst Bromleag Care Practice patients, 93 (36.6%) of which were related to suspected or confirmed SARS-CoV-2 infection.

A study of the whole care home testing approach (testing all residents and staff regardless of symptoms) was set up in these care homes in order to understand the scale of infection amongst staff and residents, assess the level of asymptomatic infection and institute appropriate infection prevention and control measures in a timely fashion.

#### Methods

#### Eligibility

Testing occurred from May 1 and all residents and staff (including those not delivering direct care) in care homes registered with Bromleag Care Practice were eligible. Staff self-isolating at home because they or a member of their household were symptomatic were not included in the study but could access testing through the national self-referral portal.

Residents or staff who had been tested previously were included, but their earlier results were excluded from the analysis because the results were not consistently available.

Agency staff (other than those who regularly worked in and were put forward for testing by one of the care homes) were **not** included in the testing arrangements.

#### Preparation

An information bulletin was sent to all Care Homes in Bromley on April 29 2020. Each Care Home was phoned by the Practice Manager of Bromleag Care Practice prior to testing in order to determine the incidence of cases/deaths, understand any local concerns or issues, assess the number of swabs needed, explain the process and agree dates and times of delivery and collection of swabs.

The Care Home Quality Liaison Nurse sent a preparatory email to each Care Home Manager and an advice pack was sent that included contact details to access support.

#### Testing

The combined nose and throat swab testing kits and request forms (including instructions for use) were delivered to the care home by courier on the day prior to testing, with collection by courier either later the same day or the next day.

Swabs for residents were taken by Care Home staff using appropriate PPE [9] or by District Nursing staff in some Extra Care Housing Units where staff were not confident to do it themselves. Staff carried out self-testing.

Combined nose and throat samples were tested by qualitative real-time reverse transcriptase polymerase chain reaction (RT-PCR). Samples were tested using KingFisher Flex automated RNA extraction (ThermoFisher Scientific Inc) followed by Tecan robotics and detection on the QuantstudioTM 7 Flex Real-Time PCR System (ThermoFisher Scientific Inc). The RealStar SARS-CoV-2 RT-PCR Kit 1.0 targeting the E and S genes (altona Diagnostics GmbH, Mörkenstr. 12, D-22767 Hamburg) was used to detect SARS-CoV-2 RNA. Results were analysed and tests reported using pcr.ai systems (diagnostics.ai) and were available within 12 hours of sample delivery.

#### Additional Data Collection

Care homes were asked to indicate whether each individual tested had any symptoms and to indicate whether any residents or members of staff could not be tested. The symptoms were those highlighted in national case definition at the end of April and those seen by care practice GPs in the preceding two months. GP records were reviewed to check for symptoms in residents testing positive.

Staff testing positive were asked about symptoms when they were phoned with their results.

The Care Home Practice had been recording the number of deaths from suspected and confirmed COVID-19 infection as well as all other causes since March 1 2020.

#### Notification of Results

Staff were notified directly of their results by a small team of staff trained using a standardised clinical advice template in the Virology Department at King's College Hospital. For those staff members whose swabs were positive, the result was discussed, advice given to isolate for 7 days, and they were asked to contact their manager. These staff members were all asymptomatic and were subsequently followed up by sending a swab by courier weekly until the result was negative.

The Care Home Manager was notified of residents' results by a GP from Bromleag Care Practice who was able to access results electronically at regular intervals that day.

#### Post-Testing Support to Care Homes

GPs at the registering practice gave clinical advice to the care homes and referred all positive cases to St Christopher's Hospice for Advance Care Planning.

All homes were already closed to visitors and cohorting/segregation were implemented where there were positive cases. Admissions continued, but the results prompted a policy change within homes to restrict admissions to those who had tested negative.

Infection Prevention and Control advice and training was given by the Care Home Quality Liaison Nurse and the Local Authority Health Protection & Infection Prevention & Control Lead following current national guidance [10].

#### Data Analysis

Data are descriptive.

#### Research Ethics

Research ethics permission was granted by the South East London Clinical Advisory

Group (equivalent to the South East London Ethics Committee). Testing in this study

met National policy guidance by the time testing commenced and was conducted in

the best interests of the care home residents and staff.

Verbal consent was obtained at the point of testing and residents' data accessed

only as part of direct patient care. It was made clear for staff on the request form

which named individuals would access the information. Data processing and storage

accorded with General Data Protection Regulation (GDPR).

#### Patient and Public Involvement

Given the urgency and rapid progression of the covid-19 pandemic particularly as it affected care homes, there was a need to act quickly, thus patients and the public were not involved in the design and conduct of the study, the choice of outcomes, recruitment, or planned dissemination. However, it should be noted that the care homes were actively requesting better access to testing.

#### Results

Testing was carried out in 37 care homes between May 1 to 20 2020. They comprised 17 nursing homes, 13 residential homes, one mixed residential and nursing home and 6 extra care housing facilities as designated by the CQC.

Thirty-three homes reported the numbers of residents and staff not tested. Of these 17 homes tested everyone and the remaining 16 homes reported 137 untested individuals (75 staff, 35 residents and 27 unspecified). This represented 5.3% of the cohort. Amongst the reasons given for not testing were shielding, self-isolation, hospitalisation, long term leave and refusal, however, no reason was given in 75 (54.7%) cases.

Two care homes declined testing via the pilot. One had just had whole care home testing by the Care Quality Commission, and another elected to adopt a private testing process.

One care home had not submitted swabs for residents by 20<sup>th</sup> May and so was excluded from the analysis.

Of the 2,455 individuals tested, 42.1% were care home residents (table 1). The proportion of female residents and those over the age of 85 years was comparable to that reported for the country as a whole [11]. The proportion of female staff (73.1%) was comparable to that reported for England and Wales [5] and that of BAME staff (31.9%) was between the levels for England and London [5].

#### Test Results (Table 2)

Overall, 6.5% (95% CI 5.6 to 7.6) of individuals tested positive, with a higher positive rate for residents (9.0%, 95% CI 7.4 to 10.9) than for staff (4.7%, 95% CI 3.7 to 5.9).

The positive rate was the same in women and men (6.5%) and not significantly higher in white (8.2%, 95% CI 6.8 to 9.9) than BAME (6.8%, 95% CI 4.9 to 9.4) groups, ethnicity was unknown in 33.0%.

Eleven care homes had no positive tests in either staff or residents (5 extra care housing, 3 residential and 3 nursing homes). Only two of these eleven (both nursing homes) had suffered any COVID-related deaths since the start of the pandemic.

Where there were positive cases, the proportion of positive testing residents ranged from 3% to 35.7%, and the proportion of positive testing staff ranged from 2.2% to 20%.

Table 3 shows that 99.3% of tests provided a definitive result.

#### Symptom Status from Care Homes

Two care homes failed to submit data on symptom status, and some submitted incomplete data, nevertheless 82.5% of all individuals tested had a record of whether symptoms were present, including 91.3% of those testing positive.

#### Symptom Status in Care Home Residents

Table 4 shows that, of those residents with symptom status recorded, 67.7% of those testing positive were identified as asymptomatic by the care home at the time of testing. Including symptoms identified from GP records reduced this figure to 50.6%.

However, Figure 1 shows that for residents testing positive for SARS-CoV-2 infection, there was agreement in the identification of symptom presence between both GP and care home in only 12 (symptomatic) and 43 (asymptomatic) cases.

GP records identified cough in 63.6% of symptomatic cases, fever in 45%, malaise/lethargy in 15.2% and coryza in 6.1%. Cough without fever was present in 33.3% and with fever in 30.3%, fever alone occurred in 15.2%.

Analysis of the PCR results demonstrated that the median crossing threshold (CT) value for the 93 care home residents with positive swabs was 30 (range 19-45). 27 samples were at the limit of assay detection. For those with symptoms, the median CT value was 33 (range 19-45). 22 samples were at the limit of assay detection. The median CT value for the asymptomatic residents was 30 (range 28-45). 5 samples were at the limit of assay detection.

#### Symptom Status in Care Home Staff

Of those staff with symptom status recorded by the care home, 77.6% who tested positive had been deemed to be asymptomatic.

The virology team questioned staff about symptoms when conveying their results and found that of the 1421 staff tested, 211 staff had negative swabs but had symptoms suggestive of COVID-19 between December 2019 and May 2020. Of those 163 had been symptomatic in March and April 2020. Of the staff with symptoms that preceded the swab testing, the symptoms in descending order were fever 52%, cough 48%, headache 38%, anosmia and loss of taste 29%, shortness of breath and chest tightness 19% and fatigue 14%.

67 staff had positive swabs and of those 46 (69%) had been asymptomatic.

Of the symptomatic staff, the symptoms in descending order were cough 63%, fever 48%, headache 35%, fatigue 32%, anosmia and loss of taste 30% and shortness of breath and chest tightness 30%.

Analysis of the PCR results demonstrated that the median CTs were 33 (range 30-45) and 30 (range 22-45) for the positive swabs collected from the asymptomatic and symptomatic care home staff, respectively. Almost 50% of the staff swabs had CTs around 45 and were at the limit of assay detection.

#### Impact of Previous Infection and Type of Care Home

Table 5 shows the impact of COVID-19 infection on care home resident mortality in the two months prior to testing. Nine settings appear to have been unaffected throughout, of these five were Extra Care Housing settings. The four homes with the highest numbers of COVID-related deaths in the two months prior to testing also had high proportions of residents and staff testing positive in this pilot.

Table 6 shows that the lowest rates of infection were seen in Extra Care Housing facilities and there was no significant difference between nursing (4.9%, 95% CI 3.7 to 6.6) and residential homes (5.9%, 95% CI 3.8 to 8.39).

#### Discussion

This was the largest study of care homes in Europe at the time of writing and involved 2455 individuals tested irrespective of symptoms. There was a 6.5% point prevalence of COVID-19 that included residents and staff across multiple settings representative of the care home population in England. 9.0% of residents and 4.7% of staff were swab positive. A key finding was that 69% of swab positive staff and 50.6% of residents, respectively, were asymptomatic. There was evidence of underdetection of symptoms by care home staff.

Studies reporting COVID-19 point prevalence in care homes to date in this pandemic have been limited to single facilities [8,12-14]. This study reported point prevalence recorded in both residents and staff simultaneously across 37 care homes, representing approximately 92% of the older people's care home population in a single London Borough.

The prevalence in residents of 9.0% is lower overall and even in the Bromley nursing homes (11.0%) than the 19% to 64% seen elsewhere in nursing home settings [8,12,13] which may be because this study was carried out later in the pandemic. However, the 3.8% point prevalence reported in a mixed independent and assisted living facility [14] is higher than the value here for extra care housing (0%) and reflects the fact that our testing was not symptom led.

Other studies reported that COVID-19 transmission in care home settings was rapid [12], and the UK saw a disproportionate impact on care home residents, with care homes suffering over 40% of total COVID-19 deaths by May 1 2020 [1]. Given that Care home staff deliver close personal care, the prevalence of infection of 4.7% amongst staff working at the time of testing was significant.

The pattern seen in this study of some care homes with a high number of deaths and a persistence of positive tests indicated that once COVID-19 was established in a care home, it was difficult to clear. This was in part explained by the high rates of unrecognised and asymptomatic infection in both residents and staff. Further testing would therefore be indicated to ensure the potential for further transmission had been reduced and then eliminated.

With respect to the swab PCR results, interpreting CT values can be difficult due to variables such as assay extraction efficiency, assay targets with differences in detection sensitivity, as well as variability in sample collection. With respect to care home residents, the median CT was 30 for those asymptomatic and 33 for those with symptoms with the reverse finding for the staff positive swab results. This was interesting as a 3 CT difference is equivalent to a one log<sub>10</sub> change, regarded as significant, that infers from a semi-quantitative perspective that the SARS-CoV-2 RNA load was higher or lower depending on the group tested. However, onset of

infection cannot be determined in the asymptomatic group, so it is just an observation. Values close to the assay detection limit, with CTs around 45, suggested that those individuals were in the later stages of infection.

When the study was complete, a national approach to testing care home residents and staff was in place and was used by many care homes. However, 9 staff sent further samples from home to our laboratory as part of follow up. All became negative, but two sent weekly samples and the CT values reduced each week, but it took 3 weeks and 4 weeks before the swabs were negative. Both could not return to work and the key question was whether the virus was both viable and transmissible at these low levels of detection. This situation is very difficult both professionally and socially, especially advising staff and their managers when an individual could return to work. It may be that the only way to do this is to have the ability to culture the virus and demonstrate a cytopathic effect *in vitro*, suggesting that the virus is viable and therefore transmissible.

Asymptomatic and pre-symptomatic infection has been reported elsewhere with estimates of 57 to 74% amongst residents [8,13] and of 50% in staff [13]. This study compares the pre-test symptom status reported by residents and staff. In both cases, the proportion of asymptomatic cases reported by care home staff was higher than that following a medical assessment of symptoms. Poor recognition of symptoms by care home staff for themselves and residents could lead to suboptimal infection control. Behaviour of staff will be determined by their perception of risk i.e. an asymptomatic member of staff will continue to attend work, residents with atypical symptoms may not be isolated. Many staff were shocked that their swabs were positive and that they could have inadvertently transmitted the infection to those they were caring for as well as family and friends. By intervening in this way we were able to offer standard advice to individuals with SARS-CoV-2 infection, arrange for a further swab to be sent to their house whilst they were isolated for a further test 7 days later, and report the infection to Public Health England.

The carers were surprised and unsettled to learn that asymptomatic residents were testing positive. This provided a valuable opportunity to review the infection control procedures, to supply additional PPE for the staff and to investigate the possible reasons for clusters of cases. The residents were isolated immediately, which helped reinforce the importance of adhering to infection control measures in well residents. The discussions and learning about the wide variety of presentations in the elderly facilitated a greater awareness of the symptoms to look out for, which resulted in closer monitoring of symptoms in the other residents.

When the study started, testing was not available for care home staff and residents other than in the event of an outbreak. The whole care home approach to testing established that a significant proportion of residents and staff were infected. The methodology and fast turnaround of results facilitated rapid and targeted clinical and Infection Prevention and Control support. Testing of all homes together also managed the issue of care home staff working at more than one site.

Analysis by type of care home indicated that some protection against COVID-19 may be conferred by the individual tenancy arrangements of extra care housing due to individual kitchen facilities, not sharing equipment, and a smaller number of carers for those who need support.

The proportion of individuals not tested was low at 5.3% and the number of staff who refused testing was small. However, some bias may have been introduced through those in whom the reason for not testing was not known. It may be useful to consider mandating testing in these settings, whilst also guaranteeing adequate compensation for loss of earnings during self-isolation.

Although this study demonstrated the benefits of a whole care home testing approach, it highlights the need to offer retesting in care homes at regular intervals given the high proportion of asymptomatic cases. However, once asymptomatic staff were detected, advice was given to continue self-isolation and a further swab test was offered on a weekly basis.

As SARS-CoV-2 serological tests are available, there is an opportunity for those staff who were not swabbed but had been symptomatic, to find out whether they had developed a COVID-19 infection at that time, which may be helpful information for the future.

#### Acknowledgements

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#### **Author Contributions**

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AB, MZ, AM, SR designed the study, AM, SR, MZ, SN, CW and AR coordinated the study, AM carried out the literature search, SN, MV, AN, EH, LT collected the data. AM, MZ, EH carried out the data analysis. AM wrote the report, with, AB, SR and MZ reviewing and editing. All authors contributed ideas and comments, revised the paper, and approved the final version.

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#### Footnote

#### **Conflict of Interest Statement**

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi\_disclosure.pdf and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

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#### **Corresponding Author Contact Information**

Dr Agnes Marossy, Consultant in Public Health

One Bromley, Global House, 10 Station Approach, Hayes, Kent, BR2 7EH, UK

agnesmarossy@nhs.net Telephone: +44 20 3930 0127

#### Alternate Corresponding Author

Dr Mark Zuckerman, Head of Virology, Consultant Virologist and Honorary Senior Lecturer

South London Specialist Virology Centre, King's College Hospital NHS Foundation Trust, 2nd floor, Cheyne Wing, Bessemer Road London SE5 9RS, UK

Mark.Zuckerman@nhs.net

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Telephone: +44 20 3299 9000 ext. 36970

Characteristics		Study Cohort	England & Wale
			(London)
Care Home	% Female	73.1	73.5
Residents	% Over 85 years	61.0	59.2
Care Home Staff	% Female	83.0	83.0
	% BAME <sup>a</sup>	32.1	20.0 (67)
<sup>a</sup> Black Asian and Miı	nority Ethnic		1
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Table 2		SCI			
Characteristic	2	Residents	Staff		
	No. Tested (%)	No. Positive Test Result (%)	No. Tested (%)	No. Positive Test Result (%)	
Overall	1034	93	1421	67	
Female	756 (73.1)	71 (76.3)	1179 (83.0)	55 (82.1)	
Minimum Age (years)	44.3	70.5	17.2	17.5	
Maximum Age (years)	110	101.7	92.6	92.6	
Average Age (years) (median)	85.6 (87.4)	88.1 (87.9)	46.6 (48.0)	48.3 (51.2)	
White	699 (67.6)	73 (78.5)	459 (32.3)	22 (32.8)	
BAME	32 (3.1)	3 (3.2)	454 (31.9)	30 (44.8)	
Unknown	303 (29.3)	17 (18.3)	508 (35.7)	15 (22.4)	
Symptom Status Recorded (Care Home Assessment)	871 (84.2)	87 (93.5)	1156 (81.3)	59 (88.1)	

Result	No.	% (95% C.I.)
Negative	2277	92.7 (91.7 to 93.7)
Positive	160	6.5 (5.6 to 7.6)
Needs Retest	11	0.4
Specimen Labelling Errors	7	0.%
Total	2455	100.0
No.		

	Positive Testing	Positive Testing
Home)	Residents (%)	Staff (%)
Symptoms Present	24 (25.8)	7 (10.4)
Asymptomatic	63 (67.7)	52 (77.6)
No Record	6 (6.5)	8 (11.9)
Total	93	67
	an <sup>y</sup>	2

						95								
Table 5									No. of Deaths 01.03.2020 to 30.04.2020					
Care Home	No. Tested	Residen ts	Staf f	Positive Residents	Positive Staff	% Positive Residents	% Positive Staff	Confirm	Suspect ed	Confirm ed & Suspect	All Death			
								Covid-19	Covid-19	ed Covid-19	S			
ECH <sup>♭</sup> 1	24	13	11	0	0	0.0%	0.0%	0	0	0	0			
ECH 2	92	59	33	0	0	0.0%	0.0%	0	0	0	0			
ECH 3	34	12	22	0	0	0.0%	0.0%	0	0	0	0			
ECH 4	49	27	22	0	0	0.0%	0.0%	0	0	0	0			
ECH 5	85	53	32	0	1	0.0%	3.1%	1	0	1	1			
ECH 6	78	44	34	0	0	0.0%	0.0%	0	0	0	0			
Mixed <sup>c</sup> 1	58	23	35	0	2	0.0%	5.7%	1	1	2	6			
Nursing 1	97	27	70	0	0	0.0%	0.0%	3	1	4	4			
Nursing 2	41	17	24	0	1	0.0%	4.2%	0	0	0	2			
Nursing 3	85	32	53	1	0	3.1%	0.0%	0	4	4	6			
Nursing 4	75	34	41	2	1	5.9%	2.4%	1	3	4	11			

						95						
						<u> </u>		No. of De	eaths 01.03.2020 to 30.04.2020			
	No.	Residen	Staf	Positive	Positive	% Positive	% Positive	Confirm	Sugnast	Confirm ed &	All	
Care Home									Suspect			
	Tested	ts	f	Residents	Staff	Residents	Staff	ed	ed	Suspect	Death	
				N.O				Covid-19	Covid-19	ed	s	
				0.						Covid-19		
Nursing 5	123	52	71	17	8	32.7%	11.3%	2	2	4	8	
Nursing 6	124	50	74	8	5	16.0%	6.8%	6	2	8	17	
Nursing 7	42	11	31	0	3	0.0%	9.7%	2	2	4	9	
Nursing 8	130	62	68	16	8	25.8%	11.8%	0	2	2	15	
Nursing 9	67	22	45	2	0	9.1%	0.0%	1	1	2	14	
Nursing 10	118	49	69	3	3	6.1%	4.3%	4	3	7	23	
Nursing 11	61	16	45	0	0	0.0%	0.0%	1	2	3	4	
Nursing 12	69	28	41	3	4	10.7%	9.8%	0	1	1	5	
Nursing 13	134	46	88	4	4	8.7%	4.5%	2	1	3	16	
Nursing 14	74	27	47	1	0	3.7%	0.0%	2	2	4	11	
Nursing 15	81	26	55	0	0	0.0%	0.0%	0	0	0	1	
Nursing 16	53	22	31	0	2	0.0%	6.5%	0	1	1	4	

						95						
						5		No. of De	aths 01.03.2020 to 30.04.2020			
Care Home	No. Tested	Residen ts	Staf f	Positive Residents	Positive Staff	% Positive Residents	% Positive Staff	Confirm ed	Suspect ed	Confirm ed & Suspect	All Death	
	resteu				otan	Residents	otan	Covid-19	Covid-19	ed Covid-19	S	
Nursing 17	62	23	39	3	5	13.0%	12.8%	0	6	6	14	
Residential	32	20	12	2	0	10.0%	0.0%	0	0	0	3	
Residential 2	26	12	14	0	0	0.0%	0.0%	0	0	0	0	
Residential 3	67	25	42	1	0	4.0%	0.0%	0	3	3	6	
Residential	46	20	26	5	1	25.0%	3.8%	0	1	1	2	
Residential 5	73	37	36	10	3	27.0%	8.3%	5	0	5	12	
Residential	78	33	45	1	1	3.0%	2.2%	1	0	1	3	

						95					
					S	S.		No. of De	aths 01.03.2	2020 to 30.0	4.2020
Care Home	No. Tested	Residen ts	Staf f	Positive Residents	Positive Staff	% Positive Residents	% Positive Staff	Confirm ed	Suspect ed	ed & Suspect	All Death
				N				Covid-19	Covid-19	ed Covid-19	s
6											
Residential 7	70	20	50	7	6	35.0%	12.0%	1	2	3	6
Residential 8	25	10	15	2	3	20.0%	20.0%	0	0	0	2
Residential 9	29	17	12	0	0	0.0%	0.0%	0	0	0	2
Residential	44	14	30	5	3	35.7%	10.0%	0	0	0	4
Residential	47	25	22	0	0	0.0%	0.0%	0	0	0	3
Residential	32	18	14	0	1	0.0%	7.1%	0	1	1	4

						5		No. of Deaths 01.03.2020 to 30.04.2020					
Care Home	No. Tested	Residen ts	Staf f	Positive Residents	Positive Staff	% Positive Residents	% Positive Staff	Confirm ed Covid-19	Suspect ed Covid-19	Confirm ed & Suspect ed Covid-19	All Death s		
12													
Residential	30	8	22	0	2	0.0%	9.1%	1	2	3	4		
Grand Total	2455	1034	142 1	93	67	9.0%	4.7%	34	43	77	222		

<sup>b</sup>ECH: Extra Care Housing

<sup>c</sup>Mixed: Residential & Nursing

	R	lesidents	Staff			
Type of Care Home	No.	Positive Test	No.	Positive Test		
	Tested	No. (%)	Tested	No. (%)		
Extra Care Housing	208	0 (0)	154	1 (0.6)		
Mixed Nursing & Residential	23	0 (0)	35	2 (5.7)		
Nursing	544	60 (11.0)	892	44 (4.9)		
Residential	259	33 (12.7)	340	20 (5.9)		
Total	1034	93 (9.0)	1412	67 (4.7)		
	×eç	No				
Rcce	5					



## Symptom Status in Positive Testing Residents



PCS