



UK Health Security Agency

Weekly Care Homes Evidence Digest

Prevention and control of COVID-19 in home care/care homes settings

26th November 2021

Summary

This weekly digest contains a selection of evidence published in the last 7 days, in relation to the prevention and control of COVID-19 in home care/care home settings. We search a number of Covid-19 review repositories, an existing UK Health Security Agency (UKHSA) Covid-19 evidence digest (including Covid-19 evidence digests produced by Public Health England prior to October 2021), Ovid Medline and Embase, Social Care Online, medRxiv (pre-print server) and various websites. We select peer reviewed and non-peer reviewed publications (pre-prints), as well as systematic reviews, guidance and evidence summaries.

The digest is produced by UKHSA [Knowledge and Library Services \(KLS\)](#), in conjunction with a small editorial team.

We do not accept responsibility for the availability, reliability or content of the items included in this resource and do not necessarily endorse the views expressed within them. Our intent is to highlight early emerging research findings as well as research that has been subject to peer review and wider scrutiny.

This week's digest includes; from USA, a call for systemic and organisational changes to be implemented during the COVID-19 recovery phase to support and protect the residents and staff that live and work in long-term care facilities; use of a 'telepresence robot' to minimise use of staff in post-acute and long term care settings during the COVID-19 pandemic; evidence of an association between anti-thrombotic use and reduced mortality in SARS-CoV-2 positive nursing home residents; further evidence of waning immunity in health care workers and nursing home residents 6 months following COVID-19 vaccination; use of causal inference to identify factors associated with reduced risk of mortality in long term care facilities; from Canada, experiences of improvements to palliative care during the COVID-19 pandemic to help to increase the quality of care for patients beyond the pandemic; feasibility and acceptability of an acute/ long-term care, integrated care model, for nursing home residents during the COVID-19 pandemic; from the Republic of Ireland, a quality improvement project in a hospital emergency department to improve outcomes for nursing residents during the COVID-19 pandemic; from the Netherlands, an evaluation of single swab sampling

for rapid detection of COVID-19 in nursing homes; and from Spain, further evidence of the need for a COVID-19 booster dose in residents of long-term care facilities.

From the UK, impact of vaccination on severity and duration of COVID-19 outbreaks in long-term care; and a systematic review of the impact and staff perceptions of policies for management of COVID-19 in social care settings.

Finally, summaries of other recently published COVID-19 pandemic reports, guidance and statistics.

An ongoing series of UKHSA rapid reviews on a range of COVID-19 related research questions can be also found at <https://ukhsalibrary.koha-ptfs.co.uk/covid19rapidreviews/>. A wider range of UKHSA information resources on the impact of the COVID-19 pandemic may be found at <https://ukhsalibrary.koha-ptfs.co.uk/coronavirusinformation/>.

Peer-Reviewed Articles

Publication date	Title / URL	Journal / Article type	Digest
18.11.2021	Long-term Care and COVID-19: An Equitable Recovery	American Journal of Infection Control / Study	<ul style="list-style-type: none"> • The impact of the COVID-19 pandemic on nursing home (NH) residents has highlighted the long-standing systemic deficiencies in and need for effective infection prevention and control (IPC) practices • Despite high rates of vaccination (86% of NH residents, nationally), NHs continue to experience higher mortality rates compared to deaths in the community. From July to August 2021, influenced by the Delta variant, the mortality rate in United States NHs quadrupled while the rate in the general community doubled. • Feelings of overwhelm and exhaustion can impact the quality of care that is provided. In the context of COVID-19 and its variants, a single missed care event (such as neglecting to follow proper hand hygiene protocol, poorly surveilling the early symptoms of COVID-19, or neglecting to use/misusing personal protective equipment (PPE)) could result in an outbreak within a unit and trigger the loss of morale that accompanies a sudden return to strict unit lockdown procedures • Systemic and organizational changes must be implemented to support and protect the residents and staff that live and work in these communities. A focus on building a “just culture” within a NH organization can help to eliminate the many communication failures that occur between DCWs and unit managers and administrators. • If we are to see an equitable recovery to the pandemic, it is crucial that researchers prioritize projects that can help us to better understand the ongoing IPC needs of NHs.
18.11.2021	Invited letter: Integrated palliative care in a geriatric mental health setting during the COVID-19 pandemic	International Journal of Geriatric Psychiatry / Letter	<ul style="list-style-type: none"> • The COVID-19 pandemic has disproportionately impacted the elderly residents of congregate settings with respect to morbidity and mortality. The high rate of severe illness in this population necessitates timely and quality access to palliative care. • There are a number of challenges facing teams working in geriatric mental health settings during the COVID-19 pandemic with respect to palliative care.

			<ul style="list-style-type: none"> • Authors outline their experience as an example of changes made to improve the provision of pandemic palliative care on site in a geriatric mental health inpatient unit. • Improving palliative care can help to increase the quality of care for patients beyond the pandemic, can increase the skill set of staff members, and help to prevent staff burnout. •
18.11.2021	A Robotic Device to Enhance Nursing Home Provider Telepresence during and after the COVID-19 Pandemic	JAMDA / Study	<ul style="list-style-type: none"> • The COVID-19 pandemic presents significant challenges to face-to-face communication with people residing in post-acute and long-term care (PALTC) settings. Telemedicine is an alternative, but facility staff may be over-burdened with the management of the equipment. • The authors introduce the use of a mobile HIPPA-compliant telepresence robot (MTR) to bridge this barrier which may be beneficial to reimagine options for PALTC in the future • This pragmatic innovation demonstrates use of a robot to provide clinical PALTC telepresence with minimal staff burden during the COVID-19 pandemic and beyond.
18.11.2021	186 Optimal Management Of Covid-19 In Nursing Home Patients: A Quality Improvement Project In An Irish University Hospital Emergency Department	Age And Aging / Poster Presentation	<ul style="list-style-type: none"> • COVID-19 has caused unprecedented challenges in nursing homes. This narrative review aims to describe factors that contributed to the spread and mortality of COVID-19 in nursing homes and provide an overview of responses that were implemented to try to overcome such challenges.
18.11.2021	Changes in COVID-19 outbreak severity and duration in long-term care facilities following vaccine introduction, England, November 2020 to June 2021	EuroSurveillance / Study	<ul style="list-style-type: none"> • Long-term care facilities (LTCF) have been disproportionately affected by the coronavirus disease (COVID-19) pandemic, with residents particularly at risk of severe outcomes. • English LTCF have been impacted by three waves of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections, with changes in disease control measures and epidemiology of infection over successive waves. • The aim of this study was to describe how the changing epidemiology and vaccination introduction have affected COVID-19 outbreak

			<p>characteristics, including outbreak duration and severity, in LTCF to inform revaccination strategies and the implementation of non-pharmaceutical interventions to prevent transmission.</p> <ul style="list-style-type: none"> • The study identified a shift towards staff-only outbreaks, possibly associated with lower vaccination coverage in staff vs residents, greater infection risk associated with staff mixing outside of the LTCF, testing policy leading to increased testing of staff compared with residents, or possibly improved protection offered to residents by infection control measures. • Authors also saw the proportion of resident-only outbreaks rising between January and February 2021 and between March and April 2021, although this remained far below the proportion of staff-only outbreaks over the same periods and the subsequent trend did not show an increase in resident-only outbreaks, so the importance appears minimal. Future studies with longer follow-up may explore this further
19.11.2021	Mortality Reduction Associated with Coexistent Antithrombotic Use in Nursing Home Residents with COVID-19	Journal of the American Medical Directors' Association / Study	<ul style="list-style-type: none"> • Nursing home residents have a high mortality when infected by COVID-19. This study identifies an association between use of antithrombotics and a reduction in 30-day mortality.
19.11.2021	Significant reduction in vaccine-induced antibody levels and neutralization activity among healthcare workers and nursing home residents 6 months following COVID-19 BNT162b2 mRNA vaccination	Clinical Infectious Diseases / Study	<ul style="list-style-type: none"> • Antibody decline from two weeks to 6-months post-BNT162b2 mRNA vaccination in nursing home (NH) residents and healthcare workers. • Anti-spike, receptor-binding domain and neutralization levels dropped >81% irrespective of prior SARS-CoV-2 infection. • Notably, 69% of infection-naïve NH residents had neutralizing antibodies at or below the limit of detection of the assay.
20.11.2021	Clinical evaluation of single-swab sampling for rapid COVID-19 detection in outbreak settings in Dutch nursing homes	European Geriatric Medicine / Study	<ul style="list-style-type: none"> • Study to assess whether in the nursing home (NH) setting a single-swab sampling method, in which one swab can be used to perform both the Ag-RDT and RT-PCR, can be used for rapid COVID-19 detection during an outbreak. It addresses general requirements for post-acute COVID-19 geriatric rehabilitation and critical aspects for quality assurance during the COVID-19 pandemic.

			<ul style="list-style-type: none"> • In the NH setting, the single-swab method had a sensitivity of 51% and a specificity of 89% compared to RT-PCR, which was lower than in the laboratory setting (69% and 100%, respectively). During focus groups, both advantages and disadvantages of the single-swab method emerged. • For the vulnerable NH residents, it is important to find the right balance between effective testing policy and the burden this imposes.
<p>23.11.2021</p>	<p>A Novel Collaborative Care Program to Augment Nursing Home Care During and After the COVID-19 Pandemic</p>	<p>JAMDA / Study</p>	<ul style="list-style-type: none"> • The 2019 novel coronavirus (COVID-19) pandemic created an immediate need to enhance current efforts to reduce transfers of nursing home (NH) residents to acute care. Long-Term Care Plus (LTC+), a collaborative care program developed and implemented during the COVID-19 pandemic, aimed to enhance care in the NH setting while also decreasing unnecessary acute care transfers. • Using a hub-and-spoke model, LTC+ was implemented in six hospitals serving as central hubs to 54 geographically associated NHs with 9,574 beds in Toronto, Canada. • LTC+ provided to NHs with the following: <ul style="list-style-type: none"> ○ virtual general internal medicine (GIM) consultations; ○ nursing navigator support; ○ rapid access to laboratory and diagnostic imaging services; ○ educational resources. • From April 2020 to June 2021, LTC+ provided 381 GIM consultations that addressed abnormal bloodwork (15%), cardiac problems (13%) and unexplained fever (11%) as the most common reasons for consultation. Sixty-five nurse navigator calls addressed requests for non-GIM specialist consultations (34%), wound care assessments (14%) and system navigation (12%). One hundred and seventy-seven (46%; 95% CI 41-52%) consults addressed care concerns sufficiently to avoid the need for acute care transfer. All 36 primary care physicians who consulted the LTC+ program reported strong satisfaction with the advice provided. • Early results demonstrate the feasibility and acceptability of an integrated care model that enhances care delivery for NH residents where they reside and has the potential to positively impact the long-

			term care sector by ensuring equitable and timely access to care for people living in NHs. It represents an important step towards health system integration that values the expertise within the long-term care sector.
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Preprints

Publication Date	Title / URL	Preprint Source	Digest
20.11.2021	COVID-19 management in social care in England: a systematic review of changing policies and newspaper reported staff perspectives	MedRxiv	<ul style="list-style-type: none"> • Adult social care has been a major focus of public attention and infection control guidance during the COVID-19 pandemic, with a high mortality both for carers and those receiving care. • Authors sought to explore the production and reception of guidance and look at ways these can be adapted to improve the working life of care staff in domiciliary and residential care whilst reducing the risk of SARS-CoV-2 transmission amid this pandemic and of future emerging infections through two complementary and integrated systematic reviews of published documents in the pre-vaccination era: (1) National guidance for social care (conducted between 29 July to 28 October 2020), and (2) Newspaper coverage of infection control issues in social care (conducted between 27th July to 10th September 2020). • Three higher order common themes emerged in the integrated systematic review of guidance documents and newspaper articles: <ul style="list-style-type: none"> ○ a) Testing, ○ b) Personal Protective Equipment, ○ c) Employment. • The reviews revealed a sharp disjunction between the content of infection control guidance and its usability and applicability in social care settings. • Authors suggest that infection control guidance needs to be better adapted to social care settings and informed by the sector

			<ul style="list-style-type: none"> The practicalities of care work and care settings need to be at the core of the process for guidance to be relevant and effective. Modes and timings of communications also need to be optimised.
21.11.2021	Causal Inference and COVID-19 Nursing Home Patients: Identifying Factors That Reduced Mortality Risk	MedRxiv	<ul style="list-style-type: none"> Less than 1% of the US population lives in long-term care facilities, yet this subset of the population accounts for 22% of total COVID-19 related deaths. Because of a lack of experimental evidence to treat COVID-19, analysis of real-world data to identify causal relationships between treatments/policies to mortality and morbidity among high-risk individuals is critical. This study applied causal inference (CI) analysis to longitudinal patient-level health data of 4,091 long-term care high-risk patients with COVID-19 to determine if any actions or therapies delivered from January to August of 2020 reduced COVID-19 patient mortality rates during this period. Causal inference findings determined that certain supportive care interventions caused reduced mortality rates for nursing home residents regardless of severity of disease (as measured by oxygen saturation level, presence of pneumonia and organ failure), comorbidities or social determinants of health such as race, age, and weight. This study does address the biological mechanisms associated with specific medical interventions and their impact on mortality, but its analysis suggests methods to validate and optimize treatment protocols using domain knowledge and causal inference analysis of real-world data across patient populations and care settings.
21.11.2021	Limited immune responses after three months of BNT162b2 vaccine in SARS-CoV-2 uninfected elders living in long-term care facilities	MedRxiv	<ul style="list-style-type: none"> SARS-CoV-2 vaccination is the most effective strategy to protect elders living in long-term care facilities (LTCF) against severe COVID-19, but primary vaccine responses are less effective in older adults. In this paper, the authors characterise the humoral responses following 3 months after mRNA/BNT162b2 vaccine in institutionalized elders. Three months after vaccination, uninfected-elders presented reduced specific SARS-CoV-2 IgG levels and significantly lower neutralization capacity against the WH1 and Delta virus compared to vaccinated uninfected younger individuals.

			<ul style="list-style-type: none"> • In contrast, COVID-19 recovered elders showed significantly higher specific SARS-CoV-2 IgG levels after vaccination than younger counterparts, while showing similar neutralization activity against WH1 virus and increased neutralization capacity against Delta variant. • Despite previously infected elders elicit potent cross-reactive immune responses similarly to younger individuals, higher quantities of specific SARS-CoV-2 IgG antibodies are required to reach the same neutralization levels. • While hybrid immunity seems to be active in previously infected elders after three months from mRNA/BNT162b2 vaccination, humoral immune responses are diminished in COVID-19 uninfected vaccinated residents living in LTCF. • The results suggests that a vaccine booster dose should be prioritized for this particularly vulnerable population.
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Statistics

Publication date	Title / URL	Author(s)	Digest
23.11.2021	Notifications to Care Inspectorate Wales related to COVID-19 in adult care homes: 1 March 2020 to 17 November 2021	Welsh Government	<ul style="list-style-type: none"> • The report provides provisional counts of the number of adult care homes reporting one or more confirmed cases of COVID-19 and provisional counts of deaths in care homes. This is based on notifications by care home providers to Care Inspectorate Wales. The location of death may be in the care home, in hospital or another location.
23.11.2021	Care home resident deaths registered in England and Wales, provisional	ONS	<ul style="list-style-type: none"> • Provisional counts of the number of care home resident deaths registered in England and Wales, by region, including deaths involving coronavirus (COVID-19), in the latest weeks for which data are available.

23.11.2021	Number of deaths in care homes notified to the Care Quality Commission, England	ONS / CQC	<ul style="list-style-type: none"> Provisional counts of deaths in care homes caused by the coronavirus (COVID-19) by local authority. Published by the Office for National Statistics and Care Quality Commission.
24.11.2021	Coronavirus (COVID-19): adult care homes - additional data	Scottish Government	<ul style="list-style-type: none"> Weekly data on COVID-19 in adult care homes in Scotland.

Editorials and News

Publication date	Title / URL	Author(s)	Digest
18.11.2021	Chart of the week: How many care home staff in England have received two Covid-19 vaccine doses?	Hemmings, Nina	<ul style="list-style-type: none"> Last week saw the deadline pass for staff to have received two doses of a Covid-19 vaccine as a condition of deployment in care homes in England. Care home staff in England now need to have received two Covid-19 jabs to carry on working. In this chart, Nina Hemmings looks at how many had been vaccinated twice only a few weeks before the deadline.