

COVID-19 in Pflegeheimen – Lessons Learned?

Erfahrungsaustausch
Aktion Saubere Hände
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Christian Pux

ggz.graz.at



GRAZ
GERIATRISCHE
GESUNDHEITZENTREN



Hintergrund - Risiko

- ***Im Alter nimmt sowohl die Erkrankungshäufigkeit (Inzidenz) als auch die Sterblichkeit (Letalität) von Infektionen zu.***
- ***Grund hierfür ist die altersbedingte Beeinträchtigung des Immunsystems.***
- ***Der alte Mensch ist ähnlich infekтанfällig wie eine immunsupprimierte Personen.***
- ***Aufgrund der altersassoziierten Schwäche des Immunsystems sind schwere Verläufe von Infektionen häufig.***

Hintergrund - Risiko

Clinical Infectious Diseases 2003;36:870–6

Infectious Disease Outbreaks in Nursing Homes: An Unappreciated Hazard for Frail Elderly Persons

Table 1. Etiologic agents of respiratory disease outbreaks in nursing homes.

Viruses
Influenza A virus
Influenza B virus
Parainfluenza virus
Respiratory syncytial virus
Rhinoviruses
Bacteria
<i>Streptococcus pneumoniae</i>
<i>Chlamydia pneumoniae</i>
<i>Chlamydia psittaci</i>
<i>Mycobacterium tuberculosis</i>
<i>Legionella</i> species
<i>Haemophilus influenzae</i>
<i>Bordetella pertussis</i>

Table 2. Etiologic agents of outbreaks of gastrointestinal infection in nursing homes.

Viruses	Bacteria
Caliciviridae ^a	<i>Salmonella</i> species
Rotaviruses	<i>Shigella</i> species
Adenoviruses	<i>Staphylococcus aureus</i>
Astroviruses	<i>Clostridium perfringens</i>
	<i>Clostridium difficile</i>
	<i>Escherichia coli</i> 0157:H7
Parasites	<i>Aeromonas hydrophila</i>
<i>Entamoeba histolytica</i>	<i>Campylobacter jejuni</i>
<i>Giardia lamblia</i>	<i>Bacillus cereus</i>
<i>Cryptosporidium parvum</i>	

OUTBREAKS CAUSED BY ANTIMICROBIAL-RESISTANT BACTERIA

Methicillin-resistant S. aureus (MRSA)
Vancomycin-resistant enterococci (VRE)
Multidrug-resistant (MDR) gram-negative bacilli

OUTBREAKS OF SKIN AND SOFT-TISSUE INFECTION

Group A Streptococci,
Sarcoptes scabiei var. hominis

Hintergrund - Risiko

Herausforderungen durch Infektionen und mehrfach-resistente Bakterien bei alten Menschen in Heimen



Der Alterungsprozess des Menschen geht mit einigen physiologischen Veränderungen einher, die die individuelle Disposition gegenüber Infektionskrankheiten erhöhen können.

Zusätzliche Infektionsrisiken in Heimen:

- ***Gemeinschaftsalltag***
- ***durch pflegerische Maßnahmen***
- ***(teils inadäquater Einsatz von Antibiotika)***

Hintergrund - Risiko

Healthcare-associated infections pose a major public health threat in long-term care facilities in Europe



*„Strategies to **prevent and control these infections**, in addition to **prudent use of antimicrobial agents**, need to be in place to **protect the health of the residents of these facilities**.“*

European Centre for Disease Prevention and Control.(2017): <https://www.ecdc.europa.eu/en/news-events/healthcare-associated-infections-pose-major-public-health-threat-long-term-care>

Prevalence of healthcare-associated infections, estimated incidence and composite antimicrobial resistance index in acute care hospitals and long-term care facilities: results from two European point prevalence surveys, 2016 to 2017

*„The total number of **healthcare-associated infections (HAI)** in long-term care facilities in the EU/EEA was estimated at **4.4 million**. The total number of residents **with at least one HAI on any given day** in EU/EEA **long-term care facilities** was estimated at **129,940**.“*

Euro Surveill. (2018): <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2018.23.46.1800516>



*“This finding emphasises the **urgent need to reinforce measure to improve infection prevention and control, antimicrobial stewardship as well as microbiological laboratory support for long-term care facilities.**”*

Hintergrund - Risiko

Mortality among Care Home Residents in England during the first and second waves of the COVID-19 pandemic: an observational study of 4.3 million adults over the age of 65

The Lancet Regional
Health - Europe
2022;14: 100295

Findings We included 4,340,648 people aged 65 years or older on the 1st of February 2019, 2.2% of whom were classified as residing in a care or nursing home. Age-standardised mortality risks were approximately 10 times higher among care home residents compared to those in private housing in February 2019: comparative mortality figure (CMF) = 10.59 (95%CI = 9.51, 11.81) among women, and 10.87 (9.93, 11.90) among men. By April 2020 these relative differences had increased to more than 17 times with CMFs of 17.57 (16.43, 18.79) among women and 18.17 (17.22, 19.17) among men. CMFs did not increase during the second wave, despite a rise in the absolute age-standardised COVID-19 mortality risks.

SARS-CoV-2/COVID-19 - Risiko

Ein eigenständiger Risikofaktor für schwere Verläufe mit Todesfolge war die Tatsache, ein Heimbewohner (eine Heimbewohnerin) zu sein.

Deutsche Gesellschaft für Krankenhaushygiene. (2021). [Nosokomiale COVID-19-Ausbrüche in vollstationären Pflegeeinrichtungen Ursachen und Forderungen](#)

SARS-CoV-2/COVID-19 – Prävalenz („1. Welle“) international

EClinicalMedicine

Available online 1 March 2021

Epidemiology and clinical features of COVID-19 outbreaks in aged care facilities: A systematic review and meta-analysis

EClinicalMedicine. (01.03.2021). [Epidemiology and clinical features of COVID-19 outbreaks in aged care facilities: A systematic review and meta-analysis](#)

Table 1
Characteristics of included studies and epidemiologic index of SARS-CoV-2 in aged care facilities.

First Author/ Year	Country	Study design	Study period (month)	Outbreak setting (number of facilities)	Number of outbreak	Participants investigated in the facility	Index case	Total number of residents	Total number of investigated participants (N)n	RT-PCR- confirmed COVID-19 cases (n)n	Sex distribution of COVID-19 cases (M/F) [†]	Age of COVID-19 residents (years) [*]	Attack rate (%)	Case fatality rate (%)	Mortality rate (%)
Gilbert/ 2020 ¹⁰	Australia	Case study	March	NH (1)	1	R, S	Staff, Female	76	76	17	NR	NR	22.3	35.2	7.8
Frank/2020 ²⁹	Belgium	Retrospective cohort	March–April	NH (1)	1	R, S	NR	130	188	40	NR	NR	30.7	NR	NR
Stall/2020 ²³	Canada	Retrospective cohort	March–May	LTC (190)	190	R	NR	22,990	NR	5218	NR	NR	22.6	27.8	6.3
Stall/2020 ²²	Canada	Retrospective cohort	April	NH (1)	1	R, S	NR	126	126	89	NR	NR	70.6	13.4	9.5
Hu/2020 ³¹	China	Retrospective cohort	January–April	NH (1)	NA	R	NR	34	34	34	11/23	82.7 (7.4)	NR	NR	NR
Blain/2020 ²⁴	France	Prospective cohort	March	NH (1)	1	R, HCP	NR	79	70	88	NR	86.5 (5)	48.1	31.5	15.1
Belmin/ 2020 ²⁵	France	Retrospective cohort	March–May	NH (17)	NA	R, S	Resident	1250	1294	65	NR	NR	0.4	100	0.4
Sacco/2020 ²⁶	France	Retrospective cohort	March	NH (1)	NA	R, S	NR	87	82	32	15/26	88.8 (7)	47.1	26.8	12.6
Guery/2020 ²⁷	France	Letter	April	NH (1)	1	S	Resident, Female, 80 years	NR	136	3	NR	NR	NR	2.2	NR
Klein/2020 ²⁸	Germany	Prospective cohort	March	NH (1)	1	R	NR	60	60	39	NR	NR	65	20.5	13.3
Kennelly/ 2020 ³²	Ireland	Cross- sectional	April–May	NH (28)	21	R, S	NR	1741	1742	7305	NR	NR	40.8	25.8	10.5
Nouvenne/ 2020 ³³	Italy	Prospective cohort	April	NH (5)	NA	R	NR	83	83	44	NR	NR	53.0	NR	NR
Veronese/ 2020 ³⁴	Italy	Retrospective cohort	April–May	NH (1) [*]	NA	R	NR	175	175	50	NR	NR	28.5	24.0	6.9
Carta/2020 ³⁵	Italy	Prospective cohort	March–April	LTCF (1)	NA	R	NR	65	65	54	35/8	81 (56–97)	83.0	20.3	16.9
Rutten/ 2020 ³⁶	Netherlands	Prospective cohort	March–April	NH (1)	NA	R	NR	1969	1969	857	300/557	84 (8.7)	43.5	NR	NR
Van Den Bes- selaar/ 2020 ³⁷	Netherlands	Retrospective cohort	May–June	NH (1)	1	R, S	NR	181	184	158	31/82	85 [44–99]	NR	62.4	NR
Van Buul/ 2020 ³⁸	Netherland	Cross- sectional	May	NH (3)	NA	R, HCP	NR	297	297	16	NR	NR	NR	5.3	NR
Kittang/ 2020 ³⁹	Norway	Retrospective cohort	March–April	NH (3)	3	R, S	Pre-symptomatic staff, Resident	115	1157	40	14/26	86.2 (69–98)	34.7	52.5	18.2
Park/2020 ⁴⁰	Republic of Korea	Prospective cohort	April	LTCF (3)	3	R, S	Caregiver, Female, 45 years; Resi- dent Female, 50 & 85 years	569	209	68	68/109	82.4	3.1	38.9	1.2
Song/2020 ⁴¹	Republic of Korea	Cross- sectional	May	NF (5)	5	R, S	Daytime worker, Resident	296	137	41	NR	NR	13.8	14.6	2.0
Borras-Ber- mejil/ 2020 ⁴²	Spain	Cross- sectional	April	NH (69)	1	R, S	NR	3214	3214	7003	NR	NR	23.8	NR	NR
Bearnabeu- Wittel/ 2020 ³⁸	Spain	Retrospective cohort	March–April	NH (4)	4	R	NR	457	457	272	67/205	87 [81–91]	59.5	22.4	13.3
Ladhani/ 2020 ⁴⁴	UK	Prospective cohort	April	NH (6)	6	R, S	NR	264	264	105	23/82	88 [85–91]	39.7	16.1	3.2
Graham/ 2020 ⁴⁵	UK	Prospective cohort	March–April	NH (4)	4	R, S	Resident	394	370	136	NR	NR	31.9	16.7	5.3
Marossy/ 2020 ⁴⁶	UK	Cross- sectional	May	ECH (6), NH (18), RF (13)	37	R, S	NR	1034	1034	63	22/72/55	88.1	8.9	36.5	3.2
Shallcross/ 2020 ⁴⁷	UK	Cross- sectional	April–June	LTC (2724)	2724	R, S	NR	160,033	113,160,831	12,995	NR	NR	NR	8.1	NR
Smith/2020 ⁴⁸	UK	Prospective cohort	April–June	ECH (44)	14	R, S	NR	518	500	109	41/62	87.8 (71–104)	19.8	20.3	4.0

Table 1 (Continued)

First Author/ Year	Country	Study design	Study period (month)	Outbreak setting (number of facilities)	Number of outbreak	Participants investigated in the facility	Index case	Total number of residents	Total number of investigated participants (N) [‡]	RT-PCR- confirmed COVID-19 cases (n) [‡]	Sex distribution of COVID-19 cases (M/F) [†]	Age of COVID-19 residents (years) [‡]	Attack rate (%)	Case fatality rate (%)	Mortality rate (%)	Fidelity of reporting
McMichael/ 2020 ¹¹	USA	Retrospective cohort	March	SNF (1)	1	R, HCP, V	Resident, Female, 73 years	130	118	101	32/69	83 (51--100)	77.7	33.7	26.1	HF
Roxby/2020 ¹²	USA	Prospective cohort	March	Independent/ALF (1)	1	R, S	NR	80	80	24	NR	NR	5	NR	NR	HF
Patel/2020 ⁴⁹	USA	Prospective cohort	March	SNF (1)	1	R, S	Resident, Female, 57 years	127	126	39	11/24	82 [75-92]	16.2	28.5	7.8	HF
Temkin- Greener/ 2020 ⁵⁰	USA	Retrospective cohort	March-May	ALF (4685)	NA	R	NR	NR	NR	2647	NR	NR	NR	29.3	NR	LF
Weil/2020 ⁵¹	USA	Cross- sectional	March-May	SNF (15), ALF (1)	NA	R, S	NR	1208	1208	150	NR	NR	9.1	NR	NR	LF
Sanchez/ 2020 ⁵²	USA	Cross- sectional	March-May	SNF (26)	NA	R	NR	2773	2773	1207	NR	72 [64-82]	43.5	23.7	10.3	HF
Louie/2020 ⁵³	USA	Prospective cohort	March-April	SNF (3), ALF (1)	4	R, HCP	NR	156	157	63	NR	NR	40.3	19	7.6	HF
Arons/2020 ¹³	USA	Cross- sectional	March	SNF (1)	1	R, S	NR	89	76	36	NR	78.6 (9.5)	53.9	NR	NR	HF
Goldberg/ 2020 ⁵⁴	USA	Cross- sectional	April	SNF (1)	1	R, S	NR	97	97	85	NR	NR	85.5	28.9	24.7	HF
Dora/2020 ⁵⁵	USA	Prospective cohort	March-April	SNF (1)	NA	R, S	Resident, Male, > 90 years	99	99	89	19/0	75 [66-85]	19.1	5.2	1.0	HF
Bigelow/ 2020 ⁵⁶	USA	Prospective cohort	April	NH (1)	1	R	NR	170	170	37	NR	NR	21.7	NR	NR	HF
Feaster/ 2020 ⁵⁷	USA	Prospective cohort	April	SNF (8), ALF (1)	NA	R, S	NR	608	586	403	171/237	78.4 (13)	67.1	NR	NR	HF
Mills/2020 ⁵⁸	USA	Prospective cohort	April	ALF (101)	3	R	NR	1794	35	7	2/5	81.9 (11)	0.03	14.2	0.05	LF
Harris/2020 ⁵⁹	USA	Prospective cohort	April	SNF (1)	1	R	NR	48	48	41	NR	NR	85.4	14.6	12.5	HF
Shrader/ 2020 ⁶⁰	USA	Prospective cohort	March	LTC (1)	1	R, S	Resident, Female, 72 years	98	96	59	NR	NR	53.0	9.6	5.1	HF
Jatt/2020 ⁶¹	USA	Prospective cohort	March-April	SNF (1)	NA	R	NR	NR	149	18	NR	NR	12.0	NR	NR	LF
Escobar/ 2020 ⁶²	USA	Prospective cohort	April	NH (1)	1	R, S	Resident	84	84	22	NR	86 (15.5)	32	NR	NR	HF
Rudolph/ 2020 ⁶³	USA	Prospective cohort	April	CLC (134)	NA	R	NR	7325	7325	443	432/11	76.3 (10.8)	6.0	NR	NR	HF
Eckardt/ 2020 ⁶⁴	USA	Cross- sectional	April-May	LTC (1)	1	R, S	NR	NR	284	16	NR	NR	3.6	NR	NR	HF
Quicke/ 2020 ⁶⁵	USA	Prospective cohort	NR	SNF (5)	4	S	NR	NR	351	70	NR	NR	19.9	NR	NR	LF
Telford/ 2020 ⁶⁶	USA	Prospective cohort	March	SNF, NH, ALF (28)	28	R, S	NR	2868	2880	826	NR	NR	28.6	16.2	4.5	HF
Shi/2020 ⁶⁷	USA	Retrospective cohort	March-May	LTC (1)	1	R	NR	389	389	146	66/80	55.9	37.5	30.1	11.3	HF

SARS-CoV-2/COVID-19 – Prävalenz („1. Welle“) international

TABLE

Number of affected facilities (long-term care and other specified settings), COVID-19 cases and deaths among residents, examples from countries in the EU/EEA and the UK, May 2020 (n = 58,831 deaths)

Country	Report date (in 2020)	Affected facilities	Confirmed COVID-19 cases in LTCF residents	COVID-19-related deaths in LTCF residents	Total COVID-19 deaths	% of all COVID-19 deaths in the country	COVID-19 deaths in LTCF/1 million population ^a
Belgium [9]	25 May	Unk	5,734	4,735	9,312	51	413.3
France [16]	29 May	7,923	74,402	14,113	28,530	50	210.6
Germany [17] ^a	25 May	Unk	15,757	3,138	8,257	38	37.8
Ireland [20] ^{b,c}	25 May	458	6,392	811	1,354	60	165.4
Norway [21]	25 May	Unk	Unk	139	235	59	25.5
The Netherlands [22]	19 May	Unk	9,474	1,779	5,694 [1]	31	102.9
Spain [13]	25 May	5,457	Unk	19,066	28,752 [1]	66	406.2
Stockholm County, Sweden [14]	15 April	212 (400 ^d ; 53%)	1,711	630	1,400	45	409.6
Sweden [15]	18 May	Unk	2,866	1,777	3,661	49	173.7
UK – England and Wales [23]	15 May	Unk	Unk	11,650	45,226	26	196.0
UK – Scotland [24,25]	17 May	655 (60%)	5,652	1,623	3,546	46	297.1

SARS-CoV-2/COVID-19 – Prävalenz („1. Welle“) Norwegen

Outbreak of COVID-19 at three nursing homes in Bergen

“40 residents (Anmerkung: 35 %) had COVID-19: 7 at nursing home A (Anmerkung: 24 %), 10 at nursing home B (Anmerkung: 34 %) and 23 at nursing home C (Anmerkung: 52 %). A total of 115 residents were tested for SARS-CoV-2 during the outbreaks. A total of 168 staff members were tested for SARS-CoV-2, and 42 of these tested positive (Anmerkung: 25 %).”

„About half of the residents included in the study died (Anmerkung: 53 %), mostly during the second week of the disease.“

„We have also established two ‘corona teams’ to assist nursing homes in the event of an outbreak of COVID-19.“

SARS-CoV-2/COVID-19 – Prävalenz („1. Welle“) Österreich

Tabelle 5: COVID-19-Fälle in Alten- und Pflegeheimen nach Bundesländern (Stand: 22.6.2020)

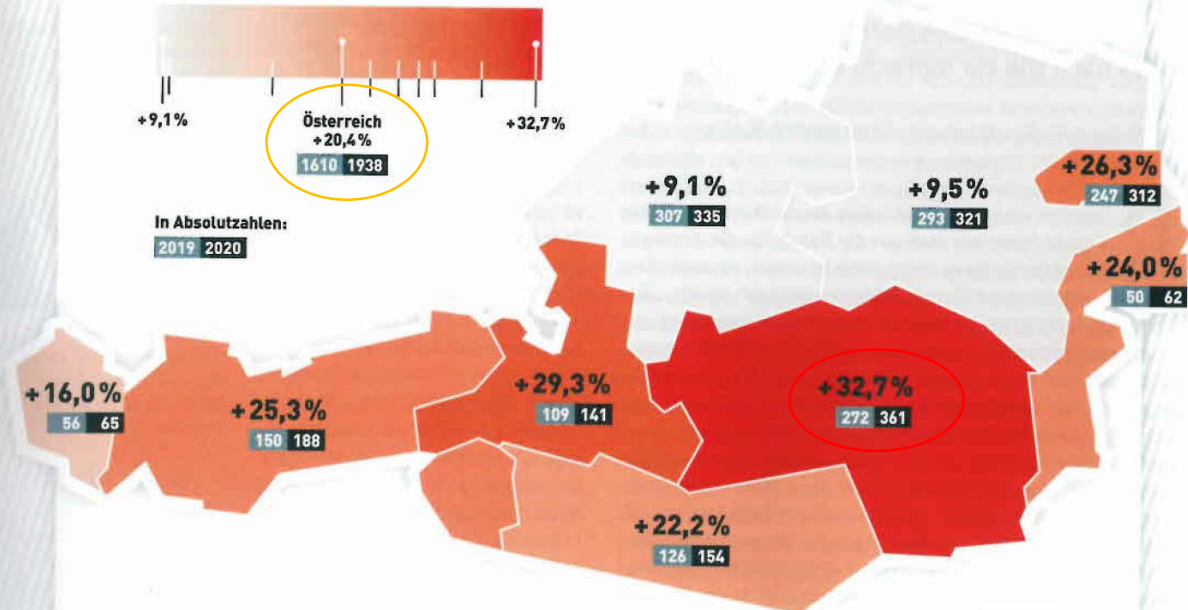
Bundesland	Fälle in APH	Betroffene APH	% der APH im BL	Männer	%	Frauen	%	Median Alter	Inzidenz in APH je 1.000 BW	Inzidenz BL je 100.000 EW	Letalität
Burgenland	6	2	4,4 %	4	66,7 %	2	33,3 %	79,5	2,6	118,6	0 %
Kärnten	0	0	0,0 %	0	0,0 %	0	0,0 %	-	0,0	75,6	0 %
Niederösterreich	53	13	11,9 %	18	34,0 %	35	66,0 %	80,0	6,0	176	23 %
Oberösterreich	59	15	11,4 %	21	35,6 %	38	64,4 %	86,0	5,2	158,6	27 %
Salzburg	49	9	11,5 %	16	32,7 %	33	67,3 %	85,0	10,8	224,1	37 %
Steiermark	305	23	10,5 %	92	30,2 %	213	69,8 %	86,0	22,5	149	27 %
Tirol	168	24	23,5 %	51	30,4 %	117	69,6 %	87,0	28,1	470,1	24 %
Vorarlberg	46	3	5,3 %	11	23,9 %	35	76,1 %	85,0	19,9	230	28 %
Wien	237	28	31,1 %	70	29,5 %	167	70,5 %	86,0	13,0	193,9	32 %
Österreich	923	117	12,6 %	283	30,7 %	640	69,3 %	86,0	12,7	195,4	28 %

APH=Alten- und Pflegeheime, BL=Bundesland, BW= Bewohner/-innen, EW=Einwohner/-innen

Quelle: Darstellung GÖG, basierend auf EMS-Daten

Gestorbene mit Hauptwohnsitz in Pflegeanstalten, Pensionistenheimen und Behinderteneinrichtungen

in den Kalenderwochen 12, 13, 14, 15; 2019 und 2020



In Absolutzahlen:
2019 2020

Quelle: STATISTIK AUSTRIA, Statistik der natürlichen Bevölkerungsbewegung. Grafik: ©Schaffler Verlag



SARS-CoV-2/COVID-19 – Prävalenz („1. Welle“) GGZ

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Major Article

Analysis of COVID-19 outbreaks in 3 long-term care facilities in Graz, Austria



Ines Zollner-Schwetz MD^{a,*}, Elisabeth König MD, PhD^a, Robert Krause MD^a, Christian Pux^b, Lisa Laubreiter^b, Walter Schippinger MD^b

^a Section of Infectious Diseases and Tropical Medicine, Department of Internal Medicine, Medical University of Graz, Graz, Austria

^b Albert Schweitzer Hospital, Geriatric Health Centers of the City of Graz, Graz, Austria

American Journal of Infection Control. (2021). [Analysis of COVID-19 outbreaks in 3 long-term care facilities in Graz, Austria](#)

Ergebnisse:

❖ **3 (277 Bewohner:innen) von 4 Heimen betroffen (367 Bewohner:innen)**

Beginn positive Testung: 22.03.2020

❖ **SARS-CoV-2 positive Bewohner:innen**

■ **13 % (36 von 277):**

17 % (16 von 92) / 13 % (13 von 100) / 8 % (7 von 85)

■ *Temperatur ≥ 38.1 °C: 25 % (9)*

■ *„asymptomatisch“: 17 % (6)*

❖ **SARS-CoV-2 positive Mitarbeiter:innen**

■ **9 % (19 von 214):**

6 % (4 von 70) / 15 % (11 von 74) / 6 % (4 von 70)

SARS-CoV-2/COVID-19 – Prävalenz („1. und 2. Welle“) Österreich

Austria

Data from the 24th January 2021 shows that, up to that date, 18,080 residents in care homes (including all ages) tested positive for COVID-19 and of these, 3,243 had died with COVID-19. Compared to the 7,328 total deaths linked to COVID-19 in Austria on the same date, deaths of care home residents would represent 44% of all deaths (data from the Austrian epidemiological alert system and based on care home data reported by the Länder). There have been 10,180 cases among staff in care homes, of which one was fatal.

While, after the first wave, only 0.4% of care home residents had died according to data from 17th September 2020, by January 2021 this number has risen to 4.7%, using 69,730 residents in care homes in Austria as the denominator for the total number of care home residents¹⁰.

Figure 1. Share of care home residents whose deaths were linked to COVID-19, compared to the care home population

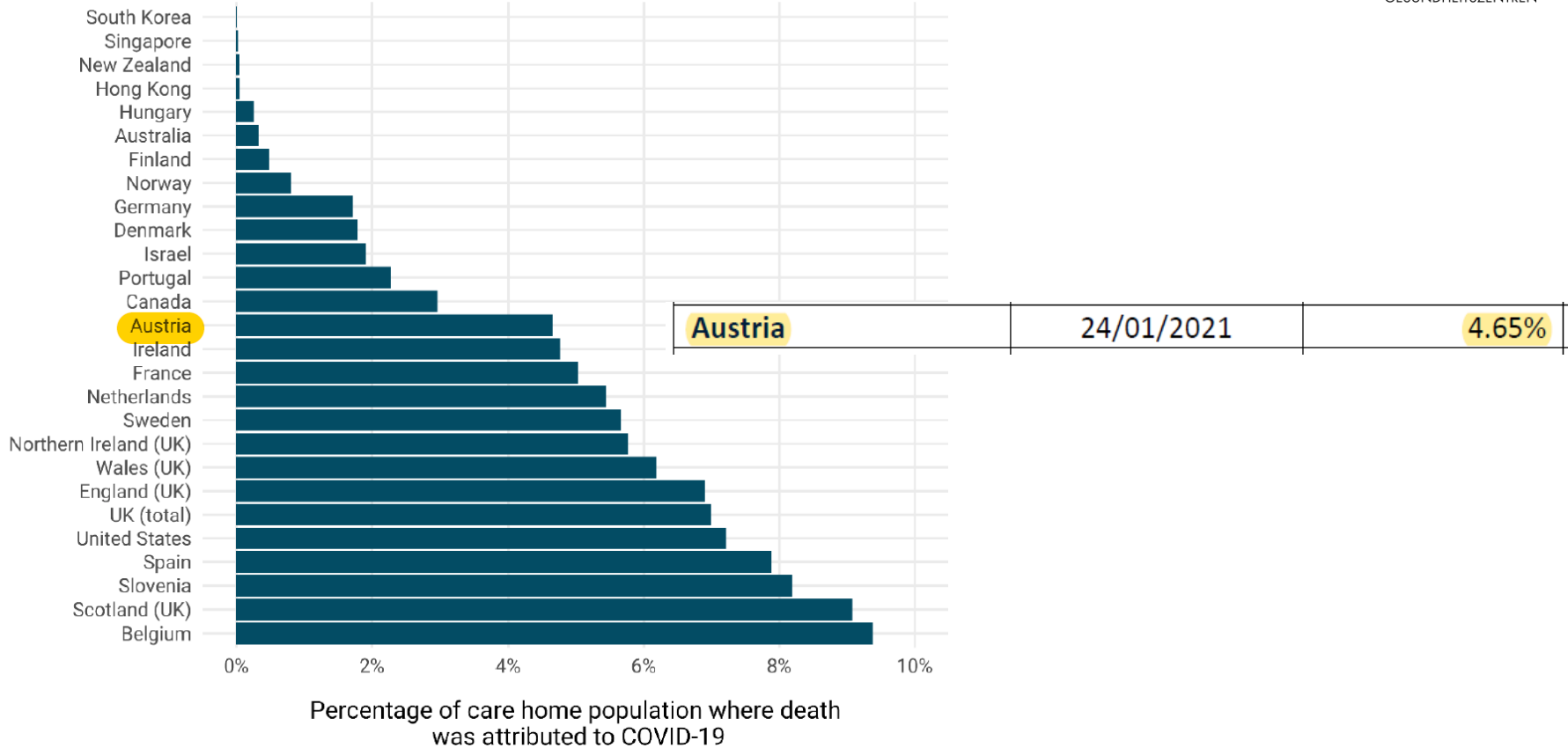


Table 1. Number of COVID-related or confirmed deaths in the population and in care homes (or among care home residents).

Country	Date	Approach to measuring COVID-19 linked deaths in care homes <i>C: confirmed P: probable</i>	Total number deaths linked to COVID-19*	Number of deaths of care home residents linked to COVID-19	Number of deaths in care homes linked to COVID-19	Number of care home resident deaths as % of all COVID-19 deaths	Number of deaths in care homes as % of all COVID-19 deaths
Australia	22/01/2021	C	909	685		75%	
Austria	24/01/2021	C	7,328	3,243		44%	
Belgium	19/01/2021	C + P	20,457	11,722	8,854	57%	43%
Canada	23/01/2021	C + P	18,974	11,114		59%	
Denmark	19/01/2021	C	1,837	719		39%	
Finland	22/01/2021	C	644		243		33%
France	20/01/2021	C + P	71,342	30,395	21,646	43%	30%
Germany	22/01/2021	C	50,642	14,066		28%	
Netherlands	15/01/2021	C	12,774	6,529		51%	
Slovenia	17/01/2021	C	3,371	1,875		56%	
Spain	22/01/2021	C + P	66,557	26,328		40%	
Sweden	18/01/2021	C + P	9,949	4,656	4,249	47%	43%
United Kingdom	As above	C + P	104,130	34,979	26,391	34%	25%
United States	07/01/2021	C + P	357,124	139,699		39%	

SARS-CoV-2/COVID-19 – Prävalenz („1. und 2. Welle“) Deutschland

Die durchschnittliche Ausbruchgröße in der **1. Pandemiewelle** in deutschen Pflegeheimen betrug **19,3 Fälle**.

Die durchschnittliche Ausbruchgröße in der **2. Pandemiewelle** in deutschen Pflegeheimen betrug **28,4 Fälle**.

Robert Koch-Institut. (06.05.2021). [COVID-19-Ausbrüche in deutschen Alten- und Pflegeheimen](#)

SARS-CoV-2/COVID-19 – Prävalenz („1. und 2. Welle“) Deutschland

Tab. 3 | Ausbrüche und Ausbruchsfälle stratifiziert nach Größenkategorie

	Kat 2–4	Kat 5–9	Kat 10–19	Kat 20–49	Kat 50–99	Kat 100+	Gesamt
<i>MW 10/2020–20/2020; 1. Pandemiewelle</i>							
Fälle	485	639	2.023	5.559	3.208	767	12.681
Anteil (%)	3,8	5,0	16,0	43,8	25,3	6,0	100
Ausbrüche	177	98	154	191	55	6	681
Anteil (%)	26,0	14,4	22,6	28,0	8,1	0,9	100

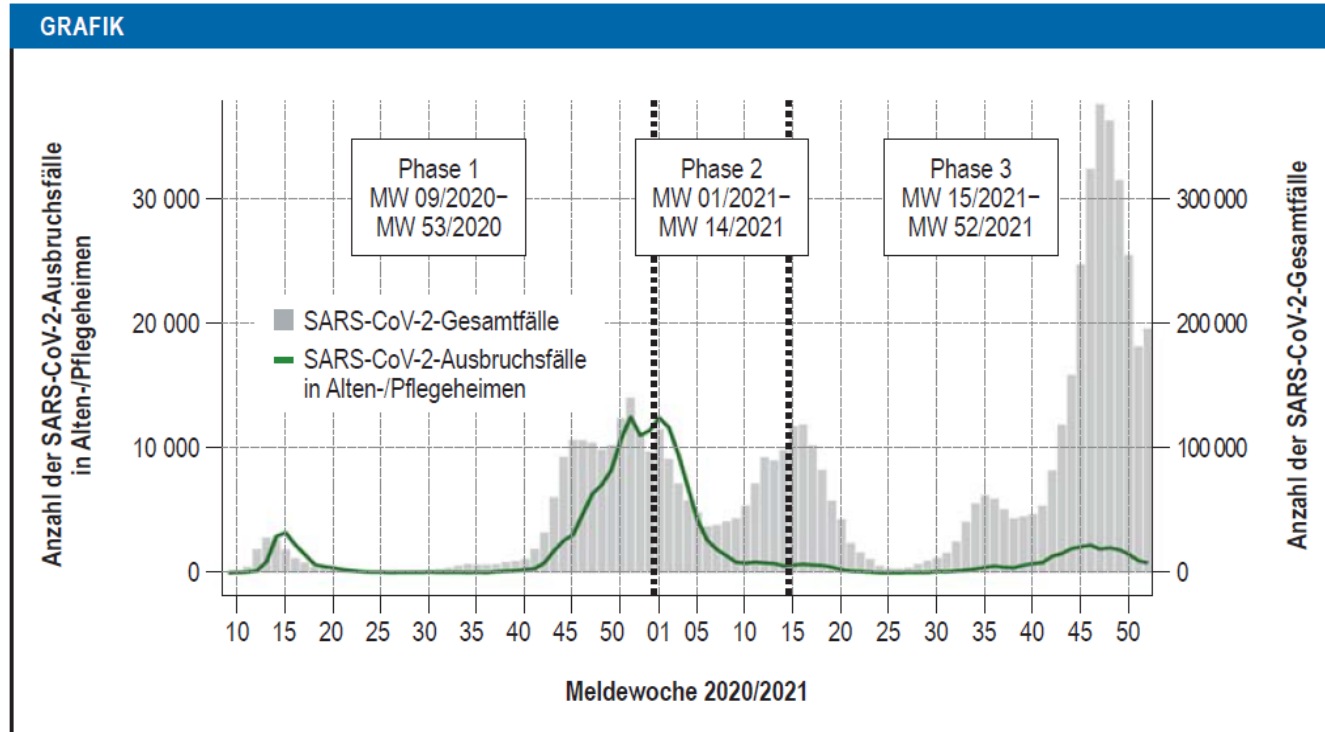
	Kat 2–4	Kat 5–9	Kat 10–19	Kat 20–49	Kat 50–99	Kat 100+	Gesamt
<i>MW 40/2020–06/2021; 2. Pandemiewelle</i>							
Fälle	1.770	4.104	11.183	43.550	45.082	13.265	118.951
Anteil (%)	1,5	3,5	9,4	36,6	37,9	11,2	100
Ausbrüche	619	602	780	1.342	669	108	4.123
Anteil (%)	15,0	14,6	18,9	32,5	16,2	2,6	100

SARS-CoV-2 outbreaks in hospitals and long-term care facilities in Germany: a national observational study

Variables	First wave (CW 9/2020, March 2020 - CW 28/2020, July 2020)	Second wave (CW 29/2020, July 2020 - CW 5/2021, February 2021)	Third wave (CW 6/2021, February 2021 - CW 25/2021, June 2021)	Fourth wave (CW 26/2021, June 2021 - CW 37/2021, September 2021)
Long-term care facilities (SARS-CoV-2 LTCF outbreaks)				
Number of outbreaks (cases)	746 (14,810)	4,466 (130,353)	846 (9,221)	196 (1,966)
Outbreak cases in elderly (≥ 65 y.o) (%)	9,803 (66.2)	91,322 (70.1)	5,690 (61.7)	1,389 (70.7)
Proportion of outbreak cases in total cases %	7.4	6.2	0.6	0.5
Median outbreak size (range outbreak cases)	13 (2 - 187)	21 (2 - 237)	7 (2 - 73)	8 (1- 50)***
Median age (IQR)	85 (80 – 90)	85 (80 – 90)	85 (80 – 90)	86 (81 – 91)
Outbreak cases in men (%)	4,211 (28.4)	36,316 (27.9)	2,627 (28.5)	493 (25.5)
Outbreak cases in women (%)	10,593 (71.6)	93,634 (72.1)	6,580 (71.5)	1,441 (74.5)
Outbreak cases with hospitalization (%)****	2,685 (18.1)	14,154 (10.9)	1,025 (11.1)	244 (12.4)
Deaths in elderly outbreak cases (≥ 65 y.o.) (%)**	2,691 (27.5)	19,305 (21.1)	914 (16.1)	99 (16.4)**

SARS-CoV-2/COVID-19 – Prävalenz („1. und 2. Welle“) Deutschland

Deutsches Ärzteblatt | Jg. 119 | Heft 27–28 | 11. Juli 2022



SARS-CoV-2/COVID-19 – Prävalenz („2. Welle“) Steiermark

Im Bundesländervergleich gibt es mit Abstand die meisten Toten unter Heimbewohner:innen in der Steiermark. Hier starben seit Beginn der Pandemie bereits 1.491 Menschen – 814 davon (55 Prozent) lebten in Alters- oder Pflegeheimen.

20 größten Pflegeheim-Cluster in der Steiermark:

44 – 127 infizierten Heimbewohner:innen

Mein Bezirk. (26.01.2021). [55% aller Corona Todesfälle in der Steiermark in Alters- oder Pflegeheimen](#)

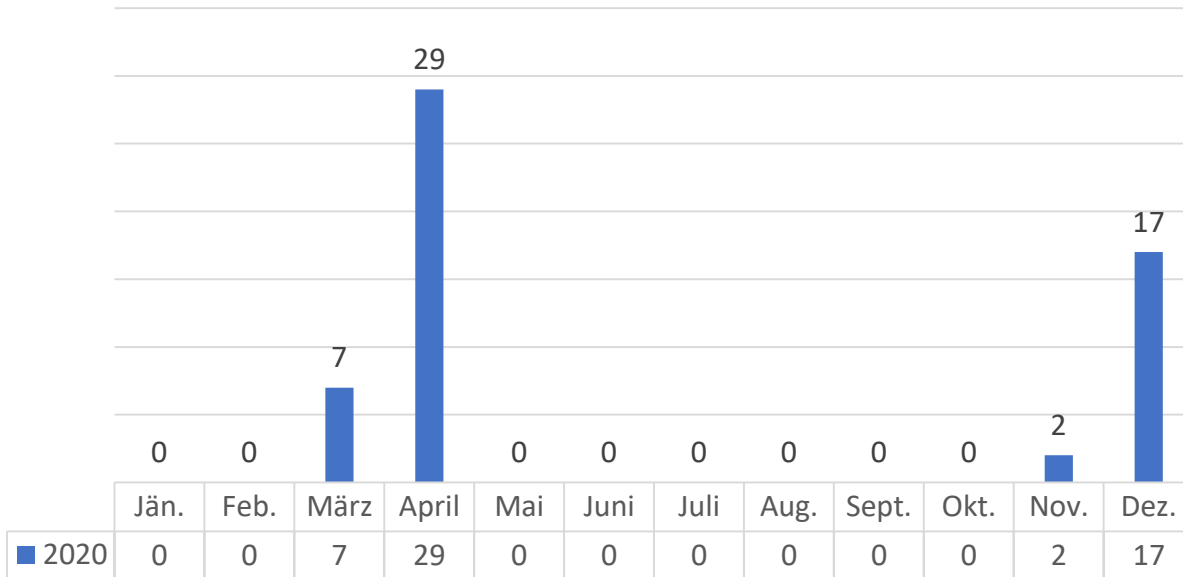
Ergebnisse Mortalitätsstudie Land Steiermark (EPIG):

*Unabhängig von der Todesursache verstarben **2020** 4.890 Menschen in steirischen Pflegeheimen. Das sind **1.155** mehr als im Durchschnitt der letzten Jahre.*

Land Steiermark. (15.10.2021). [Pandemie und Pflege](#)

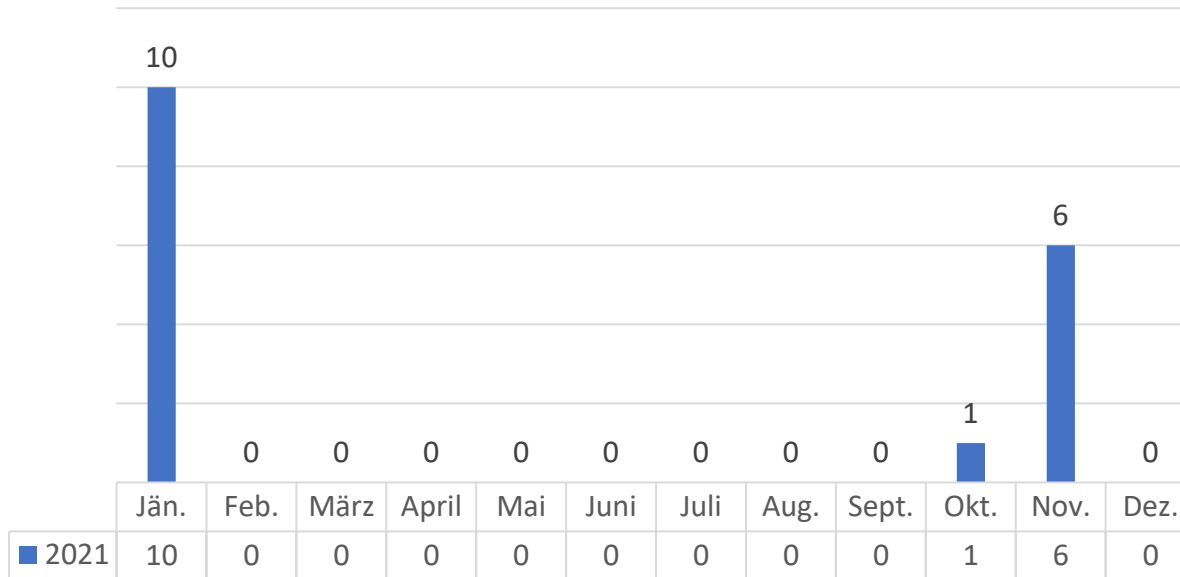
SARS-CoV-2/COVID-19 – Prävalenz GGZ 2020 und 2021

SARS-CoV-2 pos. Bew. PWH GGZ 2020



SARS-CoV-2/COVID-19 – Prävalenz GGZ 2020 und 2021

SARS-CoV-2 pos. Bew. PWH GGZ 2021



Ergebnisse „2.Welle“ Pfl egewohnh eime (PWH) GGZ:

❖ **4 von 4 Heimen betroffen (372 Bewohner:innen)**

Beginn positive Testung: 09.11.2020

❖ **SARS-CoV-2 positive Bewohner:innen (Bew.)**

▪ **8 % (29 von 372):**

1 % (1 von 101) / 8 % (7 von 92) / 11 % (10 von 92) /

Nov. 2020: 1 % (1 von 90) und Jänner 2021: 11 % (10 von 87)

❖ **SARS-CoV-2 positive Mitarbeiter:innen im (möglichen) Zusammenhang mit pos. Bew.**

▪ **4 % (11 von 249):**

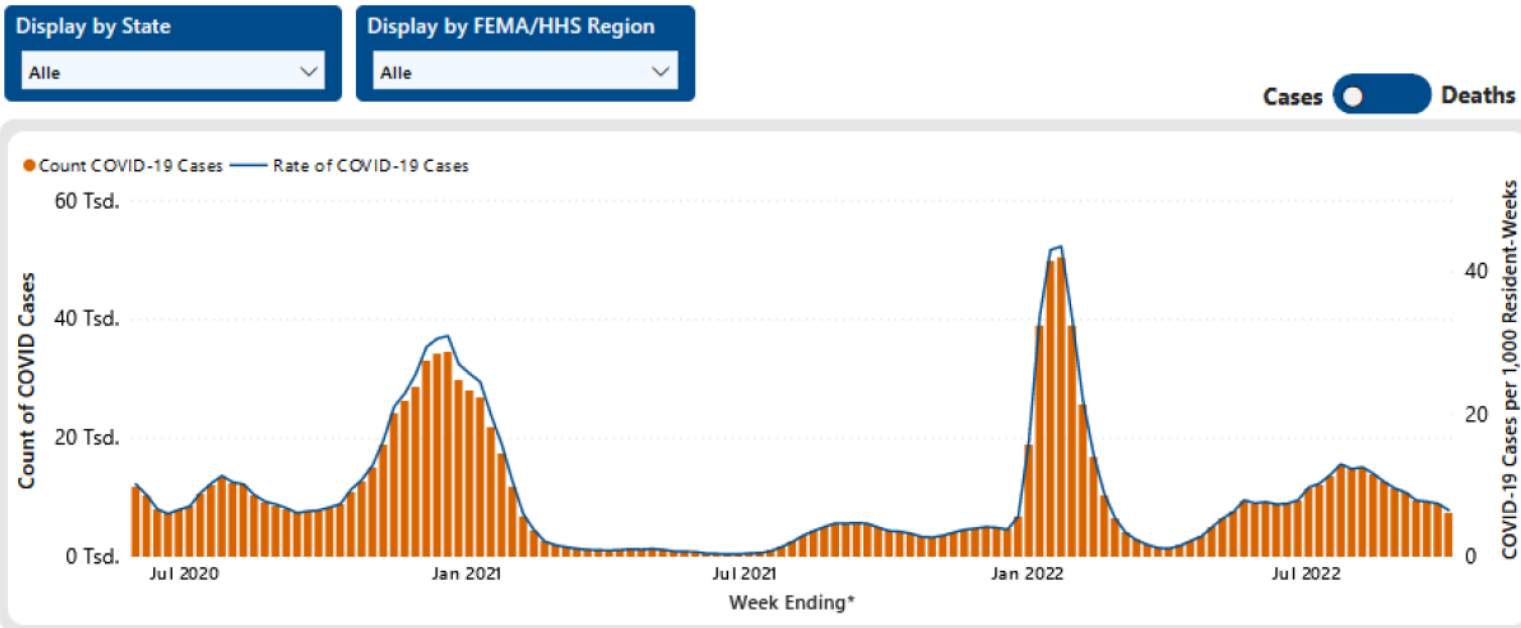
0 % (0 von 66) / 3 % (2 von 72) / 11 % (6 von 57) /

Nov. 2020: 0 % und Jänner 2021: 6 % (3 von 54)

SARS-CoV-2/COVID-19 USA



Confirmed COVID-19 Cases among Residents and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States



* Data are likely accruing, all data can be modified from week-to-week by facilities

For the purpose of creating this time-series graph, data that fail certain quality checks or appear inconsistent with surveillance protocols are assigned a value based on their patterns for data-entry or excluded from analysis

Data source: Centers for Disease Control and Prevention, National Healthcare Safety Network

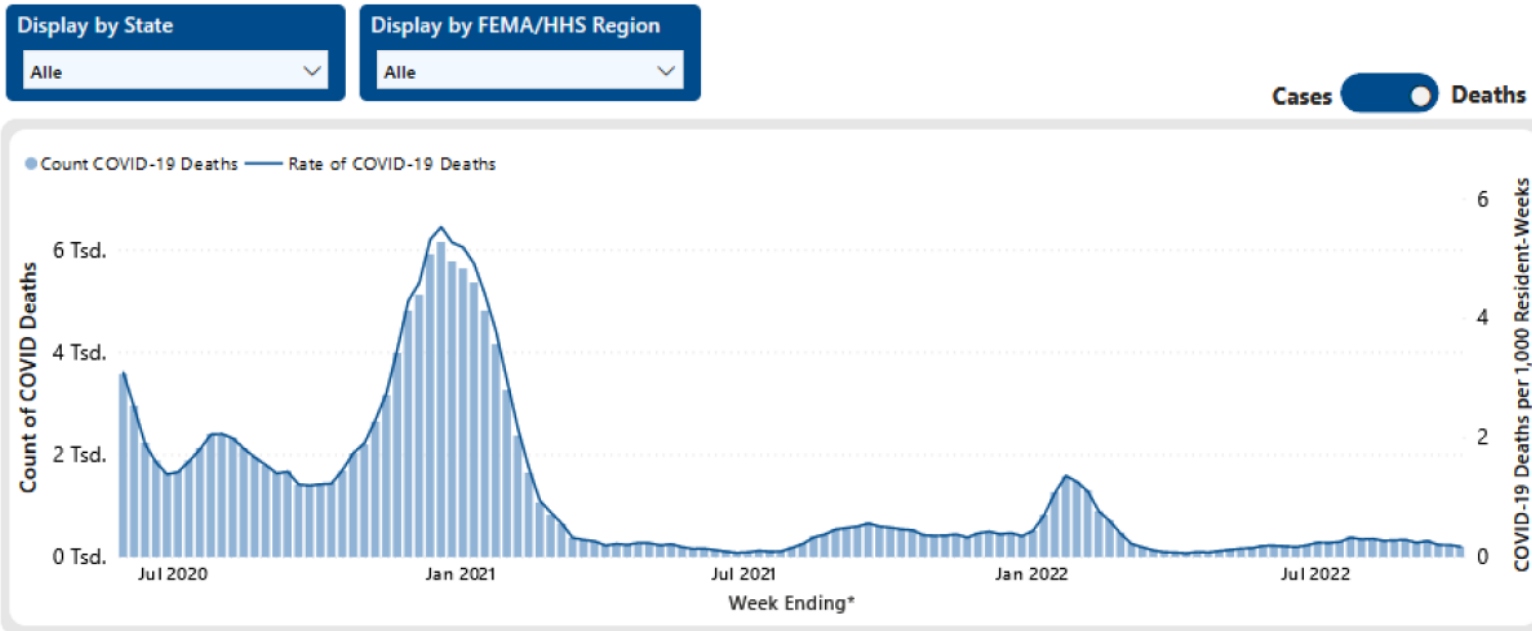
For more information: <https://www.cdc.gov/nhsn/itc/covid19/index.html>

Accessibility: [Right click on the graph area to show as table]

SARS-CoV-2/COVID-19 USA



COVID-19 Deaths among Residents and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States



* Data are likely accruing, all data can be modified from week-to-week by facilities

For the purpose of creating this time-series graph, data that fail certain quality checks or appear inconsistent with surveillance protocols are assigned a value based on their patterns for data-entry or excluded from analysis

Data source: Centers for Disease Control and Prevention, National Healthcare Safety Network

For more information: <https://www.cdc.gov/nhsn/itc/covid19/index.html>

Accessibility: [Right click on the graph area to show as table]

SARS-CoV-2/COVID-19 – COVID-19-Impfung

Bis Mitte August 2021 sind in diesem Jahr 677 Menschen in Pflegeheimen nach einer SARS-CoV-2-Infektion gestorben. Mit 642 war das Gros der Todesfälle unter den nicht geimpften Bewohnern zu beklagen, lediglich 35 der Verstorbenen waren immunisiert. Zudem waren rund zwei Drittel der Toten in den ersten drei Kalenderwochen des Jahres zu verzeichnen.

ORF. (30.09.2021). [Von Jahresbeginn bis Mitte August 677 Tote in Pflegeheimen](#)



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SARS-CoV-2/COVID-19 – COVID-19-Impfung

Centers for Disease Control and Prevention March 18, 2022

Effectiveness of mRNA Vaccination in Preventing COVID-19–Associated Invasive Mechanical Ventilation and Death — United States, March 2021–January 2022

What is added by this report?

Receiving 2 or 3 doses of an mRNA COVID-19 vaccine was associated with a 90% reduction in risk for COVID-19–associated IMV or death. Protection of 3 mRNA vaccine doses during the period of Omicron predominance was 94%.

What are the implications for public health practice?

COVID-19 mRNA vaccines are highly effective in preventing the most severe forms of COVID-19. CDC recommends that all persons eligible for vaccination get vaccinated and stay up to date with COVID-19 vaccination.

**SARS-CoV-2 Infection and Hospitalization Among Adults Aged ≥ 18 Years,
by Vaccination Status, Before and During SARS-CoV-2 B.1.1.529 (Omicron)
Variant Predominance — Los Angeles County, California,
November 7, 2021–January 8, 2022**

Summary

What is already known about this topic?

COVID-19 vaccines are highly effective against severe SARS-CoV-2–associated outcomes, including those caused by the Delta variant.

What is added by this report?

As of January 8, 2022, during Omicron predominance, COVID-19 incidence and hospitalization rates in Los Angeles County among unvaccinated persons were 3.6 and 23.0 times, respectively, those of fully vaccinated persons with a booster, and 2.0 and 5.3 times, respectively, those among fully vaccinated persons without a booster. During both Delta and Omicron predominance, incidence and hospitalization rates were highest among unvaccinated persons and lowest among vaccinated persons with a booster.

What are the implications for public health practice?

Being up to date with COVID-19 vaccination is critical to protecting against SARS-CoV-2 infection and hospitalization.

SARS-CoV-2/COVID-19 – COVID-19-Impfung

During the 2022 Hong Kong COVID-19 outbreak, 7 out of 10 deaths* have been among adults ages 60 years and older who were unvaccinated



20x higher risk of death[†]
among unvaccinated adults
ages 60+



High vaccination coverage
among older adults and others
at risk can help prevent deaths



* COVID-19-associated deaths reported to the Hong Kong Department of Health during January 6–March 21, 2022.
[†] Compared with fully vaccinated adults ages 60 years and older

bit.ly/MMWR7115

MMWR

Lessons Learned aus COVID-19?

Hypothese:

Es gibt ja mittlerweile die COVID-19 Impfung, wir benötigen aus diesem Grund keine weiteren Infektionsschutz-Maßnahmen in Pflegeheimen.

Lessons Learned aus COVID-19?

There is a risk for outbreaks of COVID-19 in LTCFs in EU/EEA countries despite very high uptake of the COVID-19 vaccine in LTCF residents and high uptake in staff. In some cases, the outbreaks had a high attack rate and resulted in high morbidity and high mortality among residents.

TABLE 1

Descriptive results for residents by country in COVID-19 outbreaks in long-term care facilities, 10 EU/EEA countries, July–October 2021 (n = 17,268 residents)

Country	Outbreaks (n)	Residents (n)	Fully vaccinated (%)	COVID-19 cases (n)	Pooled AR %	95% CI	Median AR (%)	Hospitalised cases		Deaths (n)	CFR (%)
								n	%		
Belgium	20	1,812	96.3	238	13.1	7.9–21.1	11.7	27	11.3	13	5.5
France	34	2,293	94.1	485	21.2	17.2–25.7	18.4	50	10.3	53	10.9
Greece	14	912	88.8	277	30.4	19.2–44.5	33.7	19	6.9	26	9.4
Ireland	9	424	99.8	107	25.2	13.4–42.5	24.1	9	8.4	10	9.3
Lithuania	4	483	91.1	75	15.5	1.8–65.0	37.7	8	10.7	5	6.7
Luxembourg	4	374	96.0	11	2.9	1.4–6.3	2.8	3	– ^a	4	– ^a
Norway	15	301	ND	68	22.6	14.0–34.3	19.4	2	2.9	6	8.8
Portugal	25	1,073	95.8	589	54.9	34.3–74.0	52.4	49	8.3	40	6.8
Slovakia	1	52	96.2	4	7.7	2.1–18.5	7.7	1	– ^a	1	– ^a
Spain	114	9,544	98.9	1,978	20.7	16.4–25.8	14.9	497	25.1	232	11.7
Total	240	17,268	97.0	3,832	22.2	18.9–25.9	18.9	665	17.4	390	10.2

AR: attack rate; CFR: case fatality rate; COVID-19: coronavirus disease; EU/EEA: European Union and European Economic Area; ND: no data.

Percentages not shown when the number of cases is small.

Lessons Learned aus COVID-19?

Es gibt auch Ausbrüche mit anderen Erregern wie Influenza oder Noroviren, ebenso besteht weiterhin die Problematik des Eintrages von multiresistenten Erregern (MRE) bzw. durch Antibiotikagabe selektierte Erreger wie *C. difficile*, **die fachlich adäquat gemanagt werden müssen da sie zu potenziell lebensbedrohlichen Infektionen bei den Bewohnern führen können.**

Insofern zeichnen sich die hier vorgeschlagenen Maßnahmen zur Verbesserung des Infektionsschutzes und zur Bewältigung der Hygienedefizite in den Alten- und Pflegeeinrichtungen durch ein hohes Maß an Nachhaltigkeit aus, welche auch für die Zeit nach der COVID-19-Pandemie Gültigkeit haben.

Lessons Learned aus COVID-19?

„Der Nutzen einer verbesserten Infektionsprävention in deutschen Alten- und Pflegeheimen geht also weit über eine Reduktion von COVID-19-Erkrankungen hinaus und sollte priorisiert werden.“

Robert Koch-Institut. (2021). [COVID-19-Ausbrüche in deutschen Alten- und Pflegeheimen](#)

Lessons Learned aus COVID-19?

„Studien aus den Jahren 2004 und 2010 kamen zum Ergebnis, dass nosokomiale Infektionen in deutschen Pflegeeinrichtungen ein ernstzunehmendes Problem darstellen und Ausbrüche in diesem Setting mit einer hohen Anzahl Infizierter und damit verbundenen hohen Mortalitätsraten einhergehen. Auf diese Situation traf seit März 2020 die Coronapandemie und deckte die Schwächen des stationären Pflegesystems auf Kosten der Pflegebedürftigen konsequent auf.

Aber auch **die Pflegenden standen unter erheblichen psychischen und physischen Belastungen**, viele haben die Arbeit in den Einrichtungen aufgegeben.“

Lessons Learned aus COVID-19?

American Journal of Infection Control

Lessons learned – Outbreaks
of COVID-19 in nursing
homes

Published: July 30, 2020

„Nursing Homes (NH) need to invest in Infection Preventionists and Employee Health.

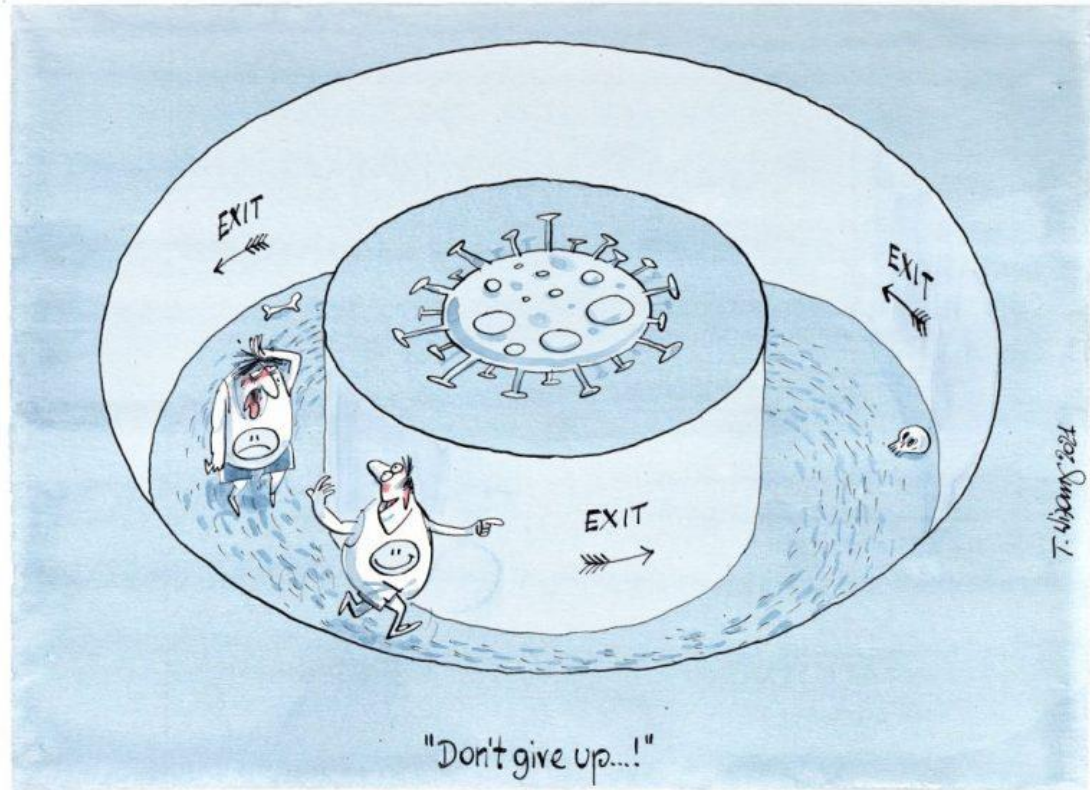
COVID-19 will not be the last respiratory infection to threaten NH residents; it is time to invest in prevention for the future.

Lessons Learned aus COVID-19? - Steiermark

Bericht Expert:innenkommission Tannenhof:

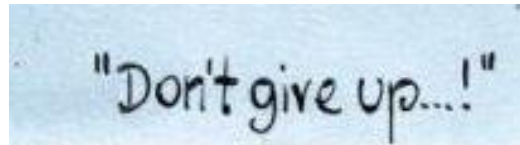
Für den Bereich der Hygiene wird die Einstellung 1 Hygienefachkraft pro 200 Betten empfohlen.

Land Steiermark. (15.10.2021). [Pandemie und Pflege](#)



© Thomas Wizany

Der Infektionsschutz in Alten- und Pflegeheimen ist von essentieller Wichtigkeit (für die Gesundheit der Bewohner:innen und Mitarbeiter:innen) und benötigt aus diesem Grund auch den entsprechenden Stellenwert!



Herzlichen Dank!



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Christian Pux

Tel.: +43 316 7060 – 1205

Email: christian.pux@stadt.graz.at



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