Crisis management during the pandemic from the perspective of GÖG as a boundary organization

Claudia Habl, 24. Mai 2022

Conference: Science for Resilience – Learnings from the Pandemic
23 & 24. Mai 2022, Wien

Gesundheit Österreich GmbH

The Austrian National Public Health Institute in brief

- Founded by national law in 2006
  - Service Centre for Research, Planning, Health Promotion, Quality, Economics and Evaluations in the Health Sector
  - Some mandated tasks (e.g., Poison Information Centre, Stemcell transplantation, Health Work Force Registry, Medical Devices Registry) – but no explicit surveillance or epidemiology tasks
- Owned by the Federal State of Austria, represented by MoH
- Three business units

Austrian National Institute for Health Services Research (ÖBIG), established in 1973 to plan, regulate and reform the Austrian Health Care System

Austrian Health Promotion Fund (FGÖ), established in 1992 with the task to encourage health promotion and prevention in Austria

Austrian National Institute for Quality in Health Care (BIQG), established in 2007, responsible for developing, implementing and evaluating a nationwide quality system on behalf of the federal government

Containment 1.0

Starting point:
Exponential increase in Sars Cov 2 cases in early March ‘20

Containment 1.0 objectives:

- Stopping the rate of increase and reducing the number of cases
- Maintaining the functioning of the health system

Measures in containment 1.0:

- Closing the borders - disrupting travel
- March 15, 2020 - total lockdown of social and economic life
- Development and expansion of the Covid-19 capacities in the healthcare sector
- Federally coordinated procurement of protective devices
- “At any cost"

Sozialministerium

What we did not foresee…. (at least partially)

Immediate overdrive mode in media

Expert emerging like mushrooms in a rainy forest

People are not able anymore to objectively deal with a communicable disease

WHO had a slow start

Faster than anticipated global spread

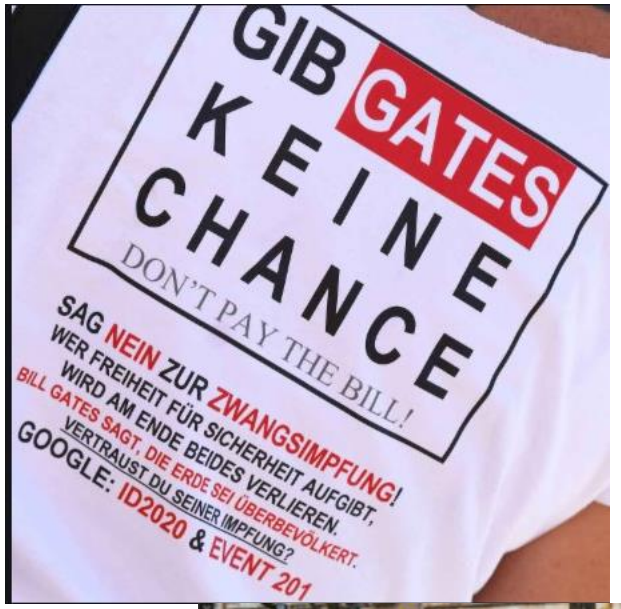
Poor information on actual disease severity

What we did not foresee…

FEAR – FEAR – FEAR

→ People and society accepted fairly draconian restrictions

Corona myths – It is not a long way from absurd to agressive



Containment 2.0

Starting point:

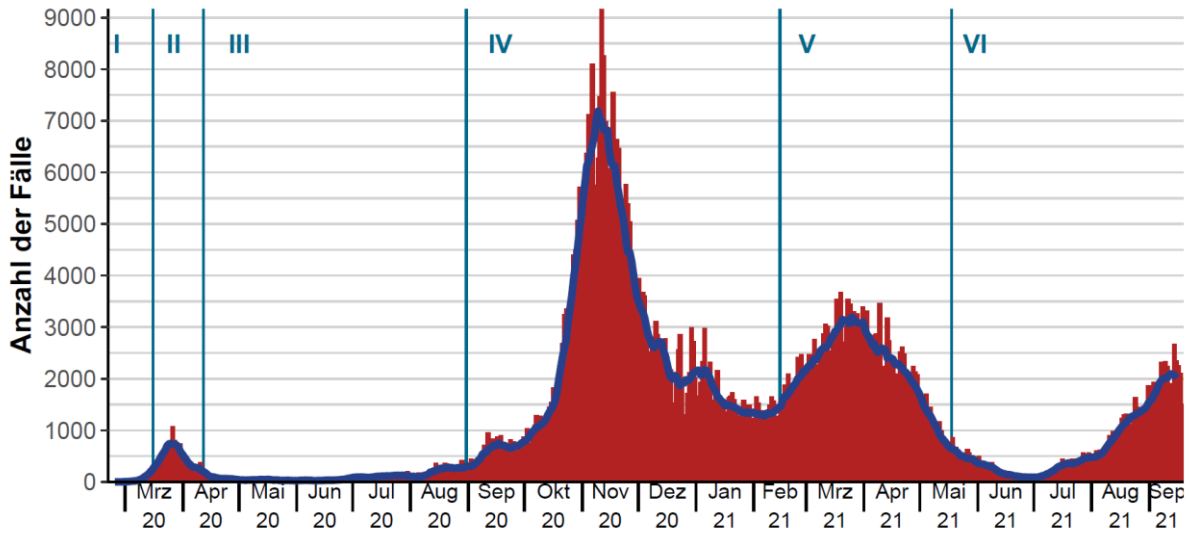
- Control of the chain of infection and low number of cases (summer 2020)

Containment 2.0 objectives:

- Opening of social life according to risk management considerations
- Gradual restoration of economic life
- Protection of the elderly population and risk groups → subscription of vaccines-to-be
- Restoration of standard care in the healthcare system and ensuring COVID-related capacities.
- Rapid action in the event of an outbreak
- Societal and personal rules

~~Containment 3.0, 4.0, 5.0~~ → Summary

- Phases of the pandemic in Austria



~~Everything is over after two months~~

~~Once we have a vaccine everything will be better~~

Well, vaccination is not that easy-going

Challenges in creating herd immunity to SARS-CoV-2 infection by mass vaccination

Published Online November 4, 2020 https://doi.org/10.1016/S0140-6736(20)32318-7

See Online for appendix

Vaccines to protect against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) have risen up the agenda of most policy makers and individuals as the second wave of COVID-19 in northern hemisphere countries grows and there is increasing pressure on health-care systems. For any licensed vaccine, efficacy and duration of protection are key issues. Vaccine efficacies to protect against infection above 80% are desirable,[1] but duration of protection will remain uncertain for a number of years post licensure of COVID-19 vaccines. Preliminary evidence suggests waning antibody titres in those who have recovered from SARS-CoV-2 infection,[2] but antibodies are only one part of the human immune response and acquired immunity to reinfection or the prevention of disease when reinfected.[3–5] Data on immunity to other coronaviruses suggest that immunity to SARS-CoV-2 might be short lived, perhaps 12–18 months in duration.[6] Whether past infection will prevent severe COVID-19 on re-exposure to SARS-CoV-2 is not known at present.

is planned in many countries, given the high number of COVID-19 deaths in these facilities during the first wave.

There is less clarity about the main priority of mass vaccination in the shorter term. Is it to minimise net mortality per year, or is it to maximise the average number of years of life gained by an individual receiving the vaccine? To maximise the average years of life gained, calculations need be made using demographic and epidemiological data. For example, with the recorded case fatality rates in the UK during the first COVID-19 wave and with the UK demography, we estimate that vaccinating people older than 70 years in the UK saves more lives than focusing on those aged 50–70 years (appendix). The reason for this is the steep rise in the case fatality rates in the very oldest age groups (appendix). We suggest that governments should therefore minimise mortality in the short term, unless vaccine supplies are short of what is required to protect the entire population for 1 year or more. Such calculations should be expanded to include other statistics, such as years of disability-

Source: https://www.thelancet.com/article/S0140-6736(20)32318-7/fulltext

~~Containment 3.0, 4.0, 5.0~~ → Summary

- Phases of the pandemic in Austria

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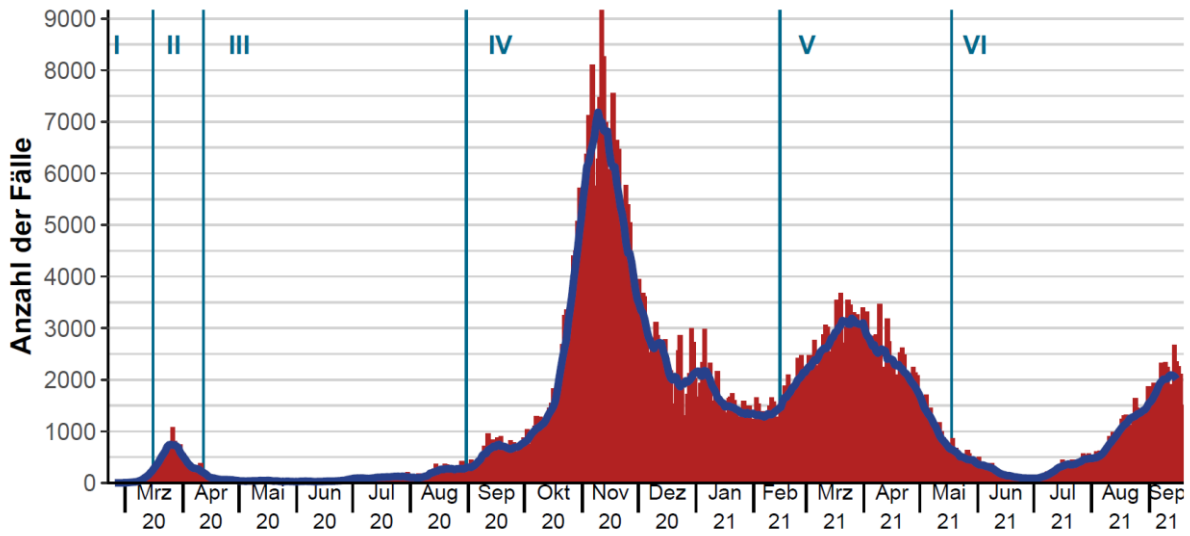
Its getting more and more complex



16.01.2021 22:55 | NACHRICHTEN > POLITIK

„DREI WOCHEN LÄNGER“

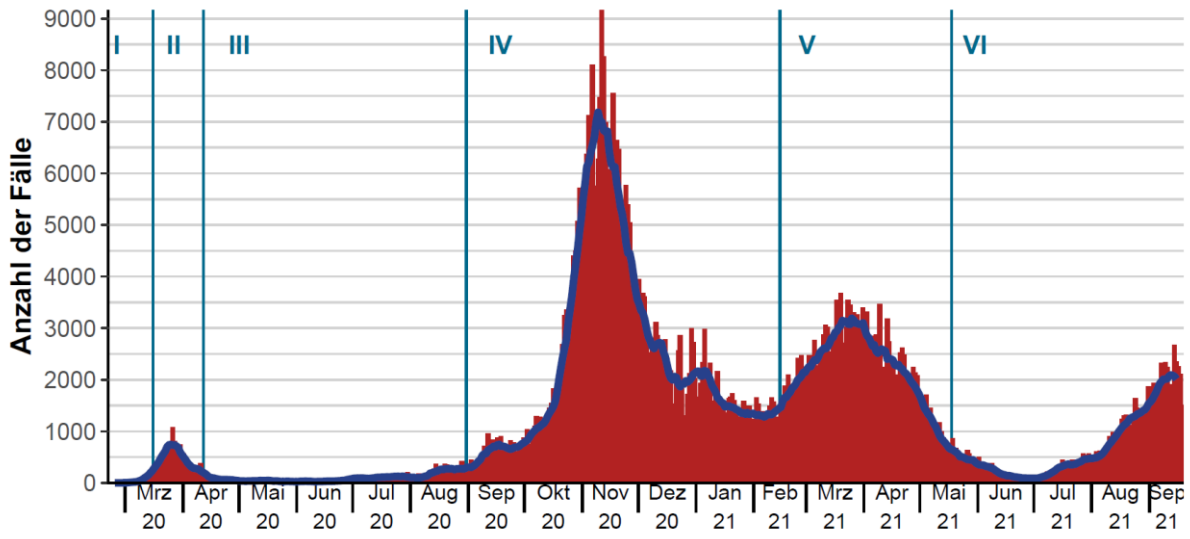
Lockerungen? Nein: Jetzt kommt der Mega-Lockdown!

Herwig Ostermann (Geschäftsführer der Gesundheit Österreich GesmbH), Oswald Wagner (AKH Wien) und Andreas Bergthaler vom Forschungszentrum für Molekulare Medizin (CeMM) (Bild:

Source: https://www.krone.at/2320031

~~Containment 3.0, 4.0, 5.0~~ → Summary

- Phases of the Pandemic



~~*Everything is over after two months*~~

~~*Once we have a vaccine everything will be better*~~

~~*Well, vaccination is not that easy-going*~~

Its getting more and more complex

„The global challenge: eradication Vs. immune escape“

Elimination of COVID-19: what would it look like and is it possible?

In countries that have achieved a low incidence of COVID-19 infection, such as Australia and New Zealand, disease elimination has been proposed.[1,2] Yet we do not have a definition of elimination for COVID-19. Both these countries implemented early, widespread, and strict disease mitigation strategies. With low cumulative incidence, most of the population in these countries remain susceptible to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Before the availability of a vaccine, implementing exit strategies that ease social distancing restrictions will probably result in epidemics if a low level of community transmission remains or is imported through travel, as seen with the resurgence in the state of Victoria, Australia in July 2020. For other respiratory transmitted infections, such as measles, mumps, and smallpox, the prevaccine era saw recurrent epidemic cycles,[3] and a similar pattern is projected for unmitigated SARS-CoV-2 transmission, depending on the duration of immunity.[4] Reduced

www.thelancet.com/infection Vol 20 September 2020

Variants of concern (VOC)

For these variants, clear evidence is available indicating a significant impact on transmissibility, severity and/or immunity that is likely to have an impact on the epidemiological situation in the EU/EEA. The combined genomic, epidemiological, and in-vitro evidence for these properties invokes at least moderate confidence. In addition, all the criteria for variants of interest and under monitoring outlined below apply.

Lineage + additional mutations	Country first detected (community)	Spike mutations of interest	Year and month first detected	Evidence for impact on transmissibility	Evidence for impact on immunity	Evidence for impact on severity	Transmission in EU/EEA
B.1.1.7	United Kingdom	N501Y, D614G, P681H	September 2020	Yes (v) [1]	Unclear [2]	Yes (v) [3, 4]	Dominating
B.1.1.7+E484K	United Kingdom	E484K, N501Y, D614G, P681H	December 2020	Yes (v) [1]	Neutralisation (v) [2, 5]	Yes (v) [3]	Outbreaks
B.1.351	South Africa	K417N, E484K, N501Y, D614G, A701V	September 2020	Yes (v) [6]	Escape (v) [7, 8]	Yes (v) [4, 9]	Community
P.1	Brazil	K417T, E484K, N501Y, D614G, H655Y	December 2020	Yes (v) [10]	Neutralisation (v) [11]	Yes (v) [4]	Community
B.1.617.2	India	L452R, T478K, D614G, P681R	December 2020	Yes (v) [12-14]	Escape (v) [15]		Community

Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/991343/Variants_of_Concern_VOC_Technical_Briefing_14.pdf

SARS-CoV-2 hit Austria – our role changed

- Set up of crisis response teams in the Ministry of Health, at GÖG and at the Austrian Agency for Health and Food Safety (AGES) and “Staatliches Krisen- und Katastrophenschutzmanagement” (SKKM) on Central Government Level (coordinated by the Ministry of the Interior).
- 10-12 GÖG employees were seconded to the MoH to staff the crisis response team there as ministerial persons partly had to carry on with their regular tasks as well,
- Establishment of a functional mailbox corona@goeg.at that worked as the „point of communication“
- Establishment of a Task Force with experts from different departments of GÖG with various skills and expertise
- Tasks reaching from evidence generation and modelling, to analysis of capacities used to input to “FAQs” on website and communication support
- Executive Director became part of official Ministerial Advisory Board (now GECKO)

Evidence Provision in a standardised format

- First „formal“ question reached GÖG on 6 March 2020 related to identification of infection and testing
- Standardised format – 1st page with Q&A short summarising answer, accompanied by evidence identified
- Rapid Assessments
- Sample: Self-sewed masks

Anfragenbeantwortung

Krisenstab Corona S *4*

Übermittlung GÖG an BMSGPK: 18.03.2020

Kurztitel/Arbeitstitel	*Evidenz zu selbstgenähten Atemschutzmasken bzw. OP-Masken*
Fragestellung	*Siehe Titel*
Fragesteller	*Über Peter Schneider und Herwig Ostermann*
Quelle	*Per E-Mail und telefonisch*
Datum der Anfrage	*18.3. bzw. schon am 13.3.2020 (HO)*
Fazit	*Bei „selbstgenähten Masken" oder „Masken ohne Normen-Kennzeichnung" statt Einmalmasken aus Zellulose oder Polypropylen ist die* ***Schutzwirkung ungewiss bzw. kann der Einsatz in Hochrisiko-Situationen nicht empfohlen werden****.* *Mögliche Gefahren bei der Verwendung von „Stoffmasken":* • *Unsachgemäße Reinigung* • *Unsachgemäße Wiederverwendung* • *Unzureichende Filterung* • *Und dadurch Nährboden für Pathogene*
Bearbeiter/in GÖG	*Nina Zimmermann, Claudia Habl*
Freigabe/ Qualitätssicherung	*SV (13.3.2020); HO (18.3.2020) EK am 18.3.2020*
Kontakt	Rückfragen und weitere Anfragen über corona@goeg.at

Disclaimer

Diese Anfragenbeantwortung/Hintergrundinformation spiegelt den Stand des Wissens zum oben genannten Datum wieder. Die Ergebnisse wurden vor dem Hintergrund der aktuellen Erfordernisse (insb. in Hinblick auf die zeitliche Dringlichkeit) mit größtmöglicher Sorgfalt recherchiert bzw. analysiert. Sie sind für den Fragesteller bzw. die fragestellende Organisation bestimmt und beantworten konkrete Fragen.

Hot topics – Face-masks

In the beginning → how to distribute

CHRONIK ÖSTERREICH 23.03.2020

Flieger mit Masken und Schutzanzügen in Wien-Schwechat gelandet

Zwei AUA-Maschinen holten die 130 Tonnen schwere Fracht aus China. Sie wird morgen nach Tirol und Südtirol gebracht.

II. Länderkontingente:

Wie vereinbart richtet sich die Aufteilung des Bundeskontingents auf die Länder/SV nach der jeweiligen regionalen Versorgungssituation. Dafür wurde durch die Gesundheit Österreich Gmbh ein Modell entwickelt, bei dem folgende Kriterien pro Bundesland und Artikel herangezogen werden:

- Eingemeldeter kurz- und mittelfristiger Bedarf
- Eingemeldete Bestände und separat erfolgte Bestellungen durch die relevanten Institutionen im jeweiligen Bundesland
- Aktuelle und prognostizierte Entwicklung von COVID-19-Erkrankungen pro Bundesland

Auf Basis der eingemeldeten Daten und der vorhandenen Artikel ergeben sich die folgenden Länderkontingente für FFP2-Masken, OP-Überschuhe und Handschuhe. Es wird laufend daran gearbeitet weitere Artikel nach Österreich zu bekommen, wodurch auch evtl. vorhandene Unschärfen aufgrund der zur Verfügung stehenden Daten in weitere Folge adressiert werden können. Die Lieferungen werden nach Bestelleingang schnellstmöglich durch das ÖRK bearbeitet und zugestellt.

a) Kontingent FFP2-Masken

FFP2 Masken	Anzahl der zugeteilten Kartons pro Artikelnummer				Summe Kartons	Summe der entsprechenden Stückzahl
	Artikelnummer C000060 (Kartons zu je 400 Stück)	Artikelnummer C000085 (Kartons zu je 240 Stück)	Artikelnummer C000034 (Kartons zu je 300 Stück)	Artikelnummer C000012 (Kartons zu je 440 Stück)		
Burgenland	15			1	16	6.440
Kärnten		35		6	41	11.040
NÖ				71	71	31.240
OÖ				139	139	61.160
Salzburg				27	27	11.880
Steiermark				38	38	16.720
Tirol				67	67	29.480
Vorarlberg			24	11	35	12.040
Wien				47	47	20.680
SV (ÖGK)				144	144	63.360
Gesamt	**15**	**35**	**24**	**551**	**625**	264.040

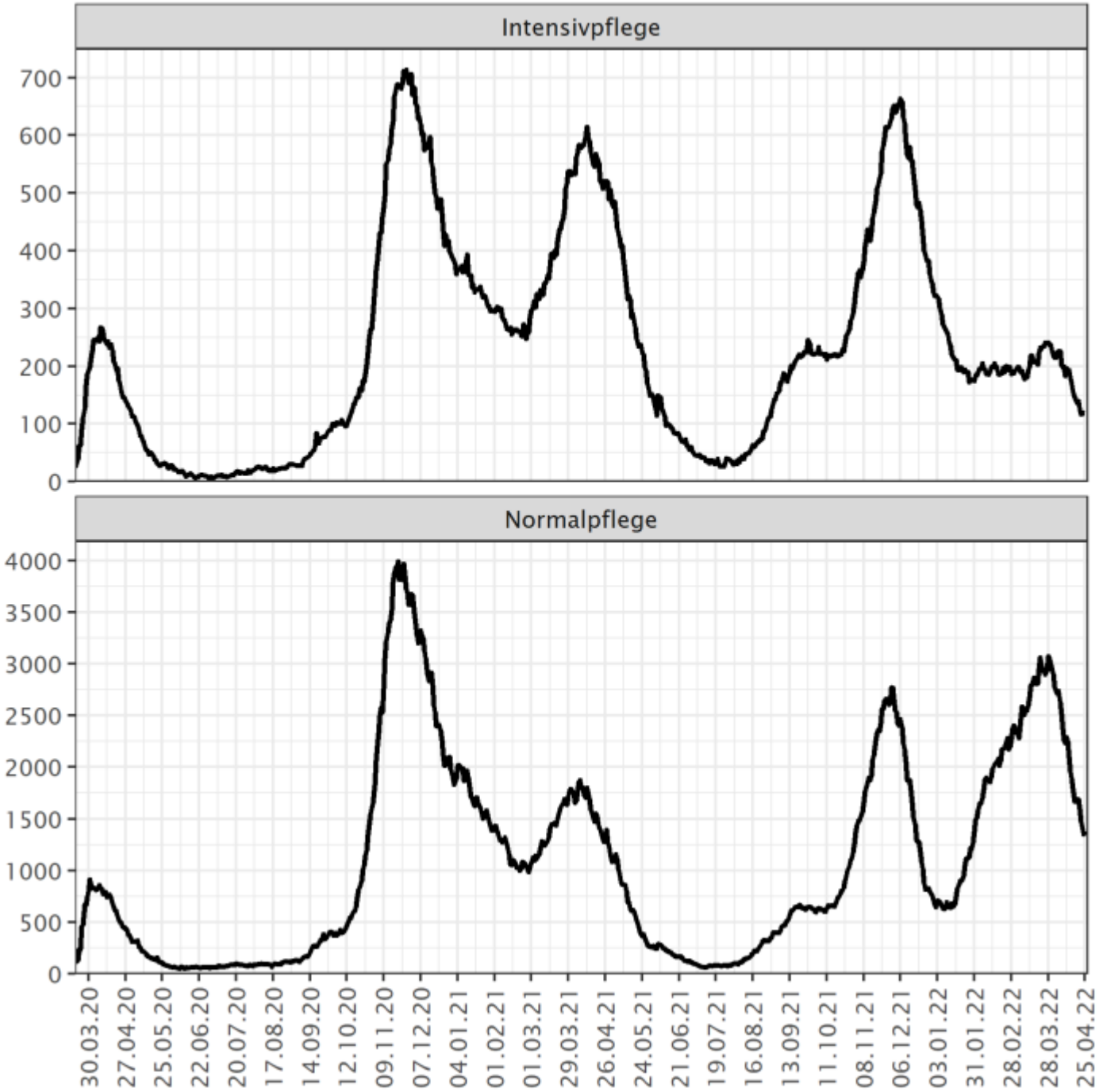
	Verteilung - KA 70% und - Pflegebereich 30% (- COVID-19 20%)	Einwohner %	COVID%
Burgenland	**2,61%**	3,31%	1,78%
Kärnten	**6,15%**	6,33%	2,77%
NÖ	**16,13%**	18,94%	15,82%
OÖ	**17,98%**	16,73%	16,70%
Salzburg	**7,00%**	6,27%	9,41%
Steiermark	**13,65%**	14,03%	10,38%
Tirol	**12,03%**	8,52%	23,14%
Vorarlberg	**4,70%**	4,45%	6,88%
Wien	**19,75%**	21,42%	13,11%
Österreich	**100,00%**	100,00%	100,00%

FINANZ PROKURATUR

Source: https://kurier.at/chronik/oesterreich/coronavirus-flieger-mit-masken-und-schutzanzuegen-in-wien-schwechat-gelandet/400790417

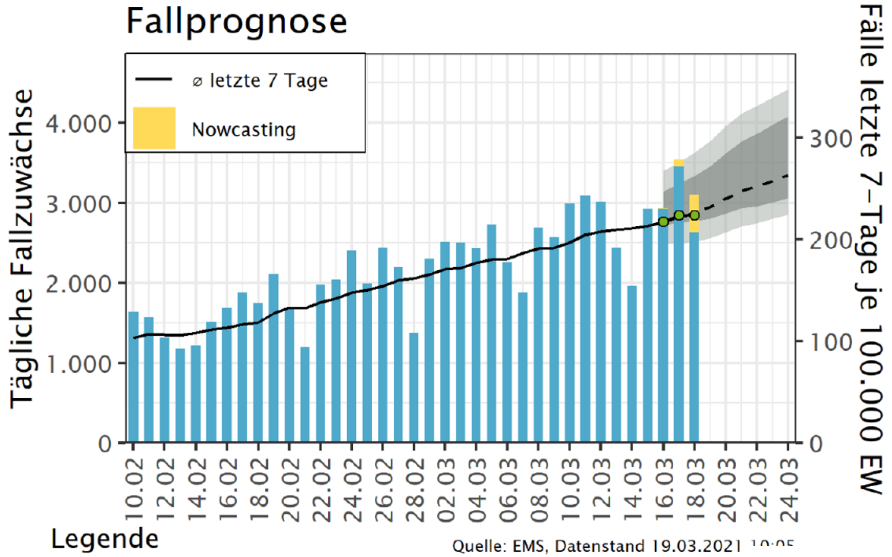
Infectious control and measures taken must be evidence based

- Screenshot from **GÖG fact sheet**: Use of beds in intensive care and normal wards in Austria in the course of the pandemic
- Corona Dashboard developed by AGES and MoH for disease control
- Enhanced cooperation with public bodies and academia

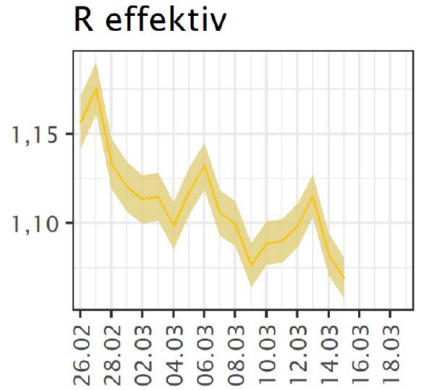


Modelling and Forecasting

E.g., analysing the state of play leading to the „Easter Lockdown“ 2021



Bundesland	Variants of concern %				
	KW 07	KW 08	KW 09	KW 10	KW 11
Burgenland	83,23 %	88,59 %	94,90 %	96,74 %	94,10 %
Kärnten	52,91 %	66,44 %	74,50 %	84,47 %	88,69 %
Niederösterreich	61,67 %	64,35 %	86,45 %	93,13 %	94,10 %
Oberösterreich	66,23 %	71,93 %	69,80 %	74,82 %	78,71 %
Salzburg	66,50 %	82,34 %	81,95 %	86,21 %	90,04 %
Steiermark	46,66 %	52,38 %	78,00 %	82,36 %	83,36 %
Tirol	35,62 %	53,41 %	39,81 %	46,28 %	46,23 %
Vorarlberg	32,14 %	31,33 %	29,36 %	33,19 %	58,17 %
Wien	65,14 %	72,21 %	75,27 %	81,74 %	81,99 %
Österreich	59,30 %	66,66 %	75,42 %	80,64 %	80,43 %



	KW 01	KW 02	KW 03	KW 04	KW 05	KW 06	KW 07	KW 08	KW 09*	KW 10*	KW 11*
Fälle gesamt, N_{total}	14622	10964	10149	9555	9209	9554	11764	14315	16472	18555	21502
N501Y PCR-Testung, N_{test}	**1293**	**1729**	**3159**	**4574**	**6486**	**7312**	**9769**	**12087**	**12783**	**14044**	**11888**
N_{test}/ N_{total}	8,84%	15,77%	31,13%	47,87%	70,43%	76,53%	83,04%	84,44%	77,60%	75,69%	55,29%
N501Y negativ	1180	1282	2438	3085	3932	3834	3976	4030	3142	2719	2327
N501Y positiv, n_{pos}	**113**	**447**	**721**	**1489**	**2554**	**3478**	**5793**	**8057**	**9641**	**11325**	**9561**
n_{pos}/N_{test}	8,74%	25,85%	22,82%	32,55%	39,38%	47,57%	59,30%	66,66%	75,42%	80,64%	80,43%
B.1.1.7 PCR-basiert	19	42	67	341	893	1609	3306	7278	8688	9560	6727
B.1.351 PCR-basiert	2	8	5	88	53	97	60	129	67	60	26
B.1.1.7 Sequenzierung	77	265	401	698	1064	304	192	260	266	231	31
B.1.351 Sequenzierung	4	52	132	93	73	14	3	18	7	-	-
B.1.1.7 n_{gesamt}	**96**	**307**	**468**	**1039**	**1957**	**1913**	**3498**	**7538**	**8954**	**9791**	**6758**
n_{gesamt}/N_{test}	7,42%	17,76%	14,81%	22,72%	30,17%	26,16%	35,81%	62,36%	70,05%	69,72%	56,85%
B.1.351 n_{gesamt}	**6**	**60**	**137**	**181**	**126**	**111**	**63**	**147**	**74**	**60**	**26**
n_{gesamt}/N_{test}	0,46%	3,47%	4,34%	3,96%	1,94%	1,52%	0,64%	1,22%	0,58%	0,43%	0,22%
(noch) nicht weiter differenziert	11	80	116	269	471	1454	2232	372	613	1474	2777

* KW 09, 2021, KW 10, 2021, KW 11, 2021: Anzahl der noch nicht differenzierten Fälle wird sich erwartungsgemäß verringern

Secondary use of Data - COVID-19 data platform

- Help national and international research community to improve evidence for and increase understanding of SARS-CoV-2/ COVID-19
- Academic and scientific institutions can be given permission to use the following data sets:
  - data from the Austrian epidemiological reporting system;
  - anonymized diagnosis and treatment data of patients with principal or secondary COVID-19 diagnosis, including anonymized intensive care documentation data (again restricted to patients with principal or secondary diagnosis COVID-19).
  - Vaccination status
  - Sequencing data
- For data protection reasons, data can only be made available to research facilities after accreditation by the advisory board
- GÖG responsible for the operational implementation of the data platform and acts as the administrative office
- Link collection to publicly available COVID-19 data in Austria: https://datenplattform-covid.goeg.at/Daten_Aut

Further Jobs since March 2020

- Cooperation on international level
  - Weekly compilation of international evidence based on information sent by Austrian Embassies, desk-top research and cooperation with international partners
  - PHIRI (www.phiri.eu) activities, incl. organising bi-weekly exchange meetings between in average 25 countries, ECDC, JRC, SANTE
- Replying to >700 questions of crisis response team, reaching from usefulness of intake of Vitamine D to potential Long-Covid treatment pathways, mostly with very short time frames
- Relevant papers on social aspects of the disease and mental health
- Covering 79 media requests only in Q4/2021
- And of course, organising Corona Commission and Corona “Ampel”.

My personal learning: Public Health is always Politics

- Measures and decisions taken during pandemic have affected societies and lives of citizens in very profound ways
- During a crisis colliding interests and evidence are quite common
- It is naïve to expect that all decisions can be based on hard evidence or science (but still one has to try)
- Good governance is key
- Centrally governed health systems have advantages in times of crisis → quicker decision pathways, data can be linked more easily
- Solidarity of a society is one of the highest public health goods and must be maintained.

Thanks for staying awake!

Claudia Habl
Executive Board Member

Gesundheit Österreich GmbH
Stubenring 6
1010 Wien
T: +43 1 515 61 – 161
M: +43 676 848 191 – 661
Claudia.habl@goeg.at
www.goeg.at