

Draft response to the epidemiological situation dd. 20/6/2022 (ex-GEMS/SCC)

1. Epidemiological situation in Belgium
 - a. We refer to RAG-reports of June 15 and 22
 - b. There is a further increase in n of cases, also (more modest) in number of hospitalisations. ICU occupancy remains stable so far (late indicator)
2. Epidemiological situation in other countries
 - a. We refer to the document compiled by Geert Molenberghs in Annex 1
 - b. Not only in Portugal a next wave in cases was noted, but also in surrounding countries (e.g. France, Germany, Luxemburg, Netherlands), other European countries (e.g. Italy, Greece, Estonia, Norway,...) and elsewhere (e.g. Israel, Morocco, the US, southern parts of South America...).
3. Impact on health care system
 - a. The absolute numbers of new admissions and the total number of beds occupied have remained limited so far, but a possible new wave of new hospitalisations - however small- can be worrisome, given the actual very low resilience of the health care sector. The entire sector is still recovering from 2 pandemic years, with pre-existing considerable long term absenteeism on top of the yearly holiday seasons' lower staffing levels (see Annex 2). These already jeopardized staffing numbers have led to bed closures. A significant new wave would lead to further exhaustion of the system, insufficient recovery of staff and the hospital capacity, and thus to non-preparedness for a possible more intense fall-winter season.
 - b. Also, with higher viral circulation in the community, the risk of outbreaks in health care settings increases as well, putting further pressure on the already limited (isolation) bed capacity.
 - c. Patients actually admitted with covid-19 are largely medically vulnerable patients with significant immune depression (e.g. hemato-oncological or transplant patients) and/or high age and frailty indexes.
4. Suggested measures to contain the situation
 - a. The actual particular epidemiological situation allows for a step-wise approach, with first emphasis on optimal protection of the patients most at risk, and only broadening measures to the general population if that would not be sufficient
 - b. Nevertheless, it is relevant to generate again general awareness on the risk of being infected, because of the chance of reinfection, the continual risk of long COVID for everyone, and because of the potential overflow of infections from the general public into the care/health care system. Communication should cover the rationale for boosters, when and how to (self)test, risk of long COVID and how to protect the vulnerable
 - c. Optimal protection of the medically vulnerable:
 - i. Stimulate to optimize vaccination status (i.e. make sure all among the target population have received 4 vaccine doses)

- ii. Stimulate to optimize vaccination status of 'ring' around vulnerable patients (e.g. partners, relatives, care takers,...)
- iii. Stimulate general public to complete their recommended n of vaccines (3) if not yet done so, a new communication campaign to explain the rationale may be needed (cfr limited uptake of boosters in general, also among 80+)
- iv. Stimulate vulnerable patients to wear FFP2-masks when mixing with the general population (e.g. shopping, work, public transport,...)
- v. Stimulate ventilation/adequate air quality in all public areas as well as in private settings (this includes also nursing homes, schools)
- vi. Stimulate general public to apply caution when meeting a medically vulnerable person (e.g. do not visit when symptoms, self-test, wearing masks, keep distance, ...) - this includes also nursing homes

Annex 1. Evolution of cases and relationship to hospitalizations in selected countries

21 June 2022

Geert Molenberghs

14-day case incidences

When citing incidences, they refer to 14 days incidence per 100,000 inhabitants on 21 June 2022, or the most recent data if not available (always between 7 and 21 June 2022); unless otherwise stated.

Worldwide, infections in some countries have been rising for several weeks:

- Portugal, had an incidence of 3341 on 14 June 2021; it currently is down to 2838. While an outlier in terms of incidence, it has been declining for a few weeks
- Iceland has been rising for three weeks. The incidence currently is 610
- Norway has been showing a gentle rise, against the background of a low incidence that currently is 75
- United States of America: 455: at the end, we will consider New York
- Taiwan reached a high peak a couple of weeks ago, around 4500, and is currently down to 4130. Note that also Hong Kong saw a very steep rise a few months ago; their peak is over and the Hong Kong incidence was 68 a week ago, but started to rapidly rise again and is currently at 100.
- South America; the incidence in Brazil is 239, that in Chili is 674, and both are rising.

An overview of selected countries can be found in the following table (boldface red means rising on June 21, 2022; parenthetical figures refer to incidences that are at least a week old).

Country	Incidence	Country	Incidence	Country	Incidence
Australia	1525	Iceland	610	Portugal	2838
Austria	446	India	6	Romania	(23)

Belgium	211	Ireland	188	Russia	35
Brazil	239	Israel	579	Serbia	51
Chili	674	Italy	460	Slovakia	46
China	0	Kosovo	5	Slovenia	180
Cuba	3	Latvia	124	South Africa	40
Cyprus	(407)	Lithuania	65	Spain	353
Czechia	33	Luxembourg	721	Sweden	30
Denmark	163	Malta	305	Switzerland	309
Estonia	122	Montenegro	130	Taiwan	4130
France	689	Morocco	24	Turkey	11
Germany	733	Netherlands	172	UK	179
Greece	543	New Zealand	1674	USA	455
Hong Kong	100	Norway	75		

In Ireland, figures were rising, but the top has been reached and the incidence is declining again. It was 499 two weeks ago and is now down to 188.

Consider the evolution in selected European countries and the United States.

Austria and Switzerland had considerable BA.1 (Jan-Feb 2022) and BA.2 (March 2022) waves, and have declined since. The Austrian incidence is 335, the Swiss incidence is 176, and both countries observe a declining trend.

In contrast, Portugal had a very large BA.1 wave, but virtually no BA.2 wave. This might explain to some extent the current outlying peak (BA.4/5). However, Belgium had a similar evolution to

Portugal through the BA.1 and BA.2 waves, but the current rise remains limited compared to Portugal (for the moment). The vaccination rate offers little or no explanation. Belgium has a 79% base vaccination rate and 65% booster rate. The base vaccination rate in Portugal is 87% and the booster rate 64%.

Zooming in on the most recent wave, we see that it is dominated by Portugal within the European contingent:

Zooming in further, we see the following picture.

Note the declining trend in most countries, with Ireland showing a mild peak that is over by now. Other countries show a continued declining trend or a mild flare-up.

It is noteworthy that the USA (with continually updated figures still, unlike in many European countries) show a different trend. Once again, it is hard to interpret the USA as a whole, given the vast size. It is advisable to zoom in on individual states or regions.

Comparing Belgium and Portugal, while adding also the delta period (starting 1 November 2021), the following evolution is observed:

Both countries had a considerable BA.1 wave, only a mild flare-up in the BA.2 period, but Belgium had a much larger Delta wave. One has to keep in mind that the pathogenicity of Delta was larger, so an incidence of about 2000 was a considerable public health problem.

The incidences of Hong Kong and Taiwan are interesting in their own right:

Both countries successfully maintained a zero-covid policy until February 2022, when Hong Kong realized a tremendous peak in infections, in a population largely epidemiologically naïve and with poor vaccination coverage in Hong Kong. In Taiwan, this phenomenon is occurring, to a lesser extent, with 2.5 months of delay.

In Hong Kong, 84% of the population received a base vaccination (but with less performing vaccines) and 55% received a booster. In Taiwan, 80% received a base vaccination and 68% received a booster. In Taiwan, to a large extent AstraZeneca and Moderna were used.

Hospitalizations

For Belgium, Christel Faes (UHasselt) examined the relationship between cases and hospitalizations (starting 1 October 2020). Early 2021, the beginning effect of vaccination is visible, in spite of the rise of Alpha. Further progress in vaccination is visible early Summer 2021, in spite of the rise of Delta (50% on 1 July 2021). The relationship improved further early 2022, but for a short while, after which it started rising again.

Currently, a doubling of cases in Belgium leads to an increase in hospitalizations of about 60%. This figure has been stable for quite a while.

It is instructive to also consider the effect on hospitalizations *with* COVID-19:

In Hong Kong and Taiwan, around 0.1% of hospital capacity was occupied with COVID-19 on 1 January 2022. In Hong Kong, at the peak (7 March 2022) 85% of hospital capacity was used, and in Taiwan, on 5 June 2022, 51% of hospital capacity was used.

In Portugal, the hospital occupancy evolved as follows:

Portugal		
Date	Hospital capacity in use	Event
1 January 2022	10%	Reference
11 February 2022	23%	BA.1 peak
1 April 2022	12%	Low point
3 June 2022	37%	BA.4/5 peak

It is noteworthy that over the period 1 April – 1 June 2022 the incidence in Portugal about tripled, as well as hospital occupancy. This points to a rather strong effect on hospitalizations. A point of caution is that the BA.4/5 wave followed quickly after the BA.1 wave. While Portugal did not have a high peak in the BA.2 period, its incidence stayed a relatively high level (altiplano), which implies a constant influx in hospital.

In New York State, the peaks and lows in terms of cases and hospitalizations are:

New York State				
Date	Cases	Date	Hospital occupancy	Event
1 November 2021	4076	1 November 2021	2282	Low

7 January 2022	74,410	12 January 2022	13,176	BA.1 peak
1 March 2022	1828	1 March 2022	2123	Low
20 May 2022	9332	20 May 2022	2995	BA.1.12.1 peak

In New York State, cases multiplied by a factor 18 in the BA.1 wave. Doubling cases in this period led to a 50% increase in hospitalizations. In the BA.1.12.1 wave, the effect on hospitalizations is milder, with doubling cases leading to about 15% increase in hospitalizations.

Annex 2. Incidences and impact in the working population

Lode Godderis

In the 2-weekly report (version 35-36): Covid-19 infections by sector for the period: 17/05-13/06, the average 14-day incidence in the working population (n=239 per 100,000) has increased by 12% compared to the period 17/05-30/05 (n=214 per 100,000). With this, the incidence among the working population again dives above the incidence of the general population (n=198 per 100.000). This is remarkable because the past weeks the incidence rate was below that of the general population. This goes from 26.5% lower than the general population in the previous report to 26.5% higher than the general population in the present analysis. The increase in incidence rate is thus faster among the employed compared to the general population.

The increase occurs in various sectors. With the holidays coming up and an increase in travel, it is not surprising that currently the airline sector takes the lead (n= 536). The absence of measures in that sector and the fact that in a number of countries and regions (e.g. Portugal) a lot of BA.5 is circulating contribute to the further spread of the virus in that sector.

Incidences are also increasing in the care professions (general and psychiatric hospitals, medical laboratories) and in general secondary education. Scientific research & development is also a fairly large sector, with a high incidence now as well. We have to realise that with the current testing strategy, there is a serious underreporting and underestimation of the number of infections among the working population. We can therefore expect a further increase at least until the holidays, which may have an impact on sick leave.

The figures for medium-term absenteeism (employees absent for up to 30 days due to illness) follow the trend of the corona waves and have remained high compared to 2021. In December 2021, the delta variant of the coronavirus emerged. This caused more sickness, which can also be seen in the figures with 3.6% absentees at the beginning of December. This was followed by a decrease (1.26% in the last week of the year), but due to the omicron variant in January 2022, medium-term absence increased again. It even peaked at 4.66% in January 2022. Many employees had to stay at home, although the omikron variant generally caused less sickness. These figures were compiled in cooperation with three social secretariats: Acerta, SD Worx and Securex.

When the omikron variant of the coronavirus has died down, we see that the sickness absence decreases again to 2.86% in week 8 of 2022 (end of February) - which is higher than the 2.25% in week 8 of 2021. But in March and April of 2022, medium-term absence rises again to just above 4%. This is due to two factors: the flu and corona. Corona is no longer systematically tested, so this is an underestimate.

Long-term sick leave is less affected by seasonal changes, which means that there are fewer fluctuations. It remains around 4%. The long-term absence is therefore not infection-related and has more to do with musculoskeletal disorders (MSDs) or psychosocial complaints. Long-term absenteeism among blue-collar workers is much higher than among white-collar workers, 8%

versus 4.5% respectively. Blue-collar workers perform physically harder work and often in less favorable working conditions, which results in longer absences.

In the healthcare sector, absenteeism is higher than in other sectors. In the Joint Committee for Nursing and Care Homes, long-term absenteeism is much higher than average: 12%. Medium-term absenteeism, at 4%, is also higher than average. This is also the case in other care sectors: in home nursing, long-term sickness absence is around 9%. In hospitals, long-term absence rose steadily from 7.39% in January 2021 to 9.05% in May 2022.