

SCC advice to RMG foreseen on 18/7/2022

Advice of 12/7/2022, finalized 17/7/2022

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1. Epidemiological situation:

We refer to the RAG report dd. 13/7/2022 for the complete overview of the epidemiological situation.

Points of attention include:

- The positivity rate (PR) for symptomatic persons has increased again considerably to 37.9%, within a context of a mild increase of the number of tests carried out. This is many folds higher as compared to the same date in 2021 or 2020 and is likely to be related to the further spread of Omicron BA.5 in a context of numerous smaller and larger social gatherings, international travel, and considerably increases in the majority of European countries, as well as in several non-European countries. (See also the international Annex 2.)
- Omicron BA.5 is now the dominant lineage in Belgium and at this time accounts for more than 90% of the most recent infections. This recent shift is associated with an increase in the number of infections ($R_t \sim 1.07$) and increasing positivity rate. It also associates with an increase in the number of hospital admissions, including ICU admissions.
- The number of hospitalizations is increasing further (about 150-200 admissions/day), leading in turn to a further increase of the total number of occupied hospital beds ($n = 2049$ on July 12th and 2171 on July 15th, i.e. nearly 10 x the number of hospitalized patients mid July 2021).
- Also the number of ICU beds occupied increased, but less strongly so ($n = 93$, this is comparable to the number in mid July 2021). Likewise, mortality has increased mildly to 8,9 deaths/day – arguably due to the lower virulence of the actual circulating strain.
- In summary, the R_t based on infections and the incidence of the hospitalisations is actually at RAG-level 2 whereas the ICU-occupation and GP-workload are at RAG-level 1
- In the meantime, international genomic surveillance highlighted the emergence of a new variant (BA.2.75) which, based on current, still limited, data seems to harbour the potential to outpace BA.5. These early observations mainly arise from India (where it might become the dominant lineage), but also from other continents including Europe. This emerging variant will be closely followed-up during the next weeks.

2. Impact for the economic sectors (with particular attention to the health care sector)

The 2-weekly report (version 38) of Covid-19 infections per sector for the period: 28/06-11/07 shows that the average 14-day incidence in the working population ($n=951$ per 100,000) has doubled compared to the previous period 14/06-27/06 ($n=476$ per 100,000). The incidence among workers also continues to rise faster (37%) than the incidence among the general population ($n=694$ per 100,000).

The sectors that stand out are the sectors where there is close contact with people: i.e. health care (e.g. hospitals) and social sector (e.g. OCMW/CPAS), aviation and public transport (e.g. train crew). Furthermore, it is striking that several production companies are also struggling with an increased number of infections and, remarkably, certain governmental departments. In these sectors, the incidence is up to 3 times that of the general population and twice that of the working population.

Despite the holidays and the closure of schools, the increase has not yet been curbed. We continue to draw attention to the potential impact on certain sectors, including the health sector, which is facing a loss of staff and a shortage of care providers.

The actual high viral transmission translates into an increase in short and mid-long term sickness absence in nearly all sectors. This, in combination with the annual leave period, leads in many sectors to critically low staff presence and the necessity to cut down activities and services.

The situation is particularly difficult in the care/health care sector, with a combination of a higher demand (higher number of admitted patients) with significantly less health care workers available.

We refer to Annex 1 of this document for more complete data.

3. Actual measures

With the barometer 'inactivated' since May 23, 2022, there is a lack of clear communication of the remaining risks and recommendations how to protect the most vulnerable.

If the barometer were still activated, it would highlight the following:

- Code yellow according to the ICU-occupation (i.e. < 300 beds occupied)
- Code red (!) according to the daily number of hospitalisations (i.e. > 149 pts/d)
- In addition, the barometer does not take into account new societal issues such as widespread sickness absenteeism, which is nevertheless disruptive for the economy and service delivery within our society.

4. Forecast short and mid long term

There are actually several sources of uncertainty to allow solid forecasts: the evolution of social contacts between people, the risk behaviour of medically vulnerable people, waning of previously built immunity with diverse vaccination schedules, with or without infection, the possible emergence of new VOCs, joint impact of more heavy influenza seasons and covid, etc.

On the other hand, given the experiences of 2020 and 2021, a larger increase of transmission and subsequent need for hospitalisations may be expected at the end of the summer/early fall or even later in fall/winter. As pointed out in the GEMS-report dd. 28/3/2022, it is extremely important to be prepared for several scenarios, for all sectors. In this context, the health care sector and educational sector are of particular concern, because of already tight staffing levels. In particular the educational sector is at risk for outbreaks and intense transmission given unresolved issues of crowding and lack of state-of-the-art ventilation and/or air purification.

5. Recommendations

Actual situation

- We refer to the SSC-advice of 20/6/2022, with emphasis on protection of the most vulnerable.
- It is worth considering to facilitate further the access to antivirals (e.g. Paxlovid), and to collect early data on feasibility, tolerability and efficacy among Belgian patients using these drugs, in addition to gaining a detailed insight on the actually hospitalized population (in terms of age, co-morbidity, vaccination status,...)
- For the general population, it would be important to reactivate the corona-barometer, associated with strengthened and repeated risk communication and preventive messages (e.g. recommendation to wear masks in public, in the passenger air transportation sector, in (crowded) public transportation sectors, and in other crowded indoor settings)
- Ventilation/indoor air quality also remains a very important preventive measure in all sectors and diverse settings, including in the health care setting and nursing homes. However, additional insights and technical support might also be needed to meet several needs in these settings (e.g. ventilation versus avoiding too cold or too hot indoor environment).
- In addition, we think it remains important to continue to stress the importance of people staying home when they have a positive test or have symptoms, i.e. they do not go to work and refrain from meeting people in the public space.

Preparation for next fall/winter season scenarios need to be continued and strengthened, in particular:

- for the health care sector (including the nursing home sector and other residential centres for vulnerable people), in terms of maximally ensuring health care workers' health and wellbeing yet working on optimal use of available resources in difficult/worst case scenarios
- for primary and secondary schools, in terms of: ventilation/indoor air quality, possibility of repeated testing, consideration of using masks in worst case scenarios,...
- for economic sectors, in terms of re-using the Generic Guide, possibility to return to telework with moderation when needed,...
- in general: maximally adopt lessons learned from abroad and from earlier waves

Annex 1. Medium-term sick leave follows corona waves

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Medium-term sick leave - employees absent for up to 30 days due to illness - remain high compared to 2021. The figures of the medium-term sick leave follow the trend of the corona waves. In December 2021, the delta variant of the coronavirus emerged. This led to more sickness, reflected in 3.6% absenteeism at the beginning of December. This was followed by a decrease (1.26% in the last week of the year), but due to the omikron 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 severe illness.

When the omikron variant of the coronavirus subsides, absenteeism drops 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 might be an underestimate.

Long-term absenteeism is less subject to seasonal changes, explaining the 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. These figures were compiled in cooperation with three social secretariats: Acerta, SD Worx and Securex.

Long-term sickness absence among blue-collar workers is much higher than among white-collar employees, 8% versus 4.5% respectively. Blue-collar workers do physically harder work and often in less favourable working conditions, which results in longer absences.

In the **health care sector**, absenteeism is higher than in other sectors. In the Joint Committee for Nursing and Care Homes, the long-term absenteeism rate 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 rates increase steadily from 7.39% in January 2021 to 9.05% in May 2022.

The high absenteeism rates in combination with the tight labour market, make it even more difficult for companies to fill vacancies.

Figure 1. Joint sub-committee for nursing homes, rest homes, service flats, day care centres for the elderly

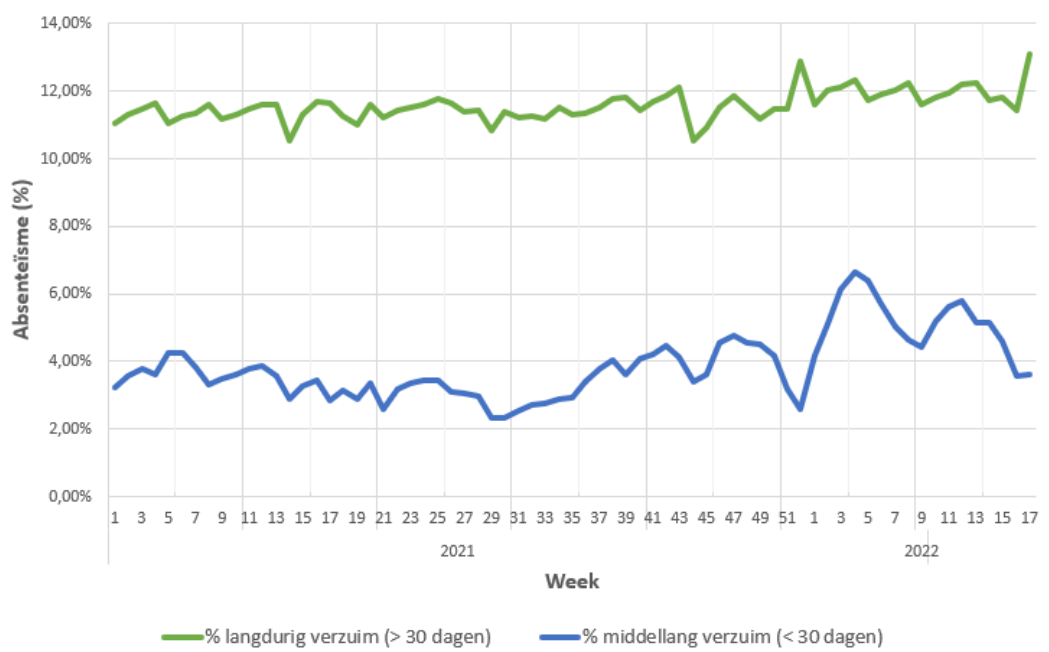
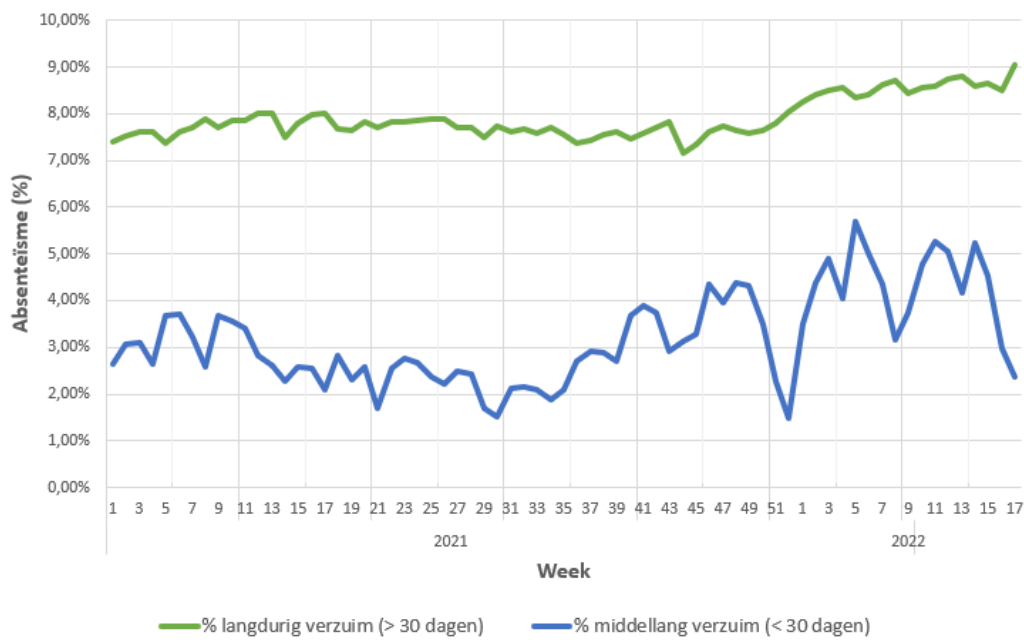


Figure 2. Joint sub-committee for private hospitals and psychiatric nursing homes



Annex 2. International situation

Evolution of cases and relationship to hospitalizations in selected countries.

9 July 2022

Geert Molenberghs

14-day case incidences

In May and early June 2022, there was a rise in cases (and hospitalisations) in **Portugal**, with a peak incidence of 3648 on 28 May 2022, to then go down to 2838 on 21 June 2022 and with a current (7 July 2022) value of 1271 and a continuing downward trend. This happened against the background of low and still declining incidences in most European countries. Both the timing and the height of the peak in Portugal were anomalous. The impact on hospital capacity (non on ICU) was non-negligible (see further).

There were two other early risers, **Ireland** and **Iceland**. The Iceland curves should not be overinterpreted given the small population size (about 350,000 inhabitants). Ireland went up to incidence 499 on 7 June 2022, to then go down to 188 on 21 June 2022, but is currently seeing another rise, with a 7 July 2022 incidence of 462.

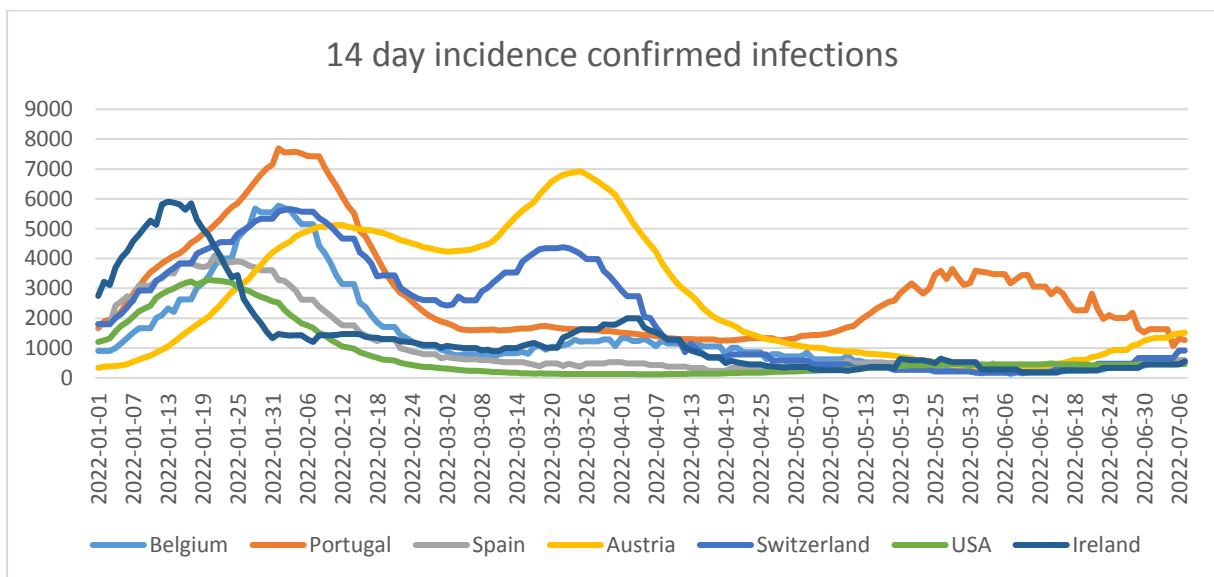
Noteworthy in the rest of the world:

- **United States of America:** 456. The country has seen a relatively flat incidence curve for a couple of weeks, but this hides evolutions, in both directions, from one state to the other (the so-called 'New York effect' from the early days of the pandemic where NYS and the other Northeastern US states dominated the curve and their decline hid the fact that there was rise in southern and western states). Further in this document, we will consider New York State (because of its recent BA.2.12.1 peak and current rise due to BA.5).
- **Taiwan** reached a high peak on 14 May 2022 of 5406, and is currently down to 1317. The downward trend has been coherent for a month, like in Portugal.
- **Hong Kong** saw a very steep rise a few months ago, with peak incidence 9760 on 11 March 2022. Their peak was over and the Hong Kong incidence reached its low of 48 for a few days (27 – 31 May 2022), but then started to rapidly rise to 100 on 21 June 2022 and currently is 395. Unlike in mainland China, the virus appears to have gained a foothold in Hong Kong.
- South America; **Chile** has seen a rise for a while, but currently seems to have reached a plateau of about 678. In contrast, **Brazil** is seeing a steady rise, with incidence 239 on 21 June 2022 and currently 382.
- **Australia** and **New Zealand** had both gone through considerable peaks, for the first time during the pandemic, then started to experience a decline of their incidences, albeit slow. Currently though, this trend has reversed and there is a rise again, starting from a level that was still very high.

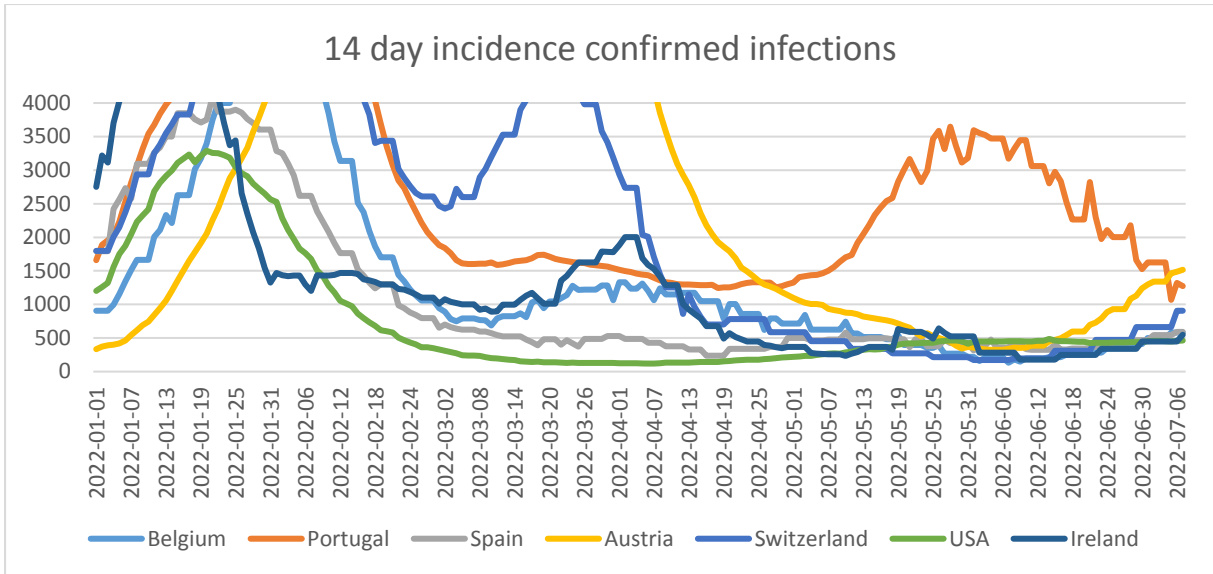
An overview of 14-day incidences per 100,00 population for selected countries can be found in the following table, with incidences on 21 June 2022 → 7 July 2022. Parenthetical incidences indicate that the figures are slightly older.

14-day incidences per 100,000 population (21 June 2022 → 7 July 2022)					
Country	Incidence	Country	Incidence	Country	Incidence
Australia	1525 → 1709	Iceland	610 → 1064	Portugal	2838 → 1271
Austria	446 → 1432	India	6 → 15	Romania	(23) → 38
Belgium	211 → 644	Ireland	188 → 462	Russia	35 → 28
Brazil	239 → 382	Israel	579 → 1569	Serbia	51 → 152
Chile	674 → 678	Italy	460 → 1550	Slovakia	46 → 101
China	0 → 0	Kosovo	5 → 76	Slovenia	180 → 510
Cuba	3 → 3	Latvia	124 → 276	South Africa	40 → 14
Cyprus	(407) → 3205	Lithuania	65 → 159	Spain	353 → 530
Czechia	33 → 98	Luxembourg	721 → 1998	Sweden	30 → 64
Denmark	163 → 414	Malta	305 → 1397	Switzerland	309 → 698
Estonia	122 → 129	Montenegro	130 → 433	Taiwan	4130 → 1317
France	689 → 1916	Morocco	24 → 106	Turkey	11 → 49
Germany	733 → 1441	Netherlands	172 → 417	UK	179 → 390
Greece	543 → 1771	New Zealand	1674 → 1831	USA	455 → 456
Hong Kong	100 → 395	Norway	75 → 147		

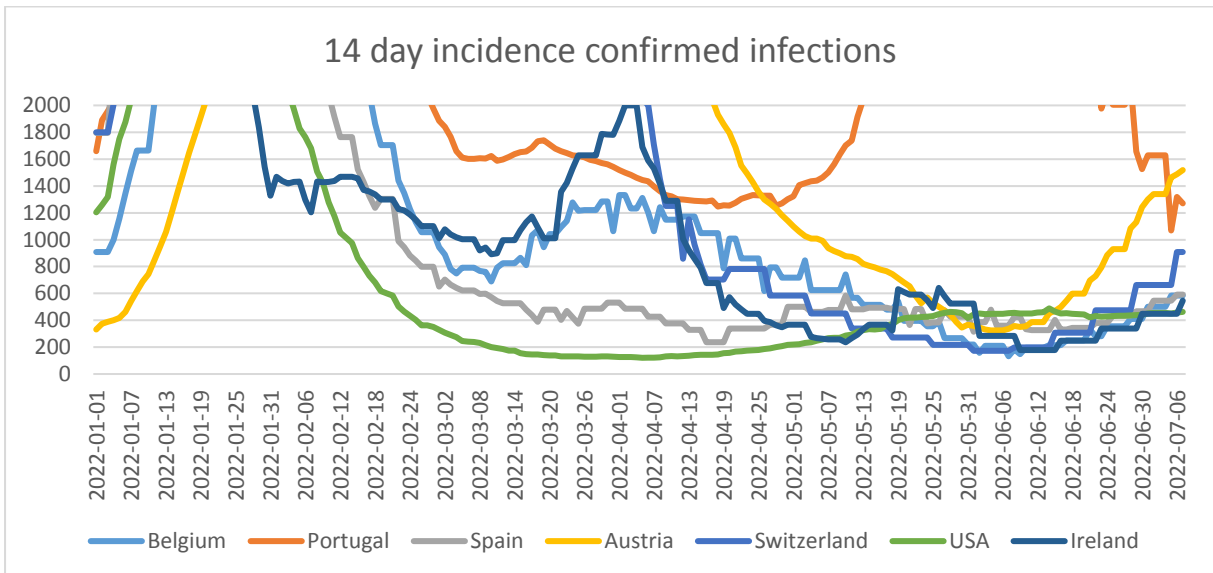
Consider the evolution in selected European countries and the United States.



Austria and **Switzerland** had considerable BA.1 (Jan-Feb 2022) and BA.2 (March 2022) waves. In contrast, **Portugal** had a very large BA.1 wave, but a relatively small by comparison BA.2 wave. This might explain to some extent the outlying peak (BA.4/5). However, Belgium had a similar evolution to Portugal through the BA.1 and BA.2 waves. 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%. The Portuguese peak was high and early by comparison, but the other countries are now seeing considerable rises. This is clear when zooming in.



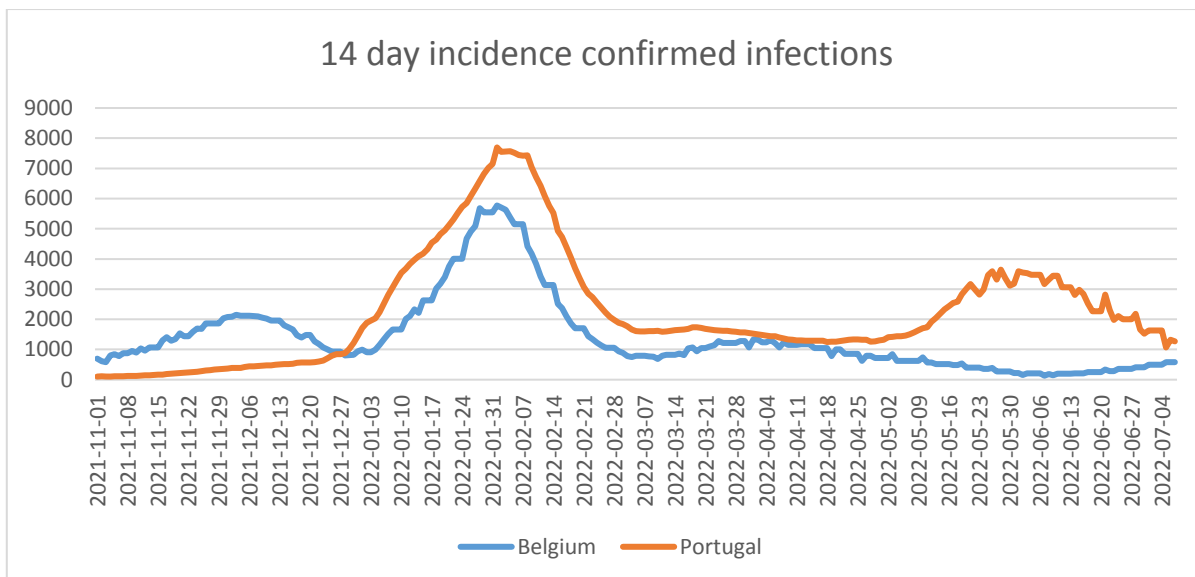
Zooming in further, we see the following picture.



The very rapid rise in **Austria** is now clear (4fold in about a month), followed by rises in the other countries, and Portugal still declining.

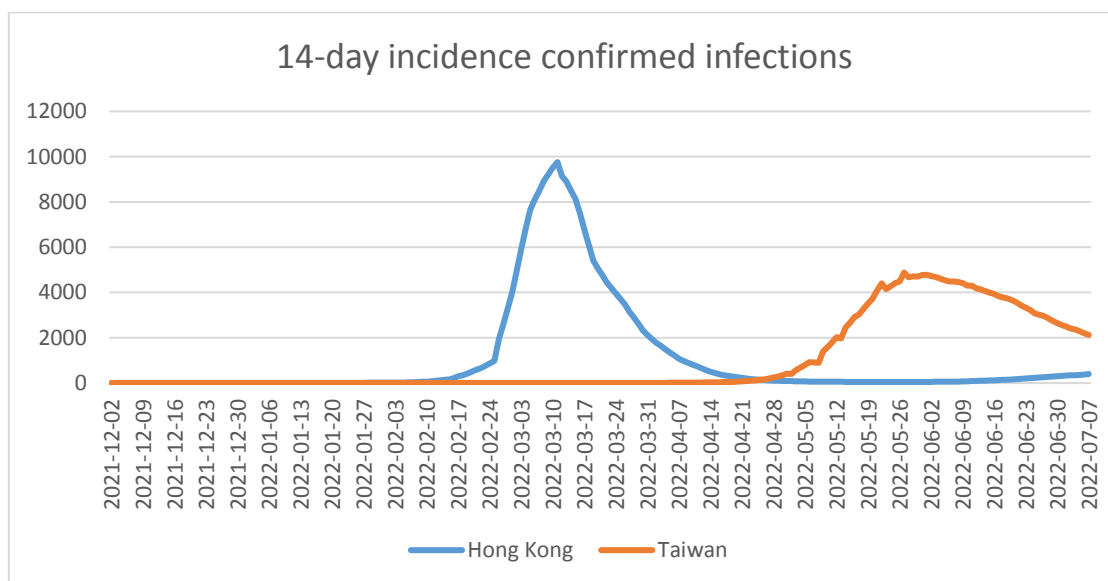
Of note, **Portugal** had a high peak against the background of low and declining figures in the other European countries. Currently, a continent-wide surge is observed.

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 at that time.

In view of the discussion on page 1, 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.

As mentioned earlier, Hong Kong is seeing a rise once more. Whereas the lowest value reached after the peak was about 48 (end of May 2022), it currently already rose to 395.

ECDC Regions

Apart from countries, we can also consider the NUTS2 regions on the ECDC map. The highest incidences are observed for Cyprus (3205), and various Greek regions (roughly 3000 on several islands, as well in Attica). Listing the Belgian regions and their neighbours (adjacent regions in neighbouring countries) leads to the following (situation 7 July 2022):

Country	Region	14-day incidence
Luxembourg	Luxembourg	1998
Germany	Nordrhein-Westfalen	1670
France	Hauts-de-France	1478
Germany	Rheinland-Pfalz	1456
France	Grand Est	1262
Belgium	Vlaams Gewest	629
Belgium	Brussels	585
Belgium	Région wallonne	428
Netherlands	Zeeland	358
Netherlands	Limburg (NL)	350
Netherlands	Noord-Brabant	323

Among the 214 regions listed, the colour codes are:

- 0 green (corrected incidence between 0 and 40)
- 1 orange (corrected incidence between 40 and 100)
- 8 red (corrected incidence between 100 and 300)
- 92 dark red (corrected incidence above 300)
- 91 are dark grey (no colour given between testing rate is below 600)
- 22 are grey (insufficient data available)

(The corrected incidence adjusts the raw incidence by the vaccination rate.)

Of note, the lowest incidences (<10) are observed in Polish and Romanian regions, but this should be considered with great caution, given that these are coloured dark grey and hence the testing rate is very low.

Incidences in the Belgian Work Sectors

Based on the bi-weekly RSZ/ONSS data analysis (Molenberghs, Verbeeck, Vandersmissen, Godderis; Report 37, 29 June 2022), incidences that are much higher than that of the working population (476) and the general population (355) are observed, in particular, at NACEBEL level 4:

- Activities of extraterritorial organisations and bodies: 949
- Research and experimental development in biotech: 917
- Passenger air transport: 904
- Business regulation and optimisation: 812
- Activities of trade unions: 808
- Hospital activities: 764
- Several production sectors

Given the international epidemiological situation and the high demand for air transportation, the incidence of passenger air transport is not surprising but nevertheless a threat for business continuity.

While most sectors listed encompass less than 10,000 employees, the hospital sector listed above employs over 200,000 people.

Listings for all NACEBEL levels can be found in the report.

Initial data on BA.2.75

By June 28, 2022, the distribution of the 204 sequences identified across countries was as follows:

Country	Number	Country	Number
Australia	2	Luxembourg	1
Canada	4	Nepal	2
Germany	2	New Zealand	2
India	168	Turkey	1
Indonesia	4	United Kingdom	11
Japan	1	USA	6

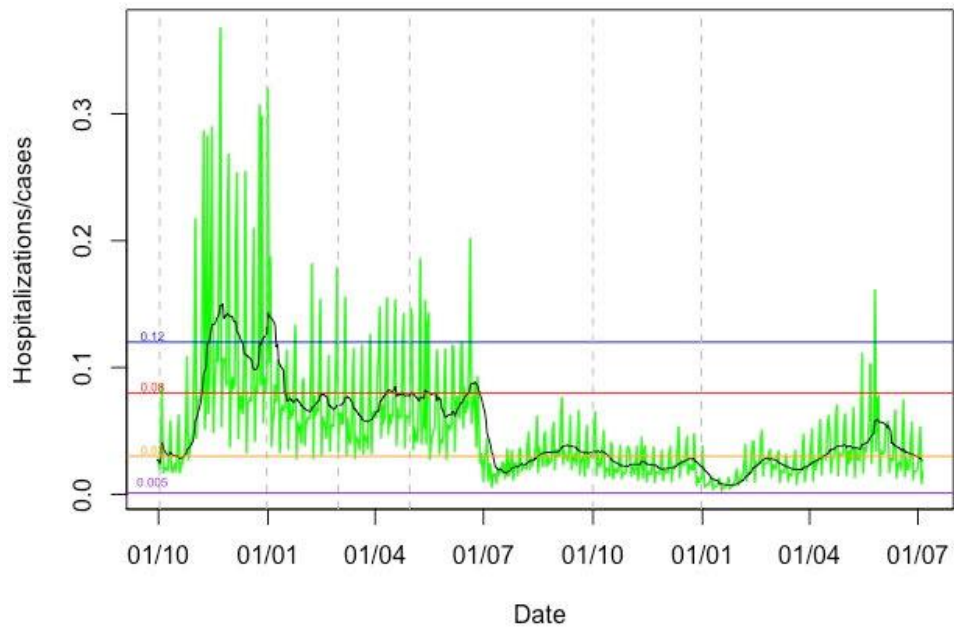
Preliminary investigation indicates that there is perhaps the potential to outpace BA.5. What the properties will be in various countries, each with its own history of vaccination and previous infections, remains to be seen. A considerable number of mutations.

Hospitalizations

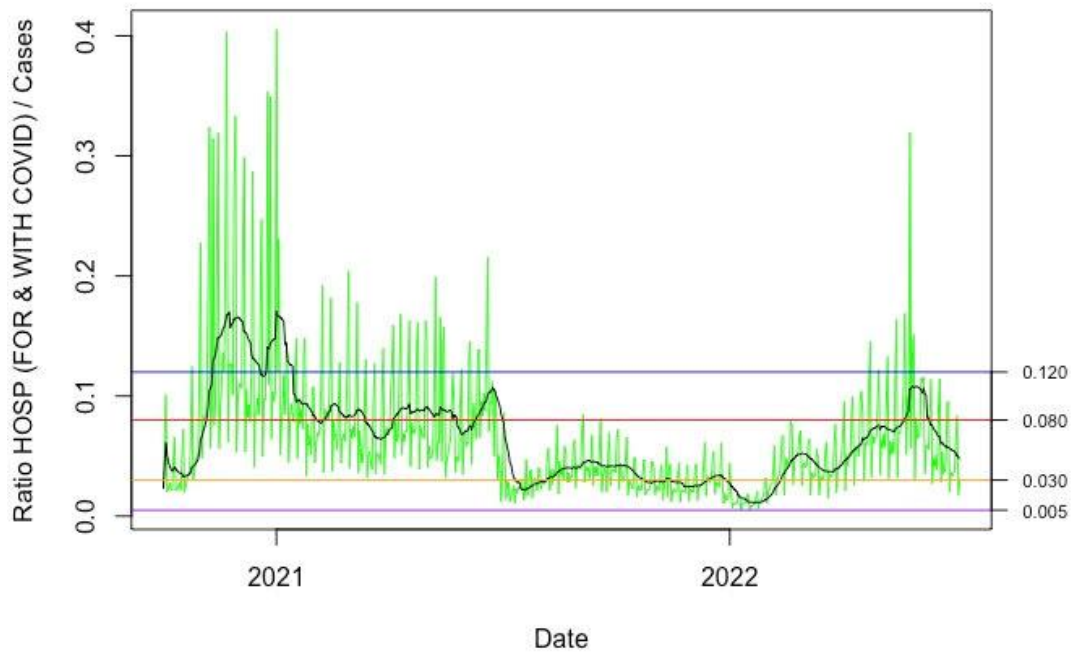
For **Belgium**, Christel Faes examined the relationship between cases and hospitalizations (starting 1 October 2020). The figures have been updated on 10 July 2022.

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. The following figure is hospitalizations *for* COVID-19.

In the BA.5 wave, a doubling of cases in Belgium led to an increase in hospitalizations of about 60%, with a decreasing trend over the most recent period, towards the level of the pre-BA.5 period.

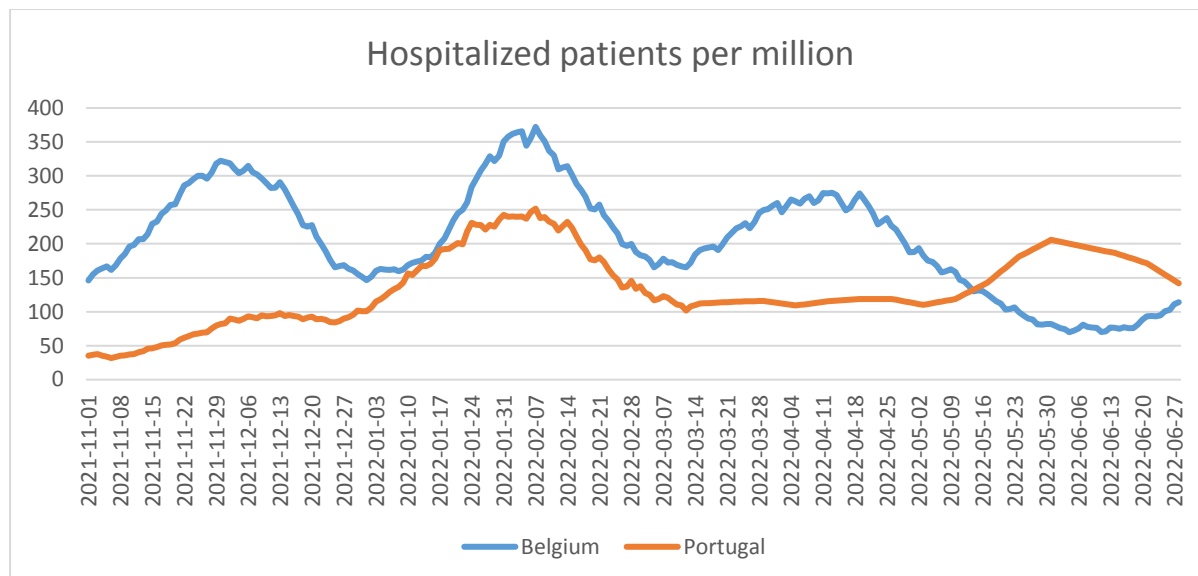


It is instructive to also consider the effect on hospitalizations *with* COVID-19, in a figure where *for* and *with* COVID-19 are combined.



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.

Comparing hospitalized patients in **Belgium** and **Portugal**, from November 2021 until June 2022, gives the following picture:



It is noteworthy that over the period 1 April – 1 June 2022 the incidence in Portugal about tripled, while hospital occupancy doubled. This points to a considerable effect on hospitalizations, and is consistent with the 60% estimate for Belgium, based on work by Christel Faes. 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.2.12.1 peak
22 June 2022	5141	22 June 2022	2170	Low
6 July 2022	6525	6 July 2022	2600	Current (rise of BA.5)

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 was milder, with doubling cases leading to about 15% increase in hospitalizations.

Following the BA.2.12.1 peak, both cases and hospitalizations went down. Cases nearly halved, hospitalizations decreased by about one third (it takes longer for hospitalization to go down). Currently, because of the spread of BA.5, both metrics are going up again.

