

Experiences with the concept of the canton of Zug for COVID-19

[Das Konzept des Kantons Zug für die zweite Welle von COVID-19]

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The alert system and the intervention concept of the canton of Zug for COVID-19 have been developed by the Directorate of Health, acknowledged by the government of the canton and published in the Journal of the Swiss Medical Association in July 2020. The summer and particularly the autumn of 2020 with the second wave of the COVID-19 pandemic in Switzerland have highlighted the potential but also the limitations of the concept.

The COVID-19 monitoring system of the canton of Zug is used by the COVID-19 staff of the Directorate of Health and its inter-directorial support structure. Its core elements are the COVID-19 incidence and its development and the canton’s alert system [1]. Further elements for the canton of Zug include contact tracing, hospital and COVID-19 mortality data, the functioning of contact tracing and a summary analysis of the interviews with the cases of the last seven days. Together with the incidence data of the four neighbouring cantons and Switzerland as a whole, they are the basis of the Chief Medical Officer’s assessment of the epidemiological situation and the situation concerning contact tracing (illustration 2).

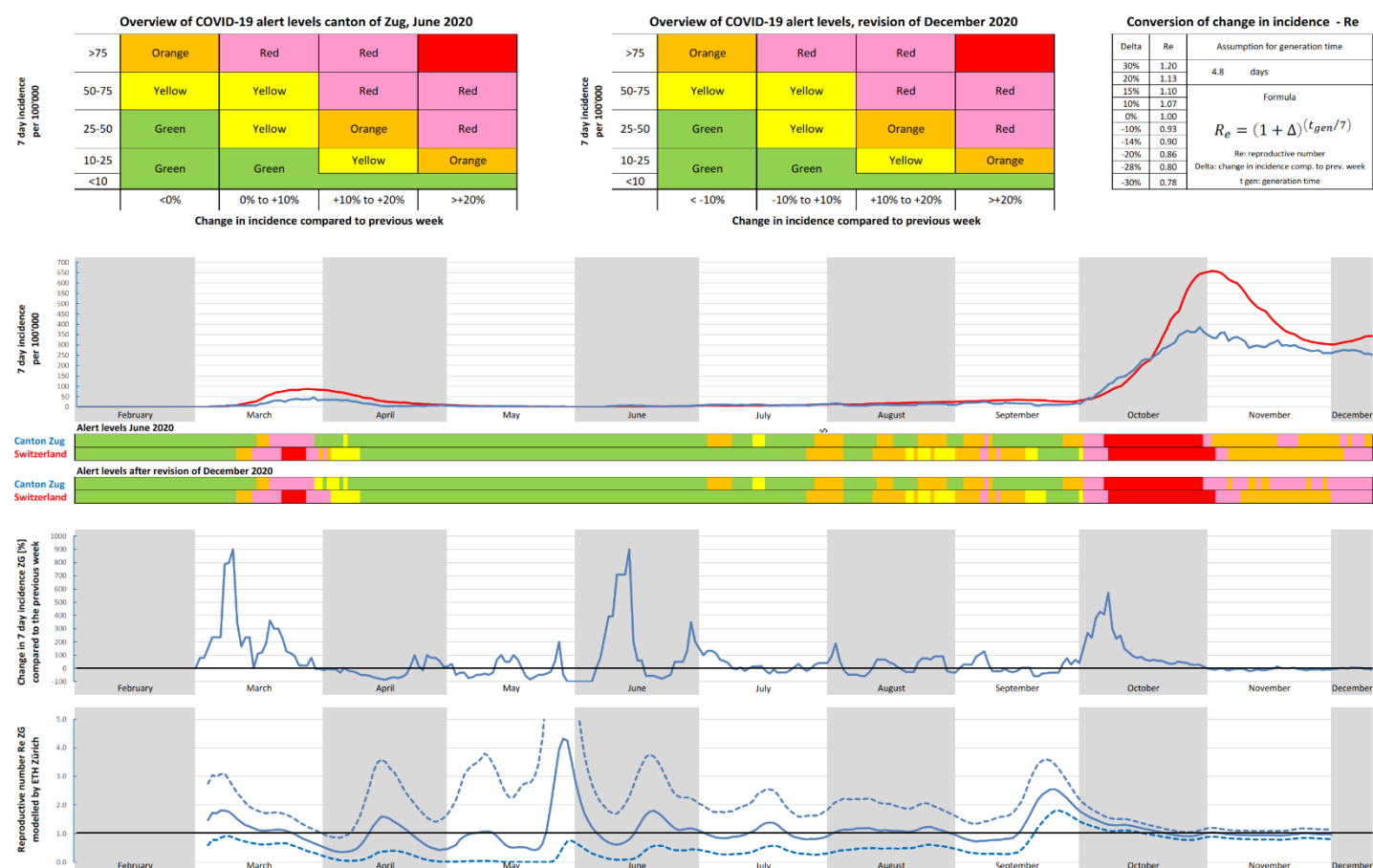


Illustration 1. Development of 7 day incidences and alert levels for the canton of Zug and for Switzerland, development of the reproductive number for the canton of Zug until 10.12.2020.

The revised model for the alert levels provided a better indication of the need for action in view of constantly high case numbers. The data for the reproductive number (Re) was downloaded from the website of the Institute of Integrative Biology of the ETH Zürich. Essentially Re corresponds to a smoothed curve of the changes in incidence, with a time differential of two weeks.

Following the first wave of the Pandemic, very few cases were observed in the canton of Zug. Beginning in June 2020, some marked increases in incidence were seen, though at a very low level of cases (illustration 1). Backward tracing during this period identified increased contacts in an extended family, the re-emerging party scene and people returning from high incidence countries in south-eastern Europe as the main sources of infection. Targeted measures were successful in controlling the outbreaks. There was only one single day when the alert level for Zug reached condition red.

After 17 consecutive days at condition green, the alert level for the canton of Zug changed to orange on Monday, 28 September, and to red on Friday, 2 October. On Monday, 5 October, the Chief Medical Officer re-assessed the epidemiological situation as requiring “heightened awareness”, on 9 October as “critical”. In the following period the increase of the incidence slowed down to a linear development, reaching the maximal 7 day incidence of 386/100'000 on 30 October, followed by a moderate decrease and then essentially a stagnation of the incidence for the canton (illustration 2). Applying the alert levels of the canton of Zug, condition red at the national level was reached also on 2 October. The rise of the incidence was slightly delayed in comparison, but then steeper and longer, reaching a maximum of 658/100'000 on 2 November. The neighbouring canton of Schwyz showed a substantially stronger increase than Zug. In Zurich, Aargau and Lucerne the rise was delayed, but steeper and longer.

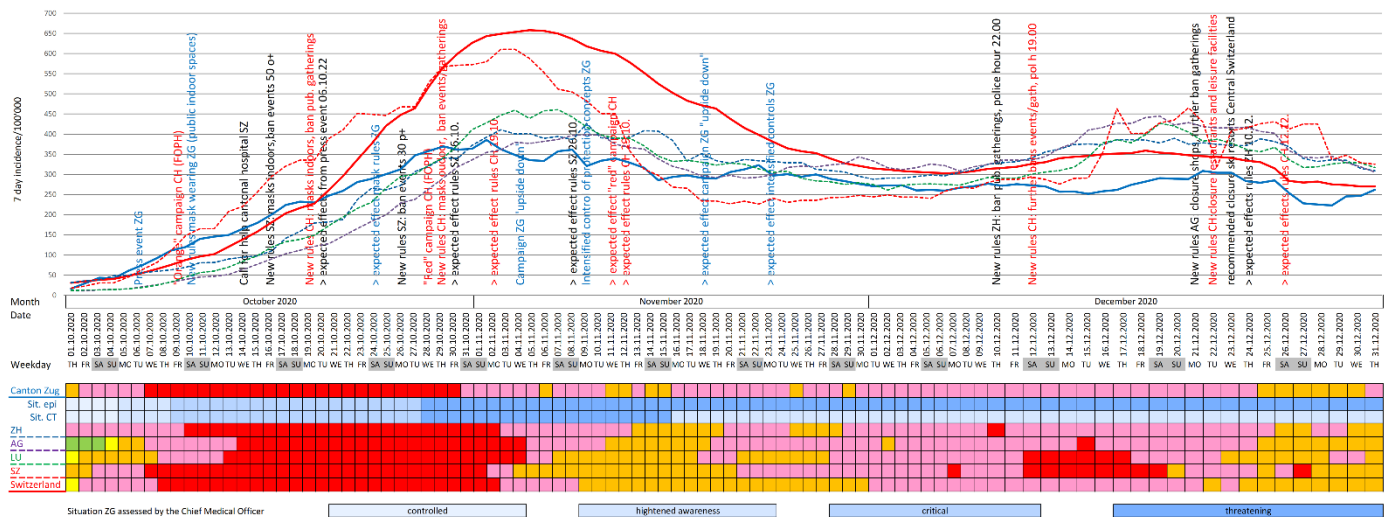


Illustration 2. Development of 7 day incidences and alert levels in Switzerland, in the canton of Zug (ZG) and in the neighbouring four cantons (Zürich ZH, Aargau AG, Luzern LU, Schwyz SZ) from October until December 2020. The alert levels were calculated using the concept of the canton of Zug revised in December 2020. For the canton of Zug, the assessment of the Chief Medical Officer is indicated as it was communicated for the epidemiological situation (epi) and for the situation concerning contact tracing (CT).

The COVID-19 monitoring system and the Chief Medical Officer’s assessment of the situation were useful elements for the canton of Zug going into the second wave of the COVID-19 pandemic. They provided transparency for the course of action of the canton and facilitated the discussion with the communities and other actors about specific measures, which allowed to control the situation in summer 2020. They also were the basis for the first tightening of restrictions already in the beginning of October 2020 and they may have contributed to a slightly milder course of the second wave of the pandemic in comparison with neighbouring cantons. The concept of the canton of Zug also entered the public discussion in other cantons. Several of its elements were adopted by one of the neighbours when the canton was identified by the media as being in condition red for several days already in August 2020.

The second wave of the pandemic also highlighted the limitations of the concept. The experiences of spring 2020 did not prepare for a situation in which the public became accustomed to case numbers stagnating at high levels for extended periods of time. This led to normalising effects on the public opinion and the political discourse, strain on the health care system and the health authorities, and an increase in social tensions. The increased need for action in such a situation was taken into account in a revision of the alert level system in December 2020, specifically with respect to the threshold for decrease in incidence in comparison with the previous week (illustration 1). The developments of autumn 2020 also showed that swift reactions of one canton alone were not sufficient to reverse the trend in case numbers. More efficient measures in coordination between cantons and at the national level would have been necessary for this. Compared with the first wave, such measures were only taken with considerable delay (illustration 2).

The second wave of the pandemic has demonstrated the necessity for coordination between the cantons and the federal administration and for timely and decisive action. An evidence-based approach can contribute to a constructive discussion in the public and the political domain and hopefully also to a shortening of decision-making processes.

The complete article has been published on 24 February 2021 in German in the Journal of the Swiss Medical Association.

Reference

1. Martin B, Klaey H, Müller A, Gügler C, Koepfli A, Gross B, Pfister M, Hauri R. Das Konzept des Kantons Zug für die zweite Welle von COVID-19 [The concept of the canton of Zug for the second wave of COVID-19 in Switzerland]. Schweiz Ärzteztg 2020; 101:928–32 (extended summary in English at www.panh.ch/covid19)