

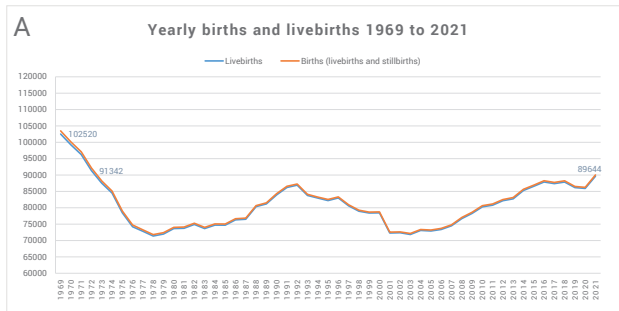


Monitoring newborn health in the first two years of the COVID-19 pandemic in Switzerland

Introduction

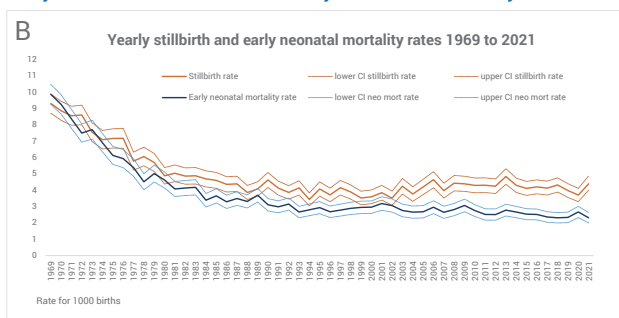
Since the beginning of the COVID-19 pandemic in 2020, early reports of altered stillbirth and premature birth rates raised concerns in various countries for the health of neonates. Data collected by the FSO (BEVNAT) allow to follow yearly and monthly variations of newborn health indicators: birth numbers, stillbirth rates and early neonatal mortality rates.

Yearly evolution: absolute birth counts 1969 to 2021



A The evolution of births since 1969 shows fluctuations of **absolute birth numbers**. Compared with 2019, births slightly decreased in 2020 by 0.3% and then increased in 2021 by 3.9% to reach a level last seen in 1972.

Yearly evolution: stillbirth and early neonatal mortality rates

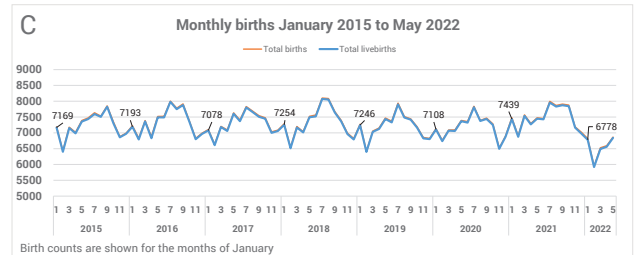


B **Stillbirth rates** vary around 4 stillbirths per 1000 since 1988. Recently, they decreased from 4.0 [95%CI: 3.6;4.4] per 1000 births in 2019 to 3.7 [95%CI: 3.3;4.1] per 1000 births in 2020. An increase of stillbirth rates to 4.4 [95%CI: 4.0;4.8] occurred in 2021.

B **Early neonatal mortality** was lower in 2021 with 2.3 [95%CI: 2.0;2.6] compared to 2020 with 2.7 [95%CI: 2.3;3.0] per 1000 live births.

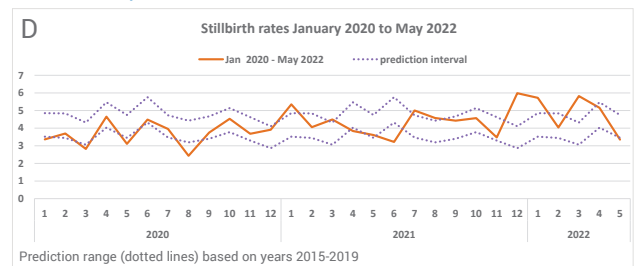
No differences were seen for **premature births** in 2020 or 2021.

Seasonal variations: monthly birth counts 2015 to 2022



C **Monthly births** show well known seasonal variations. Absolute birth numbers decreased sharply in the first months of 2022 (preliminary data).

Stillbirth rates per month 2020 to 2022



D Compared to the 95% prediction interval, **stillbirth rates** below prediction occurred in August 2020 and June 2021 and above prediction in December 2021 as well as in January and March 2022 (preliminary data for 2022).

Conclusion

- The total number of births increased by 4% in 2021. Births decreased in the first months of 2022 (preliminary data).
- Higher than expected stillbirth rates were observed between December 2021 and January 2022 as well as in March 2022.
- In December 2021 and January 2022 the COVID-19 Delta-variant was dominant. Given reports of increased risk for stillbirths among pregnant women with COVID-19 Delta infection¹, a possible relationship cannot be excluded.

Methodological comments

- Source of Data: Data from BEVNAT/ Civil Registries Switzerland. Data for 2022 are provisional.
- Stillbirth rates are calculated per 1000 births for stillbirths after 22 weeks of gestational age.
- 95% Confidence intervals are calculated for monthly stillbirth rates.



¹) DeSisto CL, Wallace B, Simeone RM, et al. Risk for Stillbirth Among Women With and Without COVID-19 at Delivery Hospitalization – United States, March 2020–September 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1640–1645. DOI: http://dx.doi.org/10.15585/mmwr.mm7047e1external_icon