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Switzerland Country Report

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The Switzerland report has been reviewed by Claudine Burton-Jeangros.

Executive Summary

Switzerland is a Confederation composed of 26 state-like bodies referred to as Cantons. As a federal system, Switzerland's governance of health-related matters is normally managed at the Cantonal level. At the onset of the COVID-19 outbreak, the Federal government opted to centralize the response by enacting the 2016 Epidemics Act. This Epidemics Act gives latitude to the Federal government to declare a health crisis to be an "extraordinary situation", allowing it to take conservatory measures. On 16 March 2020, the Federal Council¹ acted unilaterally in by deciding to implement the strictest measures ever to be taken on a national level during a time of peace, with measures including "semi-lockdowns," closures of schools, bars, restaurants, and non-essential shops, among others. As of June 2020, Cantonal governments regained more localized control over the management of the pandemic.

In addition to the Epidemics Act, the Swiss parliament passed the Federal COVID-19 Act on 25 September 2020. The Federal COVID-19 Act added additional regulations and limitations to the Federal Council's powers and responsibilities in managing the epidemic so that the regular legal channels, such as the Swiss parliament, would not be overlooked for future decision-making.

Prior to the COVID-19 pandemic, Switzerland had one preparedness plan primarily related to potential influenza pandemics, the latest Swiss Influenza Pandemic Plan established in 2018. This pandemic plan found legal basis in the Swiss Epidemics Act (2016) and had clearly delineated responsibilities delegated between different levels of governance (federal and cantonal) and different health authorities and actors. However, the Influenza Pandemic Plan did not foresee a crisis that would be long-lasting and instead included provisions for short-term mitigation measures.

Early on in the epidemic, several measures in the Plan were put in place, such as a "semi-lockdown" on 16 March 2020. All shops, restaurants, and bars were closed, while food stores and health establishments, such as pharmacies, hospitals, and clinics, remained open. Work from home policies were put in place and were mandatory whenever possible.

The government innovated by developing measures that went further than the Pandemic Plan's measures for two aspects. First, the Swiss National COVID-19 Science Task Force (SN-STF) was created at the end of March 2020 as an *ad hoc* response to the COVID-19 pandemic that was not planned in any of preparedness plans. Second, on 16 March 2020, the Federal Council established border controls between Switzerland and Germany, France and Austria. It also imposed entry bans into Switzerland, with some exceptions, for people coming from these three countries and Italy. This measure regarding restriction on borders was decided unilaterally by the Federal Council, and was further extended to all Schengen countries on 25 March 2020 (FederalCouncil, 2020e).

All levels of government were directly engaged in broadcasting similar prevention messages to encourage the population to comply with sanitary and mitigation measures and did so by mobilizing traditional forms of media, such as television, radio, newspapers, poster and billboard campaigns. They also engaged with Swiss residents through Internet channels via online news outlets and social media platforms. The Federal Council participated in widely followed weekly press conferences to inform the Swiss population about the most current decisions and developments.

Furthermore, the Swiss Federal government launched a large economic package aimed at providing financial support to most of those who have lost earnings (employees, employers, business owners, and independent workers). Most of subsidies cover 80% of the loss of earnings and were paid out with a maximum of 196 CHF (Swiss francs) per day.

¹ "The Federal Council is made up of seven members, each of which heads a government department. Decisions are made jointly. The Federal Chancellor supports the government. (...) The Federal Council is the highest executive authority in the country. It comprises seven members, who are elected by the Federal Assembly. The Federal Council's tasks are set out in the Federal Constitution" Admin.ch. (n.d.). *The Federal Council*. Retrieved February 25, 2021 from <https://www.admin.ch/gov/en/start/federal-council.html>.

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1 Introduction

The coronavirus SARS-CoV-2 causing COVID-19 disease reached officially Europe in January 2020 and quickly spread throughout Europe as it also made its way across the globe. As part of the PAN-FIGHT project, funded by the Norwegian Research Council, we investigate the response of five European countries (Germany, Norway, Sweden, Switzerland and the United Kingdom). This research examines these countries' risk communication strategies, particularly in comparison between the preparedness plans that pre-dated the pandemic and the health measures put into place in response to the pandemic.

This report provides an overview of the way Swiss authorities managed the pandemic in Switzerland, taking into account its existing political and health care systems. It is divided in three sections. First, the report establishes the role of the World Health Organization (WHO) with respect to global health, global health emergencies and specifically pandemics. A timeline of the guidance issued by WHO during 2020 provides an external reference point to use for comparison. Second, an overview of Switzerland prior to the COVID-19 pandemic is detailed. This includes population statistics, government structure, economic factors, organisation of health care and pandemic experience and preparedness plans. Third, the report focuses on the response of Switzerland during the COVID-19 pandemic, during 2020 only, including mitigation measures, emergency legislation, and risk communication.

2 Switzerland: Pre-COVID-19

2.1 Country overview: Population, governance & health

Table 1: Country characteristics (pre-COVID-19). This can be separated into several tables if it becomes too long. Please add any other indicators that are considered relevant here

Switzerland			
Themes	Indicators	Data	Any notes and references
Population characteristics	Population size (millions) 2019	8.6 (BFS, 2019)	https://www.bfs.admin.ch/bfs/en/home/statistics/population.html
	Life expectancy at birth	Both sexes: 84 Men: 82 Women: 86 (Worldbank, 2018)	https://data.worldbank.org/indicator/SP.DYN.LE00.FE.IN
	Age profile of population	65 and above: 19% (BFS, 2019)	https://www.bfs.admin.ch/bfs/fr/home/statistiques/population/effectif-evolution.html
	Population density per km ² (year)	215.46 (Worldbank, 2018)	https://data.worldbank.org/indicator/EN.POP.DNST?locations=CH
	Official language(s)	Switzerland has four national languages, with varying levels of the permanent resident population speaking them: Swiss German/German	https://www.bfs.admin.ch/bfs/en/home/statistics/population/languages-religions/languages.html

		(62.1%), French (22.8%), Italian (8.0%) and Romansh (0.5%) (FSO, 2019)	
	Percentage of people who speak official language	German (both High German and Swiss German) is spoken by about 63% of the population, French by about 23%, and Italian by about 8%. Romansh is spoken by less than 1% of the total population.	https://www.bfs.admin.ch/bfs/fr/home/statistiques/population/langues-religions/langues.html English and Portuguese are the two most frequently mentioned non-national languages
	Average household size (number of persons)	2.2 (UN, 2000)	https://population.un.org/Household/index.html#/countries/756
	Average household size (m ²)	Average floor space per occupant: 46m ² (BFS, 2019)	https://www.bfs.admin.ch/bfs/en/home/statistics/construction-housing/dwellings/housing-conditions/floor-area-person.html#:~:text=Multiple%20person%20households%20with%20all,of%2044m2%20per%20person.
	Single person household (%)	16.3 (BFS, 2019)	https://www.bfs.admin.ch/bfs/en/home/statistics/population/effectif-change/households.html
	Living in care home (%)	Accommodation rate in nursing homes among persons aged ≥ 80 years: 15.1% (BFS, 2019) In 2012, 8% of the population aged 65 and over were in longterm care in a nursing home 80+ population living in care home: 16.8 (OECD, 2017)	https://www.bfs.admin.ch/bfs/en/home/statistics/health.html file:///C:/Users/2923158/Downloads/1235-1801-05.pdf https://www.researchgate.net/figure/Share-of-80-population-in-care-homes-in-various-OECD-countries_tbl1_325271960 https://www.hspm.org/countries/switzerland250620

			16/livinghit.aspx?Section=5.8%20Long%20term%20care&Type=Section
	Poverty headcount ratio at national poverty lines (% of population)	Poverty headcount ratio at national poverty lines (% of population): 14.6 (Worldbank, 2017)	https://data.worldbank.org/indicator/SI.POV.NAHC
	Inequality (Gini index)	32.7 (Worldbank, 2017)	https://data.worldbank.org/indicator/SI.POV.GINI
	Urban population (%)	74 (Worldbank, 2019)	https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?view=chart
COVID-19 risk factors in population (prior to 2019)	Cardiovascular disease (mortality rates among men and women; age-standardised mortality/100,000 inhabitants)	Men=134.6, women=91.4 (FSO, 2018)	https://www.bfs.admin.ch/bfs/en/home/statistics/health/state-health/mortality-causes-death/specific.html#par_text
	Total respiratory diseases (mortality rates among men and women; age-standardised mortality/100,000 inhabitants)	Men=33.8, women=21.1 (FSO, 2018)	https://www.bfs.admin.ch/bfs/en/home/statistics/health/state-health/mortality-causes-death/specific.html#par_text
	Age standardised cancer rate	311 (WCRF, 2018)	https://www.wcrf.org/dietandcancer/cancer-trends/data-cancer-frequency-country
	Estimated number of prevalent cases (5-year) as a proportion in 2020, all cancers, both sexes, all ages	2,663	https://gco.iarc.fr/today/online-analysis-map?v=2020&mode=population&mode_population=continents&population=900&populations=900&key=asr&sex=0&cancer=39&type=2&statistic=5&prevalence=1&population_group=0&ages_group%5B%5D=0&ages_group%5B%5D=17&items=10&group_cancer=1&include_nmsc=1&include_nmsc_other=1&projection=natural-

			earth&color_palette=default&map_scale=quantile&map_nb_colors=5&continent=0&rotate=%255B10%252C0%255D
	Incidence of cancer (cases per 100 000 population)	497 (WHO, 2015)	https://gateway.euro.who.int/en/hfa-explorer/#BdaoBGt5Nm
	Prevalence of diabetes (%)	5.6 (World Health Organization – Diabetes country profiles, 2016)	World Health Organization – Diabetes country profiles, 2016 https://www.who.int/diabetes/country-profiles/che_en.pdf?ua=1
	Prevalence of obesity (%)	21 (World Health Organization – Diabetes country profiles, 2016)	
	Probability (%) of dying between age 30 and exact age 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases	Both sexes: 8.6 Men: 10.6 Women: 6.6 (WHO, 2016)	https://apps.who.int/gho/data/view.main.GSWCAH21v
Government / economy / transport	Member of World Health Organization	Yes	
	European Union membership (in 2020)	No	
	Number of states/regions	Switzerland consists of 26 Cantons (similar to states)	
	Autonomy of States/Cantons/Nations	Switzerland is made up of 26 Cantons which enjoy a high degree of autonomy vis-à-vis the federal government. Each Canton is an independent and sovereign entity, with their own capital town or city	eda.admin.ch/aboutswitzerland/en/home/politik/uebersicht/kantone.html
	GDP per capita (USD)	70,989.30 (Worldbank, 2019)	https://data.worldbank.org/indicator/NY.GDP.PCAP.P.CD

	Unemployment level (%)	5.3 (2020)	https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-81105.html
	Governments	The Swiss federal government (the Federal Council) is made up of seven members, who are elected by parliament. The Swiss Parliament (Federal Assembly) has a total of 246 members, who are directly elected by the people. Switzerland has a bicameral parliament, including the National Council (200 members) and the Council of States (46 members).	https://www.eda.admin.ch/aboutswitzerland/en/home/politik/uebersicht/politisches-system-der-schweiz---fakten-und-zahlen.html#:~:text=The%20Swiss%20federal%20government%20(the,directly%20elected%20by%20the%20people.
Social security	Sick pay (weekly pay and length)	Daily allowance in case of incapacity to work due to sickness The insurer agrees with you or your employer on the amount of daily allowance: Payment made by the majority of insurers: 80% of your salary. Waiting period and duration of payment: Waiting period of 3 days. In general, allowances are paid for at least 720 days over a period of 900 days.	https://ec.europa.eu/social/main.jsp?catId=1131&langId=en&intPageId=4823
	Sick pay (freelance and self-employed) (weekly pay and length)	Self-employed persons need to take out a paid sick leave insurance to cover the loss of income in the event of illness. Payment made by insurers may vary, similar to the case as above	https://www.ch.ch/en/inability-work-due-illness-pregnancy/
	Critical care beds per 100,000	Intensive care beds capacity: 11.8 per 100,000 (OECD, 2018)	https://www.oecd.org/coronavirus/en/data-insights/intensive-care-beds-capacity

		Acute care hospital beds per 100,000: 375 (WHO, 2014)	Note: While some of the beds and other resources in curative (or acute) care hospital units may be temporarily converted into flexible intensive care units, a key point, especially for COVID-19 treatment, is that intensive care beds need to be equipped with respiratory equipment. There may be differences in the notion of intensive care affecting the comparability of the data across countries
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2.2 Organization of health system

The authorities

Switzerland is a confederation composed of 26 Cantons, or state-like regional bodies, and is governed at the federal level by the Federal Council, composed of seven councillors directly elected by the Federal Assembly (Admin.ch, n.d.). Like any other federal system, the roles and responsibilities are divided between the Federal level – which is responsible over "Switzerland's relations with the outside world, defence, the national road network, and nuclear energy" (SwissFederalChancellery, 2021, p. 12).

The Cantons follow general guidance from the Confederation's policies and are responsible for the management of any other sectors (such as health, education, culture, etc.) (SwissFederalChancellery, 2021)

At the federal level, the Federal Office of Public Health (FOPH), in collaboration with the Cantons, is responsible for Switzerland's national health policies and public health measures. The FOPH also represents Switzerland on the international stage concerning health issues and health policies. The FOPH is housed within the Federal Department of Home Affairs, which receives directives from the Federal Council (FOPH, 2020d).

At a lower level, each of the 26 Cantons in Switzerland has its own health authority, the General Health Administration (GHA), which is responsible for the Canton's public health directives and measures (Biller-Andorno & Zeltner, 2015). The GHA of each Canton evaluates the Canton's current and future health needs in order to implement health measures and develop and enact new health policies (Vaud, 2019). Each Canton has an Office of the Cantonal Doctor (OCD), which falls under the GHA and represents the Canton's medical authority. The OCD is responsible for public health and medical concerns of the Canton's population. Among its other responsibilities, it also intervenes in preventing transmissible/communicable diseases through, for example, vaccination programs. The OCDs from each Canton are members of the Association of Swiss Cantonal Doctors (ASCD), which is tasked with

facilitating the exchange of information, debates, and discussions between the Cantons, and with bringing forward propositions to the FOPH (Marty-Nussbaumer, 2009). A graphic representation of this organization is included in Figure 1.

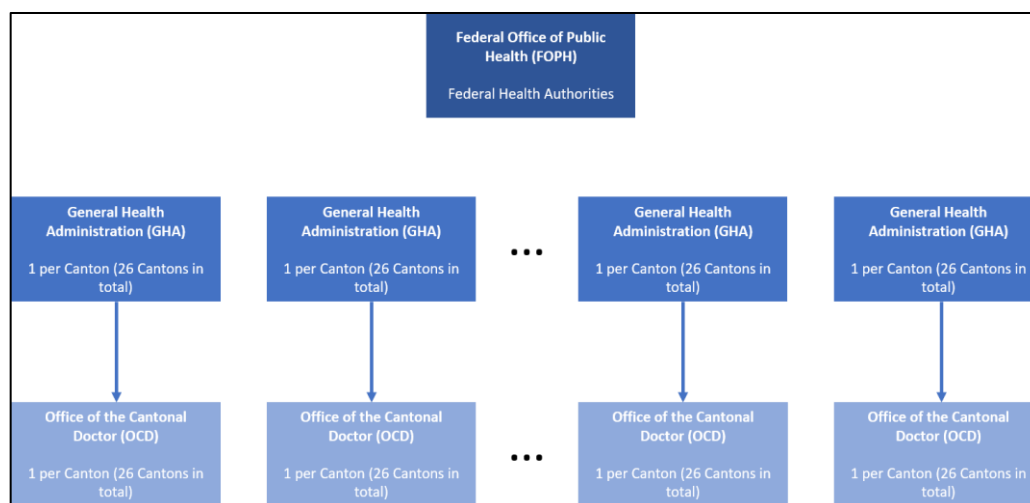


Figure 1 - Organisation of the Swiss Health System. The Federal Office of Public Health services all of Switzerland. At a cantonal level, there is an Office of the Cantonal Doctor in each of the 26 cantons.

The health care system and its financing

The Swiss health care system model strives for universal coverage for those residing in Switzerland and is not financed through taxation but through social insurance, which is paid through insurance premiums following the Bismarckian model of social protection (PNHP, 2010).

It is mandatory for all Swiss residents to have private health insurance as per the 1994 Swiss Federal Law on Compulsory Health Care (FOPH, n.d.). In exchange, the Confederation guarantees a catalogue of minimum services (basic coverage).

In 2018, health expenses accounted for 11.87% of the country's GDP, which places Switzerland among the ten top countries in terms of the proportion of health expense compared to the GDP and as the fourth most costly among OECD countries (FSO, 2021a; WorldBank, 2021).

The OECD considers the Swiss health care system to be effective, yet expensive (OECD, 2017).

Table 2 shows that approximately one quarter of the spending comes from consumer out-of-pocket payments comprising "co-payments, deductibles, and other private payments" (Biller-Andorno & Zeltner, 2015, p. 2195). The public authorities provide subsidies for residents with lower incomes to cover for part of the insurance premiums (Biller-Andorno & Zeltner, 2015). Insurance providers are, as per the law, non-profit organizations but can seek profit through complementary insurance schemes that cover additional therapies and services that are not covered by the minimum basic coverage (article 12, LAMal).

Table 2 - Basic Characteristics of the Swiss Health Care System

Distribution of health care system costs by financing schemes (2018)	
- State	18,7%
- Compulsory health insurance	36,9%
- Household out-of-pocket payments	25,8%

Doctors in the ambulatory sector (per 100,000 inhabitants) in 2018 (FSO, 2021b)	222,3
Number hospital beds in acute care and maternity wards (per 100,000 inhabitants) in 2018 (Glatthard, 2020)	270
Health care expenditure per capita and month in CHF (2018) (FSO, 2021a)	785

2.3 Pandemic preparedness for Switzerland prior to COVID-19

- **Pandemic plans in place prior to COVID-19**

The Swiss Epidemics Act (2016) designates measures to be taken in case of infectious disease outbreaks and delineates tasks between the Confederation and the Cantons. This legislation was proposed and passed by the Swiss parliament in 2012 as an update to the outdated 1970s law on epidemics. Those in favour of the updated legislation cited recent epidemics such as SARS in 2003 and 2009 A (H1N1) pandemic, combined with societal changes, such as faster and more prevalent mobility for holidays and work, and a lack of clear coordination mechanisms between the federal government and cantonal health systems as requiring updated legislation for more efficient and coordinated public health responses (Admin.ch, 2013a). After adoption by the parliament, the law underwent a referendum² initiated by individuals claiming that the law was aiming to make vaccination mandatory, would allow the government to look into people's private records, was a violation of individuals' liberties, and was seeking to sexualize children through sexual education programs aimed at informing about transmissible diseases in schools (Admin.ch, 2013a). Following a popular vote in September 2013, the law passed with 60% of the population voting in its favour and 40% voting against (Admin.ch, 2013b). The law went into effect on 01 January 2016 (FOPH, 2018a).

Pandemic preparedness plans in place in Switzerland prior to the COVID-19 pandemic primarily related to potential influenza pandemics. The focus on influenza is evident on the Swiss Federal Office of Public Health website's section "Infectious diseases: Outbreaks, Epidemics, Pandemics," where the page dedicated to "Pandemic preparedness" describes planning related only to flu pandemics (FOPH, 2020i). The bottom of this webpage provides a link to a Flu pandemic preparedness handbook, entitled "Swiss Influenza Pandemic Plan 2018" (FOPH, 2018c) which is available as a PDF document in German, French, Italian, and English on the Swiss FOPH website.

The 2018 Swiss Influenza Pandemic Plan is a 128-page document and was drafted under the overall project responsibility of Patrick Mathys, Director of the Crisis Management and International Relations Section of the Swiss FOPH and Anne Iten, President of the Federal Commission for Pandemic Preparedness and Response. The Steering Group for the plan was the Federal Commission for Pandemic Preparedness and Response and was composed of 17 individuals. In drafting the plan, the Steering Group consulted with numerous experts, governmental entities, Cantonal medical officers, Cantonal pharmacists, university hospitals, and medical associations, among others (FOPH, 2018c, p. 128).

² When parliament passes legislation in Switzerland, Swiss citizens can contest this legislation: "When citizens disagree with the decision of Parliament and they gather 50,000 valid signatures within 100 days of the official publication of the act, or eight Cantons submit a request, the act is submitted to a vote of the People (an optional referendum). The act only comes into force if it is accepted by the majority of the People" CH.ch. (n.d.). *Mandatory referendums and optional referendums in Switzerland*. Retrieved February 18, 2021 from <https://www.ch.ch/en/demokratie/political-rights/referendum/mandatory-referendums-and-optional-referendums-in-switzerland/>.

The 2018 plan describes how Switzerland has systematically prepared for influenza pandemics since 1995. The first Swiss Influenza Pandemic Plan was developed in 2004 and then updated annually until the 2009 A(H1N1) pandemic required it to be “completely overhauled” (p. 7). The 2018 version describes its purpose as follows:

“The Swiss Influenza Pandemic Plan is designed to protect the life and health of the population, and it delineates the specific preparations made by the Swiss health system in anticipation of a pandemic. **It is aimed primarily at the competent national and Cantonal authorities.** These preparations ensure that Switzerland is adequately equipped to deal with a pandemic of any degree of severity, i.e. can react in a sufficiently coordinated and efficient manner to limit the impact on people and society” (p. 7, emphasis in original).

According to this document, federal tasks include providing information, developing a strategy, defining guideline values for enforcing measures (guidelines, recommendations), and coordinating between the Cantons. The plan designates the Federal Office of Public Health as the responsible entity for “defining guideline values for the preparation for and control of a pandemic” (p. 8). As for the Cantons, their roles entail the organization of Cantonal health systems and the enforcement of measures. Overall, the plan is organized into four parts: (Part I) Targets, strategies, framework conditions, (Part II) Control measures, (Part III) Principles, and (Part IV) Annexes.

Part I provides a brief introduction to the plan, including a historical overview of previous preparedness plans for influenza pandemics, the purpose of the plan, the principles of planning, which involve a need to be flexible, the differences between “normal situation,” “particular situation,” and “extraordinary situation,” as part of an escalation model, the plan’s recognition of and basis in the World Health Organization guidelines, an overview of pandemic control strategies, and the management, coordination, and governance of pandemics.

Part II describes the control measures of pandemic preparedness, particularly “the **tasks and powers** of the federal authorities and Cantonal stakeholders in planning and implementing control measures” (p. 23, emphasis in original). The plan further describes the control measures, first listing *communication*, which has four stages: (1) awareness-raising, (2) risk communication, (3) crisis communication, and (4) post-pandemic stage (p. 29). Additional control measures include: monitoring, contact management, social distancing (school closures, bans on events), medical care, separation measures (quarantine/isolation), behavioural measures, disinfectants, protective masks and examination gloves, antiviral drugs and antibiotics, and vaccines. There is a section dedicated to each of these which describes their underlying processes, legal basis, and those responsible for implementing and communicating about the measures.

Part III of the plan covers the “principles and other information useful for understanding parts I and II” (p. 73), including: current epidemiological and virological evidence, statutory foundations and ethical guidelines, recommendations for the use of antiviral drugs, calculation tools and pandemic simulation models, information on pandemic planning and the implementation of measures in businesses, and measures at airports.

Part IV displays various annexes, which include checklists to be used by hospitals and sociomedical institutions in case of a pandemic, pandemic preparedness checklists to aid the development and review of the Cantonal pandemic plans, a list of bibliographic references, abbreviations, and a glossary.

- **Prior experience with pandemics**

Since 2000, Switzerland has had several experiences in learning to manage infectious disease epidemics, with the federal and Cantonal authorities realizing that institutional and political changes needed to be made with each subsequent epidemic. For example, during the 2002-2004 severe acute respiratory syndrome (SARS) global epidemic, Switzerland had 30 suspected cases of SARS in spring 2003 which proved to be negative (FOPH, 2018b). During this time, a health ordinance was issued (818.101.22) which allowed the Federal Office of Public health to deny entry to Switzerland for certain individuals coming from high-risk countries for SARS infections, and passengers who flew into Switzerland from SARS-infected countries were required to fill out a questionnaire about their itinerary.

Switzerland experienced the highest rates of measles cases in Europe from November 2006 to August 2009, with 15 per 100,000 in 2007 and 29 per 100,000 in 2008 (Richard & Masserey Spicher, 2009). In total, 4,415 cases were notified by physicians and laboratories, of which 656 patients had complications or were hospitalized. This epidemic had 3 successive waves and affected all 26 Swiss Cantons. For those whose vaccination status was known (N=3,916), 92.9% had not been vaccinated. At the time, public health measures were the responsibility of the Cantons, and the Swiss "FOPH had no detailed overview on the measures taken by the Cantonal health authorities and physicians, and their results" (Richard & Masserey Spicher, 2009, p. 4). At the same time, the FOPH was in the process of drafting national guidelines to standardize measures throughout the country. Despite a lack of existing national guidelines at the time, various measures were widely applied and included: information provided to those who had been in contact with infected individuals, especially in kindergartens, schools, and universities. This information campaign also involved providing vaccination recommendations. Other measures included contact tracing and recommended isolation for those identified as positive. During this time, there was also an outbreak among students at the University of Lausanne, which was followed by a catch-up vaccination campaign resulting in more than 3,800 doses of MMR vaccine being administered within 2.5 weeks in 2008. This 3-year-long measles epidemic put infectious disease preparedness on the political agenda in the Swiss context, with compulsory vaccination unsuccessfully being considered for children entering kindergarten or schools if measles vaccination rates could not be increased by other means. There were also discussions in the parliament for interventions to request that the federal government initiate a national measles elimination plan (Richard & Masserey Spicher, 2009, p. 7).

In April 2009, the A(H1N1) virus made major headlines throughout the world after the World Health Organization called on governments to stay on maximum alert following mounting cases and deaths related to the "Swine flu" in Mexico (WHO, 2009). Preparations were quickly made in Switzerland, with early FOPH reports informing doctors to expect adult services and paediatric services in hospitals to increase as a result of the imminent A(H1N1) outbreak and that private practice physicians would be heavily solicited. The report also indicated recommendations for the population to take responsibility and self-isolate at home in case of flu-like symptoms (FOPH, 2009). In preparation for the expected pandemic, the Swiss Federal Council in 2009 purchased 13 million vaccination doses in preparation for the expected pandemic; however, the pandemic was not as severe as predicted, with 570 hospitalizations and 20 deaths (FOPH, 2010), whereas seasonal flu typically results in 400-1,000 deaths per year in the Swiss context (Mombelli, 2010). Analysis of the first wave of the H1N1 flu season in one Swiss Emergency Department in 2009 found that the true positivity rate of H1N1 infection was low (5%) and hospitalizations were rare (5%), with no mortality, leading researchers to declare that the pandemic was "rather media 'hype' than real threat" (Nickel et al., 2009, p. 731). Following disappointingly low uptake of the ordered vaccinations (15% of the Swiss population and 27% of at-risk groups were vaccinated), the Swiss Federal Department of the Interior mandated a group of international experts to evaluate the Confederation's H1N1 vaccination strategy (FOPH, 2010). The

report details gaps in coordination and standardization of pandemic plans between the federal and Cantonal levels, noting particularly lack of clear responsibilities between the diverse Cantonal and federal actors (Brender et al., 2019; Van-Tam et al., 2010).

In the following years, Switzerland was spared from the 2012 Middle East respiratory syndrome coronavirus (MERS) outbreak, and had one isolated case of Ebola in 2014 after a Cuban doctor infected with Ebola was evacuated to Geneva from West Africa to be treated (FOPH, 2019a). The 2014 case of Ebola was the second ever confirmed case on Swiss soil, with the first case having been reported in 1995. Both cases were treated, and no death was reported in Switzerland.

In terms of yearly influenza cases, only estimates are available since the flu is clinically impossible to distinguish from other viral respiratory infections. The FOPH estimates that up to 20% of the population get the flu each year. However, according to data since 2010, less than 3% of the population has suffered from flu-like symptoms, and 2% of the population consulted a doctor for suspected cases of the flu (Dietrich et al., 2020), which on average results in 112,000 to 275,000 medical consultations each year (FOPH, 2020j). Furthermore, the most recent influenza vaccination coverage dates back to data from 2007 and 2012 Swiss Health Surveys and shows an estimated 16.4% of the population ≥ 15 years of age and 47.8% of those 65 years and older vaccinated against influenza in 2007. These numbers decreased in 2012 to 14.1% for the population ≥ 15 years of age and to 38.5% of those 65 years and older (Zürcher et al., 2019). For older adults (65 years and older), the influenza vaccination coverage rate in Switzerland is similar to Germany (35.3%) and Austria (32.1%), yet lower than Italy (52%) and France (49.8%) (Sheikh et al., 2018).

Approaching 2020, Switzerland again experienced several measles outbreaks due to locally low vaccination rates. Thirty separate outbreaks of measles, resulting in 212 total cases, were reported in Switzerland in 2019, which is about 6 times the number of cases as in 2018. Two measles-related deaths were also reported in 2019 (FOPH, 2019b). Recent data on measles vaccination shows that coverage rates have been increasing on a population level (approximately 88% coverage for two doses nationally in 2015, as compared to 77% coverage in 2012) (Altpeter et al., 2018). That said, in 2017, the FOPH reported not systematically meeting measles vaccination coverage for the desired public health goal of 95% coverage, which is necessary for herd immunity (FOPH, 2017): “Switzerland has only partially reached its objectives in terms of vaccination (...). For instance, flares of measles still occur in parts of Switzerland, taking advantage of locally low rates of vaccination” (p. 5).

3 Switzerland’s response to COVID-19

3.1 The first known case and progression of COVID-19 in Switzerland

The first known case of coronavirus was confirmed on 25 February 2020 in the Italian-speaking Canton of Ticino. In 2020, Switzerland experienced two distinct waves of coronavirus infections and COVID-19 related deaths. The first, smaller wave occurred in Spring 2020 and peaked around April 2020 (Table 3, Figure 2, Figure 3). The second, larger wave began in October 2020, with the incidence of infections peaking in November 2020 and plateauing in December 2020 (Figure 2). At the end of 2020, more than 455,000 positive coronavirus cases and 7,000 COVID-19 related deaths have been documented in Switzerland (Table 3, Figure 2, Figure 3).

Table 3 – Statistics on cases and mortality

Event	Date
First known case	25 February 2020 (FOPH, 2020e)
First known death	05 March 2020 (FOPH, 2020f)

Peak of wave 1 (cases) 7-day average	25 March 2020, with 1,068 cases (FOPH, 2021b)
Peak of wave 1 (deaths) 7-day average	5 April 2020, with 55.2 deaths (FOPH, 2021b)
Peak of wave 2 (cases) 7-day average	30 November 2020 with 8,067 cases (FOPH, 2021b)
Peak of wave 2 (deaths) 7-day average	15 November 2020, with 88.8 deaths (FOPH, 2021b)
Evidence of wave 3? If yes, cases and death, 7-day average	None as of 31 December 2020
Cumulative case numbers	Date surpassed
100	03 March 2020
1,000	11 March 2020
5,000	18 March 2020
10,000	23 March 2020
25,000	09 April 2020
50,000	18 September 2020
100,000	21 October 2020
250,000	11 November 2020
455,000	31 December 2020
Cumulative deaths	Date surpassed
100	21 March 2020
1,000	10 April 2020
2,000	24 October 2020
5,000	03 December 2020
7,000	27 December 2020

Source: (FOPH, 2021b)

Development over time

Laboratory-confirmed cases, Switzerland and Liechtenstein, 24.02.2020 to 12.02.2021, absolute case numbers

The graphic shows the development of laboratory-confirmed cases for the selected time frame.

Daily values: The line represents the 7-day rolling average (average of the previous 3 days to subsequent 3 days). 14-day values: The Line represents the sum of the last 14 days as the incidence (cases per 100 000 inhabitants) or as an absolute number. Total: The line represents the total of all cases for the selected time frame.

The published data is based on information submitted by laboratories, doctors and hospitals. It refers to the new reports we received and reviewed. The figures might therefore deviate from those communicated by the cantons.

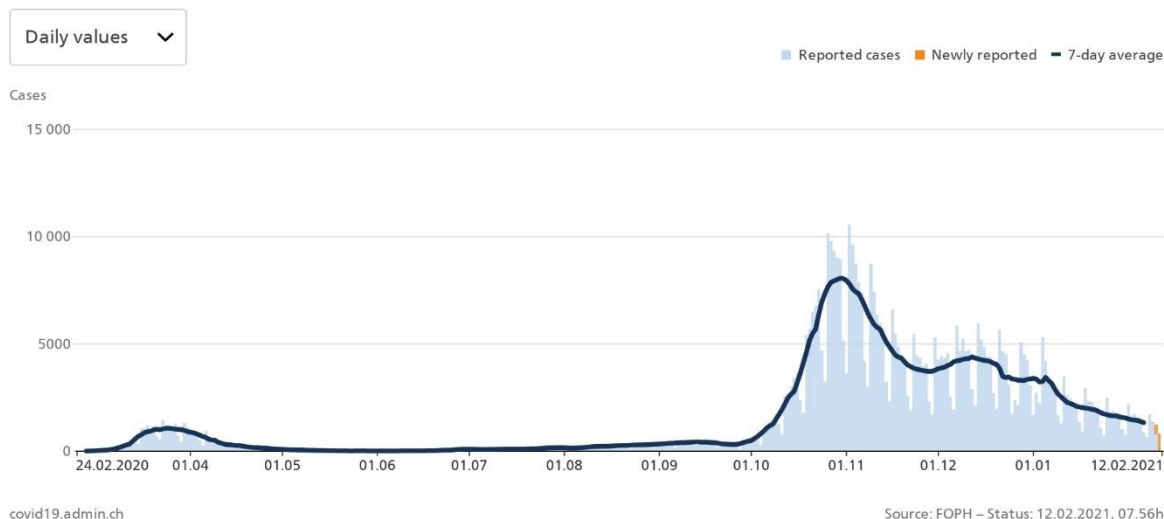


Figure 2: Development over time of laboratory-confirmed cases in Switzerland and Liechtenstein (FOPH, 2021c)

Development over time

Laboratory-confirmed deaths, Switzerland and Liechtenstein, 24.02.2020 to 12.02.2021, absolute case numbers

The graphic shows the development of deaths for the selected time frame.

The line represents the 7-day rolling average (average of previous 3 to subsequent 3 days).

People who have died with a laboratory-confirmed COVID-19 infection. For this statistic the date of death is decisive.

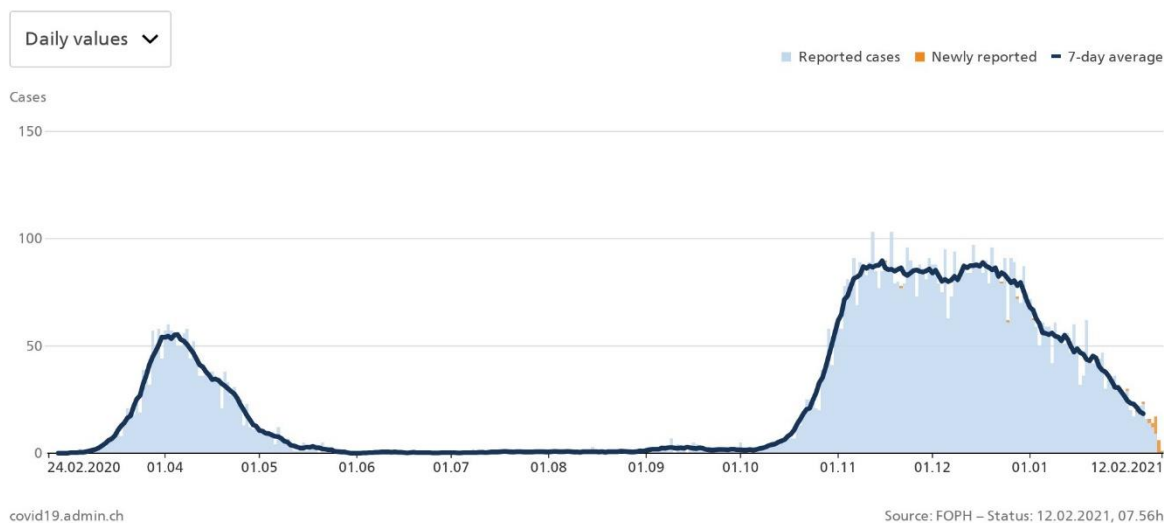


Figure 3: Development over time of laboratory-confirmed deaths in Switzerland and Liechtenstein (FOPH, 2021c)

3.2 Emergency COVID-19 related legislation

Since the beginning of the COVID-19 epidemic, various measures, rules, and bans have been implemented at both the federal and Cantonal levels, with the overall goal being “to contain the coronavirus” (FOPH, 2021a). Under these rules and guidelines, the level at which decisions concerning measures are made has shifted several times between federal-level decisions being uniform throughout Switzerland and other decisions around COVID-19 measures being made on a Cantonal level. At some points in time, some Cantons have implemented stricter measures than what has been implemented at the federal level, and other times, the Federal Council has decided to ramp up measures uniformly throughout the 26 Cantons.

Such shifts in the decision-making process are made possible through Epidemics Act (2016) provisions allowing the Federal Council to make decisions based on the epidemiological situation according to a three-stage escalation model, including (1) normal, (2) particular, and (3) extraordinary situations. For example, upon declaration of an extraordinary situation on 16 March 2020, the Federal Council was able to act unilaterally in enacting stringent measures on a national level in order to close all shops, restaurants, bars, and entertainment/leisure facilities at the onset of the epidemic. The initial situation also allowed for checks at the borders of Germany, Austria, and France and for the deployment of 8,000 members of the Swiss Army and Civil Service to assist Cantons and hospitals with logistics and security related to the epidemic (Admin.ch, 2020a). The “extraordinary” situation came to an end in June 2020, when it shifted to be considered a “particular” situation, which allowed Cantons more margin for making local-level decisions; in other words, “the Cantons now have a greater say in matters” (FOPH, 2021a).

In addition to the Epidemics Act (2016), the legal basis upon which the Federal Council initially declared an extraordinary situation in March 2020, the Swiss parliament passed the Federal COVID-19 Act on 25 September 2020. It “creates a legal basis allowing the Federal Council to maintain the measures resolved by emergency decree that are still necessary to manage the COVID-19 epidemic” (FOPH, 2021a). This legislation recognized the need for additional legislation due to the long-term nature and stringent measures that had been applied up until that point through the legal framework allowed by the Epidemics Act (2016). The Federal COVID-19 Act added additional regulations and limitations to the Federal Council’s powers and responsibilities in managing the epidemic so that the regular legal channels, such as the Swiss parliament, would not be overlooked for future decision-making. The Federal COVID-19 Act also added measures related to healthcare provision, employee protection, foreign nationals and asylum seekers, border closures, the justice system and procedural law, company meetings, bankruptcy/insolvency, the cultural sector and financial assistance, hardship measures for businesses, the sports sector, compensation for loss of earnings, pension schemes, unemployment insurance, short-time work compensation for persons on low-incomes, and criminal provisions (Admin.ch, 2020b).

3.3 Coordination of response within Switzerland

The Swiss Influenza Pandemic Plan from 2018 describes how cooperation between the Confederation and the Cantons is regulated based on the Swiss Epidemics Act (2016): “The leadership position of the Confederation and its responsibility for devising and implementing strategic targets for the whole of Switzerland were strengthened with the coming into force of the revised EpidA (01 January 2016). The Cantons remain responsible for enforcement in all situations” (FOPH, 2018c). It further explains that, in times of epidemics, the Swiss Federal Council can order additional measures in particular situations (through consultation with the Cantons) and in extraordinary situations. Page 19 of the Plan includes a detailed organigram of the concerned actors involved for different levels of the escalation model (Appendix 1: Management and coordinating bodies).

- Independent task force or not (was this task force in the preparedness plans or it is a creation for this pandemic?)

There was not a task force included in any preparedness plans. Instead, the Swiss National COVID-19 Science Task Force (SN-STF) was created at the end of March 2020 as an *ad hoc* response to the COVID-19 pandemic. It was organized by the Federal Council's Coronavirus Crisis Unit (KSBC), the Federal Office of Public Health, and the State Secretariat for Education, Research and Innovation as a scientific advisory body (FOPH, 2020k).

- Role of experts (task force and expert council) in response and decision making.

The Swiss National COVID-19 Science Task Force's website describes how it "advises the public authorities in the current COVID-19 crisis. While the Task Force does not make decisions about measures or actions taken, the volunteer group of experts represents relevant scientific fields and ensures that impartial scientific advice is given" (SN-STF, 2021).

The Task Force consists of around 70 experts and is composed of a Steering Committee, the Advisory Group, and ten expert groups: Clinical Care; Data and Modelling; Diagnostics and Testing; Digital Epidemiology; Economics; Ethics, Legal, and Social; Exchange Platform; Immunology; Infection Prevention and Control; Public Health.

- A brief overview of the key political/medical/experts figures for each country (the faces of the crisis).

Alain Berset, Swiss Health Minister and Federal Councillor (Admin.ch, 2020c)

Daniel Koch, Head of the Division of Infectious/Transmissible Diseases at the Federal Office of Public Health until April 2020 when he retired (FOPH, 2020h)

Stefan Kuster, Replacement of Daniel Koch at the Division of Infectious/Transmissible Diseases at the Federal Office of Public Health until December 2020 (FOPH, 2020h)

Virginie Masserey, Head of the Section for the Control of Infectious Diseases at the Federal Office of Public Health

Didier Pittet, Professor at the University of Geneva's Faculty of Medicine, Chief Doctor in Prevention and Infectious Disease Control at the University Hospital in Geneva, and Director of the World Health Organization's Collaborating Centre on Patient Safety.

Daniel Probst, Computer scientist, bioinformatician who aggregated Swiss epidemic data online and served as a source of information before the FOPH was able to provide such data on their website in the first months of the pandemic

- How did the government ensure the compliance of the population to the sanitary measures? (sanctions, fines? Etc)

The government implemented and enacted various fines for those who did not respect the sanitary measures. As of December 4, 2020, these fines ranged from 100 CHF for gatherings of more than 15 people in public spaces to 2,000 CHF for gatherings of more than 50 people (CPS, 2020). In July 2020, there were fines of up to 10,000 CHF for those who did not respect quarantine measures upon entry into Switzerland (FOPH, 2020g).

3.4 Timeline of mitigation measures

The first official communication from health authorities, in the form of a press release, regarding the coronavirus epidemic in the Swiss context came from the Federal Office of Public Health, the General Secretariat and the Federal Department of the Foreign Affairs on 24 February 2020. It informed the public about the number of cases in Switzerland and that a Scientific Task Force would be created. The press release also announced the beginning of an information campaign that would inform the public about the measures to be taken to avoid further spread of the virus.

- **Differences and uniformity between Cantons**

Since the beginning of the pandemic, the Federal Council made it clear to the Cantonal authorities that they could impose stricter measures than those enforced at the federal level in case of higher rates of cases (FederalCouncil, 2020b). In general, the Cantons uniformly followed the recommendations and implemented the measures proposed by the Federal Council at the onset of the pandemic. Some Cantonal websites provided more information than others (GDK-CDS, 2021; ge.ch, 2020; zh.ch, 2020). In some instances, some Cantons implemented stricter measures than those proposed at the federal level. For example, the Cantons of Vaud and Fribourg announced initially longer school closure periods (16 March 2020 to 30 April 2020) than the period proposed at the national level (16 March 2020 to 04 April 2020) (RTS, 2020). The Cantons began taking different measures than those proposed at a Federal level in June 2020, with stricter Cantonal measures being justified according to the current local epidemiological situation (FederalCouncil, 2020p; FOPH, 2021a).

On 04 December 2020, the Federal Council urged Cantons with high reproduction rates to act quickly to stop further rapid spread (FederalCouncil, 2020h).

- **At-risk group categorizations**

In March 2020, the Federal Office of Public Health considered people ≥ 65 years of age, people with cancer, cardiovascular disease, chronic respiratory diseases, conditions/therapies weakening the immune system, diabetes, and high blood pressure to be at especially high risk of having COVID-19 related complications. Pregnant women were added to this list in May 2020 (FOPH, 2020c).

- **Obligations to stay at home**

The first mention of the obligation to stay at home following contact with a contaminated person appeared on 25 February 2020 (FederalCouncil, 2020af).

A semi-lockdown was announced on the 16 March 2020, even though the term “lockdown” was not used. Every unnecessary shop, restaurant, and bar closed. Work from home was highly recommended. People could freely go on a walk or stay outside as they wished without a curfew or a limited amount of time and spatial distance (FederalCouncil, 2020m). On 20 March 2020, the Federal Council announced bans of gatherings of more than five people “because people have not been fully complying with this measure and the rules on social distancing,” and explained that the police could “impose a fine for non-compliance” (FederalCouncil, 2020k).

On 16 April 2020, the measures in force under the semi-lockdown were relaxed. Several steps were taken to soften regulations on 27 April 2020, 11 May 2020 and 08 July 2020 (FederalCouncil, 2020ac):

- In an initial phase commencing on 27 April, the Federal Council eased measures on businesses where there was only a low level of direct contact, where precautionary measures could easily be put in place, and where there were no significant movements of people. Businesses offering personal services involving physical contact also reopened, for example hairdressing salons,

massage practices, tattoo and cosmetic studios. Florists, DIY stores and garden centres also reopened, as did unstaffed public facilities such as car washes.

- In phase two, which started on 11 May 2020, schools for children of compulsory-school age, shops and markets reopened.
- In phase three, which started on 08 June 2020, upper secondary schools, vocational schools and higher education institutions were allowed to resume face-to-face teaching..

- **Border closures and openings**

On 13 March 2020, the Federal Council introduced border controls between Switzerland and Italy.

On 16 March 2020, the Federal Council established border controls between Switzerland and German, French and Austrian borders. It also prohibited entry into Switzerland for people coming from these three countries and Italy (FederalCouncil, 2020m). As of 25 March 2020, these measures were extended to all Schengen countries (FederalCouncil, 2020f). These measures affected anybody coming by land or by air.

Only Swiss citizens, individuals with a Swiss residential permit, or those with work-related objectives could enter Switzerland. People with urgent/pressing reasons were also permitted to travel to Switzerland. The transit and transport of goods remained open (FederalCouncil, 2020ad).

The Federal Council announced on 12 June 2020 that the controls at the border would be lifted and that international travel via ground transportation would be back to normal after 15 June 2020 (FederalCouncil, 2020f).

- **Quarantine upon arrivals**

On 01 July 2020, the Federal Council imposed 10 days of quarantine for every person entering Switzerland from a region at risk. This list has been regularly updated since (FederalCouncil, 2020n).

On 11 September 2020, the Federal Council stated that it would be taking a “region-based approach to neighbouring countries” when it came to quarantining upon arrival. Additionally, “the border regions of neighbouring countries may be exempted from inclusion on the list.”

It also specified that “creative artists returning from a cultural event, athletes returning from competitions and persons who have been attending professional conferences will be exempted from the quarantine requirement” (FederalCouncil, 2020x).

As of 29 October 2020, the Federal Council also adapted a travelling threshold for countries and areas by modifying a quarantine-travel list. It allowed for exceptions to the quarantine requirement for business travellers (FederalCouncil, 2020w).

On 21 December 2020, the Federal Council announced that given the discovery of the new strain in the UK and South Africa, “all persons who have entered Switzerland from these two countries since 14 December must go into quarantine for 10 days” (FederalCouncil, 2020r).

- **Use of facemasks in indoor public settings**

On 22 March 2020, the Federal Council announced not enforcing mask wearing policies and stated that people with good health would not need to wear a mask in public spaces (FederalCouncil, 2020l).

On 30 March 2020, the FOPH announced that in certain situations, when distances could not be maintained, it recommended wearing a mask (FederalCouncil, 2020ae).

On 05 June 2020, the FOPH recommended wearing a mask in public spaces when it was not possible to maintain two meters of distance (FederalCouncil, 2020c).

After 20 July 2020, wearing masks became mandatory on public transportation(FederalCouncil, 2020n).

As of 19 October 2020, the Federal Council announced that masks were to be required in publicly accessible indoor spaces as well as in public transport waiting areas and railway stations and airports. The authorities explained additional requirements, “masks must now also be worn outside establishments and facilities, for example in outdoor areas of shops and at event venues, on terraces of restaurants and bars, and at farmers’ and Christmas markets. Masks are also mandatory in busy pedestrian zones, for example shopping streets in town centres, and wherever the required distance cannot be maintained in public spaces. Wearing a mask is now also mandatory in schools from upper secondary level (level II) upwards. Similarly, masks are now mandatory in the workplace unless the distance between workspaces can be maintained (e.g., in individual offices).” There were exemptions to face mask requirements: “Children under the age of 12, persons who are unable to wear a mask for medical reasons, and guests in restaurants and bars when seated at a table are not required to wear a mask” (FederalCouncil, 2020w).

- **Handwashing**

On 27 February 2020, the FOPH recommended handwashing, coughing into the inside of the elbow, and staying home in case of fever or cough. Furthermore, as more and more contaminations were declared from travellers and workers arriving in Switzerland from Italy, flyers were distributed at the Swiss-Italian border with hygiene recommendations to mitigate further spread of the virus (OFSP 2020).

On 06 April 2020, the Tages-Anzeiger (a local newspaper) reported that “Switzerland faces a shortage of the raw material needed to make disinfectant to tackle the coronavirus pandemic after the country abandoned its emergency reserve of 10,000 tonnes of ethanol two years ago” (Reuters, 2020)

- **Physical distancing**

On 28 February 2020, the Federal Council stated that demonstrations and gatherings of more than 1,000 people were prohibited (FederalCouncil, 2020j).

On 13 March 2020, the Federal Council stated that demonstrations and gatherings of more than 100 people were prohibited (FederalCouncil, 2020ad).

On 20 March 2020, the Federal Council prohibited gatherings of more than five people, both inside and outside, including “spontaneous” gathering of more than five people (FederalCouncil, 2020k).

A poster dated 05 March 2020 advises people to keep physical distance between each other (FOPH, 2020b).

On 13 March 2020, maintaining distance of 2 meters from one another is listed as among the measures, with the exact wording noting that “the population must keep their distance” (FederalCouncil, 2020ad).

On 27 May 2020, the Federal Council said the ban on gatherings in public, in particular in public spaces, promenades and parks were to be eased. As of 30 May 2020, the upper limit was increased from 5 to 30 people. Additionally, starting 6 June 2020, private and public events with up to 300 people were allowed (FederalCouncil, 2020g). After a summer of relaxed measures, a new increase of COVID-19

cases brought authorities to impose strictures measures again as of October 2020. At an extraordinary meeting on 18 October 2020, the Federal Council reintroduced several further national measures to combat the rapid rise in coronavirus infections. From 19 October 2020, spontaneous gatherings of more than 15 persons were no longer permitted in public. This measure allowed for private events attended by more than 15 people if food and drink could be consumed while people were seated (FOPH, 2020a)

At its meeting on 28 October 2020, the Federal Council agreed that nightclubs would be shut again, while keeping bars and restaurants open until 11pm. All events with more than 50 people, and recreational sporting and cultural activities with more than 15 people, were also prohibited. Furthermore, from 02 November 2020, higher education institutions were once more brought to forgo face-to-face teaching (FederalCouncil, 2020w).

The Federal Council informed businesses and the public that starting 12 December 2020, “restaurants and bars, shops and markets, museums and libraries, and sports and leisure facilities will be required to close at 7pm.” The measures remained in place until 22 January 2020 (20, n.d.).

Cantons in more favourable epidemiological situations were allowed to extend the closing time. This depended on the R-number remaining less than 1.0 for at least seven days and the weekly incidence remaining below the Swiss average for at least seven days (FederalCouncil, 2020u).

On 11 December 2020, the Federal Council highlighted in its press release that the “current rule of no more than ten persons will continue to apply. Children count towards this number. In addition, the Federal Council strongly recommends that private gatherings be limited to two households” (FederalCouncil, 2020u).

- **Work from home policies**

In a press release from 13 March of 2020, official communication noted how the use of crowded public transport represents a high risk of contagion for the users. Therefore, the Federal Council recommended that the population avoid using public transport. The Federal Council recommended that employers should allow flexible working schedules for employees in order for employees to avoid spending time in public transportation during rush hours if their presence in the office was required (FederalCouncil, 2020ad).

On 16 March 2020, the Confederation recommended working from home, when possible, except for those working in healthcare facilities and in sectors deemed necessary for the population. The Federal Council announced that remote work was to be possible for at-risk populations and that, when this was not possible, employers were supposed to send these at-risk employees home on paid leave (FederalCouncil, 2020m).

As of 20 March 2020, people were still allowed to leave their home to go to work, as long as their employer complied with the safety guidelines (FederalCouncil, 2020m).

As of 27 April 2020, the Federal Council continued “to recommend that people continue to work from home, not least to avoid overcrowding on public transport.” However, it also noted that “businesses have gained a wealth of experience with regard to staff working from home. On that basis, they are free to decide on a return to the workplace.” Nevertheless, “employers are still required to allow people at high risk to work from home” (FederalCouncil, 2020s).

After a summer of relaxed measures, on 18 October 2020, the Federal Council reinforced the need for employers to comply to their recommendations regarding office settings according to sanitary

standards to protect employees. It further encouraged employers to facilitate work from home approaches. This was reflected in an added a paragraph on working from home to the Special Situation COVID-19 Ordinance (FederalCouncil, 2020z).

On 4 December 2020, the Federal Council announced that “to further reduce the number of contacts and the flow of people, the recommendations on working from home should be applied more widely.” They furthermore renewed their “appeal to employers to allow staff to work from home where feasible” (FederalCouncil, 2020v).

- **Targeted and mass testing**

On 24 February 2020, the FOPH started testing people with influenza-like symptoms. The costs of coronavirus testing had been shared between health insurers and the Cantons (FederalCouncil, 2020w).

The Federal Council declared that the Federal Government would cover the costs of COVID testing for people with symptoms as of 25 June 2020 (FederalCouncil, 2020a). They reimbursed the cost of tests for SARS-Coronavirus-2 at a flat rate of 169 CHF, and of antibody tests at a rate of 113 CHF (FederalCouncil, 2020w).

The Federal Council announced that from 02 November 2020, rapid antigen tests might also be used to determine a COVID-19 infection, in addition to the PCR tests already in use. The cost of the rapid tests are covered by the Confederation (FederalCouncil, 2020w).

- **Medical supplies and personal protective equipment (PPE)**

On 25 March 2020, the Federal Council expressed that health-related materials must be kept under control to avoid shortages (FederalCouncil, 2020o).

Beginning 21 December 2020, the Federal Council expanded the use of rapid tests to make it easier for people to get tested. Until then, only rapid antigen tests using a nasopharyngeal swab had been approved. By December 2020, pharmacies, hospitals, doctors' surgeries and testing centers were permitted to use any type of rapid test that met the FOPH criteria (FederalCouncil, 2020t).

Additionally, people without any obvious symptoms and who did not meet the FOPH criteria for testing were then permitted to take a rapid test. However, those who did not meet the test criteria had to pay for the test (FederalCouncil, 2020t).

- **Vaccination**

On 15 December 2020, Health Minister and Federal Councilor, Alain Berset, had a meeting with Ministers of Health from France, Spain, and Italy and representatives from Germany, Luxembourg, and the Netherlands to discuss national vaccination strategies while also ensuring coordination among neighbouring countries (FederalCouncil, 2020ah).

On 17 December 2020, the FOPH and the Federal Vaccination Commission (FVC) defined Switzerland's COVID-19 vaccination strategy. The vaccination campaigns first objective was to protect vulnerable people and to reduce the number of serious cases and deaths. The second objective was to reduce the toll on hospitals and to maintain the health system. The third objective was to fight against the negative repercussions of the pandemic and to contain the propagation of the virus. The vaccination campaign was primarily meant for the following targeted adult groups, who were considered successively as vaccination was not open to the entire population at the beginning:

1. Vulnerable people such as the elderly and those with pre-existing conditions (excluding pregnant women)
2. Health workers and personal attendants of vulnerable people
3. Members of households of vulnerable people
4. Personnel and people in community institutions
5. Everyone else above the age of 16

The Vaccination Strategy details how the vaccination against COVID-19 would be free for the population but not mandatory (FederalCouncil, 2020ag).

On 19 December 2020 SwissMedic, the authority on therapeutic products and their approval for use in Switzerland, authorized the first coronavirus vaccine from Pfizer/BioNTech for use in Switzerland (FederalCouncil, 2020aa).

By the last week of December 2020, the Cantons were able to begin with the first vaccinations, on a systematic, step-by-step basis, for people in vulnerable groups *in targeted and supervised settings* (FederalCouncil, 2020aa). From 04 January 2021, the Cantons started to vaccinate vulnerable groups in line with the vaccination strategy and recommendations in all Cantons throughout Switzerland.

On 12 January 2021, Swissmedic authorized the second coronavirus vaccine from Moderna for use in Switzerland (FederalCouncil, 2020ab).

3.5 Governmental support to enable the population to adopt best measures

The Federal Council has implemented a package of measures aiming to financially support the most economically impacted by the pandemic. The subsidies have been managed by the different Cantonal compensation offices, which has been serving as the contact point for residents in Switzerland who were not linked to any professional funding association or the federal compensation office (AHV/AVS, 2021). In Switzerland, the Federal Council has decentralized the administrative management of social retirement and disability coverage for retirement to these Cantonal compensation offices. Each Canton and some professional bodies have their own compensation offices (OFAS, 2021). The number of available subsidies has depended on the situation of the person. Some of these financial support measures pre-existed the pandemic, but, in light of the pandemic, the Federal Council has simplified the process to obtain support while also extending the eligibility period.

People can receive financial support if:

- requests to quarantine by the authorities have led them to lose part of their salary (when work from home was impossible). This applies to both employees and self-employed workers.
 - These subsidies cover 80% of the loss of earnings with a maximum of 196 CHF per day.
- parents (both employees and self-employed workers) lost earnings due to having to take care of their children during a lockdown or a quarantine.
 - These subsidies cover 80% of the loss of earnings with a maximum of 196 CHF per day.
- employees saw their working hours reduced, leading to partial unemployment.
- employers had to close their establishments due to the Federal or Cantonal orders or could no longer conduct business due to the ban on demonstrations and gatherings (i.e. those working in event sector).
 - Employers and self-employed workers are eligible if their "monthly turnover for the month to be indemnified has decreased by at least 55% (until 18 December 2020) or by at least 40% (from 19 December 2020) compared to the average achieved over the years 2015 to 2019 or during the effective period of [the] activity" (OFAS, 2021). To be eligible, these individuals are required to show that they "contributed to the AVS

- [compulsory old-age and survivors' insurance] on a minimum income for the activity in question of at least 10,000 francs in 2019" (OFAS, 2021).
- "The allowance amounts to 80% of the income subject to AVS on which [the] last installment of contributions for 2019 is based" with a maximum of 196 CHF per day; (OFAS, 2021).
 - they are considered as too vulnerable to be able to work and that work from home is not possible.
 - those considered as particularly vulnerable are: "pregnant women as well as people who have not been vaccinated against COVID-19 and suffer from one of the following pre-existing conditions: high blood pressure, cardiovascular diseases, chronic respiratory diseases, diabetes, diseases/therapies that weaken the immune system, cancer, obesity" (OFAS, 2021).
 - These subsidies cover 80% of the loss of earnings with a maximum of 196 CHF per day.
 - All financial measures were extended until 30 June 2021, except for the measure regarding vulnerable people, scheduled to expire on 28 February 2021.
 - The sectors of restauration, tourism, winery, culture, sport and media are considered the most affected and receive additional support from the Confederation (FederalCouncil, 2020a, 2020i, 2020q, 2020y; SECO, 2020)

Employers have the responsibility to ensure the health and safety of their staff members in working places. The Federal Council has provided companies and enterprises with technical advice to comply with the sanitary measures, which they enforce through regular inspections within organizations (SECO, 2021).

The Federal Council declared that the Federal Government would cover the costs of COVID testing for people with symptoms as 25 June 2020 and for people asymptomatic as of 28 January 2021 (FederalCouncil, 2020a, 2020d).

4 Risk Communication

4.1 Communication sources

FOPH: The fifth edition of the Swiss Pandemic Plan for Influenza, which was published in 2018, the FOPH, designates the FOPH as the responsible authority for "running the public information campaign" during a "pandemic situation" (Swiss Influenza Pandemic Plan 2018, p. 18). At the onset of the pandemic, the FOPH created the primary coronavirus posters – and its many derivatives – that were featured across the country. The key messages featured in these posters were also promoted through the communication channels listed in the next section.

Federal Council: Another important aspect of Switzerland's COVID-19 communication was done by the Federal Council. It communicated Switzerland's COVID-19 situation and measures to the public primarily via regular press conferences and accompanying press releases. Experts from the FOPH as well as members of the Task Force have joined the Federal Council's press conferences.

Cantons: The Cantons were also responsible for communicating any measures taken in addition to the federal measures. Additionally, the Cantons created their own original COVID-19 communication, such as videos that they shared on websites^{3,4}. The scope and extent of the communication varied between Cantons.

³ See for example: <https://www.ge.ch/document/COVID-19-kit-anti-COVID>

⁴ See for example: <https://www.geneve.ch/fr/actualites/dossiers-information/COVID-mesures-prises-ville-geneve/informations-pratiques/proteger>

4.2 Communication channels

Communication from the FOPH: The FOPH ran Switzerland's COVID-19 public information campaign via physical posters, billboards and print media advertising; TV campaigns; YouTube advertising; social media (Facebook⁵, Instagram⁶, LinkedIn⁷, TikTok⁸, Twitter⁹), radio, and the FOPH's dedicated coronavirus website.

Press conferences from the Federal Council: The Federal Council communicated new developments and measures concerning the pandemic through press conferences and press releases. These were then disseminated and shared via traditional (i.e. television and newspaper) and digital media channels.

Communication from the Cantons: In addition to FOPH's communication, Swiss Cantons also have been managing their own communication channels. As mentioned, the scope and extent of original communication differed from Canton to Canton.

Citizen engagement: Citizens were engaged in parts of the FOPH's communication strategy. Famous Swiss athletes such as Roger Federer¹⁰, as well as "ordinary" citizens¹¹, recorded videos about the virus and the FOPH's safety guidelines. The videos were shared widely through many of the communication channels listed above.

4.3 Key campaign messages adopted

The following COVID-19 campaign messages were developed and adopted by the FOPH throughout 2020.

"Stop Corona." This overarching coronavirus campaign message was featured from the onset of the pandemic.

"Voici comment nous protéger" (translation: "This is how we protect ourselves"). This slogan was also a cornerstone of the FOPH's coronavirus communication. It is featured on the top-right corner of most FOPH posters.

"Ensemble et solidaire" (translation: "Together and solidary"). This campaign message was introduced around the time when the first nationwide lockdown was announced. Another version simply said **"Ensemble"**, meaning "Together."

"Restez à la maison. Sauvez des vies." (translation: "Stay at home. Save lives."). This message emerged when the first nationwide lockdown was announced. Another version simply said, **"Restez à la maison,"** meaning "Stay at home."

"Le coronavirus est encore là" (translation: "Coronavirus is still here."). This message was introduced in spring/summer 2020 introduced after the easing of the restrictions imposed by the first semi-lockdown.

⁵ <https://www.facebook.com/swiss.public.health/>

⁶ <https://www.instagram.com/swiss.public.health/>

⁷ <https://www.linkedin.com/company/bag-ofsp/>

⁸ <https://vm.tiktok.com/v26bfF/>

⁹ https://twitter.com/BAG_OFSP_UFSP

¹⁰ See for example: <https://www.instagram.com/p/B9-AllQhpfv/>

¹¹ See for example: <https://www.instagram.com/p/B-HkgJrHXld/>

“A vous d’agir” (translation: “Your turn to act.”). This message, which encouraged people to take responsibility by respecting the COVID-19-related hygiene and safety guidelines, emerged during the late summer/early autumn 2020.

“Rencontrez le moins de personnes possible” (translation: “Meet with the least amount of people possible.”). This message discouraged people from meeting physically with too many people and emerged in late summer/early fall 2020.

“Plus important que jamais : stopper l’augmentation des cas.” (translation: “More important than ever: stop the increase of cases”). This campaign slogan was introduced late summer/early autumn 2020.

5 Summary/Conclusions

- Epidemiologically, Switzerland experienced two distinct waves of coronavirus infections and COVID-19 related deaths. The first, smaller wave occurred in Spring 2020 and peaked around April 2020. The second, larger wave began in October 2020, with the incidence of infections peaking in November 2020 and plateauing in December 2020. At the end of 2020, more than 455,000 positive coronavirus cases and 7,000 COVID-19 related deaths have been documented in Switzerland.
- Switzerland’s response to the COVID-19 pandemic and the measures implemented to mitigate the spread of the coronavirus have had legislative support in the Swiss Epidemics Act (2016) and the Federal COVID-19 Act (2020). This legislation delineates tasks for coordination and implementation between the Federal and Cantonal authorities. Public health responses in Switzerland have oscillated between measures implemented uniformly throughout the country and measures implemented at the cantonal level. Pandemic response coordination efforts (i.e. preventive measures, public health response, provision and allocation of resources, and communication geared toward the public, etc.) between the Federal and Cantonal efforts merit further investigation.
- Pandemic preparedness provisions prior to COVID-19 were planned around potential responses to influenza outbreaks. The most recent plan was the 2018 Swiss Influenza Pandemic Plan. The extent to which health authorities utilized this document in responding to the COVID-19 pandemic is unclear and should be investigated further. Future investigations should also consider if and how authorities plan to adapt future pandemic preparedness plans based upon lessons learned from the COVID-19 pandemic.
- The Swiss National COVID-19 Science Task Force (SN-STF) was established as an *ad hoc* committee to advise health authorities in March 2020. The extent to which health authorities took the SN-STF’s recommendations into account in making health policy decisions merits further investigation. It will be of particular interest to examine the role of external expertise in public health decision-making.
- The main authorities who have communicated information about coronavirus risks and preventive measures in an official capacity have been the Swiss Federal Office of Public Health, the Federal Council, and Cantonal authorities. These actors have used various channels of communication, including posters, billboards, print media, television, and social media. Communication has been in the main Swiss languages (German, French, Italian) and English. The content of official communication has changed over time, with notable contradictions in messaging around the use of masks and children’s potential to serve as vectors of transmission. Communication challenges largely dealt with clearly communicating about current scientific evidence and changing measures over time, particularly when measures differed between regions. It is unclear the extent to which authorities involved the public at large in attempts to understand the communication needs of

residents in Switzerland and in the design of their communication campaigns. Currently, there is little available evidence about authorities' internal discussions and decision-making around communication approaches.

6 Appendices

	Normal situation	Particular situation	Extraordinary situation
Federal Council	T: Setting targets and strategies to prevent and control a pandemic P: Issuing rules, ordering measures affecting individuals and the population as a whole		
Federal Chancellery		T: National information coordination (Federal Council – departments – cantonal chancelleries) P: Overseeing communication, maintaining the one-voice principle	
Federal Crisis Management Board	T: Devising scenarios, coordinating provision planning P: Coordinating training and verifying readiness	T: Presenting the overall situation, requesting action to be taken by the Federal Council, coordinating resources and measures at international and national levels and with cantonal leadership organisations P: Issuing orders to laboratories and specialised units of the Confederation and the ETH as well as to civil and military deployment units	
FOPH Management: Directorate of Public Health	T: National pandemic preparedness, early detection, campaigns P: Instructions/recommendations for an adequate state of preparedness	T: Assessing the situation, devising strategies and measures P: Main unit entrusted with all or part of the business. Instructions to cantons, orders to supporting structures (KOr EpG), technical management KOM; control of the pandemic in the area of public health, international cooperation	
FCP	T: Revising the pandemic plan P: Providing expertise and advice, updating the pandemic plan	T: Risk assessment P: Providing expertise and advice	
FCV	T: Creating the national vaccination policy P: Providing expertise, advice, vaccination recommendations		
KOr EpG Management: Federal Office of Public Health	T: Meeting the need for coordinating agreements and vertical coordination needs between the FOPH and the cantons. Supporting cooperation between the Confederation and the cantons, ensuring uniform enforcement of laws, supporting the Confederation in its leadership role P: Providing expertise and advice		
Swiss-medic	T: Testing, registering and issuing marketing authorisation for drugs (vaccines, antivirals, etc.). Monitoring drug effects P: Drug marketing authorisation and supervisory authority, measures to ensure that current quality and safety standards are upheld		
FSVO	T: Monitoring influenza activity in animals, providing status reports, issuing recommendations to protect staff working in animal disease control. Coordinating veterinary measures P: Animal health centre of competence, ordering veterinary measures for animals, enforcement of veterinary measures		
Armed Forces Pharmacy DDPS	T: Procurement, logistics and storage of drugs (e.g. vaccines). Holding and using emergency reserves (antivirals). Subsidiary support of the cantons P: Procurement and logistics centre of competence		
FONES	T: Ensuring that the country is supplied with goods that are essential to life P: Issuing orders	T: Assessing the supply situation, evaluating appropriate management measures P: Enforcement of legislation, releasing items from mandatory stockpiles and taking other actions to control supply and demand	
CMS Management: Person designated by the Federal Council to run the CMS	T: Provision and deployment planning, resource management P: Issuing instructions and recommendations for national and cantonal scenario-based preparedness status	T: Operative implementation of measures decided at national level, assessment of the health services situation, IES resource management/monitoring, tracking individuals P: Federal Council decision with extraordinary powers, convening SANKO, coordinated enforcement of health service measures	
ZIVI Central Office for Civilian Service	T: Contribution of human resources to nursing and care P: Mobilisation of civilian service members		
Cantons CMOs, KFO, project teams			T: Enforcement and coordination of pandemic control measures in the cantons
	T: Pandemic preparedness P: Implementation of national strategies and management of enforcement		
CMPH	T: Political coordinating body of the Cantonal Ministers of Public Health. Promotion of cantonal cooperation P: As per membership in the National Crisis Management Board		

Figure I.3.1: Management and coordinating bodies

T = tasks, P = powers

Other abbreviations and acronyms are explained in the text.

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