Switzerland
Special Case Study
Covid-19 Safety Assessment

Switzerland: #3 Region by COVID-19 Safety Ranking

COVID-19 Quarantine Efficiency

Weight 2.2 Category Score 65.26

144 POINTS

Scale of Quarantine	15.36
Quarantine Timeline	10.63
Criminal Penalties for Violating Quarantine	6.42
Economic Support for Quarantined Citizens	10.44
Economic and Supply Chain Freezing	12.40
Travel Restrictions	10.01

COVID-19 Healthcare Readiness

Weight 1.3 Category Score 78.82

97 POINTS

COVID-19 Equipment Availability	14.40
Mobilization of New Healthcare Resources	17.50
Quantity and Quality of Medical Staff	14.99
Level of Healthcare Progressiveness	12.19
Level of Technological Advancement	8.68
Epidemiology System Level of Development	11.06

COVID-19 Government Efficiency of Risk Management

Weight 2.2 Category Score 82.73

182 POINTS

Level of Security and Defense Advancement	17.00
Rapid Emergency Mobilization	14.29
Efficiency of Government Structure	14.65
Economic Sustainability	9.64
Legislative Efficiency	12.00
Political Stability	15.15

742 CUMULATIVE SCORE

COVID-19 Regional Resiliency

Weight 1.3 Category Score 78.21

93 POINTS

Infection Spread Risk	12.78
Culture Specifics and Societal Discipline	16.46
Level of Modern Sanitization Methods	14.94
Demography	5.17
Chronic Diseases	11.87
Societal Risks	17.00

COVID-19 Monitoring and Detection

Weight 1.5 Category Score 91.03

137 POINTS

Monitoring Systems and Disaster Management	18.00
Scope of Diagnostic Methods	15.00
Testing Efficiency	13.45
AI for Diagnostics and Prognostics	15.00
Government Surveillance Technology for Monitoring	12.58
Reliability and Transparency of Data	17.00

COVID-19 Emergency Preparedness

Weight 1.5 Category Score 59.67

90 POINTS

Societal Emergency Resilience	20.25
Emergency Military Mobilization Experience	7.67
Surveillance Capabilities (Scale, Scope and Technological Sophistication)	20.25
Previous National Emergency Experience	11.50

COVID-19: SWOT Analysis of Switzerland

STRENGTHS

- There is guaranteed accessibility to high standard healthcare services for the entire community.
- Large capacities to mobilize new health resources.
- The government shows optimal relative performance of risk management. It has enacted financial assistance to mitigate the effects of COVID-19 on the Swiss economy.

WEAKNESSES

- Decentralized nature of the Swiss health system makes data collection difficult.
- High rates of chronic diseases increases the risks of the region.
- Government spending on preventive health is low. Switzerland should consider adopt P4 Medicine in their public hospitals and clinics.
- Geographical interconnection with Italy and France.

OPPORTUNITIES

- Digital health offer many opportunities to improve healthcare.
- Home to many advanced private clinics. It already presents the resources to implement P4 Medicine in the public sector.
- Capacity to gradually deepen basic income policies and thus revive the economy, stimulating the digital consumption of goods and services.

THREATS

- Early quarantine easing. The economic reopening process requires establishing a robust epidemiological surveillance plan. Otherwise, infection rates will rise as in Germany.
- Marked population aging.

Switzerland: COVID-19 Quarantine Efficiency

Our analytical evaluation shows that Switzerland presents one of the most favorable values for the category in question, just behind New Zealand and surpassing Denmark by only a magnitude of less than 3 points; this is so even while it is stated that Switzerland has been containing one of the greatest magnitudes in number of cases per million individuals.

The success of Switzerland's national preventive scheme has enabled the government on April 16 to announce the easing of restrictions in a gradual three-step plan. The first stage of that plan began on April 27, allowing the reopening of activities for those who work in contact with other individuals, but not in large numbers; the second stage will begin on May 11, assuming that the first step has been successful, and the third is dated June 8 with the relaxation of restrictions on schools, universities and others.

This has been achieved with fewer police officers per capita than in most of the European countries evaluated, without the exposure of civilian volunteers and with contrasting social support for the measures, making it unnecessary to define legal penalties for the violation of social isolation. Switzerland has proven to be a fundamental actor in the fight against COVID-19 and its management scheme a model to keep in view, but it is important that the reopening process of the Swiss economy is carried out with caution, assessing the dynamics of the virus, otherwise all the sacrifice and joint work of citizens, government and organizations will have been meaningless.

Indicators	Points
Scale of Quarantine	15.36
Quarantine Timeline	10.63
Criminal Penalties for Violating Quarantine	6.42
Economic Support for Quarantined Citizens	10.44
Economic and Supply Chain Freezing	12.40
Travel Restrictions	10.01
Final Score	**65.26**
Weight	**2.2**
Final Points	**144**

Switzerland: COVID-19 Government Risk Management Efficiency

The Swiss federal government shows optimal relative performance according to our multivariable indicator. Since mid-March, it has enacted a series of measures to mitigate the effects of COVID-19 on the Swiss economy, one of the most important being financial assistance in the form of cash flow to Small to Mid-Size enterprises to help them survive the short-term impact of the pandemic, a measure that includes loans with limited bureaucracy and without or very low interest rates. As in the rest of the world, the impact of the health crisis on employment has been harsh in Switzerland - although its magnitude has been much minor in this region and in our pool of European countries in general compared to Eastern and American ones due to governmental action plans to conserve jobs and financially assist citizens.

The Swiss economic program consists of a rescue package of 42 billion CHF, which includes money to replace lost wages for employed and self-employed people, short-term loans to businesses, delay for payments to the government and support for organizations. Clearly, the performance of the Swiss government could improve, and we find two weak points that can be addressed with diverse approaches. The first is related to economic sustainability, the second to legislative efficiency. Emphasizing these two highlighted areas, the absolute performance returns of the government could markedly improve in fighting crises equivalent to that of COVID-19.

Indicators	Points
Level of Security and Defense Advancement	17.00
Rapid Emergency Mobilization	14.29
Efficiency of Government Structure	14.65
Economic Sustainability	9.64
Legislative Efficiency	12.00
Political Stability	15.15
Final Score	**82.73**
Weight	**2.2**
Final Points	**182**

Switzerland: COVID-19 Monitoring and Detection

The assessment of the efficiency of monitoring and detection systems implemented by the Swiss government, the advanced disaster management systems, epidemiological surveillance schemes and others, yields values for Switzerland that, despite being comparatively high, have scope for improvement. The Swiss scheme is at the forefront of the European countries analyzed in this study, only behind Germany and separated from it by just one point of difference in the corresponding category.

Nevertheless, the main weakness of the Swiss program has been the determination to test only citizens with mild symptoms, when the most dangerous vectors are those who are asymptomatic. This element can disrupt the entire efforts of the Swiss institutions at the time of making partial confinement more flexible, and it is necessary for Switzerland to establish coherent programs for the monitoring, detection and neutralization of new cases as potential outbreaks occur in the months ahead.

Thus, without a well-consolidated strategy, it is not advisable to ease or reverse the quarantine state, widely supported by citizens, since eventual outbreaks would jeopardize the totality of what was achieved and the institutions would lose social legitimacy. It would be better to proceed very gradually in the revival of the economy due to the risks of reversing any stage or sub-stage of social restrictions, and strengthen a strategy for the epidemiological survey of the asymptomatic population along the way.

Indicators	Points
Monitoring Systems & Disaster Management	18.00
Scope of Diagnostic Methods	15.00
Testing Efficiency	13.45
AI for Diagnostics and Prognostics	15.00
Government Surveillance Technology for Monitoring	12.58
Reliability and Transparency of Data	17.00
Final Score	**91.03**
Weight	**1.5**
Final Points	**137**

Switzerland: COVID-19 Healthcare Readiness

Some of the best-defined strengths of the Swiss health system, with regard exclusively to its readiness for combating epidemiological outbreaks of COVID-19, are its capacities to mobilize new health resources such as new infection hospitals, mobile military stations for microbiological treatment and cleaning, and good infrastructure provision for mass production of masks and other protective sanitary equipments.

Even standing out more than the above, its high level of healthcare progressiveness is a trait to highlight in our ranking, being at the forefront of the advanced pool of regions addressed in the present study. Although Switzerland has not led recent optimizations of its health system, which would be a point in favor of great relevance in this framework, it has one of the most favorable Healthcare Development Index, an good balance between budgetary spending allocated to health as GDP percentage and quality of medical care, and is on par with Canada and Norway in terms of its HAQ Index (Healthcare Access and Quality Index). In addition, it also presents high values regarding the quality and quantity of the medical staff, as evidenced by our parameters.

To go beyond its constraints, Switzerland could improve its level of technological advancement for health, which regarding certain particularities scores slightly below those for other regions of our select pool. Further, there is a need to promote the transfer of state-of-the-art healthcare technology from private P4 Medicine clinics to public hospitals.

Indicators	Points
COVID 19 Equipment Availability	14.40
Mobilization of New Healthcare Resources	17.50
Quantity and Quality of Medical Staff	14.99
Level of Healthcare Progressiveness	12.19
Level of Technological Advancement	8.68
Epidemiology System Level of Development	11.06
Final Score	**78.82**
Weight	**1.3**
Final Points	**97**

Switzerland: COVID-19 Region Resiliency

Regarding the intrinsic resiliency of Switzerland, as evidenced by the indicators and parameters with which we have subjected the data sets to analysis, only the regions of Singapore, Saudi Arabia and United Arab Emirates exceed the favorable magnitudes obtained by the central european region.

Comparatively, the Achilles heel of Switzerland has been exactly the same as that of most European countries: population aging is the greatest vulnerability of developed regions in the global scenario of COVID-19. This factor, along with shortages of intensive care units, is capable of extensively stretching morbidity and mortality rates from 3 - 4 percentage points to more than 7 - 8 percentage points.

In that way, this should serve as a warning not for Switzerland only, but for the entire community of the European states and the developed world; the silver tsunami these regions have experienced is a main risk factor, and the necessary means must be implemented for a digital epidemiology and surveillance of ageing diseases in addition to a digital epidemiology and surveillance of the Coronavirus Disease. Disruptive technologies associated with digital health, AI and cutting-edge biotechnology advances are within the reach of these regions to establish, at very low cost, better defined risk groups among the elderly, optimize clinical interventions, and point out the way to the rest of the world.

Indicators	Points
Infection Spread Risk	12.78
Culture Specifics and Societal Discipline	16.46
Level of Modern Sanitization Methods	14.94
Demography	5.17
Chronic Diseases	11.87
Societal Risks	17.00
Final Score	**78.21**
Weight	**1.3**
Final Points	**93**

Switzerland: COVID-19 Emergency Preparedness

As in the case of Germany, Switzerland's degree of emergency preparedness is far from being among the lowest, but there is still a long way for improvements.

Although the indicator of societal resilience to emergencies is above of the expressed by the European countries considered in the studied set, for example when considering the value shown by Germany, the region lacks experience regarding the mobilization of armed troops in national territory due to emergencies analogous to COVID-19.

The military apparatus has not faced equivalent events neither abroad nor borders within, such as assaults or military operations that require planning or policies around chemical or biological warfare, nor has it recorded experience in situations in which the military forces are compromised or diminished.

This is evidently another argument for which our central recommendation is decisively valuable: it is essential to carry out an exhaustive monitoring of possible outbreaks of the viral agent, dedicate all efforts to its early detection and eradication, mainly during periods of quarantine-related restrictions easing, as well as to prevent the contagion and leakage channels linked to asymptomatic individuals, and amortize the effects on senior citizens over the next few years - that is, establishing a very solid digital sanitary program for the diagnosis, prognosis, treatment and epidemiological monitoring and vigilance of pathologies associated with the elderly.

Indicators	Points
Societal Emergency Resilience	20.75
Surveillance Capabilities (Scale, Scope and Technological Sophistication)	7.67
Emergency Military Mobilization Experience	20.25
Previous National Emergency Experience	11.50
Final Score	**59.67**
Weight	**1.5**
Final Points	**90**

Switzerland: COVID-19 Recommendations

- As Switzerland continues easing lockdown efforts, the region should continue its widespread monitoring and testing. A large proportion of citizens are attentive to the government's provisions in this regard, since they are not willing to sacrifice what has been achieved during the more than two months of quarantine.
- The region should also dedicate significant efforts to the early detection and eradication of COVID-19, mainly during those periods of quarantine-related restrictions easing, as well as to prevent the contagion and leakage channels linked to asymptomatic individuals.
- Importantly, Switzerland should consider amortizing the effects on senior citizens over the next few years - that is, establishing a solid digital health program and public P4 Medicine services for the diagnosis, prognosis, treatment and epidemiological monitoring of age-related diseases.
- The Swiss government could improve its performance in epidemiological surveillance by implementing, to a greater extent, the appropriate technologies for monitoring; face recognition technologies have been very controversial, but their implementation in the risk areas may be urgent, always safeguarding security and privacy.
- Despite being home to many technologically advanced private health clinics focused on preventive medicine, Switzerland's government spending on preventive health is still comparatively low. Switzerland should consider developing a specific incentive mechanism to leverage and adopt the preventive medicine technologies in use throughout their public hospitals and clinics.

Index Categories: All Scores	Points
Quarantine Efficiency	144
Government Efficiency of Risk Management	182
Monitoring and Detection	137
Healthcare Readiness	97
Regional Resiliency	93
Emergency Preparedness	90
Cumulative Score	**742**

Switzerland: COVID-19 Conclusions

- While Israel and Germany show high levels of government will and capacity to implement mechanisms for cooperation between the public and private sectors, Switzerland is comparatively lacking in this regard. More specifically, the region is not equipped with robust mechanisms to establish incentives that allow the transfer of high-level P4 Medicine resources from private clinics to the public hospital sector. The government's health budget could increase, in order to achieve feasibility in strengthening the public primary health care system and its epidemiological monitoring system. These incentives would allow the private sector of the health industry to take economic advantage of its technological offer, while increasing citizens' access to advanced technologies from state-of-the-art biosciences, thereby reducing the risks associated with any category of pathology.
- The government's efficiency in managing economic risks, on the other hand, is considerably high. The region has financially assisted companies and citizens with greater vulnerabilities to cushion the effects of the economic crisis, and as a consequence, the unemployment crisis has been controlled more efficiently in this region than in most of those considered in this report.
- Switzerland has made the determination to test only citizens with mild symptoms, when the most dangerous vectors are those who are asymptomatic, particularly infants and children, and although it has a high standard epidemiological surveillance system. Switzerland can implement a massive and robust detection program similar to that of Germany to map out transmission routes and contain outbreaks in real time. Epidemiological safety is reduced in Switzerland due to this comparative lack. Furthermore, the decentralized nature of the Swiss health system is a challenge for collecting health data in an easily accessible, interpretable and transparent way, as Israel does for example.
- Similarly to Germany, a major threat to safety in Switzerland is its pronounced population aging, as in the rest of the European countries evaluated, and the reversal of restrictions on social contact. In addition, less rigorous epidemiological surveillance increases the risks, and therefore this is an area that should be prioritized in the region.

Switzerland: COVID-19 Conclusions

- The Swiss government has decided not to make the use of protective face masks compulsory, and instead only recommends their use when it is not feasible to maintain social distance. Furthermore, the Swiss Federal Railways and the Postal Bus service only recommends avoiding the use of public transport and traveling when necessary, rather than imposing mandatory restrictions. The public health authorities in the region recommend remote work from home, only when it is possible, and to follow hygiene and social distancing measures while commerce revives with the opening of different types of shops and businesses.
- The pandemic added strong pressure on the Swiss health system, although the system would not have reached a saturation point and even some hospitals would have admitted COVID-19 patients from the neighboring region of France. Swiss hospitals have 82 Intensive Care Units and a total of up to 1,000 hospital beds, 850 of which are equipped with respirators. The Swiss army has around 100 additional respirators. The health system is equipped to contain outbreaks of the characteristics already experienced, but higher levels of infection spread would cause a severe sanitary collapse like those that occurred in other regions.
- The Swiss government orchestrated a historic mobilization of the armed forces that revealed a good preparedness and responses to emergencies. The army deployed a battalion of hospitals for the first time to support the public health system, with a capacity for 200 patients, and provided the cantons with additional ambulances. This is the largest Swiss military mobilization since the WWII, and many cantons mobilized volunteer civilians along with the armed forces.
- Switzerland has shown efficient control of land border crossings, limiting crossings from Italy, carrying out border controls on trips from Germany, Austria and France, and only allowing Swiss citizens, residents and travelers with justified business reasons to enter its borders. Nevertheless, its geographical location and proximity to its European neighbors constitutes a significant risk that should continue to be monitored.

DISCLAIMER

DEEP KNOWLEDGE GROUP

Deep Knowledge Group is using its best efforts to continuously update its COVID-19 analytics based on dynamic, publicly available metrics deemed reliable, such as World Health Organization, Worldometers, CDC, Johns Hopkins University, and other publicly available sources.

Certain metrics used for advanced and qualitative assessment were formulated by Deep Knowledge Group analysts in coordination with specific experts and consultants using proprietary sources and techniques. Therefore, such rankings may be adjusted over time depending on the corresponding underlying information and in coordination with ongoing enhancements to our underlying analytical methodologies.

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CONTACT US

www.dkv.global/covid
info@dkv.global