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Swiss recommendations for the diagnosis, management and follow-up of post-COVID condition in primary care medicine (2023)

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The COVID-19 pandemic and the post-infectious sequelae of SARS-CoV-2 have been major health concerns. The diagnosis of post-COVID condition is based on the WHO definition: "Post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS-CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms and that last for at least 2 months and cannot be explained by an alternative diagnosis" [1]. Post-COVID condition affects approximately 9–22% of people after a SARS-CoV-2 infection, irrespective of the severity of the acute phase of the infection [2]. As of the year 2022, 3,022,992 people have been infected with SARS-CoV-2 in Switzerland [3]. Between 272,000 and 634,000 people in Switzerland are estimated to have been affected by post-COVID condition in 2022 alone.

Despite the large number of affected people and the recognition of post-infection syndromes in the literature [4, 5], knowledge of the underlying mechanisms, prognosis and management of these conditions is still limited. The pathogenesis of post-COVID condition is still unclear, but studies suggest possible immune dysfunction and inflammation, endothelial dysfunction leading to microthrombosis or persistence of viral particles [6]. The clinical picture of post-COVID condition is heterogeneous, including fatigue, difficulty concentrating, headaches, sleep disorders, autonomic dysfunction, pain, and respiratory, cardiac and gastrointestinal symptoms [2, 7]. The three most frequent symptoms are fatigue, difficulty concentrating and sleep disorders [7, 8]. In post-COVID condition, fatigue is characterized by post-exertional malaise (PEM) [9]. PEM refers to the worsening of symptoms after physical, mental or emotional exertion [10] and was reported in 8.2% of SARS-CoV-2–infected individuals 15 months after the initial infection [9]. Patients' quality of life and functional capacity are impacted by these symptoms, leading to an increased cost to the individual and to society in general [11].

In 2022, the Federal Office of Public Health (FOPH), in coordination with the Federation of Swiss Doctors (FMH), introduced an initiative to draft recommendations for primary care physicians for the management of post-COVID condition. Primary care physicians are the cornerstone of management and follow-up of post-COVID condition, and these recommendations aimed to help them in the diagnosis, management and follow-up of this disease. The recommendations for primary care physicians were based on an initial effort by the Division of Primary Care Medicine at the Geneva University Hospitals (HUG), in collaboration with several specialists at HUG, that was published in February 2021 and updated in November 2021 [12]. The authors recognized a need for national recommendations to ensure a more coordinated approach in the management of post-COVID condition. This was particularly important in the context of a condition that was not fully understood, and physicians had to avoid harm to the patient. Hence was born a collaborative effort to share experiences and lessons learned by Swiss hospitals and medical [8] and scientific authorities since the start of the pandemic in March 2020, leading to the creation of post-COVID recommendations for primary care physicians.

The Division of Primary Care Medicine at HUG and the Department of Neurology at Inselspital, the University Hospital of Bern, steered the sounding board and working groups and led the work on post-COVID recommendations for primary care physicians. Representatives from different fields of medicine were invited to participate. Fields included general internal medicine, neurology, pulmonary medicine, cardiology, psychiatry, infectious diseases, otorhinolaryngology, rheumatology, dermatology, gastroenterology, neuropsychology, physical therapy, occupational therapy (ergotherapy), Swiss Insurance Medicine and patient associations. Working groups helped define the content of the post-COVID recommendations and discuss different approaches applied in Switzerland. Working groups helped to generate a consensus on the recommendations, which were then discussed and validated by the sounding board. The sounding board gathered the representatives from the major scientific societies in Switzerland and from patient organizations. The final document has been validated by the major scientific societies whose disciplines are linked to the diagnosis and management of post-COVID condition.

To date, the management of post-COVID condition relies on the management of daily energy levels, the prevention of PEM and an interdisciplinary approach to help patients

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cope with their symptoms and find, when possible, ways to return and adapt to daily life. The role of primary care physicians is critical in the identification, diagnosis and follow-up of post-COVID condition. This document aimed to help physicians in understanding which symptoms could be due to post-COVID condition, to provide them with an approach to diagnosis after excluding other causes and to recommend strategies for the management of persistent symptoms and their impact on daily life. Primary care physicians can use this document, as well as its abridged version, to orient patients in their care pathway, to consider the suggested validated scales to identify and follow up on symptoms and their severity and to use the suggested approaches to treat the symptoms when possible, or at least to reduce their impact on daily life. Offering patients self-management tools, as well as tools to understand and cope with their disease, is also an essential component of management. Patients and physicians can find this information, as well as other resources for understanding and managing their symptoms, on www.rafael-postcovid.ch, an interactive platform with a medical chatbot, verified information and webinars for patients and healthcare professionals created by HUG in partnership with several hospitals, medical networks and national and international organizations. Information is also available from the Altea network (www.altea-network.ch), which is managed by an interdisciplinary team consisting of members of different fields of medicine, communication, social marketing, design and law. Patients can also benefit from patient-to-patient support and updated information on ongoing activities for post-COVID patients via the Long Covid Schweiz association (www.long-covid-info.ch).

Finally, these recommendations were possible thanks to the commitment and collaboration of all the experts who contributed to this work and to the support of the FOPH, the FMH and the scientific societies. While the future will likely bring more solutions for this condition, through ongoing collaborations [13], registers [14] and randomized controlled trials in Switzerland [15–17] and abroad [18], this work was essential for providing guidance given the current state of knowledge and hopefully will benefit a great number of primary care physicians, healthcare professionals and patients.

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