

TOOLKIT GUIDE

Rapid responses in the context of COVID-19: Prolonged symptoms following acute COVID-19 in adults — Diagnosis and management

Validated by the HAS Board on 10 February 2021

Updated on 17 March 2022

Recent developments

Risk factors for the onset of prolonged symptoms following acute COVID-19 have been identified: hospitalisation and high number of symptoms during the initial episode.

New symptoms have been described, such as digestive tract, skin, and eye-related symptoms. They are discussed in new toolkit guides.

Prolonged symptoms following acute COVID-19 can affect adolescents and, in rarer cases, children (a specific toolkit guide will be formulated).

WHO has proposed a definition of “post-COVID condition”. This definition is liable to change over time. It defines this condition particularly via the presence of symptoms beyond 3 months after the acute episode.

The scope of this rapid response is not confined to this definition, but provides guidance on earlier management of persistent symptoms (beyond 4 weeks), in order to rule out any differential diagnoses, including some emergency scenarios, as soon as possible, and initiate treatments and/or rehabilitation.

Key points

- **Rapid response No. 1:** prolonged symptoms following acute COVID-19 can occur even in people who have had mild forms. These symptoms take on a variety of forms (or are polymorphic), and can fluctuate over several weeks or months.
- **Rapid response No. 2:** the majority of patients can be followed up in a primary care setting using a holistic management approach.
- **Rapid response No. 3:** the most commonly encountered symptoms are potentially severe fatigue, neurological problems (cognitive, sensory, headaches), cardiothoracic problems (chest pain and tightness, tachycardia, dyspnoea, cough), and smell and taste problems. Pain, digestive and skin problems are also common.
- **Rapid response No. 4:** when a patient presents with prolonged symptoms following acute COVID-19, it is first of all necessary to rule out any acute phase complications, comorbidity decompensation, and any cause other than COVID-19.
- **Rapid response No. 5:** a detailed clinical assessment (including a considerate collection of information, screening for orthostatic hypotension, and SpO2 measurement) can use scales and a careful paraclinical assessment. This detailed assessment is necessary to make a diagnosis in relation to these long-term symptoms. PET scans may be necessary, following neurological specialised advice or memory consultation, as part of the differential diagnosis workup.
- **Rapid response No. 6:** empathetic listening and viewing the patient as a whole are important — the Primary Care Physical is central to the process. The diagnostic and care pathway must be personalised, using a patient-focused approach and support the patient. Patients should be encouraged to learn self-management techniques, to know their limits, but to continue to be physically active, even to a moderate degree, while keeping within their capabilities and if there are no contraindications.
- **Rapid response No. 7:** current treatments are essentially symptomatic.
- **Rapid response No. 8:** rehabilitation has a central role and must account for the possibility of hyperventilation syndrome and post-exertional worsening of symptoms; olfactory rehabilitation for cases of persistent smell problems; exercise therapy after ruling out contraindications with psychological support if needed.
- **Rapid response No. 9:** exploring anxiety and depression disorders, and offering psychological support and treatment tailored to the individual should be considered at all stages of the follow-up process.
- **Rapid response No. 10:** scope for referral should be available within multidisciplinary and multi-professional structures, on a local level. Certain patients should be able to access multidisciplinary physiotherapy, rehabilitation, and support services.
- **Rapid response No. 11:** despite the lack of follow-up to date, observed outcomes involve alternating phases of flare-up and recovery. Patient outcomes generally improve at a variable pace depending on the patients.
- **Rapid response No. 12:** many scientific questions remain as to the epidemiological, physiopathological and therapeutic aspects. They must be the subject of funded research projects.

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This document is made up of two parts:

- Primary care strategies
- Toolkit guides by symptom or specialism:
 - Fatigue Toolkit Guide
 - Dyspnoea Toolkit Guide
 - Chest Pains Toolkit Guide
 - Taste and Smell Problems Toolkit Guide
 - Pain Toolkit Guide
 - Physiotherapy Toolkit Guide - exercise therapy
 - Physiotherapy Toolkit Guide - hyperventilation syndrome
 - Functional Somatic Disorders Toolkit Guide
 - Neurological Signs Toolkit Guide
 - Autonomic Dysfunction Symptoms Toolkit Guide
 - Digestive Tract Symptoms Toolkit Guide
 - Skin Symptoms Toolkit Guide
 - Eye Symptoms Toolkit Guide

Context

This rapid response follows a referral by the French Minister of Health dated 14 December 2020 requesting that the French National Authority for Health draft, based on a multidisciplinary approach, procedures to follow, aimed at healthcare professionals, and essentially those involved in primary care, for the management and referral of patients presenting with prolonged symptoms following acute COVID-19.

COVID-19 is a disease expressed in varied forms, in terms of clinical presentation, as well as severity and duration.

From the end of the first wave of the epidemic in May 2020, **symptoms persisting** several weeks or months after symptom onset were reported in over 20% of patients after 5 weeks or longer, and in over 10% of patients after 3 months.¹

To date, hospitalisation and a large number of symptoms during the initial episode have been identified as risk factors for prolonged symptoms.

The polysymptomatic and fluctuating nature of these clinical signs has given rise to questions and concerns for patients and clinicians.

COVID outcome data are still rare and the physiopathological mechanisms are hypothetical at this stage. The term “Long Covid” has been created and used by patients and adopted in the literature to describe this phenomenon. Given the lack of accurate physiopathological and epidemiological data, this document uses the broader concept of prolonged symptoms following acute COVID-19.

¹ Office for National Statistics. The prevalence of long COVID symptoms and Covid-19 complications: ONS; 2020.
<https://www.ons.gov.uk/news/statementsandletters/theprevalenceoflongcovidssymptomsandcovid19complications>

Pragmatic, rational and scientific management of these patients, as part of a potentially multidisciplinary approach, with a shared medical decision, is needed.

These symptoms can be managed in a primary care setting in the large majority of cases. Additional investigations may be required.

Escalation of irrelevant investigations should be avoided.

The purpose of this document is to define the primary care of adult patients presenting with long-term symptoms. The associated toolkit guides give information on the clinical and paraclinical investigations required in a primary care setting based on organ involvement and/or the symptoms presented. They identify emergency situations and situations where specialist referral is needed.

Reminder

These rapid responses have been drafted on the basis of available knowledge on the date of publication. They are liable to evolve on the basis of new data.

Identifying patients with long-term symptoms after a clinically and/or biologically documented initial episode of COVID-19

This concerns patients meeting the following 3 criteria:

- **Initial symptomatic episode** of COVID-19:
 - **either confirmed** by at least one criterion including: SARS-CoV-2 + PCR, SARS-CoV-2 + antigen test, SARS-CoV-2 + serology, prolonged loss of smell/taste of sudden onset, typical chest CT-scan (bilateral ground-glass pneumonia, etc.),
 - **or probable** due to the combination of at least three criteria, of sudden onset, in an epidemic context, including: fever, headaches, fatigue, myalgias, dyspnoea, cough, chest pain, diarrhoea, painful swallowing. A positive SARS-CoV-2 serology test can help this diagnosis.
- Presence of at least one of the initial symptoms, **for over 4 weeks following the start of the acute phase of the disease.**
- Initial and long-term symptoms **not explained by another diagnosis** with no known relationship with COVID-19.

The risk factors for prolonged symptoms following acute COVID-19 are hospitalisation and a high number of symptoms, including the following:

- Severe fatigue
- Dyspnoea, cough
- Chest pains, frequently involving tightness, palpitations
- Concentration and memory disorders, loss of words

- Headaches, paraesthesia, burning sensations
- Smell or taste disorders, tinnitus, vertigo, painful swallowing
- Muscle, tendon or joint pains
- Sleep disorders
- Irritability, anxiety
- Abdominal pains, nausea, diarrhoea, decreased or loss of appetite
- Pruritus, urticaria, pseudo-chilblains
- Fever, bouts of shivering
- Ophthalmology disorders

Multiple symptoms are often associated, some may not be present at the acute phase. Their progression often fluctuates over time. Factors triggering symptom exacerbation or resurgence (physical or mental exertion, stress, temperature change, menstrual period) should be investigated.

Establishing diagnoses in connection with COVID-19

Firstly, it is advised to rule out any diagnoses unrelated to COVID-19.

Then, it is advised to screen for:

- complications of the acute COVID-19 phase;
- conditions that may occur in the long-term COVID-19 phase;
- decompensations of underlying comorbidities (thyroiditis, diabetes, COPD, etc.).

The table below describes the main conditions, syndromes and complications of COVID-19 known to date, potentially overlapping over time.

Complications occurring during or after severe forms of COVID-19	Diagnoses, syndromes and symptoms described for long-term symptoms
<i>Pulmonary</i> – Interstitial fibrosis – Diffuse interstitial lung disease – Restrictive syndrome	<i>Pulmonary</i> – Hyperventilation syndrome – Bronchial hyperreactivity
<i>Cardiovascular</i> – Acute coronary syndrome – Heart failure – Myocarditis – Pericarditis – Arrhythmia – Venous thromboembolism	<i>Cardiovascular</i> – Pericarditis – Myocarditis – Postural tachycardia (POTS) – Venous thromboembolism (pulmonary embolism)
<i>Neurological</i> – Stroke – Encephalopathy – Epilepsy – Myelitis – Neuropathy/critical illness myopathy – Guillain-Barré syndrome	<i>Neurological</i> – Cognitive disorders (attention and concentration problems, anterograde memory disorders) – Neuropathic pain – Balance disorders

<i>Mental health</i> – Post-traumatic stress – Anxiety disorders – Depression	<i>Mental health</i> – Anxiety disorders – Depression – Post-traumatic stress
	<i>Digestive tract</i> – Gastritis, oesophagitis – Gastroparesis – Colonopathy
<i>Dermatological</i> – Extremity necrosis – Skin rash – Pressure ulcers	<i>Dermatological/vascular</i> – Pseudo-chilblains – Skin rash – Vasomotor disorders
<i>ENT</i> – Swallowing disorder – Dysphonia – Anosmia – Dysgeusia	<i>ENT</i> – Hyposmia/anosmia/dysgeusia – Phantosmia/parosmia – Tinnitus/hearing impairment/hearing loss – Vertigo/balance disorders
<i>Ophthalmological</i> – Retinal vein occlusion – Ischaemic macular damage – Dry eye syndrome, keratitis	<i>Ophthalmological</i> – Eye strain – Dry eyes – Visual acuity loss – Vision anomalies
<i>Other</i> – Chronic or acute kidney disease – Liver dysfunction – Undernutrition associated with vomiting, diarrhoea – Anorexia – Deconditioning – Autonomic dysfunction symptoms	<i>Other</i> – Autonomic dysfunction symptoms – Anorexia – Undernutrition or malnutrition – Deconditioning – Functional somatic disorders

How to conduct a consultation with these patients?

1. Assessment of the initial episode of COVID-19

It is necessary to assess the initial episode of COVID-19, particularly to avoid overdiagnosis of COVID-19:

- Description of the acute initial symptoms (type of symptoms, duration, severity) and/or prior to that, dates.
- Virological/serological status (SARS-CoV-2 serology tests).
- Additional tests previously carried out (imaging, cardiopulmonary investigations, etc.).
- Physicians and other healthcare professionals previously consulted and their findings.
- Treatments received and their effects.
- Update of known previous medical history by the practitioner: allergy, autoimmune personal or familial disease, anxiety or depression disorder, organ failure (kidney, lung, heart, etc.), immunodepression and other chronic diseases, contraception, perimenopause.

2. Assessment of current status

- Listening to the patient attentively with an empathetic manner.
- Record of the characteristics of the current episodes, dates of onset, types and frequency of symptoms. This consultation may be helped by a patient diary (frequency of symptoms, intensity, duration, type, improving conditions, and activities).
- Context of onset, factors triggering or exacerbating the symptoms, avoidance behaviours
- Physical and psychological impacts.
- Impact on quality of life, social life and work.

3. Primary level investigations

Resting and exertional clinical assessment

- Weight and recent weight change, heart rate, measurement of blood pressure, SpO₂, screening for orthostatic arterial hypotension, resting respiratory rate. In cases of dyspnoea or tachypnoea, resting and exertional SpO₂ (test during which the patient stands up and sits down in a chair continuously for 1 min, with SpO₂ monitoring).
- Assessment guided by symptoms, to assess and quantify them, and compare them to pre-illness status.
- Several scores and scales validated in other contexts may be useful in helping diagnosis and follow-up (appended):
 - in cases of dyspnoea: mMRC (modified Medical Research Council) dyspnoea scale, Nijmegen score (in cases of suspected hyperventilation syndrome, which is common, i.e. after having ruled out the conventional causes of hyperventilation, see dyspnoea toolkit guide),
 - in cases of anxiety and/or depression symptoms: HAD (Hospital Anxiety and Depression Scale) score,
 - in cases of cognitive impairment: MoCA (Montreal Cognitive Assessment, French version) score,

- in cases of pain: VAS Visual Analogue Scale, Numeric Scale (NS), DN4 (neuropathic pain),
- in cases of fatigue: Chalder scale.

Proposed additional tests

- Full blood count, kidney function, liver function, transaminases, CRP, ferritin, fasting blood glucose, blood electrolytes, TSH only if symptoms are suggestive of thyroid dysfunction.
- SARS Cov-2 serology in the absence of initial laboratory work-up.

Further tests are guided by clinical presentation and their indications are specified in the relevant toolkit guides.

Which information should be shared with the patient?

Following this assessment and in the absence of signs of severity, a number of items of information are shared with the patient. This can help them understand their situation and guide care:

- The recovery time, to return to a pre-existing health state, may vary in length according to the patients as for other viral infections (e.g. infectious mononucleosis, viral hepatitis, other coronaviruses (SARS, MERS)).
- Limited follow-up is available to date to assess their recovery time.
- No aetiological treatment is currently available, but a large proportion of patients appear to gradually improve, generally in several months, with holistic management, possibly including symptomatic treatments, rest, and respiratory rehabilitation and/or graded exercise therapy (while keeping within the patients' capabilities).
- In the event of anxiety, possible referral to a psychologist or to a psychiatrist should be mentioned.
- A healthy lifestyle is essential: balanced diet, relaxation, good sleep hygiene, limiting stimulants, limiting or preferably quitting alcohol, tobacco and other toxic substances
- The resumption of daily exercise should be encouraged and tailored to the patient's capabilities and exertion thresholds triggering symptoms.
- Exercise remains contraindicated prior to specialist advice in cases of heart disease diagnoses (myocarditis, pericarditis, etc.).
- In cases of deconditioning and in the absence of contraindications, exercise therapy provided by a trained physiotherapist may be beneficial, but it is necessary to be mindful of the risk of post-exertional worsening of symptoms (see physiotherapy-exercise therapy toolkit guide). In cases of hyperventilation syndrome, specific respiratory physiotherapy provided by a trained physiotherapist must be carried out before other forms of rehabilitation (see physiotherapy-hyperventilation guide).
- The presence of prolonged symptoms following acute COVID-19 does not affect COVID-19 vaccination indications or contraindications.

When to request secondary or tertiary specialist advice

A specialist opinion may be requested following this clinical assessment in the case of signs of severity, certain complications, or lack of improvement with a well-managed treatment.

Patients presenting with the following should be referred for specialist advice or to a specialist clinic:

- Resting hypoxaemia SpO₂ < 96 % or exertional desaturation: patients with no known respiratory disease.
- Chest pains suggestive of heart or lung complaint, rhythm disorders, signs of heart failure.
- Unexplained, intense, difficult-to-manage pain.
- Worsening neurological symptoms.
- Unexplained fever and/or persistent inflammatory syndrome.
- Unexplained skin complaint potentially justifying a biopsy.
- Exacerbation of a pre-existing condition requiring specialist investigations.
- Limitations or restrictions to everyday living or work activities requiring interdisciplinary management.

Which care plan to propose

After this holistic assessment, it is important, in the context of a shared decision-making process, to discuss and agree with the patient (and their family, relatives or caregivers, where applicable) **in respect of their needs and how they will be proposed.**

1. Initial management

In the absence of signs of severity requiring referral for specialist secondary or tertiary care:

- Offer the patient a personalised care plan and follow-up by the Primary Care Physician.
- Keep practising active and empathetic listening.
- Offer the management of the main symptoms as detailed in the toolkit guides appended. Note that no symptomatic treatments are contraindicated for this condition (particularly NSAIDs, including aspirin).
- Offer aetiological management where indicated.
- Offer psychological support, for example cognitive behavioural therapy (CBT) in cases of functional somatic, anxiety or depression disorders and, if required, psychiatric follow-up.
- Offer personalised rehabilitation targets, such as olfactory rehabilitation in cases of persistent smell disorders, speech therapy (or neuropsychological) rehabilitation in cases of cognitive disorders (see physiotherapy-exercise therapy toolkit guide, see physiotherapy-hyperventilation syndrome toolkit guide, see taste and smell problems toolkit guide).
- Optimise comorbidity management.
- There is no evidence of any benefit of exclusion diets (except in cases of documented food allergy) or over-the-counter vitamins and supplements, and self-medication is potentially harmful.
- In addition, the efficacy of alternative approaches (acupuncture, auriculotherapy, osteopathy, etc.) has not been assessed.

2. Self-management and patient-directed self-management

Based on the initial assessment, provide patients with advice and information on self-managing their needs.

This should include:

- ways to self-manage symptoms, exertion, triggering and/or exacerbating circumstances, establishing gradually achievable realistic targets;
- lists of contacts in the event of concerns on their symptoms or need for support;
- sources of advice, including support groups, patient associations, online forums;
- ways to obtain support from social services, including in relation to housing and employment, and/or advice on financial support;
- sources of information on COVID-19 outcomes that the patient can share with family, caregivers and friends (HAS, SPILF, FAS², SPLF, Ministry, ARS, National Health Insurance, patient associations).

Assist patients in medical and social administrative processes,

- particularly with the occupational health service to plan a gradual return to work;
- rely on “Regional Support Platforms” and/or “Coordination Support Schemes” for complex circumstances³, set up by the Regional Health Boards.

3. **Physiotherapy and multidisciplinary rehabilitation**

Rehabilitation is a key aspect of the management of patients presenting with long-term symptoms. This rehabilitation can be carried out in an outpatient setting or in a specialist department.

For patients requiring rehabilitation, the rehabilitation programme should be documented and shared with the care team. It will include:

- an initial assessment;
- shared and achievable targets for each rehabilitation area;
- regular review of the programme efficacy.

How to follow the patient?

One needs to define, with the patient, the optimal frequency of follow-up, and the healthcare professionals involved, accounting for the patient’s level of need and the services available.

The patient will be able to learn to self-manage some everyday problems and self-manage their symptoms:

- during the shared decision-making process, discuss the possibility of face-to-face or remote follow-up;
- adapt monitoring of symptoms to patient needs;

² France Assos Santé.

³ French Ministry of Solidarity and Health. Appendix toolkit guide No. 8: role of coordination support scheme for managing complex health pathways. Coronavirus (Covid-19). 12 November 2020.
https://solidarites-sante.gouv.fr/IMG/pdf/fiche_annexe_8_appui_des_dac.pdf

- be attentive to the new onset or flare-ups of symptoms which might require additional tests, specialist advice, and/or could impact patient quality of life and well-being.

Routine follow-up of pre-existing chronic diseases should be maintained, and any exacerbations identified, which may require specialist advice.

Organisation of care

Most of these patients can be managed via primary care. This should be organised to allow multidisciplinary management if required.

In some patients, either from the start or as the condition progresses, a need for more intensive assessment or an inadequacy between the patient's needs and primary care provision may emerge. Two types of needs may be identified: medical complexity, and complexity involving biomedical, psychological and social problems.

Patients may be referred to multidisciplinary and multi-professional regional organisations with doctors, particularly specialists, experienced in the management of patients having long-term COVID-19 symptoms.

The objective of these organisations is to conduct a clinical and paraclinical review with a view to offering a potential adaptation of the care plan in concert with the Primary Care Physician.

If required, they will have a role in organising both the health and social care pathways of these patients.

Some patients need to access multidisciplinary physiotherapy, rehabilitation and support services. Such services should have specialist healthcare professionals with large expertise for diagnostic and therapeutic review purposes, in particular, expertise in the treatment of fatigue and the main symptoms and signs observed in prolonged forms of COVID-19.

Due to a lack of data, it is not possible to recommend prescribing hydrotherapy programmes which would not offer suitable rehabilitation treatments and support.

Knowledge and expertise sharing and training will be organised for all workers in the health and social care sectors.

The organisation of patient referral between these different levels of care must be made public and brought to the attention of the various health stakeholders and to the patients themselves.

Unresolved questions and perspectives

Many unknowns remain, on the description of the effects observed, physiopathology, outcomes, epidemiology, or therapeutics. To date, no validated care pathway exists apart from non-specific symptomatic treatments of the effects of COVID-19.

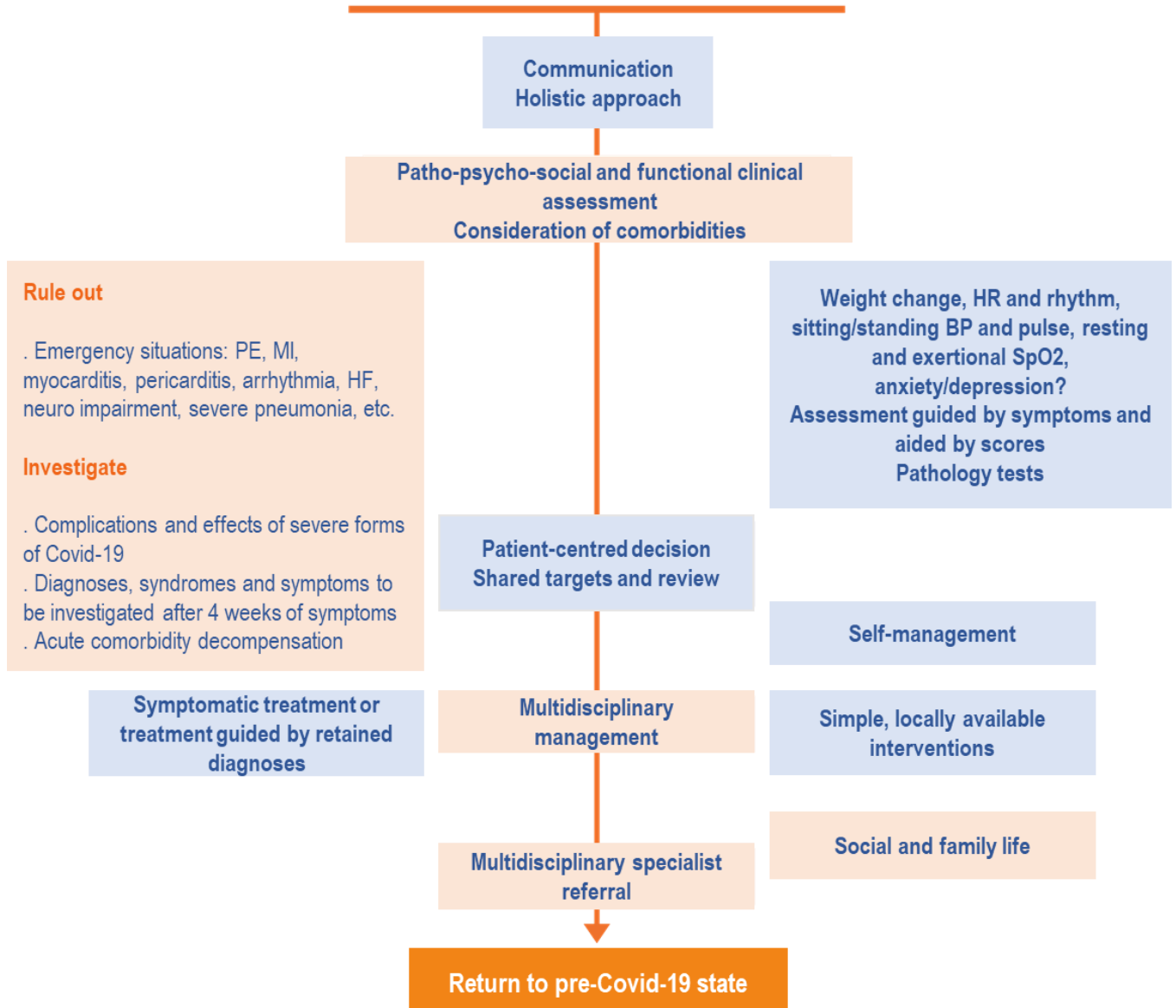
A coordinated national research initiative has been launched. It is aimed at facilitating research with a view to being able to address the main epidemiological, therapeutic, and physiopathological questions.

The research priorities are as follows:

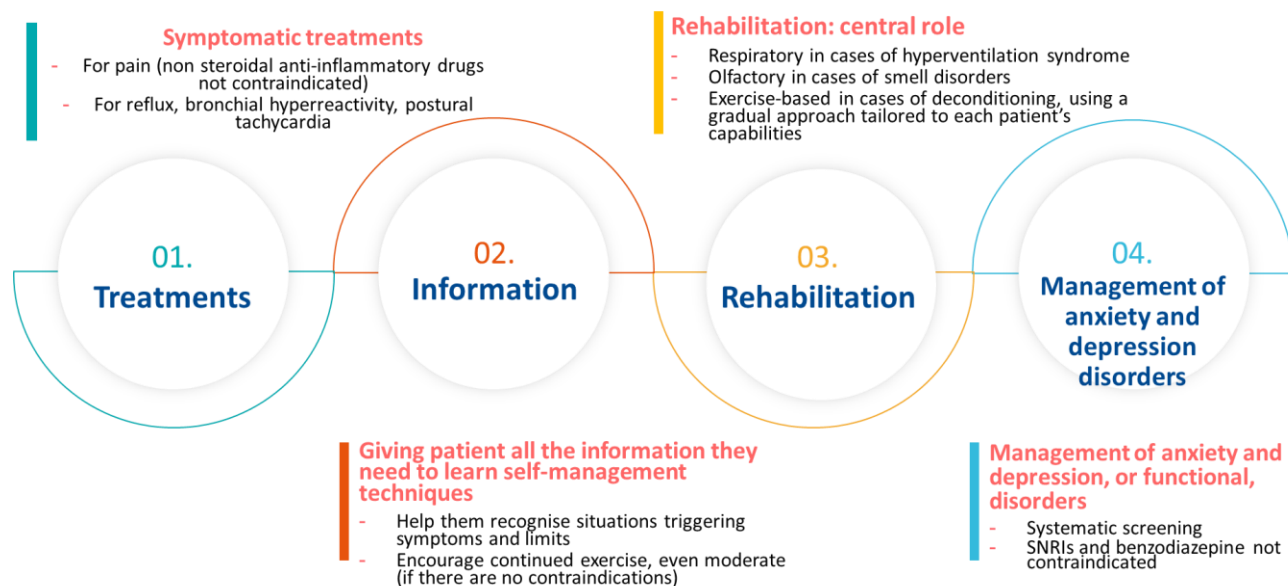
- epidemiology of long-term symptoms (prevalence, distribution, duration, relationship with COVID-19, risk factors);

- physiopathological mechanisms causing these symptoms. These mechanisms are probably not unequivocal and, to date, a number of hypotheses have been proposed:
 - viral or viral protein persistence in the usual sites (rhinopharyngeal) or in other sites (olfactory, digestive tract, monocytes),
 - dysfunctional immune response,
 - inappropriate local inflammatory response,
 - mast cell activation,
 - functional disorders, i.e. not linked to any current injury or dysfunction in the organ or system affected by the symptoms,
 - occurrence or decompensation of psychological or psychiatric disorders,
- genetic, hormonal and/or autoimmune factors that could favour one or another of these hypotheses;
- care pathways to be offered to patients according to their symptoms;
- impact of these symptoms on quality of life, personal relationships and work.

Primary care management of patients presenting with long-term symptoms > 4 weeks



The therapeutic **strategy** is based on 4 areas



Appendices

Appendix 1: mMRC (modified Medical Research Council) dyspnoea scale

Grade 0: Not troubled with breathlessness, except on strenuous exercise

Grade 1: Shortness of breath when hurrying on level ground or walking up a slight hill

Grade 2: Walks slower than people of same age on level ground because of breathlessness or has to stop to catch breath when walking at their own pace on level ground

Grade 3: Stops for breath after walking 100 metres or after few minutes of walking on level ground

Grade 4: Too breathless to leave the house, or breathless when dressing or undressing

Source: Mahler D, Wells C. Evaluation of clinical methods for rating dyspnea. Chest. 1988;93:580–6.

Appendix 2: Nijmegen questionnaire: Diagnosis of Hyperventilation syndrome

NIJMEGEN QUESTIONNAIRE to predict the likelihood of hyperventilation syndrome

Last name:	First name			Date	
	Never Score 0	Rarely Score 1	Sometimes Score 2	Often Score 3	Very often Score 4
Feeling tense					
Unable to breathe deeply					
Faster or deeper breathing					
Cold hands or feet					
Short of breath					
Palpitations					
Cold hands or feet					
Dizzy spells					
Feeling of anxiety					
Tight feelings in chest					
Chest pain					
Blurred vision					
Tingling fingers					
Stiff fingers or arms					
Feeling confused					
Bloated feeling stomach					
Tight feelings around mouth					
SUBTOTAL					
TOTAL SCORE: ----/64					

If score > 23/64 = positive diagnosis of hyperventilation syndrome

Source: Garcia G. La Revue du praticien. 2011;61(4);456-9

Appendix 3: Anxiety and depression score: HAD (Hospital Anxiety and Depression scale)

The HAD scale is an instrument used to screen for anxiety and depression disorders. It includes 14 items rated from 0 to 3. Seven questions concern anxiety (total A) and seven others depression (total D), making it possible to obtain two scores (maximum total of each score = 21).

1. I feel tense or 'wound up'		8. I feel as if I am slowed down	
Most of the time	3	Nearly all the time	3
A lot of the time	2	Very often	2
From time to time, occasionally	1	Sometimes	1
Not at all	0	Not at all	0
2. I still enjoy the things I used to enjoy		9. I get a soft of frightened feeling like 'butterflies' in the stomach	
Definitely as much	0	Not at all	0
Not quite so much 1	1	Occasionally	1
Only a little 2	2	Quite often	2
Hardly at all 3	3	Very often	3
3. I get a soft of frightened feeling as if sometime awful is about to happen		10. I have lost interest in my appearance	
Very definitely and quite badly	3	Definitely	3
Yes, but not too badly	2	I don't take as much care as I should	2
A little, but it doesn't worry me	1	I may not take quite as much care	1
Not at all	0	I take just as much care as ever	0
4. I can laugh and see the funny side of things		11. I feel restless as I have to be on the move	
As much as I always could	0	Very much indeed	3
Not quite so much now	1	Quite a lot	2
Definitely not so much now	2	Not very much	1
Not at all	3	Not at all	0
5. Worrying thoughts go through my mind		11. I look forward with enjoyment to things	
A great deal of the time	3	As much as I ever did	0
A lot of the time	2	Rather less than I used to	1
From time to time, but not too often	1	Definitely less than I used to	2
Only occasionally	0	Hardly at all	3
6. I feel cheerful		13. I get sudden feelings of panic	
Not at all	3	Very often indeed	3
Not often	2	Quite often	2
Sometimes	1	Not very often	1
Most of the time	0	Not at all	0
7. I can sit at ease and feel relaxed		14. I can enjoy a good book or radio or TV programme	
Definitely	0	Often	0
Usually	1	Sometimes	1
Not often	2	Not often	2
Not at all	3	Very seldom	3

Scores

Add up the scores for answers: 1, 3, 5, 7, 9, 11, 13: **Total A =**

Add up the scores for answers: 2, 4, 6, 8, 10, 12, 14 : **Total D =**

Interpretation

To detect cases of anxiety and depression, the following interpretation may be proposed for each of the scores (A and D):

- 7 or under: non-cases
- 8 to 10: doubtful cases – 11 and over: cases

Based on the findings, it may be necessary to request a specialist opinion

Source: Lépine JP, Godchau M, Brun P, Lempérière T. Évaluation de l'anxiété et de la dépression chez des patients hospitalisés dans un service de médecine interne. Ann Méd Psychol. 1985; 143 (2): 175-89

Appendix 4: Cognitive disorder score: MoCA (Montreal Cognitive Assessment)

MONTREAL COGNITIVE ASSESSMENT (MOCA) NAME : _____ Education : _____ Date of birth : _____
Sex : _____ DATE : _____

VISUOSPATIAL / EXECUTIVE		Copy cube		Draw CLOCK (Ten past eleven) (3 points)		POINTS	
							___/5
NAMING [] [] []						___/3	
MEMORY Read list of words, subject must repeat them. Do 2 trials. Do a recall after 5 minutes.		FACE	VELVET	CHURCH	DAISY	RED	No points
ATTENTION Read list of digits (1 digit/sec.). Subject has to repeat them in the forward order [] 2 1 8 5 4 Subject has to repeat them in the backward order [] 7 4 2							___/2
Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors [] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B							___/1
Serial 7 subtraction starting at 100 [] 93 [] 86 [] 79 [] 72 [] 65 4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt							___/3
LANGUAGE Repeat: I only know that John is the one to help today. [] The cat always hid under the couch when dogs were in the room. []							___/2
Fluency / Name maximum number of words in one minute that begin with the letter F [] _____ (N ≥ 11 words)							___/1
ABSTRACTION Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler							___/2
DELAYED RECALL Has to recall words WITH NO CUE		FACE	VELVET	CHURCH	DAISY	RED	Points for UNCUED recall only
Optional Category cue Multiple choice cue		[]	[]	[]	[]	[]	
ORIENTATION [] Date [] Month [] Year [] Day [] Place [] City							___/6
© Z.Nasreddine MD Version November 7, 2004 www.mocatest.org		Normal ≥ 26 / 30		TOTAL ___/30 Add 1 point if ≤ 12 yr edu			

The Montreal Cognitive Assessment (MoCA) is the most sensitive rapid assessment test, offering the broadest assessment of cognitive functions (attention, concentration, executive function, memory, language, visuospatial abilities, abstraction, calculation, orientation). In clinical practice, it tends to be used as an alternative to the MMSE.

A score of 26 (25 if level of education ≤ 3 = certificate of primary education) is considered abnormal.

Source: Nasreddine ZS, Phillips NA, Bédirian V, Charbonneau S, Whitehead V, Collin I, Cummings JL, Chertkow H. The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. J Am Geriatr Soc. 2005 Apr;53(4):695-9. doi: 10.1111/j.1532-5415.2005.53221.x. Erratum in: J Am Geriatr Soc. 2019 Sep;67(9):1991. PMID: 15817019

Appendix 5: Pain score: Visual Analogue Scale (VAS), Numeric Scale (NS)

VISUAL ANALOGUE SCALE (VAS)

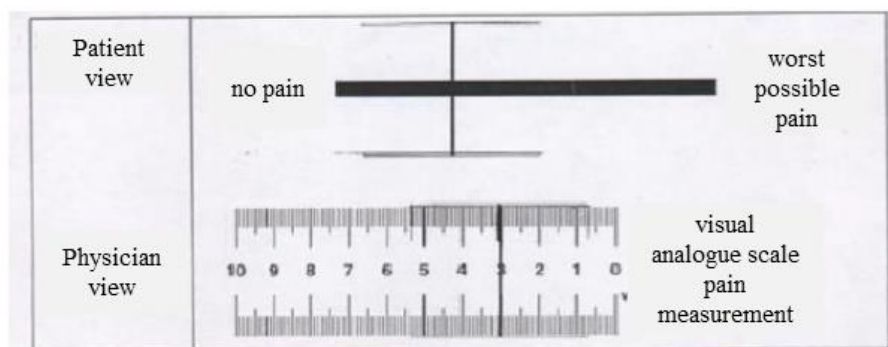
1. Paper form

Horizontal or vertical line measuring 100 mm, from left to right or from bottom to top. The two ends of the line are defined respectively by terms such as “no pain” or “worst possible pain” (1). The patient responds by placing a mark on the line. The pain intensity is measured by the distance between the position of the mark and the “no pain” end.



2. “Mechanical” force

Rule on which a 100 mm horizontal or vertical line is plotted on the “patient view”, from left to right or from bottom to top (1). The two ends of the line are defined respectively by terms such as “no pain” or “worst possible pain”. The patient responds by moving the rule cursor. The pain intensity is measured by the distance between the position of the cursor and the “no pain” end on the “physician view”.



NUMERIC SCALE (NS)

1. Pain intensity measurement – Paper form

Example of written form of numeric scale :

Assign a score of 0 to 10 below that best describes the severity of your pain. A score of 0 corresponds to “no pain”. A score of 10 corresponds to the “worst possible pain”.

no pain	0	1	2	3	4	5	6	7	8	9	10	worst possible pain
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Source: Évaluation et suivi de la douleur chronique chez l'adulte en médecine ambulatoire. ANAES. February 1999

Appendix 5 (continued): Pain score: DN4 (neuropathic pain)

DN4 questionnaire

A simple tool to screen for neuropathic pain

To estimate the probability of neuropathic pain, the patient must answer “yes” or “no” for each item of the following 4 questions

QUESTION 1: Does the pain have one or more of the following characteristics?

	YES	NO
1. Burning		
2. Painful cold		
3. Electric shocks		

QUESTION 2: Is the pain associated with one or more of the following symptoms in the same area?

	YES	NO
4. Tingling		
5. Pins and needles		
6. Numbness		
7. Itching		

QUESTION 3: Is the pain located in an area where the physical examination may reveal one or more of the following characteristics?

	YES	NO
8. Hypoesthesia to touch		
9. Hypoesthesia to pinprick		

QUESTION 4: In the painful area, can the pain be caused or increased by?

	YES	NO
10. Brushing		
YES = 1 point	NO = 0 points	Patient's Score: /10

INSTRUCTIONS FOR USE

When the practitioner suspects neuropathic pain, the DN4 questionnaire is a useful diagnostic tool.

This question is composed of 4 questions representing 10 checklist items:

- ✓ The practitioner interviews the patient and completes the questionnaire
- ✓ For each item, a “yes” or “no” answer must be given
- ✓ At the end of the questionnaire, the practitioner adds up the answers, counting 1 for each “yes”, and 0 for each “no”.
- ✓ The sum obtained gives the Patient's Score, out of 10.

If the patient's score is greater than or equal to 4/10, the test is positive (sensitivity: 82.9%; specificity: 89.9%)

Source: <https://www.sfetd-douleur.org/> (<https://www.sfetd-douleur.org/wp-content/uploads/2019/08/dn4ok.pdf>)

Appendix 6: Chalder fatigue scale

	Less than usual	No more than usual	More than usual	Much more than usual
PHYSICAL fatigue				
1. Do you have problems with tiredness?				
2. Do you need to rest more?				
3. Do you feel sleepy or drowsy?				
4. Do you have problems starting things?				
5. Do you lack energy?				
6. Do you have less strength in your muscles?				
7. Do you feel weak?				
MENTAL FATIGUE				
8. Do you have difficulties concentrating?				
9. Do you make slips of the tongue when speaking?				
10. Do you find it more difficult to find the right word?				
11. How is your memory?				

Source: T Chalder, G Berelowitz, T Pawlikowska, L Watts, S Wessely, D Wright, E P Wallace. Development of a fatigue scale. Journal of Psychosomatic Research. 1993;37(2):147-53. doi: 10.1016/0022-3999(93)90081-p.

Resources

These rapid responses will evolve as knowledge in the field of COVID-19 increases. They supplement the websites, documents and guidelines developed by learned societies.

See all the French National Authority for Health's [rapid responses in the context of COVID-19](#).

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Drafting method and warning

The method used for this rapid response is based on a narrative summary of the most relevant available data, national and international guidelines and the consultation of stakeholders (by email).

These documents were jointly drafted by the French National Authority for Health and experts designated by the National Councils of Healthcare Professionals, Learned Societies and patient associations concerned.

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Patient associations: #Après J20 Covid Long France, Millions Missing France, Tous Partenaires Covid, UPGCS.

These rapid responses are drafted on the basis of available knowledge on the date of publication and are liable to evolve on the basis of new data.

These rapid responses are based on what appears to be preferable or necessary at the time of their formulation.