
RECOMMENDING
BEST PRACTICES

GUIDELINE

Diagnosis and management of adults with post- intensive care syndrome (PICS) and their relatives

Validated by the HAS Board on 17 May 2023

Clinical practice guidelines (CPGs) are defined in healthcare as systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances.

CPGs are rigorous summaries of the state-of-the-art and scientific data at a given time, described in the evidence report. They do not exempt healthcare professionals from exercising discretion in the patient's treatment; this must be the treatment considered to be most appropriate on the basis of their own findings and the patient's preferences.

These best practice guidelines were developed according to the method summarised in the evidence report and in the HAS methodological guide available on-line: Development of best practice guidelines – Clinical practice guidelines method.

The objectives of this guideline, the population and the professionals concerned by its implementation are summarised on the last page (information sheet) and described in detail in the evidence report.

The latter and the guideline summary can be downloaded from www.has-sante.fr.

Grades of recommendations

A	Established scientific evidence Based on studies with a high level of evidence (level of evidence 1): randomised controlled trials with high power and without major bias or meta-analysis of randomised controlled trials, decision analysis based on well conducted studies.
B	Scientific presumption Based on scientific presumption provided by studies with an intermediate level of evidence (level of evidence 2) such as low power randomised controlled trials, well conducted non-randomised controlled studies, cohort studies.
C	Low level of evidence Based on studies with a lower level of evidence such as case-control studies (level of evidence 3), retrospective studies, case-series studies, comparative studies with major biases (level of evidence 4).
EC	Expert consensus In the absence of studies, the recommendations are based on agreement between experts in the working group after consultation of the review group. The absence of grading does not mean that the recommendations are not relevant and useful. However, it should prompt additional studies.

Description of the publication

Title	Diagnosis and management of adults with post-intensive care syndrome (PICS) and their relatives
Working method	Memo sheet
Objective(s)	Development of a guideline for healthcare professionals, with the aim of improving the prevention and management of PICS in terms of: – definition of patients at risk of PICS; – diagnosis of these patients; – early and long-term management of PICS; – care pathway. Development of a document intended for patients and their families or carers to alert them to this post-intensive care syndrome and support them in its management by referring them to healthcare professionals trained in this syndrome.
Targets	These recommendations concern all adult patients admitted to an intensive care unit in whom PICS is suspected or diagnosed, and any patient following a hospital stay in an intensive care unit. They are aimed at all healthcare professionals treating or liable to treat patients with PICS, in particular: general practitioners, physical medicine and rehabilitation specialists, internal medicine specialists, respiratory medicine specialists, intensive care medicine specialists, psychiatrists, neurologists, occupational medicine specialists, ENT specialists, infectious diseases specialists, follow-on care and rehabilitation specialists, geriatric medicine specialists, skin/cosmetic surgeons, clinical psychologists, speech therapists, nurses, physiotherapists, occupational therapists.
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Declaration of interests	The members of the working group communicated their public declarations of interest to the HAS. They are available to view on the website https://dpi.sante.gouv.fr . They were reviewed according to the analysis grid of the HAS guidelines for the declaration of interests and management of conflicts of interest. The interests declared by the members of the working group were deemed to be compatible with their involvement in this work.
Validation	Version dated: 4 May 2023
Updating	
Other formats	Rationale, toolkit guide No.1, for the primary care practitioner

This document and its bibliographic reference are available to download at www.has-sante.fr 

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1. What is PICS?

PICS (Post-Intensive Care Syndrome) is a frequent syndrome defined as new or worsening impairment in physical, psychological/psychiatric and/or cognitive status following a stay in an intensive care unit, which may limit activities, impair quality of life and functional status and impede the social and professional reintegration of patients.

In anglo-saxon models, "Intensive Care Units" can deliver various levels of critical care, ranging from enhanced care to advanced critical care. In the French organisational model, a distinction is made between:

- "réanimation" services, for patients presenting with impairment of one or several organ systems and requiring invasive support
- "soins intensifs" services, for patients who may develop organ failure and require enhanced monitoring.

The proposed guidelines focus only on patients admitted to said "réanimation" services, because they are most likely to develop PICS.

1.1. What are the problems associated with this syndrome?

Recommendation No. 1 (EC)

It is recommended that a diagnosis of PICS be proposed when one or more of the following symptoms develop or worsen, either in a persisting manner after an ICU stay, or occurring up to 12 months after the ICU stay, or even later:

- physical symptoms related to muscular, neurological, osteoarticular, skin, ENT, respiratory, cardiovascular, renal and general disorders (malnutrition, dyspnoea, asthenia, pain) that can lead to deconditioning, a reduction in exercise capacity and/or fatigue;
- psychological/psychiatric symptoms (anxiety, depression, post-traumatic stress disorder);
- cognitive symptoms including difficulties with memory, attention, comprehension and executive functions.

Especially when several are present, these symptoms can lead to objective or perceived limitations in activity, impair quality of life and functional status, and impede social and professional reintegration. They can also impair the quality of life of family members and carers.

Recommendation No. 2 (EC)

It is recommended that a diagnosis of PICS-family be proposed in the event of the onset or worsening of psychological/psychiatric symptoms (anxiety, depression or post-traumatic stress disorder) in family members or carers, persisting after the ICU stay of their family member or appearing up to 12 months or beyond following hospitalisation. These symptoms can have familial, social and professional consequences for family members and carers.

1.2. Which patients are at risk of developing this type of syndrome?

Recommendation No. 3 (EC)

It is recommended that patients with one or more of the following risk factors be considered at risk of developing PICS.

Before admission to ICU	During the stay in ICU	On discharge and following the stay in ICU
Age (in particular > 75 years) Clinical frailty (altered functional status before admission, pre-existing comorbidities on admission, general condition including malnutrition/poor nutritional status and sarcopenia) Functional limitation Cognitive disorders Psychological/psychiatric history	Reason for admission: septic shock, acute respiratory distress syndrome (ARDS) Delirium Duration of stay: duration of mechanical ventilation and/or catecholamine treatment ≥ 3 days Certain treatments, including neuromuscular blocking agents, benzodiazepines	Functional status at discharge (difficulties mobilising, ventilator support) Malnutrition / poor nutritional status Memories of delusional episodes Negative experience of ICU stay Early onset of psychological/psychiatric symptoms (anxiety, depression, post-traumatic stress disorder)

Recommendation No. 4 (EC)

At the current time, no reliable tool for predicting the development of PICS on an individual level can be recommended. Therefore, having a high degree of suspicion and actively screening for PICS is key when one or more of the proposed risk factors are present.

2. Preventing PICS in the ICU

All standards of best practice in critical care (in particular those grouped together within the “ABCDEF” bundle) are an integral component of PICS prevention insofar as they reduce the use and duration of invasive organ support techniques (catecholamine support, mechanical ventilation, etc.), the length of stay and the rate of complications.

Interventions requiring specific intensive care expertise are beyond the scope of these guidelines and will not be discussed here.

Recommendation No. 5

It is recommended that early mobilisation and rehabilitation protocols be implemented in intensive care units, with the aim of mobilising patients passively and then actively as soon as possible, adapting the intensity as required (grade B-C).

Recommendation No. 6 (EC)

In addition to the usual good clinical practices, it is recommended that multimodal programmes for the detection, prevention and treatment of delirium be put in place in order to reduce the incidence of cognitive disorders after an ICU stay. These programmes should place particular emphasis on non-medicinal means of prevention, as well as on the treatment and prevention of potential risk factors.

Recommendation No. 7 (grade C)

Among the measures to prevent ICU delirium and post-traumatic stress disorder, it is recommended that physical restraints not be used in intensive care settings. When the use of physical restraint is unavoidable, it should be used for the shortest possible time and regularly reassessed.

Recommendation No. 8

The use of diaries during the ICU stay is recommended, since these are likely to reduce the incidence of psychological/psychiatric symptoms (particularly symptoms of anxiety and depression) of PICS following the ICU stay (Grade C).

The diary should be systematically given to the patient, with the supervision of a healthcare professional (EC).

3. Preventing PICS-family

Recommendation No. 9 (EC)

To reduce the incidence of the psychological/psychiatric symptoms of PICS-family (anxiety, depression or post-traumatic stress disorder), the following recommendations are made:

- implement information and communication protocols with carers and family members, using, in particular, written documents (information brochures, etc.) and structured interviews (dedicated time and place) and centred on the person and their family members;
- do not restrict ICU visiting hours for carers and family members, it being understood that they may be required to leave the patient's room when certain care procedures are being performed;
- allow carers and family members to participate in care when they wish to do so and in accordance with the patient's preferences.

4. How to screen for and diagnose PICS during hospitalisation and in the community medicine setting?

Recommendation No. 10 (EC)

Screening for PICS in at-risk patients involves all healthcare professionals who see the patient in the year following admission to an ICU.

It is recommended that patients identified as being at risk of developing PICS should routinely undergo a structured clinical assessment, repeated over time, to detect the development of PICS symptoms. This assessment should be performed:

- before discharge from the ICU (for the earliest symptoms);
- at key transitional periods in the patient's care pathway: discharge from intensive care to a hospital ward or a medical and rehabilitative care unit, then before discharge home;
- within three to six months following the patient's discharge home (face-to-face or remote consultation).

Recommendation No. 11 (EC)

In addition to interview and clinical assessment, it is recommended that a set of scores and scales be used to screen for PICS. An assessment should be carried out systematically before discharge from intensive care, and should be repeated during the course of the patient's care. The choice of tests to be performed will be adapted to the patient's clinical condition.

The proposed scales and scores are presented below.

Types of symptoms	List of recommended scores and scales	Scores that can be used for most patients on discharge from ICU	Quick screening scores (particularly in general medicine)*
– Physical	– Timed up and go test (standing up, balance, walking) – Short Physical Performance Battery (SPPB) – 1-minute sit-to-stand test – 6-minute walk test – Hand dynamometer grip strength test – MRC score (overall muscle strength) – mMRC score (dyspnoea) – EAT-10 (swallowing difficulties) – VHI (dysphonia)	– Timed Up and Go test – <i>Short Physical Performance Battery</i> (SPPB) – MRC score – mMRC score (dyspnoea) – EAT-10 (swallowing difficulties)	– Timed Up and Go test
– Psychological/psychiatric	– PHQ-8 (depression symptoms) – GAD-7 (anxiety symptoms) – PCL-5 (Post-traumatic stress disorder)	– PHQ-8 (depression symptoms) – GAD-7 (anxiety symptoms) – PCL-5 (Post-traumatic stress disorder)	– PHQ-2 (depression symptoms) – GAD-2 (anxiety symptoms) – PCL-5 (Post-traumatic stress disorder)

- Cognitive	- MoCA	- MoCA	- MoCA
- Quality of life	- EuroQol-5D-5L	- EuroQol-5D-5L	
- Autonomy	- Katz scale - IADL scale - Functional independence measure (FIM)	- Katz scale - IADL scale	- IADL scale

* The total time required to perform these tests is estimated to be less than 30 minutes.

It is recommended to use the same tools to screen for symptoms of PICS-family (psychological/psychiatric symptoms and impact on quality of life).

Recommendation No. 12 (EC)

It is recommended that the screening and follow-up of patients at risk of PICS be carried out by a multidisciplinary team including physicians and other healthcare professionals with an awareness of PICS (including healthcare assistants, social workers, dieticians, occupational therapists, physiotherapists, nurses – possibly advanced practice nurses –, neuropsychologists, speech therapists, pharmacists and psychologists, etc.). The objectives of this screening and follow-up are to:

- identify the most appropriate care pathway for the patient: coordinated outpatient care hinged around the primary care physician for most patients, or medical and rehabilitative care unit for patients who require it;
- put in place and coordinate appropriate rehabilitation and follow-on care structures after the patient returns home;
- systematically offer a follow-up appointment within three to six months following discharge from intensive care, potentially using telehealth methods. The presence of family members and carers at this post-intensive care consultation is encouraged.

The composition of the multidisciplinary team will be adapted depending on the needs of the patient and the local organisation.

This follow-up will be carried out in addition to follow-up of pre-existing comorbidities.

Recommendation No. 13 (EC)

It is recommended that this screening and follow-up be initiated in a coordinated manner by a designated hospital healthcare professional, primarily an intensive care specialist or a physical medicine and rehabilitation specialist, with awareness of PICS and access to all the information concerning the patient's health and management in the intensive care unit.

It is recommended that the coordinator be designated as early as possible in the care pathway, namely as soon as the patient is admitted to the ICU or at the latest before discharge home. The objective should be to transfer coordination to the patient's own primary care practitioner as soon as possible.

Recommendation No. 14 (EC)

It is recommended to promote efficient transmission of information throughout the care pathway by systematically including the following in discharge letters (following a stay in the ICU and hospital ward):

- identification of patients at risk of developing PICS and therefore requiring systematic reassessment;
- a description of patients' clinical condition at discharge and, when appropriate, their rehabilitation and follow-up needs, as assessed by the designated multidisciplinary team;
- the healthcare professional responsible for the initial coordination of the care pathway.

It is recommended that discharge letters be systematically sent to the patient's primary care practitioner and to any other healthcare professionals and hospital departments concerned. A copy should also be given to the patient.

Recommendation No. 15 (EC)

A return to the patient's previous functional status, as well as social and professional reintegration, when possible, must be the key objectives of the care delivered. If required, this social and professional reintegration should be managed in liaison with social services and/or occupational medicine services (pre-return to work visit) and/or referral to the regional disability centre if necessary.

Participants

The following professional bodies and patient and user associations were consulted to propose experts invited individually to take part in working/review groups:

French board of physiotherapists (CMK)*	French national council for geriatric medicine professionals
French board of general medicine (CMG)*	French national council for nursing professionals (CNPI)*
French national board of psychiatry (CNPP)	French national council for intensive care medicine professionals (CNP-MIR)*
French national council for infectious diseases professionals – French Infectious Diseases Federation (CNP-FFI)*	French national council for ENT and cervicofacial surgery professionals (CNP-ORL)*
French national council for anaesthesia and intensive care and perioperative medicine professionals (CNP-ARMPO)*	French respiratory medicine federation (FFP)*
French national council for occupational medicine professionals (CNPMT)*	French psychiatry federation
French national council for occupational therapy professionals*	French federation of psychologists and psychology (FFPP)*
French national council for infectious and tropical diseases professionals (CNP-MIT)*	French national federation of user associations in the field of psychiatry (Fnapsy)
French national council for internal medicine professionals*	France Assos Santé
French national council for physical medicine and rehabilitation professionals (CNP-MPR)*	French physical medicine and rehabilitation society (Sofmer)
French national council for neurology professionals*	French occupational medicinal society (SFMT)*
French national council for respiratory medicine professionals (CNPP)*	French-language society for infectious diseases (Spilf)
French national council for speech therapy professionals	French national union of families and friends of patients with mental illnesses or disabilities (UNAFAM)
	French national union for the development of research and assessment in speech therapy (Unadreo)*

(*) This body proposed one or more experts for this project.

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Acknowledgements

The HAS would like to thank all the participants listed above.

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