

# Post-intensive care syndrome in pediatrics



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# Introduction

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- Advances in medicine → Survive critical illnesses
- Survive critical illnesses → Post-ICU complication



# Definition

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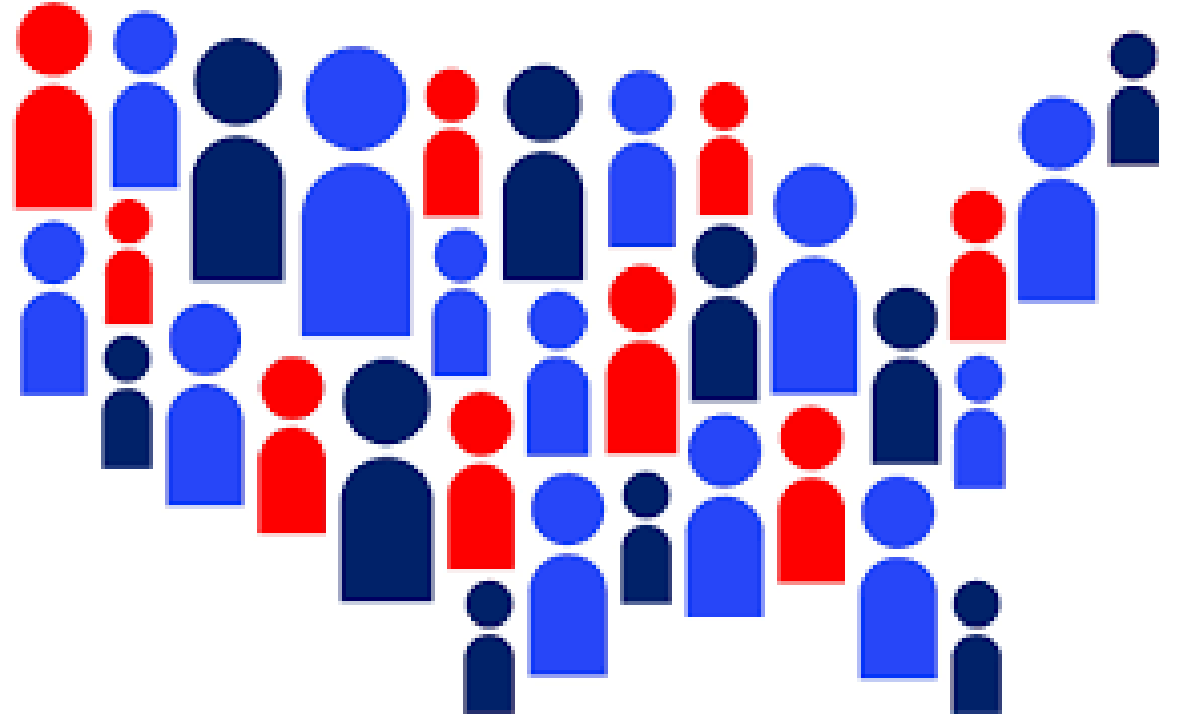
- Impairment in physical, psychological and cognitive functioning
- Have negative effects on quality of life
- Usually lasts between 6 and 18 months



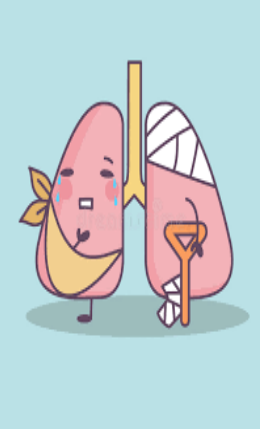
# Epidemiology

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- 50–70% of critically ill patients
- 20% of all patients







# Etiology

For some patients, the cause of their PICS is obvious

Blood clots and poor blood circulation

Damage to the lungs

Infections

kidneys or liver damaged



# Symptoms

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Physical and functional impairment

Neurocognitive impairment

Psychological impairment



# Symptoms



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## Physical and functional impairment :

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loss of muscle mass

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Neuromuscular weakness

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Sensory and nociceptive changes

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Impaired lung function

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Fatigue

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Weight loss

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Insomnia

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# Symptoms

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Dry / flaking skin and nails

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Taste changes

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Poor appetite

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Changes in vision

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Reduced kidney function

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Swollen limbs

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Hair loss

# Symptoms

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## Neurocognitive impairment :

Decreased memory

Thinking problems

Difficulty talking

Forgetfulness

Poor concentration

Problem-solving





# Symptoms



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**Psychological impairment :**

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PTSD

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Anxiety

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Depression

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Delirium

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Hallucinations

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Panic attacks

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Loss of self-esteem

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# Symptoms of PICS-F

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- Anxiety and/or depression
- Changes in sleep
- Feeling overwhelmed
- PTSD
- Grief





**RISK  
FACTOR**

Pre-morbid

During critical illness

Post-discharge



## Pre-morbid:

Age

Developmental stage

Pre-morbid conditions

Maternal mental health

Socioeconomic background





## During critical illness:

Number of invasive procedures

Severity of illness

PICU length of stay

Use of sedative medications

Secondary complications of critical illness

Delirium

Social and economic support during PICU stay

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## Post-discharge:

Limited Pediatric resources

School re-insertion

Somatic complaints

Familiar with post-traumatic stress disorder



# Diagnosis

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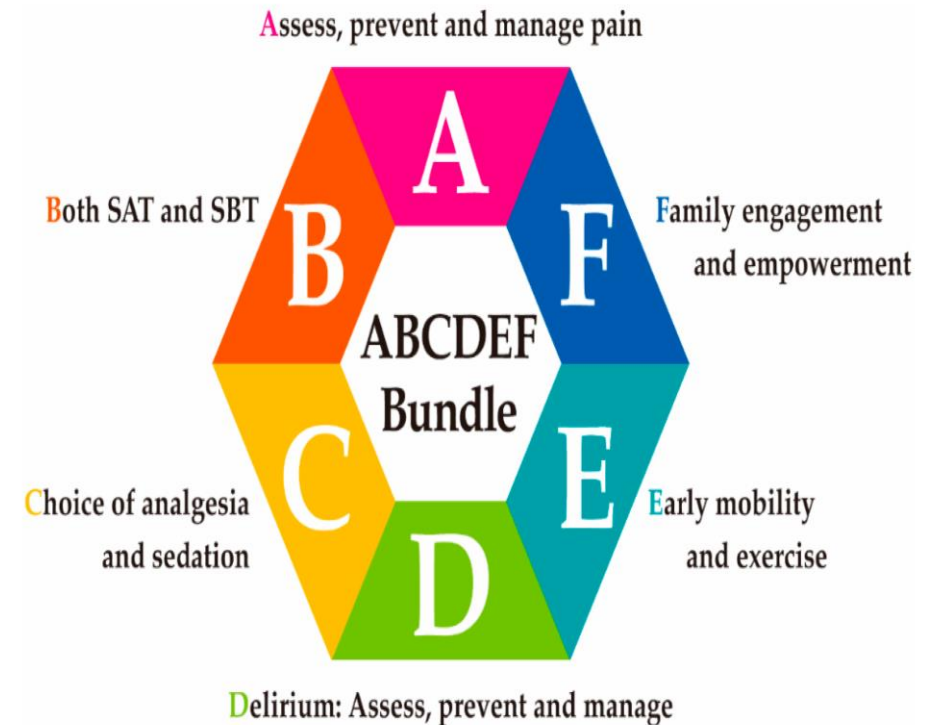
- Physical weakness with a history and exam
- Cognitive impairment screening tests to evaluate mental functions
- Stress, anxiety and depression with screening questionnaires



# Prevention

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- **“ABCDEF” bundle :**
  - A) Assess and manage pain
  - B) Breathing trials and spontaneous awakening
  - C) Choice of sedative
  - D) Daily delirium monitoring
  - E) Early mobility
  - F) Family engagement and empowerment



# Treatment

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- PICS is a very serious health condition that requires immediate medical attention
- No specific treatment
- Most people will get better with time
- The healthcare team will use many approaches to treat PICS





# Treatment

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- Natural ways to help :
- Probiotics
- Zinc
- Selenium
- Propolis



