

The identification and management of Post-Intensive Care Syndrome in COVID-19 critical care survivors: the first wave

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Acknowledgement



Tallaght
University
Hospital

Ospidéal
Ollscoile
Thamhlachta

An Academic Partner of Trinity College Dublin

- Dr Veronica O' Doherty – Head Psychology at TUH
- Dr Maria Donnelly- Consultant Intensivist at TUH
- Dr Lindi Snyman – Consultant Intensivist at TUH
- Prof David Heavey – Prof. in Research and Methodology at TCD
- Garret McDermott- Clinical Neuropsychologist at TUH
- Dr Jack Collins – NCHD
- Dr Yvelynne Kelly- Consultant Intensivist
- Dr Arabella Fahy- Consultant Intensivist

Introduction

- COVID-19 is an acute viral infection that causes severe respiratory failure and which the World Health Organisation has declared as a global pandemic since 11th March 2020.
- In patients affected by COVID-19, symptoms may persist over prolonged periods; with symptoms for more than 12 weeks defined as “post-COVID-19 syndrome” or “long COVID”.
- Patients discharged from the ICU have been found to have a high prevalence physical, cognitive and psychological impairments associated with a prolonged critical care stay.
- As the COVID-19 pandemic continues- Increased need for a PICS follow-up clinic



BJECTIVES

- To Define Post Intensive Care Syndrome (PICS) and its manifestation
- To discuss preliminary findings of the study
- To examine post intensive care clinic has impacted on patients
- To identify the common ICU problems that led to development of PICS during COVID-19

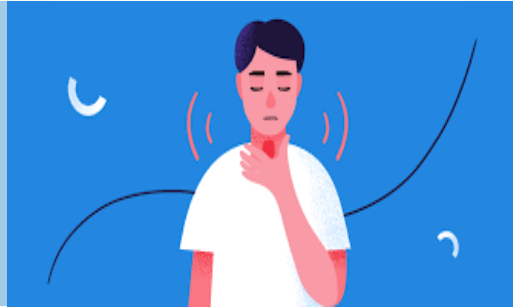
Post-Intensive Care Syndrome (PICS)

- ❑ The Post-Intensive Care Syndrome is defined by **new** or **worsening physical, mental** and **neurocognitive disorders** that negatively affect daily functioning and quality of life in survivors of critical illness and persisting beyond acute care hospitalization
- ❑ First described in 2012 by the Society of Critical Care
- ❑ Important to note this is not a diagnosis but a “ Syndrome”

Common symptoms after ICU discharge



Anxiety



Difficulty in swallowing



Difficulty Sleeping



Cloudy thinking



Difficulty in concentrating



Poor memory



Sadness



Flashbacks



Muscle weakness

Problems Associated with PICS

Physical	Cognitive	Mental Health
Gait Speed	Attention	Anxiety,
Muscle strengths	Memory	Depression,
Exercise capacity	Executive function	Post-traumatic Stress Disorder
Pain	Visuo- Spatial	
Balance	Mental Processing Speed	
Activities of Daily Living		

ICU Survivors Perspective

'finding oneself after Intensive Care'



Research

The PRaCTICaL study of nurse led, intensive care follow-up programmes for improving long term outcomes from critical illness: a pragmatic randomised controlled trial

BMJ 2009 ; 339 doi: <https://doi.org/10.1136/bmj.b3723> (Published 16 October 2009)

Cite this as: *BMJ* 2009;339:b3723

Cochrane Central Register of Controlled Trials

Increased Hospital-Based Physical Rehabilitation and Information Provision After Intensive Care Unit Discharge: the RECOVER Randomized Clinical Trial

Walsh TS, Salisbury LG, Merriweather JL, Boyd JA, Griffith DM, Huby G, Kean S, Mackenzie SJ, Krishan A, Lewis SC, Murray GD, Forbes JF, Smith J, Rattray JE, Hull AM, Ramsay P, RECOVER Investigators

JAMA internal medicine, 2015, 175(6), 901-910 | added to CENTRAL: 30 September 2015 | 2015 Issue 9

<https://doi.org/10.1001/jamainternmed.2015.0822>

Review > *Clin Nurse Spec.* Jul-Aug 2016;30(4):227-37.

doi: 10.1097/NUR.0000000000000219.

Critical Care Follow-up Clinics: A Scoping Review of Interventions and Outcomes

Sue Lasiter ¹, Sylwia K Oles, James Mundell, Susan London, Babar Khan


Affiliations + expand

PMID: 27309787 PMCID: [PMC4911825](https://pubmed.ncbi.nlm.nih.gov/27309787/) DOI: [10.1097/NUR.0000000000000219](https://doi.org/10.1097/NUR.0000000000000219)

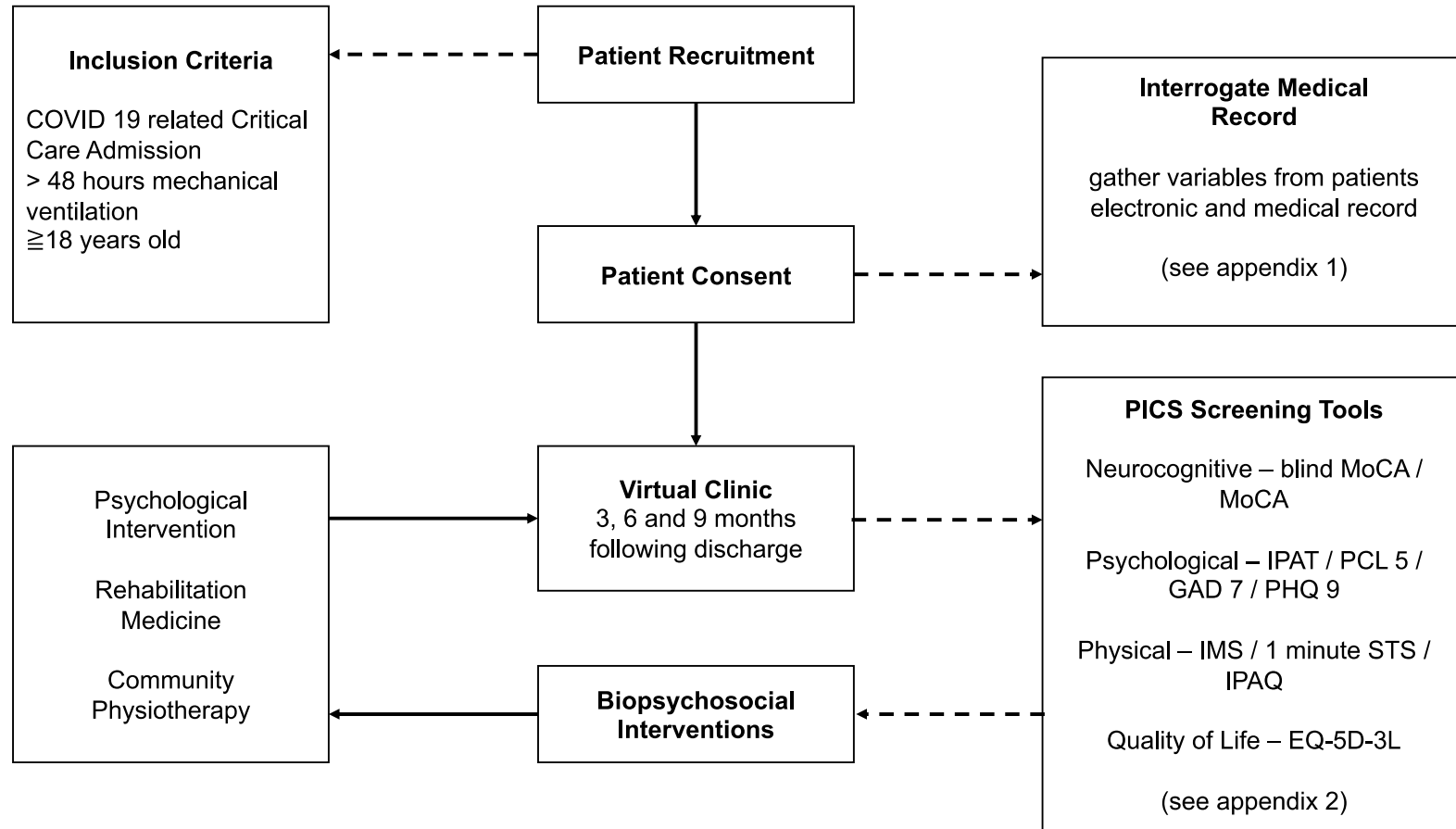
- Quantitative studies are weak
- Qualitative reports suggests a clear benefit



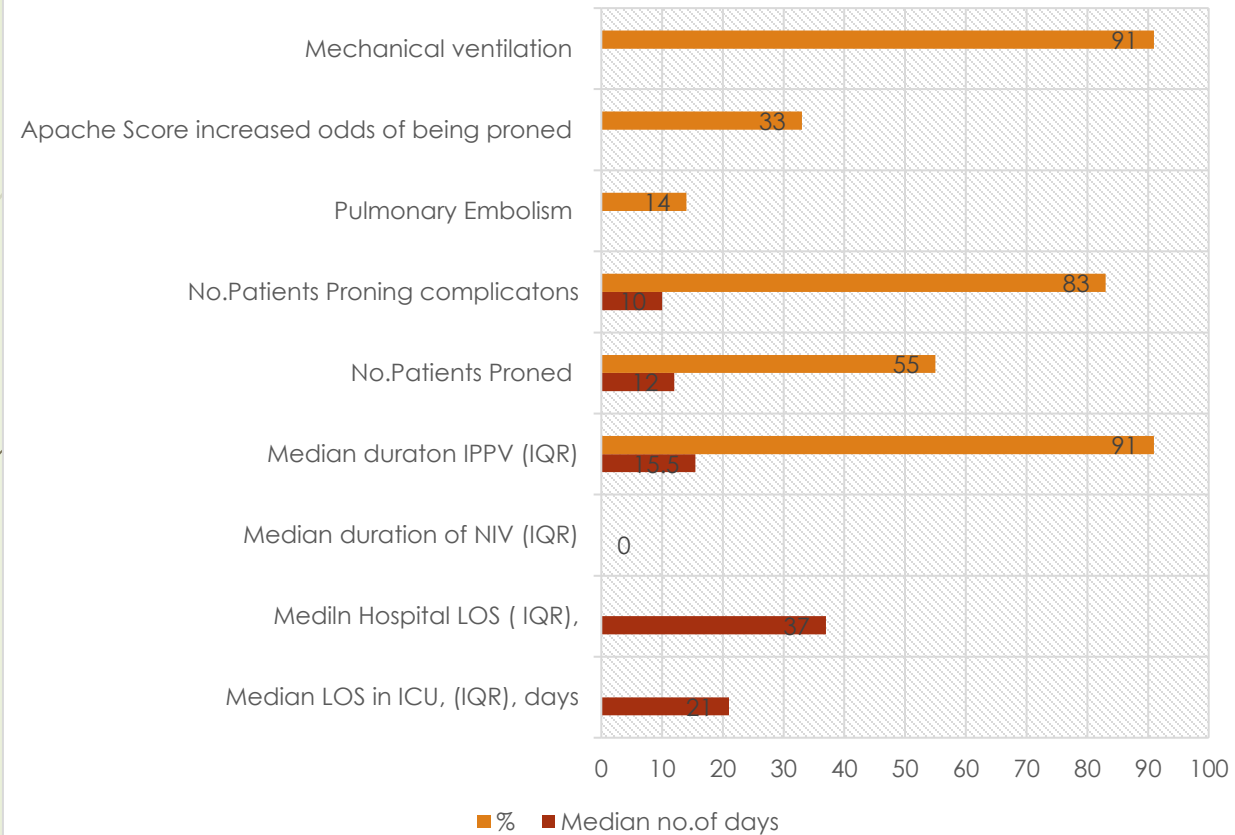
Method

- ▶ A 28 patient, observational, single site study.
 - ▶ Using a PICS outpatient follow-up clinic at Tallaght University Hospital in October 2020.
 - ▶ Clinic was staffed by consultant and trainee critical care physicians, a psychologist, a physiotherapist and a critical care research nurse
 - ▶ contributing factors were identified under the following domains
 - Cognitive
 - psychological
 - and physical functioning.
- 

Protocol



ICU Admission Score



- **Median LOS 21 days**
- **Median Hosp. LOS 37 days**
- **91% patients Mechanically ventilated**
- **55% Prone**
- **Median duration 2 days pronation**
- **APACHE II Score significant predictor increased odds of proning**
- **14% suffered PE**
- **83% patient suffered proning complications**

Results

- Majority Male and Obese
- Mean age 52 years
- The most common comorbidities were
 - ❖ Hypertension,
 - ❖ Diabetes Mellitus
 - ❖ Ischaemic heart disease.
- Only APACHE II score was a significant predictor variable for risk of requiring in proning during ICU admission



Post-ICU Clinic assessment

Patient Characteristics	n	%
Male	15	68
Smoker	3	13
Obesity (BMI >25)	12	54
Hypertension	11	50
Ischaemic Heart Disease	3	16
6MWT BORG-CR10 score > 4 ^a	5	22
SpO2 > 94% during Mean 6-minute walk test	10	45
Hand Grip Strength	24kg	
PHQ-9 score >10 ^b	7.8	3
PTSD Checklist score >31-33 ^c	6	21.1
GAD score >10 ^d	6	27

^a : Somewhat severe-severe exertion

^b : Moderate- severe depression

^c : Probable PTSD

^d : Moderate anxiety

Highlights for PICS Study

- ❖ High burden of physical, cognitive and psychological impairment following ICU discharge post covid-19 pneumonitis
- ❖ Requiring medium- to long-term specialist follow-up in up to 48%
- ❖ Previously 30% of ICUs in the United Kingdom and to our knowledge no ICUs in Ireland provided outpatient follow-up
- ❖ Rehabilitation care for COVID-19 survivors must therefore be need-focused
 - specialist multidisciplinary team and
 - planned for the longer term to meet the needs of these individuals.

Conclusion

- ❖ In this single centred observational study, we established a PICS follow-up clinic post ICU for patients who survived COVID-19 pneumonitis.
- ❖ This is just snap-shot of time one of this observational study
- ❖ We eagerly await the results of our 12-month PICS follow-up clinic and advocate for increased resources for this much needed follow-up multidisciplinary intervention for an ever-growing population of patients.



Questions
are
guaranteed in
life;
Answers
aren't.



Online resources

- **ICU Steps**

- ❑ <https://icusteps.ie/wp/>

- **THRIVE Initiative: Redefining recovery**

- ❑ <https://www.sccm.org/MyICUCare/THRIVE/Post-intensive-Care-Syndrome>

- **After the ICU: PICS Online Library**

- ❑ <https://www.aftertheicu.org/what-is-pics>

Healthcare Professionals

- **Rehabilitation after critical illness in adults**

- ❑ <https://www.nice.org.uk/guidance/cg83>

- **Life After Critical illness**

- ❑ <https://www.ficm.ac.uk/critical-futures-initiative/life-after-critical-illness>

- **ICU Diary**

- ❑ <http://www.icu-diary.org/diary/start.html>