

Abstract

Background: Post Intensive Care Syndrome (PICS) is a series of complications patients may experience after their discharge from the Intensive Care Unit. PICS impacts both adult and pediatric populations, and this research focuses on pediatric patients and their families.
Purpose: The purpose of this research was to identify Post Intensive Care Syndrome in the pediatric population and identify possible interventions to help prevent these complications.
Methods: Using search terms such as post intensive care syndrome, PICS, PICS-P, ABCDEF bundle, and ICU liberation bundle, this research was conducted. Of the 95 articles reviewed, 31 met the inclusion criteria.
Results: There are four main domains of impairments within Post Intensive Care Syndrome in the pediatric population. These four domains include physical, cognitive, psychological, and social impairments. This research also considered family and sibling impacts and the use of early intervention bundles to prevent the complications presented from PICS.
Implications: PICS has many practical implications for the medical field and specifically the nursing profession. PICS is a newly studied series of complications that impacts a majority of ICU patients and their families. Early identification and intervention is vital for these patients to help prevent these complications from progressing.

Introduction

Over the past few decades, modern medicine has significantly improved critical care health management. The mortality rates in severe conditions such as sepsis, acute respiratory distress syndrome, trauma, and many others have greatly declined. Still, there are new consequences that arise from it. Patients that survive these critical conditions face difficulties in a multitude of areas in their life once they are discharged home and return to their everyday lives. Post-intensive care syndrome is a series of health complications resulting from a patient's stay in an intensive care setting. These health complications occur both in the adult and pediatric populations. These complications in pediatric populations can produce physical, cognitive, psychological, and social impairments in the patient and extend beyond their hospital discharge.

Methods

- Search Terms used:** post intensive care syndrome, PICS, PICS-P, ICU acquired weakness, ABCDEF bundle, ICU liberation bundle
- Databases used**
 - PubMed
 - Google Scholar
 - EBSCOhost
 - Jerry Falwell Library
- Inclusion Criteria**
 - Articles that focused on post intensive care syndrome
 - Articles in English
 - Publications within the last 5 years
 - Peer reviewed articles
- Number of articles reviewed**
 - 95 articles were reviewed
 - 31 met the inclusion criteria

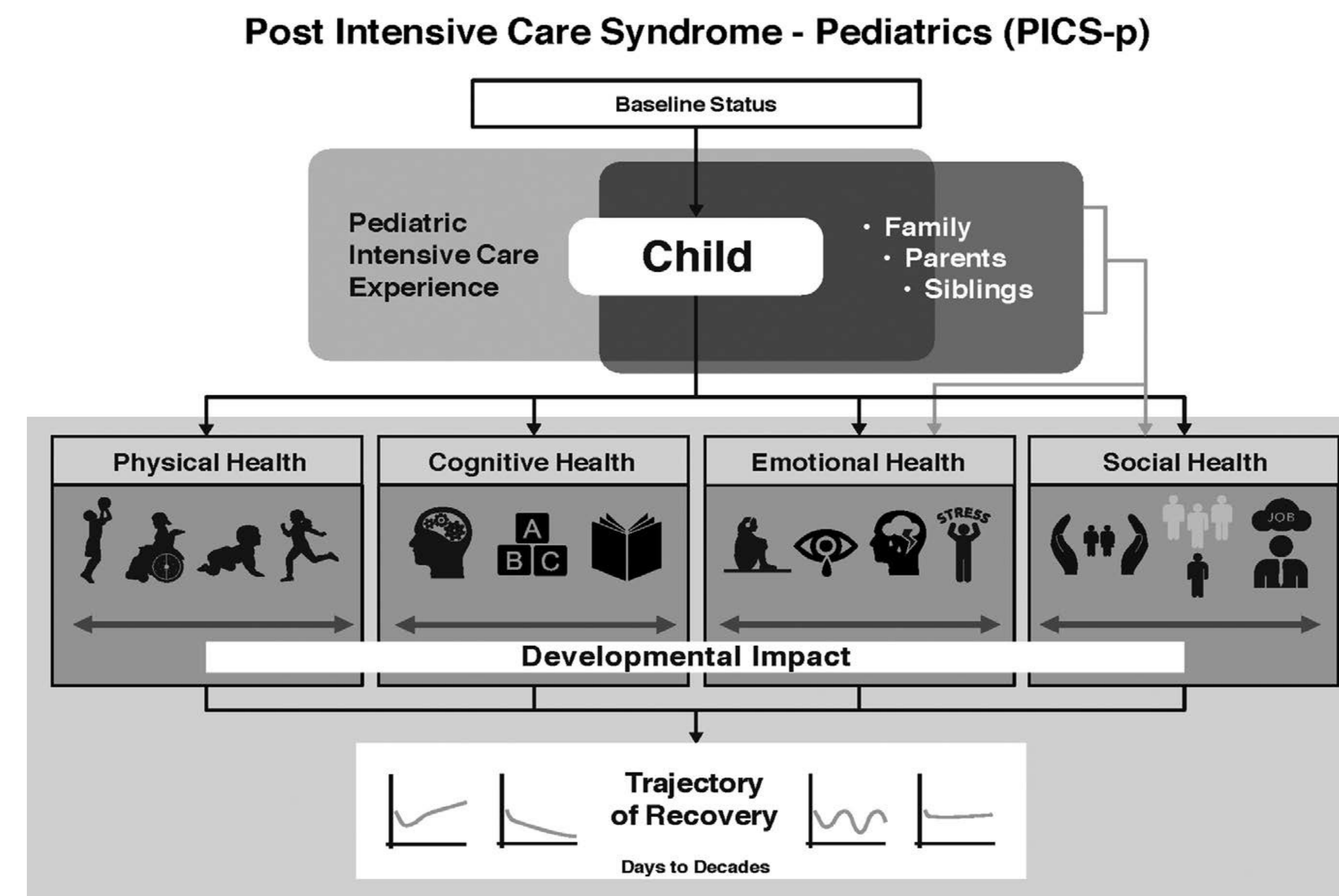


Figure 1
Post Intensive Care Syndrome in pediatrics (PICS-p) framework. Adapted from "Conceptualizing Post Intensive Care Syndrome in Children—The PICS-p Framework," by Manning, J. C., Pinto, N. P., Rennick, J. E., Colville, G., & Curley, M. A. Q. 2018, pp. 298-300. Used with permission, copyright 2018 by Lippincott.

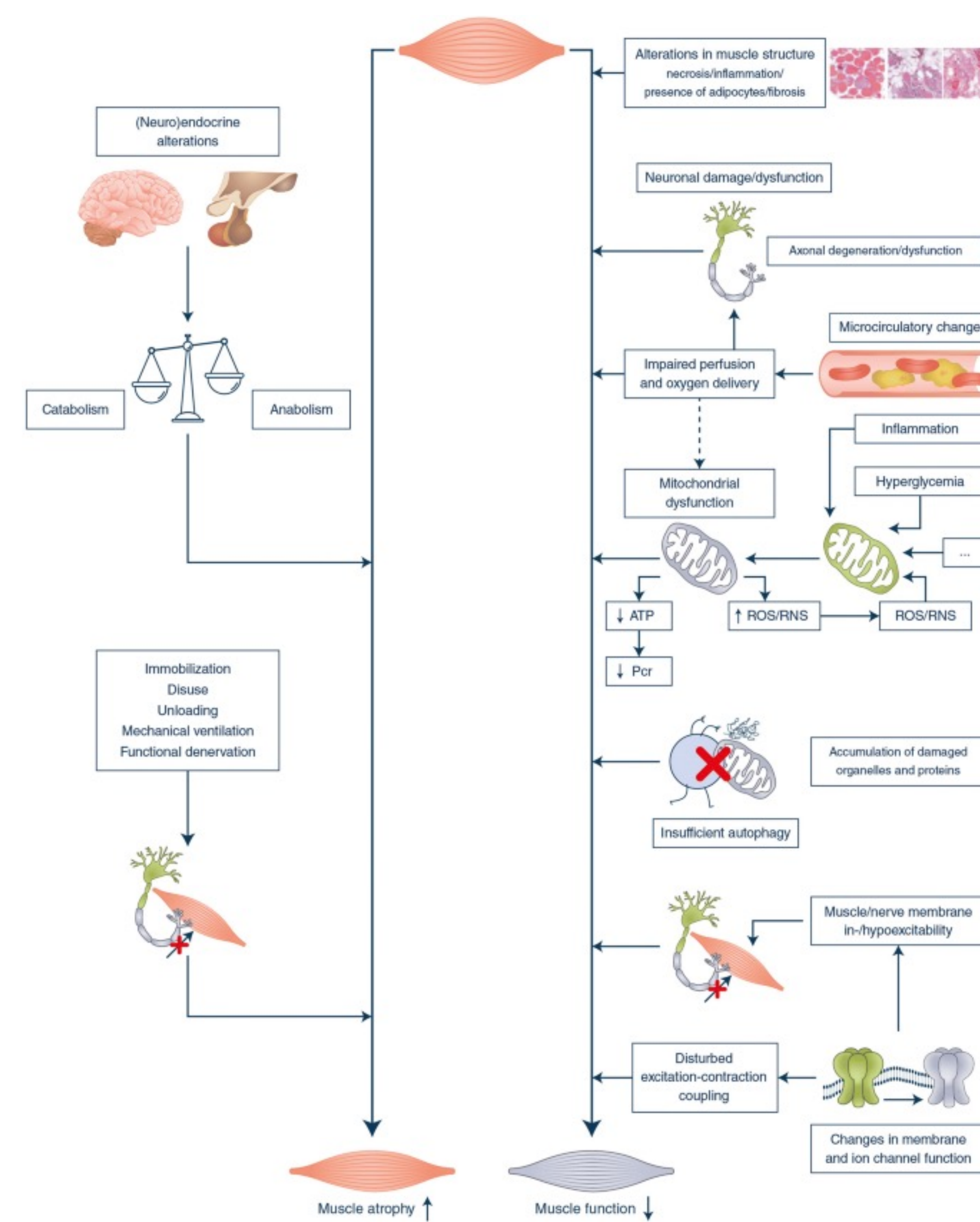


Figure 2
Mechanisms implicated in the development of ICU-acquired weakness. Adapted from "ICU-Acquired Weakness," by Vanhorebeek, I., Latronico, N., & Van den Berghe, G. 2020, pp. 637-653. Used with permission, copyright 2020 by Springer Nature.

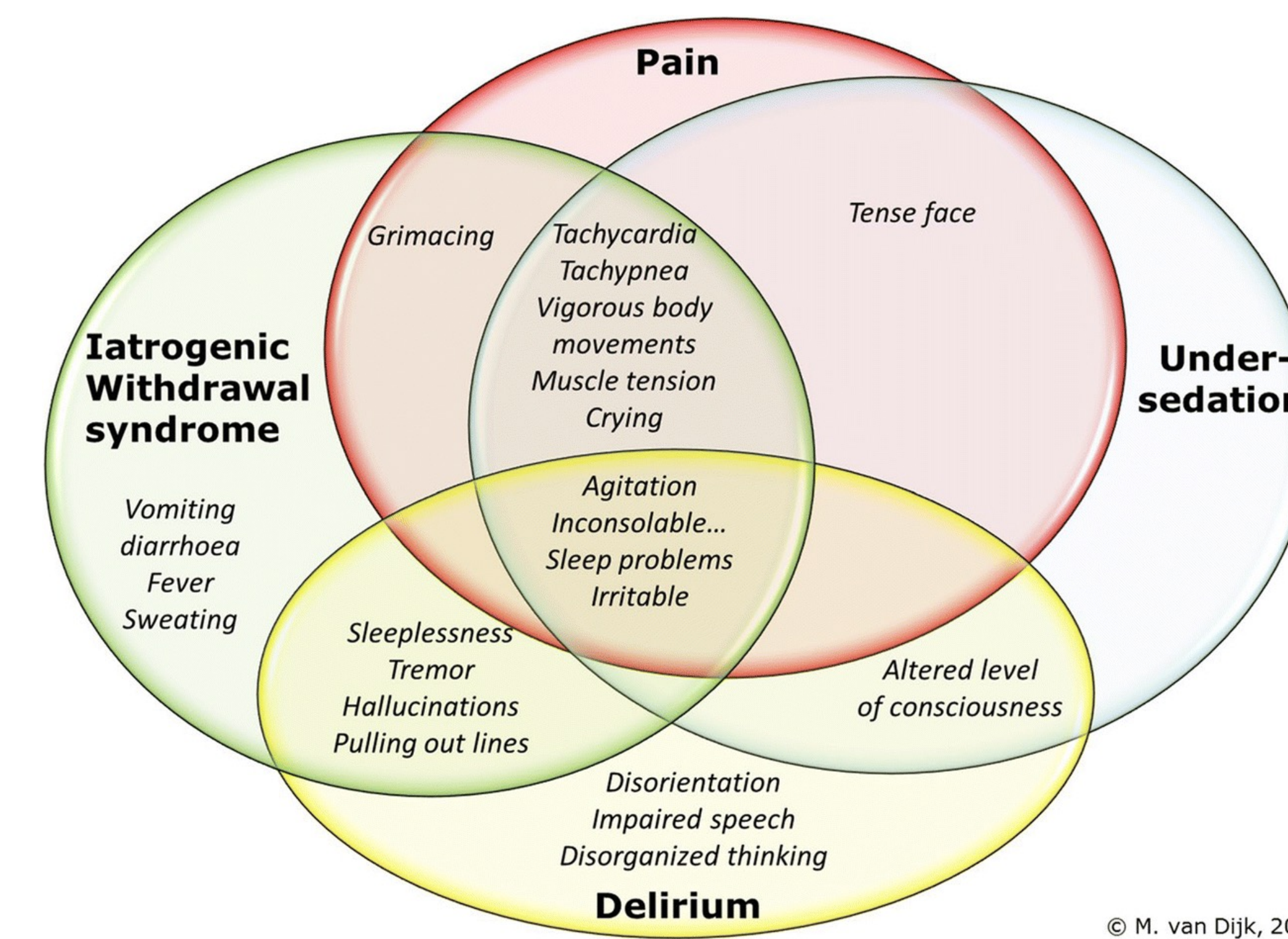


Figure 3
Overlap of behavioral cues in pain, sedation, withdrawal syndrome, and delirium. Adapted from "The ICU Liberation Bundle and Strategies for Implementation in Pediatrics," by Walz, A., Canter, M. O., & Betters, K. 2020, pp. 69-78. Used with permission, copyright 2020 by Springer Nature.

Results

Post Intensive Care Syndrome:

- Physical Impairments**
 - Decline in physical functioning and muscle weakness
 - Muscle dysfunction and muscle wasting
 - Diaphragm atrophy
- Cognitive Impairments**
 - Weakened memory
 - Decreased executive functioning and concentration difficulties
 - Difficulties in educational setting
 - Delirium
- Psychological Impairments**
 - Anxiety and Depression
 - Post Traumatic Stress Symptoms (PTSS)
 - Post Traumatic Stress Disorder (PTSD)
 - Pediatric Medical Traumatic Stress (PMTS)
- Social Impairments**
 - Loss of peer relationships
 - Difficulties with participation in social life and academics
- Family and Sibling Impact**
 - Strained family relationships
 - Financial strain
 - Occupational stress and loss

ABCDEF Bundle:

- A:** Assessing, Preventing, and Treating Pain
- B:** Spontaneous Awakening and Breathing Trials
- C:** Choice of Sedation and Analgesia
- D:** Assessing, Preventing, and Managing Delirium
- E:** Early Mobilization and Exercise
- F:** Family Engagement and Empowerment

Future Research

Future Research:

- Further exploration of post-intensive care syndrome specifically in the pediatric population
- Post intensive care syndrome impairments in infants and younger children
- Interventions for PICS-P within the nurse's scope of practice
- Future studies on the ABCDEF bundles in pediatric patients

References

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