

Introduction
Study purpose / aims
Methodology

Introduction: The COVID-19 pandemic presented itself as a major challenge for health care¹. The performance of the nursing team in patients under mechanical ventilation requires the use of valid, reliable instruments with standardized language². The Nursing Outcomes Classification (NOC) is essential to identify the nursing outcomes that assess the response of individuals along the continuum³. Content validation is a recommended option to confirm the indicators proposed and recommended by experts and whether the result measures what it is supposed to measure.

Aim: To validate the relevance of the outcomes "Mechanical Ventilation Response: Adult" and "Mechanical Ventilation Weaning Response: Adult" for critically ill patients by COVID-19 and the criteria of clarity and accuracy of the conceptual and operational definitions and magnitudes developed for the indicators.

VALIDATION OF THE OUTCOMES "MECHANICAL VENTILATION RESPONSE: ADULT" AND "MECHANICAL VENTILATION WEANING RESPONSE: ADULT" OF NURSING OUTCOMES CLASSIFICATION (NOC) IN CRITICALLY ILL PATIENTS BY COVID-19

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Method: Methodological study of content validation, using the Focal Group strategy until 100% consensus was reached. The expert sample consisted of four senior specialists. Each indicator's degree of relevance was evaluated by the precision and clarity of the conceptual and operational definitions and magnitudes. The experts assessed the relevance of the indicator without considering a specific population but the operational definitions and magnitudes were evaluated with reference to the population with severe COVID-19.

Focal Group had five meetings held via google meet lasting approximately 3 hours. Each indicator and its definitions were widely discussed until an absolute consensus was reached. Modification suggestions were made and submitted for further evaluation for individual judgment of relevance, clarity, and precision. These criteria were evaluated using a 03-point scale, for example: relevant, slightly relevant, irrelevant.

The study was approved by the Ethics Committee on Institutional Research under protocol numbers 36420720.8.0000.5505

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2. Swanson, E, Monteiro Mantovani, V., Wagner, C., Moorhead, S., Dunn Lopez, K., Makaira, T. G. R., Abe, N (2020). NANDA-I, NOC, and NIC linkages to SARS-CoV-2 (COVID-19): Part 2. Individual response. *International Journal of Nursing Knowledge*. 32(1):68-83. <https://doi.org/10.1111/2047-3095.12307>.
3. Moorhead, S., Swanson, E., Johnson, M., & Maas, M. L. (Eds.). (2018). *Nursing Outcomes Classification (NOC): Measurement of health outcomes* (Sixth edition). Elsevier.

Results
Impact

Results: Fifty-six indicators were submitted for validation and a change in the nomenclature was proposed for five indicators (in parentheses) because it is better representative of clinical practice.

Mechanical Ventilation Response: Adult	Mechanical Ventilation Weaning Response: Adult
Respiratory rate	Apical heart rate
Respiratory rhythm	Spontaneous respiratory depth
Depth of breathing	PaO ₂
Adventitious breath sounds	PaCO ₂
FiO ₂	Arterial pH
Oxygen saturation	Positive end expiratory pressure
Peripheral tissue perfusion	Anxiety
Respiratory secretions	Restlessness (Agitation)
Chest x-ray findings (Findings on imaging tests)	Fear
Difficulty breathing with ventilator	Impaired cough reflex (Cough reflex: present/absent)
Impaired skin integrity (Related to breathing devices)	Difficulty communicating needs
Pulmonary infections	Discomfort (Pain)
Atelectasis	Difficulty breathing on own (Difficulty maintaining spontaneous ventilation)

Impact: Results with validated definitions favor application in clinical practice and support the development of research.



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