



Costs of Ventilation Options Derived from nThrive® Database – Retrospective Database Analysis

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Abstract:

Noninvasive ventilation (NIV) has become a common treatment for acute and chronic respiratory failure, especially in patients with chronic obstructive pulmonary disease (COPD). In comparison with invasive ventilation, NIV has the advantages of reducing the rate of intermittent mechanical ventilation (IMV), procedural complications, and mortality. The objective of this study was to estimate and compare ventilation costs.

Methodology and Theoretical Orientation: Hospitalized patients with COPD and respiratory distress treated with NIV or IMV were analyzed from the nThrive® US-database. Patients were grouped by their use of NIV and IMV: NIV only, IMV only, NIV prior to IMV. The following NIV ICD10 procedure codes were used: 5A09357, 5A09457, 5A09557. For IMV, ICD10 procedure codes were: 0BH17EZ and 0BH18EZ. All costs are in 2018 US dollars.

Findings: A total of 12,284 admissions occurred in 2018 in the nThrive® database with the five ICD10 codes listed above (majority on NIV). The results showed that IMV is twice as expensive as NIV (Table 1). The most expensive option was when NIV was unsuccessful and IMV was subsequently initiated (NIV prior to IMV).

Conclusion and Significance: The use of NIV is wider spread among patients hospitalized for acute exacerbations of COPD than IMV. The results showed that NIV prior to IMV is 2.6 times more expensive than NIV alone. Therefore, successful NIV seems to have a cost advantage.

Biography:

Goran Medic is a Senior Manager for Health Economics and Outcomes Research (HEOR) in Philips. In this role, Goran drives the implementation and execution of health economic strategies and analyses for Philips' prod-



ucts and services, both marketed and in development. He has over 14 years of global, regional (Europe, Middle East, Canada and US) and local hands-on experience in HEOR, market access and reimbursement. He is self-driven to develop HTA value propositions and data driven solutions to support decision making in access of innovative medical devices to patients. He is making strategic decisions on the launch sequence and HEOR evidence roadmaps of premium-priced medical devices. In his current and past roles, Goran has honed his expertise and skills in proactively identifying payer / HTA relevant evidence requirements to support relative value demonstration and product differentiation.

Recent Publications:

1. The application of multi-criteria decision analysis to inform in resource allocation.
2. Clinical and economic benefits of the Intellispace Portal applications CT TAVI and Spectral CT: Findings from a two-step Delphi panel.
3. Evidence-based Clinical Decision Support Systems for the prediction and detection of three disease states in critical care: A systematic literature review.

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