

# Characterization of Bronchopulmonary Dysplasia in Chilean premature infants under 32 weeks

Marcela Linares<sup>1</sup>, Javier Cifuentes<sup>1</sup>, Sergio Ambiado<sup>1</sup>, and Rosita Silva<sup>1</sup>

<sup>1</sup>Clinica INDISA

June 6, 2022

## Abstract

**Introduction:** Bronchopulmonary dysplasia (BPD) is the most common chronic lung disease in premature newborns. It is most defined as a need for supplemental O<sub>2</sub> for 28 days or at 36 weeks postmenstrual age (BPD36w). **Objective:** In premature newborns born at less than 32 weeks (PNBs<32) in a neonatal unit in Santiago, Chile, between 2012 and 2019: 1.-) evaluate the O<sub>2</sub> requirement at 28 days of life (BPD28d) and 36 weeks postmenstrual age (BPD36w). 2.-) Describe and determine the incidence of BPD36w in PNBs<32. **Methods:** Descriptive, retrospective study with an analytical component. **Results:** 722 PNBs<32 were born at the healthcare center. Mortality was 12.19%. The study population was 535 PNBs<32. The incidence of BPD28d and BPD36w was 35% and 28%, respectively. Of the 242 newborns BPD28d, 203/242 (83.88%) still needed O<sub>2</sub> at 36 weeks. Sixteen from 242 (6%) required O<sub>2</sub> for less than 28 consecutive days, 7 of them still required O<sub>2</sub> at 36 weeks. The predictors of BPD36w were male sex (OR 2.42, 95% CI:1.24-4.69), birth weight (OR 1, 95% CI:0.99-1), gestational age (OR 0.75, 95% CI:0.57- 0.97), APGAR at 5 min, (OR 0.01, 95% CI:0.003-0.05), continuous positive airway pressure/ high-flow nasal cannula requirement (OR 1.1, 95% CI:1.04-1.17) and days of invasive mechanical ventilation (OR 1.1,95% CI: 1-1.2). **Conclusions:** Most PNBs<32 with O<sub>2</sub> at 28 days of age will require O<sub>2</sub> at 36 weeks. The predictors associated with BPD36w were male gender, birth weight, gestational age, APGAR score, a positive airway pressure requirement and days of invasive mechanical ventilation.

## Hosted file

DBP main document Pediatric pulmonology junio.docx available at <https://authorea.com/users/471953/articles/571902-characterization-of-bronchopulmonary-dysplasia-in-chilean-premature-infants-under-32-weeks>