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HealthCare Utilization among infants with Bronchopulmonary Dysplasia during the COVID-19 Pandemic

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Background

- Pulmonary sequelae in bronchopulmonary dysplasia (BPD) results in increased health care utilization.
- Infants with BPD have a 42% increase in healthcare utilization.
- Limited data exists on health care utilization of infants with BPD during the COVID-19 pandemic.

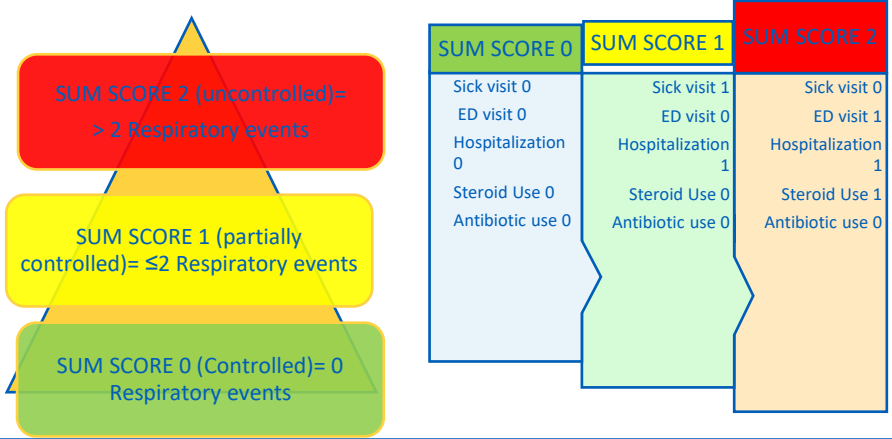
Objective

- To describe the health care utilization in infants with BPD during the COVID-19 pandemic.
- To identify risk factors associated with increased health care use in infants with BPD.

Methods

- Retrospective study of 139 subjects with BPD followed in a tertiary care high-risk follow up clinic from 2019-2022.
- Demographics and clinical data were collected at first, then 6 months and 12-months post discharge.

Figure 1: SUM SCORE relationship to Respiratory Events



Methods

Table 1. Demographics	
Gestational Age	26 weeks ± 2.6 weeks
Birth Weight (grams)	830 ± 200
Small for gestational age %	43%
BPD severity	<ul style="list-style-type: none"> • Mild 85 (61%) • Moderate 35 (25%) • Severe 19 (13%)
Age at discharge (PMA) weeks	50 ± 14 weeks
Respiratory support at time of discharge	<ul style="list-style-type: none"> • RA 51%, • LFNC 42% • Trach 6%

Results

Table2. Variables with increase health care utilization (regression analysis)	Total	p values
BPD severity:		
Mild vs moderate		0.911
Mild vs severe		0.263
Pulmonary Hypertension	3332	0.023
Congenital Heart Disease	09	0.150
VP shunt	13	0.472
Genetic Syndrome	12	0.692

Conclusions

- Majority of infants with BPD had respiratory symptoms under control (baseline).
- Health care utilization is 30x higher in infants with uncontrolled respiratory symptoms vs controlled respiratory symptoms; and 3X higher vs partially controlled symptoms.
- Respiratory viral infections with rhino-entero (42%) & SARS-2 coronavirus (32%) were the most common and biggest contributor to increased health care use.
- BPD severity does not correlate with health care utilization.
- Pulmonary hypertension in infants with BPD is an independent risk factor for increased healthcare utilization.
- Future research to Identify a standard scoring among BPD infants to predict factors associated with increase healthcare utilization is needed.

Figure 2: SUM SCORE With Time of Visit

