

**APRV UTILIZATION AND CLINICAL MANAGEMENT STRATEGIES: A  
SURVEY OF CLINICAL PRACTICE**

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**Background:** Airway-pressure release ventilation (APRV) is a ventilator mode used primarily in patients with ALI or ARDS to improve oxygenation. The purpose of this survey is to examine current APRV utilization and clinical management strategies among a wide range of institutions.

**Methods:** A survey instrument on APRV use was developed by the authors and approved by the IRB. The survey was sent via email to 200 Respiratory Therapists (RT's) (maximum of 1 per hospital) in the United States, Canada, Saudi Arabia, and United Arab Emirates.

**Results:** The response rate was 44%. APRV was utilized in 85% of hospitals with 54% utilizing APRV on 20 or more patients per year. 44% of respondents were from academic centers, 27% community hospitals, 51% level 1 trauma centers and 53% had more than 500 beds. 40% of centers utilized APRV as a transitional mode to HFOV and/or ECMO. APRV was managed by RT driven protocol for 51% of respondents. 93% allowed spontaneous breathing. 52% set PEEP (P-Low) at 0 cm H<sub>2</sub>O, while 39% used variable PEEP levels. 40% did not have a standard I:E ratio during APRV. Patient populations, indications and Vt targets are summarized in the table below.

APRV use by patient population			Vt Target	%
Adults	96%		6 ml/kg	34%
Pediatrics	19%		6-8 ml/kg	35%
Neonates	6%		8-12 ml/kg	4%
<b>APRV Indications</b>			No Target Vt	26%
ARDS/ALI	76%			
Burns	19%			
Trauma	54%			
Other	19%			

**Conclusions:** In the institutions surveyed, APRV appears to be a widely used mode of mechanical ventilation, especially in the adult patient population. Overall clinical management of APRV, however, seems to vary. However, the majority of the institutions attempt to incorporate lung protective Vt's while using APRV. Further evaluation of clinical outcomes in patients receiving APRV is warranted.