### FOR INFORMATION, CONTACT:

### AARC Membership and Other AARC Services

American Association for Respiratory Care 9425 N MacArthur Blvd, Suite 100 Irving, TX 75063-4706 (972) 243-2272 • Fax (972) 484-2720 http://www.aarc.org

### Credentialing Organization for RRT. CRT

National Board for Respiratory Care 10801 Mastin St, Suite 300 Overland Park, KS 66210 (913) 895-4900 • Fax (913) 712-9283 http://www.nbrc.org

### Accreditation of Education Programs

Commission on Accreditation for Respiratory Care 1248 Harwood Rd Bedford, TX 76021-4244 (817) 283-2835 • Fax (817) 354-8519 http://www.coarc.com

#### Grants, Scholarships, Community Projects

American Respiratory
Care Foundation
9425 N MacArthur Blvd, Suite 100
Irving, TX 75063-4706
(972) 243-2272 • Fax (972) 484-2720
http://www.arcfoundation.org



A Monthly Science Journal Established in 1956

The Official Journal of the American Association for Respiratory Care



# CONTENTS

July 2022 / VOLUME 67 / NUMBER 7

Editor's Commentary	
Commentary on July 2022 Issue	i
Editor's Choice	
High-Frequency Percussive Ventilation in Viral Bronchiolitis by Benjamin R White—Hershey, Pennsylvania Noelle Cadotte, Andrew G Smith, Angela P Presson—Salt Lake City, Utah Eric B McClellan—Ann Arbor, Michigan Erin Bennett—Little Rock, Arkansas and Salim Aljabari—Columbia, Missouri	781
Original Research	
Improving Students' Knowledge and Skills Through a Tele-ICU Clinical Rotation by Karsten J Roberts, Thomas R Lamphere, Karen K Zumstein, Margarete Pierce, Maria Williams—Philadelphia, Pennsylvania Susan A Powell, Alexa Moran, Brian Kellar—Bryn Mawr, Pennsylvania and William R Solly—Gwynedd Valley, Pennsylvania	789
Filters Alter the Performance of Noninvasive Ventilators by Julie Tolson, Rodney Hone, Linda Rautela, Thomas J Churchward, Anna Ridgers, Mark E Howard, Christopher J Worsnop, and Christian Bandiera—Heidelberg, Australia	795
Perceptions of Individuals With Chronic Lung Disease on Home Use of Pulse Oximetry by Esha Joshi, Jennifer M Mann, Maureen E Goodwin, Allison L Collins, Naomi E Atkins, Yet Hong Khor, and Christine F McDonald—Melbourne, Australia	801
In-Vitro Comparison of Single Limb and Dual Limb Circuit for Aerosol Delivery via Noninvasive Ventilation by Wei Tan, Bing Dai, Dong-Yang Xu, Li-Li Li—Shenyang, China and Jie Li—Chicago, Illinois	807
The Influence of Mental Health and Respiratory Symptoms on the Association Between Chronic Lung Disease and E-Cigarette Use in Adults in the United States by Mohammed M Alqahtani—Riyadh, Saudi Arabia Gregory Pavela, Donald H Lein Jr, Ruzmyn Vilcassim, and Peter S Hendricks—Birmingham, Alabama	814
Prognostic Value of the Intensive Care Respiratory Distress Observation Scale on ICU Admission by Maxens Decavele, Isabelle Rivals, Romain Persichini, Julien Mayaux, Laure Serresse, Capucine Morélot-Panzini, Martin Dres, Alexandre Demoule, and Thomas Similowski—Paris, France	823
Respiratory Therapist-Driven Extubation Readiness Testing in a Single Pediatric ICU by Herng Lee Tan, Yi-Jyun Ma, Apollo Bugarin Aguilan, Chen Yun Goh, John Chi Keong Wong, Linda Su Ling Ang, Angela Hui Ping Kirk, Tsee Foong Loh, Yee Hui Mok, and Judith Ju-Ming Wong—Singapore	833
Isolated Elevation in Lung Residual Volume Is Associated With Airway Diseases by Amjad N Kanj, Bilal F Samhouri, Daniel Poliszuk, Kaiser G Lim, and Sumedh S Hoskote—Rochester, Minnesota	842
Oscillation Transmission of Modern High-Frequency Neonatal Ventilators Under Different Lung Mechanics Conditions by Roberta Centorrino, Valentina Dell'Orto, Charlotte Boussard, Agathe Debray, Rafik Ben-Ammar, and Daniele De Luca—Paris, France	850

# CONTENTS

CONTINUED...

The Effect of Inspiratory Effort on Circuit Compensation for Volume-Targeted Modes by Ping-Hui Liu and Robert L Chatburn—Cleveland, Ohio	8 5 7
Reliability of Central Venous Blood Gas Values Compared With Arterial Blood Gas Values in Critically Ill Patients by Dong-Gon Hyun, Wonjun Ji, Jee Hwan Ahn, Dong Kyu Oh, Jin Won Huh, Sang-Bum Hong, Younsuck Koh, and Chae-Man Lim—Seoul, Republic of Korea	863
Chest Radiograph Severity and Its Association With Outcomes in Subjects With COVID-19 Presenting to the Emergency Department by Daniel Kotok, Jose Rivera Robles, Christine E Girard, Shrutti K Shettigar, Allen P Lavina, Samantha R Gillenwater, Andrew I Kim, and Anas Hadeh—Weston, Florida	871
Systematic Review	
Neurally-Adjusted Ventilatory Assist Versus Pressure Support Ventilation During Noninvasive Ventilation by Teng Weiyun, Sang Linli, and Cao Liuzhao—Jiangsu, People's Republic of China	879
Cochrane Corner	
Comparison of Airway Clearance Therapies for Cystic Fibrosis: A Cochrane Review Summary With Commentary by L Denise Willis—Little Rock, Arkansas	889
Editorials	
High Frequency Percussive Ventilation in Viral Bronchiolitis: Do We Need a Standardized Approach to HFPV Management?  by Cheryl Dominick, Amanda J Nickel, and Nadir Yehya—Philadelphia, Pennsylvania	893
Telemedicine: An Opportunity in RT Clinical Education by Sarah M Varekojis—Columbus, Ohio	895







