

CONTENTS

SEPTEMBER 2009 / VOLUME 54 / NUMBER 9

FOR INFORMATION, CONTACT:

AARC Membership

or 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>

Therapist Registration or Technician Certification

National Board for
Respiratory Care
18000 W 105th St
Olathe KS 66061-7543
(913) 599-4200 • Fax (913) 541-0156
<http://www.nbrcc.org>

Accreditation of Education Programs

Committee 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

RESPIRATORY CARE

RESPIRATORY CARE (ISSN 0020-1324, USPS 0489-190) is published monthly by Daedalus Enterprises Inc, at 9425 N MacArthur Blvd., Suite 100, Irving, TX 75063-4706, for the American Association for Respiratory Care. One volume is published per year beginning each January. Individual subscription rates are \$89 per year in the US; \$109 in all other countries (for airmail, add \$94).

The contents of the Journal are indexed in *Index Medicus*/MEDLINE, Science Citation Index Expanded, Journal Citation Reports/Science Edition, Current Contents®/Clinical Medicine, Hospital and Health Administration Index, Cumulative Index to Nursing and Allied Health Literature, EMBASE/Excerpta Medica, and RNdex Library Edition. Abridged versions of RESPIRATORY CARE are also published in Italian and Japanese, with permission from Daedalus Enterprises Inc.

Periodicals postage paid at Dallas TX and at additional mailing offices. POSTMASTER: Send address changes to RESPIRATORY CARE, Membership Office, Daedalus Enterprises Inc, 9425 N MacArthur Blvd, Irving, TX 75063-4706

© Printed on acid-free paper.
Printed in the United States of America
Copyright © 2009 by Daedalus Enterprises Inc.

EDITORIALS

- Setting Standards for Pulmonary Function Measurements:
What Is Reasonable? **1161**
by David M Mannino—Lexington, Kentucky
- Innovation in Pulmonary Rehabilitation: Experimenting With a Hybrid **1163**
by Philip E Alkana—Boston, Massachusetts
- Less Complication When Calculating Duration? Evaluating the
Accuracy of the LTV-1000 Cylinder Duration Calculator Feature **1165**
by Valerie LW Stevenson and Carl F Haas—Ann Arbor, Michigan

ORIGINAL RESEARCH

- Specific Conductance Criteria for a Positive Methacholine Challenge Test:
Are the American Thoracic Society Guidelines Rather Generous? **1168**
by Imran Khalid, Zachary Q Morris, and Bruno DiGiovine—Detroit, Michigan
- Feasibility Study of Noninvasive Ventilation With Helium-Oxygen Gas
Flow for Chronic Obstructive Pulmonary Disease During Exercise **1175**
*by Patrick F Allan, Kimbreca V Thomas, Michael R Ward, Anthony D Harris,
Gregory A Naworol—Lackland Air Force Base, Texas
and John A Ward—Fort Sam Houston, Texas*
- Accuracy of the Oxygen Cylinder Duration Calculator of the LTV-1000
Portable Ventilator **1183**
by Thomas C Blakeman, Dario Rodriguez, and Richard D Branson—Cincinnati, Ohio
- Connecting Students to Institutions: the Relationship Between Program
Resources and Student Retention in Respiratory Care Education Programs **1187**
by Arzu Ari—Atlanta, Georgia

24TH ANNUAL NEW HORIZONS SYMPOSIUM NEONATAL RESPIRATORY CARE

- Oxygen Therapy in the Neonatal Care Environment **1193**
by Brian K Walsh, Toni M Brooks, and Barry M Grenier—Boston, Massachusetts
- Surfactant Replacement Therapy in the Neonate: Beyond Respiratory
Distress Syndrome **1203**
by Steven M Donn and Jennifer Dalton—Ann Arbor, Michigan
- Nasal Continuous Positive Airway Pressure (CPAP) for the Respiratory
Care of the Newborn Infant **1209**
by Robert M DiBlasi—Seattle, Washington
- Mechanical Ventilation of the Neonate: Should We Target Volume
or Pressure? **1236**
by Steven M Donn and Win Boon—Ann Arbor, Michigan
- Extracorporeal Membrane Oxygenation for Neonatal Respiratory Failure **1244**
by Peter Betit and Nancy Craig—Boston, Massachusetts

CONTENTS

CONTINUED...

ALSO IN THIS ISSUE

1145	Editor's Commentary
1146	Abstracts from Other Journals
1275	Professional Opportunities
1277	AARC Membership Application
1279	Calendar
1280	Author Index
1280	Advertisers Index & Help Lines

Bronchopulmonary Dysplasia <i>by Kathleen M Deakins—Cleveland, Ohio</i>	1252
--	------

CASE REPORT

A 64-Year-Old Male With Fever and Persistent Lung Infiltrate <i>by Tajender S Vasu, Rodrigo Cavallazzi, Aryn Hirani, and Paul E Marik—Philadelphia, Pennsylvania</i>	1263
---	------

TEACHING CASE OF THE MONTH

An Unusual Cause of Nonresolving Pneumonia <i>by Srinivas Rajagopala, Navneet Singh, Ritambara Nada, and Dheeraj Gupta—Chandigarh, India</i>	1266
---	------

BOOKS, SOFTWARE, AND OTHER MEDIA

Sleep in Children: Developmental Changes in Sleep Patterns, 2nd edition (Marcus CL, Carroll JL, Donnelly DF, Loughlin GM, editors) Sleep and Breathing in Children: Developmental Changes in Breathing During Sleep, 2nd edition (Marcus CL, Carroll JL, Donnelly DF, Loughlin GM, editors) <i>reviewed by Richard M Kravitz—Durham, North Carolina</i>	1270
Overcoming Steroid Insensitivity in Respiratory Disease (Adcock IM and Chung KF, editors) <i>reviewed by Raju C Reddy—Ann Arbor, Michigan</i>	1271
The Pulmonary Epithelium in Health and Disease (Proud D, editor) <i>reviewed by Gustavo Matute-Bello—Seattle, Washington</i>	1272
Managing in Health Care: Business Strategy (Moseley GB III) <i>reviewed by William R Howard—Boston, Massachusetts</i>	1273

**RESPIRATORY
CARE**

A Monthly Science Journal
Established in 1956

The Official Journal of the
American Association for
Respiratory Care



RESPIRATORY CARE audio summaries podcast now available!
Go to www.rcjournal.com/podcasts to subscribe.