



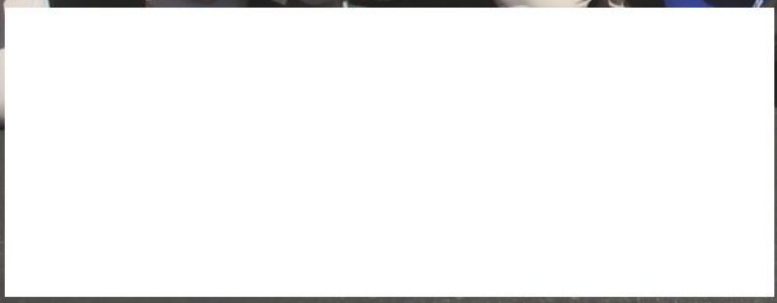
An Official Publication of the American Association for Respiratory Care
November 2012 Vol. 36, Issue 11 www.aarc.org \$10.00

Times



RTs Drive COPD Awareness

Students and faculty of the East Los Angeles-Santa Monica College Respiratory Therapy Program participated in the DRIVE4COPD awareness campaign



F&P Evaqua 2™

with MicroCell Technology™

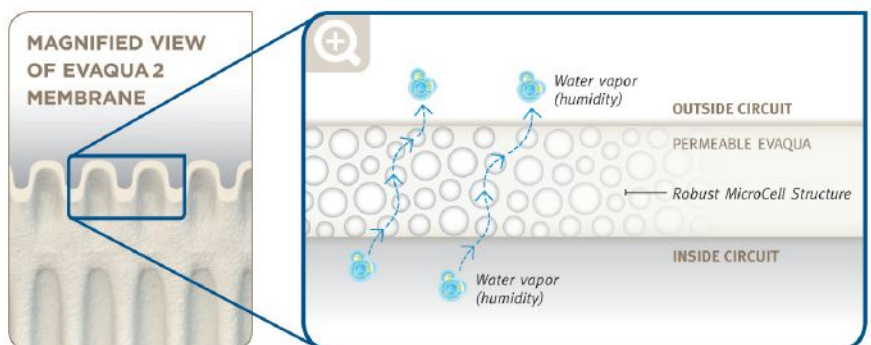
Your solution to expiratory condensate - evolved



Fisher & Paykel Healthcare has developed a new technology for breathing circuits specifically to minimize expiratory tube mobile condensate, while also withstanding the rigors of the critical care environment.

This next generation range allows caregivers to nurture life by promoting a maintenance-free, closed system. The unique Evaqua material allows humidity to freely diffuse out through the wall of the expiratory tube before it has the opportunity to condense and form into liquid water.

Many layers of MicroCells also mean the Evaqua 2 tube is robust and resistant to kinking/damage. The result is an easy-to-use system which is designed so that the breathing circuit can remain closed and free of clinician intervention.

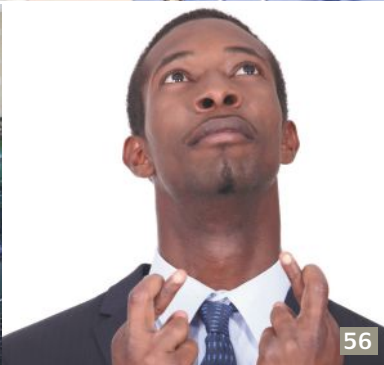


Visit AARC Booth 823 in New Orleans

Fisher & Paykel
HEALTHCARE

For more information on F&P Evaqua 2™ please visit us at Booth #823 at the 2012 AARC Respiratory Congress in New Orleans, Louisiana.

www.fphcare.com



Chronic Disease Manager | 6
Chronic diseases of neonates, infants, and children. By Kathleen Deakins, MSHA, RRT-NPS, FAARC

Coming of Age | 12
Elder abuse identification. By Helen M. Sorenson, MA, RRT, FAARC

Ventilation for Life | 18
The role of electronic health records in documenting mechanical ventilator care. By Felix Khusid, BS, RRT-NPS, FAARC, and Brent Kenney, BSRT, RRT

Sleep Waves | 26
Restless legs syndrome. By Suzanne Bollig, RRT-SDS, RPSGT, FAARC

Novel Inhaled Nicotine Delivery Systems | 32
Novel forms of nicotine replacement therapy could dramatically shift the nation's health and lead to a sea change in respiratory health. By Nathan K. Cobb, MD

The RT's Role in Preventing Ventilator-associated Pneumonia | 35
The respiratory therapist has the largest potential to execute VAP prevention and

should be the most knowledgeable about current evidence. By Roger D. Seheult, MD

An Idea Whose Time Has Come | 40
RRTs at Indiana University Health play a major role in chronic disease management. By Janet Lee, RRT-NPS, AE-C

AARC Members Raise Awareness of COPD | 44
Respiratory therapists and students increased COPD awareness in multiple ways across the United States this year.

Choose the February 2013 Cover of AARC Times Magazine | 54
Cast your vote online for the photo contest.

Getting the Job | 56
An RT manager provides practical advice on securing a new position in a challenging job market. By Colleen Schabacker, BA, RRT, FAARC

Owned by Registered Respiratory Therapists | 58
ROAD Center RRTs at the University of California–Davis lead the way in COPD case management. By Debbie Bunch

Government Advocacy | 10
Executive Office Update | 21
General Counsel | 24
The View from Here | 28
Industry Watch | 64
Marketplace | 66
RC Currents | 68
New Members | 74
Classified Advertising | 86
Calendar of Events | 88
Advertiser Index | 88

AARC Strategic Plan

AARC Vision/Mission Statement: The American Association for Respiratory Care (AARC) will continue to be the leading national and international professional association for respiratory care. The AARC will encourage and promote professional excellence, advance the science and practice of respiratory care, and serve as an advocate for patients, their families, the public, the profession, and the respiratory therapist.

AARC Strategic Objectives

- Validate the science of respiratory care and the value of the respiratory therapist (RT) in providing respiratory care by supporting, conducting, and publishing research information.
- Promote respiratory therapists as the best providers of respiratory care by assuring that the science that clarifies the value and role of the RT is provided to those stakeholders whose decisions and actions need to be guided by that information.
- Promote respiratory therapists and the American Association for Respiratory Care by developing and implementing promotion and marketing campaigns targeted to unique audiences.
- Assure the Association has the resources to meet the needs of its members and that the AARC has the needed financial, volunteer, and staff resources needed to accomplish the implementation of the strategic plan of the Association.

The complete version of the Association's Strategic Plan is available to AARC members online at www.aarc.org/members_area/resources/strategic.asp.

Editor

Marsha Cathcart, BA

Assistant Editor

Karen Singletery, BS

Contributors

Debbie Bunch, BA
Sheila Henegar

Art Director

Donna Knauf, BA

Graphic Designers

Jeanette Chawdhury, MBA
Lisa Dudley
Kelly Piotrowski

Consultant

Sherry Milligan, MBA, CAE

Director, Advertising Sales

Tim Goldsbury, BA, RRT
Goldsbury@aarc.org

Advertising Sales Consultant

Andrea Conté
andrea@aarc.org

Advertising Rates and Media Information

Contact: Goldsbury@aarc.org
Tim Goldsbury, 725 N. Highway
A1A, Ste. C-106, Jupiter, FL 33477
Voice (561) 745-6793
Fax (561) 745-6795

Advertising Materials

Send production materials for AARC publications to Binkley@aarc.org or AARC
9425 N. MacArthur Blvd., Ste. 100
Irving TX 75063 c/o Beth Binkley
Voice (972) 243-2272
Fax (972) 484-2720

AARC Times and RESPIRATORY CARE —
official publications of the AARC

Daedalus Enterprises, Inc.
9425 N. MacArthur Blvd., Ste. 100
Irving, TX 75063
(972) 243-2272
Fax (972) 484-2720

Director of Business Development

Dale L. Griffiths, BA

Publisher and Managing Editor

Thomas J. Kallstrom, MBA, RRT,
FAARC



Printed in USA

► Meet the AARC Staff



Steve Bowden

Internet Coordinator
bowden@aarc.org



Russell Leighton

Information Technology
leighton@aarc.org



Olga Jusino

Web Application
Specialist
jusino@aarc.org



Steven B. Nelson

Associate Executive
Director
nelson@aarc.org



You know **ONLY** capnography measures real-time adequacy of ventilation.

But did you know
Oridion Capnography
protects your non-intubated patients in
the ICU and General Floor too?



Only capnography measures adequacy of ventilation as recommended by patient safety standards (ASA, APSP, Joint Commission)^{1,2,3}. No matter how you measure respiratory rate, it gives you only a partial picture of ventilation.

Protect all your patients with Oridion Capnography:

- ✓ Crisp, accurate waveforms
- ✓ Simple to use
- ✓ Comfortable for your patients

Learn more at www.oridion.com.

1 ASA Standards for Basic Anesthetic Monitoring, Committee of Origin: Standards and Practice Parameters (Approved by the ASA House of Delegates on October 21, 1986, and last amended on October 20, 2010 with an effective date of July 1, 2011) - Viewed 3-21-11 at www.asahq.org/Standards%20Guidelines%20Stmnts/Basic%20Anesthetic%20Monitoring%202011.aspx.

2 Stoelting R and Overdyk F. Anesthesia Patient Safety Foundation, Conclusions and Recommendations from June 08, 2011 Conference on Electronic Monitoring Strategies to Detect Drug-Induced Postoperative Respiratory Depression. Accessed August 25, 2011 at <http://www.apsf.org/announcements.php?id=7>.

3 Standards for Basic Anesthetic Monitoring, American Society of Anesthesiologists. Accessed 6/20/11 at <http://www.asahq.org/For-Healthcare-Professionals/-/media/For%20Members/documents/Standards%20Guidelines%20Stmnts/Basic%20Anesthetic%20Monitoring%202005.aspx>.

Visit AARC booth 201 in New Orleans



AARCConnection . . .

maximizing your membership

Social Networking

AARC has extended its social media presence to Pinterest where users share images and track and catalog ideas and thoughts on many aspects of their life; now respiratory therapists on Pinterest have a professional home too. We invite all members to follow the AARC on its Pinterest page. **Follow the AARC Pinterest Page** at <http://pinterest.com/aarccenter/>

Increase Your Skills

Increase your value to your employer by expanding your warehouse of skills through the AARC's programs and educational offers. **Start at** <http://www.aarc.org/education/>

Save \$40 on an NBRC Exam

Any AARC member gets a one-time \$40 discount on these NBRC exams: RRT (Written or Clinical Simulation), RPFT, CPFT, SDS, and the NPS. **Learn More and Start Saving at** www.aarc.org/member_services/nbrc_discount/

Track Your CRCE

Use your AARC member number whenever taking classes to ensure that your continuing education activities are logged into the AARC's online transcript service, an exclusive AARC member benefit. **Check your transcript at** http://www.aarc.org/education/crce_lookup/index.asp

Get Advice

Get professional advice from your colleagues through the Specialty Sections. With 10,500 members in ten Sections you have a resource of RTs that share your interests and concerns. **Start networking at** <http://www.aarc.org/sections/>

Follow Us on Twitter and Facebook.

Visit www.AARC.org



Information Contacts:

AARC Membership or Other AARC Services:

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

Respiratory Therapist Certification & Registration:

National Board for Respiratory Care • 18000 W. 105th St., Olathe, KS 66061-7543 • (913) 895-4900 • Fax (913) 895-4650 • 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 • www.coarc.com

Grants, Scholarships, Community Projects:

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

AARC Times (USPS 491-930) (ISSN 0893-8520) is a monthly publication of Daedalus Enterprises, Inc., for the American Association for Respiratory Care. Copyright © 2012 by Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706. All rights reserved. Reproduction in whole or part without the express written permission of Daedalus Enterprises, Inc., is prohibited. The opinions expressed in articles, departments, or editorials are those of the author and do not necessarily reflect the views of Daedalus Enterprises, Inc., or the American Association for Respiratory Care.

Periodicals Postage: Paid at Irving, TX, and at additional mailing offices. POSTMASTER: Send form 3579 to *AARC Times*, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706.

Change of Address: Six weeks' notice is required. AARC members should include their membership number when submitting an address change. Non-member subscribers should provide old mailing label and new address. Send changes to *AARC Times*, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706. Periodicals postage paid at Irving, TX.

Article and Feature Contribution: *AARC Times* welcomes AARC member contributions of feature articles and information for the regular departments. All materials should be submitted via email to Editor Marsha Cathcart at cathcart@aacrc.org. Letters from members will be considered for publication if they relate to specific articles appearing in *AARC Times* within the last three months. Editorials may be published if they are of interest to the AARC membership. The editor reserves the right to edit letters and articles without changing their meaning in order to suit legal and space requirements.

Subscriptions: Annual subscriptions are offered to members of associations according to their membership enrollment as follows: 100-500 members/\$80; 501-5,000/\$71; 5,001-20,000/\$33.40; over 20,000/\$11.50. Individual subscriptions are available at the following rates: \$89.95 per year (12 issues) in the United States or Puerto Rico; \$109 per year in all other countries. Airmail postage is an additional \$94 per year. Single copies, current and back issues, if available, are \$10. Write *AARC Times*, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Daedalus Enterprises, Inc., for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$1 is paid directly to CCC, 21 Congress St., Salem, MA 01970.

INSPIRE YOUR PATIENTS

Introducing the palm-sized, wearable Breathe Non-Invasive OPEN Ventilation (NIOV™) System. Designed to increase mobility and promote early mobilization.

The Breathe NIOV System — developed to ventilate patients with respiratory insufficiency. Opening the possibility to expand their daily activities at home, during pulmonary rehabilitation or to promote early mobilization while in the hospital.

- Wearable, one pound, battery-operated ventilator
- Delivers ventilation and supplemental oxygen*
- Unique OPEN nasal pillow interface
- Clinician customizable volume settings



Breathe
NIOV™

1-877-698-1325 www.BreatheNIOV.com

PM-00-0009-C ©2012. NIOV is a trademark of Breathe Technologies, Inc.

*An external source of oxygen is required.

Visit AARC booth 1225 in New Orleans

Chronic Diseases of Neonates, Infants, and Children

by Kathleen Deakins, MSHA, RRT-NPS, FAARC

Over the past 30 years, despite advances in neonatal and pediatric care, chronic lung disease (CLD) continues to evolve in neonates, infants, and children.¹ Strikingly, most patients survive the peaks and valleys of acute illness and treatment and go on to lead normal lives. Others are left to recover with burdens and inconsistencies in health and quality of life. Most CLDs occurring in neonates and infants result after managing various birth-related conditions.¹ Inflammation is a key factor that is responsible for structural changes in the airway and lung pathology or impairment.² CLD is characterized by sustained periods of inflammation, increased airway resistance, chronic infection, and changes in pulmonary mechanics that affect airflow, airway clearance mechanisms, cough, and work of breathing.³ Despite optimal treatment for managing acute or chronic lung diseases, necessary interventions can result in barotrauma, oxygen toxicity, infection, or other impairments.³

Bronchopulmonary dysplasia

Bronchopulmonary dysplasia (BPD), known as the chronic lung disease of infancy, is prevalent in post-premature infants who were born at birthweights < 1500 grams, had respiratory distress syndrome and some degree of surfactant deficiency, and were treated with oxygen and/or mechanical ventilation.⁴ While the incidence of BPD decreases from 20–50% to < 10% in birthweights > 1500 grams, meconium aspiration, lung hypoplasia, and pneumonia also place the newborns at higher risk for BPD.^{3,5} BPD's definition has evolved from "classic" (infants > 28 weeks gestation with cystic lung hyperinflation and oxygen requirement at 28 days of life) to the "new" BPD (oxygen requirement beyond 36 weeks postmenstrual age with arrested alveolar development).^{1,3-5}

Beyond the neonatal period, BPD complications become more apparent with abnormal growth patterns, inadequate weight gain, and abnormal lung function.¹ There is an increased incidence of wheezing and bronchial hyper-responsiveness because of chronic inflammation and airway damage from loss of epithelium.³ In the first year of life, nearly eight out of 10 BPD infants have airway obstruction from changes in the bronchial wall shape and thickness.^{2,3} Functional residual capacity (FRC) is reduced during the first through sixth months of life. Beyond the first year, the FRC typically improves.³ By the second year, the severity of illness diminishes further. Infant pulmonary function tests at age three revealed improvement in forced vital capacity, translating to improved lung volumes; however, airway hyper-responsiveness continues longer due to airway remodeling.^{2,3}

By age five, lung hyperinflation results from loss of elastic recoil or airway obstruction caused by bronchial wall changes.¹⁻³ About 25% of adolescents with a history of BPD go on to develop chronic pneumonia or wheezing and require long-term use of medications to treat symptoms.¹ An increased incidence of airway hyper-reactivity or childhood asthma is possible if prior CLD exists.

Pulmonary hypertension may result from a substantial overgrowth of systemic pulmonary vasculature resulting in decreased blood flow and alveolar hypoxemia.¹ These structural changes in the pulmonary arteries result in "vessel remodeling" due to the abnormal alveolar duct size and repeated vasoconstriction. Right, left, or bilateral ventricular hypertrophy has been identified in nearly half of all BPD patients.¹ This serious comorbidity requires aggressive life-altering management, including vasodilator medications in some cases.

about the author...



Kathleen Deakins, MSHA, RRT-NPS, FAARC, is the manager of pediatric respiratory care at Rainbow Babies & Children's Hospital in Cleveland, OH.

For the 92% of neonatologists who expressed concerns over exposing newborn infants to animal-derived medications¹...

Discovery Labs heard you

Dear Healthcare Provider,

Above most, you understand the potential challenges that lie ahead for an infant that is born prematurely. Your goal is to ensure each infant has the quality of life her parents long for and which she deserves. You also know that not all medications are created equal. That is why, according to a recent publication in the *Journal of Neonatal-Perinatal Medicine*; nearly all neonatologists interviewed stated they were concerned about the exposure of newborn infants to animal-derived medications.¹

In March, the US FDA approved the first and only synthetic peptide-containing surfactant, SURFAXIN® (lucinactant). Approved for the prevention of respiratory distress syndrome (RDS) in premature infants at high risk for RDS, SURFAXIN is the first new alternative to animal-derived surfactants to be approved by the FDA in more than two decades. Importantly, the safety and efficacy of SURFAXIN was evaluated in two phase 3 clinical trials^{2,3}, which included direct comparisons to the animal-derived surfactants, Survanta® and Curosurf®. SURFAXIN will become available as a commercial product later this year.

The approval of SURFAXIN represents more than just a therapeutic alternative for neonatologists and NICU parents. It is the embodiment of the unwavering commitment Discovery Labs has to the respiratory critical care community today and tomorrow. We have persisted because of our belief in the series of new solutions that we are developing to improve patient lives and the standard of respiratory critical care.

As you contemplate the best treatment options for your neonatal patients, we would be happy to provide you with more information about SURFAXIN and explore ways to work together to alleviate the concerns of neonatologists and NICU parents who have waited for more than a decade for a new and effective alternative for the prevention of RDS in preterm infants.

Together, we can reach our goal of redefining RDS management and give preterm infants the life they deserve.

Sincerely,



Dr. Thomas F. Miller
Chief Operating Officer
Discovery Laboratories, Inc.
Warrington, PA



IMPORTANT SAFETY INFORMATION

SURFAXIN (lucinactant intratracheal suspension) is intended for intratracheal use only. The administration of exogenous surfactants, including SURFAXIN, can rapidly affect oxygenation and lung compliance. SURFAXIN should be administered only by clinicians trained and experienced with intubation, ventilator management, and general care of premature infants in a highly supervised clinical setting. Infants receiving SURFAXIN should receive frequent clinical assessments so that oxygen and ventilatory support can be modified to respond to changes in respiratory status.

Most common adverse reactions associated with the use of SURFAXIN are endotracheal tube reflux, pallor, endotracheal tube obstruction, and need for dose interruption. During SURFAXIN administration, if bradycardia, oxygen desaturation, endotracheal tube reflux, or airway obstruction occurs, administration should be interrupted and the infant's clinical condition assessed and stabilized. SURFAXIN is not indicated for use in acute respiratory distress syndrome (ARDS).

Please see accompanying brief prescribing information or visit www.surfaxin.com for full prescribing information.

¹ S. Sarkar and S.M. Donn, *Journal of Neonatal-- Perinatal Medicine* 4 (2011) 235-239

² F. R. Moya, et al; *Pediatrics* 2005;115;1018-- 1029

³ S. K. Sinha, et al; *Pediatrics* 2005;115;1030-- 1038

Surfaxin[®]

(Lucinactant)

Intratracheal Suspension

BRIEF SUMMARY OF PRESCRIBING INFORMATION

Please see package insert for full prescribing information.

INDICATIONS AND USAGE

SURFAXIN is indicated for the prevention of respiratory distress syndrome (RDS) in premature infants at high risk for RDS.

CONTRAINDICATIONS

None.

WARNINGS AND PRECAUTIONS

Acute Changes in Lung Compliance

Administration of exogenous surfactants, including SURFAXIN, can rapidly affect lung compliance and oxygenation. SURFAXIN should be administered only by clinicians trained and experienced in the resuscitation, intubation, stabilization, and ventilatory management of premature infants in a clinical setting with the capacity to care for critically ill neonates. Infants receiving SURFAXIN should receive frequent clinical assessments so that oxygen and ventilatory support can be modified to respond to changes in respiratory status.

Administration-Related Adverse Reactions

Frequently occurring adverse reactions related to the administration of SURFAXIN include bradycardia, oxygen desaturation, reflux of drug into the endotracheal tube (ETT), and airway/ETT obstruction.

Increased Serious Adverse Reactions in Adults with Acute Respiratory Distress Syndrome (ARDS)

Adults with ARDS who received lucinactant via segmental bronchoscopic lavage had an increased incidence of death, multi-organ failure, sepsis, anoxic encephalopathy, renal failure, hypoxia, pneumothorax, hypotension, and pulmonary embolism. SURFAXIN is not indicated for use in ARDS.

Clinical Trials Experience

The efficacy and safety of SURFAXIN for the prevention of RDS in premature infants was demonstrated in a single randomized, double-blind, multicenter, active-controlled, multi-dose study involving 1294 premature infants (Study 1). Infants weighed between 600 g and 1250 g at birth and were 32 weeks or less in gestational age. Infants were randomized to receive 1 of 3 surfactants, SURFAXIN (N = 524), colfosceril palmitate (N = 506), or beractant (N = 258). Co-primary endpoints were the incidence of RDS (defined as having a chest x-ray consistent with RDS and an $\text{FiO}_2 \geq 0.30$) at 24 hours and RDS-related mortality at 14 days. The primary comparison of interest was between SURFAXIN and colfosceril palmitate with the intent of demonstrating superiority. Beractant served as an additional active comparator. Compared to colfosceril palmitate, SURFAXIN demonstrated a statistically significant improvement in both RDS at 24 hours and RDS-related mortality through Day 14. A second multicenter, double-blind, active-controlled study involving 252 premature infants was also conducted to support the safety of SURFAXIN (Study 2). Infants weighed between 600 g and 1250 g and were less than 29 weeks in gestational age. Infants were randomized to receive 1 of 2 surfactants, SURFAXIN (N = 124) or poractant alfa (N = 128).

The safety data described below reflect exposure to SURFAXIN administered intratracheally to infants at a dose of 5.8 mL per kg (up to 4 doses) in either 4 aliquots (Study 1) or 2 aliquots (Study 2) in 643 premature infants.

Comparator surfactants colfosceril palmitate and beractant were administered at the recommended doses (5.0 and 4.0 mL per kg, respectively) while the first dose of poractant alfa administered (2.2 mL per kg) was less than the recommended dose of 2.5 mL per kg. Any subsequent doses of poractant alfa were at the recommended 1.25 mL per kg dose.

Overall, the incidence of administration-related adverse reactions was higher in infants who received SURFAXIN compared to other surfactants (Table 1) and resulted in a greater proportion of infants treated with SURFAXIN who experienced administration-related oxygen desaturation and bradycardia. For Study 1, oxygen desaturation was reported in 17%, 9%, and 13% and bradycardia for 5%, 2%, and 3% of infants treated with SURFAXIN, colfosceril palmitate, and beractant, respectively. For Study 2, oxygen desaturation was reported in 8% and 2% and bradycardia in 3% and 2% of infants treated with SURFAXIN and poractant alfa, respectively.

These adverse reactions did not appear to be associated with an increased incidence of serious complications or mortality relative to the comparator surfactants (Table 2).

Table 1. Administration-Related Adverse Reactions in SURFAXIN Controlled Clinical Studies^a

	Study 1 ^b			Study 2	
	SURFAXIN (N = 524)	Colfosceril palmitate (N = 506)	Beractant (N = 258)	SURFAXIN (N = 119)	Poractant alfa (N = 124)
Total Doses Administered	994	1038	444	174	160
Total Number of Events (Events per 100 Doses)					
ETT Reflux	183 (18)	161 (16)	67 (15)	47 (27)	31 (19)
Pallor	88 (9)	46 (4)	38 (9)	18 (10)	7 (4)
Dose Interruption	87 (9)	46 (4)	30 (7)	7 (4)	2 (1)
ETT Obstruction	55 (6)	21 (2)	19 (4)	27 (16)	1 (1)

^a Table includes only infants who received study treatment.

^b Study 1 doses were administered in 4 aliquots.

^c Study 2 doses were administered in 2 aliquots.

Table 2. Common Serious Complications Associated with Prematurity and RDS in SURFAXIN Controlled Clinical Studies Through 36-Weeks Post-Conceptual Age (PCA)

	Study 1			Study 2	
	SURFAXIN (N = 527) %	Colfosceril palmitate (N = 509) %	Beractant (N = 258) %	SURFAXIN (N = 119) %	Poractant alfa (N = 124) %
Apnea	52	52	46	66	75
Intraventricular hemorrhage, all grades	52	57	54	39	38
-Grade 3/4	19	18	21	13	8
Periventricular leukomalacia	10	10	12	4	9
Acquired sepsis	44	44	44	45	52
Patent ductus arteriosus	37	35	37	43	44
Retinopathy of prematurity, all grades	27	26	25	32	31
-Grade 3/4	6	7	6	5	9
Necrotizing enterocolitis, all grades	17	17	19	13	15
-Grade 2/3	6	8	14	8	8
Pulmonary air leak through Day 7, all types	15	17	14	9	7
-Pulmonary interstitial emphysema	9	10	10	3	5
-Pneumothorax	3	4	2	4	1
Pulmonary hemorrhage	10	12	14	6	9

All-cause mortality through 36-weeks PCA was similar regardless of which exogenous surfactant was administered.

Adverse reactions reported in the controlled clinical studies through 36-weeks PCA occurring in at least 10% of infants were anemia, jaundice, metabolic acidosis, oxygen desaturation, hyperglycemia, pneumonia, hyponatremia, hypotension, respiratory acidosis, and bradycardia. These reactions occurred at rates similar to the comparator surfactants.

No assessments for immunogenicity to SURFAXIN were performed in these clinical studies.

Follow-up Evaluations

Twelve-month corrected-age follow-up of 1546 infants enrolled in the 2 controlled clinical studies demonstrated no significant differences in mortality or gross neurologic findings between infants treated with SURFAXIN and those treated with the comparator surfactants (colfosceril palmitate, beractant, or poractant alfa).

OVERDOSAGE

There have been no reports of overdose following the administration of SURFAXIN.

HOW SUPPLIED/STORAGE AND HANDLING

SURFAXIN (lucinactant) Intratracheal Suspension is supplied sterile in single-use, rubber-stoppered, clear glass vials containing 8.5 mL of white suspension (NDC 68628-500-31). One vial per carton.

Store SURFAXIN in a refrigerator at 2° to 8°C (36° to 46°F) and protect from light until ready for use. Do not freeze. Vials are for single use only. Discard any unused portion of SURFAXIN. Discard warmed vials of SURFAXIN if not used within 2 hours of warming.

DiscoveryLabs.
Inspired Innovation.

Manufactured by Discovery Laboratories, Inc.

Warrington, PA 18976

06/2012

MK-012

Airway compromise in bronchopulmonary dysplasia mimics asthma (wheezing) with or without respiratory infection.^{3,6} Airway injury may result from epithelial damage that occurs in the presence of a prolonged artificial airway or repetitive intubations.^{2,3} Inflammation may occur from exposure to suctioning or positive pressure ventilation.^{1,3} Eber et al stated that the airway of BPD patients may change shape when exposed to pressures such as CPAP + 10 cm H₂O or peak inspiratory pressures > 25 cm H₂O.^{1,3} About one in 10 infants with an artificial airway as infants will develop subglottic stenosis or narrowing with direct mucosal injury. In patients three weeks to 17 months, tracheal or bronchial stenosis may progress to atelectasis from low lung volumes. In patients two months to three years, tracheobronchial malacia may appear in 50% of all patients with a history of BPD.³

The incidence of hospital admission for BPD patients with viral illness before age one is > 50%.¹ Lower respiratory tract infections caused by respiratory syncytial virus (RSV) resulting in bronchiolitis may present with severe respiratory distress and cough with small airway inflammation, producing an asthma-like wheezing illness.⁶ Bronchiolitis has been successfully treated with suctioning and supportive care. Cough severity in an infant has been associated with the degree of prematurity or birthweight.² Morbidity related to acute illness and CLD is dependent on baseline condition, disease management, and prior risk factors during infancy.

What RTs need to know

Respiratory therapists must become familiar with the details surrounding the most common chronic lung diseases and impairments related to BPD. RTs often function as educators and coaches to the patient and family, starting in the acute care arena to establish important relationships. RTs become familiar with the patient's history, perform a patient assessment, and assist in creating a personal plan to meet the patient's individual respiratory care needs. Standardized programs integrate systematic assessment. Protocol-driven programs employ specific scoring mechanisms used to determine the long-term frequency of treatment based on current exam and symptoms. Respiratory therapists identify the type of therapy or breathing exercise needed to achieve the goals of therapy.

In bronchopulmonary dysplasia, bronchodilators, diuretics, and anti-inflammatory drugs such as steroids and antibiotics may be required. Bronchodilators assist in reversing airway obstruction in acute and chronic phases of BPD by reducing the airway hyper-reactivity.

Identifying the need for long- or short-term bronchodilator therapy may require patient education on medication delivery. Teaching basic assessment of respiratory distress and normal breathing, ways to optimize medication delivery, and the function of the respiratory equipment are essential components of the program. Patients who need airway clearance techniques such as postural drainage and chest physiotherapy may require individual instruction given to family members. Mechanical airway clearance devices such as percussors or high-frequency chest wall oscillation, if indicated, also require patient and caregiver instruction to optimize airway clearance goals. Oxygen therapy for long- or short-term use in the home requires a plan for assessment, monitoring, and follow-up.

The purpose of RT involvement in chronic disease management is to participate as a service consultant on a multidisciplinary team that selects goals for improvement in the underlying respiratory condition, determine the appropriate therapy, demonstrate therapy techniques by modeling behaviors to patients and caregivers, assess the ability to perform and carry out these activities, and follow up over a defined period of time.

Follow-up care for chronic disease management can occur in a number of ways. Follow-up phone calls to assess post-discharge caregiver understanding and to answer pertinent questions related to care is also helpful. Outpatient clinics are involved in routine management and monitoring of patients with chronic lung disease (such as BPD follow-up and evaluation), and long-term care provides the important value of continuity of care. Primary care involvement in the treatment is also essential. Through directed and focused disease education, patients and families can experience a modest quality of life. Adherence with long-term therapies, early recognition of change in condition, and seeking timely treatment are essential to recovery. The process starts with the respiratory therapist. ■

REFERENCES

1. Eber E, Zach MS. Long term sequelae of bronchopulmonary dysplasia (chronic lung disease of infancy). *Thorax* 2001; 56(4):317-323.
2. Tiddens H, Silverman M, Bush A. The role of inflammation in airway disease: remodeling. *Am J Respir Crit Care Med* 2000; 162(2 Pt 2):S7-S10.
3. Allen J, Zwerdling R, Ehrenkranz R, et al. Statement on the care of the child with chronic lung disease of infancy and childhood. *Am J Respir Crit Care Med* 2003; 168(3):356-396.
4. Philip AG. Bronchopulmonary dysplasia: then and now. *Neonatology* 2012; 102(1):1-8.
5. Walsh MC, Yao Q, Gettner P, et al. Impact of a physiologic definition of bronchopulmonary dysplasia rates. *Pediatrics* 2004; 114(5):1305-1311.
6. Moss TJ. Respiratory consequences of preterm birth. *Clin Exp Pharmacol Physiol* 2006; 33(3):280-284.

You've Just Been Elected to Congress... So Now What Do You Do?

by Cheryl West, MHA

The 2012 elections will soon be history, and some of us will have new senators or representatives who will be representing us in Washington, DC. Just like any other new position or job, new members of Congress have to “learn the ropes” before they can begin to focus on the needs of their district or state. So, how do they transform from a “civilian” to a member of the U.S. Congress? Let’s look at what happens in general for a new representative.

Welcome to Capitol Hill

It’s November 7, and after a lengthy campaign process you have just won the election that sends you to Congress for the first time. You’re in the “freshman class” of 2013... now what? How do you get started helping your constituents, all 650,000 of them (which is approximately the size of each congressional district), those who voted for you and those who did not, and how do you prepare yourself for being one of 435 members of the U.S. Congress? As a member of the House of Representatives, you will now have a very large role in governing the country.

You have about 10 weeks from election night to the mid-January State of the Union address (when Congress officially starts work) to be up and running and to be briefed and prepared to start governing. Establishing your new office in Washington, DC, has been compared to starting up a small business.

You are certainly not left out in the cold to figure things out. More than likely you won your election with the support of either the Democratic or Republican National Committees, and these parties coordinate with the operational arm of Congress (those not elected but who keep the “ship of Congress” on course) to give you the orientation of your life.

Within a week of the election, the freshman class is flown to DC to begin a week of intense orientation. You are given official IDs and a smartphone or Blackberry (with an app that will tell you when a vote on the floor is happening). You also are given a four-inch thick binder of orientation materials that go along with the lectures on such topics as how Congress works, the federal budget, ethics, media relations, relations with the White House, foreign policy, etc.

Then there are the critical details of actually setting up the physical office on Capitol Hill as well as your district office(s) back home. Each member of Congress is provided somewhere between \$1.2 and \$1.6 million (2007 figures, which are the most recent) of federal funding (taxpayer dollars) to get their offices up and running. (Both House and Senate members are government employees.)

So during orientation you are advised/lectured on how to set up the DC office, how many staff members to hire, whom you plan to hire, what to pay them, how many district offices you should open, whom and how many staff you need in those home offices, how often you should plan to visit your district, how to budget your travel fund, how many staff you should take with you on those trips home, whether to buy or lease computer and telecommunications systems, and how often

and what to include in your written updates to your constituents. Are you moving yourself and your family to the nation’s capital, or will it be just you; and if so, where do you plan to live in the very expensive DC area? The most knowledgeable lecturers on these types of topics are seasoned chiefs of staff (who are essentially the chief operating officers) to current sitting members of Congress.

about the author...



Cheryl West, MHA, serves as director of government affairs for the AARC.



Before you contact your new representative or senator, walk the halls of government in their shoes and discover what they will be doing and learning in the next few months.

Then comes the room assignments in the three House office buildings (Rayburn, Longworth, and Cannon). All members, not just the freshman class, engage in a major musical chairs shift, vying (based on seniority) where their offices will be. Rayburn has the biggest offices but is furthest away from the Capitol Building. Cannon is the most desirable, with elegant offices and a quick walk to the Capitol (members from both parties of the leadership and those with the most seniority seem to always be located in Cannon). And no one ever wants to be assigned to the mysterious and almost-impossible-to-get-to fifth floor of Longworth, where after locating a special out-of-the-way elevator on the lower floors, you will find halls that are lined with old office furniture and more storage rooms than congressional offices. Rumor has it some visiting constituents went up to the fifth floor and never have been heard from again. But there will be some new members (and it's always the new members) who will indeed have their offices up there.

Getting down to business

While all the complex operational aspects of setting up a new congressional office have to be addressed, the fact that you have been elected and sent to Washington, DC, to help govern this great nation is never out of mind.

You were elected by a majority of your voting constituents to come to DC to represent them for a reason, a message, or a mission. During these 10 weeks you are seeking out (or being sought out by) like-minded members who share your vision. There are groups of members you can loosely band with (termed a caucus) on particular issues. Actually, there are over 219 officially registered congressional caucuses that cover every imaginable issue from the Appalachian Caucus to the

Zero Capital Gains Caucus and every specialty in between (including a Congressional COPD Caucus). Like-minded members can gain greater attention or “traction” on their issue from their colleagues or the media if they act together, which is what a caucus does.

Also during this time, you are networking with other members and particularly the leadership of your party so you can be selected for the House committees to which you most want to be assigned. For example, it's a fairly safe bet that if you are one of the representatives from Manhattan in New York City, your first choice of a committee assignment is probably not going to be the House Committee on Agriculture. However, if you are from Iowa, the Agriculture committee might be your dream assignment.

And it's not much different over in the Senate. It's pretty much the same process but on a grander scale with bigger budgets. Also many (but certainly not all) senators have previously been members of the House and know the operational score.

When to contact whom

As an AARC member, what if you want to contact your House member on an issue of importance to you during this transition time? If your representative is a returning member of Congress, there should be no difficulty in reaching the member's staff as these offices are fully operational and run year long, albeit with fewer staff than when Congress is in session.

Remember, however, until your new members are actually sworn in (starting in early January), the previous member of Congress is still by law your member of Congress and will be until the baton is passed. By mid-January, the transition should be complete and the member, office, and staff members should be good to go. ■



Coming of Age

Elder Abuse Identification: A Public Health Issue

by Helen M. Sorenson, MA, RRT, FAARC

Elder abuse wears many hats. As defined by the World Health Organization, elder abuse is a single or repeated act or lack of appropriate action occurring within any relationship where there is an expectation of trust that causes harm or distress to an older person.¹ It can be manifested as physical, mental, financial, emotional, sexual, or verbal abuse. Abuse can also be in the form of passive or active neglect. Elder abuse is not confined to any country, any culture, or any age group (young-old to old-old). However, the very old seem to be most vulnerable. Determining the extent of elder abuse in any specific population is difficult, as much of it is unreported. There is a stigma associated with being abused that affects both the victim and the perpetrator, especially when it occurs within the family. Fear, loyalty, and/or shame may prevent the abused from taking any action to stop it. Suffering in silence for some seems to be a badge of honor. For those brave enough to report the abuse, it may not be considered a legitimate complaint coming from someone who has been diagnosed with delirium or dementia or from someone who is judged to “just be senile.”

In all likelihood, respiratory therapists unknowingly care for patients who are or who have been abused. Unless questioned, the victim will usually not share information about the mistreatment. Brief encounters may not elicit information. Established relationships can develop between therapists/patients in smaller community hospitals, in home care, or in rehabilitation settings. These may be instances in which abusive situations can be addressed and stopped. Awareness of the possibility is the key.

Scenario

Doris and Frank live in a small house in the rural Midwest. Doris is 72, Frank is 84, and both are retired. Two years ago their daughter, who lives nearby, decided that Mom didn't really need all the “stuff” she had collected over the years. When Doris and Frank were away, she disposed of many items. After repeatedly asking her not to do this to no avail, they changed the locks on the house. Not deterred by this action, the daughter broke the window, got inside the house, and threatened to “burn the house down” if they ever locked her out again. When they disagreed, she struck Frank.

Will they report this? No, because she is their daughter, and it wouldn't be right. Are her actions justified? Is she legitimately concerned about their safety, or is this elder abuse? This is a difficult situation. Elderly individuals can be institutionalized (for their safety) after reporting abuse. Since most older adults prefer to remain in their homes, they do not report abuse. Another option is to take out a restraining order against their child, which may also have adverse consequences. What is needed is counseling for both the victims and the offender, which is a complex process and involves the local Department of Social Services. There are no easy answers.

about the author...



Helen M. Sorenson, MA, RRT, FAARC, is adjunct faculty and an associate professor (retired) with the department of respiratory care at the University of Texas Health Science Center at San Antonio, TX.

Incidence of abuse

Elder abuse is a public health issue that affects a significant percentage of the population and in the future is likely to get worse. A systematic review of studies by Cooper et al measuring the prevalence of elder abuse or neglect was published in 2008.² This summary of the best evidence determined the following: 25% of dependent

Table 1. Warnings of Potential Elder Abuse

Warning Signs	Potential Causes
Bruises, pressure marks, broken bones, abrasions and burns	Physical abuse, neglect, or mistreatment
Unexplained withdrawal from normal activities, new onset of depression, change in alertness	Emotional abuse
Bruises around breasts, genitalia	Sexual abuse
Sudden change in financial status	Financial exploitation
Bed sores, unattended medical needs, poor hygiene, unusual weight loss	Neglect
Controlling spouses/caregivers, threats, belittling comments	Verbal/Emotional abuse
Frequent arguments between caregiver/older adult, tense relationships	Emotional abuse

SOURCE: National Center on Elder Abuse, U.S. Administration on Aging, www.ncea.aoa.gov

older adults reported significant levels of psychological abuse, and 1% reported physical abuse. Twenty percent of the older adults who presented to the emergency department were experiencing neglect, and the incidence of financial abuse has been estimated to be about 6%–18%.² Another prevalence survey published in 2010 included data from 5,777 (60.2% female) respondents.³ Abuse during a one-year period was as follows: 4.6% emotional abuse, 1.6% physical abuse, 0.6% sexual abuse, 5.1% potential neglect, and 5.2% financial abuse. Overall, 10% of those interviewed reported abuse of some kind. Factoring in demographic information, women and frail elders were more likely to experience verbal abuse. African-Americans were more likely to experience financial abuse, and Latinos were less likely than respondents from any other ethnic group to report any form of abuse. Overall, low social support increased the risk for suffering any form of mistreatment, and relatively little of this abuse was reported to the authorities.³

Understanding that abuse and mistreatment of older adults happens is the easy part of the dilemma. Determining the form of abuse, who is at risk, who is doing the abusing, and how it can be stopped is more difficult. The National Center on Elder Abuse (NCEA), in conjunction

with the Administration on Aging, has provided a list of warning signs (see Table 1).⁴ While one sign does not necessarily indicate abuse, it may raise a red flag that other signs may be present but not yet assessed. There may be many other logical reasons for the presence of the warning signs, but awareness of potential abuse is key to prevention.

Identification of abuse

Warning signs of abuse may not be readily apparent to the RT providing routine therapy on a newly admitted patient. Respiratory therapists who work in intensive care may be more likely to notice bruises and burns, but their focus is generally on ventilation and respiration. RTs who work in home care or rehabilitation may be the most likely to pick up on the fact that “something is just not quite right” with their elderly patient. If during the course of a visit or an examination, any of the warning signs of abuse are noticed, it is time to ask questions. Any licensed health care provider is qualified to ask questions. Respiratory therapists routinely ask about shortness of breath, quality of sleep, and frequency of cough. If bruises are noted, asking “has someone hurt you” or “did someone do this to you” are not unusual questions.

To increase the odds of getting an honest response, it may be necessary to interview the older adult without others present. If family members or caregivers seem reluctant to leave you alone with the individual in question, this may also be a potential “red flag.” If the patient seems afraid to answer two simple questions or seems elusive with a response, contact your hospital social worker or case worker for a follow-up. Respiratory therapy education does not always cover assessing for abuse; but despite lack of training, awareness is vital. Educators could add a unit on elder abuse to a disease management course or give reading assignments to students to increase their awareness of the problem. Classroom discussions can and often do result in attitudinal changes not measurable by examinations.

Questions for the RT to ask

Questions that may elicit a response to warning signs or bruises include:⁵

- ? *Has someone hurt you?*
- ? *Did someone do this to you?*
- ? *Has anyone ever touched you without your consent?*
- ? *Does anyone yell at you or threaten you?*
- ? *Who cares for you at home?*
- ? *Are you afraid of your caregiver?*
- ? *Do you feel safe where you live?*
- ? *Who manages your finances?*
- ? *What happens when you and your caregiver disagree?*

Keep in mind that skin tears and bruises in older adults are not always the result of abuse, but assuming that they are “just signs of old age” may be doing a disservice to the patient.

Elder abuse screening instruments

In an effort to facilitate early identification of elder abuse, a number of screening instruments have been created to help nurses detect mistreatment.⁶⁻⁹ One of the more current instruments, the Geriatric Mistreatment Scale, is available in both Spanish and English versions and screens for five different types of elder mistreatment.⁹ While useful, it is also important to realize that even when assessed, many older adults will not report and will not admit that they are the victims of abuse. Another screening instrument published by the American Medical Association and available at www.centeronelderabuse.org/docs/AMA_Screening_Questions.pdf sug-

gests questions that physicians should incorporate into their daily practice. While presenting all aspects of elder abuse is beyond the scope of this article, a chapter authored by Tom Miller in “Elder Abuse: A Public Health Perspective” contains a very useful algorithm for elder abuse intervention designed for health professionals.¹⁰ Unfortunately, sometimes it is the caregiver who is abusive.

Abuse at the hands of caregivers

In response to an increased awareness of elder abuse, in 1987 the Omnibus Budget Reconciliation Act (OBRA) enacted major reforms that ultimately led to improved training of caregivers working with elderly clients.¹¹ Additional initiatives across the country have attempted to address the problem in a variety of ways. An earlier publication estimated that at least 4% of elderly people are maltreated by their caregivers.¹² Reasons cited have been stress, dependency of the caregiver on the abused older adult for finances and living arrangements, and social isolation.¹³ Marshall et al have offered that caregiver stress, rather than malicious intent, is often the cause of abuse.¹⁴ Considering that neglect is also considered a form of abuse, how many patients develop bedsores for lack of being turned or have their call-lights ignored because they are “needy patients who whine a lot”?

Recognizing and reporting abuse

Health care professionals need to be able to recognize the “at-risk” factors for elder mistreatment. It is imperative to abide by all reporting laws and equally important is to maintain a therapeutic relationship with the potential victim. Communication and trust issues can make a big difference in the cooperation and willingness of older adults to share incidences of abuse. Legislatures in all 50 states have passed some form of elder abuse prevention laws. In March of 2011 Congress passed a comprehensive federal elder abuse prevention law.¹⁵ Help for our older adults is out there; but first, abuse must be recognized. While not a comfortable situation to address, there are ways to let authorities know of a potential problem without violating the Health Insurance Portability and Accountability Act (HIPAA) rules and regulations. Anyone can report a case of elder abuse in good faith. The Elder Abuse and Neglect Act provides that people — who in good faith report suspected abuse or cooperate with an investigation — are immune from criminal or civil liability or professional disciplinary action. It further provides that the identity of the reporter shall not be disclosed except with the written permission of the reporter or by order of a court. Anonymous reports are accepted. While not easy to do, these actions may be as important as

I heard
hernia surgery
is incredibly
painful.



NOT ANYMORE. The Covidien ProGrip™ composite mesh for hernia repair is a self-gripping technology that potentially eliminates the need for fixation of any kind. The result? Patients experience less post-operative pain than conventional fixation-based repair, according to a recent clinical trial. It's just one example of how Covidien is collaborating with healthcare professionals to solve medical issues to help improve patient care and safety.

At Covidien, we're not just committed to medical innovation — we're committed to making a difference in patients' lives. See how at covidien.com



COVIDIEN

positive results for life™

Visit AARC booth 201 in New Orleans



Ethics Course



Maintain your licensure and earn 3 CRCE® credits through this online course from the AARC.

The online AARC Ethics Course teaches you the theories of ethical decision-making as applied to:

- ✓ scope of practice
- ✓ informed consent
- ✓ confidentiality
- ✓ discrimination
- ✓ conflicts of interest
- ✓ illegal or unethical acts
- ✓ fraud
- ✓ research and more...

Learn more at:
www.aarc.org/go/ec

Meets the ethics requirements for

Ohio New Jersey
Nevada Pennsylvania
District of Columbia

starting an IV, delivering a medication, or viewing an x-ray to get at the root of what is causing the older adult to suffer.

The following are resources that one can refer to for help if abuse is suspected or confirmed:

- Eldercare Locator: (800) 677-1116. Monday–Friday, 9 am to 8 pm EST. Trained operators will refer you to a local agency that will help.
- The National Domestic Violence Hotline: (800) 799-SAFE (800-799-7233)
- National Committee for the Prevention of Elder Abuse: www.preventelderabuse.org
- National Center on Elder Abuse/Administration on Aging: www.ncea.aoa.gov
- Center of Excellence on Elder Abuse & Neglect: www.centeronelderabuse.org ■

REFERENCES

1. McAlpine CH. Elder abuse and neglect. *Age Ageing* 2008; 37(2): 132-133.
2. Cooper C, Selwood A, Livingston G. The prevalence of elder abuse and neglect: a systematic review. *Age Ageing* 2008; 37(2):151-160.
3. Acierno R, Hernandez MA, Amstadter AB, et al. Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: the National Elder Mistreatment Study. *Am J Public Health* 2010; 100(2):292-297.
4. National Center on Elder Abuse (NCEA), Administration on Aging website. www.ncea.aoa.gov
5. Gray-Vickrey P. Combating elder abuse. *Nursing* 2004; 34(10): 47-51.
6. Yaffe MJ, Wolfson C, Lithwick M, Weiss D. Development and validation of a tool to improve physician identification of elder abuse: the Elder Abuse Suspicion Index (EASI). *J Elder Abuse Negl* 2008; 20(3):276-300.
7. Neale AV, Hwalek M, Scott R, Stahl C. Validation of the Hwalek-Sengstock elder abuse screening test. *J Appl Gerontol* 1991; 10(4): 406-418.
8. Schofield MJ, Mishra GD. Validity of self-report screening scale for elder abuse: Women's Health Australia Study. *Gerontologist* 2003; 43(1):110-120.
9. Giraldo-Rodriguez L, Rosas-Carrasco O. Development and psychometric properties of the Geriatric Mistreatment Scale. *Geriatr Gerontol Int* 2012; June 14 [Epub ahead of print].
10. Summers RW, Hoffman AM, editors. Elder abuse: a public health perspective. Washington DC: American Public Health Association; 2006.
11. Hawes C, Mor V, Phillips CD, et al. The OBRA-87 nursing home regulations and implementation of the Resident Assessment Instrument: effects on process quality. *J Am Geriatr Soc* 1997; 45(8):977-985.
12. Pillemer K, Finkelhor D. The prevalence of elder abuse: a random sample survey. *Gerontologist* 1988; 28(1):51-57.
13. Penhale B. Responding and intervening in elder abuse and neglect. *Ageing Int* 2010; 35:235-252.
14. Marshall CE, Benton D, Brazier JM. Elder abuse. Using clinical tools to identify clues of mistreatment. *Geriatrics* 2000; 55(2):45-53.
15. The Elder Justice Coalition EJA Update, May 20, 2012. Available at: www.elderjusticecoalition.com Accessed Sept. 11, 2012



We Have Been Listening *To You!*



AARC Membership Dues Are Changing *And you have more choices than ever before . . .*

Now you control how you read your publications and how much you save!

\$78.50 Digital Level

You read RESPIRATORY CARE journal and AARC Times online each month. And you get the satisfaction of knowing you're being green. (If you have previously had the AARC Choice level, you are being billed for this option.)

\$84.25 1 + 1 Level

You choose which publication you want to receive in the mail and which you'll read online.

\$90.00 Print Level

Both publications come to you in the mail, just as they always have.



If you like to read online, you can save on your dues, support the AARC, and get all the benefits of membership in exactly the way you want to receive them.

Membership includes a subscription to AARC Times magazine and/or RESPIRATORY CARE journal at \$11.50 each.

Watch for your dues renewal forms and new membership applications.

American Association for Respiratory Care (972) 243-2272 • www.aarc.org • email: info@aarc.org

The Role of Electronic Health Records in the Documentation of Mechanical Ventilator Care

by Felix Khusid, BS, RRT-NPS, FAARC, and Brent Kenney, BSRT, RRT

The winds of change are sweeping the field of health information management, and eventually they will touch every clinician involved with documentation in a medical record. Like everything else these days, these records are going digital and moving into cyberspace, and that means those of us in respiratory care will increasingly be required to document the care we deliver via an electronic health record (EHR). As part of this process, we may encounter more automated documentation as well, particularly for our patients on mechanical ventilation.

An electronic version of the patient chart

An EHR is basically an electronic version of the patient's medical history that features information recorded over time by the provider, including demographics, problems, progress notes, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports.¹ Reported benefits of implementation and use of an EHR are automated access to documentation, streamlining of the clinical workflow, and automated access to support care-related activities, including evidence-based decision support, outcomes report, and quality management.¹ Electronic health records can improve overall patient care through a reduction in medical errors that can occur with improved clarity in the medical record, a reduction in the duplication of tests and delays in treatment, improvements in decision making, and better informed patients.

Switching to an electronic system for recording, capturing, and saving patient information and data is still a challenging prospect for many, but incentives are now in

place to encourage providers to make the leap. With the signing of the Health Information Technology for Economic and Clinical Health Act on Feb. 17, 2009, the government sweetened the pot by making incentive payments available to the tune of \$27 billion over 10 years for those who switch to an EHR and engage in "meaningful use" of the EHR.² To qualify, providers must meet a core set of objectives with measures to be achieved. Many health care systems are evaluating the

cost of the EHR, estimated by the Congressional Budget Office to be around \$14,500 per bed, compared to the benefit of increased payments under "meaningful use."

about the author...



Felix Khusid, BS, RRT-NPS, FAARC, is the respiratory care director at New York Methodist Hospital in Brooklyn, NY. Brent Kenney, BSRT, RRT, is a respiratory therapy supervisor at Mercy St. John's Health System in Springfield, MO.

Getting connected

Thanks in large part to the new government incentives, there are many companies out there today with products and services to help health systems, hospitals, clinics, and physicians convert to an EHR. The three largest vendors based on installations are Meditech, McKesson Provider Technologies, and Cerner.³

In our experience with the Cerner and Epic corporations, the vendor will provide the software needed to use their proprietary EMR. The vendor will also advise the customer about hardware needs for servers, as scalability for future use is critical. A client-server system is most often used where the customer provides the infrastructure and servers. The vendor should install

the software on the servers and optimize it for the servers, number of users, and operational load. Some new systems, however, are Web based. These systems are called Software as a Service (SaaS). This means you

would access the EHR via the Internet using a Web browser or secure Internet connection. This type of system avoids the need for costly internal servers and may be attractive for smaller hospitals.

Since information in the EHR is covered under the Health Insurance Portability and Accountability Act (HIPAA), institutions are legally required to secure the data and ensure that only those with a verifiable and legal need are allowed to access the patient record. Employees involved in patient care, billing, quality management, and chart review for quality assurance purposes would be considered among those with a verifiable and legal need.

Automated documentation for vent settings

As hospitals and health systems make the change from a paper medical record to an EHR, many will also take advantage of new technology allowing for the automatic generation of some information, including ventilator settings. The need to automate this process was illustrated by a 2003 study that found considerable variation in ventilator documentation practices in the institutions surveyed.⁴ Specifically, the researchers looked at whether or not the participants' flow sheets for ventilator settings and measurements contained the items recommended at the time by the AARC Clinical Practice Guideline (CPG) titled "Patient-Ventilator System Checks."⁵

The researchers found that only 15 of 52 items recommended by the AARC CPG were included on blank respiratory therapy flow sheets of every hospital in the study, despite the fact that 10 of 17 respiratory therapy managers surveyed in the study reported using the AARC CPG as the basis for their mechanical ventilation documentation policy. In addition, while data showing the importance of measurement and control of the plateau pressure existed three years before the study,⁶ only 10 of 17 hospitals had plateau pressures recorded in patients with acute lung injury/acute respiratory distress syndrome.

Automation could help overcome this type of documentation shortfall. Modern microprocessor-controlled ICU ventilators are equipped with RS-232 ports on the back. Most manufacturers have software in the ventilator that allows them to send out data via the RS-232 port. The software codes the data sent out, which can be alarms, settings, or measurements. A serial port device server (often referred to as middleware) can be attached to the RS-232 port, which is then connected to an Ethernet cable. The middleware will code the data so that the EHR software will recognize it. The cable connects to your

local area network (LAN), allowing the data to be fed into your EHR server. For example, the Epic EHR has an HL7 formatted device interface that can receive alphanumeric data from monitoring systems. HL7 refers to "Health Level 7," which is a standard for information exchange between medical applications. Using this technology, you can automatically capture the pertinent ventilator settings derived from computerized ventilator management protocols.

Wireless technology that can simplify the hardware issues is also available. Using wireless communication protocols such as Bluetooth®, ZigBee®, and Wi-Fi®, users can transmit data using a wireless serial bridge. A complete discussion of this technology is beyond the scope of this article.

Benefits and barriers

The value of documenting via computerized ventilator management protocols has been assessed in the medical literature. One study published in 2007, for example, compared the quality of manually entered versus automatically generated data.⁷ The researchers looked at 10 ventilator settings, including fraction of inspired oxygen (FIO₂), positive end-expiratory pressure (PEEP), tidal volume, respiratory rate, peak inspiratory flow, and pressure support. The study gauged how often the two types of documentation matched.

The percentage of time that the settings matched ranged from 99% on PEEP to 75.9% on low tidal volume alarm setting. In nearly 4% of the 14,263 suggestions generated by the computerized ventilator management protocols, one or more manually charted setting value did not match the automatically generated data, leading the authors to conclude that even in facilities with well performed manual charting of ventilator settings, automatic data collection can "improve charting efficiency and reduce errors caused by incorrect data."

Alarm response can also benefit from automation. Another study looked at how to provide safe and appropriate notification of ventilator alarms using an automated system that monitors critical ventilator events through the hospital's existing network. When a new event is identified, the automatic system takes control of all of the computers in the unit and emits an enhanced audio and visual alert until the event is acknowledged or resolved.⁸

Of course, automatic documentation isn't without its problems. Getting the data to display in the EHR so that it makes sense clinically is a special challenge. This revolves around the fact that there is no standard taxonomy between manufacturers for naming ventilator

modes. As one author recently stated, “Current nomenclature relevant to ventilator modes is hopelessly confused and outdated.”⁹

The lack of agreement on taxonomy is made more complex by that fact that within differently named modes that perform the same function there are different values to set a parameter. Take pressure support (PS), for example. When used within other modes, such as airway pressure release ventilation, PS has different meanings depending on which manufacturer’s ventilator you are using.¹⁰ This complicates things when trying to categorize and put choices in the EHR flowsheets for all variants.

A seamless flow

Regardless of the current limitations, however, making evidence-based protocols part of the EHR is sure to improve patient care as long as we remember to focus on treating the patient and not the computer. Respiratory therapists can spend more time on patient assessment and care when the ventilator settings and measurements flow seamlessly to the flow sheets in the electronic health record. ■

REFERENCES

- Centers for Medicare and Medicaid Services website. Electronic health records. Available at: <https://www.cms.gov/Medicare/E-Health/EHealthRecords/index.html?redirect=/EHealthRecords/contents> Accessed July 14, 2012
- Blumenthal D, Tavenner M. The “meaningful use” regulation for electronic health records. *N Engl J Med* 2010; 363(6):501-504.
- CBSNEWS.COM website. The top ten electronic medical record vendors. Available at: www.cbsnews.com/8301-505123_162-33640350/the-top-ten-electronic-medical-record-vendors/ Accessed July 14, 2012
- Akhtar SR, Weaver J, Pierson DJ, Rubinfeld GD. Practice variation in respiratory therapy documentation during mechanical ventilation. *Chest* 2003; 124(6):2275-2282.
- American Association for Respiratory Care website. AARC clinical practice guideline: patient - ventilator system checks. Available at: www.rcjournal.com/cpgs/mvscpcg.html Accessed July 14, 2012
- The Acute Respiratory Distress Syndrome Network. Ventilation with lower tidal volumes as compared with traditional tidal volumes for acute lung injury and the acute respiratory distress syndrome. *N Engl J Med* 2000; 342(18):1301-1308.
- Vawdrey DK, Gardner RM, Evans RS, et al. Assessing data quality in manual entry of ventilator settings. *J Am Med Inform Assoc* 2007; 14(3):295-303.
- Evans RS, Johnson KV, Flint VB, et al. Enhanced notification of critical ventilator events. *J Am Med Inform Assoc* 2005; 12(6):589-595.
- Chatburn RL. Classification of ventilator modes: update and proposal for implementation. *Respir Care* 2007; 52(3):301-323.
- Chatburn RL, Volsko TA. Documentation issues for mechanical ventilation in pressure-control modes. *Respir Care* 2010; 55(12):1705-1716.



Advancing Mechanical Ventilation



The Evita Infinity® V500 – Dräger’s Critical Care Ventilator

The V500 provides for comprehensive ventilatory care for adult, pediatric, and neonatal patients. A full set of features to provide protective ventilation and closed loop systems are available to support the clinician. Data management is streamlined for efficient decision making at the bedside. APRV-Auto-Release, Variable Pressure Support, and configurable SmartCare/PS are just some of the new features to support your patients.

VISIT OUT WEBSITE AT WWW.DRAEGER.COM/RESPIRATORYCARE OR CALL 1-800-437-2437

Visit AARC island 1000 in New Orleans

Dräger. Technology for Life®





Executive Office Update

What Does the AARC Do for Me Anyway?

by Thomas J. Kallstrom, MBA, RRT, FAARC

What does the AARC really do for me as a member? Have you ever been asked this question by someone who is not a member? I have numerous times; and when I do, I relish the opportunity to respond back: “How much time do you have?”

For those who practice in our profession but are not members, this is a logical inquiry. It’s even a good question coming from a member, as well, to ensure that the AARC is still meeting that member’s needs. An AARC member should expect to receive something of value for their annual membership fees. Past surveys have indicated that the highest expectations of the AARC are advocacy, education, research, and communication.

Advocacy

This is the number one expectation of our members, and well it should be. Advocacy takes place in a couple of very generic but important ways. The AARC is an advocate for patients as well as for the respiratory therapist. It is a sad reality that many of our patients truly get lost in the milieu of health care regulations and reimbursement. Even something as simple as talking to a government agency or third-party payer can be a daunting task for patients and their caregivers. The AARC has your patients’ needs as a primary focus of our work. We are here for the patient and, as such, must be ready to provide the tools that they need to be successful in navigating the health care system to meet their cardiopulmonary goals.

AARC’s government advocacy efforts are focused on issues at the state level as well as the federal level, and we address both legislation and regulation issues.

In Congress, our Medicare Part B Initiative legislation will enable our patients to have ready access to a respi-

ratory therapist beyond the hospital. Once we successfully get our bill passed we will be able to use our disease management acumen by teaching patients a multitude of self-management skills. With a higher level of competency in their own care, we should expect less reliance on the health care system for exacerbations and acute needs.

At the state level, a key focus this year has been the efforts by the state of Michigan to de-license a number of professions, including respiratory therapists. The AARC has been assisting the Michigan Society for Respiratory Care (MSRC) in its efforts to prevent this de-licensing recommendation and let the National Board for Respiratory Care (NBRC) credentialing take over. We acted as a liaison

between MSRC and NBRC, and provided MSRC with written documentation on the critical need to maintain its profession’s licensure act. This rationale is available to any state society should the need arise.

The AARC responded to a request of the Indiana Society to develop a detailed AARC letter supporting the absolute need for RT licensure during a state agency assessment review to determine if RT licensure should continue or be repealed.

Let me highlight some other recent examples of advocacy that the AARC Government Affairs staff from the Executive Office provided in just the last couple of months for patients and members:

- Discussed patient safety concerns with staff from both the Centers for Medicare and Medicaid Services (CMS) and the Centers for Disease Control and Prevention about new draft surveyor documents that require hospitals to use isopropyl alcohol as a

about the author...



Thomas J. Kallstrom, MBA, RRT, FAARC, is executive director and chief executive officer of the AARC.

disinfecting/cleaning agent for nebulizers. CMS is considering formal recommendations made by AARC in their next round of changes.

- Reviewed and commented on state legislation in Nebraska, Iowa, and Missouri that expands prescriptive authority to nurse practitioners and physician assistants who are credentialed to write RT orders. Since this is consistent with changes made by the Medicare program, AARC supports the legislation.
- Working with our sister organizations, the AARC developed the Medicare Pulmonary Rehabilitation Program Toolkit for RTs and others to use in educating hospital billing departments to correctly charge for all pulmonary rehab legitimate services.
- Signed on to a letter to the Secretary of Health and Human Services (HHS) as members of the Tobacco Partners Coalition regarding the creation of a federal standard for smoking cessation as part of the essential health benefits package.
- As part of the Tobacco Partners Coalition, AARC also signed a joint letter to the U.S. Senate opposing exemption of cigars from the Food & Drug Administration's (FDA) regulatory oversight.
- Supported a bill in Congress that would ease the restrictive Medicare requirement that only physicians may provide direct supervision in a pulmonary rehabilitation program.
- Wrote a letter to members of Congress in support of the Medical Gas Safety bill, which would require specific regulations geared toward the unique properties of medical gases.
- Submitted written comments to the U.S. Internal Revenue Service opposing guidelines that would tax certain oxygen and other respiratory devices under provisions mandated by the Accountable Care Act (health care reform law) that are generally purchased by individuals for individual use, not institutional use.
- Provided input on durable medical equipment regulations to the chief medical officer of the HHS National Disaster Medical System as part of a manuscript he's writing for an AARC oxygen conference.
- Reviewed and commented on an obscure Louisiana emergency medical technician law that would have prevented RTs from participating as members of ground transport teams. The Louisiana Society for Respiratory Care was able to revise the restrictive provision in the law.
- AARC signed a joint letter with medical and public health organizations to oppose congressional ef-

forts to lift the ban on the sale of Primatene Mist.

- Wrote letter to Texas Health and Human Services Commission warning of the unintended consequences of decreasing Medicaid payments for pressure-support ventilators.
- Met with the U.S. Department of Labor in an effort to provide detailed information about the role of the respiratory therapist and how respiratory services are currently being provided and reimbursed.

As you can see from our activities in just the last few months, the AARC works with local, state, and federal governments on public policies that impact our patients and our members. From Medicare and Medicaid reimbursement issues to health care reform proposals, the AARC keeps Congress, state, and local policymakers up to date on the issues that are important to patient care and respiratory practice.

The AARC also sends representatives to more than 20 outside groups and organizations that work on common issues, including The Joint Commission, the American Hospital Association, the American Medical Association's CPT Editorial Panel (coding), and the federal government's National Asthma Education and Prevention Program among other groups.

Did you know that we have a disaster fund that provides to members financial reimbursement should they suffer damage as a result of a natural disaster? We have awarded over \$100,000 over the years from this fund.

Education

Post-pedagogical education and continuing education is essential for our members. This education comes in a variety of formats such as webcasts, Professor's Rounds presentations, live presentations at both the Summer Forum and AARC Congress, online classes, written guidebooks, and many other multimedia materials that provide clinicians relatively inexpensive access to the education required to maintain competency as well as licensure in most states.

With our Continuing Respiratory Care Education® (CRCE) database of AARC-approved educational programs, members do not have to worry about keeping track of their completed education because the AARC does that for them. The AARC is especially proud of its ability to develop and offer ample amounts of free CRCE education throughout the course of the year to its members. In fact, members can frequently obtain enough free CRCE contact hours as a member benefit to meet their states' license requirements.

All educational opportunities that the AARC provides are developed with input from our members about their

needs in the clinical arena. The COPD Educator Course and Asthma Prep Course, for example, were developed because of a documented need within the respiratory care community.

The last quarter of 2012 and the beginning of 2013 will also bring updated editions on many educational products, as well as some exciting new products that are critical to both new and experienced respiratory therapists around the world.

Research

The AARC promotes research through both the journal *RESPIRATORY CARE* and the American Respiratory Care Foundation. Monthly we publish peer-reviewed science in the Journal that is submitted from around the globe on pertinent topics that cannot be found in other science publications. We encourage members to introduce themselves in the field of respiratory science by first submitting an OPEN FORUM abstract in the late spring of every year. If accepted after a peer-review process, the member will be invited to present their scientific findings at the AARC Congress in the fall as well as have the abstract published in *RESPIRATORY CARE* in the month preceding the Congress.

The AARC publishes the proceeds of two Journal Conferences annually, again on relevant and timely topics that relate to the provision of quality and cutting-edge patient care. The AARC also offers the opportunity to obtain grant money for science that promotes the vital role that the respiratory therapist makes in patient care through a peer-reviewed grant process.

Another avenue of research support is provided through the American Respiratory Care Foundation, which is awarded annually at the awards ceremony at the AARC Congress for academic achievement, scholarships, and publications.

Communication

We strive to be your preferred clearinghouse to go to for the latest information concerning the profession. We send weekly *News Now@AARC* emails to members that provide current news and information to the profession from reliable sources. This communication vehicle provides a short digest that directs you to a Web link should you wish to learn more about the subject. Our website, set to undergo a major upgrade and revision, is another information source that is critical to your daily clinical

practice. As we prepare to provide an overhaul to www.aarc.org in the coming months, you will see more pertinent information provided in a much more intuitive multimedia fashion you have grown accustomed to in today's digital society.

Of course, being a member allows you to take advantage of the ability to actively participate in roundtables as well as our 10 specialty sections. Both are exceptional networking vehicles for our members, which are often provided via a real-time or digest version email through AARConnect.

Patients can access the AARC for their educational and clinical needs through a patient-specific website, www.yourlunghealth.org. This is a digital platform where patients can readily learn about respiratory-related information in an easily understood format. In addition to this

we have a digital magazine called *Allergy and Asthma Health* that is specifically written at the patient and caregiver level.

Membership dues to the AARC, when compared to other associations of the same size, are noticeably less. In fact, the AARC now offers membership at a lower cost should the mem-

ber opt to have access to the electronic publications. We are passing this savings on to our members while at the same time continuing our revenue sharing plan with your state affiliates, which provides \$12 of your dues back to your state society.

The sad truth is that while we continue to grow in numbers, two out of three practicing respiratory therapists choose not to be members of the AARC. I challenge you to assist us as we work to communicate the value of belonging to the only professional respiratory care organization that seeks to meet their daily needs on the local, regional, national, and international platform. There is power in numbers, and we need to work together to educate those who are not members about the benefits of membership.

The number of executive office staff working to ensure and provide all these benefits and opportunities has not changed in nearly two decades. In fact, much like the profession itself, the amount of productivity per staff member continues to climb as our membership numbers grow. Much is planned in the coming year that we hope will satisfy our members who rely on the AARC. We always appreciate your feedback, and I invite you to contact me directly should the need ever arise. My email address is Kallstrom@aarc.org. ■

There is power in numbers,
and we need to work
together to educate those
who are not members about
the benefits of membership.

National Emergency and the Standard of Care

by Anthony L. DeWitt, JD, RRT, FAARC

In September 2001 when the twin towers fell in New York City, the nation's respiratory therapists responded. Therapists from all over the country mobilized to help. In September 2005 after Hurricane Katrina, Gulf Coast residents benefitted from therapists who gave their time and talents. When F-5 tornadoes tore through Tuscaloosa, AL, and Joplin, MO, in 2011, again respiratory therapists were among the first who went to the affected areas, donated their services, and worked hard to restore the health care systems affected. Respiratory therapists, as a group, tend to run toward disaster instead of away from it. It is one of the things I love most about the professionals in this Association.

The question sometimes arises, "what becomes of the standard of care in an emergency?" Does a trauma victim removed from the wreckage of a tornado have the same rights to the same kind of emergency treatment at a makeshift field hospital organized to treat survivors that a private patient would have at a facility during a non-emergency? The answer is a qualified "no."

No reported cases

Incredibly, the issue has not been litigated in the context of medical negligence following a national disaster at any time in the last 40 years. In a search through online legal databases, I could find no cases where individuals sued a hospital or physician for negligence in the aftermath of a storm or natural disaster. There have been lawsuits against the federal government, however. In *Freeman v. United States*, relatives of Hurricane Katrina victims filed suit against the United States to hold it liable under the Federal Tort Claims Act

for the deaths of loved ones. The plaintiffs sued based on the Federal Emergency Management Agency (FEMA) and its management negligently failing to perform "non-discretionary duties" arising under the National Response Plan.

The District court dismissed the actions, and the Fifth Circuit affirmed, holding that the discretionary function exception of the Robert T. Stafford Disaster Relief and Emergency Assistance Act barred suits based on the federal government's handling of relief efforts in the aftermath of Hurricane Katrina. Thus therapists operating under a National Response Plan emergency designation are likely cloaked in a form of sovereign immunity while carrying out medical duties assigned to them. Prudence still dictates that therapists carry a standard policy of malpractice insurance to cover themselves in the case of a lawsuit. Immunity simply means you have a right to get out of the lawsuit; but without a lawyer, paid for by your insurer, you might not have the ability to get out without paying a lot of money up front.

Circumstances control

But what of the therapist who shows up and volunteers to render aid when there is no federal emergency declared? The key to the question is found in the way the standard of care is defined in the civil law. The standard of care is what a reasonable person would do under the *same or substantially similar situation*. If the emergency finds you in a tent inside a field hospital without all the equipment you might have at your disposal in a hospital, then that situation — not the patient's medical needs — controls your

about the author...



Anthony L. DeWitt, JD, RRT, FAARC, is an attorney and a partner in the firm Bartimus, Frickleton, Robertson & Gorny, PC, and resides in Jefferson City, MO. He has also authored two books and numerous legal journal articles. This article is not a substitute for legal advice.



Helpful Websites

Amateur Radio Emergency Service (ARES) — www.arrl.org/ares
 The National Association for Amateur Radio (ARRL) — www.arrl.org
 Radio Amateur Civil Emergency Service (RACES) — www.usraces.org

liability. The only exception is where a hospital or emergency management agency was negligent in not stocking the emergency supplies; and in that situation, the agency, and not the therapist, is left holding the bag. The law does not require you personally to be constantly armed with medical gear and ready to engage any medical condition.

The same is true of a national disaster. If the CT scanner is out, due to the emergency, then portable radiography might be the best available option. So long as a therapist operates reasonably in light of the situation, in most cases a deviation from the standard of care will not be found.

Another way therapists can assist

Across the country, therapists have found numerous ways to make themselves indispensable in times of disaster. Therapists drill at their hospitals for emergency and mass casualty situations. Therapists join federal disaster response teams to assist in FEMA operations. And many therapists, like me, are amateur radio operators or “hams.” Amateur radio clubs and the disaster response organizations ARES (an organization of the American Radio Relay League) and RACES (an organization sponsored by FEMA) practice alongside medical and disaster officials during drills, relaying information and requests for assistance and supplies when regular landline or microwave communications are compromised after an emergency. The ability to locate loved ones, coordinate disaster responses, and organize search efforts with

portable battery-operated radio gear is frequently a god-send in a real emergency.

While many therapists think it is difficult to become an amateur radio operator, it is actually quite simple. While radio operators at one time had to learn Morse Code, that requirement has been lifted. To get a technician class license requires passing a 35-question test administered by a volunteer exam coordinator and paying \$15 for a license. The full pool of 350 questions is available to study prior to the test, and dozens of study resources are available.

Portable and mobile ham radios can be found online for less than \$100. Membership in a local radio club is often less than \$25 a year and provides training and support for new operators. Therapists are especially valuable in emergency service communications because they understand the concepts of triage and issues of medical privacy that non-medically-trained radio operators may not. For therapists interested in becoming a ham radio operator, the American Radio Relay League has an information page at www.arrl.org/licensing-education-training. ■

EDITOR'S NOTE: Anthony DeWitt is a general-class amateur radio operator, callsign KD0SLC. He is a member of the American Radio Relay League and the Mid Missouri Amateur Radio Club.

Respiratory therapists tend to run toward disaster instead of away from it. It is one of the things I love most about the professionals in this Association.



Not Just OSA: Sleep-associated Syndromes A Review of Restless Legs Syndrome

by Suzanne Bollig, RRT-SDS, RPSGT, FAARC

The recognition that the quality and quantity of sleep an individual is able to achieve has a major influence on one's ability to maintain both physical and mental well-being and ultimately quality of life has led to increased interest by both the general public and the medical community on the subject of sleep and sleep disorders. The most common sleep disorders include obstructive sleep apnea (OSA), narcolepsy, restless legs syndrome (RLS), and insomnia, with much of the emphasis on diagnostic sleep testing and treatment aimed at OSA. Untreated OSA is associated with significant comorbidities including hypertension, heart attack, diabetes, obesity, and stroke;¹ and this has led to it being one of the primary reimbursable indications for sleep testing. It is important, however, that we do not forget the many other sleep disorders or conditions that can lead to poor sleep and eventually poor health and performance. This article will provide a review of a sleep disorder known as restless legs syndrome that is also associated with a number of chronic medical conditions and is responsible for a disrupted sleep-wake cycle.

Description

Restless legs syndrome, also known as Ekbom syndrome, affects from 5–10% of adults² and is a neurologic sensory and motor disorder characterized by uncomfortable sensations in the legs when at rest and results in an irresistible urge to move. In some individuals, the uncomfortable sensations can affect their arms as well. RLS sufferers usually describe the uncomfortable sensations as creepy, crawling, tingling, or even burning; and these sensations intensify until temporarily eased by movement. Since these uncomfortable sensations occur at rest and typically occur primarily in the evening,

they tend to cause difficulty in initiating and maintaining sleep, and (depending on their severity) may result in significant sleep loss and daytime sleepiness. Individuals with RLS often present with a primary complaint of insomnia or the inability to sleep. In general, significant sleep loss (such as seen with RLS) can lead to decreased sense of well-being, impaired cognitive performance, decreased work productivity, and mood changes.

about the author...



Suzanne Bollig, RRT-SDS, RPSGT, FAARC, is the manager of the Sleep Disorder and Neurodiagnostic Institute, Center for Health Improvement at Hays Medical Center in Hays, KS.

Features

Diagnostic criteria for RLS includes four key features:

- a strong, irresistible urge to move accompanied by uncomfortable sensations in the legs,
- symptoms that worsen with inactivity,
- improvement in symptoms with movement, and
- symptoms that start or get worse in the evening.³

Approximately 80% of RLS sufferers will also have periodic limb movements of sleep (PLMS) that continue after sleep onset and contribute to the associated symptom of daytime fatigue and sleepiness. Restless legs syndrome affects all ages and gender; though according to the American Academy of Sleep Medicine (AASM), women are 1.5 to 2 times more likely to have RLS, and the incidence of RLS increases with age.⁴

Primary RLS is the most common form of RLS, and its cause is unknown. Symptoms tend to worsen over time, and there appears to be a genetic component. According to the AASM factsheet, "More than 50% of people with primary RLS report a pattern of the disorder in their family. First-degree relatives of a person with RLS are three to six times more likely to have it."⁴ Secondary RLS is asso-

ciated with, or caused by, another medical condition or occurs as the result of certain medications or substances.

Causes and associated medical conditions

Substances such as caffeine, alcohol, and tobacco, as well as a number of medications both prescription and non-prescription, are known to exacerbate RLS symptoms. Cold and allergy medications that contain antihistamines (diphenhydramine), anti-nausea medications (prochlorperazine, promethazine, metochlopramide), tricyclic antidepressants and SSRIs (amitriptyline, fluoxetine, escitalopram, venlafaxine), tranquilizers (haloperidol, thioridazine, chlorpromazine), psychiatric medications (lithium), and calcium channel blockers (amlodipine) also are associated with increased RLS.⁴

Iron deficiency and conditions producing it — e.g., frequent blood donation, heavy menstrual periods, pregnancy, and end-stage kidney disease — are associated with the development of RLS symptoms.⁴ Pregnancy particularly seems to be associated with at least transient RLS, with symptoms reported by 17% of women in their first trimester and progressing to nearly 30% reporting symptoms in their third trimester. Interestingly, in a Swedish study published in 2012, 31% of the women continued to have RLS symptoms three years after delivery.⁵ The incidence of RLS in patients with end-stage renal disease on dialysis was reported at nearly 22% in one study,⁶ though significant improvement in RLS symptoms was noted following successful kidney transplants.⁷ And finally, a 2007 study from Italy showed that the prevalence of RLS in diabetic patients was 17.7%, which also was significantly higher than the 5–10% reported in the general population.⁸

Treatment

The primary goal of RLS treatment is to decrease discomfort and the resulting disruption to sleep. If RLS is the result of another underlying medical condition, attention to the underlying condition will be necessary in order to improve symptoms. Lifestyle changes such as the avoidance of caffeine, alcohol, and tobacco may lead to improvement of symptoms. Other non-pharmacologic treatments shown to reduce symptoms include the adoption of a moderate, regular exercise program and the development of good sleep habits. Adopting a healthy and balanced diet to ensure an adequate intake of iron, folate, and magnesium-rich foods may also help to alleviate symptoms. Iron and vitamin supplements may be indicated if ferritin levels prove to be low, but they should only be taken on the advice of a health care provider.

The U.S. Food and Drug Administration has currently approved three drugs for the treatment of RLS: ropinirole (Requip®, GlaxoSmithKline, Philadelphia, PA), pramipexole

(Mirapex®, Boehringer Ingelheim, Ridgefield, CT), and gabapentin encarbil (Horizant®, GlaxoSmithKline, Philadelphia, PA). Dopamine agonists such as Requip and Mirapex are considered first-line drugs for the treatment of severe RLS and increase the level of the neurotransmitter dopamine, thought to be important in the regulation of muscle movement. Benzodiazepines such as clonazepam are sedatives that may suppress some of the muscle activity of RLS but work primarily by reducing awakenings and helping to maintain sleep. Anticonvulsants such as gabapentin may reduce muscle contractions in some people and are effective for mild RLS and for those unable to take dopamine agonists. Gabapentin should be used with caution in individuals with renal failure, in the elderly, and those with depression. Opioids (propoxyphene, oxycodone, methadone) are used primarily for patients with severe RLS associated with pain who are unresponsive to other treatment.

Respiratory therapist's role

It is important to remember that OSA is not the only sleep disorder that can have serious consequences if unrecognized and left untreated. As a health care provider, be aware of the signs and symptoms of restless legs syndrome and the possibility that complaints of insomnia may be related to undiagnosed or untreated RLS. Consider the indications for and potential side effects of pharmacologic therapy for RLS. Finally, be aware that RLS is often associated with other medical conditions and commonly used medications and be prepared to assist your patients in obtaining a thorough sleep evaluation that may lead to improvement in their sleep and overall health status. ■

REFERENCES

1. Somers VK, White DP, Amin R, et al. Sleep apnea and cardiovascular disease. *J Am Coll Cardiol* 2008; 52(8):686-717.
2. Zucconi M, Ferini-Strambi L. Epidemiology and clinical findings of restless legs syndrome. *Sleep Med* 2004; 5(3):293-299.
3. Allen RP, Picchietti D, Hening WA, Trenkwalder C, et al. Restless legs syndrome: diagnostic criteria, special considerations, and epidemiology. *Sleep Med* 2003; 4(2):101-119.
4. American Academy of Sleep Medicine website. Restless legs syndrome. Available at: www.aasmnet.org/resources/factsheets/rls.pdf Accessed July 20, 2012
5. Sarberg M, Josefsson A, Wirehn AB, Svanborg E. Restless legs syndrome during and after pregnancy and its relation to snoring. *Acta Obstet Gynecol Scand* 2012; 91(7):850-855.
6. Gigli GL, Adorati M, Dolso P, et al. Restless legs syndrome in end-stage renal disease. *Sleep Med* 2004; 5(3):309-315.
7. Winkelmann J, Stautner A, Samtleben W, Trenkwalder C. Long-term course of restless legs syndrome in dialysis patients after kidney transplantation. *Mov Disord* 2002; 17(5):1072-1076.
8. Merlino G, Fratticci L, Valente M, et al. Association of restless legs syndrome in type 2 diabetes: a case-control study. *Sleep* 2007; 30(7):866-871.

ADDITIONAL RESOURCES

Restless Legs Syndrome Foundation: www.rls.org
 American Sleep Association: www.sleepassociation.org
 National Sleep Foundation: www.sleepfoundation.org

Mentoring: Shaping Our Future and Defining Our Legacy

by Brian K. Walsh, MBA, RRT-NPS, FAARC

Since 1947, respiratory therapists have been providing care to patients with cardiopulmonary disorders. Along this 65-year journey, we have developed from on-the-job trainees to full-fledged professionals with academic and credentialing standards that have led to a sustained contribution to the health of the patients we serve. Yet, the RTs of the 1940s and 1950s do not resemble the RTs of today. In addition, the health care system is experiencing drastic reform.

In 2007, the American Association for Respiratory Care developed the “2015 and Beyond” project. This project was broken into a series of conferences designed to help guide the future direction of the respiratory care profession. The first conference established the vision for respiratory care in 2015 and beyond.¹ The second created competencies needed by graduate respiratory therapists,² and the last set the groundwork for transitioning the respiratory therapy workforce.³ However, relational knowledge transfer was left from the transition equation.

According to the “2009 AARC Respiratory Therapist Human Resource Study,” many of our leaders and educators will be retiring,⁴ and those retirees will be replaced with advanced credentialed and higher educated RTs.⁵ In addition, an increasing number of leaders may opt for growth opportunities outside of the hospital, home, or clinic setting. Some will leave health care altogether to start careers in different fields. It is precisely for these reasons that our profession must focus on and build an infrastructure within our workforce that can develop, adapt, and regenerate itself over time. One small but powerful tool I suggest is mentorship.

Building the RC workforce infrastructure

According to Bell, a mentor is someone who helps someone else learn something that would have otherwise been learned less well, more slowly, or not at all.⁶ Webster’s Dictionary defines a mentor as an experienced advisor, supporter, or trainer. Mentoring, therefore, has to be the act of a mentor. Maya Angelou has been quoted as saying “I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”⁷ The act of mentoring has the potential to motivate or facilitate the process of discovery and insight.

Mentoring is a commitment, a trusted relationship, a dedication to life-long learning. The origins of mentoring can be traced back to ancient Greece as a technique to impart to young men important social, spiritual, and personal values. The character of Mentor in the Homeric legend of the Trojan War inspired the word itself.⁸ Though Mentor, in the story, is a somewhat ineffective old man, the goddess Athena takes on his appearance in order to guide young Telemachus (Odysseus, King of Ithaca’s son) in his time of difficulty. The role of Mentor was not only to care for the child but to educate, shape his character, and assist him in making clear and steadfast decisions. Historically, significant systems of mentorship include traditional Greek pederasty, the guru-disciple tradition practiced in Hinduism and Buddhism, and the elders and discipleship system practiced by the Christian church.

Mentoring today is loosely modeled on the historical craftsman/apprentice relationship, where young people

about the author...



Brian K. Walsh, MBA, RRT-NPS, FAARC, is the clinical director of respiratory care at Children’s Medical Center Dallas in Dallas, TX.

Improve the Quality of Education and Care of Your Asthma Patients

with the *Online* AARC Asthma Educator Certification Preparation Course



American Association
for Respiratory Care

9425 N. MacArthur Blvd.
Suite 100, Irving, TX 75063
(972) 243-2272 • info@aarc.org

www.AARC.org



As a respiratory therapist, you are at the core of the team responsible for educating and caring for asthma patients.

Although you have many clinical skills in asthma care, there are additional soft skills that are required to work as an effective asthma educator. The AARC Asthma Educator Certification Preparation Course helps you learn those skills and also prepares you for the AE-C credentialing exam from the NAECB.

LEARN MORE AT AARC.ORG/EDUCATION/ASTHMA_COURSE

What the AE-C Educator Course Means to You

Expanding your understanding of asthma is a natural professional growth opportunity. Even if you don't practice as an asthma educator, it increases your knowledge so that you can *improve your education and care of asthma patients*. And, make yourself more valuable to your employer. According to a survey of AE-C holders, the certification resulted in additional job responsibilities for 20% of respondents – accounting for a 9.4% increase in salary.

SOURCE: The Certified Asthma Educator: The U.S. Experience, Pediatric Allergy, Immunology, and Pulmonology, Vol. 24, No. 3, 2011.

The Challenge of Passing the AE-C Examination

Respiratory therapists are trained in much of the content area of the AE-C examination, however portions of the examination have proven to be a challenge for RTs and other disciplines—those are the sections that are outside the RT's normal scope of practice. The AARC course helps you prepare for those sections as well as provide a refresher on scope of practice materials. Participants report a higher pass rate than the national average for respiratory therapists who took the AE-C exam. That is why more than 2,500 respiratory therapists and others have relied on the AARC course.

This continuing nursing education activity was approved by the Illinois Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.



The Asthma Educator Certification Preparation Course has been accredited by the International Education Recognition System (IERS) and Continuing Respiratory Care Education (CRCE).

The Asthma Educator-Certified (AE-C) credential is awarded by the National Asthma Educator Certification Board (NAECB). Visit www.naecb.com/exam_information.php. The AARC Asthma Educator Certification Preparation Course is not endorsed, co-sponsored, or in any way affiliated with the NAECB.

Nonmember Price \$225.00

MEMBER PRICE \$165.00

(AARC Members SAVE \$60.00)

Earn
10.5 CRCE®
Credits

Recertification Discount: Receive a \$30 discount if you are preparing for AE-C recertification and have previously taken the AARC online or live Asthma Educator Certification Preparation Course.

learned a trade by shadowing the master artisan. In the mid-1970s, corporate America redefined mentoring as a career development strategy. Yet, there is almost nothing written on mentoring specific to the respiratory care profession or as a tool to transition it into the future. Mentoring is a vital part of the leadership role that has learning (competence, proficiency, skill, know-how, and wisdom) as its primary outcome. Is it the tool that could take us to 2015 and beyond?

Engaging the mentee

Mentoring requires a mentor to act on behalf of the mentee, not only for the protégé's wellbeing, but also for the future health of pulmonary patients and the profession. Great mentors share their knowledge, roll up their sleeves, and get their hands dirty. Many people feel they must hoard knowledge because knowledge is power. However, knowledge is only valuable if you can act upon it, and successful mentors know they must make their knowledge available for others to use. This requires a deep trust and respect for the mentee but often leads to new insights and greater wisdom, reduces the "reinvention of the wheel," increases efficiency, and promotes innovation.

The literature generally supports the notion that the mentor, in the early years, is critical for launching productive careers, for learning the informal network that supports productivity, for understanding the inner workings of professional associations, and for identifying the most productive people.⁹

The mentor typically extends an invitation to the mentee by identifying those who are most likely to parallel their career. However, this is not always the case. Sometimes you must seek out your mentor. Most people are nervous to ask a person to be his or her mentor. From experience, I can tell you honestly that there is no greater reward than hearing those words. It is the greatest compliment someone could possibly give. There's an instant feeling of wanting to help. Deep down, we all want to help others. It's in our DNA.

Giving the gift of growth

Future advantages for the mentor may be seen as developing a successor or disciple to carry on one's work or the perpetuation of certain codes or covenants in respiratory care. If we are to succeed at making the transition

to the year 2015 and beyond, we must start mentoring today. We are interdependent on each other, and we know when we help others then we also help patients, the profession, and ourselves. Except for love, there is no greater gift one can give another than the gift of growth.⁶ It is great experience to watch a mentee become a mentoring success.

John Crosby once said, "Mentoring is a brain to pick, an ear to listen, and a push in the right direction."¹⁰ The "push in the right direction" is what the "2015 and Beyond" project individuals have accomplished, but now we must conduct a knowledge transfer from those who have gone before us and established the practice we have today, so that we can return the

favor and mentor the future. ■

Our profession must build an infrastructure within our workforce that can develop, adapt, and regenerate itself over time.

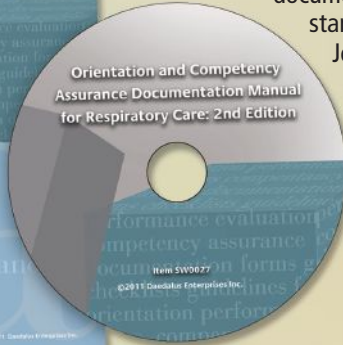
REFERENCES

1. Kacmarek RM, Durbin CG, Barnes TA, et al. Creating a vision for respiratory care in 2015 and beyond. *Respir Care* 2009; 54(3):375-389.
2. Barnes TA, Gale DD, Kacmarek RM, Kageler WV. Competencies needed by graduate respiratory therapists in 2015 and beyond. *Respir Care* 2010; 55(5):601-616.
3. Barnes TA, Kacmarek RM, Kageler WV, et al. Transitioning the respiratory therapy workforce for 2015 and beyond. *Respir Care* 2011; 56(5):681-690.
4. Applied Measurement Professionals I. Introduction to all AARC respiratory therapist human resources studies – 2009. American Association for Respiratory Care.
5. Kacmarek RM, Barnes TA, Durbin CG Jr. Survey of directors of respiratory therapy departments regarding the future education and credentialing of respiratory care students and staff. *Respir Care* 2012; 57(5):710-720.
6. Bell CR. *Managers as mentors: building partnerships for learning*. San Francisco CA: Berrett-Koehler Publishers; 2002.
7. Angelou M. *The collected autobiographies of Maya Angelou*. New York: Modern Library; 2004.
8. Griffin J. *Homer: the odyssey*. Cambridge UK: Cambridge University Press; 1987.
9. Barondess JA. A brief history of mentoring. *Trans Am Clin Climatol Assoc* 1995; 106:1-24.
10. Brainy Quote website. John C. Crosby quotes. Available at: www.brainyquote.com/quotes/authors/j/john_c_crosby.html Accessed Sept. 19, 2012



Respiratory Management Made Easier

Orientation and Competency Assurance Documentation Manual for Respiratory Care, 2nd Edition



Take the worry out of documenting orientation and competency in respiratory care. This manual contains the information, assessment forms and models that you need. With current content in an easy-to-use digital format, the manual provides tools for documentation of compliance for Respiratory Care Services with the 2010 standards for CMS, IHI (Institute for Healthcare Improvement), and The Joint Commission. Terminology is consistent with the AARC Uniform Reporting Manual. The CD includes guidelines in chapter form with reference to over 90 detailed competency documentation forms. It's truly an "off the shelf" system that you can begin using right away. Copyright 2011 Daedalus Enterprises Inc.

ITEM # SW0027

Nonmember Price \$159.00

Member Price \$119.00



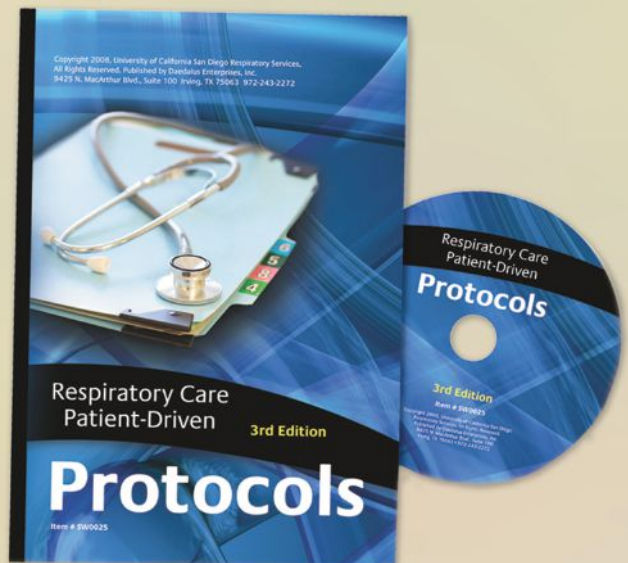
Respiratory Care Patient-Driven Protocols, 3rd Edition

The pressure is on to operate a respiratory care department more economically. And there are only so many ways you can accomplish cost savings. One of the most significant is the use of protocols by respiratory therapists. Protocols have been documented as an established method to reduce expenses. This manual is an excellent resource for the development, implementation, or refinement of care plans. The CD contains a PDF file containing algorithms with each protocol. Visio files of algorithms are also included. Copyright 2008 University of California San Diego, Respiratory Services.

ITEM # SW0025

Nonmember Price \$130.00

Member Price \$90.00



Additional educational and management resources are available from the AARC. Select from videos, books on CD, handouts for patient education and career, and much more. The AARC Respiratory Catalog allows you to search by keyword, so it is easy to find all items related to your topic of choice. Your purchases also provide support directly back into the AARC for educational programs, public relations for growth and awareness of the profession, advocacy at the state and national level, and much more.

Novel Inhaled Nicotine Delivery Systems

by Nathan K. Cobb, MD

Despite decades of research and public health efforts, cigarettes and the inhalation of combusted tobacco smoke remains one of the foremost public health threats in the United States. Even with aggressive public health campaigns, smoking rates remain stalled at 19%.¹ While the addiction to tobacco is driven by nicotine, the drug itself contributes little to the overall morbidity from smoking. The pharmaceutical industry has taken advantage of this fact to develop multiple forms of nicotine-replacement products — safe and effective medications to assist in planned tobacco cessation.² Unfortunately, consumer acceptance of these products is relatively poor. Novel forms of nicotine replacement therapy (NRT), especially improved inhalation devices that could substitute for tobacco use and assist in smoking cessation, could dramatically shift the nation's health and lead to a sea change in respiratory health.

Other forms of inhaled nicotine

For decades the tobacco and pharmaceutical industries have worked in parallel to develop alternative forms of inhaled nicotine, either by eliminating the combustion process or by refining out nicotine from raw tobacco and delivering it directly. Eclipse and its predecessor Premier (RJ Reynolds, Winston-Salem, NC) was a tobacco-based product developed in the 1990s and designed to heat rather than burn tobacco, theoretically producing a less deadly product. Smokers lit the tip of these devices, causing a small charcoal plug to heat tobacco soaked in propylene glycol and glycerol. These humectants carried nicotine content similar to that of a regular cigarette in a vapor

fog that mimicked smoke.³ Favor, a small cigarette-shaped inhaler that contained refined nicotine but did not produce vapor or smoke, was briefly marketed during the same period. It was forcibly removed from the market by the U.S. Food and Drug Administration (FDA) as a “nicotine delivery system,” and the intellectual property was ultimately purchased by a pharmaceutical company and became today's Nicotrol inhaler (Pfizer Inc., New York, NY).⁴ All three products were failures with both regulators and consumers; only the Nicotrol inhaler is currently available, and it occupies a niche status.

Part of the failure of alternative inhalers to connect with smokers seeking to quit or cut back has been slow and difficult nicotine delivery. Combusted tobacco smoke produces a particle size of 2–4 μm or lower, which is optimal for alveolar deposition deep in the lung, rapid arterial uptake, and delivery directly to the brain. Most inhalation devices, including the pharmaceutical inhaler, deposit nicotine more proximally in the mouth or airways, resulting in slower delivery to the brain through the venous system. The rapid, spiking nicotine delivery of combusted cigarettes via arterial blood differentiates the abuse liability of cigarettes from chew or spit tobacco and various forms of pharmaceutical NRT.

The pharmaceutical industry has invested significantly in the development of alternatives: pressurized metered dose inhalers, aerosolization devices, and even plating inert metal strips with nicotine that liberate gas phase nicotine when heated⁵ — none of which have received FDA approval.

about the author...



Nathan K. Cobb, MD, is a research investigator at the Schroeder Institute for Tobacco Research at Legacy in Washington, DC. He also holds faculty positions with Georgetown University Medical Center in Washington, DC, and Johns Hopkins Bloomberg School of Public Health in Baltimore, MD.

Unregulated devices

Despite the failure of larger companies to develop attractive products, an estimated 10% of current smokers have tried unregulated devices labeled “electronic cigarettes.”⁶ These devices are manufactured by an array of small companies, often imported from overseas and sold online, in convenience stores, and in malls. The inhalers are essentially simplified descendants of Eclipse; in lieu of a charcoal plug, they contain a small electronic heating element and a pressure sensor. Instead of soaking tobacco in humectant, the devices contain only refined nicotine in propylene glycol solution wicked into a fibrous plug. Drawing on an electronic cigarette triggers the pressure switch, closes the electric circuit, and heats the nicotine solution. The resulting change in temperature combined with pressure drop generates a nicotine-laden fog that is visible when exhaled.

The vapor in tested electronic cigarettes, similar to previous inhaler products, appears to deposit the nicotine proximally. Naïve users (e.g., smokers looking to transition) may find nicotine delivery very poor if they use the device as they would a cigarette.⁷ More experienced users, particularly those who use more refined nicotine solutions or modify their devices, can generate sustained plasma nicotine levels meeting or exceeding those seen in NRT studies.⁸ However, due to the lack of any regulation of the devices or their contents, product variability and quality control make predicting nicotine delivery in any given “electronic cigarette” nearly impossible. Much like printers, manufacturers sell devices and cartridges separately. A given device might accept cartridges with varying nicotine content, flavors, or even humectants. Individual users often choose to manually refill their cartridges by buying bottles of nicotine solution and dripping the contents into used or empty cartridges. Multiple studies have shown variable nicotine content and delivery across brands, models, and cartridges, indicating an industry still struggling with quality control.⁹⁻¹²

Despite this fact, it is likely that the current, rudimentary models currently on sale will become more sophisticated once larger, more experienced companies enter the market. Philip Morris has purchased intellectual property to enable arterial delivery by using a nicot-

tine pyruvate salt.¹³ Other large tobacco companies have purchased competing technologies or electronic cigarette companies outright, and it is reasonable to expect that they will use their research and development experience to optimize the nicotine delivery and addiction potential of the individual products.

There are sizable unknowns associated with electronic cigarettes — both potentially positive and negative. It is unclear what the long-term impact of inhalation of propylene glycol may be on respiratory physiology and lung health. Limited data on the inhalation of electronic cigarette vapor or propylene glycol indicates it can be a respiratory irritant;^{14,15} but there is no available data on either long-term administration or its use in patients with lung disease.

The long-term impact of inhaling electronic cigarette vapor (or propylene glycol) on respiratory physiology and lung health is unclear, but limited data indicates it can be a respiratory irritant.

Lacking regulation of the devices, there is nothing stopping device manufacturers from changing humectants (e.g., propylene glycol to vegetable glycerin). Consistent with this trend to substitution is at least one case report of lipoid pneumonia in an e-cigarette user.¹⁶ Equally unknown is the potential efficacy of these devices in promoting smoking cessation; limited pilot data is suggestive,^{11,17} but more important is the sizable body of literature that supports nicotine replacement as a therapeutic class.² There appears to be no fundamental reason that a propylene glycol-based nicotine inhaler could not be as effective as existing nicotine replacement products if constructed and manufactured under appropriate quality and safety controls.

Future regulations blurred

In the bigger picture, the electronic cigarette companies, along with the tobacco and pharmaceutical industries, are waiting for the FDA to take regulatory action and bring clarity to the market. Blocked in an initial attempt in 2010 to remove electronic cigarettes from the market,¹⁸ the FDA subsequently announced its intent to regulate the industry but has made no further move in the subsequent 18 months. The Family Smoking Prevention and Tobacco Control Act of 2009 gives the FDA the authority to regulate such devices as tobacco products under a harm reduction pathway rather than as drug delivery devices.¹⁹ Assuming the FDA pushes forward, future devices will likely be required to show evidence of safety and harm reduction while also being barred from

making therapeutic claims (e.g., smoking cessation). What remains unclear is when the FDA will act and if it will remove devices from the market pending their ability to achieve regulatory compliance.

In the meantime, respiratory care providers will be on the front lines to answer questions about electronic cigarettes and deal with complications if they arise. Ultimately, whether the current generation of electronic cigarettes will develop into an effective mechanism for reducing the harm from “real” cigarettes remains unknown. More research is needed, and the participation of respiratory therapists will be critical in recruiting real-world users and understanding their behavior. What is clear, however, is that we are witnessing a transition from well-recognized and understood combusted tobacco products to an array of different mechanisms of nicotine self-administration. Pending regulation and oversight, providers can advise their patients that multiple other forms of safe and effective nicotine are available, ranging from the gum to the FDA-approved nicotine inhaler. For those people intent on using electronic cigarettes, advice that the risk and benefits remain unknown is appropriate — if unsatisfying. ■

REFERENCES

- Centers for Disease Control and Prevention (CDC). Vital signs: current cigarette smoking among adults aged ≥ 18 years – United States, 2005–2010. *MMWR Morb Mortal Wkly Rep* 2011; 60(35):1207-1212.
- Stead LF, Perera R, Bullen C, et al. Nicotine replacement therapy for smoking cessation. *Cochrane Database Syst Rev* 2008; (1):CD000146.
- Stapleton JA, Russell MA, Sutherland G, Feyerabend C. Nicotine availability from Eclipse tobacco-heating cigarette. *Psychopharmacology (Berl)* 1998; 139(3):288-290.
- Hilts PJ. Anti-smoking groups move to keep a low-smoke cigarette off U.S. market. *The New York Times*, November 30, 1994.
- Caldwell B, Sumner W, Crane J. A systematic review of nicotine by inhalation: Is there a role for the inhaled route? *Nicotine Tob Res* 2012; Feb. 29 [Epub ahead of print].
- Pearson JL, Richardson A, Niaura RS, et al. e-Cigarette awareness, use, and harm perceptions in US adults. *Am J Public Health* 2012; 102(9):1758-1766.
- Vansickel AR, Weaver MF, Eissenberg T. Clinical laboratory assessment of the abuse liability of an electronic cigarette. *Addiction* 2012; 107(8):1493-1500.
- Vansickel AR, Eissenberg T. Electronic cigarettes: effective nicotine delivery after acute administration. *Nicotine Tob Res* 2012; Feb. 6 [Epub ahead of print].
- U.S. Food and Drug Administration website. Westenberger BJ. Evaluation of e-cigarettes. Available at: www.fda.gov/downloads/Drugs/ScienceResearch/UCM173250.pdf Accessed Sept. 6, 2012
- Eissenberg T. Electronic nicotine delivery devices: ineffective nicotine delivery and craving suppression after acute administration. *Tob Control* 2010; 19(1):87-88.
- Bullen C, McRobbie H, Thornley S, et al. Effect of an electronic nicotine delivery device (e cigarette) on desire to smoke and withdrawal, user preferences and nicotine delivery: randomised cross-over trial. *Tob Control* 2010; 19(2):98-103.
- Cobb NK, Byron MJ, Abrams DB, Shields PG. Novel nicotine delivery systems and public health: the rise of the “e-cigarette”. *Am J Public Health* 2010; 100(12):2340-2342.
- Rose JE, Turner JE, Murugesan T, et al. Pulmonary delivery of nicotine pyruvate: sensory and pharmacokinetic characteristics. *Exp Clin Psychopharmacol* 2010; 18(5):385-394.
- Vardavas CI, Anagnostopoulos N, Kougias M, et al. Short-term pulmonary effects of using an electronic cigarette: impact on respiratory flow resistance, impedance, and exhaled nitric oxide. *Chest* 2012; 141(6):1400-1406.
- Wieslander G, Norbäck D, Lindgren T. Experimental exposure to propylene glycol mist in aviation emergency training: acute ocular and respiratory effects. *Occup Environ Med* 2001; 58(10):649-655.
- McCauley L, Markin C, Hosmer D. An unexpected consequence of electronic cigarette use. *Chest* 2012; 141(4):1110-1113.
- Polosa R, Caponnetto P, Morjaria JB, et al. Effect of an electronic nicotine delivery device (e-Cigarette) on smoking reduction and cessation: a prospective 6-month pilot study. *BMC Public Health* 2011; 11:786.
- Duff W. Judge orders FDA to stop blocking imports of e-cigarettes from China. *New York Times*, January 14, 2010.
- U.S. Food and Drug Administration website. Deyton LR, Woodcock J. Regulation of e-cigarettes and other tobacco products. Available at: www.fda.gov/NewsEvents/PublicHealthFocus/ucm252360.htm Accessed Sept. 6, 2012



The RT's Role in Preventing Ventilator-associated Pneumonia

by Roger D. Seheult, MD

The respiratory therapist is the central team member in the management of the ventilated patient and, therefore, the prevention of ventilator-associated pneumonia (VAP). As such, it is important to review the current evidence-based guidelines for the prevention of VAP. The purpose of this article is to review the current state-of-the-art prevention modalities of VAP and the level of evidence for such interventions.

Background

VAP is currently defined as pneumonia occurring more than 48 hours after the initiation of mechanical ventilation.¹ While the definition is currently under review by the Centers for Disease Control and Prevention, the primary etiology remains understood and involves aspiration of organisms into the bronchial tree from the oropharynx as a result of the breach in the body's natural defenses via the endotracheal tube.² The endotracheal tube has been shown to alter the mucosa and mucociliary clearance and cause the formation of biofilm.^{3,4} Incidence ranges from 8–28% in ventilated patients, and mortality is 20–65%.¹ The range is wide because of the lack of a true “gold standard” for the diagnosis of VAP. While the reasons for this go beyond the scope of this article, the main issue of diagnosis is to distinguish between noninfectious complications of simple respiratory tract colonization and true lower respiratory tract infection.⁵ This is also relevant when the issue of mortality as an end-point is raised. Certain interventions may reduce the incidence of VAP but not mortality because it may only reduce the incidence of simple respiratory tract colonization. Re-

gardless of the shortcomings of a VAP definition, many years of research and evidence have laid the foundation of VAP prevention, which we will now review.

Prevention of VAP: the standard

In 2005, the American Thoracic Society and the Infectious Diseases Society of America issued the definitive paper on VAP to date, enumerating the recommended policies and evidence for interventions specific for the prevention of VAP.⁶ Level I evidence is from well-conducted, randomized controlled trials and Level II evidence is from well-designed, controlled trials without randomization. Table 1 summarizes the recommendations.

Prevention of VAP: The update since 2005

A number of areas have changed since the publication in 2005. What follows is a review of the major developments in the prevention of VAP.^{5,7}

Wake up and breathe: In 2008 Girard et al published in *The Lancet* what has come to be known as the “Awakening and Breathing Controlled Trial.”⁸ This paper showed that a spontaneous breathing trial coupled with a spontaneous awakening trial (compared to only a spontaneous breathing trial) increased days off the ventilator (14.7 vs. 11.6 days [p=0.02]), reduced days in ICU (9.1 vs. 12.9 [p=0.01]), and reduced days in the hospital (14.9 vs. 19.2 [p=0.04]). For every seven patients treated with the intervention, one life was saved. These data effectively raised the level of evidence for reducing the time on the ventilator to Level I.

about the author...



Roger D. Seheult, MD, is assistant professor of medicine at Loma Linda University School of Medicine, and a critical care intensivist, pulmonologist, internist, and sleep specialist at Beaver Medical Group and San Geronio Memorial Hospital in Banning, CA.

Table 1. Recommended Policies and Interventions for Preventing VAP

Category	Level of Evidence
General Prophylaxis	
Hand hygiene	I
Active surveillance of VAP	II
Intubation and Mechanical Ventilation	
Avoid intubation and reintubation	I
Use noninvasive ventilation when possible	I
Intubate lungs and stomach through the mouth and not nose	II
Use continuous subglottic suction of secretions	I
Cuff pressure should be greater than 20 cm H ₂ O	II
Passive humidifiers or HMEs do not prevent pneumonias	I
Condensate should not be allowed to enter the endotracheal tube	II
Reduction in time on the ventilator	II
Aspiration, Body Position, and Feeding	
Semi-recumbent position	I
Enteral feeding is best	I
Modulation of Colonization: Oral Antiseptics and Antibiotics	
Selective gut decontamination	I (II)
Oral chlorhexidine	I
Stress Bleeding Prophylaxis, Transfusion, and Hyperglycemia	
Restrictive transfusion policy	I
Intensive insulin therapy	I
Stress bleeding ulcer prophylaxis	I

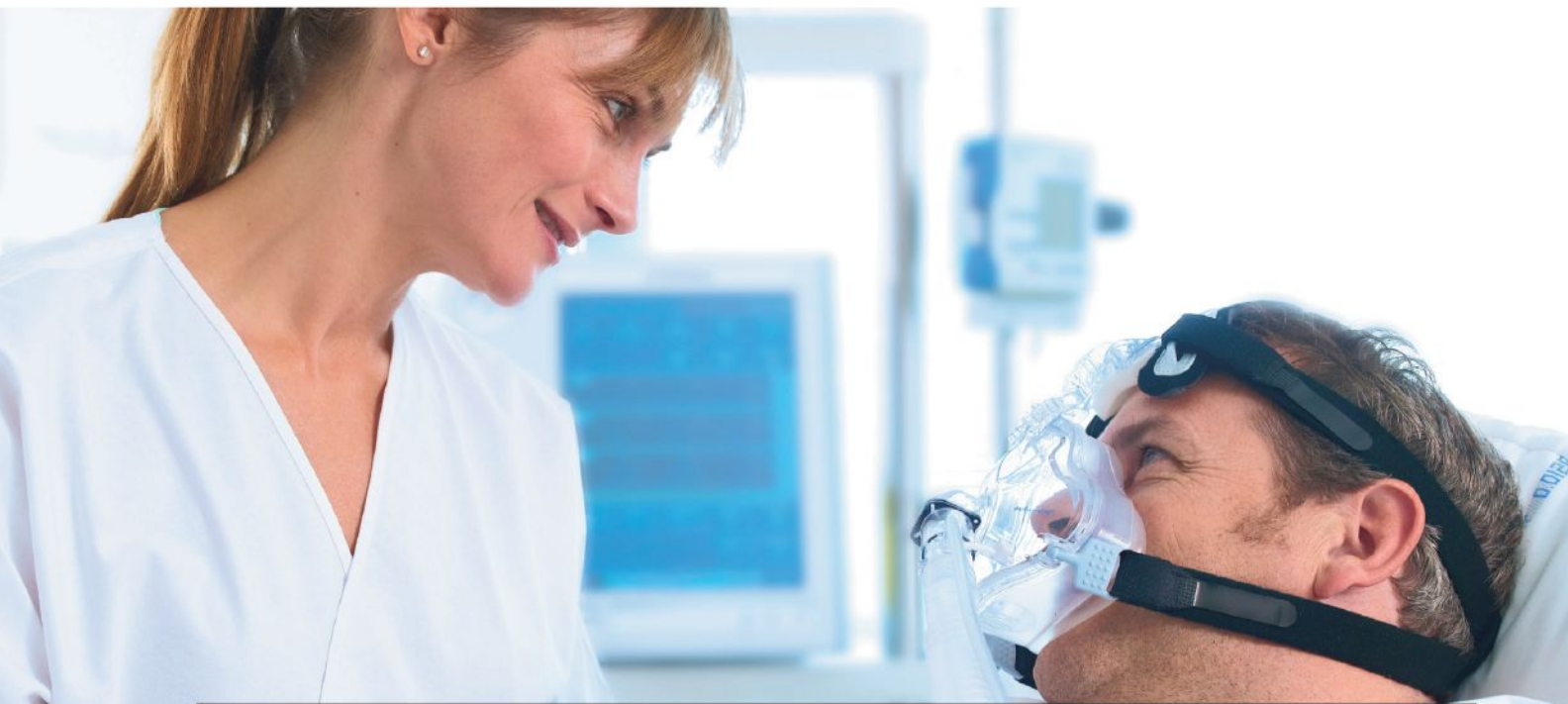
Continuous control for endotracheal tube cuff pressure

(Pcuff): It was recommended in the 2005 joint paper that cuff pressure should be maintained at least at 20 cm H₂O. Two papers in 2007 and 2011 investigated the idea of a device that continuously maintains a pressure in the endotracheal tube to at least 20–30 cm H₂O. Valencia et al conducted a randomized trial (n= 69) involving an automatic device versus manual cuff pressure taken every eight hours. There was no difference in VAP rate, mortality, or length of stay (ICU or hospital) despite the fact that the Pcuff was more consistently maintained by the automatic device.⁹ Another trial by Nseir et al in 2011 (n=61) looked at pepsin concentration in tracheal aspirates as well as VAP using an automatic device versus routine care of Pcuff. Gastric microaspiration (pepsin detection) was significantly lower in the intervention group (18% vs.

46%, p=0.002) as was the VAP rate (9.8% vs. 26.2%, p=0.032).¹⁰ While this intervention makes sense biologically, more studies are needed before this intervention can be recommended.

Selective digestive and oral decontamination (SDD):

Considering that VAP is caused by aspiration of organisms into the bronchial tree from the oropharynx, a possible strategy is to eradicate them before they enter the respiratory system. In a 2009 paper by de Smet et al, 5,939 patients were randomized to SDD (parenteral and topical antibiotics along with four days of IV cefotaxime) versus topical antibiotics alone versus standard care. The 28-day adjusted odds of mortality in the SDD and topical antibiotics group versus the control were 0.83 (95% CI 0.72–0.97) and 0.86 (95% CI 0.74–0.99).¹¹ Interestingly, the 2005 joint



Proportional Pressure Ventilation — noninvasively. Can your ventilator do that?

Different patients have different breathing needs, and Philips remains committed to finding innovative new ways to address them. With the incorporation of a proportional pressure ventilation (PPV) mode within our Respironics V60 system, you can now perform PPV noninvasively. To learn more about how the Respironics V60 is taking NIV even further, visit www.philips.com/V60.

PHILIPS
sense and simplicity

Visit AARC booth 401 in New Orleans

paper by the American Thoracic Society and the Infectious Diseases Society of America gave Level I evidence for SDD but balked at recommending this practice because of the concern for emergence of antibiotic resistance even though this concern was represented by Level II evidence. Some have pointed out that in this instance Level II evidence outweighed Level I evidence in the final joint recommendation. Currently, this modality is seldom practiced in the United States but is routinely performed in some European countries, presumably due to less antibiotic resistance.¹² More study is needed in this regard.

Probiotics: Non-pathogenic bacteria may suppress growth and activity of pathogenic bacteria in the development of VAP. Such use of probiotics in a recent study of 138 patients randomized to receive *Lactobacillus rhamnosus* GG or an inert inulin-based placebo treatment twice a day showed a reduction in both VAP (19.1% vs. 40.0%; $p=0.007$) and in the days of antibiotics prescribed for VAP (5.6 ± 7.8 vs. 8.6 ± 10.3 days $p=0.05$).¹³ However, a recently published meta-analysis (perhaps because of heterogeneity) showed no beneficial effect.¹⁴ Again, more study is needed on this topic.

Intensive insulin therapy: Level I evidence existed in 2005 to suggest that intensive insulin therapy in critically ill patients in the ICU was warranted. Since that time, strict control has been found to lead to an increase in hypoglycemic events. In one study, the incidence of hypoglycemia as defined as less than 40 mg/dL was 18.7%.¹⁵ A more recent target of less than 180 mg/dL has been proposed.¹⁶

Care bundles: While specific interventions can be studied to evaluate their effect on VAP, it has been thought for some time that the way to actually reduce VAP incidence is to group various strategies together and implement them in the patient care setting. So-called “bundles” are at the very heart of major national campaigns such as the Institute for Healthcare Improvement’s (IHI) “Saving 100,000 Lives.” The IHI bundle consisted of four components (elevation of the head of bed to 30–45 degrees, daily sedation vacation and daily assessment of readiness to extubate, peptic ulcer disease prophylaxis, and deep venous thrombosis prophylaxis). While positive results have been published on the IHI’s website, a published 2009 systematic literature review questioned the design, reporting, and results of the four published studies.¹⁷ Furthermore, many of the now accepted interventions for the prevention of VAP were not on the IHI’s ventilator bundle (hand washing, subglottic suctioning, cuff pres-

sure, oral chlorhexidine, etc.), highlighting the difficulty in determining the correct bundle and how to implement it. Finally, in 2011 a literature review on the four components of the IHI care bundle was undertaken, revealing that “Because of the limitations of the observational design used in the studies reviewed, a definitive causal link between the VCB [ventilator care bundle] and VAP incidence, length of ventilation, and ICU length of stay cannot be proved. However, the weight of evidence in terms of the magnitude of difference in the measured outcomes — especially with regard to VAP reduction — suggests a strong relationship.”¹⁸ Given that the paper goes on to mention that the IHI and The Joint Commission consider the association to be so strong as to consider any randomized study with an arm without the VCB to be unethical, it is unlikely that any further Grade I level evidence will be performed involving VCBs.

VAP study continues to evolve

The respiratory therapist, as the primary licensed professional with bedside access to the ventilator, has the largest potential to execute VAP prevention and therefore should be the most knowledgeable about current evidence. The study of VAP is an evolving field. New evidence has further defined established interventions, and new modalities are being investigated for clinical efficacy. The direction of VAP prevention is toward a multipronged approach utilizing care bundles to reduce incidence even though only observational evidence exists for their adoption. ■

REFERENCES

1. Chastre J, Fagon JY. Ventilator-associated pneumonia. *Am J Respir Crit Care Med* 2002; 165(7):867-903.
2. Garrouste-Orgeas M, Chevret S, Arlet G, et al. Oropharyngeal or gastric colonization and nosocomial pneumonia in adult intensive care unit patients. A prospective study based on genomic DNA analysis. *Am J Respir Crit Care Med* 1997; 156(5):1647-1655.
3. Safdar N, Crnich CJ, Maki DG. The pathogenesis of ventilator-associated pneumonia: its relevance to developing effective strategies for prevention. *Respir Care* 2005; 50(6):725-741.
4. Adair CG, Gorman SP, Feron BM, et al. Implications of endotracheal tube biofilm for ventilator-associated pneumonia. *Intensive Care Med* 1999; 25(10):1072-1076.
5. Trouillet JL. Ventilator-associated pneumonia: a comprehensive review. *Hosp Pract (Minneapolis)* 2012; 40(2):165-175.
6. American Thoracic Society; Infectious Diseases Society of America. Guidelines for the management of adults with hospital-acquired, ventilator-associated, and healthcare-associated pneumonia. *Am J Respir Crit Care Med* 2005; 171(4):388-416.
7. Bouadma L, Wolff M, Lucet JC. Ventilator-associated pneumonia and its prevention. *Curr Opin Infect Dis* 2012; 25(4):395-404.
8. Girard TD, Kress JP, Fuchs BD, et al. Efficacy and safety of a paired sedation and ventilator weaning protocol for mechanically ventilated patients in intensive care (Awakening and Breathing Controlled Trial): a randomised controlled trial. *Lancet* 2008; 371(9607):126-134.

9. Valencia M, Ferrer M, Farre R, et al. Automatic control of tracheal tube cuff pressure in ventilated patients in semirecumbent position: a randomized trial. *Crit Care Med* 2007; 35(6):1543-1549.
10. Nseir S, Zerimech F, Fournier C, et al. Continuous control of tracheal cuff pressure and microaspiration of gastric contents in critically ill patients. *Am J Respir Crit Care Med* 2011; 184(9):1041-1047.
11. de Smet AM, Kluytmans JA, Cooper BS, et al. Decontamination of the digestive tract and oropharynx in ICU patients. *N Engl J Med* 2009; 360(1):20-31.
12. Bonten MJ. Prevention of hospital-acquired pneumonia: European perspective. *Infect Dis Clin North Am* 2003; 17(4):773-784.
13. Morrow LE, Kollef MH, Casale TB. Probiotic prophylaxis of ventilator-associated pneumonia: a blinded, randomized, controlled trial. *Am J Respir Crit Care Med* 2010; 182(8):1058-1064.
14. Gu WJ, Wei CY, Yin RX. Lack of efficacy of probiotics in preventing ventilator-associated pneumonia: a systematic review and meta-analysis of randomized controlled trials. *Chest* 2012; July 10 [Epub ahead of print].

15. Fahy BG, Sheehy AM, Coursin DB. Glucose control in the intensive care unit. *Crit Care Med* 2009; 37(5):1769-1776.
16. Ichai C, Preiser JC. International recommendations for glucose control in adult non diabetic critically ill patients. *Crit Care* 2010; 14(5):R166.
17. Zilberberg MD, Shorr AF, Kollef MH. Implementing quality improvements in the intensive care unit: ventilator bundle as an example. *Crit Care Med* 2009; 37(1):305-309.
18. Lawrence P, Fulbrook P. The ventilator care bundle and its impact on ventilator-associated pneumonia: a review of the evidence. *Nurs Crit Care* 2011; 16(5):222-234.

DISCLOSURE

Dr. Roger Seheult is a speaker for Forest Pharmaceuticals for two VAP medications: Daliresp® and Teflaro®.

Become a Better Therapist with www.AARC.org/ Resources

**NEW!**

PROFESSOR'S ROUNDS 2012

Improving Patient Safety - How Respiratory Therapists Can Contribute

Karen Frush, MD
Ira Cheifetz, MD FAARC FCCM

Item # PR20128

Reviews the history of the current focus on patient safety, cites examples of positive economic & clinical outcomes resulting from patient safety initiatives, and discusses how RTs can become change agents to improve overall patient safety in their workplace.

\$295 for Nonmembers
\$265 for MEMBERS

MEMBERS
SAVE \$30

Present this current respiratory care topic on DVD to your entire staff. Topic is approved for one [1] CRCE® per participant.

Find out more at www.AARC.org/go/pr2

RRTs at Indiana University Health play a major role in chronic disease management

by Janet Lee, RRT-NPS, AE-C

A video produced several years ago by the University of Southern California covered the history of the disease management movement and why it is likely to take off in the coming decades. According to the film, “Emergence of and Innovations in Disease Management,” the aging baby boomer generation will drive much of the growth through its need for extensive health care and chronic disease management.¹

Census information cited in the video tells us the 65+ population increased by 10% between 1980 and 2004, resulting in a higher prevalence of chronic disease that led to a 33% increase in health care expenditures, along with concerns regarding appropriate resources to care for these patients. These escalating health care costs prompted big insurers such as Blue Cross/Blue Shield to pay closer attention to the benefits of disease management.

Specifically, data began to show about 5% of individuals in commercially insured populations were accounting for an average of 50% of health costs.¹ This finding propelled case management forward within the medical management and



About the Author

Janet Lee, RRT-NPS, AE-C, manages the pulmonary care program, Population Health Strategies, at Indiana University Health in Indianapolis, IN.

health plan arenas. Programs initially focused on patients with catastrophic cases in the hopes that relapse would be prevented. These first steps led to what we know today as “disease management” and the creation of the Disease Management Association of America, which is now called the Care Continuum Alliance.

With statistics from Pew Research now showing that baby boomers are reaching retirement age at the rate of about 10,000 per day — a pace that will continue for the next 18 years — disease management is a concept whose time has come.¹

Studies show it works

A key to disease management is understanding that each chronic disease is different and that patients with different conditions will have different medical needs. It is also important to identify patients according to their risks so that those considered at higher risk, such as patients with multiple health conditions, can receive the greater attention they need, while those considered at lower risk can be provided with less intense efforts. This allows for more efficient allocation of health care resources.

A study conducted by Issim and Cramer in 2003 found disease management achieved a 25–30% decrease in per member/per month cost for high-risk patients. This was the first proof that disease management could actually work.¹ Another study conducted among diabetes patients found a 16% drop in hospital admissions per 1,000 health plan members — and high-risk and low-risk members saved in health care costs alike.¹

Here in Indiana, we have approximately 6.4 million residents, about 9% of whom have been diagnosed with asthma. Roughly 5% have been diagnosed with chronic bronchitis or emphysema; but we all know COPD is an under-diagnosed disease, so we most likely have a higher than 5% prevalence in our

state. Marion County, which is where about 70% of the disease management clinics operated by Indiana University Health (IUH) are located, is ranked third in the state for emergency department visits for asthma. And while Indiana’s smoking population has dropped by 6.1% over the last five years, Indiana still ranks in the second highest group for smoking prevalence in the United States.²

The Ambulatory Pulmonary Care Program

The Ambulatory Pulmonary Care Program (APCP) at IUH was established 13 years ago and is one of 11 disease management programs operated throughout the system. These programs fit nicely with the system’s new emphasis on accountable care. According to the Centers for Medicare & Medicaid Services, an accountable care organization is one that meets the health care needs of a defined population by improving health and the patient experience while reducing costs.

The APCP is operated by Registered Respiratory Therapists who are also certified asthma educators and smoking-cessation facilitators. Our overall goals are to reduce emergency department utilization, reduce exacerbations, improve overall quality of life, and partner with primary care physicians. In other words, to be a part of the team.

RTs were selected to run the program instead of nurses for a couple of reasons. First, we are educated in these disease states from day one. Secondly, our research showed a significant difference in salary for RTs versus nurses, which helps to keep the costs of the program in line. Right now there are seven of us employed by the program, including five RTs and an RT manager (myself). We also have a medical assistant who staffs our call center. She handles calls that come in from patients and triages those calls before handing them off to an RRT.

Hospitals don't want chronic respiratory patients stuck in the revolving door of readmissions, and chronic respiratory patients don't want to be there either. AARC members in Indiana are helping both sides get their wish.

Our workload consists of asthma and COPD disease management and smoking cessation at 20 sites in two affiliated medical groups. We work under “treat, provide, order” protocols that have been signed off by our physicians. These protocols allow us to start and stop medications without going back to the physician for approval. Right now, about 90% of our referrals are covered by protocols. The other 10% come from new physicians, who still want to review our orders, or spirometry-only sessions. However, we find new physicians will generally switch to the protocol after about six months — the time it usually takes for them to become comfortable with our services.

We see on an average of 4,000 visits per year to patients at our 20 sites. How often we are at each office depends on the pulmonary patient population. Some offices have a large contingent of pulmonary patients while others see only a few. We manage IUH employees as well, along with IUH health plan members, and we monitor ED lists and take referrals. We are conducting a pilot study with one hospital wherein the RTs are referring patients into the disease management program right from the ED, with the goal of reducing readmissions.

ASTHMA GOALS



In the asthma arena, we work with patients of all ages, along with their families, to provide a combination of medication, education, and an action plan. For our asthma patients, we strive to meet the following goals:

- Minimal or no chronic symptoms day or night
- Minimal or no exacerbations
- No limitations on activities; no school/work missed
- Maintenance of (near) normal pulmonary functions
- Minimal use of short-acting inhaled beta-2 agonists outside that needed to treat exercise-induced asthma.

Our plan of care is based on the National Institutes of Health’s “EPR-3 Guidelines.” These guidelines cover severity, control, impairment, and risk, and utilize six treatment steps for age ranges 0–4, 5–11, and 12–adult.³ All of our RT disease managers have a laminated copy of the key components of the “EPR-3 Guidelines,” which they carry with them at all times. We follow the recommendations in the guidelines to determine patient severity, medications, and step-up and step-down therapy.

COPD GOALS



The COPD management program is designed to manage exacerbations and stabilize the disease. The program is also aimed at assessment and monitoring, as well as the reduction of risk factors. Working with patients and families, we strive for the following goals of management:

- Prevent progression
- Relieve symptoms
- Improve exercise tolerance
- Improve health status and quality of life
- Reduce ED visits and hospitalizations
- Promote smoking cessation.

Quality of life is an important factor, as we really want our COPD patients to live their lives the way they want to live their lives. When it comes to smoking cessation, we use standard tools to assess for readiness to quit. When we hear certain keywords from our patients indicating readiness, we start doing smoking-cessation right away.

The COPD program follows the guidelines established by the Global Initiative for Chronic Obstructive Lung Disease (GOLD), which set goals based on disease severity determined by lung function. In 2011 the GOLD guidelines were updated, classifying COPD patients by characteristics:⁴

- **Low risk, less symptoms with spirometry classification as GOLD 1–2:** First medication choice is short-acting anticholinergic or beta-2 agonist PRN.*
- **Low risk, more symptoms with spirometry classification as GOLD 1–2:** First medication choice is long-acting anticholinergic or beta-2 agonist.*
- **High risk, less symptoms & High risk, more symptoms with spirometry classification as GOLD 3–4:** First medication choice is inhaled corticosteroid plus long-acting anticholinergic or beta-2 agonist.*

Our goal is, of course, to get patients into the program while they are still in the low risk stages, but in reality most patients come to us after they are past these stages. We find many COPD patients do not pay serious attention to their conditions until they are so breathless they can no longer handle even basic activities of daily living.

* Overall management of stable COPD is to reduce symptoms and reduce risk.

THREE TYPES OF VISITS



Our visits are designed to:

- Identify symptoms/triggers and educate on how to reduce those symptoms
- Assess impairment
- Instruct on medication education
- Review self-management strategies
- Create and monitor compliance not only with medications but also with action plans and goal setting
- Identify barriers to care and help patients overcome them.

Our visits are set up with three options: a 90-minute initial visit, a 30-minute recheck, and a 60-minute smoking-cessation counseling session. So, what do we do in 90 minutes? That's a long time to sit with anybody, but we pack in a lot of material. The initial visit includes:

- A physical assessment, including SPO₂ and sometimes walking SPO₂
- A trigger assessment utilizing an environment questionnaire
- Medication reconciliation, using the information in the patient's electronic medical record
- Asthma Control Test (ACT) or COPD breathlessness questionnaire
- Depression screening or Berlin Sleep Apnea Questionnaire, if applicable
- Pre/post pulmonary function testing with a bronchodilator
- Creation of action plans and goal setting.

The 30-minute follow-up session includes another physical assessment, a review of triggers, and whether the patient is following our recommendations (such as keeping the cat out of the bedroom), and a review of medications and the use of devices. We also repeat the ACT or COPD breathlessness questionnaire, and may repeat the depression or sleep apnea questionnaires. Patients will perform a follow-up pulmonary function test as well, and we will show the patient the results on our trend report, which lets our patients see how their conditions have improved since their initial visits. This report provides the patient with a visual that proves his/her medications are working.

We provide ongoing disease education during this visit too — in fact, there is never a time when a patient comes to see us when we do not offer education. Patients cannot grasp everything we tell them in the initial 90-minute session, and reinforcement is needed throughout their care to empower self-management.

We end the session with a review of the action plan and any necessary changes to it, and we also go over the patient's goals and update them or add to them for patients who have met previous goals.



Proving our worth

One of the hard things about disease management is that we don't generate revenue, or enough revenue, to keep our programs going on their own. That means it is even more important for us to show our value and worth to our organizations on an ongoing basis.

At IUH, we produce an annual report showing we have met our objectives and we have had cost savings or, more typically, cost avoidance. Since our physicians use the Healthcare Effectiveness Data and Information Set (HEDIS), we use this tool to measure our performance, monitoring for asthma-ordered control medication for our asthma patients and yearly spirometry for our COPD patients.

(continued on page 85)



AARC MEMBERS

Raise Awareness of COPD

As respiratory therapists, you treat many different kinds of patients, and you strive to deliver compassionate care to each. But for many of you, people with COPD hold a special place in your heart for the valiant effort they make to overcome a chronic condition that often amounts to a struggle for every breath they take.

As the nation once again marks **COPD Awareness Month** in **November**, and the whole world takes time out for **World COPD Day on the 14th**, we thought this would be a great time to review just a few of the ways you have stepped up to raise awareness of COPD in your communities over the past year.

So check out the inspiring stories and pictures on the following pages to see how your respiratory care colleagues are not only putting COPD in the spotlight, but also honoring the people who live with it every day.



This \$5 Device Saved a Leading Hospital \$186,789

AeroEclipse® II Breath Actuated Nebulizer (BAN)

resulted in \$186,789 annual savings for Forsyth Medical Center in Winston Salem, NC and an estimated potential savings of \$475,411 across Novant Health facilities.¹

To find out more about Forsyth Medical Center's success and how you can save your facility money while increasing clinical outcomes contact your Monaghan sales representative or visit us at monaghanmed.com

¹ Wilson, J. Reducing Total Costs of Aerosolized Medication Delivery Using the AeroEclipse II Breath Actuated Nebulizer. *Resp Care* 2011 Oct;56(10):1634.

Visit AARC booth 111 in New Orleans

monaghan™

Monaghan Medical Corporation, 5 Latour Ave., Suite 1600, Plattsburgh, NY 12901
Customer Service 800-833-9653 • www.monaghanmed.com

™ and ® are trademarks and registered trademarks of Monaghan Medical Corporation or an affiliate of Monaghan Medical Corporation © 2012 Monaghan Medical Corporation

**SCAN CODE TO SEE
HOW THEY SAVED**



RC Students Get into the Act

RC students from the University of Texas Health Science Center in San Antonio marked World Spirometry Day on June 27 by hosting a pulmonary screening event at a local senior center. The event drew 18 students to the Bob Ross Senior Center from 8:30 a.m. to 1 p.m., where they screened 73 seniors for obstructive lung disease and got the chance to visit with them about other aspects of their lung health as well.

We began by pre-screening all of the attendees with either peak flows or with a device that gave us their FEV₁ percentage. If their PEF was <70% predicted or their FEV₁% <73% predicted, they got full spirometry. Of the 73 individuals screened, average age was 75.5 and only 15 qualified for full spirometry. It was a great learning experience for the students.

— *Helen Sorenson, MA, RRT, FAARC, UTHSCSA, San Antonio, TX, AARC member since 1980*



The students enjoyed the opportunity to connect with seniors and hear their stories.



A staff member tests out the pulmonary function equipment.



World Spirometry Day was a great time for RTs at The Christ Hospital to share their lung health expertise with fellow staff members.



UTHSCSA students got ready to network with seniors on World Spirometry Day in June.



In honor of World Spirometry Day, the respiratory care department at The Christ Hospital in Cincinnati, OH, puts on a spirometry screening event for fellow employees to spread the word about the importance of testing lung function. This year was no different. We had over 30 employees visit the screening event, as well as a few of our

spirometer, based on the information provided and the spirometry test itself. Those individuals whose FEV₁ was less than 79% of predicted were informed that they should follow up with their primary care physician because the decreased FEV₁ could indicate a decrease in lung function.

Staff Screens Staff

own respiratory therapists. We provided information regarding COPD, smoking cessation, and spirometry.

For the testing, everyone filled out a form requesting age, height, race, weight, and smoking history. That information was then programmed into the bedside spirometer and each person was tested three times. After the test was complete, the information was derived from the spirometer and written on the form for each person. Participants were given their predicted and actual FEV₁ and FVC measurements according to the calculations of the

This event not only helps us sharpen our skills in performing bedside spirometry, it also allows us to spread the word about a disease that is growing rapidly. We are also able to enlighten individuals who smoke about the damage that smoking can do and the consequences that can ensue because of smoking.

— *Cassandra Blankenship, RRT, The Christ Hospital, Cincinnati, OH, AARC member since 2009*

Reaching Out to the Vietnamese

Vietnamese Community Health (VCH) at UCLA is an undergraduate organization that aims to combat the lack of access to adequate health care in the Vietnamese community of Southern California. Established in 2006, VCH holds three health fairs yearly, one for each quarter of the school year. Working with a linguistically isolated community, VCH aspires to break the language barrier by providing underprivileged community members with free health screenings and education. Through culturally sensitive programs, the organization hopes to spread awareness of prevalent diseases particular to this community, such as COPD, hepatitis B, and osteoporosis.

According to UCSF researchers, in 2000 35% of Vietnamese men in California smoked — a rate 1.5 times higher than that seen among men in the general population. Cultural acceptance of smoking is traced back to life in Vietnam, where 73% of all men smoke, the highest rate in the world. These grim statistics place the Vietnamese population at a high risk for COPD.

On May 20, VCH hosted a health fair for the Vietnamese community in Little Saigon at the Westminster Civic Center, marking its second triannual health fair in



The Vietnamese health fair takes place three times a year, thanks to the efforts of Vietnamese Community Health at UCLA.

2012. Around 200 community members attended over the four-hour time span. For the first time, respiratory therapists provided pulmonary function screenings. The collaboration came about after the group contacted me. I immediately reached out to the RT program at American Career College. With a large number of Vietnamese students, I felt this program offered the ideal match for this community. Together we embarked on a mission to provide COPD awareness to an underserved population.

Working with VCH volunteers, we provided attendees with a pre-screening risk assessment and a Vietnamese-translated description of spirometry and how it can be used to detect risk of COPD. With the success of the health fair, we look forward to future collaborations with VCH to raise awareness of COPD in the Vietnamese community.

— *George Garcia, MBA, RRT-NPS, RPFT, regional director of cardiopulmonary at Garden Grove Hospital Medical Center, Huntington Beach Hospital, Garden Grove and Huntington Beach, CA, AARC member since 1988*



George Garcia (far left), enlisted the help of RC students at American Career College to provide COPD screening and education to the Vietnamese community.

Community



Vietnamese Community Health Project (VCH) tại UCLA
Kết Quả Khám Bệnh Viêm Đường Phổi

Spirometry là gì?

Spirometry (Đo phổi dung) là một xét nghiệm hơi thở được sử dụng để đo lượng không khí được đưa vào phổi cũng với tốc độ lượng khí được đẩy ra từ phổi. Dựa trên tuổi tác, giới tính, và các chỉ số cá nhân của bệnh nhân, bác sĩ có thể đưa ra kết luận về mức độ hoạt động trong phổi. Kết quả này cũng với kết quả sức khỏe tổng quát sẽ đưa ra xác định chính xác liệu những hoạt động không bình thường của phổi trong bệnh nhân có bắt nguồn từ một bệnh liên quan đến phổi hay không.

Bạn nên đi xét nghiệm hơi thở nếu bạn thuộc một trong những trường hợp sau đây:

- 40 tuổi trở lên.
- Đã hoặc đang hút thuốc.
- Sống chung với người hút thuốc.
- Thường hay bị hụt hơi, khó thở (so với những người cùng tuổi).
- Mặc chứng ho không dứt.
- Ho lên niêm dịch.
- Làm việc thường xuyên với hóa chất và bụi.
- Gia đình có người mắc bệnh khí thũng (emphysema).
- Hơi thở khó khê.

Chúng tôi cũng khuyến khích các bạn xét nghiệm hơi thở nếu bạn muốn biết rõ hơn về tình trạng phổi của mình.

Trong lúc xét nghiệm, bác sĩ chuyên khoa hô hấp sẽ yêu cầu bạn làm một số điều sau:

- Hít vào thật sâu.
- Thở ra thật mạnh.
- Tiếp tục thở cho đến hết hơi.

Tuổi _____ Chiều Cao _____ Nam _____ Nữ _____

Bệnh thường _____ Không bình thường _____ Chưa rõ _____

FEV6 _____ lít (_____ % so với dự đoán)

FEV1 _____ lít (_____ % so với dự đoán)

Tỷ lệ FEV1/FVC _____

có thể làm được, của bạn cho mỗi

hào cũng bị

ở gần

Có, hàng ngày

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý

đồng ý



Joe Rohling (left), Lynn Martin (center), and Terry Marzofka educated members of their community about COPD last summer.

Raising Health Literacy in Our Community

As part of the 3rd Annual Weston Fest held July 20–22 in Weston, WI, Ministry Health Care staff greeted over 3,000 visitors to our health adventure tent, an interactive consumer-driven health education event.

Families participated in fun, informational activities at more than 40 interactive exhibits. Along with various participants in our community, such as the Marathon County Tobacco Free Coalition and others, we helped raise health literacy in our community.

Our respiratory therapy department staff conducted screenings for COPD and sleep apnea, producing 14 positive screens for COPD and 44 for sleep apnea. We also proudly displayed our AARC Quality Respiratory Care Recognition Award to let people in our community know that our RC department meets the highest standards.

— Joe Rohling, BS, RRT, Ministry Saint Clare’s Hospital, Weston, WI, AARC member since 1980

Điền câu trả lời đúng nhất đối với bạn trong 12 tháng vừa qua: Tôi làm việc bất hơn hỏi trước tại vì khó thở.

Rất không đồng ý Không đồng ý Không biết Đồng ý Rất đồng ý

4. Trong cả đời, bạn đã hút ít nhất 100 thuốc lá chưa?
Không Có Không biết

5. Bạn bao nhiêu tuổi?
35-49 tuổi 50-59 tuổi 60-69 tuổi Lớn hơn 70 tuổi

How to score the survey: In the spaces below, write the number that is next to your answer for each of the questions. Add the numbers to get the total score. The total score can range from 0 to 10.

#1 + #2 + #3 + #4 + #5 = TOTAL SCORE

If your total score is 8 or more, your breathing problems may be caused by chronic obstructive pulmonary disease (COPD). COPD is often referred to as chronic bronchitis and/or emphysema and is a serious lung disease that should get worse over time. While COPD cannot be cured, it can be managed.

Please show the completed survey with your doctor. The higher your score, the more likely you are to have COPD. Your doctor can help evaluate your breathing problems by performing a simple breathing test, also known as spirometry.

If your total score is between 0 and 4, and you experience problems with your breathing please show this survey with your doctor. Your doctor can help evaluate any type of breathing problem.

Advocating for COPD Patients



Terri Lesser, RRT (far right), recruited her daughter Mandi Francis (left), niece Brooke Shelley (second from the left), and granddaughter Kaitrin Francis to take part in the race. Eleven-year-old Kaitrin finished the 5K in 39 minutes!



The KRCS was a proud sponsor of the 5K4MJ race held in August to honor the memory of a COPD patient who lost her battle with the disease.

The Kansas Respiratory Care Society (KRCS) has a simple mission: to educate, advocate, and promote the profession and practice of respiratory care. Fulfilling that mission involves advocating for patients as well, and COPD patients were a high priority for the KRCS in 2012.

In March we arranged funding for Janet Henderson (a Kansas City area woman with COPD) to travel to Washington, DC, with the AARC's PACT representatives from Kansas to promote awareness of COPD and to advocate for legislation designed to increase patient access to respiratory therapists.

Then on Aug. 26, we helped sponsor the first annual "5K4MJ" COPD 5K Walk/Run Benefit at Heritage Park in Olathe, with proceeds to benefit the COPD Foundation. The

event was organized in honor of Mary Jo Byrne, who passed on February 28 after a long and very brave battle with COPD. Her family shared their insight on the event website. "Our family, having witnessed the strife, now understands the long-term needs and costs of this disease and is dedicated to increasing public awareness and providing outreach for support and options to the families realizing this same battle."

The KRCS also recently petitioned Kansas Governor Sam Brownback to officially proclaim November 2012 as COPD Awareness Month in Kansas.

— Suzanne Bollig, BHS, RRT-SDS, FAARC, *president, KRCS, AARC member since 1981*



COPD community education workshops help raise awareness of the condition in Florida.

and Better Care



A tired but happy participant crosses the finish line.



Debbie Fox, MBA, RRT-NPS (left), and Suzanne Bollig, BHS, RRT-SDS, FAARC (center), were grateful to have COPD patient Janet Henderson accompany them on their visits to Capitol Hill last March.

The Florida COPD Coalition was formed in 2009 and has grown steadily in both patient and provider partnerships and community impact, reaching communities from Tallahassee to Miami. Adopted from the U.S. COPD Coalition's model, teamwork between providers, patients, sponsors, organizations, and stakeholders has had a major influence on the group.

Earlier this year, the Florida COPD Community Education Workshop Series featured two excellent events and covered several key topics, including COPD management by stages, healthy living tips, and education/support resources for healthy living. It also created a COPD movement for

nership with our Florida Society for Respiratory Care (FSRC) Sunshine Seminar, the second workshop took place on August 8 at the Hyatt Regency Bonaventure Conference Center in Weston, drawing more than 80 COPD patients and caregivers.

Also, on August 9, we presented a three-hour "COPD Track for Respiratory Therapists" during the FSRC Sunshine Seminar. On August 10, it was "GO2BAT4COPD Awareness Night" at Marlins Park. The COPD Shuttle: Journey to the Center of the Lungs was there to educate and guide South Florida residents to a better understanding of COPD and lung health.

Partnerships + Community Workshops = Empowerment

the advocate voice to be heard. Patients, respiratory therapists, physicians, and advocates served as presenters at these workshops.

One of the workshops was on March 13 during National Pulmonary Rehabilitation Week and was held in conjunction with Florida Hospital-Celebration Health. Sixty patients and caregivers attended the event. In part-

Generous sponsor support, great patient and provider teamwork, and promotion by our community partners each contributed to a great beginning for COPD awareness in Florida in 2012.

— *Robert Sobkowiak, RRT, AE-C, Cape Coral, FL, AARC member since 2006; and Jamie Lamson Sullivan, COPD Foundation, Washington, DC*

NOW IT'S YOUR TURN!



As the stories on these pages show, AARC members are promoting lung health awareness in communities everywhere. But there is plenty of work to go around to ensure more people know about our nation's third-leading cause of death, COPD. Here are a few resources you can use to start raising awareness in your own community.



Established by and for people with COPD, the [COPD Foundation](#) has developed a wealth of free information on COPD. Here you'll find brochures on alpha-1 antitrypsin deficiency, the COPD Gene Study, and COPD Research Registry, as well as educational materials designed for patients, families, and caregivers. One of the best for planning activities is the "[COPD Resource Kit](#)" — everything you need conveniently packaged in one small, fashionably designed box.



The National Heart, Lung, and Blood Institute's [Learn More Breathe Better Campaign](#) offers downloadable resources for raising public awareness and helping you educate your patients, their families, and your fellow health care professionals.



Sponsored by Global Initiative for Chronic Obstructive Lung Disease (GOLD), [World COPD Day 2012](#) offers a free activity guide designed to help you make the most of your public awareness events. This year the theme is "It's Not Too Late," a positive message selected to emphasize the meaningful actions people can take to improve their respiratory health at any stage before or after a diagnosis of COPD.



The American Association for Respiratory Care supports a number of COPD awareness activities that often seek member involvement. Keep an eye on the [AARC website](#) for more information on DRIVE4COPD events, our annual booth at the AARP's Life@50+ conference, our YourLungHealth Consumer Program at AARC Congress 2012, and the annual AARC Lobby Day on Capitol Hill.



Last but certainly not least, consider *your own* personal knowledge of COPD and how you can enhance it for the benefit of your patients and your organization. The AARC offers three great ways to do just that: Our "[COPD Educator Course](#)" covers all the bases when it comes to diagnosing, treating, and educating patients about the condition. Our "Emerging Roles for the Respiratory Therapist in [Alpha-1 Antitrypsin Deficiency](#)" course zeroes in on the genetic form of COPD and the treatments patients can receive for it. In addition, we offer free to AARC members "A Guide to [Aerosol Delivery Devices](#) for Respiratory Therapists—2nd Edition," a downloadable booklet that can help you better explain aerosol delivery devices to your patients, especially those with COPD. All of these great opportunities also help you earn CRCE credits from the AARC. ■

Fairfield Medical Center (FMC) in Lancaster, OH, developed a pulmonary and respiratory educational series entitled “Breathe Easy” during the spring of 2011. This event was initiated by Fairfield Pulmonary and Critical Care Associates (FPCCA), which includes three critical care pulmonologists, Drs. Christian Tencza, Jarrod Bruce, and Andrew Twehues.

At the beginning of 2011, these physicians met with a multidisciplinary group made up of respiratory therapists, registered dietitians, and staff from pulmonary rehabilitation and our cardiology department. As a team, we all determined that there was a need for individuals with respiratory issues to understand and learn how to manage their disorders. “Breathe Easy” was developed to satisfy this educational need and functions as an open house.

At the event, each of the departments mentioned above has a display table with information about their area. Community members spent the first 45 minutes of the event walking around seven stations, where they learned more about inhalers and spacers, nutrition, smoking cessation, pulmonary rehabilitation, COPD

“Breathe Easy” Open Houses Invite Patients In



Drs. Christian Tencza, Jarrod Bruce, and Andrew Twehues enlisted the support of RTs in their “Breathe Easy” open house events.



The doctor visits with a patient during one of the sessions.



“Breathe Easy” attendees spent about 45 minutes visiting the various stations.

and asthma, pulse oximetry and spirometry, and local DME services. After that, one of the physicians or staff members presented a lecture on a topic of their choice, such as “What Is COPD and Why Do I Have It?”; “Acute COPD Exacerbations”; and “Nutritional Tips on Pulmonary Disease.”

We also offered refreshments and held a raffle drawing for various prizes at the conclusion of the event. All three physicians participated in every event. We have been asked to host this open house at other facilities, including a senior center in Logan, OH, and a nursing and rehabilitation center in Pickerington, OH. We plan to continue to host this event on a quarterly basis at FMC and will offer it at other locations whenever and wherever there is a need.

— Lyle Miller, RRT, Fairfield Medical Center, Lancaster, OH,
AARC member since 2005

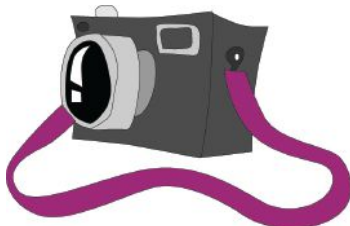
Choose the February 2013 Cover of *AARC Times* Magazine

The AARC has been collecting photos from Association members this year for our **photo contest**. Now it's time to select the winning photo for our February 2013 *AARC Times* cover.

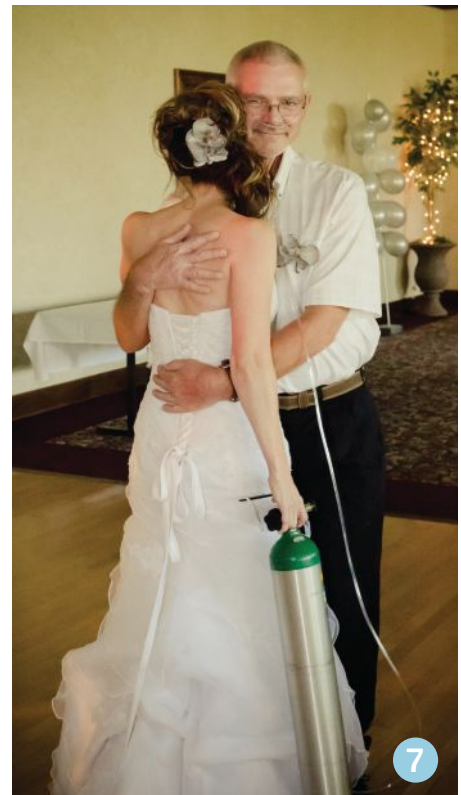
Go to www.aarc.org now and click on the **"Photo Contest"** button to cast your vote. The winning photo will be the cover photo for the February 2013 issue of *AARC Times*.



Congratulations to this year's Photo Contest finalists, who each received a **free annual AARC membership renewal!**



1. Marcia Smith, RRT, Vandalia, OH
2. Lisa M. Tyler, MSM, RRT-NPS, CPFT, Philadelphia, PA
3. Paul Andreas, BS, CRT Tenstrike, MN
4. Robert L. Joyner, Jr., PhD, RRT, FAARC, Salisbury, MD
5. April McCullough, MEd, RRT Little Rock, AR
6. Karen Schell, MHSc, RRT-NPS, RPFT Emporia, KS
7. Brian Cayko, MBA, RRT Great Falls, MT



Getting the Job

by Colleen Schabacker, BA, RRT, FAARC

With health care reform just around the corner and with no real feel for its exact financial impact, it is no secret that jobs in health care are getting harder and harder to find.

less whether there are shortages or not, managers have gotten a lot smarter in whom they hire. Managers no longer hire RTs merely because they have the correct credential, have a pulse, and are still breathing. Most managers have learned the hard way that it is better to deal with not enough staff than it is to deal with the wrong staff.

Getting employed is obviously a large concern for respiratory therapists. The AARC has been proactive in developing a Web page on "Career Advice" (www.aarc.org/career) to fit this need. This page will give you tips on creating a good résumé, finding the right job, and even gives applicants the opportunity to ask advice from experts.

New graduates need to realize their interview began the minute they walked into each and every clinical site they graced as a student. Managers and their staff start deciding immediately if they want the student to eventually work with them. They look at attitudes, willingness to see new things, and willingness to be a part of anything and everything going

on around them. They listen to the questions asked to see if these are "lazy" questions or if they are real questions you can't easily find answers to in a textbook. The student is being evaluated on how they get along with the staff, how they dress, and even their manners. Of all the attributes listed above, the two most important things being evaluated by the manager and staff are attitude and willingness. Nowhere can it be stressed enough how important these two attributes are.

Writing the résumé

As stated earlier, the AARC has hints on how to write a résumé on the Career Advice Web page. In fact, googling "how to write a résumé" will get hundreds of variations. The main points about résumé writing are to keep it short and sweet. Get to the point. Required information includes objectives for why you want to work for the institution where you are applying. This needs to be only one or two sentences. Other information required is work experience, education, affiliations, and skills. Do not include references but always add a statement at the end stating, "References upon request." Again, remember to keep it short and always, ALWAYS, spellcheck. If there are spelling errors in a résumé, most managers will not take the résumé seriously. On the other hand, don't keep it so short that your résumé looks like a text message, and don't



EDITOR'S NOTE This article was adapted from an AARC Congress 2011 lecture by the author.

use texting language. Spell out all words (except for credentials) for clarity.

Creating a curriculum vitae (CV) is a whole different story. In a CV everything you have ever done should be listed. Not only should past work experience be listed, but you need to go into detail about your responsibilities at each prior position. When stating education, also list scholastic awards that may have been achieved. If you went straight from high school to college, it never hurts to mention activities you were involved in while in high school and college. Mention offices held in any affiliations you were involved in. Always explain all the skills you possess that may help get the job.

Always do your homework before the interview. Visit the corporate website, get a copy of their newsletter, find out as much as you can about the department where you are applying. It is strongly recommended you look at patient outcomes posted online through Health-Grades (www.healthgrades.com), which compares institutions in any given geographic area. Make sure this is where you want to work even before you send in an application.

First impressions are very important

You are immediately being judged; 55% of another person's perception of you is based on how you look, so it just makes sense to dress your best. This means the same for both men and women: moderate shoes, limited jewelry, neat hair, clean fingernails. Don't show up in blue jeans. Wear comfortable fitting clothes and look neat and clean. You will need a good strong handshake (not bone shattering), good posture, direct eye contact, and a great big smile.

The gift of gab can be something of a curse during an interview. Your response should be less than one-and-a-half minutes long when asked about yourself. Why? Because after 90 seconds, you will have totally lost the interviewer's attention. When you begin, they are listening to you; but after 10 seconds, you are already losing them. After 60 seconds their mind is sorting through all the things they should be doing including what they should ask you next.

One of everyone's top fears is rejection, and one of our top needs is acceptance. For these reasons, it is not surprising that interviews make people nervous. Remember to always give yourself credit for at least getting the interview. Rejection can happen; and if it does, chalk it up to experience. Remember, after interviewing, you may decide you really did not want to work there anyway. ■



About the Author
Colleen Schabacker, BA, RRT, FAARC, is the director of respiratory care at Cookeville Regional Medical Center in Cookeville, TN.

Know How To Answer These Questions

Here are some questions interviewees may be asked during an interview. Be honest: If you have never dealt with what you're being asked, just say so — especially if you are new to the profession.

What is your performance history?

- What were the most important responsibilities in your last job?
- Tell me about a difficult problem you had and how you handled it.
- How did you feel about the workload in your last job?
- How did you allocate your time among your various responsibilities?
- Have you ever had to make an unpopular decision? What were the circumstances?
- What expectations and reservations do you have regarding this position?
- What skills and qualities can you bring to this position?

Are you willing?

- What qualities do you think are necessary to be successful in this job?
- Tell me about how you handle working with new people. Give me an example.
- Tell me about your most successful participation in a team/group project. What was your role in making the project a success?
- Tell me about your least successful team project. What caused it to be unsuccessful?

Are you manageable?

- How were you rated on your last performance evaluation?
- What are your strengths and weaknesses?
- Tell me about a time you presented a new idea, and how you convinced your manager to adopt your point of view?
- Tell me about a time when you wish you had handled a difficult situation differently.
- Has a physician ever asked you to do something you did not agree with? If so, what did you do?

Owned by Registered Respiratory Therapists

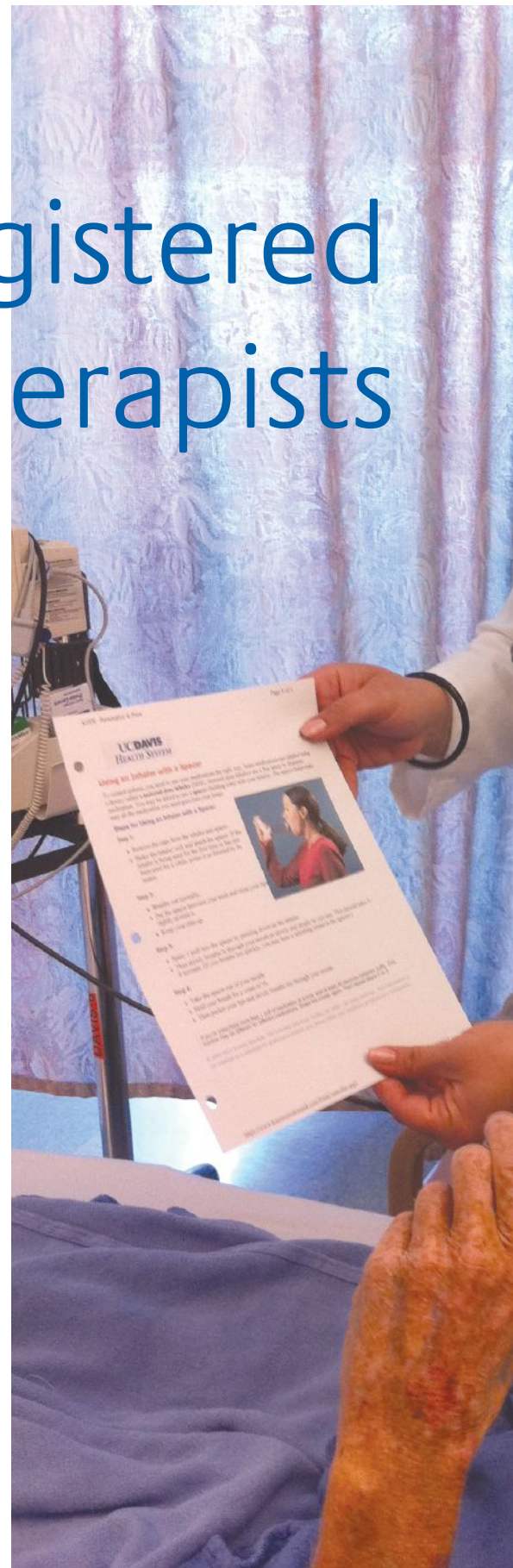
At UC Davis, RRTs lead the way in COPD case management

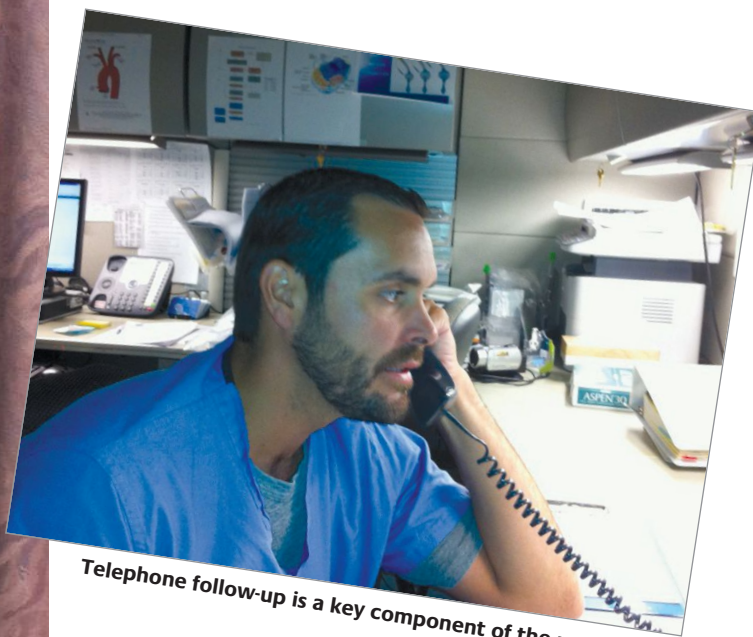
by Debbie Bunch

Case management is definitely a multidisciplinary team sport — but at a facility in California, respiratory therapists have taken the lead role.

They say good things are worth waiting for, and that has certainly been the case for the COPD component of the Reversible Obstructive Airway Disease (ROAD™) Center at the University of California, Davis, in Sacramento. With roots going back to the development of an asthma disease management program in the late 1990s, the ROAD Center was first conceived in 2004 to heighten public awareness of asthma, COPD, and bronchiectasis. But it wasn't until this past March that seven RRT case managers actually began seeing COPD patients through the program.

“The preview to the ROAD Center actually began in 1998,” explains Patricia Brown, BA, RRT, respiratory therapy department manager at the UC Davis Medical Center. The UC Davis Asthma Network (UCAN) was





Telephone follow-up is a key component of the program.

established to minimize the prevalence of poorly controlled asthma in the community. “This successful program laid the ground work for part two — the COPD Case Management Program.”

Samuel Louie, MD, the ROAD Center’s medical director, developed the asthma program and felt strongly that COPD patients could benefit from something similar. However, convincing hospital and clinic administrators proved to be an uphill battle. “It was clear to me that the standard of care for COPD was deplorable in the United States and here in Northern California,” says the physician. “It was not until COPD exacerbations were blamed for nearly 80% of the direct costs of care for COPD that care coordination programs nationwide became a priority.”

Working closely with Carol Robinson, RN, chief nursing officer who approved the UCAN 16 years prior, Dr. Louie gained approval for the COPD program in 2011. It was then that he turned to Brown to help him turn his vision into reality. “It takes a team to realize the vision, and that is where Patricia Brown came in,” he says. “Patricia was the administrative leader and organizational force we needed to pull it off to help COPD patients in the hospital.”

Not curable, but reversible

Brown presented the program to the department of nursing and to the facility’s hospitalists, and it was off and running. The program zeroes in on the “reversible” nature of chronic respiratory conditions because while asthma, COPD, and bronchiectasis cannot be cured, the team at UC Davis feels strongly that the poor quality of life and frequent acute exacerbations associated with them can certainly be prevented.

“Our vision is that anyone in our community living with reversible, obstructive airway disease will have the knowl-

COPD Case Manager Michelle Young helps a patient better understand the need to monitor his condition.



COPD Case Manager Anthony Yanes (left) discusses a case with Respiratory Critical Care Coordinator Brendy Avalos.

edge, education, and health care services needed to elevate their quality of life,” says Brown. “Our mission is to integrate and provide quality patient care services that promote patient education and safety and social networking, and to align our goals with national efforts to transform people’s lives one at a time.” She notes that the patient is an integral member of the team, because without patient buy-in, the timely and judicious decision making necessary to manage acute exacerbations, other crises, and daily living would not be possible.

While emphasizing that it takes a team of hospitalists, pulmonologists, registered nurses, pharmacists, discharge planners, and family and friends to make the program work, Dr. Louie credits his RRT case managers for leading the way. “It is my opinion that institutions are ignoring a great asset in their hospitals and clinics — Registered Respiratory Therapists,” says the physician. “If I can trust them with a critically ill patient in acute respiratory failure, why not trust them to prevent and treat patients before they end up on a ventilator?”

Pulling the program together

Once the program was approved and RRTs were slated as the case managers, planning went into full swing. Working with AARC member and RC Critical Care Coordinator Brendy Avalos, RRT, Brown began gathering information and data upon which to base the COPD case management program. “We started with the Global Initiative for Chronic Obstructive Lung Disease data,” she says. “Next, Brendy took the AARC COPD Educator Course.” Avalos was impressed with what she learned and recommended the course for all of the designated case managers, who ended up taking it as well. “It added credence to our program through the ‘certification’ and ensured we were all on the same page,” says Brown.

From there, she and Avalos pulled additional information from course materials, journals, and professional organizations and blended it all together into five “scripts” covering the basic knowledge that COPD patients need to better control their condition:

In Their Own Words

COPD Case Managers Explain Why They Got Involved

I worked with Dr. Louie in the UCAN program, and it was an honor to work with him on another project. He offered me an opportunity to be a part of something that I knew would enrich the lives of the patients I serve. It was never a question of whether I would (once offered) but of when I could... simply put, I feel this program can do a lot of good. — *Anthony Yanes, RRT*

I like being an RT, but after five years of critical care, I wanted

something more. As a case manager I have time to get to know my patients. I very much enjoy the teaching we provide the patients and the time we have to do this. As RTs we don’t always have the time, with our full workloads and emergencies that come up during our shift, to go over things like pursed-lip breathing. In this position, that is what we are doing — making time for education. I love being a part of this specialized area of respiratory care. — *Krystal Craddock, RRT* ■

The COPD case management component ... of the ROAD Center begins while the patient is still in the hospital recovering from an acute exacerbation.



- Anatomy and physiology
- Physiologic changes caused by COPD
- Medications and their proper delivery techniques
- Pulmonary rehabilitation
- Smoking cessation

AARC member Claudia Vukovich, RRT, AE-C, who serves as the UCAN coordinator, pitched in to critique the scripts and help prepare the staff to take on a case manager role. “Each case manager spent time in the UCAN clinic with Claudia observing patient interaction and education as well as collaboration with physicians,” Brown explains.

Dr. Louie was also there every step of the way to elaborate on the lessons learned in the COPD Educator Course, stressing in particular the vital role communication plays in disease management. “He showed the case managers how to empower the patients by giving them the tools they need to make the right choices,” says Brown. He also encouraged the RTs to believe in themselves and let loose the passion to teach and to care.

Step-by-step comprehensive education

The COPD case management component of the ROAD Center begins while the patient is still in the hospital recovering from an acute exacerbation. The RRT case managers typically see patients over

Helping her patients gain control of their COPD is rewarding for COPD Case Manager Krystal Craddock.

In Their Own Words

COPD Case Managers Cite Most Important Service They Provide

The most important service we provide is attention to the person, not just the disease. We look at medications, assess effectiveness, and make changes based on the subjective information given by the patient. We offer assistance and referrals to programs that will enhance quality of life for those suffering with COPD. We don't only talk, we listen. People don't care how much you know until they know how much you care. — *Michelle Young, RRT*

Empathy. These patients see us taking our time with them, educating them, making referrals for them, and answering them when they call. They see that we care, and I believe that makes them feel like someone here cares about them. A lot of the time doctors don't have time to bridge the gap between diagnosis of COPD and treatment. They

don't always have the time to educate their patients who need to know how their disease process works, the different classifications of medications, breathing techniques, and how to avoid infection. That's where we come in. — *Krystal Craddock, RRT*

I think the most important service we provide our patients is the one-on-one education that we share with each COPD patient. This allows them to ask questions in a nonthreatening environment. The interaction with family members allows them to voice their concerns and ask questions, too. Our follow-up calls to the patients after discharge enables them to ask us questions about what else they can do to facilitate their staying out of the hospital. — *Carol Mason, RRT*

a four-day period to provide education in 10 key areas:

- Normal lung anatomy/physiology vs. COPD anatomy/physiology
- Medication classifications
- The patient's specific medication(s): what, when, where, how, and why to take them (including a detailed action plan)
- Breathing retraining (pursed-lip and diaphragmatic breathing)
- Anxiety breakers
- Recognizing exacerbation vs. just having a "bad day" (rescue plan)
- How to avoid infection
- Pulmonary rehabilitation and exercise
- Smoking cessation
- Oxygen use (delivery systems, hazards, do's and don'ts)

The RRTs also refer patients to other services when appropriate, including the UCAN quit-smoking program, pulmonary function testing, and pulmonary rehabilitation. They make follow-up calls to patients three to five days following discharge and then again every six to eight weeks thereafter to ensure patients

have made a follow-up appointment with their PCP and are complying with the medication plan established during the hospital visits. Each patient in the program leaves the hospital with an action plan to prevent exacerbations and a rescue plan to implement if they feel an exacerbation is imminent. Patients also receive a pager number they can call at any time between 7 a.m. and 8 p.m. for immediate assistance with questions or concerns.

"Most of our patients have very limited knowledge about their disease and don't feel comfortable asking their doctors in-depth questions," says Brown. "Families often receive education along with the patient and appreciate being better equipped to recognize early signs and symptoms of an exacerbation."

In fact, the case managers find it is often a family member or close friend who is the first to recognize the early signs of an exacerbation, such as a change in mood; and involving these close associates of the patient in the program is vital to its success. "We have gotten calls from family members and patients asking medication questions, needing help finding a PCP, and wanting to know what to do when they think they are starting to have an exacerbation," says Brown. "They are very grateful for this program and for our pager."

Our initial outcomes have shown that with just ... four days of personalized attention and integration of services, our patients stay out of the hospital more than 30 days.

Significant drop in readmissions

Brown notes the program has received great support from its referring physicians, who refer their patients either at admission or by requesting an RT evaluation for COPD exacerbation. "UC Davis is not new to RT-driven protocols, and our MDs know how to request our services," she says. "If the physician is unsure whether the patient qualifies, they always call and discuss the patient with us and ask for our assessment and recommendations." Dr. Louie adds, "To activate the ROAD Program for COPD patients in the hospital, at the clinic, or from home, all anyone has to do is call the ROAD COPD number and an RRT COPD case manager will be at their service. That's exceptional patient care service."

Initial outcomes from the ROAD Program illustrate the impact it is already making on patients and the hospital bottom line alike. When looking at 2009–2011 data on hospital readmissions within 30 days of discharge (before the ROAD Program started), Brown and her colleagues found COPD readmissions occurred in between 11–16% of cases. However, in the first four months of this program, readmissions declined to just 2.4%.

"Our initial outcomes have shown that with just four days of personalized attention and integration of services, our patients stay out of the hospital greater than 30 days," says the manager. "Of the 42 patients we saw who could have had a COPD exacerbation readmission in 30 days or less, only one had a readmission."

Exceeding expectations

Dr. Louie believes using Registered Respiratory Therapists to provide case management services to inpatients with an acute exacerbation of COPD is not only a good solution to the problem of reducing readmissions for this costly condition but also is a great way to improve quality of life for people living with the disease. "No health care professional is better educated and trained to deal with asthma, COPD, and bronchiectasis than a Registered Respiratory Therapist," he says. "Each of the RRT COPD case managers has exceeded all expectations. I think they like challenges, and I am extremely proud of every one of them. This ROAD Program will always belong to our patients and to our Registered Respiratory Therapists." ■

In Their Own Words

COPD Case Managers Share Their Patient Stories

After I had finished educating one patient, one of her family members followed me into the hall to ask how he might be able to stop smoking. He was able to express his fears and concerns for his mother and for himself. It was his stimulus to begin on a path to a healthier life. It was touching he cared so much for his own family that he was trying to become healthier before he got really sick. — *Carol Mason, RRT*

I had one patient who was newly diagnosed with COPD. She and her adorable husband wanted to know everything they could about this disease so that they could stay on top of it and live their lives as fully as possible. This lady was easy to educate because she wanted to learn how to live with the disease, not suffer from it. She was one of our first candidates for the program, and I will never forget her enthusiasm. By the time she was ready to be discharged, her husband had the name and address of a medical supply store where he planned to purchase a

pulse oximeter and several other pieces of equipment so he could be her "RT" at home. She even left wearing a mask because "that RT gal said I should because hospitals have germs!" — *Michelle Young, RRT*

One day I walked into a patient's room after I had been seeing her for two days. She was on the phone but immediately told them, "I have to go, my Krystal is here." Usually during COPD education, it is "my breathing lady is here." When your patients see you as their "own," it helps you realize that you are making a positive impact on them. They see that you care about them, and they look forward to seeing you. They get to know you. You can hear the excitement in their voice when you call them at home, too. I have called patients and started to leave a message on their machine only to have them pick up with excitement in their voice while I'm in the middle of my message and say, "Oh, hi Krystal!" — *Krystal Craddock, RRT* ■



Industry Watch

Masimo acquires PHASEIN AB

Masimo has acquired PHASEIN AB, a developer and manufacturer of ultra-compact mainstream and sidestream capnography, multigas analyzers, and handheld capnometry solutions based in Stockholm, Sweden. The company notes that the acquisition complements Masimo's portfolio of products, which range from OEM solutions for external "plug-in-and-measure" gas analyzers and integrated modules to handheld devices.

"In our assessment, PHASEIN has the most accurate gas measurements, the widest array of measurements, and the technology most suited for easy and flexible integration in both Masimo and OEM products," Masimo CEO Joe Kiani, was quoted as saying.

Sarepta Therapeutics announces study results

According to Sarepta Therapeutics Inc., treatment with its exon-skipping compound, eteplirsen, achieved a significant clinical benefit on the six-minute walk test over a placebo/delayed treatment cohort in a Phase IIb trial

in Duchenne muscular dystrophy patients. Eteplirsen administered once weekly at 50 mg/kg over 36 weeks resulted in a 69.4 meter benefit compared to patients who received placebo for 24 weeks followed by 12 weeks of treatment with eteplirsen in the open-label extension.

Nanosphere blood culture test gets FDA approval

The FDA has allowed marketing of the Verigene GP Blood Culture Nucleic Acid Test (BC-GP), the first nucleic acid test that can identify 12 different bacterial types known to cause bloodstream infections, according to Nanosphere Inc., its manufacturer. Verigene allows for simultaneous identification of the bacteria and three associated resistance genes a few hours after the first sign of bacterial growth. The FDA decision was based on a study that compared BC-GP and traditional blood culture laboratory methods on 1,642 patient blood samples obtained from incubated blood culture bottles that contained gram-positive bacteria.

The BC-GP results were consistent with traditional blood culture methods in 93%–100% of the comparisons, according to the company.

Covidien receives 510(k) clearance for Nellcor system

Covidien has received 510(k) clearance from the FDA to market the Covidien Nellcor™ Bed-side SpO₂ Patient Monitoring System. "Health care professionals on the general care floor and in other lower-acuity areas of the hospital need critical patient information at their fingertips so they can respond quickly to health threats," says Robert J. White, president of respiratory and monitoring solutions at Covidien. The system was devised to give the health care professionals ready access to a patient's respiratory history so they can focus on delivering efficient, high-quality care, not gathering and managing data. The new system is now available in the U.S.

Weill Cornell researchers receive NHLBI grant for COPD

Researchers at Weill Cornell Medical College have received a \$6.5

million grant from the National Heart, Lung, and Blood Institute for a five-year investigation into metabolic changes occurring within airway epithelial cells in the lungs of patients with COPD caused by cigarette smoking. The researchers also hope to identify which cigarette smokers are at highest risk of developing COPD, along with novel biomarkers to assist in the development of new therapeutic treatments for the disease.

The MED Group adds online ventilator program

The MED Group has added a ventilator program to its MED Suppliers Network website. The program was created to assist health care professionals in the coordination of care for complex respiratory patients needing ventilation products and services by identifying quality MED member providers to care for their patients.

Domain Surgical uses new FMwand in cardiac surgery

Domain Surgical has reported its FMwand surgical device was used for the first time in a cardiac

surgery in August. The device enabled the surgeon to perform a high-risk procedure on a 68-year-old woman that may have been impossible without the FMwand's unique ability to simultaneously seal as it cuts, almost entirely eliminating bleeding and reducing tissue damage, according to the company.

Frank Shannon, MD, a cardiothoracic surgeon at Beaumont Health System's Royal Oak Campus in Michigan, said the device was able to precisely separate delicate lung tissue from the heart with minimal bleeding. He noted the FMwand was also able to surpass traditional surgical devices by eliminating electrical passage into surrounding tissues, further mitigating tissue damage.

ResMed acquires Umbian

ResMed Inc. has acquired Umbian Inc., a Canadian data services technology provider headquartered in Halifax, Nova Scotia. Umbian offers a comprehensive patient compliance management solution called U-Sleep, which monitors CPAP devices and provides a suite of interactive follow-up services for health care providers. "One of the biggest issues facing our HME partners is competitive bidding and reimbursement changes," says Luke Maguire, director of

health care informatics marketing at ResMed Americas. "The resulting pressure this places on HME businesses means that we are all continually looking for ways to decrease the cost of health care and improve profitability. By providing a scalable solution for compliance outreach, we are taking a significant step in supporting our HME partners to drive efficiencies and cost reduction."

Researchers announce influenza vaccine breakthrough

Researchers from Crucell Holland B.V. and The Scripps Research Institute have identified the first human monoclonal antibodies that appear capable of disabling all influenza B viruses. The discovery, which was published in a recent issue of the journal *Science*, addresses a significant missing link in the development of universal therapies and vaccines.

"Despite current vaccines and treatments, influenza remains a major medical problem worldwide. There is a strong need for development of new therapies that go beyond treatment or prevention of infection by single strains, especially with the growing problem of resistance to available anti-viral drugs," says Jaap Goudsmit, director of the Crucell Vaccine Institute and coauthor of the study.

FDA approves Sanofi SA epinephrine injector

The FDA has approved a new epinephrine injector from Sanofi SA that's designed to provide patients suffering from a deadly allergic reaction with audible and written instructions on how to administer the medication and what to do after injecting the epinephrine into the thigh. An alert light comes on when the dose has been delivered, and a retractable needle mechanism limits accidental needle sticks. The Auvi-Q has roughly the dimensions of a credit card and is about as thick as a cell phone. The device is not approved for children under 33 pounds.

Phrixus completes preclinical studies on DMD drug

Phrixus Pharmaceuticals Inc. has completed preclinical studies in mdx mice that demonstrate a beneficial effect of Carmeseal™ on the diaphragm after subcutaneous dosing as low as 3 mg/kg per day. The drug is being tested for its potential to treat Duchenne muscular dystrophy. "These results demonstrate the utility of Carmeseal in respiratory disease, the main cause of death in boys with DMD, and open a new, convenient route of administration for Carmeseal, similar to the subcutaneous administration of insulin, a route that has been

found acceptable for millions of individuals in diabetes," says Thomas A. Collet, president and CEO. Phrixus has received \$67,374 in sponsored research funding through the DuchenneDashboard to extend its findings.

FDA approves digital pill

A silicon chip made by Proteus Digital Health that's designed to be integrated into a pill has received FDA approval. After ingestion, the chip interacts with digestive juices to produce a voltage that is read through a detector patch placed on the skin. The signal is then sent via a cell phone to the physician. The chip also measures the patient's heart rate and physical activity, allowing the physician to gauge the patient's response to the medication dose. Right now the device is only approved for placebo pills, but tests have been conducted with pills designed to treat tuberculosis, mental health, heart failure, hypertension, and diabetes. Spokesmen for the company say it hopes to receive FDA approval for the use of the chip in these and other medications soon.

Brief submissions and photos for this column may be sent to Marsha Cathcart, AARC Times editor, at cathcart@aacrc.org. ■

Marketplace

Featuring information on products and equipment from manufacturers



SERVO-i Ventilators with NAVA®

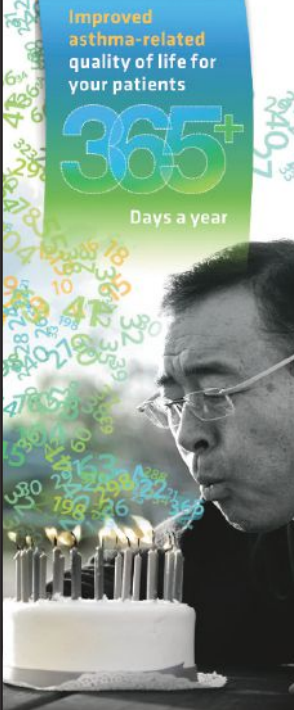
Empowering Human Effort

MAQUET
GETINGE GROUP


888-627-8383
www.maquetusa.com

Improved asthma-related quality of life for your patients

365+
Days a year



Blom® Tracheostomy Tube System



Blom Tracheostomy Tube System is an innovative solution for the tracheostomized patient. Our Standard, Subglottic Suctioning, Speech and LPV Inner Cannulas are used with our Blom Tracheostomy Tube to provide better patient care.

- Subglottic Suctioning Cannula is a Disposable Inner Cannula for suctioning the secretions above the cuff of the Blom Trach Tube
- Blom Speech Cannula is designed to allow speech for ventilator patients that require a fully inflated cuff
- LPV™ (Low Profile Valve) allows non-vented patients to speak without the use of finger occlusion

Visit www.Pulmodyne.com for more information.

Pulmodyne®
... bringing change to life®

Anchor Fast
Oral Endotracheal Tube Fastener

The right choice.



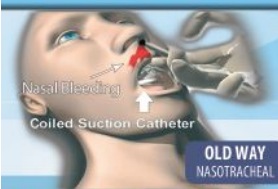
The Anchor Fast Oral Endotracheal Tube Fastener combines a number of unique features that make it the right choice to help prevent the formation of lip ulcers and ease access to the oral cavity.

Hollister
1.888.740.8999
www.hollister.com

Hollister and logo, and Anchor Fast are trademarks of Hollister Incorporated. ©2012 Hollister Incorporated.

BIAMP

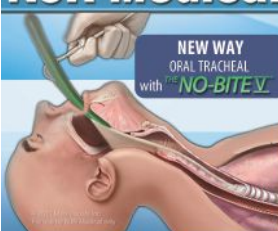
NEVER NASOTRACHEAL SUCTION AGAIN!



Nasal Bleeding
Coiled Suction Catheter

OLD WAY
NASOTRACHEAL

NJR Medical



NEW WAY
ORAL TRACHEAL
with **NO-BITE™**

FREE TRIAL
1.877.318.5162
or visit NJRMedical.com



QuickLung®

No other test lung performs with this precision and versatility at this price.

Call 800.583.9910 or visit ingarmed.com

INGMAR MEDICAL

New & Improved Endotracheal Tube Holder




MES Part No. 9102

Offset integral bite block, easier patient care

mes

mymesinc.com
1-800-423-2215

IPI Medical's ET-CARE™




Endotracheal Tube "FIXATOR" Device prevents longitudinal and rotational movement of the ETT and its cuff while allowing for easy access to oral care with its unique sliding latch system. ET-CARE's soft foam face plate minimizes pressure points and can be used on facial trauma/burn cases. The patency of the system is unaffected by the presence of facial hair, sweating or excessive secretions. Its design is completely tape and adhesive free. Non-metallic so it is MRI/CT Scan friendly and comes with an integral bite block and NG/OG tube holder. The true fixation properties of the ET-CARE™ reduce the need for repetitive X-rays to reassess the position of the ETT. ET-CARE™ cost effective by nature.

iP MEDICAL PRODUCTS
(561) 330-7820
www.ipimedicalproducts.com

► **Press releases and photos on new products are welcome. Send to Marsha Cathcart, AARC Times editor, at cathcart@aarc.org.**

MASIMO
Introducing
Rainbow Acoustic Monitoring™


Respiration Rate Monitoring
That Works Where and
When You Need It



www.masimo.com
800-257-3810

© 2011 Masimo Corporation. All rights reserved.

CENORIN™
Semi-Critical &
Non-Critical Medical Device
Washing
High Level Disinfection
HEPA Drying



6324 199th Pl, Ste 107
Kent, WA 98032
253.395.2400

CENORIN.COM

Telemedicine ECG System

CompuMed Inc. will offer GE Healthcare's powerful and compact ECG platform, the MAC 800®, as part of its new, next-generation telemedicine enhanced ECG system. CardioGram System 907 is the latest evolution of CardioGram technology and combines data communications and telemedicine services to allow clinicians the ability to instantly access cardiologists for immediate ECG over-reads and tele-consulting. The new system is designed to meet the needs of markets such as rural health care, mental health facilities, surgery centers, assisted-living centers, and correctional health care. www.compumed.net

Private Practice Therapy Software

MediServe's new all-in-one Web-based software solution is designed to help private practice therapy providers increase their profits. Attigo™ Therapy covers billing, documentation, scheduling, and practice management, and unlike some therapy EMR vendors who charge by the user and location, the fixed monthly price is determined solely by the annual scheduled appointment volume. Appointment reminders, technical support, training, and upgrades are all included at no extra cost. With its bidirectional integrated clearinghouse feature, the solution provides real-time information, so therapy providers know where their revenue is during the entire billing process. www.mediserve.com

Oxygen Cannulas

Teleflex has announced the introduction of Hudson RCI Softech® Plus, a line of oxygen cannulas designed to help clinicians improve patient comfort. The adult, pediatric, infant, and neonatal oxygen cannulas feature a soft material in both the cannula and the lariat tubing, which runs from the nasal prongs up to, over, and around the ear. By expanding this soft design to the lariat, Hudson RCI delivers a superior cannula that will improve comfort around the patient's ears. The line also features a non-DEHP material. A plasticizer used in PVC products, DEHP has been shown to produce a range of adverse effects in laboratory animals. www.teleflex.com

Nasal Cannula

The Smart Nasal Cannula™ with Oxyview® from Ingen Technologies Inc. offers in-line pneumatic oxygen flow and a high-quality, curved soft tip. Touted for its ability to save staff time when monitoring oxygen and improve safety and accuracy, the cannula is made from durable medical-grade polycarbonate and is not gravity dependent, so it works in any position. The cannula comes in sizes for adults, children, and infants. www.ingen-tech.com

Combination Module/Wireset Sensor

Philips Respironics' Pro-Tech ezRIP combination module/wireset sensor is designed to provide a low initial RIP investment for sleep labs. ezRIP effort modules operate with Pro-Tech zRIP DuraBelt effort sensor belts to help minimize bedside module congestion and provide easy configurability for sleep lab technicians. The driver module clips directly onto the zRIP DuraBelt or legacy zRIP belt. By plugging the ezRIP wireset into the belt effort sensor and the PSG headbox, the driver module is kept out of the way, and patients can enjoy the movement and freedom associated with minimal RIP equipment. www.philips.com

Web-based Patient Management System

The VirtuOx Professional Edition is a Web-based patient management system for the providers of oral appliance therapy (OAT) offered by Airway Management and VirtuOx. The comprehensive system does not use software and is accessible via an Internet connection from any PC. It includes oximeter screening, home sleep testing, and patient demographic and sleep record storage, as well as medical billing for oral appliances. Unlike CPAP, OAT requires gradual titration in the home over a three- to four-week period. www.virtuoxpro.com



RC Currents

IN THE NEWS

► Strickland Joins AARC Executive Office Team

Shawna Strickland, PhD, RRT-NPS, FAARC, will join the AARC as Associate Executive Director of Education later this year, following the retirement of current director William Dubbs, MEd, RRT, FAARC. In her position, Dr. Strickland will oversee the development of educational programs for the AARC and its members. She will direct the continuing education operation for the organization and develop online and on-demand programming.



She comes to the AARC from the University of Missouri where she is a clinical associate professor. She was awarded a Fellow in the American Association for Respiratory Care (FAARC) pin in 2011 for her contributions to the profession and also holds an AE-C credential. During her career, she has held positions in neonatal care, transport, general floor care, and education. In addition to the University of Missouri where she has worked since 2006, Dr. Strickland has also worked at Shriner's Hospital, Southern Illinois University, Cardinal Glennon Medical Center, Barnes-Jewish Hospital, and Texas Children's Hospital. She currently serves the AARC in the House of Delegates and as coordinator of the Clinical Practice Guidelines evidence-based project.

William Dubbs, who is currently in the position, will retire at the end of the year, having worked at the AARC since 1995.

"We welcome Shawna to our team. Her experience and energy will certainly be a great addition here as we bring our members more options for educational offerings in the future," said Thomas J. Kallstrom, MBA, RRT, FAARC, the AARC's executive director and CEO. "And we offer our best wishes and thanks to Bill as he transitions into his retirement." ■

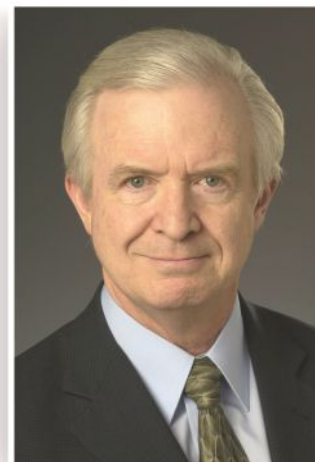
Aviation Safety Expert Presents Keynote at AARC Congress

Like many other organizations, the AARC is taking a page from the aviation industry by developing a series of checklists aimed at improving patient safety. The first three checklists (www.aarc.org/resources/safety_checklist/) were made available earlier this year and focus on oxygenation during in-patient transport of adults/children and infants/neonates, and assessing the risk for ICU readmissions in adults.

The connection between aviation safety and patient safety will take center stage at the AARC International Respiratory Convention & Exhibition this Nov. 10–13 in New Orleans, LA, as the Association brings nationally known aviation and patient safety expert John J. Nance, JD, to the podium to deliver the keynote address (www.aarc.org/education/meetings/congress/saturday.cfm).

Many of you will recognize Captain Nance from his appearances on ABC's "World News Tonight" and "Good Morning America," where he serves as an aviation analyst and is regularly called upon to offer expert opinions whenever a major airline emergency occurs. He has shared his expertise on flight safety on numerous other networks and news shows as well, including CNN, PBS, the "Today Show," and the "Oprah Winfrey Show."

In the keynote he will discuss how aviation principles should be infused into the culture of American health care to improve patient safety. His interest in the health care field grew out of the realization that flight safety programs implemented in military and civilian aviation could easily be translated to the patient safety environment. ■



Honoring Military RTs

If you are a respiratory therapist currently serving your country in the military, *AARC Times* would like to publish a story and photo about your service or deployment.

Please go online at www.AARC.org/go/mm where you will find an online form you can fill out to provide information about your deployment. You can also download your photo there.

Once we receive your information, we may use it to prepare an "RC Currents" story about your service in the military. The AARC honors those who serve, and we would like to share your story with your respiratory care colleagues here and abroad. ■



► Transitions

Steve Sittig, RRT-NPS, C-NPT, FAARC, has been elected to serve as secretary of the executive committee for the board of directors of the Commission on Accreditation for Medical Transport Services. Sittig had been filling the spot on the committee since January, when he was selected to fill a vacancy. He is the first respiratory therapist to ever hold a position on the CAMTS executive committee. (Photo 1)



1

Kathleen Lee, EdD, RRT, FAARC, has been appointed to serve as chancellor of the Central Indiana region of Ivy Tech Community College. She began her career at Ivy Tech's Indianapolis campus in 1985, serving as the college's director of RC clinical education. She went on to serve as program director before being promoted to dean of the School of Health Sciences and Public Services, and in 2005 she began her service as vice chancellor of academic affairs. (Photo 2)



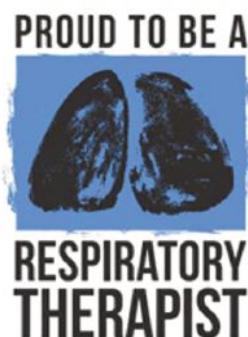
2

Barry Johnson, RRT, has been named executive director of the Texas Alliance for Home Care Services.

We welcome news about AARC members. Submit notices online at www.AARC.org/transitions. ■

Did You Celebrate Respiratory Care Week?

We want to hear about what you did to celebrate National Respiratory Care Week this year. Upload your high-resolution photos to www.aarc.org/rcweek with a brief description before November 9, especially identifying your organization. You just might find your story on the AARC website or in an upcoming issue in "RC Currents." ■



Read the Rest of the Story at www.AARC.org

- Free recordings to all convention registrants — www.aarc.org/headlines/12/09/congress_recordings
- New and improved Sputum Bowl — www.aarc.org/headlines/12/09/sputum_bowl.cfm

Born with Two Souls

by Bill Baker, RRT



In my many years of being an RT, I've come across some wild stuff. In home care we really get to know many of our patients, and many of my customers have come from varied backgrounds. I've had everyone from a Supreme Court Justice, to a WWII Marine who was one of the original Code Talkers, to astronauts, to folks from Mexico who came across the border for a variety of reasons.

One of the latter spent about eight years in a TB ward in Mexico before leaving on his own accord as he got older. He got married and had three kids. He did well for himself, and his children all went to college. Being successful, he came to Arizona for medical care for his lung ailments, which had persisted throughout all these years and were now causing him to need oxygen during sleep.

He finally decided to get a definitive diagnosis regarding his condition. Doctors did a CAT scan and found a large mass in his upper left thorax. Upon further analysis of this mass they found it to be his "twin brother," who had been implanted encapsulated in his

thorax as they both grew post conception. I think you would call that an "absolute shunt," with its air volume reducing venous admixture and resulting in a shunt to his respiratory system.

Doctors did not remove the mass. With age, this gentleman has required more oxygen; he's now using it 24/7 with some increase in requirement over the years. I believe this man was born with two souls. He never did get TB, even in the TB ward where he lived all those years. ■

Bill Baker, RRT, is an AARC member from Tucson, AZ, where he serves as president of RxO2 Oxygen & Medical Equipment Supply Co., Inc.

COPDGene Project Receives Phase II Funding

The second phase of the COPDGene project has been funded by the National Heart, Lung, and Blood Institute. The project is being conducted by researchers at National Jewish Health and Brigham and Women's Hospital and will enable scientists to build on the first phase of the study by comprehensively analyzing the human genome to find additional genetic predispositions to developing COPD. The investigators believe a better understanding of the biological mechanisms causing COPD could lead to specific treatments that would prevent further progression of the disease.

The COPDGene cohort of 10,171 subjects was created by medical centers across the United States and is comprised of subjects with a history of heavy smoking who

either have COPD or are at risk for developing the condition. In the second phase of the project, follow-up visits at a five-year interval from the initial visit will be conducted on all available subjects to determine longitudinal changes in disease development and progression.

"This research has the potential to identify the set of genes that controls susceptibility to COPD. Such information would aid the development of new therapies that could improve the quality of life for individuals with COPD — and potentially save lives," says COPD Foundation President and Co-founder John Walsh. "Ultimately, by providing a greater understanding of COPD, the COPDGene Study lays a solid foundation for the development of personalized therapy." ■

Azithromycin Three Times a Week Could Prevent COPD Exacerbations

The overuse of antibiotics had gotten a lot of bad press, but according to researchers from Virginia Commonwealth University (who published their findings in the July 26 edition of the *New England Journal of Medicine*), taking the antibiotic azithromycin three times a week on an ongoing basis could help prevent acute exacerbations of COPD.

The investigators arrived at that conclusion after reviewing current clinical studies and the pharmacology and adverse effects of azithromycin, then examining the risks and benefits of a regimen of a Monday, Wednesday, Friday dosing schedule. While noting that three times a week dosing will not be advisable for all patients, study author Richard P. Wenzel, MD, was quoted as saying, "This approach has the potential to eliminate one-third of the severe exacerbations each year among patients with COPD."

Dr. Wenzel and his colleagues have developed a protocol aimed at helping clinicians select appropriate candidates for the antibiotic therapy. Specifically excluded would be those with a high risk of cardiovascular disease who may be prone to dangerous cardiac rhythm disturbances, those on drugs already known to adversely affect the electrocardiogram and that might interact with the antibiotic, and those with hearing loss.

According to the authors, earlier work out of Canada put the cost of a hospital stay following an acute exacerbation of COPD at \$9,557 (in Canadian dollars). Another large study concluded that if approximately three people must be treated with the antibiotic to prevent one annual exacerbation, the cost to prevent an exacerbation would be \$3,564 for daily dosing, or \$1,545 for dosing three times a week. In 2000, 726,000 patients were hospitalized with acute exacerbations of COPD in the United States. ■

National Health Observances

- **COPD Awareness Month**; November; American Lung Association, (800) 548-8252; www.lungusa.org
- **Lung Cancer Awareness Month**; November; Lung Cancer Alliance, (202) 463-2080; www.lungcanceralliance.org
- **World COPD Day**; Nov. 14; Global Initiative for Chronic Obstructive Lung Disease (GOLD); www.goldcopd.org
- **Great American Smokeout**; Nov. 15; American Cancer Society; (800) ACS-2345; www.cancer.org

► Strange But True...

Cluck, cluck: Could the lowly chicken hold the key to treating bacterial infections and even cancer? Maybe, report U.S. and South Korean researchers, who found two genetic variations in chickens that showed the ability to fight off bacterial infections — and one also appeared to be effective against cancer cells. Maybe there was something in that chicken soup claim after all. (*Proceedings of the National Academy of Scientists*)



Good hypertension? High blood pressure might not be a bad thing for the frail elderly, find researchers from Oregon State University. Their study noted a 62% lower mortality rate among older people with high blood pressure who were unable to finish a walking test versus those with normal blood pressure. The investigators believe high blood pressure may serve as a compensatory mechanism to overcome the loss of elasticity in the blood vessels as people age. The same is probably not true for fit elderly, though. People who walked the fastest on the test were 35% more likely to die if they had high blood pressure.

Magic under the sea: U.S. researchers reporting in *Nature Biotechnology* have created a jellyfish made from a mix of silicone and rat heart cells that is able to swim on its own when placed in a salty fluid capable of conducting electrical currents. The next step: a manmade jellyfish that can acquire its own nutrients. The concept may one day lead to the development of bioengineered systems for use in humans, such as a pacemaker that would work without battery power.

A new use for fat: Adult stem cells harvested from fat during liposuction have been transformed into usable blood vessels in the lab. Researchers from the University of Oklahoma first turned the cells into a thin collagen membrane where they multiplied. From there they rolled the membranes into tubes. After about three or four weeks they had small diameter blood vessels they believe could be used in heart bypass surgery. ■

Rewarding Moments Healing Connections

by Janelle Gardiner, MS, RRT, AE-C



At the hospital where I work, they call it “healing connections.” The idea is to make a personal connection with the patient to let him know we care about him as a person, not just a room number.

I try to do that with all my patients, not just because I was told to by administration but because I really do care. So for me, this particular experience occurred simply as the result of a routine SVN treatment.

I went to see the patient. I introduced myself, performed the initial assessment, and then began the therapy. Since this was an initial treatment, I explained some things about the medication and therapy and then asked the patient some important questions about the history of her present illness to see if I could get a better understanding of what I was reading in her chart.

She expressed how uneasy she was about her new diagnosis of COPD. She mentioned that she was trying hard to adjust to the limitations caused by this

debilitating disease. With tears in her eyes, she told me that she was not even able to take her dog outside for a short walk. She was in a sense, crying out for help.

We talked for a long time — much beyond that allotted to me for a simple nebulizer treatment. But I could tell she needed someone to listen to her. I discussed with her the need for pulmonary rehabilitation. I tried to instill in her some hope, as I think at this point she felt all was lost. I was able to provide her with some referral information so she could get the help she needed and so badly desired.

That night, I felt I truly had a “healing connection.” ■

Janelle Gardiner is an AARC member from Ogden, UT, where she serves as an assistant professor at Weber State University and also works PRN as an RRT at McKay-Dee Hospital Center.

Not Much Progress Made on Reducing Readmissions

Despite all the press on the government’s new policy to reduce payments to hospitals with higher than expected readmissions for heart attacks, heart failure, and pneumonia, little progress has been made on curtailing these readmissions over the past three years.

According to data posted on Medicare’s Hospital Compare website earlier this year, the percentage of pneumonia patients readmitted within 30 days actually rose by 0.1%. The percentage of heart attack and heart

failure patients readmitted within 30 days dropped by only 0.1% between 2008–2011. Overall, 19.7% of heart attack patients, 24.7% of heart failure patients, and 18.5% of pneumonia patients were readmitted within the 30-day window.

The government is expected to expand the readmissions penalty program to include other chronic diseases. COPD is likely to be added to the list in 2014 or beyond. ■

Renting Curtails Environmental Changes To Reduce Allergens

Renting a home can put the brakes on environmental changes to reduce indoor allergy triggers. That's the key finding from researchers who gauged the willingness of renters and home owners to adhere to recommendations for environmental modifications such as wearing a mask while vacuuming, reducing home humidity, and eliminating carpeting. Overall, 91% of homeowners made these kinds of changes versus just 63% of renters.

"By making recommended environmental changes around the home, people with allergies can substantially reduce their symptoms," allergist Michael Schatz, MD, lead study author, was quoted as saying.

"While some changes are related to owning a home, other changes, such as encasing your mattress with a dust-proof cover, can and should be done no matter your real estate status." The study was published in the August issue of the *Annals of Allergy, Asthma & Immunology*. ■



Women Equal Men in Smoking Cessation

The long-standing belief in the medical community that women are less likely to successfully quit smoking is just plain wrong, report the authors of the largest epidemiological study to date to look into the issue. They find women and men quit successfully at about the same rate, although some gender differences do exist. Specifically, women under age 50 are more likely to kick the habit than men, and men over age 50 are more likely to quit than women. Women also appear to relapse for different reasons than men, including weight control, stress, and negative emotions. Women often experience more severe withdrawal symptoms, and they are less likely to benefit from nicotine replacement therapy.

But the bottom line, say the authors, is that health professionals should stop tagging women with the "harder to quit" label. Not only does that discourage some women from attempting to quit, it could also derail quit attempts by men who are led to believe quitting is easier for them and thus fail to put forth the effort needed to be successful. "It is time to put aside the idea that women are less successful than men at giving up smoking," they write. The study was published in a recent issue of *Tobacco Control*. ■

Smoking Among American Youth Is Declining, But...

Tobacco use among American middle school and high school students showed a slow decline from 2000–2011, according to a recent report from the Centers for Disease Control and Prevention (CDC). But when compared with other long-term studies, such as the Youth Risk Behavior Survey, the steep rate of decline from 1997–2003 has slowed noticeably. This report shows that in 2011 nearly 30% of high school males and 18% of high school females used some form of tobacco. More than 8% of middle school males and nearly 6% of middle school females used some form of tobacco in 2011.

Tobacco use, including cigarette-like cigars and homemade cigarettes, remains high among high school students. In 2011, cigar use among high school males (15.7%) was comparable to cigarette use (17.7%). These cigars contain the same toxic chemicals as cigarettes.

Nearly 25% of high school males and more than 17% of high school females used some form of smoked tobacco product in 2011, while smokeless tobacco use among high school males (12.9%) was eight times higher than among high school females (1.6%).

"An overall decline in tobacco use is good news; but although four out of five teens don't smoke, far too many kids start to smoke every day," said CDC Director Thomas R. Frieden, MD, MPH, upon the release of "Current Tobacco Use Among Middle and High School Students – United States, 2011," published in this year's August 9 issue of *Morbidity and Mortality Weekly Report*. He notes that this reaffirms the need to return youth tobacco use trends to the more rapid rate of decline seen from the late 1990s through 2003.

To further reduce tobacco use among young people, the 2012 U.S. Surgeon General's Report (released in May), recommended making tobacco products less affordable, running hard-hitting mass media campaigns, and having evidence-based tobacco control and prevention programs that work in conjunction with new restrictions on the sale, distribution, and marketing of cigarettes and other tobacco products to youth. Today, tobacco use remains the leading cause of preventable death and disease in the United States. Cigarette use and exposure to secondhand tobacco smoke kill an estimated 443,000 Americans yearly. Still, nearly 4,000 kids under age 18 try their first cigarette every day. ■





New Members

Welcome to the AARC

U.S. Members

A

Bragwell, Jennifer, Anchorage, Ak*
Buckley, Kathleen, Fairbanks, Ak
Jury, Kate, Anchorage, Ak

Abdulfatah, Naser, Mobile, Al
Allen, Destiny, Birmingham, Al
Bass, Jennifer, Cottonwood, Al
Binder, August, Montgomery, Al
Blankenship, Daniel, Birmingham, Al
Braswell, Ashley, Dothan, Al
Brown, Amber, Birmingham, Al
Buggs, Quintoya, Birmingham, Al
Cartledge, Jason, Birmingham, Al
Cole, Shante, Birmingham, Al
Crawford, Gabrielle, Midland City, Al
Danford, Jessica, Elba, Al
Daniels, Cindy, Tuskegee Institute, Al
Dumas, Whitney, Birmingham, Al
Edwards, Artavius, Birmingham, Al
Evans, Michael, Birmingham, Al
Gaines, Jennifer, Birmingham, Al
Garrett, Rainey, Midland City, Al
Giattina, Christopher, Semmes, Al
Grimes, Amber, Ozark, Al
Harris, Kaitlyn, Leeds, Al
Hildreth, Lavonda, Birmingham, Al
Hinton Mims, Cynthia, Birmingham, Al
Holland, Simaria, Dothan, Al
Hollingsworth, Benjamin, Anniston, Al
Howe, Cathy, Huntsville, Al*
Jefferson, Randi, Birmingham, Al
Jehlik, Rebecca, Birmingham, Al
Jones, Caitlin, Ozark, Al
Jones, Katie, Birmingham, Al
Knight, Lakisha, Birmingham, Al
Kulp, Katherine, Birmingham, Al
Landers, Phillip, Birmingham, Al
Layer, Samantha, Birmingham, Al
Lee, Candace, Birmingham, Al
Levingston, Jameson, Birmingham, Al
McCloud, Alfredia B, Montgomery, Al*
Milstead, Shannon, Birmingham, Al
Mithell, Andrea, Abbeville, Al
Mullins, Ryan, Birmingham, Al
Murphy, Laquandra, Birmingham, Al
Nawaz, Nadia, Birmingham, Al
Nelson, Ashley, Union Grove, Al
Palmer, Gentry, Birmingham, Al
Pettaway, Krystle, Birmingham, Al
Price, Blayde, Dothan, Al
Prince, Jasmine, Birmingham, Al
Reach, Kendra, Birmingham, Al
Reeves, Trusha, Dothan, Al
Renfroe, Chelsea, Eufaula, Al
Robinson, Areka, Birmingham, Al

Rodgers, Melissa, Dothan, Al
Shepherd, Thomas, Bay Minette, Al*
Sullivan, Frances, Birmingham, Al
Takrouni, Yousef, Mobile, Al
Thompson, James, Daleville, Al
Tibbs, Brittany, Birmingham, Al
Vestal, Rebecca, Cedar Bluff, Al
Vo, Cat Thuy, Birmingham, Al
Vo, Jeffrey, Birmingham, Al
Walton, Taylor, Birmingham, Al
Warnick, Julie, Birmingham, Al
Wiggins, Ben, Frisco City, Al*
Williams, Dishon, Birmingham, Al
Williams, Leslie, Birmingham, Al

Allen, Jacob, Hamburg, Ar
Avant, Rhea Lynn, Crossett, Ar
Brooks, Meagan, Hamburg, Ar
Brown, Haley, Hot Springs, Ar
Christman, Amanda, Hot Springs, Ar
Cumming, Jennifer, Little Rock, Ar*
Drewry, Brandy, Hot Springs, Ar
Fletcher, Leanna, Amity, Ar
Gray, Mary, Hot Springs, Ar
Hamilton, Kristie, Tontitown, Ar*
Hill, Wendy, Amity, Ar
Hunter, Karyn, Little Rock, Ar*
Johnson, Tina, Magnolia, Ar
Jones, Mason, Leola, Ar
Jones, Shelly, Benton, Ar
Kirkendoll, Jake, Clinton, Ar*
Koehn, David, Gentry, Ar
Miller, Lashona, Smackover, Ar
Miller, Terrill, El Dorado, Ar
Moon, Tara, Glenwood, Ar
Murphy, Amanda, El Dorado, Ar
Riebock, Kristan, Hot Springs, Ar*
Robert, Herron, Hot Springs, Ar
Trotter, Whitney, Hampton, Ar
Young, Jeff, Hot Springs Village, Ar

Abdon, Kevin, Lake Havasu City, Az
Bermudez, Hector, El Mirage, Az*
Bonchis, Jason, Phoenix, Az*
Bushnell, Lisa, Laveen, Az*
Coleman, John, Glendale, Az*
Cronin, Julie, Queen Creek, Az*
Genovese, Phillip, Phoenix, Az*
Hengeveld, Rebecca, Flagstaff, Az
Hinsch, Deborah, Phoenix, Az*
Morales, Doris, San Tan Valley, Az*
Sigler, Franklyn, Phoenix, Az*
Spies, Denise, Mesa, Az*
Stroops, Tracy, Mesa, Az*
Travis, Amanda, Flagstaff, Az

C

Abugan, Annabelle, Chula Vista, Ca*
Aguirre, Isaac, Murrieta, Ca
Aldrete, Shawn, Hesperia, Ca
Alvarez, Roger, Rialto, Ca

Aure, Rozette, Los Angeles, Ca*
Balagtas, Iris, Redwood City, Ca
Baxter, Juan, Brawley, Ca
Beck, Ariana, Carlsbad, Ca*
Beesla, Sarbjit, Hayward, Ca
Bock, Diane, Santa Barbara, Ca*
Bonilla, Theresa, San Francisco, Ca
Brayton, Niquette, Santa Maria, Ca
Brillantes, Christopher, Monrovia, Ca
Brown, Torey, Lancaster, Ca
Camasura, Randy, Sacramento, Ca*
Cantorna, Lillian, Delano, Ca
Carmichael, Rommie, McKinleyville, Ca
Cervantes, Gregory, Bakersfield, Ca
Chan, Walton, San Francisco, Ca
Cisneros, Veronica, La Verne, Ca
Coley, Nicholas, Bakersfield, Ca
Contreras, Jonnie, Lancaster, Ca
Corcoran, Tanya, Torrance, Ca
Cornejo, Juan, Daly City, Ca
Coronado, Alex, Delano, Ca
Cory, Craven, Sherman Oaks, Ca
Covarrubias, Natalie, Riverside, Ca
Crist, Deborah, Fremont, Ca*
Cristobal, Jenny Lyn, Winnetka, Ca*
Cross, Rebecca, Santa Barbara, Ca
Davis, Jessica, Elk Grove, Ca
Dayao, Melissa, Daly City, Ca
De Fazio, Michael, La Verne, Ca
Demita, Mark, San Francisco, Ca
Deo, Sheetal, Sacramento, Ca
Dimaggio, Stacey Lyn, Rocklin, Ca
Dipietro, Marina, Bakersfield, Ca
Downs, Elizabeth, Bakersfield, Ca
Dragon, Gerino, San Diego, Ca
Duong, Phuong, Los Gatos, Ca*
Edrosa, Kevin, Walnut, Ca
Elissague, Toni, Bakersfield, Ca
Figuración, Janice, San Francisco, Ca
Fletcher, Linda, Nipomo, Ca
Frances Whittington, Danette, Bakersfield, Ca
Frick, Michael, Fullerton, Ca
Galang, Ma Kris, San Francisco, Ca
Gallagher, Chad, Santa Rosa, Ca
Galvan, Amanda, Brawley, Ca
Garcia, Gaylord, San Francisco, Ca
Garcia, Kristen, Riverside, Ca
Garcia, Lisa, El Cajon, Ca*
Garcia, Velinda, Carson, Ca
Gephart-Wilson, Carolyn, Santa Rosa, Ca*
Golden, Pamela, Rancho Cordova, Ca
Gonzalez, Ivan, Bakersfield, Ca
Grigsby, Maurice, Stockton, Ca
Guevara, Jose, Bakersfield, Ca
Haig, Mike, Highland, Ca
Hamilton, Sarah, Bakersfield, Ca
Hansen, Alexandra, Upland, Ca
Hansen, Kurt, Tracy, Ca*
Harrison, Stephen, Rancho Cucamonga, Ca
Hernandez, Lisa, Bakersfield, Ca
Herrera, Robert, Mountain View, Ca*
Hillman, Mary, Elk Grove, Ca*
Hogan Estrada, Linda, San Clemente, Ca*

These individuals have been approved for membership in the AARC. Any member may object to a new membership by filing a written objection with the Executive Office within 30 days. *Active Members

Hoover, Megan, Bakersfield, Ca
 Hotz, Justin, Thousand Oaks, Ca*
 Hurtaqdo, Jonathan, Santa Ana, Ca*
 Ison, Adrienne, South San Francisco, Ca
 Jamir, Jon Rainier O, Long Beach, Ca
 Jeffers, Lori, Bakersfield, Ca
 Johnson, Robert, Alta Loma, Ca
 Jones, Jeremy, Clovis, Ca*
 Jorge, Fresia, San Francisco, Ca
 Joyce, Richard, Norwalk, Ca*
 Judkins, Ronald, El Cajon, Ca*
 Kelsch, Samantha, Camarillo, Ca
 Kerr, Misrah, Bakersfield, Ca
 Kivler-Ballard, Celeste, Fair Oaks, Ca*
 Koelsch, Penny, Pasadena, Ca*
 Kramer, Chris, Monterey, Ca*
 Lam, Melody, Oakland, Ca
 Lam, Tammy, Garden Grove, Ca
 Lam, Van, El Monte, Ca
 Larrabee, Sean, Rancho Cucamonga, Ca
 Le, Ai, San Jose, Ca
 Lee-Marelli, Karen, Canyon Lake, Ca*
 Lerma, Kaitlynn, Bakersfield, Ca
 Levitt, Michael, Cupertino, Ca*
 Longenecker, Karen, Sacramento, Ca*
 Lopez, David, Fontana, Ca
 Lopez, Isaac, Helendale, Ca
 Lopez, Michael, Alta Loma, Ca
 Lovell, Lucas, South Lake Tahoe, Ca
 Lozoya, Shannon, Santee, Ca
 Lu, Lu, Glendora, Ca*
 Mackey, Nicki, Tehachapi, Ca
 Maddux, Julia, Camarillo, Ca
 Mangalonzo, Clarisse, Hayward, Ca
 Mara, Kristin, Bakersfield, Ca
 Mares, Ramiro, Oxnard, Ca
 McCarthy, Shawna, San Francisco, Ca
 McCaskel, Latisa, Sacramento, Ca
 McKee, Diana, Ontario, Ca*
 Miguel, Gladys, San Francisco, Ca
 Mitchell, Lisa, South San Francisco, Ca
 Montes, Samantha, Bakersfield, Ca
 Newman, Ashley, Bakersfield, Ca
 Nichols, Robert, Oakland, Ca*
 Orozco, Chastity, Bakersfield, Ca
 Orr, Peter, Bakersfield, Ca
 Paredes, Cristina, Bakersfield, Ca
 Paredes, Randy, Bakersfield, Ca
 Partida, Yolanda, Bakersfield, Ca
 Peaslee, Cynthia, Palmdale, Ca*
 Perez, Mitchell, Claremont, Ca
 Perez-Espinoza, Rebecca, Hollister, Ca
 Prasad, Ravinesh, Sacramento, Ca
 Prosser, Robyn, Riverside, Ca
 Qaiser, Hamza, Madera, Ca
 Rabara, Joel, Sacramento, Ca
 Radtke, Shelley, Santa Rosa, Ca*
 Ratliff, Dona, Quartz Hill, Ca
 Regan, Karina, Half Moon Bay, Ca*
 Relosimon, Heinrich, Daly City, Ca
 Reyes, Ana, Fontana, Ca
 Reyes, Elwynn, Bakersfield, Ca
 Richardson, Craig, Bakersfield, Ca
 Rickett, Louise, Bakersfield, Ca
 Rivera, Emmanuel, San Leandro, Ca*
 Robinson, Chenita-Chay, Downey, Ca*
 Robison, Margaret, Riverbank, Ca*
 Roditis, Constantine, Buena Park, Ca
 Rodriguez, Christine, Fremont, Ca
 Rodriguez, Jutie, Smartsville, Ca*
 Rose, Marquel, Hawthorne, Ca
 Ruff, Zachary, Bakersfield, Ca
 Ruiz, Anthony, Susanville, Ca
 Ruiz, Daniel, Bakersfield, Ca
 Ruiz, Mikaela, Ontario, Ca
 Sabio, Norris, La Puente, Ca
 Saldana, Matthew, San Bruno, Ca

Sanders, Dwayne, Coronado, Ca
 Saxton McClure, Crystal, California City, Ca
 Schmitz, Cindy, San Pedro, Ca*
 Serrato, Melissa, Perris, Ca
 Siufanua, Ava, Daly City, Ca
 Smith, Britanie, Santa Maria, Ca
 So, James, Canyon Country, Ca
 Spears, Karyn, Alta Loma, Ca
 Squires, Brianna, Claremont, Ca
 Stapleton, Brittany, Bakersfield, Ca
 Strebendt, Michael, Bakersfield, Ca
 Stuart, Timothy, Calimesa, Ca
 Sun, Zhenghua, Los Angeles, Ca*
 Synder, Jennifer, Apple Valley, Ca
 Talosig, Melanie, Delano, Ca
 Tanquilut, Joseph, Chino Hills, Ca
 Taylor, Theron, Rancho Cucamonga, Ca
 Thomas, Amit, Bakersfield, Ca
 Torrado, Jocelyn, Hayward, Ca
 Touch, Buntha, Bellflower, Ca
 Truong, David, Pacifica, Ca
 Ugarte, Andrew, Fontana, Ca
 Upton, Adrienne, Pacific Grove, Ca*
 Vasquez, Alicia, Bakersfield, Ca
 Vaughn, Zahra, Sunnyvale, Ca*
 Vendiola, Jennifer, Chula Vista, Ca*
 Villaro, Richard, Daly City, Ca
 Yong, Regina, San Francisco, Ca
 Voronetsky, Olga, Belmont, Ca
 Weiner, Theodore, Simi Valley, Ca*
 Whitley, Reina, Merced, Ca
 Williams, Kayla, Ojai, Ca
 Woolford, Mary, Littlerock, Ca*
 Yip, Connie, San Francisco, Ca
 Zhang, Cherry, Arcadia, Ca*

Alberts, James, Palisade, Co
 Buonocore, Amie, Littleton, Co*
 Cervantes, Melissa, Longmont, Co
 Derose, Kenneth, Grand Junction, Co
 Donnelly, Kathleen, Cheyenne Wells, Co*
 Gallagher, Kevin, Pueblo, Co*
 Jorden, Armon, Grand Junction, Co
 Lucero, Jolene, Denver, Co
 Nix, Crystal, Denver, Co*
 Pinnt, Tashia, Grand Junction, Co
 Reaser, Jamie, Colorado Springs, Co
 Saiz, Shawn, Pueblo, Co
 Trabert, Albert, Aurora, Co*

Atwood, Cassandra, Tolland, Ct
 Ivansheck, Kristin, Norwalk, Ct

D

Conrad, Christina, Newark, De*
 Defrancis, Angela, Wilmington, De
 Esaka-Priso, Patience, Wilmington, De*
 Nkeng, Bridget, Smyrna, De*
 Peterson, Timothy, Frankfort, De*
 Washington, Esther, Claymont, De*

F

Altringer, John, Jupiter, Fl*
 Amaro, Perla, Port Saint Lucie, Fl*
 Ayala Mendez, Ada, Lake Worth, Fl*
 Balletta, Janice, New Port Richey, Fl*
 Barnes, Melisha, Palm Coast, Fl
 Bell, Laureen, New Port Richey, Fl*
 Benton, Brittany, Gainesville, Fl
 Berry, Tamie, Melbourne, Fl
 Brooks, Antwan, Tallahassee, Fl*
 Brown, Kimberly, Fort Lauderdale, Fl*
 Casallas, Mercedes, Miami Gardens, Fl

Crescini, Sharon, Stuart, Fl*
 Degrenia, Edward, Debarry, Fl
 Dimas, William, Saint Petersburg, Fl
 Elliott, Jessica, Palm City, Fl
 Field, Linda, Merritt Island, Fl*
 Francoeur, Bibiane, Palm Bay, Fl
 Gerdes, Richard, Bradenton, Fl
 Giberson, Donald, Pensacola, Fl
 Grace, Deanna, Tallahassee, Fl*
 Gruenberg, Michelle, Fort Lauderdale, Fl*
 Hernandez, Orlando, Miami, Fl
 Hubbard, Stacey, Sarasota, Fl
 Hudson-Archie, Andrea, Davie, Fl*
 Joziak, Jaclyn Merie, Bradenton, Fl
 Kadinger, Anjelika, Spring Hill, Fl
 Kennelly, Gerry, Hobe Sound, Fl*
 Krenn, Melissa, Apollo Beach, Fl*
 Lecker, Eileen, West Palm Beach, Fl*
 Loveless, Jessica, Gainesville, Fl*
 Martin, Joyce, Homosassa, Fl*
 Mason, Sarah, Port Saint Lucie, Fl*
 Mathew, Saly, Odessa, Fl*
 Miguel, Martha, Hialeah, Fl*
 Monroy Tobar, Hugo E, Miami, Fl
 Murr Jr, Bruce, Jacksonville, Fl
 O'Brien, Ashley, Port St Lucie, Fl*
 Obas, Bonaventure Mo, Palm Bay, Fl
 Ortega, Pedro, Margate, Fl
 Peterson, Eric, Inverness, Fl
 Pierre, Kareen, West Palm Beach, Fl
 Posey, Justin, Tallahassee, Fl*
 Quintero, Leonel, Miami, Fl
 Radford, Christina, Bartow, Fl*
 Ralston, James, Jacksonville, Fl
 Randall, Jacquelyn, Hawthorne, Fl*
 Rodriguez, Janet, Hialeah, Fl
 Small, Gina, Saint Cloud, Fl*
 Sosa Robles, Elizabeth, Deltona, Fl*
 Thekkedathu, Anand, Orlando, Fl
 Thompson, Elizabeth, Apopka, Fl*
 Tuck, Tamara, Sunny Isles Beach, Fl*
 Webb, John, Bonifay, Fl
 Wheeler, Chanta, Canal Point, Fl

G

Abrams, Ruby, Martinez, Ga*
 Adams, Collette Desl, Lithonia, Ga
 Agarwal, Namita, Atlanta, Ga
 Allen, Mariterese, Newnan, Ga
 Allison, Tanya, Adairsville, Ga
 Alshagag, Hasan, Atlanta, Ga
 Ayala, Nora, Covington, Ga
 Ballard, Tanya, Kingsland, Ga
 Bauer, Tara, Cedartown, Ga
 Benjamin, Anne, Hiram, Ga
 Bishop, Ariel, Senoia, Ga*
 Bridges, Robin, Locust Grove, Ga*
 Brown, Kendra, Summerville, Ga
 Brownlow, Amber, Rome, Ga
 Champion, Angie, Cartersville, Ga
 Chandler, Kelly, Atlanta, Ga
 Dahunsi, Kevin, Powder Springs, Ga
 Dillon-Ndaw, Fenetra, Doraville, Ga
 Dotray, Adourra, Atlanta, Ga
 Dunn, Ruth, Griffin, Ga
 Fernandez, Lila, Conyers, Ga
 Freeman Kelly, Carrie, Waynesboro, Ga*
 Gantt, Paula, Lawrenceville, Ga
 Griffin, Patricia, Brunswick, Ga*
 Hamilton, Julie, Silver Creek, Ga
 Hardy, Jodie, Cedartown, Ga
 Hatchette, Sarah, Cedartown, Ga
 Hicks III, Kenneth, Euharlee, Ga
 Hill, Tamerion, Hull, Ga*
 Hornaday, Katherine, Atlanta, Ga

New Members

Kamami, Angela, Marietta, Ga
Kim, Eleese, Johns Creek, Ga
Lee, Travis, Decatur, Ga
Lupi, Cynthia, St Simons Island, Ga*
Mackey, Holly, Pine Mountain, Ga
Miller, Amanda, Lawrenceville, Ga
Miner, Joanna, Athens, Ga
Misencik, Ashley, Toccoa, Ga
Mohamud, Salaado, Clarkston, Ga
Monteiro, Abigail, Smyrna, Ga
Nguyen, Ngan, Lawrenceville, Ga
Padilla, Melissa, Tucker, Ga
Patel, Dhruvi, Decatur, Ga
Peay, Terri, Nashville, Ga*
Pope, James, Lagrange, Ga
Pradere, Louis, Powder Springs, Ga*
Price, Sharee, Hiram, Ga
Roberts, Amanda, Suwanee, Ga
Smith, Monica, Albany, Ga*
Stewart, Katie, Loganville, Ga
Tessin, Abraham, Cave Spring, Ga
Tillery, Toby, Cave Spring, Ga
Trim, Keisha, Locust Grove, Ga*
Vernon, Christy, Aragon, Ga*
Washington, Renita, Fayetteville, Va
Wiggins, Amanda, Glennville, Ga

H

Cabigon, Jewelyn, Ewa Beach, Hi*
Hooikaika, Ellen, Anahola, Hi
Luga, Jovencio, Honolulu, Hi*
Nakamoto, Keith, Pearl City, Hi
Sappington, Millard, Kapolei, Hi*

I

Anderson, Troy, Cedar Rapids, Ia
Ball, Kimberly, Wapello, Ia
Bietz, Zac, Burlington, Ia
Biezuns, Brielle, Remsen, Ia
Bloe, Nick, Cedar Rapids, Ia
Boesenberg, Tina, Cedar Rapids, Ia
Camenzind, Jamie, Crescent, Ia
Chapman, Maria, Middletown, Ia
Clarey, Shelly, Sioux City, Ia
Cobb, Sheila, Cedar Rapids, Ia
Cox, Ryan, Cedar Rapids, Ia
Cress, Tiffany, Schaller, Ia*
Dickinson, Sarah, Sioux City, Ia
Garber, Lisa, Keokuk, Ia
Garner, William, Cedar Rapids, Ia
Garringer, Nichole, Cedar Rapids, Ia
Gehring, Kelly, New London, Ia
Gist, Heather, Cedar Rapids, Ia
Gregg, Shanae, Sioux City, Ia
Huseman, Bridget, Sioux City, Ia
Jordan, Dustin, West Burlington, Ia
Kracke, Jessica, Sioux City, Ia
Kramer, Erika, Cedar Rapids, Ia
Kratke, Alicia, Sioux City, Ia
Larkin, Jennifer, Burlington, Ia
Loan, Natalie, Cedar Rapids, Ia
Longshore, Raegan, Keokuk, Ia
Loya, Joelle, Cedar Rapids, Ia
Lueck, Jessica, Salix, Ia
Malone, Debra, Cedar Rapids, Ia
Mansheim, Micaela, Fort Madison, Ia
Martin, Nick, Cedar Rapids, Ia
Mbonabucha, Peter, Cedar Rapids, Ia
Miller, Brent, Burlington, Ia
Mulholland, Jordan, Cedar Rapids, Ia
Murray, Kristen, West Burlington, Ia
Nguyen, Trinh, Cedar Rapids, Ia
O'Brien, Patrick, Urbandale, Ia*

Osman, Hwida, Cedar Rapids, Ia
Pekny, Gregory, Sioux City, Ia
Perrenoud, Angie, Mount Pleasant, Ia
Peters, Jerrilen, Sioux City, Ia
Plock, Emily, Cedar Rapids, Ia
Plunkett, Daniel, Council Bluffs, Ia
Rapp, Shelby, Cedar Rapids, Ia
Roberson, MacKenzie, Cedar Rapids, Ia
Stahr, Annette, Cedar Rapids, Ia
Strum, Ryne, Cedar Rapids, Ia
Tembea, Esther, Cedar Rapids, Ia
Thornton, Ronnie, Hornick, Ia
Vandenberg, Dylan, Wever, Ia
Vulgamott, Hali, Cedar Rapids, Ia
Zavala, Eliana, Sioux City, Ia

Cochrane Bradley, Kelly, Idaho Falls, Id
Davis, Misty, Donnelly, Id
Gray, Amanda Faith, Moscow, Id
Hahn, Jessica, Lolo, Id
Hunter, Melissa, Pocatello, Id
Jackson, Jason, Pocatello, Id
Jones, Gerod, Idaho Falls, Id
Kobza, Bethany, Meridian, Id*
Miller, Trevor, Moscow, Id
Olson, Heather, Idaho Falls, Id
Teel, Nicole, Chubbuck, Id*

Appleberry, Blythe, Chicago, Il*
Applegate, Jean, Pana, Il*
Bailey, Leah, O Fallon, Il
Ballew, Brittany, Granite City, Il
Beam, Leslie, O Fallon, Il
Brown, Diane, Champaign, Il
Brown, Jolinda, Posen, Il
Brown, Tanisha, Rockford, Il
Calandro, Brittney, Collinsville, Il
Carson, Rasheda, Thebes, Il
Cash, Morgan, Sparta, Il
Coates, Cherish, Rockford, Il
Colton, Dawn, Collinsville, Il
Cooper, Diane, Waterloo, Il
Del Carmen, Eddy, Chicago, Il
Dhermy, Amy, Springfield, Il*
Dickerson, Sharon, Tilden, Il
Duggan, Sally, Rockford, Il
Duncan, Michael, Washington, Il
Dunn, Bryan, Oquawka, Il
Finazzo, Amy, Granite City, Il
Garner, Carvetta, Belleville, Il
Garrison, Virgiline, O Fallon, Il
Giachetti, Tina, Geneva, Il
Glass, Matthew, Belleville, Il
Godin, Marina, Antioch, Il
Hodges, Mary, Kankakee, Il
Hoffer, Rebecca, O Fallon, Il
Holle, Sarah, Swansea, Il
Hull, Jayne, Granite City, Il
Jenkins, Lillian, O Fallon, Il
Jones, Johneshia, Belleville, Il
Kellenberger, William Shawn, Geneseo, Il
Kuecher, Samantha, Frankfort, Il
Lederer, Victoria, Glendale Heights, Il
Lofton, Latasha, Oak Park, Il*
Love, Samantha, Fairview Heights, Il
Makobe, Nicole, Antioch, Il
Marek, Kimberly, Crest Hill, Il
Maslo-Daugherty, Judith, Evergreen Park, Il*
Master, Astrid, Gurnee, Il
McDermott, Jacquelyn, Schaumburg, Il
McKinney, Megan, Eldorado, Il
McMurray, Lesley, Valier, Il*
Mellin, Katrina, Belleville, Il
Miller, Jennifer, Belleville, Il
Narain, Mukesh, Chicago, Il
Page, Alyssa, Collinsville, Il
Pilcher, Linda, Rock Island, Il

Pinedo Pedroza, Angelica, Washington Pk, Il
Pride, Edward, Joliet, Il
Rodgers, Becky, Pekin, Il*
Rutledge, Melissa, Dover, Il
Schooley, Billie, Granite City, Il
Sobitan, Adetoun, Chicago, Il
Soos, Katharine, Glen Carbon, Il
Stanley, Ashanti, Centerville, Il
Taylor, Heather, Edwardsville, Il
Tomassetti, Laura, Lake Villa, Il
Tyree, Melanie, Madison, Il
Ursin, Nikia, Cahokia, Il
Villanueva, Bertha, Fairmont City, Il
Walden, Robyn, Thebes, Il
Watts, Brittni, Coal City, Il
Woodruff, Stephanie, Hamilton, Il

Adams, Rita, Claypool, In
Aljaziri, Narijs, Indianapolis, In
Bailey, Ashley, Fort Wayne, In
Baker, Nicole, North Judson, In
Balek, Rachel, Carmel, In
Ball, Julie, Auburn, In
Ball, Kevin, Fort Wayne, In
Beavers, Amanda, Carmel, In
Bennett, Travis, Mishawaka, In
Benson, Amy, Hobart, In*
Beyler, Michael, Mishawaka, In
Bireley, Denise, Columbia City, In*
Boettcher, Christina, South Bend, In
Boggs, Heather, North Manchester, In
Borden, Bea, Dayton, In
Borkowski, Katalin, South Bend, In
Briar, Regina, Cambridge City, In
Brindley, Jeffrey, Lafayette, In*
Brookshire, Alexis, Zionsville, In
Brown, Claudette, Flora, In*
Brydson, Tyler, Indianapolis, In
Budzielek, Jill, Indianapolis, In
Campton, Paige, Washington, In
Carroll, Lori, Indianapolis, In
Coffey, Misty, Martinsville, In
Cox, Douglas, Mooresville, In
Dewey, Michelle, Osceola, In
Dyer, Yvonne, Fort Wayne, In
Ewy, Kristy, Michigan City, In*
Fey, Rebecca, Albion, In*
Fitzpatrick, John, Franklin, In
Freeman, Grace, Indianapolis, In*
Gard, Justin, Whiteland, In
Gernhardt, Daniel, Fort Wayne, In
Gill, Gurpreet, Pittsboro, In
Gillespie, Jared, Indianapolis, In
Gilmer, Shelaine, Indianapolis, In
Gilmore, Gayle, Fishers, In
Gorman, Alexis, Preble, In
Green, Kelli, Michigan City, In
Harding, Deon, Indianapolis, In
Harshman, Jordan, Galveston, In
Hawk, Renee, Beech Grove, In
Hayes, Armand, Indianapolis, In
Haynes, Lori, Logansport, In*
Hegel, Christy, Indianapolis, In
Hess, Jason, Brownsburg, In
Hopkins, Kathelia, East Chicago, In
Hoycus, Andrea, Tipton, In*
Hunter, Rachel, New Palestine, In
Ilerardi, Scott, Greenfield, In
Isch, Shane, Berne, In
Jessup, Gavin, Spiceland, In
Larsen, Kristyn, Fort Wayne, In
Likes, Christopher, Garrett, In
Lohsl, Frances, Indianapolis, In
Loughmiller, Amanda, Indianapolis, In
Marshall, Rebecca, Indianapolis, In
Martens McKinley, Dawn, New Palestine, In
Mason, Brittany, Osceola, In

Mayfield, Kimberly, Indianapolis, In
 McDonald, Barbara, Brownsburg, In
 Metcalf, Alyssa, Fishers, In
 Miles, Shaila, South Bend, In
 Mills, Courtney, Shelbyville, In
 Mitchell, Jalisa, Muncie, In
 Myers, Adam, Shelbyville, In
 Myers, Barry, Brownsburg, In
 Prunty, Chelsey, McCordsville, In
 Ragan, Brandon, Indianapolis, In
 Razor, Shannon, South Bend, In
 Reader, Kirstin, Greenwood, In
 Reed, Teresa, Muncie, In
 Rhoades, Natalie, Pittsboro, In
 Roland, Mariah, Knightstown, In
 Roseman, Jessica, Bainbridge, In
 Rydberg, Daniel, Indianapolis, In
 Rzeszewski, Suzanne, South Bend, In
 Saini, Namneet, Indianapolis, In
 Sanders, Carmen, Greenwood, In
 Serafin, Marie, Indianapolis, In
 Sherman, Laura, South Bend, In
 Shipp, Joseph, Whiteland, In
 Slee, Bonnie, Wolcottville, In
 Smith, Thoomas, Indianapolis, In*
 Spicer, Jason, Greenwood, In
 Stancombe, Olivia, Franklin, In
 Stephan, Alan, Indianapolis, In*
 Tapp, Amy, Indianapolis, In
 Tudyk, Joe, Noblesville, In
 Twedt, Donna, Indianapolis, In*
 Unsicker, Tyler, Indianapolis, In
 Wagner, Sarah J, Jeffersonville, In
 Washington, Sharmain, Indianapolis, In
 Weiss, Jacki, Mishawaka, In
 Wembodinga, Peter, Indianapolis, In
 Whitfield, Renata, Indianapolis, In
 Wilhelm, Jannel, Greenfield, In
 Williams, Mary Dian, Denver, In
 Winger, Timothy, Lebanon, In
 Wood, Milly, Rochester, In
 Worth, Kelsey, Indianapolis, In
 Yoder, Phil, Millersburg, In

K

Accardi, Tina, Kansas City, Ks
 Agyen, Nana, Kansas City, Ks
 Aldrich, Douglas, Olathe, Ks*
 Berg, Jennifer, Hanover, Ks
 Berry, Kelli, Scott City, Ks
 Correll, Jerilou, Shawnee, Ks
 Dumler, Amy, Plainville, Ks
 Englert, John, Mission, Ks
 Flummerfelt, Trisha, Lawrence, Ks
 Fouts, Lainie, Kansas City, Ks
 Goldwater, Cassie, Wilson, Ks
 Heitschmidt, Wil, Kansas City, Ks
 Henderson, Kody, Kansas City, Ks
 Higginbotham, Lora, Olathe, Ks
 Holloway, Randi, Kansas City, Ks
 Horton, Abby, Kansas City, Ks
 Kidd, Danita, Kansas City, Ks
 Kimbley, Kassy, Olathe, Ks
 Lee, Lynn, Kansas City, Ks
 Matheny, Sydney, Prairie Village, Ks
 Moore, Brittany, Kansas City, Ks
 Naranjo, Jason, Kansas City, Ks
 Persinger, Neshia, Olathe, Ks
 Quayle, Caleb, Lawrence, Ks
 Schultz, Rachel, Kansas City, Ks
 Shafer, Whitney, Galena, Ks
 Smith, Kelsey, Lenexa, Ks
 Swift, Courtney, Kansas City, Ks
 Valdivia, Alyssa, Lenexa, Ks

Baker, Natosha, Corbin, Ky
 Brandenburg, Bettie, Brodhead, Ky
 Brown, Eric, Owensboro, Ky
 Cameron, Jennifer, Orlando, Ky
 Clarke, Jeffrey, Paducah, Ky
 Cornelius, Ruth, East Bernstadt, Ky*
 Corum, Daphne, Slaughters, Ky*
 Cox, Shawna, Wallins, Ky*
 Davidson, Jennifer, Manchester, Ky
 Eggers, Chris, London, Ky
 Eubanks, Jordan, Somerset, Ky
 Feese, Robin, Somerset, Ky
 Fields, Angela, Louisville, Ky*
 Gambrel, James, London, Ky
 Cifford, Kenna, Catlettsburg, Ky*
 Gilbert, Justin, Ashland, Ky*
 Gray, Julia, Highland Heights, Ky*
 Grigsby, Paul, London, Ky
 Hammack, Sylvia, Lily, Ky
 Heath, Amanda, Whitley City, Ky
 Hobbs, Jeffrey Adam, London, Ky
 Howard, Joann, Richmond, Ky
 Hughes, Amanda, Manchester, Ky
 Irvin, Tracie, Somerset, Ky
 Jones, Marketia, Elizabethtown, Ky*
 Jones, Ronnie, Manchester, Ky
 Kannapel, Amber, Louisville, Ky*
 Magee, Leeanna, Burlington, Ky
 McCarty Gray, Kendra, Lily, Ky
 McKee, Casey, Rockholds, Ky
 Mitchell, Mary Ann Christy, East Bernstadt, Ky
 Morris, Brittany, Louisville, Ky
 Neeley, Crystal, London, Ky
 Pace, Aimee, Harlan, Ky*
 Paul, Heather, Corbin, Ky
 Pence, Jessica, London, Ky
 Perseghin, Joseph, Somerset, Ky
 Pooser, Janice, Elizabethtown, Ky*
 Powell, Misty, Whitley City, Ky
 Slade, Mary, Cynthia, Ky*
 Smith, Carolyn, Louisville, Ky*
 Snider, Patricia, Lexington, Ky
 Spiess, Terry, Lexington, Ky
 Stafford, Danielle, Madisonville, Ky
 Thomason, Michael, Mount Vernon, Ky
 Vazquez, Noel, Louisville, Ky*
 Williams, Donna, Whitley City, Ky
 Wilson, Charlotte, London, Ky

L

Bean, Loretta, Bossier City, La
 Brown, Rachel, Oakdale, La
 Cannon, Steve, West Monroe, La
 Caskey, Christopher Sean, West Monroe, La
 Curtis, Thomas, Monroe, La*
 Dickerson-Price, Roysour, Coushatta, La
 Duncan, Tekeiller, Thibodaux, La
 Garman, Annette, Leesville, La
 Girod, Chad, West Monroe, La
 Green, Pamela, Jackson, La
 Hampton, Chelsea, Ruston, La
 Howard, Joseph, Quitman, La
 Lee, William, Lafayette, La
 Mayhall, Amy, Bunkie, La
 Pace, Robert, Marrero, La*
 Pratt, Vernadette, Monroe, La
 Roberson Coats, Belinda, Natchitoches, La
 Sumbler, Krisner, Oakdale, La
 Tate, Kiantra, Jennings, La
 Vogt, David, Monroe, La
 Whiten, Brittany, Clinton, La
 Winkler, Terry, Bastrop, La

M

Alghazi, Shaima, Lynn, Ma
 Alder, Jenn, Peabody, Ma
 Bernier, Darren, Springfield, Ma
 Charles, Johanne, Lynn, Ma
 Chernyak, Alex, Salem, Ma
 Chmura, Alison, Ipswich, Ma
 Digregorio, Stefan, Wakefield, Ma
 Gibson, Emily, Topsfield, Ma
 Gill, Elizabeth, Everett, Ma*
 Gonzalez, Leandro, Peabody, Ma
 Grieco, Lisa, North Andover, Ma*
 Hurley, Bethany, Beverly, Ma
 Joyce, Jordan, Medford, Ma
 Lauzier, Stephan, Raynham, Ma*
 Loiselle, Renee, Leominster, Ma*
 Lynch, Shannon, Woburn, Ma
 Mahoney, Jennifer, Peabody, Ma
 McQueen, Lisa, Bourne, Ma
 Muldoon, Gina, North Andover, Ma
 Peters, Iliana, Malden, Ma
 Rapoport, Alex, Malden, Ma
 Samatis, Elise, Haverhill, Ma*
 Scurio, Denise, Peabody, Ma
 Seelley, Eva, Saugus, Ma
 Shoot, Sophia, Randolph, Ma
 Toussaint, Jean Marc, Brockton, Ma
 Whitlock, Jucie, Haverhill, Ma

Appiah, Jolene, Upper Marlboro, Md*
 Brown, Yvonne, Upper Marlboro, Md*
 Bukowsky, Jillian, Nottingham, Md*
 Burch, Amy, Oldtown, Md
 Campbell, Bernadette, Templehills, Md*
 Day, Dylan, Lonaconing, Md
 Gallagher, Kelly, Frederick, Md*
 Gearhart, William, Highland, Md
 Gemechu, Tamerie, Largo, Md
 Ibe, Ngozi, Largo, Md
 Jagdeo, Kevison, Westminster, Md
 Jones, Tami, Mt Savage, Md
 Keister, Tisa, Frostburg, Md
 Kidane, Filmon, Takoma Park, Md
 Knife, Aden, Silver Spring, Md
 Lee, Shanee, Cumberland, Md
 Mao, Sonny, Silver Spring, Md
 McCullough, Kristen, Cumberland, Md
 McCullough, Linda, Smithsburg, Md*
 McPhail, Malicia, Kitzmiller, Md
 Nava, Han-Soon, Largo, Md
 Ngungwa, Ilonda, Largo, Md
 Nixon, Chad, Columbia, Md
 Njeutcha, Nicole, Largo, Md
 Oriola, Daniel, Largo, Md
 Pilarski, Tina, Aberdeen, Md*
 Schoppert, Shelley, Frederick, Md*
 Sneed, Tura, Upper Marlboro, Md*
 Spears, Ashley, Parkville, Md
 Stephens, Richard, Mountain Lake Park, Md
 Thomas, Kenneth, Friendsville, Md
 True, Heather, Cumberland, Md
 Vanmeter, Keisha, Rawlins, Md
 Vigneulle, Margaret, Largo, Md
 Warsaw, Marcella, Oakland, Md
 Whitt, Richard, Largo, Md

Brown, Arthur, Lewiston, Me
 Doyle, Mark, Lyman, Me
 Faron-French, Mary, Wells, Me
 Goode, Jessica, Lebanon, Me
 Isaacson, Graham, Portland, Me
 Jordan, Lauren, South Portland, Me
 Jordan, Melissa, Portland, Me*
 Knight, Eric, Portland, Me
 Mason, Cedric, Portland, Me

New Members

Nodarse, Maria, Saco, Me
Omar, Jihan, Lewiston, Me
Pollick, Timothy, Cape Elizabeth, Me
Reece, David, Kennebunk, Me
Reynolds, Frank, Westbrook, Me
Roberts, Gavin, Portland, Me
Spada, Carol, Naples, Me*
Spiliopoulos, Arianna, Sanford, Me
Taylor, Melissa, Sumner, Me
Vaughn, Joseph, Fryeburg, Me
Vosmus, Jamie, South Portland, Me
Wall, David, Richmond, Me
Young, Chrissy, South Portland, Me

Andrews, John, Ypsilanti, Mi
Brandon, Sandra, Flint, Mi*
Brewster, Autumn, Manistique, Mi
Chambers, Lonnetta, Romulus, Mi*
Cutsinger, Phyllis, Bancroft, Mi
Durack, Lauren, Clinton Twp, Mi*
Goolsby, Michael, Lambertville, Mi
Jones, Chana, Benton Harbor, Mi*
Kamradt, Mary, Spring Lake, Mi*
Krapohl, Jessica, Breckenridge, Mi*
Langston, Richard, Newberry, Mi
Lapoint, Amy, Drummond Island, Mi
Likert, Theresa, Saline, Mi*
Melstrom, Nikki, Iron River, Mi
Moon, Courtney, Sault Sainte Marie, Mi
Moses, Melody, Grosse Ile, Mi
Mulka, Alicia, Rogers City, Mi*
Pool, Tony, Ishpeming, Mi
Stowers, Carol, Warren, Mi*
Sylvain, Amy, Harbor Springs, Mi
Trejo, Jorge, Livonia, Mi*
Tschirhart, Jill, Freeland, Mi
Weimer, Andrea, Newport, Mi*
Wilson, Dekenia, Southfield, Mi
Youkhana, Suzanne, Macomb, Mi

Abdulle, Amina, Savage, Mn
Anderson, Aubrie, Owatonna, Mn
Bakken, Rhonda, Roseville, Mn*
Dawit, Nuhamin, Blaine, Mn
Finch, Allyson, Blaine, Mn
Finken, Ann, Lino Lakes, Mn*
Hamilton, Carol, Mora, Mn*
Hopkins, Shalonda, Minneapolis, Mn
Jangchup, Tsering, Minneapolis, Mn
Jaramillo Bly, Angelica, Saint Paul, Mn
Johnson, Stephanie, Saint Paul, Mn
Lee, Vickie, Detroit Lakes, Mn
Lindgren, Hillary, St Paul, Mn
Lynch, Whitney, Brooklyn Park, Mn
Moua, Sheng, Brooklyn Center, Mn
Prather, Emily, Crystal, Mn
Schmidt, Brian, Blaine, Mn*
Soper, Christel, Coon Rapids, Mn*
Spina, Courtney, Belle Plaine, Mn
Strassburg, Elizabeth, Brooklyn Center, Mn
Thao, Pakou, Hugo, Mn
Tinaglia, Angie, Faribault, Mn*
Vang, Cady, Woodbury, Mn
Weiman, Melissa, White Bear Lake, Mn

Alicia, Brust, Carthage, Mo
Barnes, Lyndsey, Carthage, Mo
Barthelme, Jennifer, Asbury, Mo
Bass, Ali, Carthage, Mo
Bills, Lisha, Sikeston, Mo
Binder, John, Springfield, Mo*
Boles, Hannah, Joplin, Mo
Bumgardner, Crystal, Noel, Mo
Butron, Evan, Fort Leonard Wood, Mo*
Claymore, Amber, Neosho, Mo
Conrad, Micha, Cape Girardeau, Mo
Darby, Katie, Joplin, Mo

Depisa, Michelle, Joplin, Mo
Dodd, Amanda, Greenfield, Mo
Dunn, Anne, Hannibal, Mo*
Eaton, Betty, Sikeston, Mo
Elfrink, Toni, Chaffee, Mo*
Harper, Ioddic, Chaffee, Mo
Harris, Kaitlyn, Jackson, Mo
Hobbs, Heather, Benton, Mo
Jarnagin, Teisha, Webb City, Mo
Johnson, Angela, High Ridge, Mo*
Jones, Machel, Springfield, Mo
Kamins, Nechama, Saint Louis, Mo
Lafiam, Nadia, St Louis, Mo
Leahy, Kassie, Ironton, Mo
Maddux, Dusti, Jackson, Mo
McLaughlin, Krystal, Neosho, Mo
McMillian, Sherri, Sedgewicville, Mo
Murphy, Helen, Lees Summit, Mo*
Nave, Lia, Carthage, Mo
Parris, Taylor, Pleasant Hill, Mo
Portell, Nathan, Cape Girardeau, Mo
Prater, Lean Breann, Joplin, Mo
Rebstock, Kristopher, Kennett, Mo
Revelle, Erica, Sikeston, Mo
Robertson, Colette, Webb City, Mo
Robertson, Ladonna, Charleston, Mo
Roden, Stephanie, Cape Girardeau, Mo
Schiermeir, Kylie, Joplin, Mo
Sexauer, Tom, Saint Mary, Mo*
Smith, Ronald, Sheldon, Mo
St Charles, Sally, Chaffee, Mo
Tipper, Tiffany, El Dorado Springs, Mo
Troxel, Matthew, Jackson, Mo
Unterreiner, Theresa, Perryville, Mo*
Vanatta, Tiffany, Joplin, Mo
Wallis, Bryce, Cape Girardeau, Mo
Walters, Abby, East Prairie, Mo
Waters, Tawana, St Louis, Mo
Wesbecher, Rachael, Park Hills, Mo
Williams, Breanna, Perryville, Mo
Williams, Leava, Lebanon, Mo*
Zullig, Holly, Mount Vernon, Mo

Abduraham, Mina, Raymond, Ms
Abel, Jelinda, Florence, Ms
Adams, Lucus, Terry, Ms
Allen, Ladonna, Edwards, Ms
Anderson, Stephanie, Indianola, Ms
Beeland, Laura, Brandon, Ms
Boland, Ashley, Ripley, Ms
Bracey, Gregory, Jackson, Ms
Brackeen, Brittany, Booneville, Ms
Brewer, Candis, Columbia, Ms
Bryan, Cannan, Ripley, Ms
Corban, James, Jackson, Ms
Crumedy, Proche, Tylertown, Ms
Cullum, Patrick, Pearl, Ms
Duplichien, Dominic, McHenry, Ms*
Elliot, Corrie, Vicksburg, Ms
Enoch, Kendale, Florence, Ms
Farrar, Jordan, Baldwin, Ms
Flanagan, Holly, Corinth, Ms
Gardener, Christy, Byram, Ms
Garner, Lacie, Petal, Ms
Gentry, Jessica, Perkinston, Ms
Gleason, Carolyn, Brandon, Ms
Gremillion, Paige, Brandon, Ms
Grimes, Barbara, Walnut, Ms
Gurule, Sean, Gulfport, Ms
Hilton, Lance, Petal, Ms
Hines, Tony, Hattiesburg, Ms
Holliman, Haylee, Overt, Ms
Hunsucker, Carolyn, Ripley, Ms
Jones, Ariel, Okolona, Ms
King, Constance, Brandon, Ms
King, Stephanie, Philadelphia, Ms
Lee, Jessi, Carriere, Ms

Lucas, Shannon, Sumrall, Ms
Malone, Chris, Liberty, Ms
McClendon, Justin, Braxton, Ms
McDaniel, Mindy, New Hebron, Ms
McLaurin, Yvette, Hattiesburg, Ms
Melton, Dominica, Poplarville, Ms
Mickle, Lauren, Florence, Ms
Moss, Ashli, Laurel, Ms
Owens, April, Blue Springs, Ms
Payton, April, Canton, Ms
Penna, Dylan, Booneville, Ms
Poe, Markeida, Greenville, Ms
Poole, Lindsey, Poplarville, Ms
Roberts, Brittany, Burnsville, Ms
Robertson, Blake, Hattiesburg, Ms
Robinson, Race, Byram, Ms
Rodgers, Rachel, Stringer, Ms
Ross, Casey, Corinth, Ms
Sanford, Kacie, Petal, Ms
Schultz, Crystel, Picayune, Ms
Skates, Claire, Hattiesburg, Ms
Small, Crystal, Hattiesburg, Ms
Smith, Abriil, Pelahatchie, Ms
Smith, Christy, Braxton, Ms
Stapleton, Andrian, Brandon, Ms
Stewart, Qua'shandra, Vicksburg, Ms
Swain Cook, Shelley, Leland, Ms
Tidwell, Jamie, Madison, Ms
Valliere, Melanie, Hattiesburg, Ms
Vittitoe, Betty, Pearl, Ms
Warren, Carla, Magee, Ms
Williams, Jody, Aberdeen, Ms

Allred, Samuel, Pinesdale, Mt
Bray, Jeris, Missoula, Mt
Brewington, Carsen, Missoula, Mt
Feltus, Jeannette, Frenchtown, Mt
Gasvoda, Melissa, Missoula, Mt
Hasselstrom, Carter, Sidney, Mt*
Hasselstrom, Lori, Sidney, Mt*
Jacobs, Abby, Missoula, Mt
Lovell, Lacey, Frenchtown, Mt
Majerus, Casey, Missoula, Mt
O'canna, Joseph, Kalispell, Mt
Robinson, Dustyn, Missoula, Mt
Simon, Adam, Missoula, Mt
Stettler, Renae, Heron, Mt
Williams, Elisha, Frenchtown, Mt
Wood, Jillian, Libby, Mt
Yarmolich, Natalya, Missoula, Mt



Allen, Candace, Greenville, NC
Allen, Elizabeth, Albemarle, NC
Allen, Jennifer, Albemarle, NC
Anthony, Michele, Hickory, NC
Barnes, William, Laurinburg, NC
Barrett, Jevonnie, Winston-Salem, NC*
Beck, Jodie, Clarendon, NC*
Blackwell, Ashlee, Salisbury, NC*
Brown, Kathryn, Wilson, NC
Bruce, Donnie, Charlotte, NC
Budrys, Alex, Greenville, NC
Bullins, Juanita, Thurmond, NC
Burleyson, Rebekah, Albemarle, NC
Burr, Douglas, Fayetteville, NC*
Calhoun, Gail, Charlotte, NC
Cameron, Stephanie, Garner, NC*
Campbell, Fabiola, Albemarle, NC
Campbell, Samantha, Clyde, NC*
Carrington, Tiffany, Charlotte, NC
Cartrette, Shannon, Chadbourn, NC
Cassidy, Ryan, Wilmington, NC
Ciaramella, Kelly, Waxhaw, NC
Clinkscales, Penny, Charlotte, NC

Cochran, John, Albemarle, NC
 Collins, Christy, Albemarle, NC
 Colombo, Scott, Wilmington, NC*
 Cook, Kelly, Greenville, NC
 Cook, Tiffany, Monroe, NC
 Cooper, Jason, Charlotte, NC
 Dancy, Cynthia, Glade Valley, NC
 Darrisaw, Latonya, Greenville, NC
 Davenport, Jeannine, Seven Springs, NC
 Davis, Kristen, Henrietta, NC
 Dawson, Donna, Windsor, NC*
 Defreitas, Amanda, Monroe, NC*
 Dillane, Danielle, Greenville, NC
 Dulepov, Nikolay, Charlotte, NC
 Engmann, Edward, Gastonia, NC
 Flake, Jacqueline, Albemarle, NC
 Flynn, Kelly, Cornelius, NC
 Frazier, Latasha, Albemarle, NC
 Funderburke, Jamie, Albemarle, NC
 Galloway, Joshua, Gastonia, NC
 Garcia, Nancy, Monroe, NC
 Garrell, Tonya, Chadbourne, NC
 Gibbs, Lauren, Winterville, NC
 Glenn, Alisha, Albemarle, NC
 Goff, Lynwood, New Bern, NC*
 Habtezeghi, Abrehet, Albemarle, NC
 Haddock, Olivia, Winterville, NC
 Hagler, Nicholas, Timberlake, NC
 Hargrove, Ashley, Winston Salem, NC
 Harris, Dedra, Youngsville, NC*
 Hemperly, Allison, Charlotte, NC
 Hensley, Wendi, Maiden, NC
 Henson, Darrah, Charlotte, NC

Holland, Chad, Greenville, NC
 Honeycutt, Meredith, Albemarle, NC
 Hudson, Megan, Conover, NC
 Icard, Matthew, Concord, NC
 Jefferys, Valerie, Raleigh, NC*
 Johnson, Gabrielle, Albemarle, NC
 Johnson, Monica, Kannapolis, NC
 Johnston, Nicholas, Albemarle, NC
 Kreisher, Lindsey, Franklinton, NC*
 Lamb, Marc, Matthews, NC
 Lane, Donna, McGrady, NC*
 Lebron, Maria Isabel, Maple Hill, NC
 Ledford, Heather, Statesville, NC
 Lindsey, Lobree, Statesville, NC*
 Loggins, Robin, Hickory, NC
 McCallum, David, Matthews, NC
 McClain, Megan, Charlotte, NC*
 McNeill, Sonya, Pembroke, NC*
 Medford, Lawrence, Greenville, NC
 Mendoza, Brittany, Ellenboro, NC
 Molchan, Sarah, Durham, NC*
 Moore, Stuart, Lincolnton, NC
 Morgan, Felicia, Albemarle, NC
 Mullins, Deborah, Raleigh, NC
 Nobles, Michelle, Greenville, NC
 O'neal, Crystal, Nashville, NC
 Ogbamichael, Ghenet, Charlotte, NC
 Oliver, Cassandra, Albemarle, NC
 Owens, Christy, Greenville, NC
 Parrish, Jenna, Greenville, NC
 Peay, Jamal, Charlotte, NC
 Philips, James, Charlotte, NC
 Proctor, Krystal, Greenville, NC

Ramseur, Lora, Maiden, NC
 Rhea, Holly, Lenoir, NC
 Riley, Jeffrey, Hickory, NC
 Ring, Brian, Charlotte, NC
 Roberts, Massa, Albemarle, NC
 Rogers, Abby, Lawndale, NC
 Sanford, Courtney, Clemmons, NC
 Schleuning, Jeffrey, Greensboro, NC
 Sikes, Misty, Rockwell, NC*
 Similton, Doreen, Charlotte, NC
 Simmobs, Monica, Winston-Salem, NC*
 Smith, Kerri, Monroe, NC
 Smith, Kevin, Monroe, NC
 Smolos, Ronald, Matthews, NC
 Spencer, Stephanie, Greenville, NC
 Statham-Adams, Imani, Charlotte, NC
 Stedford-Torres, Michelle, Albemarle, NC
 Strickland, Sharon, Pembroke, NC*
 Szymanski, Brandie, Hickory, NC
 Thomas, Kevin, Morganton, NC
 Trunong, Jonathan, Albemarle, NC
 Turnage, Michelle, Stokes, NC
 Viar, Crystal, Harrisburg, NC*
 Ward, Kimberly, Mocksville, NC*
 White, Steven, Winterville, NC*
 Whitley, Amber, Ayden, NC
 Williams, Bobby, Albemarle, NC
 Williams, Marisa, Albemarle, NC
 Wilson, Maria, Albemarle, NC
 Wodziak, Frank, Wilmington, NC
 Yarn, Kevin, Durham, NC



Submit Your Proposals Today For AARC Congress 2013

The AARC Program Committee invites everyone – members, nonmembers, and groups – to submit proposals for programs for AARC Congress 2013 in

Anaheim, CA • Nov. 16–19, 2013

ALL PROPOSALS MUST BE SUBMITTED ONLINE AT AARC.org

For more details, visit AARC.org.

New Members

Calhane, Patrick, Fargo, ND
 Chung, Phung, West Fargo, ND
 Estes, Marc, Fargo, ND
 Farah, Abdirahman, Fargo, ND
 Leno, Jace, Mandan, ND*
 Meyer, Dylan, Fargo, ND
 O'Brien, Rebecca, Fargo, ND
 Pelzer, Bethany, Fargo, ND
 Rykal, Katelyn, Fargo, ND
 Solma, Elizabeth, Fargo, ND
 Zillgitt, Ben, Fargo, ND

Alotaibi, Sami, Omaha, Ne
 Andrade-Juarez, Anabel, Kearney, Ne
 Atkins, Sidney, Grand Island, Ne
 Bausch, Jace, Lincoln, Ne
 Bedlan, Brandon, Omaha, Ne
 Birmingham, Alicia, Beatrice, Ne
 Blackham, Marianne, Omaha, Ne
 Brandl, Matthew, Lincoln, Ne
 Brewer, Nancy, Clatonia, Ne
 Buchanan, Sheri, Lincoln, Ne
 Buriemek, Joseph, Lincoln, Ne
 Burse, Qiana, Omaha, Ne
 Campbell, Roxanne, Omaha, Ne
 Clark, Michael, Lincoln, Ne
 Cline, Amy, Lincoln, Ne
 Crouch, Jory, Grand Island, Ne
 Cuva, Emily, Omaha, Ne
 Eitzen, Amber, Omaha, Ne
 Erwin, Tyler, Omaha, Ne
 Esterling, Mikaela, Omaha, Ne
 Evans, Amanda, Hastings, Ne
 Gallagher, Chelsey, Lincoln, Ne
 Galvin, Andrew, Grand Island, Ne
 Halpain, Leah, Omaha, Ne
 Harris, Amanda, Beatrice, Ne
 Harris, Kaitlyn, Lincoln, Ne
 Haugen, Brittany, Lincoln, Ne
 Heinemann, Brenna, Winside, Ne
 Henderson, Chelsey, Omaha, Ne
 Hengen, Della, Gothenburg, Ne
 Hoeft, Kiley, Lincoln, Ne
 Jiskra, Kyra, Lincoln, Ne
 Kendall, Mikayla, Gretna, Ne
 Klenda, Amy, Omaha, Ne
 Koch-McDiarmid, Tena, Kearney, Ne
 Krueger, Ryan, Syracuse, Ne
 Kuker, Macie, Lincoln, Ne
 Lacey, Keyonta, Omaha, Ne
 Laffin, Alycia, Wymore, Ne
 Lindberg, Rebecca, Lincoln, Ne
 Mallam, Ben, Wymore, Ne
 Mason, Tiffani, Lincoln, Ne
 McCluskey, Keli, Lincoln, Ne
 McKenna, Taryn, Omaha, Ne
 Mesenbrink, Shannel, Omaha, Ne
 Mlnarik, Julie, Ewing, Ne
 Moura, Maria, Lincoln, Ne
 Nanfak, Edwige, Omaha, Ne
 Pilquist, Tresa, Scottsbluff, Ne
 Poulas, Abby, Lincoln, Ne
 Raveling, Jenna, Homer, Ne
 Snow, Melissa, Plattsmouth, Ne
 Soucie, Matthew, Chappell, Ne
 Tenney, Ashley, Crete, Ne
 Toth, Tomas, Omaha, Ne
 Tran, Richard, Lincoln, Ne
 Troxell, Randolph, Blair, Ne*
 Whiteside, Elizabeth, Lincoln, Ne
 Williams, Lacey, Wayne, Ne
 Zakrzewski, Carly, O'Neill, Ne

Clifford, Susan M, West Lebanon, NH
 Fiore, Jonathan, Londonderry, NH
 Lee, Nancy, Danville, NH*
 Mallet, Jeffery, Jackson, NH

Stober, Keli, Manchester, NH*

Abughanam, Eman, Guttenberg, NJ
 Adeleke, Lade, North Brunswick, NJ
 Aguilera, Carina, Randolph, NJ
 Alex, Vineeth, Teaneck, NJ
 Allen, Alicia, Englewood, NJ
 Alvarado, Erika, Jersey City, NJ
 Amicette, Patrick, Irvington, NJ*
 Asratiali, Kateja, Jersey City, NJ
 Bae, Kook, Lyndhurst, NJ
 Balbosa, Humberto, Jersey City, NJ
 Barros, Evelyn, Hillsborough, NJ
 Birch, Amber, Bellmawr, NJ*
 Bodden, Jeuz, Tinton Falls, NJ
 Bojaryn, Gregory, Clifton, NJ
 Bonaccorso, Yen, Fair Lawn, NJ
 Brown, Anthony, Hoboken, NJ
 Bruce, Ashley, Piscataway, NJ*
 Brunson, Myrtella, Paterson, NJ
 Burruezo, Teresa, Mount Royal, NJ*
 Buske, Tracy, Brick, NJ
 Cahill, Angela, Matawan, NJ
 Canencia, Marro, Neptune, NJ
 Cano, Douglas, Ridgefield, NJ
 Caro, Johanna, Fair Lawn, NJ
 Chaker, Cesar, Toms River, NJ
 Cherez, Frank, Jersey City, NJ
 Colaie, Bertille, Somerville, NJ
 Das, Rinku, Wallington, NJ
 Delacruz, Richard, Union, NJ
 Deodhari, Samantha, Hillside, NJ
 Dominic, Jessica, Red Bank, NJ
 Dormelus, Alex, Irvington, NJ
 Dumas, Rejeanne, Union, NJ
 Ebenau, Jeannine, Little Ferry, NJ
 Fey, Crystal, Neptune, NJ
 Gandhi, Mary, Clifton, NJ
 Giffin, Lisa, Trenton, NJ
 Gleason, Patrick, Oakhurst, NJ
 Govich, Ashlee, Barnegat, NJ
 Grieco, Tara, Mays Landing, NJ
 Griffin, Chantay, Toms River, NJ
 Gunderson, Craig, Paramus, NJ
 Hansen, Erika-Lynn, Lanoka Harbor, NJ
 Hill, Nancy, West Orange, NJ
 Hynes, Ruby-Yray, Lodi, NJ
 Invernon, Vanessa, Ringwood, NJ
 Irizarry, Alfredo, Toms River, NJ
 Jafrazy, Laura, Wharton, NJ
 Joseph, Raphael, Englewood, NJ
 Kaur, Navjot, North Plainfield, NJ
 Kotadia, Laxmi, Elmwood Park, NJ
 Krawczyk, Lisa, Elmwood Park, NJ
 Kruse, David, Tenafly, NJ
 Leal, David, Newark, NJ
 Low, Kaitlyn, Lincroft, NJ
 Mabie, Brittny, Bayville, NJ
 Malangone, Gregory, Red Bank, NJ
 Manansala, Elice, Little Ferry, NJ
 Mangondato, Prince-Haron, Bergenfield, NJ
 Maradia, Sohil, Keyport, NJ
 Mburu Malonza, Rose, Millburn, NJ
 McCann, Alyssa, Red Bank, NJ
 Mishechko, Karina, Jersey City, NJ
 Monia, Yvonne, Union City, NJ
 Morris, Lung, Kearny, NJ
 Morrison, Mariesa, Blairstown, NJ
 Mustafa, Emani, Clifton, NJ*
 Noe, Giovanna, Martinsville, NJ
 Ogado, Erick, Newark, NJ
 Palmones, Dean, Bloomfield, NJ
 Pamiloza, Alexandra Grace, South Orange, NJ
 Patel, Viral, Cranbury, NJ
 Pham, Jacqueline, Jersey City, NJ
 Pronnicki, Charles, Somerset, NJ
 Quiambao, Laurice, Little Ferry, NJ

Quiambao, Martin, Hasbrouck Heights, NJ
 Rasevych, Svitlana, Fair Lawn, NJ
 Raveendra, Jisha, Bergenfield, NJ
 Raymond, Randy, Teaneck, NJ
 Rocha, Pollyana, Newark, NJ
 Roque, Ann Margaret, Howell, NJ
 Rozin, O'Brien, Edison, NJ
 Saavedra, Christianne, Belleville, NJ
 Salerno, Richard, Brick, NJ
 Sarica, Nicole, Linden, NJ
 Schena, Niccole, Wall, NJ
 Shah, Rishita, Fort Lee, NJ
 Siegfried, Sora, Lakewood, NJ
 Simmons, Diane, Hamburg, NJ*
 Smith, Robert, Millville, NJ
 Snyder, Brian, Sparta, NJ
 Solis, Penelope, Woodland Park, NJ
 Spiro, Leah, Lakewood, NJ
 Strazella, Brian, Linden, NJ
 Sutherlin, Samantha, West Caldwell, NJ
 Sutton, Frank, Collingswood, NJ
 Taclan, Mariver, Phillipsburg, NJ
 Torres, Alvin-Garret, New Milford, NJ
 Vincent, Vineetha, New Milford, NJ
 Vujicic, James, Morganville, NJ
 Watson, Lauren, Princeton Junction, NJ
 Waxman, Rachel, Lakewood, NJ
 Whitman, Andrea, Jersey City, NJ*
 Wiggins, Wainsworth, Hackensack, NJ
 Win, Wai, Roseland, NJ
 Wishbow, Nicholas, Middlesex, NJ
 Xayaphachan, Vanyda, Mays Landing, NJ
 Yang, Li, Bergenfield, NJ
 Zawam, Sahar, Iselin, NJ
 Zimmerman, Debra, Highland Lakes, NJ*

Bono, Douglas, Grants, NM*
 Brazel, Janet, Alto, NM*
 Cardona, Corine, Roswell, NM
 Cunney, John, Mason, NM*
 Denton, Mary, Albuquerque, NM
 Faris, Elizabeth, Lovington, NM
 Fierro, John, Roswell, NM
 Garcia, Diana, Lovington, NM
 Holl, Terrie, Roswell, NM*
 Kight, Susan, Carlsbad, NM*
 Lujan, Catalina, Roswell, NM
 Maes, Deeanna, Albuquerque, NM
 Ortega, Leticia, Alamogordo, NM
 Scott, Taylor, Roswell, NM
 Silva, Anali, Roswell, NM
 Valadez, Erik, Roswell, NM
 Villalpando, Amber, Roswell, NM*
 Whitaker, Kelsey, Dexter, NM
 Young, Kaylona, Los Lunas, NM

Anderson, Pamela, Reno, Nv
 Bartholomew, Tiffany, Henderson, Nv
 Cofer, Tas, Las Vegas, Nv
 Crawford, Tyra, Sun Valley, Nv
 Dunphy, Danielle, Stateline, Nv
 Faircloth, Stacy, Las Vegas, Nv
 Garfield, Cindy, Elko, Nv
 Garrigan, Christina, Carson City, Nv*
 Guevarra, Kristine, N Las Vegas, Nv*
 Jackson, Jasmine, Las Vegas, Nv
 Keltner, Emily, Reno, Nv
 Longo, Anthony, Carson City, Nv
 McDaniel, Terry, Carson City, Nv*
 McNeil, Jason, Reno, Nv
 Mehfooz, Toqeer, Sparks, Nv
 Rew, John, Spring Creek, Nv
 Walker, Ryan, Reno, Nv
 Werlinger, Joseph, Reno, Nv
 White, Andrew, Las Vegas, Nv

Akhmedov, Khasan, Utica, NY

Alloy, Linda, West Islip, NY*
 Arase, Jane, Bronx, NY
 Asarese, Heidi, Honeoye Falls, NY
 Asgedom, Meskerem, Rochester, NY
 Auguste, Osnac, Queens Village, NY
 Austin, Thomas, Madison, NY
 Beattie, Emily, Rochester, NY
 Bejaoui, Sofiane, Chadwicks, NY
 Bekerman, Lara, Brooklyn, NY
 Bigus, Richie, New York, NY
 Bills, Brandon, Hudson Falls, NY
 Boateng, Kwame, Bronx, NY
 Bouzi, Marie, Bronx, NY
 Brown, Monifa, Bronx, NY
 Bub, Victoria, Garrison, NY
 Cabibi, Debra, West Islip, NY
 Campbell, Michael, Mount Vernon, NY
 Chatman, Craig, Buffalo, NY
 Cinco, Emy, New Rochelle, NY
 Ciofalo, Michelle, Yonkers, NY
 Clark, Tracy, Rochester, NY
 Cowles, George, Canastota, NY
 D'agostino, Samantha, Spencerport, NY
 Dameus, Rocianie, Mount Vernon, NY
 David, Ruth, Queens Village, NY
 Desir, Lourde, Poughkeepsie, NY
 Dieter, Robert, Hornell, NY
 Dizdarevic, Munib, Utica, NY
 Douglas, Rachel, Brooklyn, NY
 Essel, Carl, Bronx, NY
 Ferris, Maureen, Oneida, NY
 Feuchter, Melissa, Cuba, NY
 Fisher, Adam, Albion, NY
 Foley, Karin, Angelica, NY
 Glover, Brooker, Brooklyn, NY
 Goings, Kevin, Canastota, NY*
 Gomez, Kevin, Utica, NY
 Graham, Ron, Utica, NY
 Harris, Ayanna, Brooklyn, NY
 Hawkins, Eric, Rochester, NY
 Hutzler, Jillian, Darien Center, NY
 Ikewood, Nicole, Ontario, NY
 Jeanty, Judith, South Floral Park, NY*
 John, Jobin, Yonkers, NY
 Joseph, Shaji, New City, NY
 Lapoterie, Woody, Brooklyn, NY*
 Leger, Daphne, Nanuet, NY
 Lester, Carl, Bloomfield, NY
 Lew, Kimberly, Utica, NY
 Lind, Shelby, Brockport, NY
 Lizardo, Robert, New York, NY
 Longtin, Bradley, Poland, NY
 Lonsway, Benjamin, Stittville, NY
 Lyubezhanin, Yevgeniy, Holland Patent, NY
 Maniace, Kyle, Batavia, NY
 Marcoccia, Olivia, Huntington Station, NY
 Mason, Brandy, Oneida, NY
 Matt, Cody, Rome, NY
 McKinley, Bryan, Conesus, NY
 McLean, Marjorie, Bronx, NY
 McMartin, Kaela, Corfu, NY
 Mecca, Liza, Verplanck, NY
 Mnasri, Rafik, Utica, NY
 Mohamed, Abdullahi, Rochester, NY
 Moxley, Evan, Utica, NY
 Mucha, Sarah, Dalton, NY
 Murphy, Kevin, Iliion, NY*
 Murray, Erica, New York Mills, NY
 Nair, Arun, Forest Hills, NY
 Nettin, Laura, Fillmore, NY
 Nicastro, Alexandria, Rome, NY
 Ocasio, Matthew, White Plains, NY
 Ojevwe, Boniface, Bronx, NY
 Ou, Christian, Flushing, NY
 Panarin, Aleksandr, Monroe, NY
 Pangrazio, Jaime, Oakfield, NY
 Paniagua, James, Staten Island, NY

Pavlick, Richard, Worcester, NY
 Pearce, Jasmine, Staten Island, NY
 Peralta, Gladys, Rochester, NY*
 Peralta, Maria, Ridgewood, NY
 Petrarca, Brittany, Hilton, NY
 Piscitell, Caralyn, Mahopac, NY
 Plantz, Alex, Clinton, NY
 Powers, Ashley, Rome, NY
 Prescod, Nicholas, Rome, NY
 Raymond Tess, Lydie, Monsey, NY
 Reynolds, Sarah, Staten Island, NY
 Sackett, Gabrielle, Parish, NY
 Scherer, Leanne, Corfu, NY
 Sidorevich, Olga, Utica, NY
 Singh, Preeti, Congers, NY
 Smith, Jessica, Rome, NY
 Spann Cox, Essie, Rochester, NY
 Stewart, Katelyn, Alden, NY
 Taylor, Ayantia, Yonkers, NY
 Thayer, Alishia, New Hartford, NY
 Thesing, Kaitlyn, Rochester, NY
 Thomas, Serene, Bronx, NY
 Tomasso, Bernadette, Churchville, NY
 Trotta, Kristen, Penfield, NY
 Twitchell, Scott, Medina, NY
 Uwangu, Morgan, Staten Island, NY
 Vazquez, Camelia, Rochester, NY
 Verenich, Anatoly, Frankfurt, NY
 Wash, Jaime, Staten Island, NY
 Washington, Richard, Huntington Station, NY
 Whitehurst, Denise, Coram, NY*
 Williams Jr, Clarence, Bronx, NY
 Wright, Joshua, Wayland, NY
 Yacuzzo, Matthew, Le Roy, NY



Adlard, Diane, Rocky River, Oh*
 Al-Abed, Amber, Columbus, Oh
 Bayes, Herbert, Kettering, Oh*
 Bickley, Todd, Fremont, Oh*
 Bowman, Remy, Middletown, Oh
 Buckler, Molly, Pickerington, Oh
 Causey, Ashlee, Chillicothe, Oh
 Chen, Erica, Columbus, Oh
 Chung, Tara, Columbus, Oh
 Collins, Gabrielle, Dayton, Oh*
 Everhart, Matthew, Columbus, Oh
 Gallion, Erik, Millerburg, Oh*
 Glade, Tina, Columbus, Oh*
 Goodin, Brent, Huber Heights, Oh*
 Harris, Mary, Bluffton, Oh*
 Hause, Jason W, Warren, Oh
 Hill, Anthony, Grove City, Oh
 Holtzapfle, Leah, Cincinnati, Oh*
 Hutsell, John, Centerville, Oh*
 Ismail, Intesar, Columbus, Oh
 Kaiser, Krystal, Columbus, Oh
 Kolkowski, Katie, Columbus, Oh
 Law, Julie, Canal Winchester, Oh*
 Lin, Elizabeth, Dublin, Oh
 Livingstone, Gloria, Lancaster, Oh*
 Maglionico, Deborah, Cuyahoga Falls, Oh*
 Markus, Janet, Medina, Oh*
 Mayes, Leslie, Pickerington, Oh
 McCaslin, Steven, Columbus, Oh
 Monks, Emily, Denfer, Oh
 Morgan, Carey, Carrollton, Oh
 Morris, Nichole, Brookfield, Oh
 Morrison, Shane, Alliance, Oh
 Niemeier, Danielle, Powell, Oh*
 Noble, Candace, Hamilton, Oh
 O'neil, Matthew, Columbus, Oh
 Petrenko, Timofey, Columbus, Oh
 Quintana, Jillian, North Ridgeville, Oh
 Quinteros, Elio, Wooster, Oh

Salamakha, Nataliya, Galloway, Oh
 Sanders, Salvatore, North Jackson, Oh*
 Schneider, Brian, Columbus, Oh
 Shariff, Kerta, Blacklick, Oh
 Shaw, Jamie, Carrollton, Oh
 Skaggs, Renee, Minford, Oh*
 Slavings, Stephanie, Rittman, Oh
 Suttle, Sandra, Wooster, Oh
 Thai, Anh-Thu, Columbus, Oh
 Washington, Tiara, Columbus, Oh
 Wiegand, Elizabeth, Dover, Oh*
 Wolpert, Tyler, Columbus, Oh
 Zewdu Jr, Eyayu, Columbus, Oh
 Zinn, Thomas, Morristown, Oh*

Allen, Christin, Coweta, Ok
 Altis, Candice, Coweta, Ok
 Barden, Brittany, Collinsville, Ok
 Barnes, Andrea, Oklahoma City, Ok
 Barnes, Julie, Moore, Ok
 Barr, Lindsey, Sapulpa, Ok
 Beavers, Catilin, McLoud, Ok
 Bellew, Logan, Tulsa, Ok
 Benton, Edward, Norman, Ok
 Bingaman, Marc, Glenpool, Ok
 Bruner, Karen Renae, Fairfax, Ok
 Campbell, Brandy, Prague, Ok
 Claxton, Haylee, Healdton, Ok
 Conway, Marlena, Norman, Ok
 Cook, Christopher, Norman, Ok*
 Gaston, Leatrice, Muskogee, Ok
 Gibson, Natasha, Edmond, Ok
 Giles, Mary, Claremore, Ok
 Gosvener, Valerie, Owasso, Ok
 Gray, Loren, Ardmore, Ok
 Harn, Trinity, Broken Arrow, Ok
 Jarman, Kayla, Noble, Ok
 Jordan, Tabitha, Jenks, Ok
 Le, Ngan, Oklahoma City, Ok
 Mace, Lisa, Oklahoma City, Ok
 McKenzie, Cynthia, Lone Grove, Ok
 Moesta, Linda, Jenks, Ok
 Nguyen, Katelynn, Bethany, Ok
 Nguyen, Kimberly, Tulsa, Ok
 Nguyen, Michael, Moore, Ok
 Nikles, Phillip, Broken Arrow, Ok
 Noble, Kyle, Tulsa, Ok
 Parker, Kelsey, Oklahoma City, Ok
 Pfeiffer, Katharina, Edmond, Ok
 Ray, Kristi, Midwest City, Ok
 Robnett, Lacie, Sand Springs, Ok
 Scott, Dorothy, Newalla, Ok
 Shultzaberger, Erik, Yukon, Ok
 Sime, Gabin, Edmond, Ok
 Sotello, Natasha, Moore, Ok*
 Sparger, Jimmy, Del City, Ok
 Standefer, John, Oklahoma City, Ok
 Stewart, Andrew, Ardmore, Ok
 Strong, Rose, Muskogee, Ok
 Summers, Jennifer, Midwest City, Ok
 Thompson, Jessica, Tahlequah, Ok
 Tillett, Danielle, Oklahoma City, Ok
 Vo, Joe, Oklahhoma City, Ok
 Walker, Deborah, Elk City, Ok
 Warden, Larissa, Broken Arrow, Ok
 Watts, Stacy, Muldrow, Ok
 White, Mitchell, Owasso, Ok

Amundson, Gerrad, Lake Oswego, Or*
 August, Denise, Salem, Or
 Cram, Timothy, Azalea, Or
 Dates, Dawn, Grants Pass, Or
 Delwayer, Anna, Klamath Falls, Or*
 Diaz, Carlos, Keizer, Or
 Fry, Matthew, Gresham, Or
 Gutierrez, Carlos, Keizer, Or
 Halone, Melissa, Portland, Or*

New Members

Johnson, Karin, Wilderville, Or
Latusick, Nicole, Grants Pass, Or
Leavitt, Felicia Pre, Grants Pass, Or
Luu, Tiffany, Portland, Or
Osterman, Mandy, Canyonville, Or
Sackett, Rachael, Monmouth, Or
Stratton, Leanna, Troutdale, Or*
Washington, Demond, Keizer, Or
White, Robert, Grants Pass, Or
Wilkins, Martin, Hillsboro, Or*
Yermachenkov, Paul, Salem, Or

P

Abee, Catherine, McKees Rocks, Pa*
Agyare, Pearl, Harrisburg, Pa
Amberger, Diana, Maytown, Pa
Andes, Desiree, Reading, Pa
Arford, Lyndsey, Oil City, Pa
Arlington, Ashley, Oil City, Pa
Austel, Alexander, Oil City, Pa
Bailey, Sean, Bethlehem, Pa
Baxter, April, Port Allegany, Pa
Beard, Katana, York, Pa
Beatty, Zachary, Oil City, Pa
Bennett, Jamie, Oil City, Pa
Berenstein, Tonna, Duncannon, Pa*
Bhatt, Preksha, Oil City, Pa
Blakeslee, Alexis, New Ringgold, Pa
Bond, Cory, Bath, Pa*
Boreman, Melissa, Oil City, Pa
Bower, Gregory, Cogan Station, Pa*
Britt, Dawn, Oil City, Pa
Burge, Olivia, Oil City, Pa
Burlingame, Nicole, Erie, Pa
Bush, Tiffany, Wyomissing, Pa
Callaghan, Sean, Erie, Pa
Campbell, Caleb, Towanda, Pa*
Cappel, Brianna, Saint Clair, Pa
Chancey, James, Red Lion, Pa*
Chase, Chelsea, Oil City, Pa
Citino, Aubry, Lebanon, Pa*
Clark, Athena, North East, Pa
Clemmer, Chanelle, Reading, Pa
Clevenger, Hannah, Mechanicsburg, Pa
Crehul, Alina, York, Pa
Czerwinski, Haleigh, Oil City, Pa
Davis, Austin, Linesville, Pa
Deeter, Tara, Oil City, Pa
Deibler, Brandon, Altoona, Pa
Digilio, Devon, Mechanicsburg, Pa
Dinh, Tri, Philadelphia, Pa*
Dodson, Kayla, Hopewell, Pa
Donaldson, Kasi, Oil City, Pa
Doroba, Lauren, Portage, Pa
Dovensky, Kathryn, Coudersport, Pa
Drevna, Marianne, Pittsburgh, Pa*
Dunfee, Tiffany, Meyersdale, Pa
Eslinger, Kevin, Enola, Pa
Felletti, Chanda, Oil City, Pa
Fierst, Jodi, Oil City, Pa
Foreman, Allyn, Harrisburg, Pa
Francoeur, Stephanie, McKeesport, Pa
Frank, Rebecca, Exton, Pa*
Freiwald, Lindsay, Johnstown, Pa
Frye, Amanda, Greensburg, Pa*
Gates, Kara, Altoona, Pa
Geiger, Steven, Mount Pleasant, Pa*
Gibson, Selwyn, Tobyhanna, Pa
Gill, Katelyn, Oil City, Pa
Giraldo, Gloria, Allentown, Pa
Graham, Kimberly, Erie, Pa
Grim, Ashley, Dover, Pa
Gruber, Saunja, Meadville, Pa
Hanlon, Jennie, Oil City, Pa
Hann, Christine, Cresson, Pa

Harner, Samantha, Dillsburg, Pa
Hartman, Donna, Blandon, Pa
Heeter, Ashley, Oil City, Pa
Heiner, Amy, York, Pa
Henderson, Renae, Oil City, Pa
Hendrick, Taylor, Dillsburg, Pa
Hepfer, Scott, Eldred, Pa
Hess, Lacey, Ulysses, Pa
Hilker, Dawn, Red Lion, Pa
Holt, Lee, Oil City, Pa
Hubbard, Ryan, Johnstown, Pa
Iman, Dan, Erie, Pa
Jackson, Julie, North Huntingdon, Pa
James, Christine, Oil City, Pa
Kalnas, Natalie, Erie, Pa
Katarski, Amber, Erie, Pa
Keebaugh, Kendra, McConnellsburg, Pa
Kim, Justin, Center Valley, Pa
Kinch, Chad, Wellsville, Pa
Kinnard, Kameno, York, Pa
Knight, Megan, Bainbridge, Pa
Kolojechick, Ashley, Harrisburg, Pa
Kravetsky, Emily, Saltsburg, Pa*
Kruskie, Ashlee, Mount Carmel, Pa
Kuebler, Evelyn, Camp Hill, Pa
Lavan, Bradley, Somerset, Pa
Layton, Lindsey, Breezewood, Pa
Levin, Robert, Philadelphia, Pa*
Liszcz, Lacey, Reading, Pa
Lochner, Erin, Erie, Pa
Lozano, Tania, Lancaster, Pa
MacKanick, Nicholas, Nanty Glo, Pa
McCombie, Morgan, Johnstown, Pa
McNair, Andrea, Philadelphia, Pa
Mears, Joe, Acme, Pa
Melcher, Joseph, Oil City, Pa
Michalac, Fred, Sinking Spring, Pa
Moretti, Jonathan, New Oxford, Pa
Morrison, Anthony, Center Valley, Pa
Napierkowski, Daniel, Butler, Pa
Newmoyer, Shannon, West Reading, Pa
Nguyen, Ha, Wyomissing, Pa
Nguyen, Thuc, Mechanicsburg, Pa
Nowell, Hannah, Oil City, Pa
Olenik, Denise, Pottstown, Pa
Patel, Darshak, Enola, Pa
Perry, Jennifer, Palmyra, Pa
Pius, Terah, Harborcreek, Pa
Plank, Kasandra, Harrison Valley, Pa
Ponzek, Marisa, Philadelphia, Pa*
Portalatin, Mary Diana, Reading, Pa
Radabaugh, Nathan, York Haven, Pa
Ramsey, Danielle, Dover, Pa
Roberts, Shandra, Erie, Pa
Ronnermann, Lindsay, Pottstown, Pa
Russell, Michele, Hanover, Pa
Sanders, Misty, Kane, Pa
Santiago, Franchlee, Reading, Pa
Scaife, Roger, Hyndman, Pa
Scalzo, David, Oil City, Pa
Schell, Kathryn, Camp Hill, Pa
Scott, Shauna, Oil City, Pa
Segal, Julia, Erie, Pa
Selan, Melanie, Kane, Pa
Shilling, Chris, Narvon, Pa
Siddle, Lauren, Mechanicsburg, Pa
Sikora, Aaron, Oil City, Pa
Sink, Jason, East Stroudsburg, Pa
Smith, Rebecca, Erie, Pa
Soder, Matthew, Oil City, Pa
Starner, Sara, Gettysburg, Pa
Steele, Rachel, Germansville, Pa
Steffee, Jennifer, Oil City, Pa
Stiffler, Marla, Loganville, Pa
Swegon, Linda, Stewartstown, Pa
Terry, Marcia, York, Pa
Thompson, Brianna, Oil City, Pa

Tracey, Megan, Halifax, Pa
Varner, Beth, Biglerville, Pa
Verga, Matthew, Erie, Pa
Vrancich, Lindsay, Pittsburgh, Pa*
Waldemarson, Brittany, Oil City, Pa
Wantz, Zoe, Abbottstown, Pa
Wasiewski, Dana, Lancaster, Pa
Weldon, Tristan, Oil City, Pa
White, Barbara, Mechanicsburg, Pa
Whitehawk, Colleen, Douglassville, Pa
Williams, Brian, Mechanicsburg, Pa
Wishnok, Alicia, Oil City, Pa
Young, Lindsay, Enola, Pa
Zaffuto, Morgan, Oil City, Pa
Zimmerman, Jennifer, Ephrata, Pa

S

Artemenko, Vasilii, Inman, SC
Barbrey, Rebecca, Greer, SC
Basnett, Holley, Lexington, SC*
Bishop, Ami, Gaffney, SC
Boling, Mary, Lexington, SC*
Brown, Brandy, Union, SC
Casteel, Christopher, Simpsonville, SC
Connor, Matthew, Mount Pleasant, SC
Cooper, Abigail, Georgetown, SC
Crissone, Megan, Gaffney, SC
Crosby, Johnese, Spartanburg, SC
Davidson, Kevin, Easley, SC*
Dean, Rodney, Piedmont, SC
Dew, Jody, Columbia, SC
Diamond, Jill, Myrtle Beach, SC
Dowdell, Jacqueline, Spartanburg, SC
Drew, Kimberly, Florence, SC
Fife, Samantha, Inman, SC
Fricks, Kevin, Pelzer, SC
Gibbs, Jeremiah, Mullins, SC
Gil, Nadya, Greenville, SC
Givens, Rachel, Simpsonville, SC
Goforth, Bonnie, Moore, SC
Gosnell, Whitney, Landrum, SC
Hardy, Isha, Spartanburg, SC
Harvey, Scott, Myrtle Beach, SC
Hook, Melanie, West Columbia, SC*
Jackson, Shannon, Aiken, SC
Jeter, Willie, Simpsonville, SC
Kelsea, Mathis, Inman, SC
Kenneth, Crouse, Salem, SC
Kincaid, Christie, Gaffney, SC
Kirby, Stefanie, Lyman, SC
Knowlton, Charles, Greenville, SC
Lacheny, Lise, Goose Creek, SC*
Leopard, Brooklyn, Simpsonville, SC
McCarson, Jennifer, Marietta, SC*
McDowell, Latallya, Fountain Inn, SC
Megna, Jessica, Clinton, SC*
Moore, Ashley, Spartanburg, SC
Morton, Terry (Marie), Greer, SC
Moss, Lindsey, Blacksburg, SC
Napierkowski, Alexa, Anderson, SC
Nguyen, Danh, Greenville, SC
Oakley, Judy, Columbia, SC*
Olin, Kelly, West Union, SC
Palmer, Debra, Greenwood, SC*
Payne, Abbey, Greenville, SC
Peterson, David, Simpsonville, SC
Phillips, Emily, Campobello, SC
Pritchard, Kaylin, Inman, SC
Rhodes, Ashley, Clinton, SC
Rutherford, Bruce, Greenwood, SC*
Satterfield, Brandon, Mauldin, SC
Schlamp, Jennifer, Boiling Springs, SC
Seablom, Jennifer, Lexington, SC
Seibert, Jeffrey, Rock Hill, SC
Shultz, Brenda, Lexington, SC

Thomas, Beth, Boiling Springs, SC
 Tisdale, Tameca, Andrews, SC
 Tyler, Barrie, Mount Pleasant, SC*
 Williams, Helen, Chesnee, SC
 Yuhasz, Jonathan, Pacolet, SC
 Ziegelhefer, Kimberly, Gaffney, SC

Diez, Kelsey, Dakota Dunes, SD
 Hammond, Jennifer, Rapid City, SD*
 McMahon, Nancy, Rapid City, SD*



Crouch, Tiffany, Memphis, Tn*
 Dawson, Cynthia, Smithville, Tn
 Fullington, Kenneth, Jackson, Tn
 Harrison, Andrea, Manchester, Tn*
 Herren, Brent, Sparta, Tn
 Nance, Tracy, Jackson, Tn*
 Oglesby, Whitney, Knoxville, Tn
 Pacsi, Dominica, Hendersonville, Tn
 Pedigo, Karrie, Monroe, Tn
 Peiffer, Robert, Livingston, Tn*
 Scarbrough, Karen, Dickson, Tn*
 Seagroves, Jennifer, Altamont, Tn
 Tracey, Maxine, Hixson, Tn
 Warren, Brenton, Englewood, Tn
 Whitley, Sheila, Memphis, Tn*
 Whitmore-High, Angela, Memphis, Tn*
 Zondo, Vusumuzi, Chattanooga, Tn*

Acaputo, Casey, Granbury, Tx

Acevedo, Denise, San Antonio, Tx
 Aguilera, Eleuterio, Laredo, Tx
 Alvarez, Joann, Fort Worth, Tx
 Anaya, Patricia, Lubbock, Tx*
 Anderson, April, San Antonio, Tx
 Bachtel, Sara, Edgewood, Tx
 Badillo, Ofelia, Edinburg, Tx
 Biggs, Keeli, Ft Worth, Tx
 Blake, Crystal, San Antonio, Tx
 Boulton, Angela, Desoto, Tx*
 Burson, Carol, Fresno, Tx
 Casey, Jennifer Zuley, El Paso, Tx
 Coquat, Joshua, San Antonio, Tx
 Cortez, Christopher, Brownsville, Tx
 Cortez, Randy, Los Fresnos, Tx
 Crocker, Jennifer, North Richland Hills, Tx
 Culbreth, James, Coppell, Tx*
 Davila, Bonnie, Corsicana, Tx*
 Davila, Emanuel, Houston, Tx
 Dean, Virginia, River Oaks, Tx*
 Delossantos, Maria, San Antonio, Tx
 Desta, Habtamu, Houston, Tx
 Diaz, Erika, San Antonio, Tx
 Drury, Trinity, Godley, Tx
 Engle, Jim, League City, Tx*
 Enright, Carrie, Plano, Tx
 Fuentes, Anabel, San Antonio, Tx
 Galvan, Monika, Arlington, Tx
 Garcia, Jennifer, Rio Grande City, Tx
 Garcia, Monica, San Angelo, Tx
 Garcia, Noe, McAllen, Tx
 Garza, Amanda, Brownsville, Tx
 Gonzalez, Rosemary, San Antonio, Tx

Groff, Genifer, Weatherford, Tx
 Grzenda, Gregory, Houston, Tx*
 Harmon, Shelbi, Alvord, Tx
 Harris, Mary, North Richland Hills, Tx
 Haynes, Delena, Orange, Tx*
 Heather, Garcia, Crowley, Tx*
 Henry, Tracey, Weatherford, Tx
 Heydari, Sahar, San Antonio, Tx*
 Hogue, Kristen, Tolar, Tx
 Huynh, Sheila, Houston, Tx
 John, Joy, Stafford, Tx
 Jungman, Jennifer, Azle, Tx
 Kong, Andy, San Antonio, Tx
 Le, Dat, Grand Prairie, Tx
 Lewis, Aeronita, Houston, Tx
 Lopez, Rodolfo, Houston, Tx*
 Mann, Priscilla, Spring, Tx*
 Manuel, Flores, Laredo, Tx
 Marceaux, Michele, League City, Tx
 Martin, Bart, Cleburne, Tx
 Martin, Shelley, Bastrop, Tx*
 Martinez, Joseph, San Antonio, Tx
 Martinez, Lorraine, San Antonio, Tx
 Mayfield, Chandy, Sulphur Springs, Tx
 McClelland, Susan, Hurst, Tx
 McCreight, Curtis, Granbury, Tx
 Mendoza, Mariana, Laredo, Tx
 Miller, Travis, Weatherford, Tx
 Miller, Valentina, Dallas, Tx*
 Montesinos, Montserrat, San Antonio, Tx
 Muller, Erica, Brownsville, Tx
 Obidos, Anna, Austin, Tx*
 Olive, Marissa, Lubbock, Tx*

UNITED STATES POSTAL SERVICE
Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title: AARC Times
 2. Publication Number: 0893-8520
 3. Filing Date: 10/1/12
 4. Issue Frequency: Monthly
 5. Number of Issues Published Annually: 12
 6. Annual Subscription Price (if any): \$89.95
 7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4®):
9425 N. MacArthur Blvd, Suite 100, Irving, Dallas County, TX 75063
 Contact Person: Marsha Cathcart
 Telephone (include area code): 972-243-2272
 8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer):
Same as address above
 9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank):
 Publisher (Name and complete mailing address):
Thomas J. Kallstrom, MBA, RRT, FAARC
Same address as above
 Editor (Name and complete mailing address):
Marsha Cathcart, BA
Same address as above
 Managing Editor (Name and complete mailing address):
Thomas J. Kallstrom, MBA, RRT, FAARC
Same address as above
 10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)
 Full Name: Daedalus Enterprises, Inc.
 Complete Mailing Address: 9425 N. MacArthur Blvd. Suite 100, Irving, Dallas County, TX 75063
 11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box None
 Full Name: _____ Complete Mailing Address: _____
 12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)
 Has Not Changed During Preceding 12 Months
 Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)
 PS Form 3526-R, August 2012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-09-000-8855 PRIVACY NOTICE: See our privacy policy on www.usps.com

13. Publication Title: AARC Times
 14. Issue Date for Circulation Data Below: October 2012
 15. Extent and Nature of Circulation

		Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)		36106	36246
b. Legitimate Paid and/or Requested Distribution (By Mail and Outside the Mail)	(1) Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541 (Include direct written request from recipient, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)	35170	35123
	(2) In-County Paid/Requested Mail Subscriptions stated on PS Form 3541 (Include direct written request from recipient, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)	0	0
	(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS®	362	361
	(4) Requested Copies Distributed by Other Mail Classes Through the USPS (e.g., First-Class Mail®)	0	0
c. Total Paid and/or Requested Circulation (Sum of 15b (1), (2), (3), and (4))		35532	35484
d. Non-requested Distribution (By Mail and Outside the Mail)	(1) Outside County Nonrequested Copies Stated on PS Form 3541 (include Sample copies, Requests Over 2 years old, Requests induced by a Premium, Bulk Sales and Requests including Association Requests, Names obtained from Business Directories, Lists, and other sources)	243	237
	(2) In-County Nonrequested Copies Stated on PS Form 3541 (include Sample copies, Requests Over 2 years old, Requests induced by a Premium, Bulk Sales and Requests including Association Requests, Names obtained from Business Directories, Lists, and other sources)	0	0
	(3) Nonrequested Copies Distributed Through the USPS by Other Classes of Mail (e.g., First-Class Mail, Nonrequestor Copies mailed in excess of 10% Limit mailed at Standard Mail® or Package Services Rates)	0	0
	(4) Nonrequested Copies Distributed Outside the Mail (include Pickup Stands, Trade Shows, Showrooms, and Other Sources)	54	200
e. Total Nonrequested Distribution (Sum of 15d (1), (2), (3) and (4))		297	437
f. Total Distribution (Sum of 15c and e)		35829	35921
g. Copies not Distributed (See instructions to Publishers #4, (page #3))		277	325
h. Total (Sum of 15f and g)		36106	36246
i. Percent Paid and/or Requested Circulation (15c divided by 1 times 100)		99.17%	98.78%
16. <input type="checkbox"/> Total circulation includes electronic copies. Report circulation on PS Form 3526-X worksheet.			
17. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the <u>November 2012</u> issue of this publication.			
18. Signature and Title of Editor, Publisher, Business Manager, or Owner			
<u>Marsha Cathcart, Editor</u>			Date: <u>9/18/12</u>
I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).			
PS Form 3526-R, August 2012 (Page 2 of 3)			

New Members

Osburn, Sara, Alvin, Tx*
Parra, Javier, Laredo, Tx
Patterson, Virginia, Cedar Park, Tx*
Petty, William, Ben Wheeler, Tx
Purdy, Joy, Weatherford, Tx
Randle, Amanda, Weatherford, Tx
Reyes, Andrea, Houston, Tx
Richards, Aimee, Lubbock, Tx*
Richardson, Adrian, Houston, Tx*
Robertson, Heather, Granbury, Tx
Robinson, Valencia, Dallas, Tx*
Rodriguez, Amber, Decatur, Tx
Rodriguez, Andy, San Antonio, Tx*
Rose, Crystal, Anna, Tx*
Sabella, Joseph, Richardson, Tx*
Saelee, Muey, San Antonio, Tx
Salazar, Jose, Laredo, Tx
Sanchez, Gumaro, San Antonio, Tx
Sanchez, Shamilette, Brownsville, Tx
Sanders, Kelli, Houston, Tx*
Santiago, Cynthia, Mission, Tx
Schorre, Joanna, Bryan, Tx
Scott, Katherine, Dallas, Tx*
Seyfried, Beverly, Marble Falls, Tx
Spencer, Machelle, Bangs, Tx
Sprouls, James Kevin, Arlington, Tx
Tate, Andrew, Helotes, Tx
Tran, Lydia, Helotes, Tx
Turner, Patrick, Laredo, Tx
Vargas, Sandra, Laredo, Tx
Vasquez, David, Kerrville, Tx
Vasquez, Michael, Kerrville, Tx
Vaughn, Lynda, Weatherford, Tx
Villarreal, Irene, Laredo, Tx
Wallace, Amanda, Watauga, Tx
Weatherford, Rebecca, Emory, Tx
Webber, Sherry, Fort Worth, Tx
West, Mercedes, Mineral Wells, Tx
Wiggins, Sarah, Sulphur Springs, Tx
Withers, Laura, Angleton, Tx*

U

Bernardo-Stagg, Kaylynn, South Ogden, Ut*
Clausen, Michelle, West Jordan, Ut
Holley, Susan, Eagle Mountain, Ut
Kraft, Steven, Riverdale, Ut
Libby, Candice, Eagle Mountain, Ut*
Mills, Gary, Bountiful, Ut*
Olson, Jonathan, Salt Lake City, Ut
Quick, Trevor, Neola, Ut
Sten, Craig, Salt Lake City, Ut
Wilson, Kasey, La Verkin, Ut

V

Acquaye, Elfreda, Woodbridge, Va
Adams-Click, Stephanie, White Post, Va*
Alhaddad, Mohammad, Winchester, Va
Alshamrani, Ali, Winchester, Va
Arku, Morgina, Alexandria, Va
Awofeso, Sadie, Stafford, Va
Barnes, Matthew, Lynchburg, Va
Basoah, Kofi, Fredericksburg, Va*
Bell, Shannon, Forest, Va
Blaser, Heidi, Salem, Va*
Booker, Noel, Chesterfield, Va*
Brice, Asia, Stafford, Va
Bryant, Anne, Lynchburg, Va
Burns, Michele, Madison Heights, Va
Champ, Vicky, Gloucester, Va
Cunningham, Terry, Fredericksburg, Va*
Dankwah, Maame, Woodbridge, Va
Davis, Kemira, Forest, Va
Davis, Kishanna, Lynchburg, Va

Day, Amy, Dinwiddie, Va*
Dickson, Adeshola, Alexandria, Va
Dolan, Tara, Lynchburg, Va*
Elgin, Debra, Collinsville, Va*
Fritzinger, Megan, Lynchburg, Va
Genarelli, Mark, Warrenton, Va
Gerwitz, Christina, Alexandria, Va
Harris, Randall, Charlottesville, Va*
He, Wei, Falls Church, Va
Hockman, Ciara, Winchester, Va
Kigen, Evans, Lynchburg, Va
Kintzel, Jonathan, Lynchburg, Va
Kortmulder, John, Lexington, Va
Kyser, Jesse, Merrifield, Va*
Lull, Evan, Goochland, Va*
MacPherson, Michelle, Nokesville, Va
Mahader, Tamiru, Alexandria, Va
McClain, Sara, Newport News, Va
McCormick, Kessley, Forest, Va
McCoy, Deanna, Newport News, Va*
McDonald, Amanda, Lynchburg, Va
McGhee, Misty, Chatham, Va
Memken, Ashley, Virginia Beach, Va
Morris, Melissa, Oak Hill, Va
O'Quinn, Mishalla, Birchleaf, Va
Parker, Jennifer, Big Island, Va
Perry, Donna, Thaxton, Va
Perry, Towanda, Richmond, Va*
Ponton, Cindell, Red Oak, Va
Pope, Karen, Henrico, Va*
Rhyne, Hannah, Lynchburg, Va
Snowman, Alexandra, Forest, Va
Sowell, Kimberly, Chesapeake, Va
Steele, Cristiane, Alexandria, Va
Stemmer, Veronica, Madison Heights, Va
Sun, Aihua, Charlottesville, Va
Truong, Jenny, Alexandria, Va
Waltz, Mark, Lynchburg, Va
Wardell, McHelle, Pamplin, Va
Whichard, Cheryl, Roanoke, Va
Whittlesey, K D, Christiansburg, Va*
Williams, Gilverto, Richmond, Va*

Lucas, Jessica, Springfield, Vt*

W

Allen, Tamara, Kirkland, Wa
Breunig, Cynthia, Longview, Wa*
Demerjian, Timothy, Sumas, Wa*
Dierks, Austin, Olympia, Wa
Flores, Frank, Issaquah, Wa*
Gomez, Gladys, Pasco, Wa
Hallett, Tom, Lacey, Wa
Hilton, Brandon, Puyallup, Wa
Huff, Justin, Richland, Wa
Jaksha, Anna, Longview, Wa
Jaynes, Kimberly, Gig Harbor, Wa
Kamara, Sylvester, Seattle, Wa
Kamaru, Sylvester, Seattle, Wa
Lafferty, Dawn, Yakima, Wa
Lim, Dina, Redmond, Wa
Martin, Christopher, Bremerton, Wa*
McQueen, Sarah, Tacoma, Wa
Medrano, Christine, Mabton, Wa
Rearrick, Paul, Vancouver, Wa*
Reyes, Darlene, Seattle, Wa
Richardson, Angela, Seattle, Wa
Salde, Joy, Burien, Wa
Schmitt, Andrea, Olalla, Wa
Shimada, Sean, Renton, Wa
Spencer, Marina, Spanaway, Wa*
Stein, David, Olympia, Wa
Tang, Elizabeth, Renton, Wa
Thomas, Cescelli, Bonney Lake, Wa
Waldo, Kelly, Bellevue, Wa

Wilkowski, Derek, Kent, Wa
Yengibarov, George, Bellevue, Wa

Ahler, Julie, Oak Creek, Wi*
Baudhuin, Connie, Brussels, Wi*
Bresina, Melissa, Chippewa Falls, Wi*
Grant, Veronica, Madison, Wi
Henn, Roberta, Shawano, Wi*
Howard, Jennifer, Bristol, Wi
Johnson, Rachael, River Falls, Wi
Kolmos, Jennifer, Kenosha, Wi
Merritt, Leandria, Milwaukee, Wi
Olson, Elizabeth, Union Grove, Wi*
Sams-Rearick, Barbara, Appleton, Wi*

Blake, Charles, Shinnston, Wv
Bostic, Marisa, Glace, Wv
Bulka, Chelsea, Wheeling, Wv
Butler, Tara, Augusta, Wv
Cremeans, April, Monongah, Wv*
Eggert, Renae, Frankford, Wv
Francis, Debbie, Wheeling, Wv
Gaus, Kelsie, Wheeling, Wv
Hanlin, Leigh, Wheeling, Wv
Hott, Marisa, Shanks, Wv
Hughes, Derek, Ridgeley, Wv
Iszkula, Cameron, Wheeling, Wv
Knuth, Eric, Wheeling, Wv
Lutz, Christopher, Wheeling, Wv
Mason, Matthew, Wheeling, Wv
Massie, Thelma, Frankford, Wv
McDonald, Jessica, Wheeling, Wv
McFarland, Jennifer, Wheeling, Wv
McKinley, Brandon, Wheeling, Wv
Montgomery, James, Parkersburg, Wv*
O'Neill, Martin, Fort Ashby, Wv
Parsons, Adam, Wheeling, Wv
Petrucci, Avery, Wheeling, Wv
Spencer, Leslie, Mullens, Wv*
Stoler, Ryan, Barboursville, Wv*
Vickers, Brandi L, Summersville, Wv
Woods, Jeffrey, Beckley, Wv*

Grove, Kathy, Jackson, Wy*
Kucera, Ammi, Cheyenne, Wy
Patterson, Charlynn, Gillette, Wy
Royer, Jamie, Cheyenne, Wy

Military Members

Rios, Lillian, APO, AE*
Samuel, Sam, Lackland AFB, Tx

International Members

Almoaibed, Salma, Riyadh, Saudi Arabia
Assuncao, Murillo, Sao Paulo, Brazil
Azul, Lawrence Ace Matunan, Singapore, Singapore
Fields, Carmen, Riyadh, Saudi Arabia
Forson, Audrey, Accra, Ghana
Garcia, Raul, Guayaquil, Ecuador
Graham, Ellen, Riyadh, Saudi Arabia
Joseph, Job, Limbe, Haiti
Lamer, Daniel, McMasterville, Qc, Canada
Lema, Carlos, Bogota, Colombia
Liu, Ling, Nanjing, China
Manling, Liu, Shaanxi, China
Nileshwar, Anitha, Udupi, India
Ugurlu, Sanihe, Istanbul, Turkey
Unnikrishnan, Ramesh, Udupi, Karnataka, India

Chronic Disease Management

(continued from page 43)

We track outside of HEDIS as well to monitor our patients' use of the ED and to gauge their satisfaction with our services, as well as our physicians' satisfaction. Our latest report showed:

- Our asthma/appropriate medications and COPD/spirometry testing were both within the 90th percentile on HEDIS.
- For the patients enrolled in the program, we averaged 3% emergency room utilization per month, equaling an average yearly cost avoidance of \$466,000.

A survey of 65 physicians, which had an 82% response rate, found 100% of the physicians responding were satisfied with the services provided by the disease management clinics and felt their patients were satisfied as well. But perhaps most importantly for those of us who have dedicated our careers to improving the lives of people living with chronic lung conditions, our patient satisfaction survey indicated that after taking part in our program, patients felt their symptoms were better controlled, their quality of life was improved, and they had the knowledge and tools to manage their disease. These same patients

also felt that their physicians cared for them even more by offering them access to our program. This kind of outcome is what keeps us going every day. ■

EDITOR'S NOTE

This article was adapted from a presentation by Janet Lee at the 2011 AARC Congress in Tampa, FL. ■

REFERENCES

1. Emergence of and Innovations in Disease Management, University of Southern California: Available at: www.youtube.com/watch?v=aEJoEmK9n_g&feature=mh_lolz&list=HL1318618127 Accessed Sept. 13, 2012
2. American Lung Association website. Trends in asthma morbidity and mortality: Indiana statistics. Available at: www.lung.org/finding-cures/our-research/trend-reports/asthma-trend-report.pdf Accessed Sept. 13, 2012
3. National Heart Lung and Blood Institute website. National Asthma Education and Prevention Program: Expert Panel Report 3 (EPR 3): guidelines for the diagnosis and management of asthma: full report 2007. Available at: www.nhlbi.nih.gov/guidelines/asthma Accessed May 1, 2012
4. Global Initiative for Chronic Obstructive Lung Disease (GOLD) website. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease — updated 2011. Available at: www.goldcopd.org/uploads/users/files/GOLD_AtAGlance_2011_Jan18.pdf Accessed Sept. 12, 2012



NEW ORLEANS

Join us for The 58th International Respiratory Convention & Exhibition

www.aarc.org/education/meetings/congress/

**Be a part of the premier meeting
in respiratory care!**

November 10-13, 2012

New Orleans, LA

(Saturday through Tuesday)

AARC CONGRESS 2012

AARC Times Classified Advertising Information & Requirements:

Classified Word Advertisements

AARC Members: \$50 for 50 words or less; each additional word, \$1. Free Internet placement. Non-members: \$60 for 50 words or less; each additional word, \$1.20. Listings are categorized by state. Following the state listings are United States/International, For Sale/For Rent, Miscellaneous, and Situations Wanted. All copy should be typed double-spaced. All ads will be set in 8-point type. To calculate the cost per advertisement, a "word" is considered to be one or more letters, numbers, or special characters with a space before and after.

Ads are featured on the AARC website for one month after publication. Ad may only be placed on the website with an insertion order for placement in an AARC publication. Ad is noncancelable after placement on the website. NOTE: *AARC Times* reserves the right to refuse any advertisement not directly relevant to respiratory care. *AARC Times* does not endorse any advertiser, its positions, practices, services, or products.

We reserve the right to make editorial changes for reasons of clarity and consistency. Every effort is taken to avoid mistakes, but *AARC Times* cannot be responsible for clerical or printing errors.

Deadline for Ad Placement/Cancellation Deadline for ad placement and written cancellations for the next available issue is November 19. Blind ads available. **For Recruitment Advertising Information, Contact Classified Advertisement** Andrea Conté • Alhambra Plaza • 725 N. Highway A1A, Suite C-106 • Jupiter, FL 33477 • (561) 745-6793 • Fax (561) 745-6795 • AARCAD@aol.com

Recruitment Display Advertisements

For Recruitment Display Ad Rates, go to www.aarc.org/marketplace/media_kit/recruitment_12.pdf, or contact Tim Goldsberry and Associates, Alhambra Plaza, 725 N. Highway A1A, Suite C-106, Jupiter, FL 33477, (561) 745-6793, Fax (561) 745-6795



Get more out of your healthcare career in Brooklyn's Park Slope.

If you're interested in exploring possibilities for career growth, consider New York Methodist Hospital. We've been a strong and stable presence in our community for more than 125 years, delivering service excellence in a friendly, positive and dynamic environment.

■ NEONATAL RESPIRATORY THERAPIST

Full Time, Part-Time & Per-Diem

Due to our continuous expansion, we have a Per Diem, 12-hour Shift position available. Must have very extensive NICU Critical Care experience.

Our Respiratory Therapy Department provides:

- Protocols/Guidelines directed ventilatory support/weaning
- HFOV, HFPV, HFOPV
- INO administration therapy
- High flow heliox therapy
- Intubations
- Point of care ABG analysis

You will provide:

- The ability to utilize state-of-the-art equipment and provide expert care to the patients

Newly upgraded pay scale (includes experience, specialty credentials and shift differentials) and an excellent compensation package. To learn more about why New York Methodist Hospital is the borough's most desirable hospital for employees as well as patients, or to apply, visit: www.nym.org/careers

Member
NewYork-Presbyterian Healthcare System
Affiliate: Weill Cornell Medical College

We are an equal opportunity employer

EXPLORE YOUR FUTURE ► WWW.NYM.ORG/CAREERS

VALENCIA COLLEGE

Human Resources (407)582-8033

Seeking a leader to serve as **Professor, Cardiovascular Technology**. Valencia College serves Central Florida, enrolling more than 60,000 credit students. Our focus is improving student success through engaging learning. Come; Join-Us where learning makes a difference!!

Description

Employed to teach in discipline or discipline areas in which he/she has specific training and/or competence. Serves as professor and program chair for the Cardiovascular Technology Program. As such, is expected to plan, organize, and teach in a manner to promote and direct successful student learning in keeping with the College's learning-centered values and goals.

Required: Bachelor's degree in a related health sciences field from a regionally accredited institution. A minimum of two years clinical experience in the cardiovascular field.

Registry eligible in at least one of the cardiovascular specialties administered by Cardiovascular Credentialing International.

Required: Valencia College employment application.

To complete the application, further knowledge, skills & additional pertinent information, visit <https://jobs.valenciacollege.edu>.



CLINICAL PROJECT MANAGER (RESPIRATORY)
nSpire Health, Inc.
Longmont, CO

nSpire Health located in Longmont, CO is seeking a Clinical Project Manager (Respiratory). The Clinical Project Manager is required to implement and manage domestic and global clinical trials, and deliver work that conforms to the Sponsor's clinical protocol, time requirements and cost constraints. Ideal candidates must be a Registered Respiratory Therapist (RRT) with proven experience in respiratory clinical trials either at a major medical institution or in a pharmaceutical/biotech company.

nSpire Health offers an excellent benefits package, including PTO, Health/Dental/Life Insurance, 401k with employer matching contributions, Section 125 Cafeteria Plan, and Health Saving Account.

Qualified candidates email resume to hr@nspirehealth.com

nSpire Health is proud to be an Equal Opportunity Employer
EOE/M/F/D/V



A Salute to our 2012 Corporate Partners

Since 1947, the AARC has been leading the effort to advance the respiratory care profession and promote quality respiratory health care. Working with our 50 state organizations, we have successfully advocated for the profession at the federal, state and local level.

The link between the respiratory profession and manufacturers is clear. If respiratory practice expands, so too does the economy for our industry partners.

As health care budgets shrink and patient care becomes increasingly complex, our mutual challenges become greater. The synergy of the corporate partner concept is an effective way to address those needs utilizing our combined skills and resources.





Calendar of Events

AARC & State Society Programs

October 21–27

Respiratory Care Week

Contact AARC, (972) 243-2272, www.aarc.org

October 24

Lung Health Day

Contact AARC, (972) 243-2272, www.aarc.org

October 24–26

Atlantic City, NJ

New Jersey Society for Respiratory Care
Annual Shore Conference

Contact Michele DaSilva at education@njsrc.org
or www.njsrc.org

October 25

Newark, DE

Delaware Society for Respiratory Care's Annual
Trends in Respiratory Care Conference

Contact www.delawarelung.org or Laurene Eckbold at
Leckbold@christianacare.org,

November 9–13

New Orleans, LA

AARC Congress 2012, Mechanical Ventilation
2012 (pre-course), Patient Safety Starts with You!
(pre-course)

Contact AARC, (972) 243-2272,
www.aarc.org/education/meetings

December 12

AARC Live Webcast

How Quality Care Impacts Payment —
What You Need To Know

Contact AARC, (972) 243-2272,
www.aarc.org/education/webcast_central

Submissions for the next available issue are due November 19.

For information on submitting calendar events, contact: Beth Binkley, AARC Times, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706 (972) 243-2272 Fax (972) 484-2720 Email binkley@aarc.org



Advertiser Index

Company Name	Pg #
Breathe Technologies, Inc (877) 698-1325 www.BreatheNIOV.com Island 1225	5
Covidien www.covidien.com Booth 201	15
Discovery Labs www.surfaxin.com Booth 908-910	7, 8
Dräger Medical (800) 437-2437 www.draeger.com/respiratorycare Island 1000	20
Fisher & Paykel www.fphcare.com	C2
Masimo (800) 257-3810 www.masimo.com Booth 801	C4
Monaghan Medical (800) 833-9653 www.monaghanmed.com Island 111	45
New York Methodist Hospital www.nym.org/careers	86
nSpire Health hr@nspirehealth.com Booth 1316	86
Oridion www.oridion.com Booth 201	3
Philips Respironics www.philips.com/V60 Island 401	37
Teleflex (866) 246-6990 www.gibeck-humidflo.com Island 1122	C3
Valencia College (407) 582-8033 https://jobs.valenciacollege.edu	86

To advertise, contact: Tim Goldsbury, Advertising Sales, Alhambra Plaza, 725 N. Highway A1A, Suite C -106, Jupiter, FL 33477, (561) 745-6793, Fax (561) 745-6795, goldsbury@aarc.org. Or contact Beth Binkley, Advertising Assistant, Daedalus Enterprises, Inc., 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706, (972) 243-2272, Fax (972) 484-2720, binkley@aarc.org



THE 72-HOUR SHIFT

3 days of uninterrupted mechanical ventilation

Studies have shown that minimizing circuit breaks reduces VAP.^{1,2} This integrated kit reduces the frequency of ventilator circuit breaks so all components, including the HME, can remain in-line during the first 3 days of mechanical ventilation, maintaining PEEP and maximizing patient outcomes.



Time to protect

72
HOUR

GIBECK® Humid-Flo®
INTEGRATED KIT

gibeck-humidflo.com | 866-246-6990

Visit AARC island 1122 in New Orleans

References: 1. Han J, Liu Y. Effect of ventilator circuit changes on ventilator-associated pneumonia: a systematic review and meta-analysis. *Respiratory Care*. 2010;55:467-474. 2. Coffin S MD, MPH, Klompas M MD, Classen D MD, et al. Strategies to Prevent Ventilator-Associated Pneumonia in Acute Care Hospitals. *Infect Control Hosp Epidemiol*. 2008;29:S31-S40.

Gibeck, Humid-Flo and Teleflex are registered trademarks of Teleflex Incorporated or its affiliates.
©2011 Teleflex Incorporated. All rights reserved. Lit. No. 2011-0462 v1.

Teleflex®

Acoustic Respiration Rate

Accurate > Easy to Use > Patient-Tolerant



Introducing rainbow Acoustic Monitoring™

Masimo rainbow® Acoustic Monitoring noninvasively and continuously measures respiration rate (RRa™) using an adhesive acoustic sensor. After the sensor is easily and comfortably applied to the patient's neck, RRa helps clinicians continually assess the patient's respiratory rate.



www.masimo.com

1-800-257-3810

© 2011 Masimo Corporation. All rights reserved.



Visit AARC booth 801 in New Orleans