

**February 2015**

**Asthma in the News**

**Asthma Inhalers, Epinephrine Autoinjectors Often Misused**

**By Beth Skwarecki (Medscape)**

Only 7% of inhaler users and 16% of patients with epinephrine autoinjectors were able to demonstrate correct use of their device in a recent study.

Using the autoinjector, "most patients made multiple mistakes and would not have benefited from self-administration of the potentially life-saving treatment if the need arose," Rana Bonds, MD, and colleagues from the University of Texas Medical Branch in Galveston write in an article published in the January 2015 issue of the *Annals of Allergy, Asthma, and Immunology*, adding that most mistakes made by inhaler users would have resulted in diminished doses.

Dr. Bonds and colleagues recruited patients, and parents of minor patients, from multiple clinic sites of an allergy and immunology practice. The researchers asked participants to demonstrate how they use their device and compared their use with the checklist given by the injector manufacturer or, for inhalers, a published standard procedure.

Among the 102 patients with epinephrine autoinjectors, 84% made at least one mistake executing the five-step procedure, and of those, 56% missed three or more steps. The most common

mistake was not holding the injector in place for at least 10 seconds after triggering. Other common mistakes were not placing the right end of the device on the thigh and not pushing hard enough to trigger the injection.

Participants with previous medical training, including nursing school or medical school, were more likely to use the device correctly ( $P = .03$ ). Correct use was significantly more common in patients who were white ( $P = .05$ ), male ( $P = .001$ ), or younger than 40 years. Factors that did not correlate with correct use included education level, living with a family member with the same device, or prior use of the device.

Of the 44 participants using metered-dose inhalers with spacers, 93% made at least one mistake in the 11-step procedure, and of those, 63% missed three or more steps. The most common error was not fully exhaling before using the device. Other common errors were not realizing that a horn-like sound meant the inhalation was unsuccessful and not shaking the inhaler before a second puff. The authors did not find any factors correlated with correct use, citing the small size of this group.

"Repeated verbal instruction and, perhaps even more effective, repeated visual education, including demonstration using trainer devices, are highly recommended. Novel methods of

providing this repetitive training for patients are needed," they write.

Ann Allergy Asthma Immunol. 2015;114:74-76. (Full text)

## **Welcome to our Newly Elected New and Returning Board Members!**

### **Kimberly Byrne, RN, BSN, CPN, AE-C**

Kimberly Byrne has been the Pediatric Asthma Educator and Co-lead for the Pediatric Asthma Strategic Initiative for Banner Health for the past three years. She received her Bachelor of Science in Nursing from Grand Canyon University. She is currently working towards her doctorate degree as a Pediatric Nurse Practitioner at Arizona State University. Kimberly obtained her asthma educator certification in 2011.

Her honors include a nomination for Distinguished Nurse of the Year from the March of Dimes, and the Paul L. Singer Award for her community service. She also received the Employee Engagement Award from Get Well Network for her assistance with the creation of an interactive asthma care plan. Kimberly created the Banner Children's Pediatric Asthma Support Group in 2011. Support group members and their families meet quarterly with certified asthma educators and participate in fun learning experiences about how to control asthma.

Kimberly also created a new asthma camp program called Camp Soaring Eagle. For this camp, she is responsible for recruiting medical staff volunteers, serving as lead medical staff, providing asthma education to campers, and assuring RN and RT staff follow safety/medical protocols. Kimberly especially enjoys serving as the Arizona Region Director for Asthma Athletics, a non-profit which encourages children with asthma to participate in sports (including swimming lessons) while their parents receive asthma education. Kimberly is currently serving on the board of the Arizona Asthma Coalition. Her passion for asthma education comes from her daughter who was diagnosed with asthma at the age of 2 years.

## **Timothy R. Hudd BS, PharmD, RPh, AE-C**

Dr. Hudd earned his Bachelor of Science (BS) in Pharmacy and Doctor of Pharmacy degrees from the Massachusetts College of Pharmacy and Health Sciences (MCPHS) in Boston, MA. He is an Associate Professor of Pharmacy Practice at MCPHS University and has been on the faculty for the past 11 years. Tim currently manages an ambulatory care rotation at Greater Lawrence Family Health Center (GLFHC) in Lawrence, MA where he serves as a clinical faculty preceptor for advanced pharmacy students and pharmacist residents.

In 2014, Tim was one of 3 authors presenting a poster on the impact of pharmacists as Certified Asthma Educators at the APhA spring meeting. He is actively involved in researching how the AE-C credential is being utilized by pharmacists and co-wrote an article for the NAECB newsletter, "Profile of an AE-C Pharmacist: A Vital Member of the Healthcare Team."

He has participated in asthma awareness/screening events for inner city children and visits a local school-based health center to improve asthma management among teenage students.

In 2006, he was named "Pharmacy Practice Teacher of the Year" for the School of Pharmacy -

Boston and was awarded the "Pharmacy Practice Faculty Preceptor of the Year" in 2011. Tim presents on pulmonary related topics for several graduate and post-graduate programs including the Doctor of Pharmacy program and Post-BS Pharm.D. program at MCPHS University. He also provides educational sessions for medical residents at the Greater Lawrence Family Health Center in Lawrence, MA.

Tim is nationally certified as an Asthma Educator (AE-C), and currently serves as Vice-Chair on the NAECB Board of Directors. In addition, he has been actively involved with several NAECB committees including: the Examination (Co-Chair), Recertification, Marketing & Public Relations and Scholarship.

Tim is also a member of the Massachusetts Asthma Action Partnership (MAAP) and currently serves on the Massachusetts Pharmacist's Association (MPhA) Board of Directors as Chairman of the Board. He enthusiastically represents the profession of pharmacy and is constantly working to increase awareness of the AE-C credential.

## **Carolyn Martin, RPFT, AE-C**

I am Carolyn M. Martin (Carol), a Community Health Educator, Registered Pulmonary Function Technologist, and Certified Asthma Educator, and am honored to serve as a current member of the NAECB Board of Directors. I was appointed to the NAECB in 2012 and currently serve on the Admissions and Research committees. I bring over 30 years of healthcare and education experience to the NAECB, and hope to continue to serve on the Board as we promote excellence in asthma education through our credentialing process.

In my professional work as the Director of Health Promotions for the American Lung Association in Houston, Texas, I have worked to develop strategic partnerships with local, regional, state, and national health education and public health networks. My primary role as the Texas state manager for the "Enhancing Asthma Care Project" involves working with primary care providers and practices to teach NHLBI asthma guidelines to professionals, and increasing asthma awareness through community-based education programs. Funded by Health Care Service Corporation/BCBS, the goal of this three-year multi-state initiative is to improve and enhance the level of professional education, and improve asthma outcomes and quality of life for patients, their families, and their communities.

My professional networks include the Association of Asthma Educators, American Association of

Respiratory Care, National Board for Respiratory Care, Texas Society for Respiratory Care, Society for Public Health Education, the Women's Fund for Health Education and Research, and the Asthma Community Network.

Another strategic partnership includes my work with the Baylor College of Medicine PCORI project, "The Houston Home-Based Integrated Intervention Targeting Better Asthma Control (HITT-BAC) in African Americans." As a member of the Advisory Board/Stakeholder Committee, I work directly with this community-based participatory research project to study the effectiveness of home-based environmental interventions to improve asthma control and quality of life among African-American adults in the greater Houston area.

Needless to say, I am a passionate advocate for lung health. I hope to continue to improve lives through asthma awareness and community health education, as I continue serving and promoting our profession with my fellow Board members on the National Asthma Educator Certification Board.

## **Maureen O'Brien, BS, MPH, PA-C**

In 2010, I worked as an epidemiologist and evaluation consultant with the Michigan Department of Community Health (MDCH) serving the Asthma Prevention & Control Program (APCP). Because my work was funded by the Centers for Disease Control and Prevention (CDC), I had the opportunity to compare the local asthma initiatives with the work that was being done across the country. The APCP of Michigan was recognized in 2012 with the U.S. Environmental Protection Agency's (EPA) National Environmental Leadership Award in Asthma Management at the American College of Chest Physicians (ACCP) conference.

During this time, I assisted on a project that tried to better incorporate national asthma guidelines into primary care practice. I also worked on the evaluation of the statewide implementation of the Managing Asthma Through Case Management in Homes (MATCH) project, a program originally designed in West Michigan, which received reimbursement for home visits conducted by Certified Asthma Educators. I learned a lot from the asthma leaders in Michigan, and became passionate about how I could become a bridge for the AE-C's and the clinicians who were coordinating asthma patient care.

With a bachelor's degree in science and technology, a specialization in international development and a master's in public health from the University of Michigan, I still wanted more expertise to

help tackle the disparities in the U.S. health system. Clear on my intentions, I completed my physician assistant studies degree, and have practiced family medicine in one of the most severely affected communities ever since...Miami, Florida.

As a clinician and volunteer with the South Florida Asthma Consortium, I recognize that often the triggers of asthma don't get addressed in homes or in workplaces. My work with AE-Cs taught me that if the clinician doesn't refer a patient for follow up with someone who can be present in these environments, there is a missed opportunity for real intervention.

I have always wanted to do a combination of clinical care and public health work, and I'm so grateful for the opportunity to do so now.

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## **NAECB Newsletter Editor:**

**Karen Meyerson, MSN, APRN, NP-C, AE-C**

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