Program Spotlight: Loma Linda University

2014 – Forty+ Years of Respiratory Care Education at the Bachelors Degree Level (and now beyond)

By Charles B. Spearman, MSEd, RCP, RRT, FAARC
Assistant Professor, Department of Respiratory Care

Overview

Loma Linda (Spanish meaning “Hill Beautiful”) University is located in Southern California on the foothills of the San Bernardino Mountains. It first opened in 1906 as the “Loma Linda College of Evangelists” for the purpose of training physicians and nurses for the Seventh-Day Adventist Church’s worldwide outreach and newly established sanitarium. On December 9, 1909 it received a charter from the State of California to operate with the new name as the “College of Medical Evangelists.” In 1953 the first class of The School of Dentistry opened and on July 1, 1961 the College of Medical Evangelists officially became “Loma Linda University.” In 1966 the “School of Health Related Professions” began and was renamed the “School of Allied Health Professions” in 1971. That same year the Department of Respiratory Therapy (now called the Department of Cardiopulmonary Sciences) was established.

Respiratory Care Programs

Loma Linda University (LLU) started the Associate in Science (AS) Degree Program in Respiratory Therapy in the fall of 1971. The first class with seven students, graduated in 1972. Shortly after, a Bachelor of Science degree in Respiratory Therapy was started to provide credentialed Respiratory Therapists with an AS degree or equivalent to fill advanced positions in management, education and
research related to respiratory care. This 2 + 2 model at LLU was described in the November-December 1972 issue of the journal Respiratory Care in a special education section.

In September of 2000, our program notified CoARC that increasing demands by health care facilities to produce better educated respiratory therapists with multitasking skills, and upon recommendation by our Advisory Committee, our program took a proactive role, transitioning from our AS to an advanced level, Bachelor of Science Degree as the first professional entry degree. (Our original BS degree for practitioners continues as a separate program.)

In May of 2002, our program requested CoARC approval and was granted accreditation of our Respiratory Care "Certificate with Associate Degree Equivalency" for students in our baccalaureate degree program and for International Students graduating with a bachelor’s degree in respiratory care, who upon completion the Certificate Program, would become eligible to apply for Advanced Practitioner credentialing examinations through the National Board for Respiratory Care and in compliance with the CoARC 2001 policy guideline. Our first graduating class with the advanced level, Bachelor of Science Degree in Respiratory Care occurred in June of 2002.

**Loma Linda University's International Programs in Respiratory Care Education**

In 1987, LLU received a request by the Riyadh Armed Forces Hospital in Saudi Arabia to open a satellite campus offering our Associate Degree in Respiratory Therapy. It officially opened in 1987 after many months of preparation and planning, as well as, accreditation approval. The program was designed to take three years to complete, with the first year primarily to include English as a second language and basic sciences. The first class graduated in 1990 in Riyadh, continuing through the Class of 2001. From 1987 to 2001 LLU graduated 65 students in Saudi Arabia, with 95% earning the RRT credential and all earning the CRTT (now CRT) credential.

In 2005, LLU once again received a request to open a satellite campus in Riyadh, Saudi Arabia, offering our baccalaureate degree. Dr. Richard Nelson, MD, RCP, RRT was chosen to oversee our new satellite campus, receiving CoARC approval that November. From 2006 to 2013, LLU graduated students from our Saudi satellite program.

Our LLU Bachelor of Science Degree Respiratory Care programs and our new Master of Science Respiratory Care Program continue to serve our "Communities of Interest" by providing competent, capable, well-educated Respiratory Care Practitioners.

**Bachelor of Science in Respiratory Care – First Professional Entry Degree Program**

The American Association for Respiratory Care (AARC) recently completed a series of three conferences to determine new roles and responsibilities of Respiratory Therapists in the years 2015 and beyond. The conferences identified "dramatic change" in the healthcare system to improve health while decreasing costs, application of evidence-based care in prevention and management of disease, required competencies for safe and effective delivery of care, and the need for transition to a baccalaureate degree as a minimum entry level for respiratory care practice.
Loma Linda University took a proactive role, transitioning from an Associate Degree to a Baccalaureate Degree in Respiratory Care in the year 2000. It is our quest to provide more knowledgeable and capable Respiratory Care Practitioners to meet future demands made of them in the health care system. They are effective communicators, compassionate caregivers; provide leadership roles in patient education, wellness intervention, and development of respiratory care protocols and plans. Students complete two academic years of prerequisites at a regionally accredited college or university prior to entering our program as juniors. The two full time, upper division years of professional course work provides graduates with the education and clinical experience to meet respiratory care roles and responsibilities for 2015 and beyond. For 40+ years a BS Degree education has been offered for the practicing Respiratory Therapist.

**Post-Professional Bachelors of Science Degree in Respiratory Care**

Loma Linda University offers a second Bachelor of Science degree curriculum in respiratory care degree for students who have an Associate in Science degree in respiratory care from a CoARC-accredited respiratory care program. As mentioned above, following the inception of the associate’s degree program in 1971, Loma Linda University became acutely aware of the need for a pathway towards a bachelors degree in respiratory care to meet the rapidly changing field of respiratory care and provide leaders in the profession. In 1972 the department began the bachelor’s degree program to address the need for bachelor’s level professionals.

Advances in respiratory medicine, technology, and changes in health care have created a need for better educated respiratory care practitioners with diverse abilities. Job analysis research by the National Board for Respiratory Care reveals that employers now expect higher skill levels from respiratory education program graduates.

The two-year, upper division curriculum leading to the Bachelor of Science degree includes a sequence of professional course work intended to prepare respiratory care practitioners for leadership positions in education, management, or advanced clinical practice. The program seeks to graduate individuals with advanced knowledge and skills in the respiratory care profession including assessment, therapeutic interventions, and management of patients with cardiopulmonary related disorders and who uphold the standards of the mission and goals of the School of Allied Health Professions and Loma Linda University.

The one-year full-time professional portion of this program combines classroom learning with advanced specialty clinical experiences to achieve this goal. This degree program is tailored for the working professional. Classes meet one day a week on the LLU campus with additional supported online coursework.

*This June the department celebrates 40 years since the first therapists graduated from LLU with a BS degree in Respiratory Therapy!*
The Masters of Science in Respiratory Care Degree: A New Program for Advancing Respiratory Therapists

The new Masters of Science in Respiratory Care (MSRC) program provides respiratory therapists, who have a bachelor’s degree and the Registered Respiratory Therapist credential, further access to advanced education in respiratory care. This new program started in the fall of 2013. The Masters of Respiratory Care Program provides an avenue for continuing personal and professional development in the field of respiratory care and cardiopulmonary sciences. The Program is designed to produce competent, self-directed advanced respiratory care practitioners who will assume leadership roles in the profession at the level of management, education, and research.

The faculty believes that learning is a lifelong process that is independent and self-initiated. The learning process includes faculty-student interaction in setting goals, selecting and evaluating learning experiences, and in assessing instructional methods and student progress. Learning experiences are planned to achieve application, sequence and continuity of knowledge, skills and attitudes defined by the program’s educational objectives.

The Masters of Respiratory Care Program is conducted using the philosophy of education based on two primary rationales: 1) the understanding that teaching is a cooperative art, and 2) the recognition that genuine learning is a development of the mind, not a formation of memories, and as an acquisition of knowledge and understanding, not an adoption of indoctrinated opinions. A cooperative art is one in which productive activity is principal and sole efficient cause of results achieved.

Learning occurs through discovery. Instruction that makes impressions on the memory but is not accompanied by understanding, discovery, and implementation is not genuine teaching but indoctrination. Genuine teaching, in sharp distinction from indoctrination, consists in activities on the part of faculty that cooperate with activities performed by the minds of students engaged in discovery. The understanding of ideas once acquired, has maximum durability. What is understood cannot be forgotten because it is a habit of the intellect, not something remembered.

The 4-quarter MSRC Program is designed to allow customizable options for interactions with the Program faculty both face-to-face and on-line. Students receive and develop didactic and clinical knowledge to advance their expertise in areas of education, research, leadership, clinical performance, industry, and management in the cardiopulmonary sciences from an evidence-based perspective. Courses combine discussion, projects, case studies, service activities and web-based learning. Included is participation in cardiopulmonary research projects that prepare the respiratory care professional to effectively develop and execute research questions and experimentation while learning to evaluate evidence-based published research to facilitate the bridge of translational research (bringing bench science to the bedside).

An optional advanced practice clinical practicum of two quarters is also included that requires the consent of the program director, department chair, and the medical director—along with the approval and acceptance of a physician preceptor agreement form on file. The online program students are required to schedule an online orientation one week prior to the beginning of their courses. All students must have a detailed discussion with the program director to begin to outline capstone projects.
Programs in Department of Cardiopulmonary Sciences for Respiratory Therapists

The Department of Cardiopulmonary Sciences, School of Allied Health Professions also has two other programs that respiratory therapists can apply for to access undergraduate degrees or other clinical skills: an Associate of Science/Certificate in Cardio Electrophysiology Technology and a Bachelor of Science in Emergency Medical Care.

**Associate of Science/Certificate in Cardio Electrophysiology Technology**

Electrophysiology Technology is an emerging healthcare science and therapy, and is a subspecialty of cardiology. It focuses on diagnosing and treating cardiac arrhythmias. The electrophysiology (EP) technologist may come from a variety of allied health professionals (RT, RN, CVT, EMT, RRT, and PA), assists an EP cardiologist during diagnostic and invasive RP / Rhythm Management procedures, including programmed electrical stimulation, sterile scrub technique, electro-anatomical 3D mapping, catheter ablation for cardiac arrhythmias, and device implantations for cardiac rhythm management, such as pacemakers and other advanced implant devices. Since 2011 the AS and Certificate EP programs have been part of the Department of Cardiopulmonary Sciences and the first four students started in the winter quarter of that year.

Associate of Science or Certificate students in the cardiac electrophysiology technology (CEPT) program learn EP theory principles, and are educated to utilize the latest advancement in EP equipment/technology and cardiac rhythm management. The professional portions of the AS and Certificate programs are each 12 months long and clinical sites can be selected at the student’s request. The AS degree is a face-to-face program with some online course work. The certificate program is primarily online with a few face-to-face visits to the Loma Linda campus. The CEPT program is tailored with the working professional in mind, and clinical hours can be accrued if the student is working in and established EP/Rhythm Management lab.

**Bachelor of Science in Emergency Medical Care**

A strong emergency medical services (EMS) system is built from a network of skilled and knowledgeable emergency medical care providers who understand the complexities of patient care and the environment in which they work. Most prehospital provider training and education programs prepare individuals to work on the front line as emergency medical technicians (EMT) or paramedics (EMT-P). The continuum of care that begins with frontline prehospital care providers in the field also extends into the hospital and includes emergency department technicians, nurses, and respiratory therapists. Loma Linda University recognizes that few opportunities exist for these individuals with a dedication and commitment to emergency medical care to pursue educational advancement. Graduates from this program had the following backgrounds when they entered: 37% paramedics, 30% respiratory therapists, 27% emergency medical technicians and 6% nurses.

The Emergency Medical Care Program at Loma Linda University offers a Bachelor of Science degree to expand the clinical knowledge of prehospital care providers and offer them an educational foundation from which to pursue leadership career roles in emergency services systems. At the EMC Program, our mission is "To provide education to develop, enhance, and advance opportunities of our students in the emergency professions."
This BS degree in Emergency Medical Care (EMC) Program usually requires four years of college to complete. The EMC program is known as a "2+2" program, meaning students complete their first two years of college coursework at a regionally accredited community college, four-year college, or university of their choosing. Students enter the EMC program during the fall term of their junior year and spend the next two years focusing on the upper division EMC core curriculum. In November 2013 the program celebrated its 20th anniversary.

**Certificate in Polysomnography**

The Certificate in Polysomnography Program is a new program that is designed for current respiratory care practitioners interested in specializing in sleep disorder studies. The program will start officially with its first cohort this coming fall quarter of 2014. Both didactic theory and clinical application are offered in the program. This will provide an avenue to gain knowledge, skills, and experience in the expanding discipline of polysomnography. Topics include sleep terminology, sleep structure and disorders, complete patient set-up and monitoring, data acquisition and scoring, and pharmacological and noninvasive interventions.

The program is offered on-campus and will include: lab/clinical rotations, online and classroom discussions, and a case study presentation. The program length is 3 quarters (fall, winter, and spring). Graduates of this program are eligible to sit for the Sleep Diagnostic Specialist (SDS) exam by the National Board of Respiratory Care (NBRC) and/or the RPSGT exam by the Board of Registered Polysomnography Technologists (BRPT) after completion of specific clinical experience and hours within the profession listed for each board provider organization.

More information about our programs in the Department of Cardiopulmonary Sciences, School of Allied Health Professions at Loma Linda University can be found on our website:

http://llu.edu/cardiopulmonarysciences

**Faculty**

David Lopez, EdD, RCP, RRT is an Associate Professor in the School of Allied Health Professions and Department Chair for: Cardiopulmonary Sciences, Physician Assistant Sciences, and the Life Support Education Center at Loma Linda University. His interests and background include, program and curriculum development, cognitive neuroscience, cardiopulmonary intensive care, perinatal and neonatal respiratory care, and translational research focused on respiratory care practice. His professional career began in 1981 as a graduate of the respiratory care program at Loma Linda University. David joined the cardiopulmonary department in 1985 as an instructor, following approximately two years with the Loma Linda University Overseas Heart Surgery Team in Saudi Arabia. This initial international experience led to many international endeavors expanding the reach of respiratory care to a global community.
David M. Stanton, MS, RPFT, RCP, RRT-NPS is Program Director, Bachelor of Science Degree Respiratory Care First Professional Entry Program and Assistant Professor. He teaches courses in cardiopulmonary anatomy & physiology, pharmacology for respiratory care, pulmonary function methodology, critical care, exercise physiology and pulmonary rehabilitation. He was firefighter for 7 years and earned an Associate in Science Degree in Fire Science in 1970. A veteran serving in the Army from 1971 – 1973, he trained as a combat medic but his Tour of Duty was in The U. S. Army Medical Research Institute of Infectious Diseases at Fort Detrick, Frederick, MD. He earned an Associate of Science Degree in Respiratory Therapy at Grossmont College, El Cajon, CA in 1975 and practiced respiratory care at Loma Linda University Medical Center from 1976 – 1985 in Pulmonary Intensive Care, Pediatric Intensive Care, Respiratory Care Air Medical Transport Team, Coronary Intensive Care, Emergency Department, and in the Continuing Education section of the Respiratory Care Department. Mr. Stanton earned a Bachelor of Science Degree in Biology at Loma Linda University in 1978. He obtained the RRT credential in 1980, the CPFT credential in 1989, the NPS credential in 1997 and the RPFT credential in 1998. After becoming a full time faculty member in the School of Allied Health Professions Mr. Stanton earned a Master’s of Science Degree in Physiology from Loma Linda University in 1991. Since 1985 he has been an educator for the Department of Cardiopulmonary Sciences of (formally the Department of Respiratory Therapy) holding the positions of Director of Clinical Education 1994 – 1996, Program Director A.S. Respiratory Therapy program from 1996 – 2000. In 2000 he took the position Program Director he holds today. His publications include chapter 10, “Near Drowning” in Wilkins RL, Dexter JR., Respiratory Disease: Principles of Patient Care, 1993 and 2nd Edition Chapter 12, “Near Drowning” Respiratory Disease: A Case Study Approach to Patient Care, 1998, F.A. Davis Company.

Katherine (Kate) M. Gattuso, MA, RCP, RRT is Director of Clinical Education, Bachelor of Science Degree Respiratory Care First Professional Entry Program and Assistant Professor. Ms Gattuso earned a BA degree in English in 1975 from Clarion State University, Clarion, PA. She received certificates in Respiratory Care in 1980 and 1992 from Pruett College, Concord, CA and Foothill College, Los Alamos Hills, CA respectively. She has worked as a staff and senior respiratory therapist, supervisor and clinical instructor in a variety of patient care areas including general care, critical care, home care and pulmonary rehabilitation at several institutions in California including Dominican Hospital (Santa Cruz, CA), Stanford University Hospital (San Mateo, CA) and Loma Linda University Medical Center/ Loma Linda University Children’s Hospital. Kate graduated with a Master of Arts degree, with honors, in biomedical and clinical ethics in 2010. She has taught courses in ethics, critical care, cardiopulmonary diseases and perinatal/pediatric respiratory care. She has twice been awarded Wil Alexander Whole Person Care Award (2006 & 2012) from Loma Linda University.
**Ehren Ngo, MS, EMT-P** is program director of the Bachelor of Science in Emergency Medical Care and an Assistant Professor. He holds appointments as assistant professor in both the School of Allied Health Professions and School of Public Health at Loma Linda University (LLU). Ehren began his career at LLU in 1999 after earning his Master of Science degree in Emergency Health Services from the University of Maryland. He previously completed a Bachelor of Science in Emergency Medical Care from LLU and paramedic certification from The George Washington University. Ehren is an experienced educator who enjoys teaching in the traditional classroom as well as online/distance learning settings, with an emphasis on creating an intentional learning environment. His areas of specialization include prehospital systems and medical care, disaster health issues (especially among the elderly), and the public health response to disasters. Ehren is active in the community, as a trainer for the City of Loma Linda’s Community Emergency Response Team (CERT) program, and as a team member on the San Gorgonio Search and Rescue Team where he has responded to a variety of disasters and emergencies since 1991.

**Traci Marin, Ph.D., RCP, RRT** is Director of the Graduate Program (MSRC) in Cardiopulmonary Sciences, School of Allied Health Professions, Loma Linda University. She also holds an Assistant Research Professorship in School of Medicine at LLU as well as Adjunct Research Professor in the School of Medicine at University of California, San Diego. She earned her PhD in biochemistry and molecular biological from University of California, Riverside and her MPH in epidemiology and biostatistics at LLU. She has diverse background that includes education, clinical practice, epidemiology, biostatistics, bioinformatics, proteomics, biochemistry, and molecular biology. Her experience with current open-source interactome programs, R programming, and network modeling is complimented by her ability to explore predicted networks at the biochemical and molecular level both in vitro and in vivo. She began her medical career at the clinical bedside and now performs research with a translational focus—translating biomedical science to the health care arena. As an educator in the health sciences, she employs project-based learning in the classroom to expose students to the world of large data bases as an applicable tool for the development new diagnostic modalities and therapeutics.

**Alan Alipoon, B.S., RCP, RRT** is Program Director, Cardiac Electrophysiology A.S. Degree and Certificate programs and Instructor in the Department of Cardiopulmonary Sciences. He has also taught courses for respiratory care in diagnostic techniques and cardiopulmonary diseases and physiology courses in the Department of Radiologic Technology at LLU. He graduated from LLU with an Associate in Science degree in respiratory Therapy in 1977. Shortly after graduation he pursued employment at the Loma Linda University Medical Center (LLUMC), Department of Respiratory Care.
He progressed from staff Respiratory Therapist to Supervisor over areas like the Respiratory Intensive Care Unit, Medical Intensive Care Unit, House Supervisor, and Clinical Manager over Education, Research and the Respiratory Care Residency Program. He continued his education, earning a Bachelor of Science degree in Biology in 2000 from California State University, San Bernardino. He earned his Registered Respiratory Therapist credential from the National Board for Respiratory Care in 1984 and has been a licensed Respiratory Care Practitioner through the State of California since its inception in 1985. In 2003 Alan collaborated with the Department of Cardiopulmonary Sciences at LLU and started the Respiratory Care Residency Program at LLUMC with goals of retention and recruitment for the department and the opportunity for candidates in the program to obtain advanced degrees. Today, graduates of the program work in Adult ICU, Pediatric ICU, Neonatal ICU and specialty areas of the department such as research, information systems, Post Anesthesia Recovery, and Sleep Disorders Center. Some have obtained BS degrees in Respiratory Care and in Emergency Medical Care. Alan’s service to the community includes an ongoing affiliation with the Inland Empire Chapter of the Nu-Voice Club (for laryngectomy patients), Team Leader for the Loma Linda University Medical Center/Children’s Hospital and Family Health Fairs since 2003, and more recently as Team Leader for the Community Health Fair at Patton State Hospital, San Bernardino. He has served as a member of the Respiratory Therapy Education Program Advisory Boards for four southern California AS degree in Respiratory Care and is currently Chair of the Advisory Board for our Bachelor of Science Degree Program. He serves as a member of the Program Committee for the California Society for Respiratory Care’s annual convention.

Abdullah Alismail, MS, RCP, RRT-NPS is the Program Director for the Certificate in Polysomnography program and assist clinical professor in the Department of Cardiopulmonary Sciences, School of Allied Health Professions, Loma Linda University. He earned his Bachelor of Science in Respiratory Care and Master of Science in Health Professions Education from Loma Linda University. He teaches several respiratory care courses for both the undergraduate (B.S) and the graduate (MS) Respiratory Care programs. Alismail also gives a yearly workshop lectures for the physician assistant program at LLU. He also participates in research with several departments and programs within LLU; such as the school of Medicine (LLUSM), and the School of Allied Health Professions (SAHP). His research won twice at the Alumni Post-Graduate Convention, School of Medicine- LLU under the clinical research track. Alismail also presented several research studies at the American thoracic Society, and Asian Pacific Society of Respirology (Hong-Kong). As an educator, his passion and interest is with the neuroscience and education theories, and inter-professional education learning models. He was also part of the Loma Linda state and national champion team of the 2011 Sputum Bowl that was held at the California Society of Respiratory Care (CSRC) and the American Association of Respiratory Care (AARC) the later being held in Tampa, FL.
Lennard Specht, MD is Medical Director, BS Respiratory Care and an Associate Professor in the Schools of Medicine and Allied Health Professions, Loma Linda University. Dr. Specht received his BS in Biochemistry 1979 and his MD in 1983 both from Loma Linda University. He is board certified in Internal Medicine Critical Care Medicine (Internal Medicine) and Pulmonary Disease and practices at the VA Loma Linda Healthcare System.

Takkin Lo, MD is Medical Director, Master of Science in Respiratory Care and Associate Professor, School of Medicine Loma Linda University. He earned a BS degree in Medical Technology in 1978, his MD in 1986 and a Master of Public Health in 1987, all from Loma Linda University. Dr. Lo is an attending physician at Loma Linda University Medical ICU providing consultation in pulmonary medicine, baromedicine and wound care. His recent research interest include studies involving hyperbaric therapy in critical care.

Charles B. Spearman, MSEd, RCP, RRT, FAARC is an Assistant Professor for the Respiratory Care programs, Department of Cardiopulmonary Sciences, School of Allied Health Professions, Loma Linda University. He has taught courses in respiratory therapy sciences (equipment and procedures) critical care, mechanical ventilation, cardiopulmonary diseases, pulmonary function, perinatal/pediatrics and instructional techniques and clinical education. Mr. Spearman started his respiratory care career at Tucson General Hospital in Tucson, AZ in January 1968 as a technician being trained on the job. He entered the Tucson Medical Center (TMC)/Pima Community College Respiratory Therapy program about one and a half years later while working at TMC’s Respiratory Therapy department on the evening shift and graduated with an Associate in Science in Respiratory Therapy in 1971. While in school he earned the CITT (now CRT) credential (1970) and after graduation earned the RRT credential in 1972 with registry number 1646. In 1973 he moved to California to work part time at Loma Linda University Medical Center and attend LLU’s Respiratory Therapy BS program, graduating in 1975. Returning to Tucson he became the education supervisor for the Respiratory Therapy department at TMC and taught in TMC’s Respiratory Therapy Program. In 1977 he returned to LLU and has worked continuously since then in the Loma Linda University Health Care system. Bud (as he is known) has served on the NBRC, has served eight years on the Respiratory Care Board of California currently as president, and is on the board of directors for CoBGRTE. He will retire as a full time faculty member at LLU on June 30, 2014.
Janelle M Guerrero, MS, RECP is an Assistant Professor, Cardiac Electrophysiology A.S. Degree and Certificate programs. She received her BS in Kinesiology (2002) and MS in Clinical Exercise Physiology (2005) at Indiana University. Guerrero is a veteran of the U.S. Army and served her country for 6 ½ years as a Medical Specialist. She is a recipient of The Army Achievement Medal (1999) and was granted a graduate internship in Spain which was sponsored by U.S. Navy Department of MWR (2003). In 2012 she received certification as a Cardiac Electrophysiology Technician from Loma Linda University and upon graduation, was hired as Assistant Professor for the LLU Cardiac EP Technician program. Currently, she is pursuing additional coursework in education and has been accepted to Harvard Macy Institute program for educators in health professions, (2016). Janelle is married to Victor Guerrero. They became first time parents in November 2011 when their daughter, Liana Monet was born. Together with Janelle’s mother, and their two Great Danes, the Guerrero Family enjoys life and all its opportunities, with tremendous influence from music, travel and dance.

Lindsey Simpson, BS, CCEMT-P is a veteran EMS provider and has worked actively in the profession for over 15 years. She continues to work as a paramedic on the ambulance and on an air-rescue helicopter in Ventura County, California. At Loma Linda University, Lindsey is one of the primary instructors in the Bachelor of Science in Emergency Medical Care where she shares her clinical and professional expertise in a numerous classes throughout the program. In addition to teaching, Lindsey is active in the administration and strategic development of the Emergency Medical Care program. Her areas of specialization include critical care paramedicine, medical simulation training, psychological and social aspects of patient care, and systems analysis. Lindsey joined the faculty at Loma Linda University following her graduation from the program in 2006, and is currently pursuing her Ph.D. in Human and Organizational Systems at Fielding University.

Khalid Al Awam, PhD, RRT is a visiting Assistant Professor for the Respiratory Care degree programs in Cardiopulmonary Sciences department where he has taught courses in patient assessment and cardiopulmonary diseases. Dr. Alawam graduated with an Associate of Science degree in Respiratory Therapy from the Loma Linda University Extended Campus in Riyadh, Saudi Arabia in 1991. He then went on to complete his BS degree in Respiratory Therapy from Loma Linda University in 1995. In 1999, he earned his MPH degree from the School of Public Health, Loma Linda University. Dr. Alawam was appointed as the Director of Clinical Education for the LLU extended campus as the first Saudi national to hold such a position. He joined College of Medicine, King Saud University in Riyadh, Saudi Arabia to complete a doctorate degree in Physiology. During this period he completed a one year research fellowship at the Department of Physiology, College of Medical
Sciences, McGill University, Montreal, Canada. During this period he completed a number of research projects in the area of newborn respiratory physiology that were published in peer reviewed journals. He was awarded this degree in June 2011. Dr. Alawam’s interest is in the area of RC Education as well as a vested interest in researching the physiological responses to hypoxia in the newborn, particularly the integration between behavioral and physiological responses.
Potential International Impact of Respiratory Care

James L. Hulse PhD, MPH, RRT
Chair, Department of Respiratory Care and Polysomnography

In 2011 I began preparing myself to travel to Osun State Nigeria to teach elements of neonatal resuscitation, mechanical ventilation and bronchopulmonary hygiene. My wife Linda and I wanted to visit my daughter Lisa Hulse RN, CCRN who was serving on a compound housing a private school of nursing, a hospital and a medical residency program. As I studied the document “Opportunities for Africa’s Newborns” I was introduced to the World Health Organization, Millennial Development Goal 4: to reduce by two thirds the under-five mortality rate of children. It is significant that the majority of deaths for African children occur during the first week of life. Furthermore the majority of infants dying in the first week die during the first day. For me, the implications of this fact in relation to the respiratory care profession are enormous. In my experience, respiratory therapists have a leadership role in the delivery room and the operating room when it comes to neonatal resuscitation. This means that respiratory therapists have critical knowledge and skill that can have a significant impact in resource-limited countries.

The ministries of health of developing counties have been incentivized by the World Health Organization to reduce under-five mortality rates. This means that countries are welcoming the efforts of humanitarian clinicians who want to help in this area. For me this was such exciting news because I would like my students to be able to make an important difference in an impoverished country. Here then is an area of respiratory therapy where our students can make important and meaningful contributions in another country.

The American Academy of Pediatrics and Laerdal are all part of a global alliance that invested over 20 million dollars to develop a program known as Helping Babies Breathe (HBB). The program is research based and draws from the best recommendations for neonatal resuscitation, the best recommendations in education, international development and the diffusion of innovations. Helping Babies Breathe offers well designed educational materials. These include a manikin (Baby Natalie) and culturally appropriate materials that include a learner workbook, a flip chart, objective standardized clinical evaluation, a cognitive examination, an implementation manual, and an impressive website. The Helping Babies Breathe organization is led by respected professors, researchers and
clinicians within the American Academy of Pediatrics. The intent is that Master Trainers work collaboratively with the Helping Babies Breathe organization to contact a country’s Ministry of Health for support and approval to scale up the delivery of Helping Babies Breathe throughout a specific country. Helping Babies Breathe also encourages the collection of outcomes data.

In May of 2013 my daughter Lisa and I flew to Aurora, Colorado, and completed a Master Trainer course in Helping Babies Breathe. This was a great experience. Since that time, I have integrated the HBB course into the new International Neonatology class that I teach so that every one of my students becomes an HBB instructor. In February, 2014, I traveled to Mugonaro Adventist Hospital in Rwanda as part of a team of nine. This team taught Helping Babies Breathe Provider and Master Trainer Courses to 30 Rwandans. My humanitarian missions to Africa have been supported in part by the Loma Linda University global infrastructure. In the future I would like to take a small group of students with me to teach Helping Babies Breathe.

Many of the hospitals and clinics in these resource poor countries have unreliable electricity and no central gas supplies. Much of what respiratory therapists do is dependent upon these elements. But even without reliable electricity and piped in gases and mechanical ventilators and arterial blood gas machines in the most remote towns and villages, respiratory therapists can contribute in important ways. Often babies are dying because the physicians, nurses, midwives and traditional birth attendants simply do not know what to do when a newborn is floppy and apnic. Components of the HBB curriculum include preparing for birth, having an emergency plan, stimulating and drying the apnic newborn, suction, and positive pressure ventilation. This is needed anywhere and everywhere that mothers are delivering babies. The ability to teach these initial skills is life saving. As Respiratory therapists, we are needed to teach these basic techniques. This is our public health duty. This is our international responsibility. Our students and new graduates will embrace this cause. They will save the lives of beautiful babies’ lives and prevent many parents from unnecessary grief. I am proud to acknowledge that Loma Linda University is my alma mater.
East Tennessee State University’s Allied Health Students
Take Part in the First Annual Inter-professional Exploration Day

By Kristen McHenry MS, RRT-ACCS

The World Health Organization describes inter-professional education (IPE) as being when students from at least two professions learn about, from, and with each other to facilitate effective collaboration among health care providers and improve patient health outcomes. IPE can lead to a more cooperative professional practice, focusing on teamwork and communication. In hopes of contributing to the professional development of our students and ensuring they provide the best possible care to their patients, the faculty from the Respiratory Therapy and Radiography baccalaureate programs at East Tennessee State University decided to bring the two cohorts together in an “inter-professional exploration” day. The students have a general idea of what each profession does, but nothing really tangible either could use in clinical practice.

The day began with a welcoming from the Dean of our college (Clinical and Rehabilitative Health Sciences), Dr. Don Samples. He was truly supportive and excited about our efforts to bring these two groups of allied health students together. The students were then divided into groups so that they could learn each other’s names and perform a few icebreaker type games. The groups consisted of 2 Respiratory students and 2-4 Radiography students. The IP groups were then given patient case scenarios that they would have to act out in front of the rest of the class. Each scenario had the potential to highlight teamwork and teaching among the group, but the students were given the freedom to present it however they wished.

The students used equipment that was available from each of the programs to perform their “skits”. The amount of creativity and collaboration was remarkable! There were times when we caught the students teaching each other a skill that had nothing to do with their scenario (Respiratory students were instructing Radiography students how to intubate) which was delightful from a faculty standpoint. At the end of the day, a group was chosen for their Outstanding Student Presentation. This group presented a case in which a CXR needed to be obtained on a very restless COPD patient who would not lay down for the procedure, all while an adamant physician is barking orders to the nurse, therapist, and technologist. The team worked together flawlessly to achieve the highest quality patient care. We could not have been prouder!
Inter-professional education is here to stay and we feel it necessary to incorporate activities like this into our students’ curriculum so that we can develop not only highly trained and competent health care providers, but also students who recognize that friendly interaction and a sense of unity among professionals will contribute greatly to their practice. The students seemed to take away a greater respect for another. One student said, “I now see that true quality patient care comes from respecting other health care professionals and realizing we have to work together to achieve a goal”. Big thanks to the events coordinators and contributors: Christy Raby, Shirley Cherry, and Stacey Deshulkarni (Radiography) and Kristen McHenry and Jim Tolbert (Respiratory). We hope to get these students back together again real soon. The results of this event far exceeded our expectations. At ETSU we are Dedicated to Education and Committed to Health Care!

CoARC, AARC and NBRC Silent on Policy 13
By Tom Barnes, EdD, RRT, FAARC – CoBGRTE President

Last March prior to the last CoARC meeting on 3/27-3/29/14, I received copies of letters sent to CoARC Commissioners from 133 deans, division directors, department chairs, program directors, faculty members, students from 12 universities, and also from RT department directors or educational coordinators from six medical centers. All of these letters outlined, in detail, the hardship that would be created if Policy 13 was not retained. http://www.cobgrte.org/images/SECTION_13.pdf

On behalf of CoBGRTE members, I sent a letter on April 17 to CoARC President Dr. Kathy Rye asking her to share with the CoBGRTE Board of Directors the outcome of CoARC consideration given to retaining Policy 13 at their last meeting. Two weeks have gone by with no response from Dr. Rye. The letter sent to President Rye was copied to CoARC Commissioners, CoBGRTE Board of Directors and the Dr. Tom Smalling, the CoARC Executive Director.

On April 11, the AARC Board of Directors met with representatives from CoARC, Dr. Rye and Dr. Smalling; and NBRC, President Carl Haas and NBRC CEO Gary Smith to discuss retaining Policy 13. A letter was sent on April 17 to AARC President George Gaebler, copied to the AARC Board of Directors, from CoBGRTE asking for information from the meeting on April 11 regarding retaining Policy 13. To date there has been no response from CoARC, AARC or the NBRC. It is time for AARC and CoARC to negotiate a compromise with the NBRC that will allow Policy 13 to be retained.
CoBGRTE Summer Seminar

When: Tuesday July 15 3:00 pm – 5:00 pm and Wednesday July 16 4:00 pm – 6:00 pm

Where: Marriott Beach Resort on Marco Island, Florida

Program: Four sessions and nine speakers

CEU Credits: AARC approved for four CRCE credits

Registration Fee (Four sessions): CoBGRTE Members $25, AARC Members $45, Others $60

Tuesday July 15 3:00 pm - 4:00 pm

ASRT to BSRT Transformations: “All changes, even the most longed for, have their melancholy; for what we leave behind us is a part of ourselves.” Anatole France

- Sue Davis, MAEd, RRT, Our Lady of the Lake College, Baton Rouge, LA
- Paul Eberle, PhD, RRT, Weber State University, Ogden UT
- Jennifer Gresham, EdD, RRT-NPS, Midwestern State University, Wichita Falls, TX

Tuesday July 15 4:00 pm - 5:00 pm

Creating BS Entry Level or MS Programs in Respiratory Care: “Progress is impossible without change, and those who cannot change their minds cannot change anything.” George Bernard Shaw

- Tom Barnes, EdD, RRT, FAARC Northeastern University, Boston, MA
- Jamy Chulak, MS, RRT, Valencia College, Orlando, FL
- Lisa Farach, MS, RRT, RN, Nova Southeastern University, Fort Lauderdale, FL

Wednesday July 16 4:00 pm - 5:00 pm

Going the Distance with Online Learning: “I am always ready to learn, although I do not always like being taught.” Winston Churchill

- Jamy Chulak, MS, RRT, Valencia College, Orlando, FL
- Lisa Farach, MS, RRT, RN, Nova Southeastern University, Fort Lauderdale, FL
- Jennifer Gresham, EdD, RRT-NPS, Midwestern State University, Wichita Falls, TX

Wednesday July 16 5:00 pm - 6:00 pm

Town Hall Meeting on Accreditation Options: “If there is no struggle, there is no progress.” Frederick Douglass

- Tom Barnes, EdD, RRT, FAARC Northeastern University, Boston
- Jon Nilstuen, PhD, RRT, FAARC The University of Texas Medical Branch, Galveston
- David Shelledy, PhD, RRT, FAARC Rush University, Chicago
- Linda Goodfellow, EdD, RRT, FAARC Georgia State University, Atlanta
How do You Teach Pharmacology?

Colleagues:

The financial cutback tsunami continues at our university. You may also feel our pain if you’re experiencing the same. The latest cutbacks are to adjunct professors who teach arts and sciences. In our case, we will be losing our pharmacology instructor and a replacement will not be forthcoming. I have been told that our faculty will have to teach the general pharmacology course if we want them to receive this content. The survey below is part of my homework to address this challenge with the Dean. I ask that you assist me and my faculty by answering these simple questions and e-mailing me your answers as soon as you receive this issue of the Chronicle. This survey addresses entry-level BS Programs only. I thank you in advance for your assistance. My e-mail is: sorbellj@upstate.edu

Joe Sorbello

Upstate Medical University Survey on Pharmacology

1. Does your curriculum contain a pharmacology course that is; a) general/comprehensive or, b) focused only on the cardiopulmonary system? If you have no formal course, briefly describe how this area is covered:

_________________________________________________________________________________

2. If it’s a general/comprehensive course, who teaches the course? a) arts & sciences faculty or, b) respiratory care faculty, or c) both/hybrid, or d) another health professional, e.g. pharmacist, Ph.D. pharmacologist, etc. Also: e) full-time or f) part-time and g) adjunct?

3. How many credit hours for the course? _____________

4. How is the course delivered? a) online, synchronous or b) online, asynchronous or c) face-to-face or d) hybrid (please describe briefly)_______________________________________________________________

5. Briefly describe the design of your entry-level BS Program (e.g. 2+2 BS) ________________________________________________________________

6. If you require pharmacology as a prerequisite, is it: a) general/comprehensive or, b) focused on the cardiopulmonary system only? How many credit hours do you require for the course? __________________

7. (Optional) Although optional, it would help tremendously to know the name of your institution: ________________________________________________

Return survey to: sorbellj@upstate.edu

Click on link for a MS Word file copy of the survey: http://www.cobgrte.org/newsandevents.html
We strive to provide textbooks, eBooks, and online courses and resources that improve learning outcomes and enhance student achievement by combining authoritative content written by respected authors with innovative, proven, and engaging technology applications that meet the diverse needs of today's instructors, students, and professionals.

STUDENT-FAVORITE AND BEST-SELLING TEXT

Respiratory Care
Principles and Practice
SECOND EDITION
Dean R. Hess, PhD, RRT, FAARC
Neil R. MacIntyre, MD, FAARC
Shelley C. Mishoe, PhD, RRT, FAARC
William F. Galvin, MEd, RRT, CPFT, AE-C, FAARC
Alexander B. Adams, MPH, RRT, FAARC

Respiratory Care: Principles and Practice, Second Edition is a truly authoritative text for respiratory care students who desire a complete and up-to-date exploration of the technical and professional aspects of respiratory care. With foundations in evidence-based practice, this essential resource reviews respiratory assessment, respiratory therapeutics, respiratory diseases, basic sciences, and their application to respiratory care, the respiratory care profession, and much more.

Learn more at: http://go.iblearning.com/Hess

Special value pricing and bundle options available, contact your Account Specialist for more information at http://go.iblearning.com/findarsr, or 1-800-832-0034.

FEATURES
• Correlated to the 2015 NBRC examination matrices for the CRT and RRT
• Clinical Practice Guidelines
• Key Points and Objectives
• Respiratory Recaps
• Normal Values, Equations, and Abbreviations
• Full-color Photos and Illustrations
• Case Studies

INSTRUCTOR RESOURCES
• Presentation Slides in PowerPoint format
• Image Bank
• Test Bank
• Instructor's Manual including Lecture Outlines, Case Studies, and Discussion Questions
• Transition Guide
• Sample Syllabus

PURCHASE OPTIONS
• Textbook
• eBook
• Online Workbook with student activities, automatic grading, and instructor tools

We welcome your feedback on our resources for respiratory care education, training, and certification.
Browse our resources at: www.iblearning.com/
healthprofessions/respiratory/

Interested in writing or reviewing?
Contact our Publisher, Cathy Esperti, at cesperti@iblearning.com

Source Code: CoBGRT4egr
CoBGRTE Institutional Members

Indiana Respiratory Therapy Consortium
Georgia State University
Weber State University
Boise State University
Bellarmine University
Rush University
Salisbury University
University of Toledo
The Ohio State University
State University of New York Upstate Medical University
Northeastern University
University of Texas Medical Branch - Galveston
Wheeling Jesuit University
Texas State University
University of South Alabama
Long Island University
University of North Carolina – Charlotte
Louisiana State University – New Orleans
Midwestern State University
Jefferson College of Health Sciences
Youngstown State University
Rutgers University
Nova Southeastern University
Loma Linda University
University of Arkansas for Medical Sciences
State University of New York at Stony Brook
University of Texas Health Science Center – San Antonio
University of Hartford
University of Cincinnati
CoBGRTE Institutional Members – Continued

University of Kansas Medical Center
College of Southern Nevada
Highline Community College
University of Akron
Oregon Institute of Technology
Georgia Regents University
St. Alexius Medical Center-University of Mary
Valencia College
Kettering College of Medical Arts
Shenandoah University
Middle Georgia State College
York College of Pennsylvania
University of Alabama at Birmingham
Respiratory Care Board of California
Texas Southern University
St. Catherine University
Armstrong Atlantic State University
Cincinnati Children’s Hospital Medical Center
East Tennessee State University
University of Virginia Medical Center

Reminder: CoBGRTE Institutional Members receive free postings for open faculty member positions or hospital RT department staff and leadership positions at: http://www.cobgrte.org/professionalpositions.html
Ten Reasons Why You Should Become a CoBGRTE Member

If you haven’t already decided to become a CoBGRTE member after visiting www.cobgrte.org, the following are 10 reasons why you should join the coalition.

1. Award scholarships to baccalaureate and graduate respiratory therapy students.
2. Assist in the development of ASRT to BSRT Bridge Programs.
3. Collectively work towards the day when all respiratory therapists enter the profession with a baccalaureate or graduate degree in respiratory care.
4. Support a national association, representing the 55 colleges/universities awarding baccalaureate and graduate degrees in respiratory care, to move forward the recommendations of the third 2015 conference.
5. Help start new baccalaureate and graduate RT programs thus leading to a higher quality of respiratory therapist entering the workforce.
6. Work to change the image of the RT profession from technical-vocational-associate degree education to professional education at the baccalaureate and graduate degree level.
7. Join colleagues to collectively develop standards for baccalaureate and graduate respiratory therapist education.
8. Develop public relations programs to make potential students aware of baccalaureate and graduate respiratory therapist programs.
9. Help to publicize, among department directors/managers, the differences between respiratory therapists with associate, baccalaureate and graduate degrees.
10. Help to support maintaining a roster and web site for all baccalaureate and graduate respiratory therapist programs.

Become a CoBGRTE member by completing the application on the Membership Page: http://www.cobgrte.org-membership.html

"Dedicated to Improving Respiratory Therapy Education"

www.cobgrte.org