

The Coalition Chronicle

Coalition for Baccalaureate and Graduate Respiratory Therapy Education

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The Hospital of the University of Pennsylvania Philadelphia, PA



Spotlight Article

Department of Respiratory Care Services

**Karsten J. Roberts, MSc, RRT, RRT-ACCS - Staff Therapist and
Margie Pierce, MSc, RRT, CPFT – Administrative Director**

About the Hospital of the University of Pennsylvania

The nation's first medical school was established at the University of Pennsylvania in 1765. More than 100 years later, in 1874, the Hospital of the University of Pennsylvania (HUP) was established as the nation's first teaching hospital. The mission and dedication to advancing

science, outstanding patient care, and the education of physicians and scientists has not changed in the 240 years since the institution's founding.

Over the years, Penn Medicine has made a number of important contributions. In the 1960s Penn scientists discovered the Philadelphia chromosome, a genetic blood cell malformation, which has led to greater understanding about chronic myeloid leukemia. There has been development of magnetic resonance imaging (MRI) and other imaging technologies. The first general vaccine against pneumonia, and personalized cellular therapy occurred at Penn. With core values founded on excellence, professionalism, and tradition, Penn Medicine and HUP strive to provide the best care for patients and lead medical advances well into the 21st Century.

Department of Respiratory Care

The Respiratory Care Department at HUP supports the mission of Penn Medicine by providing quality respiratory care to our community. We strive to provide care in a culturally competent environment so that the needs of all patients are effectively addressed thus achieving the highest level of quality care. The staff works together to create a supportive atmosphere that values our diversity as the building block to a productive, creative workplace.



The department employs 150 respiratory therapists who are supported by four equipment technicians. Three of the equipment techs are current respiratory therapy students. Respiratory therapists at HUP provide care for patients ranging in age from neonates to geriatrics. We have a Level III intensive care nursery (ICN), which supports the care of our youngest patients through an institutional partnership with the Children's Hospital of Philadelphia (CHOP). All therapists

working at HUP care for patients in adult acute care settings where therapists provide the care based on physician orders, including multiple therapist driven protocols. They interact daily during doctor's rounds to ensure appropriateness of ordered therapies. The scope of adult intensive care includes cardio-thoracic surgery (CTSICU; 32 beds), medical intensive care (MICU; 32 beds), surgical intensive care (SICU; 24 beds), and neuro-intensive care (NICU; 22



beds). Patient care at HUP is provided with a focus on patient and family education to promote knowledge and understanding of the disease process, medical therapy, and self-help. Additionally, our therapists mentor students from two universities (Gwynedd Mercy University and West Chester University) and Philadelphia Community College.

APEX Award

In 2017, the AARC inaugurated the APEX Recognition Award to acknowledge clinical excellence in respiratory care departments around the country. The Hospital of the University of Pennsylvania's Department of Respiratory Care was among four acute care hospitals to earn the designation for 2017 – 2018. Recently, the department was notified of our APEX designation for 2019 – 2020. This achievement included recognition of our staffs' 100% membership in the AARC.

Clinical Ladder

One way in which our therapists are encouraged to advance their professional career is through the clinical ladder. The ladder consists of four levels. The level 4 clinical practice leads are required to have a specialty credential. Responsibilities include participation on unit based clinical leadership committees and responsibility for quality and safety initiatives in their respective units.

Clinical Leads

Our department also employs clinical lead therapists who are imbedded with two different provider teams. The advanced lung disease team supports the care of Advance Medicine and pulmonary disease patients. Colleen Cain, RRT participates in physician rounds, provides expertise on disease management, and supports case management by assisting with home mechanical ventilation, facilitating communication between providers and home care companies.

Tarella Peterson, RRT works in a similar capacity with the post-lung transplant and thoracic surgery patient populations. Over the last two years, Tarella has worked to assure that lung transplant patients safely receive bronchoscopies on the floor and ensuring the appropriateness of clinical therapies. Along with nursing, speech language pathology, and providers, She participates in tracheostomy rounding to assure that tracheostomized patients are being managed and weaned appropriately. Tarella also helps assure ease of transition for post-lung transplant patients to outpatient pulmonary rehabilitation.

COPD Education

In September 2016 we started a COPD transitions pilot program. The program focuses on leveraging technology and education to help prevent patient readmissions. Through collaboration with the Penn Innovation Center, the program assists them with monitoring their disease. Clinicians are available to answer calls concerning worsening shortness of breath, cough, increase sputum production, and other symptoms. A computer application sends text messages to patients to check in on the patient after discharge. If a patient responds they are not feeling well, the RT is able to call and provide interventions. In addition, a respiratory therapist makes follow-up phone calls to support patients and ensure follow up appointments are scheduled. Patients are also seen during in home visits made by Penn Medicine nurses who work closely with the RT COPD educator.

Quality Improvement and Research

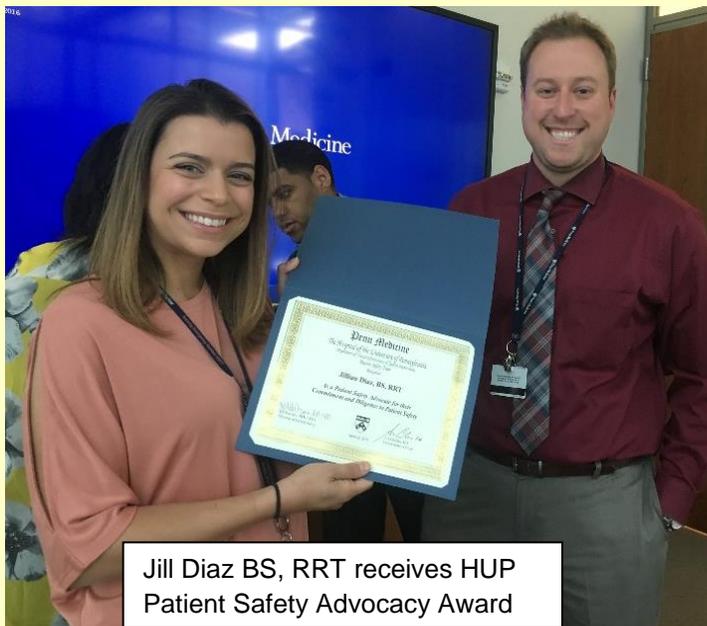
The department has participated in several quality improvement (QI) projects including recent abstract and article publications. One such project focused on preventing ICU readmissions for high risk patients. Respiratory therapists, nurses and providers standardized the

coordination of hand-offs between ICU and floor teams to improve communication regarding high risk patients. Readmission rates decreased as well as reintubation rates. Patient readiness for spontaneous breathing trial was the focus of another recent publication. Using an innovative computer application, patients are continuously monitored for spontaneous breathing trial (SBT) readiness. Data feeds a dashboard which is reviewed by the ICU team during rounds. RT's are notified of SBT readiness by text message. Duration of mechanical ventilation was reduced by 0.6 days. We are also focused on ventilator alarm data. In 2018, we analyzed ventilator data to discover how we could improve adherence to policy and how we can better respond to ventilator alarms. These QI projects were all published and presented at AARC Open Forum.

A 2018 multi-center study of post-operative bronchopulmonary hygiene showed improved patient outcomes and will be published soon in the Society of Critical Care Medicine Journal. Early in 2019, a case study completed in conjunction with the Department of Psychiatry was published in the journal Psychosomatics. Additionally, we have several staff who are currently working on research through the Pennsylvania Respiratory Research Collaborative.

Quality and Safety

Quality data is collected monthly and reported at various committees throughout the hospital. Action plans are developed for any issue that has an opportunity for improvement. The department monitors indicators that evaluate evidence-based techniques to reduce ventilator



Jill Diaz BS, RRT receives HUP Patient Safety Advocacy Award

acquired pneumonia such as head of bed elevation, cuff pressure monitoring, and hand washing. End-tidal CO₂ monitoring and patient barcode medication scanning rates are also monitored and reported monthly. The department uses the plan-do-check-act (PDCA) model for problem solving.

To support the quality and safety initiatives, several of our staff are Six Sigma Yellow belt certified through Penn Medicine. Quality and safety efforts are led by Steve Gudowski, BS, RRT, ASQ-CSSGB, Associate Director of Respiratory Care Quality and Safety.

Steve is Six Sigma Green belt trained and nationally certified through the American Society for Quality.

Professional Activities

The HUP Department of Respiratory Care Services participates in several professional organizations and professional development activities. Director of Respiratory Care Services, Margie Pierce, MSc, RRT, CPFT is the current president of the Pennsylvania Society for Respiratory Care (PSRC). Karsten Roberts, MSc, RRT, RRT-ACCS, is the 2019 Legislative Committee chair for the PSRC, and sits on the AARC membership committee, as well as the CoBGRTE social media committee and website committee. Our staff have presented at AARC Open Forum, AARC Congress, PSRC conferences, and participated in AARC PACT.

Our staff have several opportunities to develop themselves professionally through continuing education. Hospital benefits include eight thousand dollars per year for tuition reimbursement for staff working on baccalaureate or advanced degrees. Additionally, employees receive six hundred dollars per year for professional development to assist with earning continuing education credits. The department of respiratory care services has an active Journal Club, with employees participating in six or more AARC certified journal discussions each year. We also host monthly AARC Journal Cast watch parties.

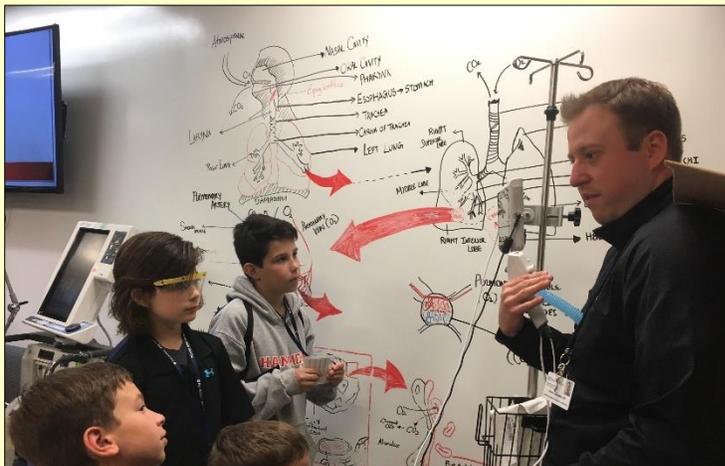
Recognition



Jennifer Loh BS, RRT receives
HUP Patient Advocacy Award

Employee recognition is achieved by monthly Employee of the Month (EOM) awards. At the end of the year, one EOM is chosen as employee of the Year. The employee receives a year of AARC membership and a department celebration. Staff are also recognized by RT leaders for monthly “Good Catch” awards. This recognition is for employees who have recognized and reported a safety concern. The department also hold several fun events. In the spring, we hold a Phillies opening day party with hot dogs, water ice, and soft pretzels. In the fall, we focus on Respiratory Care Week activities that includes games, food, and educational events.

Community Service



Take Your Child to Work Day with Steve Gudowski RRT demonstrating bronchoscopy

Our RT's are generous and community oriented. They provide meals to the Transplant House, Ronald McDonald House, education and flu prevention packages to our Better Breathers Club. They fundraise every year for the American Heart Association Heart Walk and the American Lung Association Lung Force. Every year during Respiratory Care Week, there is a give back activity. Last year we collected toiletries for a local Veteran's House.

Medical Director Barry Fuchs, M.D.

We are fortunate to have the support of an involved Medical Director, Dr. Barry Fuchs. Barry provides clinical support and leadership for all department initiatives. He answers his phone whenever we call!

Respiratory Care Leadership Team

Margie Pierce, MSc, RRT, CPFT – Administrative Director of Respiratory Care Services, Pulmonary Rehabilitation, and Pulmonary Diagnostics

Mike Frazer, BS, RRT, CPFT – Associate Director of Clinical Operations

Steve Gudowski, BS, RRT, ASQ-CSSGB – Associate Director of Quality and Safety

Ed Tollok, BS, RRT – Clinical Education Coordinator

Katie Young, MSc, RRT - Clinical Supervisor

Beryl Chambers, BS, RRT, RRT-ACCS - Clinical Supervisor

Robert Bayer, BS, RRT - Clinical Supervisor

Richard O'Connell, BS, RRT, RPFT – Supervisor of Pulmonary Rehabilitation and Pulmonary Diagnostics

Contact Information

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