didactic training, simulation training at the hospital's simulation center, and shadowing with the Phase I PACU nurses. The simulation component included a simulated hands-on review and practice of emergency scenarios that could occur in a Phase I PACU.

### Journey to Comprehensive Stroke Accreditation

*Emily O'Connell, BSN, RN, CRN, Larette Stephens, BSN, RN, CRN, Morton Plant Hospital, Clearwater, Florida*

The information presented demonstrates what our interventional radiology department, has learned thus far, transitioning from a Primary Stroke Center to a Comprehensive Stroke Center. This presentation includes recommendations to facilitate process improvements to achieve Comprehensive Stroke Accreditation. The information provided identifies communication struggles within our hospital. We present measurable victories when process improvements were implemented. Time is brain and our interventional radiology department wants to instill this value in the community that we serve.

### Interventional Radiology Percutaneous Liver Biopsy Pediatric Nursing Guidelines

*Amy Lohmann, MSN, RN, CPNP, Anna Evans, MSN, CPNP, CPHON, Mehvish Abbasi, MSN, CPNP, Ginny Than, MSN, CPNP, Children's Hospital Los Angeles, Los Angeles, California*

Although percutaneous needle liver biopsy (PNLB) is considered to be a safe procedure in adults, pediatric patients have a complication rate of up to 4% (Dezsőfi et al., 2015). Hemorrhage occurs 96% of the time during the first two hours post-procedure and infants less than 5kg are at increased risk due to low blood volume (Dezsőfi et al., 2015).
The interventional radiology (IR) team reviewed the literature to create and implement a PNLB protocol. IR nurse practitioners (NPs) review patient height, weight, age, hemoglobin, platelets, and coagulation panel prior to PNLB to evaluate individual risk of bleeding. IR registered nurses (RNs) confirm blood product availability and reliable IV access as needed. The post-operative nursing management includes post-anesthesia care unit (PACU) time of 4 hours for standard risk and 6 hours for high risk patients. Radiology PACU RNs obtain vital signs every 15 minutes for two hours, then every 30 minutes until discharge for all patients. Children remain supine and NPO for the first 2 hours post procedure and are monitored by RNs for hypotension and abdominal pain to rule out hemorrhage.
Approximately 200 patients had an IR PNLB from July 2017 until June 2018. For those patients who followed the protocol, there were no bleeding complications to pediatric PNLB in IR.
The creation and implementation of the IR PNLB protocol represents a novel and feasible interdisciplinary approach to patient care in radiology nursing.

### Management of Vascular Anomalies in Pediatric Interventional Radiology

*Ginny Than, MSN, CPNP, Anna Evans, MSN, CPNP, CPHON, Mehvish Abbasi, MSN, CPNP, Amy Lohmann, MSN, RN, CPNP, Children's Hospital of Los Angeles, Los Angeles, California*

Vascular anomalies can be managed in interventional radiology (IR) using image guided sclerotherapy. Sclerotherapy is the use of agents including ethanol, sodium tetradecyl sulfate (STS), doxycycline, and bleomycin to combat vascular anomalies including venous and lymphatic malformations (Albanese & Kondo, 2010).
Interventional radiologists use embolization and sclerotherapy to decrease painful symptoms, physical deformities, and to improve quality of life for pediatric patients with vascular, lymphatic, or bone anomalies. Radiology nurses and nurse practitioners (NPs) can facilitate the administration of sclerotherapy through patient safety education and protocols to effectively handle medications. In the radiology department at this institution RNs and NPs provided patient education regarding the uses, limitation, dosing, and safe usage of sclerosants to patients.
Overcoming barriers with pharmacy delivery and medication ordering, approximately 100 patients have received sclerotherapy during 2018 at this large pediatric academic center. All patients who received sclerotherapy in IR at this facility received patient safety education.
It is feasible for radiology nurses and radiology NPs in addition to interventional radiologists to educate patients on the medications used for the management of vascular anomalies.

### Outpatient's Journey Through Radiology In A Hospital Setting

*Donna Margiotta, BSN, RN, CRN, Lee Capponi, BSN, RN, CCRN, CRN, Plainview Hospital-Northwell Health, Plainview, New York*

We show high patient satisfaction scores and the delivery of quality care in the interventional radiology out-patient setting. From the initial phone call to schedule an interventional radiology procedure to the follow-up phone call post procedure, this step by step process is used to ensure a comprehensive visit in the out-patient interventional radiology department. High patient satisfaction scores reveal a successful team approach providing quality patient care. New patients as well as recurrent patients enjoy a family centered care approach for diagnostic, interventional and comfort care procedures.

### A Beginner's Guide to Implementing Capnography with Procedural Sedation

*Cathy Crosby, MS, RN, CNL, CRN, UR Medicine/Thompson Health, Canandaigua, New York*

November 2016 through June 2017, three Interventional Radiology (IR) cases involving procedural sedation required intervention by the Rapid Response Team (RRT) resulting in ICU admissions. All three patients developed respiratory compromise with decreasing O2 saturations. The use of supplemental oxygen can prevent desaturation during hypoventilation and can mask deteriorations in the patient's respiratory status (FU, Downs, Schweiger, Miguel, & Amp; Smith, 2004) This is the reason why oxygen desaturation is considered a late sign of respiratory compromise in hypoventilating patients.
In January 2016, the Association of Radiologic and Imaging Nursing (ARIN) released a Position Statement that endorsed the routine use of capnography on all patients who receive moderate sedation/analgesia during procedures in the imaging department
The department goal to reduce the number of procedural sedation adverse events related to respiratory compromise in IR by 50% was identified.
Capnography was implemented with IR patients receiving procedural sedation on February 12, 2018. Education included a multidisciplinary approach including review of airway management, an on-line power point presentation with a post-test, simulation during a lunch and learn, creation of learning tools and one on one nursing support. Following implementation, zero adverse events requiring the RRT have occurred from February 2018 through September 2018; this exceeded the goal.

### Say No To Vasovagal! Preventing vasovagal episodes post prostate fiiucial marker placement.

*Erika Armstrong, MSN, RN, CRN, Emory Winship Cancer Institute, Atlanta, Georgia*

During prostate marker procedures, a rectal probe is inserted to visualize the prostate and place the markers. Patients are place in the

lithotomy position for the procedure and post procedure were placed in a sitting position to recover. In a sample of 15 patients during the recovery period, 1 patient experienced projectile vomiting and 2 patients experienced a syncopal episode requiring further medical management. The 3 patients did not have any cardiac or syncopal history noted. Non pharmacological nursing interventions were researched and lying the patient supine for 30 minutes post procedure and performing orthostatic blood pressures after the recovery period was completed was chosen. Data collection of patients previously treated in prior years were sat immediately up post procedure versus patients who have been positioned supine post procedure is in ongoing collection. It is hypothesized, by implementing the following interventions shall decrease the amount of post procedure vasovagal complications. Limitations of the study include the sample size being dependent on patient volume. In the future, examining the length of time the probe is inserted should be collected as well.