

## **1. Lessons Learned in a Pandemic: Resiliency, Collaboration and Excellence**

Due to COVID-19, imaging professionals and practices are facing unprecedented challenges in how they learn, how they educate, and how they practice. Before the pandemic, burnout was considered wide spread among health professions. Now, Restauri and Sheridan (2010) predict that health care professionals will experience post-traumatic stress disorder following COVID-19, especially when combined with underlying burnout. The outcome could be both compounding and devastating for both the professional and the patient. The purpose of this presentation is to reflect upon the current pandemic: its challenges and its silver linings. If we understand the risks and vulnerabilities among students, educators, and professions, we can build resilience and better coping mechanisms. With self-resiliency, we may focus on other people and on patient care. It is important to identify the many positive and creative aspects resulting from COVID-19 disrupting our normal and safe routine. Within this time period, professionals have learned new and different ways to complete tasks, to communicate, and to collaborate. There has been an emergence of new leaders and new priorities. As we reflect on our experience, we seek to learn lessons to improve the future and to continue to motivate our growth personally, collaboratively, and as a profession.

## **2. Cervical, Thoracic and Lumbar Spine Review**

This presentation will discuss positioning of the cervical, thoracic and lumbar spine including relevant anatomy. A framework for organizing information relevant to these areas will be presented.

## **3. Evaluating Patient Dose: It's Kind of a Gray Area**

One of the more challenging aspects of radiologic physics is the concept of patient dose. Because of the different terminology and underlying meanings of "dose", those terms are often conflated in their use. The purpose of this talk will be to review these dose factors, in particular the concept of effective (whole body) dose and discuss how these terms relate to risk estimates based on scientific literature. Additionally, hospitals often mandate the documentation of fluoroscopic dose information in the patient record after procedures are completed. The context of the meaning and uncertainty of these values, and the importance to patient care will be discussed. Recently, the AAPM and ACR have released a position statement regarding the disuse of gonadal shielding. While organizations are continuing dialogue on this topic, the impact on patient dose by the use or disuse will be reviewed.

## **4. Patient Care and Education – ARRT Review**

In this course, participants will revisit all content related to the patient care section of the ARRT exam. Areas reviewed will include, but are not limited to, interpersonal communications, infection control, body mechanics, pharmacology, medical emergencies, and toxic and hazardous material. Other content specific to this lecture will include ethical and legal aspects of patient care, and physical assessment and monitoring.

## **5. A Photon Walks into a Bar....**

Radiography education starts with an introduction to atomic physics. The purpose of this lecture is to help the student understand the basic physics that are involved in the production of the x-ray photon and also the interactions that occur once the x-ray photon enters the human body. This entails a complete understanding of the atomic structure, including the nucleus which consists of protons and neutrons and also the electron cloud. Students must learn about the characteristics of the x-ray photon, the production of the x-ray photons by deceleration of electrons (Bremsstrahlung), and the alternative production of x-ray photons by way of the electronic transition of an excited atom (Characteristic radiation). Students must also learn about the various interactions that occur once the x-ray photon enters the body. These distinct interactions include the Photoelectric effect, Compton scatter, and Coherent scatter, all of which must be fully understood for the practice of radiography and for the protection of the radiographer when working around x-ray radiation.

## **6. Imaging the Digestive System: A Review**

Imaging the gastrointestinal tract is part of a staff radiographer's daily duties. Working in the fluoroscopy suite is a very demanding role. This presentation will review exams of the gastrointestinal system and its accessory organs to include the esophagus, stomach, small intestine, biliary tree/gallbladder, and the large intestine. Topics covered are anatomy and physiology, positioning, patient preparation, pathologies (including indications and contraindications) radiographic signs and image analysis. Some other interesting inclusions will be age-related considerations, body habitus and contrast media usage. The review will be useful to students as this content is included in the ARRT exam.

## **7. Want Success? Forget Passion and Follow These Eight Habits Instead**

Many students would describe the 'passion' that they have for radiography and how that passion has fueled their desire to pursue the radiological sciences. Many assume that following their passion would give them limitless motivation and thus make whatever they are pursuing a simple endeavor. However, following their passion is an oversimplification and following these eight habits instead (Purpose, Picking, Practice, Planning, Positioning, Peripheral, Perseverance and Professionalism) can lead to success and satisfaction in their career. Cultivating passion for the job takes hard work and planning. After describing why following your passion is bad advice, the presenter will detail the eight habits to develop instead. The lecture will conclude by emphasizing professionalism and the ARRT Code of Ethics.

## **8. An Overview of the JRCERT 2021 Standards**

The JRCERT implemented new Standards for Accredited Educational Programs that became effective on January 1, 2021. This session will provide an overview of the Standards and focus on areas related to program transparency, resources, academic practices, safety, and assessment.

## **9. Assessment: It Ain't for Sissies (Creating a Useful Assessment Plan)**

Assessment is a complex process with many pieces. All of these pieces must fit together to create a useful assessment plan. This presentation will discuss the purpose of assessment, beyond accreditation requirements. The components of an assessment plan will be discussed as well as benefits and pitfalls of assessment. When used effectively, assessment can help enhance student's learning, increase educators' confidence that we are putting our time and resources into activities that we value as an institution, and that we are allocating resources to areas that are producing the outcomes we value. Assessment also strengthens the ability to state that the graduates are well prepared to succeed in their future endeavors.

## **10. At Your Fingertips: Incorporating Apps into Your Classroom**

As more students expect and demand course content to be accessible on mobile devices, there is a greater need to use and create applications that meet and exceed these expectations. This session, designed for programs faculty, will review the key considerations for incorporating mobile applications in face-to-face and online learning environments. The presenters will highlight apps used to increase student engagement including Nearpos and Plipgrid. Additionally, Austin Community College faculty created a Lab Protocols App to support students in radiographic positioning. The presenters will share tips for creating individual apps and the lessons learned from the Lab Protocols project.

## **11. Virtual Simulation: Students Perceptions through the Lens of Activity Theory**

The purpose of this presentation is to discuss students' perceptions of their own self-efficacy and clinical skills (i.e. clinical preparedness) after using a virtual radiography simulation. Student who enter the clinical setting unprepared can produce sub-quality radiographic images, expose patients to unnecessary high amounts of radiation and decrease patient care. While no simulation or education can fully replace actual experience, students can benefit from practice in a safe and risk-free environment before performing exams on real patients. A brief literature review, data collection, results and conclusions will be presented.

## **12. Teaching in the Virtual Classroom**

In the age of a global pandemic, many institutions have been forced to reconsider ways to deliver content to students. Live, virtual classrooms where students meet in real time with an instructor face-to-face is one options for meeting this need. The LBCC DI program faculty have been teaching in virtual space for eight years and would like to share some of the tips and tricks learned over the years to help make transition to the virtual world easier.

### **13. Interprofessional Simulation Scenarios in Health Care**

In a clinical setting, members of different healthcare professions must work along side one another and together as a team to ensure quality patient care. Unfortunately, many times professionals do not work well together or have been educated to think that one's profession is superior to another's. Much of this starts when the students are learning skills in an undergraduate program. It has been found that when students are exposed to situations where they are forced to work together as a team with members of other professions, better communications skills and a respect for professions outside their own are developed. Simulation scenarios with both pediatric and adult code situations have been conducted for several years at a university in Texas with multiple professions coming together to learn valuable skills.

### **14. Behaving Professionally: Mentors Wanted**

The imaging or radiation therapy departments equipped with the latest computerized equipment is only one aspect of competing in today's health care environment. Enhanced service can be achieved by building trusting, positive and productive relationships with the department among employees. To build these relationships and the health care team, the care provide must acquire the behaviors of professionalism.

### **15. Ethics for the Radiographer**

Ethics as personal characteristics may be even more important today than in the past given the more informed patient and the reality of social media. This course will provide a definition of ethics and ethical standards and will review the ARRT 10 Ethical Standards for the radiographer. There will be a discussion of particular ethical dilemmas as well as opportunity for participants to reflect on those dilemmas. There will also be a discussion on ethical violations as well as reporting examples and guidelines.

### **16. ALARA Alarm! Current Controversies in Radiation Hormesis and Shielding**

This presentation divides the current research into two important aspects of radiation protection: how much low-level radiation is acceptable, and should patient shielding remain in the educational curriculum?

### **17. Teaching E-Professionalism: A Case-Based Study**

Teaching professionalism is an integral part of the curriculum for medical imaging programs. The advent of social media has heightened the need for education students in regard to electronic professionalism. Medical imaging student should understand the importance of social accountability and how to be a professional in the online arena. This presentation will utilize case studies to allow participants to analyze e-professionalism scenarios. Topics will include situations related to social media (Facebook, Twitter, Instagram, TicTok), email, and the use of electronic devices in the didactic and clinical settings.

## **18. International Radiology Outreach: A Guide for Radiologic Technologists**

This presentation will offer an overview of global radiology outreach efforts. The speaker, Chairman of the World Radiography Education Trust Foundation and an ISRTT Regional Coordinator, will introduce the audience to his friends from around the world and will share the challenges they face as radiographers in resource-poor countries. We will discuss the organizations that are playing a role in eliminating global health disparities and how the attendee can get involved. By working alongside other medical professionals as part of ongoing medical relief projects, radiologic technologists provide the education, training, and resources local health care specialists need to become self-sustaining facilities. Are you interested in getting involved? The radiologic technologist has never had so many opportunities to join these outreach efforts.

## **19. Emotional Intelligence: The Secret Advantage**

Being a successful radiologic technologist and clinical faculty member requires more than technical knowledge. Self-awareness, motivation, optimism, stress-management, empathy, perception, and communication are essential to establish and maintain positive relationships. In this session, we will explore key components of emotional intelligence and how it can impact performance, work engagement, and burnout. Leveraging emotional intelligence abilities, being aware of self and others, understanding emotions, and emotional management can provide a secret advantage in clinic.

Healthcare workers are often faced with stressful situations associated with the emotional demands of clinic. Navigating interactions with patients, clinical staff, and students as they adjust to different workflow procedures can be challenging. Drawing inspiration from data and real-life examples, we will explore how Emotional Intelligence can influence the clinical experience and work performance.