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## First Year Orientation 2016

**Medstar Washington Hospital Center Medical Imaging School**

**22-Aug-16**

**Room G033**

<table>
<thead>
<tr>
<th>Monday 22</th>
<th>Tuesday 23</th>
<th>Wednesday 24</th>
<th>Thursday 25</th>
<th>Friday 26</th>
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<td>Hospital Orientation</td>
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<td>For Monday</td>
<td>Welcome Imaging</td>
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Medstar Washington Hospital Medical Imaging School

Mission Statement
MedStar Washington Hospital Center Medical Imaging School will provide a comprehensive, quality education in the field of radiography to qualified individuals, to prepare them for careers in medical imaging, and to provide radiographers for the health care community.

Program Goals
1. The students will demonstrate professionalism-Program Effectiveness

Student Learning Outcomes
• The graduates will be satisfied with the program
• The students will successfully complete the program
• Students will become registered in Radiography RT(R) within six months of graduation
• Students will become employed as radiographers within six months after graduation
• Employers will be satisfied with the program’s graduates based on follow up feedback

2. Students will demonstrate strong clinical skills
Student Learning Outcomes
• Students will position patients to provide diagnostic images
• Students demonstrate high quality patient care to all patients
• Students will demonstrate appropriate radiation safety for self and others

3. Students will develop strong critical thinking skills
Student Learning Outcomes
• Students will demonstrate strong problem solving skills
• Students will recognize non-routine clinical situations and make appropriate modifications
• Students will identify quality diagnostic images and make appropriate changes when needed

4. Students will develop strong communication skills
Student Learning Outcomes
• Students will learn the language of medicine
• Students will demonstrate strong communication skills with peers
• Students will demonstrate strong communication skills with patients

5. Students will continue their education through lifelong learning, professional development and growth
Student Learning Outcomes
• Students will demonstrate professional development and growth
• Students will understand the importance of life-long learning
• Graduates will continue their education through fellowships
• Students will demonstrate professionalism at all times
Our Vision
To be the trusted leader in caring for people and advancing health.

Our Mission
Washington Hospital Center, a valued member of MedStar Health, is dedicated to delivering exceptional PATIENT FIRST health care. We provide the region with the highest quality and latest medical advances through excellence in patient care, education and research.

Our Values: SPIRIT

Service
Anticipate and meet the needs of our patients, physicians and co-workers.

Patient first
Deliver the best to every patient every day. The patient is the first priority in everything we do.

Integrity
Communicate openly and honestly, build trust and conduct ourselves according to the highest ethical standards.

Respect
Treat each individual, those we serve and those with whom we work, with the highest professionalism and dignity.

Innovation
Embrace change and work to improve all we do in a fiscally responsible manner.

Teamwork
Build on the collective strength and cultural diversity of everyone, working with open communication and mutual respect.

Washington Hospital Center
MedStar Health

Moving From Good To Great
MedStar Washington Hospital Center is a not-for-profit, 926-bed, major teaching and research hospital in the nation's capital. The Hospital Center is among the 100 largest hospitals in the nation,* and is renowned for handling the Washington region's most complex cases. U.S. News & World Report consistently ranks the Hospital Center's cardiology and heart surgery program as one of the nation's best; it's the only hospital in the Washington metropolitan area to earn a national ranking for heart care in FY 2015. A long-standing leader in cardiovascular care, MedStar Washington Hospital Center is home to MedStar Heart & Vascular Institute, which formed a first-of-its-kind clinical and research alliance with Cleveland Clinic Heart & Vascular Institute in 2013. The Hospital Center operates the Washington region's first Comprehensive Stroke Center and the District's only Cardiac Ventricular Assist Device program, both certified by The Joint Commission. The hospital is also home to MedSTAR, a nationally-verified level I trauma center with a state-of-the-art fleet of helicopters and ambulances, and also operates the region's only adult Burn Center.

### By the Numbers FY 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2015</th>
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<tbody>
<tr>
<td><strong>Beds/Staff</strong></td>
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<tr>
<td>Licensed Beds</td>
<td>926</td>
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<tr>
<td>Associates</td>
<td>6,198</td>
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<tr>
<td>Nurses</td>
<td>1,838</td>
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<tr>
<td><strong>Medical/Dental Staff</strong></td>
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<td>Physicians</td>
<td>1,379</td>
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<td>Advanced Practice Clinicians</td>
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<td><strong>Medical Education and Research</strong></td>
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<td>Residents/Fellows</td>
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<td>Residency/Fellowship programs</td>
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<tr>
<td>Clinical research studies</td>
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<td>Inpatient admissions</td>
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<tr>
<td>Outpatient visits</td>
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<tr>
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<tr>
<td>Cancer outpatient visits</td>
<td>68,853</td>
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<tr>
<td><strong>Cardiac admissions</strong></td>
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<tr>
<td><strong>Cardiac surgeries</strong></td>
<td>1,694</td>
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<td>Ventricular assist device procedures</td>
<td>75</td>
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<td>Heart transplants</td>
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<td>Neuro admissions</td>
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<td>ED visits</td>
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<td>22,266</td>
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<tr>
<td>MedSTAR Trauma admissions</td>
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<td>MedSTAR ground transports</td>
<td>16,276</td>
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<td>Critical care transports</td>
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<td>MedSTAR helicopter missions</td>
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<td>Inpatient surgeries</td>
<td>11,948</td>
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<tr>
<td>Outpatient surgeries</td>
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<tr>
<td>Births</td>
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<td><strong>Community Commitment</strong></td>
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<td>Charity care</td>
<td>$25.6 million</td>
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<tr>
<td>Bad debt</td>
<td>$71 million</td>
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# Medstar Washington Hospital Center Medical Imaging School Statistics

<table>
<thead>
<tr>
<th>Graduating Class</th>
<th># of students</th>
<th>Pass Rate for National Registry 1&lt;sup&gt;st&lt;/sup&gt; attempt</th>
<th>Employment Rate of Graduating class within 12 months</th>
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<tbody>
<tr>
<td>2011</td>
<td>14</td>
<td>86%</td>
<td>100%</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
<td>84%</td>
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</tr>
<tr>
<td>2013</td>
<td>11</td>
<td>91%</td>
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<tr>
<td>2014</td>
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<td>73%</td>
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<tr>
<td>2015</td>
<td>13</td>
<td>78%</td>
<td>85%</td>
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<tr>
<td>2016</td>
<td>7</td>
<td>86%</td>
<td>100%</td>
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GENERAL INFORMATION

The Washington Hospital Center has a 22-month program in Radiologic Technology. Students receive a certificate upon completion of the program. They are then eligible to sit for the board examination of the American Registry of Radiologic Technologists. The program is accredited by the Joint Review Committee on Education in Radiologic Technology. The Standards for an Accredited Educational Program in Radiologic Sciences, published by the Joint Review Committee is available in your Handbook.

PHILOSOPHY

The primary purpose of the radiographer is to assist a qualified physician in making a diagnosis through the application of ionizing radiation to produce an image. To adequately perform the duties of a radiographer, it is necessary to have good physical and mental health. Radiography can be a physically strenuous field. It requires the ability to lift and move patients, and to operate heavy equipment. Radiography also requires the use of independent judgment and initiative. A radiographer must have empathy for the patient, an appreciation of medical ethics and an understanding of patient care procedures. This includes an awareness and attention to adequate radiation protection for patients as well as self and others. The radiographer must also have an extensive knowledge of anatomy, positioning and radiographic technique in order to produce diagnostic images, and must be able to evaluate the quality of the radiographs produced.

The following months of training will be extremely demanding. Your ability, interest and desire for proficiency will govern your degree of success. As an integral part of the hospital team, you will have special responsibilities. You must be prepared and willing to assist those who come to our hospital seeking care and assistance. Your training will occur in the presence of and in association with physicians, radiographers, nurses and students of various educational and technical levels, all concerned with providing the best possible care and treatment of the sick at any hour of the day or night.

As a student you must be receptive and immediately willing to grasp the goals and purposes of this institution. The hospital has many functions to perform including the prevention of disease, the education of both health professionals and patients and the conduct of clinical research. All of these activities must be conducted with an overriding concern for the patient and recognition of his/her dignity as a human being.
Since the hospital offers the patient many services, each phase of the complex structure depends upon the equally efficient and effective operation of all services. Every job, small or large, is important, and every student has a serious responsibility to his studies, his work and to support and contribute to the overall effectiveness of the hospital's efforts to provide comprehensive patient care.

The making of a radiographer is a slow process. Proficiency is acquired most often by gradual accumulation of practical experience in the Radiology Department. Some individuals have an inherent appreciation of dealing with patients while others must acquire it. There is no substitute for the actual experience in the Radiology Department under the guidance of a competent medical radiologist and radiographer.

**CLINICAL SCHEDULE**

Each student is assigned to a radiographic room under the supervision of a registered or registry eligible radiographer for a period of 1-4 weeks. The majority of hours are scheduled on the day shift from 8:00 a.m. - 4:00 p.m. Monday through Friday. Seniors are scheduled to work evenings for a maximum of 3 weeks. Hours on the evening shift for students are 12:00 p.m. - 8:00 p.m. Students should be aware that because of the nature of our profession, it is not always possible to leave on time.

First year clinical rotations include diagnostics, fluoroscopy, outpatient radiology, Cystology, OR, critical care, portables, scheduling desk, film room, tech work area, and the Interventional Recovery room.

Senior rotations include continued rotation through the areas listed above and the additional rotations of critical care MedStar - evening shift, computerized tomography, interventional radiology, main OR, quality control, imaging overview of MRI, Sonography, nuclear medicine and radiation therapy.
VACATION, SICK LEAVE AND HOLIDAYS

Students have 4 weeks of vacation and 1 day/month of sick/personal leave over the course of the academic calendar year. Over the course of 22 months the students have a grand total of 6 weeks and 1 personal day a month. One week of vacation is given during each class break: winter, spring, and two weeks for the summer break each year. Students who use more than their allotted days of sick/personal leave may have this time deducted from their vacation days. Any student who uses up more than their combined sick and personal time will be required to make up this time before the semester is completed.

The hospital recognizes 9 holidays per year. These holidays and the vacation periods are listed in the school calendar.

The maximum time the student can be here per day is 10 hours. Only two hours per day can be made up during regular program hours. Students can volunteer to make up time the day after thanksgiving which is not an institution Holiday. They can also volunteer to make up time on weekends with prior approval.

ENTRANCE REQUIREMENTS

Candidates for admission to the School of Radiography must submit a current HR application, with a $25.00 non-refundable application fee. All fees must be made with a check or money order and made payable to Medstar Washington Hospital Center and mailed to the Radiology Administrative Manager, cash is not accepted. All applicants must have graduated high school with Academic Diploma. All transcripts from college must be submitted. The top rated qualified students are then required to come in for an interview.

Students must have a minimum of an Associate's Degree or be able to achieve the degree at the time of graduation. A 2.5 course cumulative and specific GPA is recommended. Candidates must have completed Mathematical/Logical Reasoning, Written/Oral Communication and Natural sciences with Anatomy & Physiology recommended. The remaining general education courses should be in the areas which include: Arts and Humanities, Information Systems and Social/Behavioral Sciences.
Admission decisions are based on a scoring system in which points are awarded to the applicant based on prior education and training, experience working with patients, and an applicant interview. The student should have a minimum 2.5 GPA or higher or the equivalent, and a strong background in English, Science and Math. Applicants must be able to demonstrate the ability to meet the essential functions of a Radiologic Technologist to qualify for training.

The student must obtain a physical examination by the hospital's Occupational Health and Safety Department prior to beginning on the School. The student must be in good health, and must be able to demonstrate the ability to evaluate, monitor and communicate with the patient visually and orally. Students must be able to lift and move patients, heavy equipment and to manipulate Radiographic equipment. Students must also be up to date on immunizations and receive negative results on drug and alcohol testing and submit to a criminal background check. Occupational Health and Human Resources must clear students before appointment to the program is permitted. Once accepted the student will submit a $50.00 nonrefundable admission fee.

The Medical Imaging School evaluates all candidates without regard to race, color, religion, handicap, sex, sexual orientation, age, political affiliation, veteran’s status or national origin. There are a limited number of spaces in the program so not all qualified applicants are accepted.

GRADUATION REQUIREMENTS

The student must complete all academic and clinical aspects of the program and achieve an 80% on the final comprehensive exam (Capstone). Verbal and written presentations are required.

The student must achieve a minimum grade of 80% in all classes, and must complete all clinical grading with an 85% or higher average. All Clinical Competency forms must be submitted into the online competency system within 2 weeks of completing them. Comp time forms must be turned within 2 weeks of earning the time. Reimbursement for parking at Georgetown University Hospital must be submitted during the clinical rotation, not before.

The student must complete a minimum of 22 months in the program, and must make-up any time missed in excess of the allotted sick and vacation time each trimester. The student must follow the required time and attendance policies and all hospital, radiology and school policies.
The student must complete any required make-up work for all didactic and clinical courses prior to the end of each trimester. A grade of "I" will be given if the semester work is not complete. The student will have (2) weeks to complete all coursework. Failure to do so will result in an "F." for the course and dismissal from the program, except for minor courses. Failure to take a required Exam or assignment may lead to dismissal.

The student must pay all fees owed to the school and return any materials prior to progressing to the next trimester. Failure to do so will prevent the student from going to the next trimester. Any fees owed the school prior to graduation must be paid or the student will not be allowed to graduate. Policies may change as needed. Students will be informed of changes in a timely basis.

PART-TIME POLICY

Students will not be admitted into the program on a part-time basis. However, if the need arises due to medical or personal reasons, a student may cut back to part-time attendance on a temporary basis. Part-time attendance should include attending all academic classes. Any clinical time missed must be made up prior to graduation. Attending part-time may result in a student’s delayed graduation from the program.

TRANSFER and ADVANCED PLACEMENT POLICY

Students may be admitted into the program as transfer students if they have completed at least 6 months or 1/4 of the professional curriculum including clinical training in an accredited radiography program. They must present academic and clinical transcripts to school staff for evaluation and may also be asked to present copies of tests and clinical evaluations. In addition, school staff will need copies of student handbooks/catalogs from the original program. The applicant for transfer will be interviewed by school staff and may be required to take comprehensive examinations to determine proper placement in the program. School staff will determine how much academic credit and clinical credit to award the transfer student. The student may be required to repeat academic and/or clinical work depending on how closely the original and transfer program correlate and on how recently the prior training was completed.

A transfer student must complete a minimum of 6 months of academic and clinical training in the program to qualify for graduation. Transfer students may take more than 22 months to complete training due to delays caused by differences in sequencing between programs or the need to repeat some academic courses or clinical rotations. The transfer student will be required to meet all of the requirements for graduation from the program.
CONFERENCES

At mid semester and the semester's end the student will be called to a conference with the school staff to review their academic and clinical progress. More frequent conferences may be called at the discretion of school staff if specific problems arise.

COUNSELING

Students who desire assistance with either academic or clinical problems can consult with school staff at any time. For problems of a more personal nature, there is a professional counseling referral service available through the hospital's Employee Assistance Program. School staff or self-referral can refer a student. The E.A.P. coordinator can be reached at extension 7-6606. The office is in room G008 in the hospital's East Building.

STUDENT RECORDS

In accordance with the Family Educational Rights and Privacy Act of 1974, students are entitled to examine their records at any time. Student records are kept confidential. The release of information in the student's file to anyone other than the student, school or hospital staff will Occur only with the student's permission with the following exceptions: the law permits Authorities of the Veteran's Administration, Title IV Student Aid programs and accrediting agencies to examine student records without the student's release. Allow two weeks for transcript Requests.

PART TIME WORK

The broad aspect of training encompassed in the program leaves little free time for the student. Therefore students are encouraged to limit outside employment during training especially during the first few months of the program. If students are interested in part-time employment within the Main Radiology, Outpatient Radiology, MRI or CT departments, they should check with the appropriate supervisor or the chief technologist as to job availability. Regular part-time positions
May include work as a film library clerk, receptionist or transporter. Temporary work may also be available for special research projects or for film purging activities. Any work performed by the student inside or outside the hospital, may not conflict with regularly scheduled student hours.

**DRESS CODE**

As part of the hospital team, students are expected to present a professional appearance at all times. This includes wearing a clean, pressed uniform and being well groomed. The student uniform consists of Forest/Hunter Green scrub suits, white socks or stockings, and sneakers. (Tops and bottoms should match.) Hospital scrubs must be worn in hospital operating rooms and in interventional radiology.

Long hair should be pulled back for your protection from infection. Perfumed products (this includes not only perfume and cologne but aftershave and any heavily perfumed hair or skin product) should not be worn as they create respiratory problems in patients suffering from Asthma, allergies or chronic obstructive pulmonary diseases. We suggest that you not wear jewelry as it may pick up germs or may be damaged. Visible body piercing and visible tattoos are prohibited. Fingernails should be no longer than 1/4 inch in length. Avoid wearing red or dark nail polish as this can damage the intensifying screens inside of cassettes. Students are required to wear their hospital identification at all times when on hospital property. HRP211 (7.1-7.5)
DRESS CODE AND APPAREL INFORMATION

Dress Code:

The required uniform for the first year of training is Hunter/forest Green scrub suits. White Socks with nursing shoes or tennis shoes (no extreme colors) are appropriate. Uniforms should be neat and clean. No hip hugger style pants or short tops are not allowed. It is suggested to purchase at least three sets of scrubs. Your uniform also includes your ID badge and film badge (you will receive these during orientation). These items must be worn every day.

Hospital issued scrubs may be worn if the student is assigned to the main operating room (MOR), the third floor outpatient operating room (TFO), or interventional radiology (IR). If the student soils his/her school uniform during a clinical rotation, hospital scrubs may be substituted.

Some areas of the hospital are colder in temperature than others. You may purchase Hunter/forest green or white scrub jackets to wear over your uniform. T-shirts, if worn under your scrub suit should not be long sleeved and should be tucked inside the scrub suit.

Uniforms should be worn everyday in the clinical areas unless otherwise notified.

Students must wear their hair pulled back if hair is longer that shoulder length.

Tattoos must always be covered.

No nose or facial Piercings. Earrings are allowed but must be smaller than a Dime.

No extreme hairstyles, hair colors, excessive jewelry, extreme piercings (eye, lip, nose, tongue) Are allowed.

Uniform Vendors: Gust suggestions)

Uniform City- 406 North Howard Street, Baltimore, MD, 410-539-8770
Linn's Uniforms-7423 Annapolis Road, Landover Hills, MD, 301-731-5400
            2003 Rivers Mill Road, Rockville, MD, 301-340-6373
            827 Leonardtown Road, Hughesville, MD, 20697
Nurses Call the Shots- 2975 Festival Way, Waldorf, MD, 20601
Gallos and family dollars also offer scrubs
Most Wal-Mart stores carry a limited variety of scrubs, located in the women's section.

Online Vendors:
www.jascouniform.com
www.perfectscrubs.com
www.uniformcity.com
www.uniformadvantage.com
www.alheart.com
MISSION: MedStar Washington Hospital Center (MWHC), a valued member of MedStar Health, is dedicated to delivering exceptional PATIENT FIRST health care. We provide the region with the highest quality and latest medical advances through excellence in patient care, education, and research.

I. Purpose

This policy has been developed to ensure that all associates understand the importance of appropriate dress in the workplace or when otherwise representing MWHC. The standards of dress and appearance outlined below set forth the minimum requirements to which all associates, agency, contract workers, temporary staff and other on-site MedStar associates are required to adhere. Based on the departmental functions, there may be additional or specific dress policies to which associates working in those areas are also required to comply. Additionally, this policy addresses aspects of personal grooming that reduce specific infection risks.

II. Statement of Policy

MWHC recognizes that the presentation of its associates in the workplace contributes to a comforting environment and the public image that has made it a marketplace leader.

III. Procedures

A. General Policies Applicable to Patient Care and Non Patient Care Areas

1. The MWHC ID badge must be worn at all times while on duty and worn in a manner so that the name and photograph are clearly displayed and easily read (i.e., worn horizontally above the waist). Badges that are torn, faded, or ragged should be replaced. No pins or other stick-on items may be
attached to the badge. Associates who damage their badges are responsible to pay for replacement badges.

2. No other pins may be worn in the Hospital except MedStar Health pin; a school pin reflecting certification and/or licensure for position currently held; the MedStar Washington Hospital Center Service pin; the Blood Donor pin; and the SuperStar pin. Any other exceptions must be approved by the Senior Vice President, Human Resources or designee.

3. Every associate is expected to practice daily hygiene and good grooming habits, which includes wearing clean neat uniforms or clothing and shoes. Hair will be clean and hairstyles such as spiked, shaved messages, striped, and/or non-traditional hair colors are not permitted.

4. The size and/or number of earrings, rings, necklaces, and bracelets may be determined at the department level based on specific job functions, operational, and safety factors. Where job duties present any type of safety risk, jewelry may be prohibited or severely limited. In other areas, moderate (including size and amount) jewelry may be worn. No other visible body jewelry/body piercing may be worn while an associate is on work time.

5. No visible tattoos or other body art (such as surgically implanted ball bearings, spikes, and the like) are permitted while on duty. Exceptions may be made for associates who have small, non-offensive tattoos that cannot easily be covered by standard clothing (i.e., wrist, neck, etc.). All exceptions require the approval of the Senior Vice President, Human Resources or designee.

6. Personal pagers, cellular phones, cameras, and radios or similar devices may not be used or carried during work time, except as permitted by express provisions of department policies and/or for MWHC business.

7. With the exception of head coverings worn for bona fide religious or medical reasons or in accordance with department guidelines/policies regarding uniforms, safety procedures, or other regulatory guidelines, no hats or other head wraps will be allowed while an associate is on duty. Where a hat is part of the uniform, it should be worn with the bill facing forward.

8. Associates must wear the designated uniform when established by departmental policy. For those areas where there is no uniform, acceptable work attire would include: slacks; skirts or dresses (no higher than 3 inches above the knee; or at or below the ankle, unless worn longer for
religious purposes); blouses, sweaters, and polo or button up shirts; suits with skirt, slacks or dress capris; blazers, jackets, sports coat.

9. Shoes should be appropriate for the work area. No open-toe sandals or slides, house slippers, flip flops, or evening shoes are acceptable. Open toe pumps and sling back pumps are acceptable.

10. Lab coats are permitted for clinical staff only. Scrubs are only allowed where specified in departmental policies.

11. Attire that is unacceptable includes but is not limited to: jeans; denim material; shorts, leg warmers, leggings, casual capris, stirrups, or harem type pants; mini-skirts, excessive and/or revealing skirt slits; tee-shirts, sweatshirts, tube tops, midriff tops, muscle shirts; see through clothes; low cut tops which reveal cleavage; sun dresses or other strapless or string strapped dresses; hair ornaments such as feathers, flowers, sweatbands; evening wear or party clothes; jogging or athletic clothes.

B. Associates in Patient Care Areas: In addition to the general policies, outlined above, departmental policy will specify dress code for associates in patient care areas. In general these policies will expect that associates adhere to the following:

1. Fragrances may not be worn.

2. Long hair should be worn up, secured in back, or appropriately covered in accordance with established departmental standards/protocol.

3. If patient care duties, or an unexpected event, (such as a severe infectious disease outbreak) require the associate to wear an N-95 respirator, then the associate must be clean shaven within the sealing area of the respirator in order to obtain appropriate fit and protection.

4. Nails must be trimmed no longer than \( \frac{1}{4} \) inch in patient care areas (unless more stringent standards have been established based on nature of duties). In accordance with CDC guidelines, no artificial fingernails or extenders may be worn by associates providing patient care. Neon nail polish, and nail jewels are not acceptable.

C. Associates in Non-Patient Care Areas: In addition to the general policies, in many areas, departmental policy will specify dress code for associates in non-patient care areas. In general these policies will expect all associates in non-patient care areas to promote a healing environment and a professional atmosphere. Nails will be cleaned and trimmed to no longer than \( \frac{1}{2} \) inch. Neon nail polish, and nail jewels are not acceptable.
IV. Responsibility

Managers are responsible for enforcement of this policy for all associates regardless of whether associates report to them or not. Violation of this policy will result in associate being sent home without pay. At the manager’s discretion, an associate may return to work after changing into attire consistent with this policy. Violations of this policy will result in discipline, up to and including termination, consistent with relevant MWHC policies and provisions of collective bargaining agreements, as applicable.

Exceptions may be granted for portions of this policy for departments who are off-campus based on the operational function of the department requesting the exception. All exceptions require the approval of the Senior Vice President of Human Resources or designee. Example of an exception: Associates working in the non-air conditioned warehouse at the V Street location may be permitted to wear shorts during the summer months.

V. Definitions

A. Patient Care Areas – Any areas in the hospital where the associates have direct patient contact or patient interactions.

B. Non-Patient Care Areas: Those areas where direct patient contact or interactions is minimal. Staff interaction with patients is limited to contact in the halls, cafeteria, etc. These areas would be business offices, both on and off campus, non-clinical support areas, etc.

VI. Resource

A. Prepared by: Senior Vice President, Administrative Services

B. Approved by: President

C. Responsible for Implementation: All Management Staff

D. Effective Date: April 4, 2004

E. Revision Date: January 1, 2007
   September 1, 2009
   April 1, 2016
RULES OF CONDUCT

MISSION: MedStar Washington Hospital Center (MWHC), a valued member of MedStar Health, is dedicated to delivering exceptional PATIENT FIRST health care. We provide the region with the highest quality and latest medical advances through excellence in patient care, education, and research.

I. Purpose

This policy is intended to set forth basic rules concerning workplace conduct. The basic rules included in this policy provide guidance but should not be viewed as an all-inclusive list of every type of misconduct that warrants disciplinary action.

II. Statement of Policy

It is MWHC’s responsibility to maintain order in support of its Mission, Vision, and Values, and to assure a workplace and patient environment conducive to its Patient-First, clinical and service excellence initiatives. These rules are intended to make the Hospital a safe, pleasant, productive, and desirable place to work.

III. General

A. These rules constitute basic standards of workplace behavior. While not all-inclusive, violations of the following rules subject an associate to disciplinary action up to and including termination:

1. Failure to demonstrate support of MWHC’s Mission, Vision, Values, and Service Excellence initiatives.

2. Abuse or neglect of or willful inattention to a patient.

3. Refusal or failure to carry out instructions from responsible authority or neglect of assigned duties.
4. Chewing gum and eating are not allowed except in closed break rooms.

5. Insubordination - Refusal by an associate to follow the directive of management or to comply with an established procedure.

6. Gross Insubordination - Repeated refusal or absolute failure by an associate to follow the directive of management, or abusive language or behavior in response to management.

7. Misuse, unauthorized use or possession, destruction, or theft of property owned or leased by MWHC or by another associate, patient, or visitor. MWHC property includes, but is not limited to, any/all medical equipment, telephones, computers, internet, E-mail, pagers, walkie-talkies, tools, supplies, furniture, lockers, and signs.

8. Use of e-mail, intranet, Internet to view or transmit inappropriate, obscene, or illegal material.

9. Falsifying, or collaborating in the falsification of, or tampering with any document or record of MWHC - including, but not limited to, applications for employment, time records, payroll records, and patient records.

10. Unauthorized possession, distribution, sale, or use of alcoholic beverages, narcotics, controlled substances, or illegal use of prescribed medications on Hospital premises, or such use or consumption as to make an associate unfit for duty during his/her normal work day or in any situation whereby the associate is representing MWHC.

11. Possession or use of firearms, other weapons, or explosives MWHC premises without specific written authorization.

12. Disregard or willful violation of safety or fire prevention rules and regulations; or failure or refusal to use specified safety equipment or procedures; or failure to report a work-related accident or injury. Willful disregard of security procedures or instructions from authorized security personnel, including parking directions and guidelines, parcel inspection, and access control.

13. Soliciting, offering, or accepting gifts from vendors, patients or others having business with MWHC (excluding token gifts authorized by the department head). Soliciting, offering or accepting a kickback, bribe or rebate, or any other form of compensation in exchange for patient or vendor referrals.

14. Unauthorized access, use, disclosure, or removal of patient or associate data, confidential or proprietary MWHC information.
15. Personal conduct detrimental to MWHC operations, image or morale, including discourtesy to patients, visitors, or other associates; abuse or intimidation of fellow associates; performing unassigned and unauthorized duties; gambling; fighting; horseplay; loafing; obscene or profane language or gestures; recklessness resulting in (or which could result in) accident or injury.

16. Associates may not have visitors, including associate’s relatives, friends, children, etc in the work area during the course of the associate’s scheduled shift. Additionally, associates may not leave their minor children unattended in the Hospital’s cafeteria, public waiting rooms, medical library, department’s break room, or parking lot during any portion of the scheduled shift.

17. Incompetence, unwillingness, or inability to perform satisfactorily in accordance with established performance standards.

18. Unauthorized use of pagers, cellular phones, radios, cameras, video equipment, computers and/or computer software in the work place.

19. Conviction for criminal offense relating to health care or being debarred, excluded or otherwise ineligible for participation in federal health care programs.

20. Violation of state and/or federal laws. Failure to report or disclose activities/practices which violate federal/state laws or WHC policies, including the Compliance Plan and Guidelines.

21. Sleeping on duty.

22. Leaving assigned work area without authorization or proper cause.

B. Interpretation of this policy - The Senior Vice President, Human Resources and the Employee/Labor Relations staff is responsible for interpreting this policy and for counseling and advising management and associates regarding its application. When applicable and as required, Employee/Labor Relations is responsible for communicating with union representatives regarding implementation and enforcement of these policies where such policies are not in conflict with express provisions of applicable collective bargaining agreements.

C. The provisions of this policy are applicable to all associates to the extent they do not conflict with relevant terms of an applicable collective bargaining agreement.
IV. Resource

A. Prepared by: Senior Vice President, Administrative Services

B. Approved by: President

C. Responsible for Implementation: Senior Vice President, Administrative Services or designee

D. Effective Date: January 1, 2007

E. Revision Date: September 1, 2009
   December 1, 2009
   April 1, 2016
If a disability arises during training that requires a leave of absence or restrictions on academic or clinical training, the student must present a letter from their doctor stating the nature of the problem, the probable duration of the problem and the restrictions that must be placed on the student's training. School staff will refer the student to Occupational Health/Managed Disability and they will evaluate the physician's recommendations. The student must also submit documentation to Occupational Health/Managed Disability from their physician when they are ready to return to normal status. Occupational Health/Managed Disability will make the final determination on a student's ability to return to training. A leave of absence may be granted to a student for personal reasons at the discretion of school staff. Academic and clinical work, and time missed must be made up prior to a student's graduation from the program. If the leave of absence or academic or clinical restriction occur at a critical point in the program or are prolonged, the student may be required to restart the program from the beginning or re-enter the program at the point where the separation or restrictions occurred. If a student's physician states that the disability is permanent and that the disability would prevent the student from performing the tasks required of an entry level radiographer, the student will be dismissed from the program.
PREGNANCY POLICY  The policy follows NRC Guide 8.13

If a female student becomes pregnant during training, she has the option of informing or not informing school staff of her pregnancy. If she decides to inform school staff, it must be in writing and include the expected date of delivery.

If a student discloses her pregnancy to school staff, she will have the following options of continuing her course of training:

1) Continue training without modification or interruption, or
2) Modify clinical assignments to reduce radiation risk to the developing embryo/fetus, or
3) Limit attendance to academic classes only, or
4) Take a leave of absence for part of or for the full duration of the pregnancy.
5) Options for student include but are not limited to:

The student will be granted a leave of absence for the birth of the child. When the student is ready to return to training, she must process back in through the Occupational Health departments before returning to training.

A student who informs school staff of pregnancy and wishes to continue with clinical training will be issued an additional radiation dosage badge to wear at waist level to monitor fetal exposure. She will also receive counseling on radiation exposure during pregnancy from the Radiation Safety Officer or his designee. Dosage will be checked on a monthly basis.

If the student takes a leave of absence or modifies their academic or clinical schedule during pregnancy or after delivery, the student will be required to make up any clinical or academic work missed in order to qualify for graduation from the program.
Title: Declared Pregnant Worker Exposed to Radiation

Section: 200 Series

Purpose: This policy specifies the actions that should be taken when a worker voluntarily identifies herself in writing through her supervisor to the Department of Radiation Safety as a Declared Pregnant Worker.

Number: 212.05

Effective Date:

I. Scope

This Standard Practice applies to all Washington Hospital Center employees, contract and agency staff.

II. Policy and Practices

A. Formally Declaring Pregnancy

1. WHC encourages any worker who is exposed to radiation in the course of performing job duties and who believes that she may be pregnant to formally declare her pregnancy. WHC acknowledges that any such declaration should only be on a voluntary basis because the worker desires the increased level of radiation protection safety that will be provided. A Declared Pregnant Worker can revoke at any time and for any reason this declaration by formal written notification. WHC is committed to maintaining the radiation exposure of all workers as low as reasonably achievable (ALARA).

2. WHC encourages any worker who believes that she may be pregnant or who is planning to become pregnant to review the instructions in the Nuclear Regulatory Commission's REGULATORY GUIDE 8.13, "INSTRUCTION CONCERNING PRENATAL RADIATION EXPOSURE.” Each female employee assigned a radiation monitor was given this information as part of the instruction prior to being assigned a film badge. Additional copies of REGULATORY GUIDE 8.13 are available from the Radiation Safety Office.

3. By regulation, the decision to become a Declared Pregnant Worker is voluntary, must be declared in writing, and may be revoked (in writing) at any time for any reason by the worker.

4. Many occupational activities that may/could include radiation exposure at WHC do not result in annual exposures greater than 100 millirem (about 20% of the Declared Pregnant Worker limit). WHC would not change a Declared Pregnant Worker's work assignment if the exposure is expected to be lower than the 100 millirem requiring monitoring in 10 CFR Part 20. In the event that the exposure level may/could exceed 100 millirem requiring such monitoring, the supervisor with the advice of the
Radiation Safety Department may make assignment changes to limit potential exposure.

5. WHC recognizes that many workers regard their pregnancy status as a personal matter, and WHC will make every effort to maintain the privacy of Declared Pregnant Workers within the limits of implementing the increased radiation protection safety requirements. This means Department of Radiation Safety staff who are associated with providing dosimetry (film badges or TLD rings), providing radiation training relevant to exposure of the embryo/fetus, and program oversight may be informed of the Declared Pregnant Worker's status.

B. How the Declaration of Pregnancy is Made

A declaration of pregnancy must be made in writing through the employee's supervisor to the Department of Radiation Safety. The employee contacts her supervisor to obtain a Declaration Form from the Department of Radiation Safety.

C. Dosimetry Actions

1. When a declaration of pregnancy is received, the Department of Radiation Safety will evaluate the Declared Pregnant Worker's monitoring needs and ensure that adequate dosimetry is issued and processed in order to provide timely dose monitoring.
2. Records of declared pregnancies, associated revocations, doses (both the Declared Pregnant Worker and the embryo/fetus) must be maintained and reported as required by 10 CFR Part 20.
3. If it is determined that a Declared Pregnant Worker's embryo/fetus is not likely to receive a cumulative dose of 100 mrem from external radiation, or 100 mrem from internal radiation, it is not required by 10 CFR Part 20 to provide dosimetry. However, dosimetry may be provided to Declared Pregnant Workers who routinely access Restricted Areas.
4. The Radiation Safety Officer (or designee) will review and sign the Declared Pregnant Worker declaration.

III. Responsibilities

A. Declared Pregnant Worker

1. Any worker who believes she may be pregnant and who desires the increased level of radiation protection provided by formally declaring her pregnancy must inform the Department of Radiation Safety through her supervisor, in writing, of her pregnancy.
2. The worker contacting the Department of Radiation Safety or her supervisor initiates this process. The Department of Radiation Safety will provide a form (Exhibit 1) which should be used to declare the pregnancy.
3. A physician or other caregiver should also confirm an estimated date of conception in writing as the Declared Pregnant Worker dose limit is based on the nine-month gestation period.
4. Upon travel to another facility where the Declared Pregnant Worker could receive occupational exposure, the Declared Pregnant Worker should inform the other facility of her Declared Pregnant Worker status.
5. Any dose received at another facility must be reported to WHC.
6. It is the Declared Pregnant Worker's responsibility to notify Dosimetry upon termination of her pregnancy declaration. This is accomplished in writing using the Declared Pregnant Worker form.

B. Department of Radiation Safety Dosimetry

1. Evaluate the personnel dosimetry monitoring needs, ensure adequate participation in the Dosimetry Program, and provide timely dose monitoring for all Declared Pregnant Workers.
2. Review and maintain all records of declared pregnancies and associated revocations. A record of dose received by the embryo/fetus must be maintained and reported to the Declared Pregnant Worker on an annual basis.
3. If a Declared Pregnant Worker indicates that additional information is desired, or if the Declared Pregnant Worker could potentially exceed 500 mrem during the gestation period, the Department of Radiation Safety will initiate appropriate action and ensure instruction is provided to the Declared Pregnant Worker. Individual instruction will be based on the Declared Pregnant Worker's request and potential to exceed any dose limit.
4. Maintain this policy and the Declared Pregnant Worker declaration form (Exhibit 1); and ensure that applicable WHC staff receives initial and annual training on this policy.
5. Inform and copy documentation to Managed Disability of changes in the status of a Declared Pregnant Worker.

C. Supervisor/Manager

1. Promptly have any employee who desires to declare a pregnancy complete the Declared Pregnant Worker declaration form.
2. Contact Department of Radiation Safety to answer any questions that may arise concerning the policy and its implementation.
3. Written declarations of pregnancy must be forwarded to the Radiation Safety Officer. Retain a copy for department records.
4. Work with the Department of Radiation Safety to evaluate and modify work schedules and job responsibilities, if needed, to stay within dose limits.
DECLARATION OF PREGNANCY FORM

This form is used by workers whose job duties may result in exposure to radiation and who desire to formally request status as a Declared Pregnant Worker, or to revoke this status if it has been previously declared. Please read this form carefully. Staff in the Department of Radiation Safety is available to answer any of your questions.

1. Please check one of the following boxes:

☐ I am formally declaring that I am pregnant. In accordance with 10 CFR Part 20, this disclosure is voluntary and is made for the purpose of lowering the dose limit for my embryo/fetus. I realize that work restrictions may be imposed to ensure that my embryo/fetus does not receive a dose in excess of that given in 10 CFR 20.1208 (500 mrem during the entire gestation). I authorize WHC to release this information as necessary to implement the dose limit for my fetus.

Estimated date of conception: ___________ (Must be supported by medically certified documentation)

☐ I am withdrawing my previous declaration of pregnancy. I understand that, as a result of signing and submitting this form, any work restrictions that have been imposed as a result of my previously submitted “Declaration of Pregnancy” will be lifted.

2. Separately, check one of the following boxes:

☐ I would
☐ I would not

like to receive information about radiation exposure or the policy concerning the declaration of my pregnancy from someone in the Department of Radiation Safety.

(Please indicate what type(s) of concern(s) you have.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Printed name: ____________________________
Signature: ________________________________
Date: _________________________________

Submission of this form will in no way affect the benefits, seniority, or potential for promotion of the person signing this form. Return this completed form to Radiation Safety, EB 5104. If declaring a pregnancy, please attach medical certification from your health care provider.

Reviewed by Dosimetry Assistant: ____________________ Date: __________
Reviewed by Radiation Safety Officer: ________________ Date: __________
Dosimetry assigned: ________________________________
I. SCOPE
This Standard Practice applies to all MedStar Washington Hospital Center (MWHC) employees, contract and agency staff.

II. POLICY AND PRACTICES
A. Formally Declaring Pregnancy
1. MWHC encourages any worker who is exposed to radiation in the course of performing job duties and who believes that she may be pregnant to formally declare her pregnancy. MWHC acknowledges that any such declaration should only be on a voluntary basis because the worker desires the increased level of radiation protection safety that will be provided. A Declared Pregnant Worker can revoke at any time and for any reason this declaration by formal written notification. WHC is committed to maintaining the radiation exposure of all workers "As Low As Reasonably Achievable" (ALARA).

2. WHC encourages any worker who believes that she may be pregnant or who is planning to become pregnant to review the instructions in the Nuclear Regulatory Commission's Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure." Each female employee assigned a radiation monitor is given this information as part of the instruction prior to being assigned a film badge. Additional copies of Regulatory Guide 8.13 are available from the Radiation Safety Office.

3. By regulation, the decision to become a Declared Pregnant Worker is voluntary, must be declared in writing, and may be revoked (in writing) at any time for any reason by the worker.

4. Many occupational activities that may/could include radiation exposure at WHC do not result in annual exposures greater than 100 millirem (about 20% of the Declared Pregnant Worker limit). WHC would not change a Declared Pregnant Worker's work assignment if the exposure is expected to be lower than the 100 millirem requiring monitoring in 10 CFR Part 20. In the event that the exposure level may/could exceed 100 millirem requiring such monitoring, the supervisor with the advice of the Radiation Safety Department may make assignment changes to limit potential exposure.
5. MWHC recognizes that many workers regard their pregnancy status as a personal
matter, and WHC will make every effort to maintain the privacy of Declared Pregnant
Workers within the limits of implementing the increased radiation protection safety
requirements. This means Department of Radiation Safety staff who are associated
with providing dosimetry (film badges or TLD rings), providing radiation training
relevant to exposure of the embryo/fetus, and program oversight may be informed of
the Declared Pregnant Worker's status.

B. How the Declaration of Pregnancy is Made

A declaration of pregnancy must be made in writing through the employee's supervisor
to the Department of Radiation Safety. The employee contacts her supervisor to obtain
a Declaration of Pregnancy Form (Exhibit 1) from the Department of Radiation Safety.

C. Dosimetry Actions

1. When a declaration of pregnancy is received, the Department of Radiation Safety will
evaluate the Declared Pregnant Worker's monitoring needs and ensure that
adequate dosimetry is issued and processed in order to provide timely dose
monitoring.

2. Records of declared pregnancies, associated revocations, doses (both the Declared
Pregnant Worker and the embryo/fetus) must be maintained and reported as
required by 10 CFR Part 20.

3. If it is determined that a Declared Pregnant Worker's embryo/fetus is not likely to
receive a cumulative dose of 100 mrem from external radiation, or 100 mrem from
internal radiation, it is not required by 10 CFR Part 20 to provide dosimetry.
However, dosimetry may be provided to Declared Pregnant Workers who routinely
access Restricted Areas.

4. The Radiation Safety Officer (or designee) will review and sign the Declaration of
Pregnancy Form.

III. RESPONSIBILITIES

A. Declared Pregnant Worker

1. Any worker who believes she may be pregnant and who desires the increased level
of radiation protection provided by formally declaring her pregnancy must inform the
Department of Radiation Safety through her supervisor, in writing, of her pregnancy.

2. The worker contacting the Department of Radiation Safety or her supervisor initiates
this process. The Department of Radiation Safety will provide a Declaration of
Pregnancy Form which should be used to declare the pregnancy.

3. Upon travel to another facility where the Declared Pregnant Worker could receive
occupational exposure, the Declared Pregnant Worker should inform the other facility
of her Declared Pregnant Worker status.

4. Any dose received at another facility must be reported to MWHC by the Declared
Pregnant Worker.
5. It is the Declared Pregnant Worker's responsibility to notify the Radiation Safety Department upon termination of her pregnancy declaration. This is accomplished in writing using the Declared Pregnant Worker form.

B. Department of Radiation Safety Dosimetry

1. Evaluate the personnel dosimetry monitoring needs, ensure adequate participation in the Dosimetry Program, and provide timely dose monitoring for all Declared Pregnant Workers.

2. Review and maintain all records of declared pregnancies and associated revocations. A record of dose received by the embryo/fetus must be maintained and reported to the Declared Pregnant Worker on an annual basis.

3. If a Declared Pregnant Worker indicates that additional information is desired, or if the Declared Pregnant Worker could potentially exceed 500 mrem during the gestation period, the Department of Radiation Safety will initiate appropriate action and ensure instruction is provided to the Declared Pregnant Worker. Individual instruction will be based on the Declared Pregnant Worker's request and potential to exceed any dose limit.

4. Maintain this policy and the Declaration of Pregnancy Form and ensure that applicable WHC staff receives initial and annual training on this policy.

5. Inform and copy documentation to Managed Disability of changes in the status of a Declared Pregnant Worker.

C. Supervisor/Manager

1. Promptly have any employee who desires to declare a pregnancy complete the Declared Pregnant Worker declaration form.

2. Contact Department of Radiation Safety to answer any questions that may arise concerning the policy and its implementation.

3. Written declarations of pregnancy must be forwarded to the Radiation Safety Officer. Retain a copy for department records.

4. Work with the Department of Radiation Safety to evaluate and modify work schedules and job responsibilities, if needed, to stay within dose limits.
DECLARATION OF PREGNANCY FORM

This form is used by workers whose job duties may result in exposure to radiation and who desire to formally request status as a Declared Pregnant Worker, or to revoke this status if it has been previously declared. Please read this form carefully. Staff in the Department of Radiation Safety are available to answer any of your questions.

1. Please check one of the following boxes:

☐ I am formally declaring that I am pregnant. In accordance with 10 CFR Part 20, this disclosure is voluntary and is made for the purpose of lowering the dose limit for my embryo/fetus. I realize that work restrictions may be imposed to ensure that my embryo/fetus does not receive a dose in excess of that given in 10 CFR 20.1208 (500 mrem during the entire gestation). I authorize WHC to release this information as necessary to implement the dose limit for my fetus.

   Estimated date of conception: _______________ (Supported by documentation)

☐ I am withdrawing my previous declaration of pregnancy. I understand that, as a result of signing and submitting this form, any work restrictions that have been imposed as a result of my previously submitted "Declaration of Pregnancy" will be lifted.

2. Separately, check one of the following boxes:

☐ I would

☐ I would not

like to receive information about radiation exposure or the policy concerning the declaration of my pregnancy from someone in the Department of Radiation Safety.

(Please indicate what type(s) of concern(s) you have.)

Printed Name: ____________________________
Signature: ____________________________
Date: ____________________________

Submission of this form will in no way affect the benefits, seniority, or potential for promotion of the person signing this form. Return this completed form to Radiation Safety, EB 5104. If declaring a pregnancy, please attach medical certification from your health care provider.

Reviewed by Dosimetry Assistant: ____________________________ Date: ______________

Reviewed by Radiation Safety Officer: ____________________________ Date: ______________

Dosimetry assigned: ____________________________
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<td>Additional</td>
<td>Revisions reviewed by the Radiation Safety Committee, June 2005</td>
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Accommodations for Pregnancy, Childbirth and Breastfeeding

The Protecting Pregnant Workers Fairness Act (PPW) requires District of Columbia employers to provide reasonable workplace accommodations for employees whose ability to perform job duties is limited because of pregnancy, childbirth, breastfeeding, or a related medical condition.

The employer must engage in good faith and in a timely and interactive process to determine the accommodations.

Types of Accommodations

Employers must make all reasonable accommodations,* including but not limited to:

- More frequent or longer breaks;
- Time off to recover from childbirth;
- Temporarily transferring the employee to a less strenuous or hazardous position;
- Purchasing or modifying work equipment, such as chairs;
- Temporarily restructuring the employee’s position to provide light duty or a modified work schedule;
- Having the employee refrain from heavy lifting;
- Relocating the employee’s work area; or
- Providing private (non-bathroom) space for expressing breast milk.

Prohibited Actions by Employers

Employers may not:

- Refuse an accommodation unless it would cause significant hardship or expense to the business;
- Take adverse action against an employee for requesting an accommodation;
- Deny employment opportunities to the employee because of the request or need for an accommodation;
- Require an employee to take leave if a reasonable accommodation can be provided; or
- Require employees to accept an accommodation unless it’s necessary for the employee to perform her job duties.

Certification from Health Care Provider

The employer may require an employee to provide certification from a health care provider indicating a reasonable accommodation is advisable. The certification must include: (1) the date the accommodation became or will become medically advisable; (2) an explanation of the medical condition and need for a reasonable accommodation; and (3) the probable length of time the accommodation should be provided.

Filing a Complaint of a Violation

If you believe an employer has wrongfully denied you a reasonable accommodation or has discriminated against you because of your pregnancy, childbirth, need to breastfeed or a related medical condition, you can file a complaint within one year with the DC Office of Human Rights (OHR). To file a complaint, visit:

- Online at ohr.dc.gov; or
- In-Person at 441 4th Street NW, Suite 570N, Washington, DC 20001.

A case can also be initiated through the Department of Employment Services (DOES) Office of Wage and Hour Compliance by calling (202) 671-1880. All cases must be filed and investigated by OHR. Once OHR issues a decision, a DOES administrative law judge will decide if a violation of the statute occurred. The DOES decision may be appealed to the DC Office of Administrative Hearings.

* A “reasonable accommodation” is one that does not require significant difficulty in the operation of the employer’s business or significant expense for the employer, with consideration to factors such as the size of the business, its financial resources and the nature and structure of the business.
ATTENDANCE

Students are required to request time off 5 working days in advance, 2 days in advance for a doctor’s appointment. All leave requests must be through the online attendance system.

Students are required to log in and out each day. A record of the student’s attendance will be kept in the school office. Students are expected to make every effort to attend all classes and clinical rotations. The student is allowed a maximum of 12 sick or personal days per year. Excessive absenteeism must be made up **prior to the end of the trimester. Failure to do so will result in an incomplete grade and the inability to move on to the next trimester.** However, this does not apply to special circumstances, and will be the school staff’s discretion to decide the most appropriate action depending on the circumstance. Excessive absenteeism or tardiness as well as absence from class or clinic or leaving early without permission of the appropriate supervisor or school staff may result in the loss of points on the student’s clinical grade or disciplinary action which can lead to dismissal from the program. If a chronic problem of absenteeism or tardiness develops, the student may be required to provide documentation of tardy or absentee excuses and may be dismissed from the program. Any time a student is late or cannot make it to class or clinic, they must call in and speak to the school staff. If the school staff is not available, the student should leave a message. If the student does not call in, they are considered to have abandoned their position. The first time this occurs it will result in an automatic 2-day suspension. If the abandonment is longer than 2 days or occurs a second time, it may result in dismissal from the program.
ATTENDANCE

All Nonunion Associates

MISSION: MedStar Washington Hospital Center (MWHC), a valued member of MedStar Health, is dedicated to delivering exceptional PATIENT FIRST health care. We provide the region with the highest quality and latest medical advances through excellence in patient care, education, and research.

I. Purpose

The purpose of this policy is to assist management in the interpretation and implementation of attendance related issues for associates.

II. Statement of Policy

MWHC's commitment to patients and hospital operations demand regular attendance and punctuality in accordance with Hospital standards. Adhering to the work schedule is vital to providing quality patient care.

III. Procedure

A. Attendance Policy/Recording

1. A badge reader or computer equipped with TimePC must be used by all associates to properly record hours worked. Use of TimePC rather than a badge reader must be specifically authorized by Human Resources.

2. Associates must enter their own start/end time, and failure to do so may result in inaccurate pay calculation and may subject the associate to disciplinary action.

3. Associates are required to badge in at the start of the scheduled shift and badge out at the end of the scheduled shift at their assigned badge readers. Except as authorized by management in advance, associates may not badge in more than 6 minutes before the start of the scheduled shift and more than 6 minutes after the end of the scheduled shift.

4. Associates may also be required to badge in and out at the initiation and completion of scheduled break(s) and mealtime(s) or other times away from
the work area that are not directly related to the duties assigned.

5. It is the responsibility of management to review all time and attendance records and approve all time submitted to Payroll.

6. It is the responsibility of management to review attendance records on a regular basis and take appropriate action as needed.

B. Notification of Absence:

1. Associates are required to call-in at least one (1) hour before the start of the scheduled shift in accordance with department guidelines.

2. Associates must call in for each scheduled shift. That is, if an associate calls in Monday and is then unable to report for the next scheduled shift, the associate must call in again for the next scheduled shift.

3. In the event that the associate has, at the time of the initial notification of an absence, verifiable documentation showing the legitimate need for an absence beyond one (1) scheduled shift, management will accept that as notification for the defined period of absence. Upon return to work, the associate is to provide a copy of the documentation to the manager.

4. In no event will a “call-in” for a Weekend Incentive Program (WIP) associate be longer than one weekend (i.e. Saturday and Sunday). That is, if a WIP associate calls in on Saturday and Sunday with verifiable supporting documentation that will be considered one (1) call-in. But if the same associate then calls in on the following weekend, even for the same reason, that will be considered a separate call-in.

5. Improper Notification - Failure of associate to notify management that he/she will not be reporting to work as scheduled according to departmental guidelines.

6. No Call/No Show - Failure of associate to notify management that he/she will not be reporting to work as scheduled for one (1) full shift.

7. Abandonment of Position - Failure of an associate to notify management that he/she will not be reporting to work for two (2) or more consecutively scheduled shifts constitutes Abandonment of Position, which warrants termination.
C. Unscheduled Absences

1. All unscheduled periods of absence will be taken into consideration when reviewing an associate’s attendance record. If an associate is absent or late to work, it is recorded as an occurrence, regardless of the reason.

2. Each scheduled shift shall be considered a call-in unless the associate has verifiable documentation supporting the need for a defined period of absence at the time of the notification of the absence. (i.e. medical documentation stating associate needs to be out for three (3) days)

3. An associate is subject to disciplinary action, including, but not limited to, the following reasons:
   a. An associate who calls in on a day (or days), which had previously been requested and denied as scheduled vacation.
   b. The majority of unscheduled absences surround scheduled days off (vacation day, holiday, regular scheduled day off).
   c. Excessive unscheduled absences. The number of call-ins which are considered excessive is as determined by management (i.e. several call-ins in a brief period of time such as 3 call-ins in 2 months; many call-ins in a longer period of time such as 6 call-ins in 10 months; or 1 call-in after being counseled or stepped for unscheduled absences).
   d. Pattern of abuse is identified (i.e. calls in on consecutive holidays, Easter, or Mother’s Day; 3 call-ins on same day of week such as Friday or Monday; calls in day before or after scheduled time off; call-ins surround weekends).

Note: FMLA protected absences are not considered an occurrence when evaluating the attendance record for purposes of taking disciplinary action.

D. Occupational Health Clearance

Associates are required to clear through Occupational Health before returning to duty in the following situations:

1. Return from medical LOA, including maternity leave.

2. For all episodes of absence for reported work-related injury/illnesses (refer to HRP 613 Worker’s Compensation)

3. Absence from work due for non-work related illness or injury for a period of five (5) or more calendar days.
MAMMOGRAPHY

Mammography is a low dose breast x-ray designed to help in the early detection of breast cancer. Mammograms can identify breast cancer, in some cases, up to 2 years before it can be detected by physical examination or other methods of diagnosis. Mammography is also useful in continuing the presence of other breast diseases or abnormalities.

The natural incidence of breast cancer is 11% or 1 out of every 9 women. This number has increased over the last few years. This makes it critical to detect cancer of the breast as early as possible when survival rates are close to 100%. As with all x-ray procedures, mammography exposes the patient to small doses of radiation, but the benefits of early detection and treatment far outweigh the risk.

The current recommendation of the American Cancer Society and the American College of Radiology is that asymptomatic women over the age of 50 should have a yearly mammographic exam, women between the ages of 40 and 50 should have annual or biannual exams, and women between the age of 35 and 40 should have a baseline exam. Women with a personal or family history of breast cancer may need to be examined more frequently. Also any woman displaying a symptom or sign of breast cancer including lumps in the breast or armpit, discharge from the nipple, thickening in the breast, puckering or dimpling of the breast or abnormal skin on the breast should receive a mammogram.

To prepare for a mammogram, the patient is instructed to wear a 2 piece outfit. It is also requested that a patient not wear any deodorants, powders, ointments or perfumes on the breasts, armpits or chest as these substances can leave residues (such as aluminum chlorhydrate) which can be detected by x-rays. These trace metals may cause smudging or mimic micro calcifications that can be mistaken for very serious breast disorders. This can lead to further unnecessary radiation or more seriously to misdiagnosis and possibly even surgery.

Mammograms at Washington Hospital Center are performed on dedicated mammogram units which are used solely for this purpose. There are 2 basic mammogram exams: the diagnostic mammogram and the screening mammogram.

The diagnostic mammogram is performed on patients with specific breast problems such as palpable nodules or lumps, skin thickening, breast pain, personal or family history of breast cancer, or history of surgery for benign breast disease. After completing the exam, the technologist has the films reviewed by the radiologist. Any follow-up films are taken before the patient leaves the department. This exam directly involves the radiologist.

The other type of mammogram is a screening mammogram. This is performed on asymptomatic patients only (patients who have no suspected problem.) A true screening mammogram is indicated on patients over the age of 35 with no family history of breast cancer and no previous breast surgery. Once the history sheet is completed and the films are processed, the images are checked for diagnostic quality, correct positioning, patient identification and markers. After the images are cleared, the patient is released. The extremely important to remember two things:

1. Document everything! - All breast scars, patient refusal to accept full compression, patient unsteadiness, and anything else that may cause sub-optimal film quality. This information will give the radiologist necessary background information about your patient and may help in the diagnosis.
2. The other thing you must keep in mind is the anxiety involved for the patient in returning for follow up images. In most cases, the patient is afraid, some may cry and some are openly hostile. For this reason every film should be carefully scrutinized for quality prior to release of the patient. No patient should be put through call back and follow-up because of careless, avoidable mistakes such as motion, underpenetrated films or inaccurate positioning.

The standard exam recommended by the American College of Radiology consists of a cranial-caudad projection shooting from the top of the breast through to the bottom, and a medio-lateral oblique projection shooting from the middle of the breast to the outside border. The Radiologist may request additional special views if needed. The woman's breast is placed against the cassette and then compressed with a plastic compression device. Compression can cause the patient discomfort. You should be as understanding as possible and exercise care in compressing the breast. The purpose of compression is to equalize the differences in tissue thickness and reduce tissue thickness from the subcutaneous tissue to the chest wall. Proper compression has been achieved when the breast tissue feels taut to the touch. However each patient has a different tolerance level for discomfort; never compress a patient's breast beyond their reasonable comfort level. This provides a radiograph with more uniform density which can be more accurately interpreted by the Radiologist. Compression also decreases the geometric distortion of the breast structures and decreases motion artifacts on the film. It also reduces the patient's radiation dose. The criteria for evaluating the cranio-caudad projection includes:

As much of the most medial portion of the breast and as much of the most lateral portion of the breast as possible are demonstrated on the film without rotation, the nipple should be centered on the film and in profile unless this will sacrifice breast tissue.

Criteria for the mediolateral projection include: the pectoral muscle is well seen and extends to or below the nipple line, deep and superficial breast structures are separated and the inframammary fold is open.

Bilateral mammograms are always performed as it is important that the Radiologist be able to compare tissue in both breasts to make an accurate diagnosis. If the patient has old mammogram films, these should be pulled from the Film Library and given to the Radiologist for comparison with the current study.

MAMMOGRAPHY

Some final suggestions for your manual no rotation: Always keep in mind that the mammogram patient has very special needs; most patients are very intimidated just by coming in. Keep your conversations very general and direct. Your patient takes everything you say literally and personally.

ALWAYS:

Make sure you introduce yourself to the patient. Ask if there are any questions before you begin positioning. Indicate to your patient your intentions before you begin to touch the breast (even if they have had a mammogram before.) Be pleasant!

NEVER:

Use terms such as big cassette or small cassette (your patient may think this refers to personal breast size.) The correct terms are 24 X 30 cassettes or 18 X 24 cassettes.
Never make any references to pathology when imaging (if you notice anything out of the ordinary inform the Radiologist.)
Never give opinions about the patient's physician even when asked.

Required Reading: Mammographic Quality Control Radiologic Technologist Manual, pp. 57-98 - You can borrow this from the mammogram technologist.

Learning Objectives: At the end of one or more rotations through mammography, the student will be able to:

Stock and prepare the room.

Turn equipment on and off.

Use the control panel including: ma, kvp, sec settings, focal spot, meters, photo timing-cells, Bucky and density settings, ready & overload lights, rotor & exposure switch.

Use technique and tube rating charts to determine manual and photo timing exposure factors.

Make proper exposures.

Operate mammography unit including auxiliary devices.

Properly place anatomical markers on film.

Evaluate requisition for exam; history and patient information and check with information in Chart or on prescription slip.

Double-check the patient’s name and medical record number with armband or with questions.

Introduce yourself to the patient, explain the exam and obtain relevant medical history for the Radiologist. Complete the mammography information sheet.

Show an awareness and concern for the patient’s physical and emotional needs - assist them to move into position, make them comfortable, and be supportive and respectful.

Properly position the patient for cranio-caudad, medio-lateral oblique; another special projections as ordered.

Practice proper radiation protection measures for patient, self and others.

Follow proper quality control procedures in marking films and paperwork, completing computer data entry and having films checked before releasing patient.

Evaluate films in terms of proper technique and positioning, presence of artifacts, patient and anatomical identification.

Recognize basic anatomy and begin to recognize pathology.

Properly process Image receptors, and report equipment malfunctions
At the end of one or more rotations, the student will be introduced to: breast localization and stereotactic biopsy procedures. And proper imaging of patients with breast augmentation and reduction.
Mammography is an elective rotation in the senior year. All students are given the opportunity to rotate as an elective.
A wide variety of examinations are performed in Interventional Radiology including arteriogram, venograms, digital subtraction angiograms, biopsies and interventional studies.

Arteriogram is studies in which arteries are opacified by the injection of a contrast solution. The basic routine for any patient who is scheduled to have an arteriogram is for the patient to be placed on a clear liquid diet the day prior to the exam and the patient is given some pre-medication to relieve some of the anxiety of the test. The pre-medications used include demurral (meperidine) which makes the patient drowsy, valium (diazepam) which helps to relax the patient, phentanyl or versed which tends to make the patient forget. The type and amount of drug used will depend on the patient's age, weight, medication history and allergic history.

After the patient is brought into the room, the injection site is shaved and prepped using sterile technique. Most arteriograms are done via a femoral puncture. Before the groin is prepped, the femoral pulse must be located (midway between the ASIS and symphysis pubis). After location of a good femoral pulse, the groin is shaved and then scrubbed with betadine using a circular motion. Next the patient is draped with sterile sheets and towels. This establishes a sterile field on which the doctor can place sterile instruments close to the injection site. It is extremely important that the sterile field remain sterile. If contamination occurs, the contaminated towel, glove, instrument, etc. must be removed and replaced with an article that is sterile. Infection during a sterile procedure can be a very serious complication. After the patient has been prepped, the Radiologist will use the Seldinger technique to advance the catheter to the area of interest. The type of catheter and guide wire used and the number of lines will depend on the area of interest and the patient history.

One common study performed is an aorta gram and run-off study to examine the aorta, aortic branches, aortic bifurcation and the arterial circulation to the lower extremities. Another common study is an arch and carotid study to examine the aortic arch and the 3 vessels branching off the arch. Three separate runs are included: one of the arch and branches, and a selective of each carotid artery. A three vessels or intracranial study is an even more selective way to look at circulation to the head and face. The three vessels studied are both common carotid arteries and one of the vertebral arteries. A pulmonary arteriogram examines the pulmonary circulation. Other selective studies of specific arteries may also be performed.

Digital subtraction angiography uses a computer in conjunction with x-rays to examine blood flow. DSA can be performed with either a venous or arterial injection. Almost any area of the body can be examined, but the most common exams performed are arch and carotids, renal arteriogram, aorta grams, run-offs and PA-grams. In some cases, DSA can be performed on an out-patient basis.

Over the past several years there has been an increase in interventional procedures to provide treatment for many different conditions. Interventional procedures may help a patient avoid surgery, decrease the length of a hospital stay, decrease the cost of treatment of a disease and/or speed up the patient's recovery time. New interventional procedures are being developed all the time. Interventional procedures include:

1. PTA - a special catheter with a balloon on the end that pushes plaque against the wall of a blood vessel increasing the diameter of the lumen.

2. atherectomy - treatment for arterial occlusion by using a catheter with a special cutting blade and collection chamber for removal of plaque.
3. Vascular stents - metal structures which when expanded remain permanently in the patient to keep stenotic vessels open.

4. Embolizations - to decrease bleeding pre-operatively for tumors or to slow down or stop GI bleeders.

5. IVC filters - wire mesh structures placed in the inferior vena cava to prevent emboli traveling from the lower extremities to the pulmonary arteries.
COMPUTERIZED TOMOGRAPHY

Computerized Tomography is used to produce a series of cross-sectional images of the body. The area of interest is cut into slices for scanning and viewing purposes to eliminate the superimposition of many different structures that occurs in a standard x-ray. The images obtained can be reconstructed so as to view them on different planes, and even in 3-D.

The patient is placed on a table. The table is then moved to place the area of interest within the gantry. Laser centering lights are used for precise patient positioning. The gantry contains an x-ray tube which moves in a spiral pattern around the patient's body, and detectors that respond to any radiation emerging from the body. Radiation hitting the detectors is converted into electrical current and the information contained in this current is then fed into an analog to digital converter before being processed by the computer. The final cross-sectional image produced by the computer is viewed on a CRT screen.

The appearance of the image can be changed by changing the window and level settings on the viewing console. Window controls the number of densities demonstrated - this is similar to contrast on a regular x-ray. Level is the central point of your window densities. CT is excellent in its ability to demonstrate contrast between structures. It is not as good at demonstrating resolution or detail - the structural lines are not as sharp as on an overhead film.

The CT unit scans the patient in the transverse and coronal planes, but also has the ability to reconstitute images in either the sagittal, coronal, paraxial, oblique and perpendicular planes. The CT units also have the capability of 3-dimensional imaging.

Contrast materials are used for some CT studies. Iodinated or non-iodinated water soluble contrast may be used for head, abdominal or pelvic CTs. Barium or gastrografin may be used for abdominal or pelvic studies. Occasionally, the CT exam is scheduled to follow an NP or a myelogram to take advantage of the contrast already introduced in the body for these studies. If a patient is to receive iodinated contrast, they should be NPO for 2 hours prior to the exam. If the abdominal or pelvic area is to be imaged, the patient must be NPO for 4 hours prior to the exam.

CT is also used on occasion to perform biopsies on various body parts.

As on standard x-rays, artifacts can occur on a CT scan. Motion is probably the most common artifact. Metallic shunts or prostheses in the body may also cause artifacts to appear.

Learning Objectives: At the end of this rotation, the student will be able to:

Position the patient on the table for a variety of examinations.

Be familiar with the operation of the table, gantry, scan console and viewer console.
Demonstrate a comprehension of information on the requisition and patient chart relating to the CT scan.

Assist in preparation and administration of contrast media.

Demonstrate an understanding of the applications of contrast media in CT - why and when they are used, possible adverse reactions and treatments to reactions.

An understanding of the patient preps for various CT exams. Use the laser imaging camera.

Begin to recognize cross-section anatomy of the body.

Process paperwork and

Recognize and report equipment malfunction to the appropriate supervisory, QA or equipment personnel.
INTERVENTIONAL RECOVERY ROOM

Your rotation through the interventional recovery room will give you an opportunity to observe and practice many of the patient care skills you have studied in Patient care class. You will be working with and under the supervision of the interventional nursing staff.

You will have an opportunity to follow a patient through their care in this area beginning with their initial pre-op assessment by the nursing staff, the explanation of the exam and obtaining of consent forms by the Radiologist, the administration of pre-medications and the preparation of the sterile field. Then you will observe the interventional procedure and nursing support offered to the patient during the exam. Finally, you will follow the patient to the recovery room to observe the follow-up nursing assessment during the recovery period.

You will also get a chance to observe proper record keeping and the techniques of surgical asepsis, and will have an opportunity to practice taking vital signs. Part of your rotation will also involve becoming more familiar with the code cart. You
may observe both contrast reactions and treatment for contrast reactions during this rotation.

We would recommend that you review both your notes from Patient Care Class and your Patient Care textbook.

LEARNIG OBJECTIVES:

By the end of the rotation, the student will be able to:

Locate the code cart, suction, oxygen, blood pressure cuff and stethoscope.

Locate and identify the different components of the code cart.

Take and record patient vital signs.

Correctly interpret and write chart notes.

Identify common pre-medications and their effects.

Identify common dedications used in contrast reactions and their effects.

Demonstrate an awareness and understanding of the patient’s physical and emotional needs during an interventional exam, and demonstrate the ability to meet those needs.
ALIMENTARY TRACT AND ITS ACCESSORY ORGANS
Junction of:
- Stomach
- Small Intestine
- Common Bile Duct (CBD) of Liver

Liver
Gall Bladder
Common Bile Duct
Pancreas
Duodenum

Stomach
Hepatic ducts

Small Intestine (Duodenum)
Digital Radiography Objectives

In radiology we have 3 complete DR rooms: Rm 20, Rm 12, and ccr rm 3. With digital radiography

Learning Objectives: at the end of one or more rotations through these digital rooms, the student will be able to:

- Identify and describe the functions of a total digital radiography system.
- Describe the general function of the receptor.
- Identify the general advantages of DR compared to film/screen.
- Identify the general function of the image processing component.
- Identify the general function of the image management component.
- Identify the function of memory and storage component.
- Identify and use the display and display control component.
- Will be able to use the patient information component.
OR Main Desk:     x-7-6411
OR darkroom:      x-7-7837

Suggested Reading: Review your Patient Care textbook.

Learning Objectives: At the end of this rotation, the student will be able to:

Demonstrate a knowledge and application of the rules of surgical asepsis.
Dress appropriately.
Locate portable, c-arm and auxiliary equipment.
Operate portable, c-arm and auxiliary equipment.
Position film and equipment appropriately for a variety of exams.
Set correct technical factors for a variety of exams.
Operate darkroom.
Process paperwork, films and computer entry according to departmental protocol.
Become familiar with the OR layout and procedures.
Interpret OR schedule for exams requiring x-ray support.

Report equipment malfunctions to the appropriate supervisory, QA or equipment maintenance personnel.

QUALITY ASSURANCE

The purpose of the quality assurance rotation is to give you an opportunity of applying the quality assurance principles and tests you learned in class.

Learning Objectives: By the end of this rotation, the student will be able to:

Perform a variety of quality control tests on radiographic equipment and automatic processors.
Record repeat analysis data.

Recognize the role and importance of a quality assurance program to a Radiology Department.
Recognize and operate quality assurance analysis equipment.
IP IS IN A CASSETTE THAT IS REFERED TO AS A FILMLESS CASSETTE.

IN ORDER FOR THE CR TO FUNCTION THE IP MATERIAL MUST HAVE THE ABILITY TO STORE AND RELEASE THE IMAGE INFORMATION IN A USABLE FORM.

- MOST COMMON PHOSPHOR: BARIUM FLUOROHALIDE BROMIDES AND IODIDES WITH ERIOPIUM ACTIVATORS
- HALIDES 85% BROMIDE
- HALIDES 15% IODIDE
- PHOSPHOR ABSORBS LOW ENERGY
- APPROPRIATE KVP SHOULD BE USED (MORE THAN REG. FILM)
- IP ARE MORE SENSITIVE TO SCATTER BEFORE & AFTER IT IS SENSITIZED THROUGH EXPOSURE TO THE XRAY BEAM.

LATENT IMAGE PRODUCTION:
- THE XRAY BEAM PRODUCES A LATENT IMAGE WITHIN THE PHOTOSTIMULABLE FLUOROHALIDES THAT COMPRIZE THE ACTIVE LAYER OF THE IP
- WHEN THE FLUOROHALIDES LUMINESCE THEY DO NOT RELEASE ALL THE ENERGY ABSORBED FROM THE XRAY BEAM.
- ALTHOUGH SOME LIGHT IS EMITTED THE PHOSPHORS RETAIN SUFFICIENT ENERGY IN THE FORM OF A LATENT IMAGE.
- THE LATENT IMAGE WILL BE USED TO CREATE A DIGITAL IMAGE FOR THE COMPUTER TO RECORD AND DISPLAY.
- *THE LATENT IMAGE WILL LOOSE ABOUT 25% OF ITS ENERGY IN 8HRS (IT IS IMPORTANT TO PROCESS THE CASSETTE SHORTLY AFTER EXPOSURE).
- PROCESSING: THE IMAGE IS PROCESSED BY LOADING THE CASSETTE INTO AN IRD (IMAGE READER DEVICE).
- THE IP IS SCANNED BY A HELIUM-NEON LASER BEAM.
- ONCE THE PLATE IS READ IT IS THEN ERASED TO REMOVE THE LATENT IMAGE.

IMAGE ACQUISITION:
- STARTS WITH THE XRAY EXPOSURE TO THE IP
- RULES OF POSITIONING: AREAS THAT ARE CLIPPED OR POORLY POSITIONED CAN NOT BE FIXED.
- IT IS THE RADIOGRAPHER'S RESPONSIBILITY TO SET PROPER TECHNIQUES.
- OVER EXPOSURE SHOULD BE AVOIDED BECAUSE SOME OF THE ELECTRONS ARE TRAPPED IN THE PHOSPHOR CREATING A LATENT IMAGE STORED IN THE IP.
- THE IP NEEDS TO BE READ TO RELEASE STORED INFORMATION WHICH CAN BE MANIPULATED BY THE COMPUTER IN EITHER SOFT OR HARD COPY FORM.
- Because of background radiation it is recommended that plates be erased daily if not used to eliminate unwanted noise from these sources.
- Grids should be used for chest measures 24 to 26 cm thick.
- FYI: Indirect silicon flat panel imaging plate systems cannot directly convert x-rays into electric charge. It works as a light detector to capture fluorescent light.
   **Charge Coupled Device (CCD):** Once the image has been converted into an electrical signal, it still needs to be converted into electronic pulses that are correlated to the image matrix for the computer. One method of accomplishing this signal is to place a CCD in contact with the scintillator.

**** TFT (Thin Film Transistors): They are amorphous silicon and amorphous selenium. Flat panel detectors use TFT's for electronic readout. They collect the electrical charges and send signals.

**Direct Radiography:**
Direct exposure imaging systems: Directly convert incoming x-ray photons to electronic digital signals (DR)
*Direct selenium flat panel imaging plate systems have an active layer (IP) is an amorphous selenium (semiconductor)
*Has excellent x-ray photon detection and spatial resolution
*Prior to exposure there is a charge on the top surface of selenium layer then the exposure then the charge is collected then transmitted to the computer for processing.

**DICOM Standard**
Digital Imaging and Communications in Medicine (DICOM): Standard is a system of computer software standards that permit a wide range of digital imaging programs to understand one another.
Ex: PACS (Picture Archival Communication Systems)

**Computed Radiography Artifacts:**
**Computed radiography has unique artifact patterns as a result of errors in the systems.**
1) Fogging - IP being more sensitive than film
2) Quantum Mottle - Inadequate exposure (insufficient mas)
3) Heat blur - IR being exposed to intense heat
4) Histogram error - Incorrect preprocessing ex: Histogram selection selecting a chest for hand
5) Non-parallel collimation - Collimation edges be parallel to the sides of the imaging plat
READING DIGITAL DATA
*IN VolVES A FINELY FOCUSED LASER BEAM THAT FREES THE TRAPPED ELECTRONS THAT ALLOWS THEM TO RETURN TO A LOWER ENERGY STATE REFERED TO A PHOTOSTIMULATED LUMINESCEENCE (psl). RELEASES A BLUE PURPLE LIGHT

FIGURE 43-2

DURING PROCESSING THE CR SYSTEM MUST DETERMINE THE PART ORIENTATION AS WELL THE # OF PROJECTIONS, BODY PARTS NEED TO BE CENTERED AND COLLIMATED.

COMPUTED RADIOGRAPHY IMAGE QUALITY:
• IMAGE READER DEVICE ANALYZES THE IP EXPOSURE ANDS ADJUSTS THE SENSITIVITY OF THE RECEPTORS TO ASSURE MAXIMUM DATA ACQUISITION.
• IT IS IMPORTANT TO UNDERSTAND HOW TO ASSESS IMAGE QUALITY
• SEVERAL VALUES DIFFERENT MANUFACTURES USE DIFFERENT SYSTEMS FOR THIS INFORMATION THE BASIC CONCEPT IS SIMILAR.
• FOR EXAMPLE: THE FUJI SYSTEM:
• USES AN S# SYSTEM TO ASSIST IN EVALUATING EXPOSURE
• THE EXPOSURE IS INVERSELY PORPORTIONAL TO THE EXPOSURE REACHING THE IP.
• THE S VALUE = IMR RADIATION THE IP HAS RECEIVED
• HIGHER THE S VALUE OVER 200 IT IS UNDEREXPOSED
• LOWER THE S VALUE UNDER 200 IT IS OVEREXPOSED
• NORMAL RANGE FOR S VALUES 150 TO 200
• REMINDER: KVP=CONTRAST
• SOME MAUNFACTURES SUGGEST THAT NO MORE THAN 80 KVP FOR NON GRID IMAGING SHOULD BE USED BECAUSE THE HIGHER THE KVP MORE FOG LESS CONTRAST.
• #1 ADVANTAGE CR HAS A WIDE DYNAMIC RANGE RESPONSE OF THE IP DETECTOR
• #1 DISADVANTAGE THERE IS A GREATER DANGER IN PERMITTING PERSONAL PROFESSIONAL STANDARDS: TO RELAX AND ROUTINLEY OVEREXPOSING THE PATIENTS WITH THE INTENTION OF THE CR SYSTEM ADJUSTING THE HISTOGRAM TO CORRECT THE EXPOSURE.

IMAGE ACQUISITION ELEMENT:
*MANY ADVANATGES AND DISADVANTAGES
*BIG ADVANTAGE:REDUCTION OF REPEAT EXPOSURES WIDE DYNAMIC RANGE : WHICH MEANS ABILITY TO USE WINDOWING AND LEVELING THE IMAGE.
MOR EXPECTATIONS

. Student should be in MOR by 8:00AM sharp. Dressed in green had breakfast and ready to go.

. If you are late or not coming in, you should call the MOR at extension 7-7837 by 7:45 AM.

. Bring a notebook and pen to take notes.

. Read sections in your patient care handbook Ch. 18 pages 361-370 about Surgical Asepsis and Ch. 21 pages 417-424 about OR procedures.

. Students can bring a scrub jacket to wear if they are cold. You cannot wear coats, sweaters, or bring purses while walking through the OR.

. This is a sterile area. No food and drinks are allowed to be brought back in the OR.

. You must remove all hats, shoe covers and masks before exiting the OR.

. Have your badge, markers and Technique book with you.

. Come with a positive attitude and ready to learn. Accept criticism and learn from it!
Diagnostic Radiology Competency Checklist

Section: Main Operating Room Rotation

Equipment: □ O.E.C. C-Arm
□ Siemens
□ Mini C-Arm

(Employee) (Date) Orientation/Assessment by: (Name)

Employee has been instructed on and demonstrates knowledge and appropriate skills in the following:

I. Identification & Handling of Proper Equipment, Sources and Resources

   a. ___ Identify normal location of equipment
   b. ___ Identify the procedures for which the equipment is primarily used
   c. ___ Identify safe power sources in rooms (power outlets acceptable for use with this equipment)
   d. ___ Demonstrate safe handling and transport of equipment
   e. ___ Identify proper contacts, phone number(s), & pager number(s) in the event of equipment failure.

II. Power-Up & Power-Down Procedures

   a. ___ Demonstrate proper sequence of power up & warm up protocol for C-Arm & monitors
   b. ___ Demonstrate proper sequence of power down protocol for C-Arm & monitors
   c. ___ Demonstrate emergency off and/or emergency circuit breakers (general C-Arms)
   d. ___ Demonstrate emergency off and/or emergency circuit breakers from remote control or joy stick on vascular C-Arm only.
   e. ___ Demonstrate recovery from power failure/power fluctuation
   f. ___ Ensure all images are saved prior to powering off c-arm.
   g. ___ Demonstrate machine breakdown protocol

III. C-Arm Control Panel

   a. ___ Identify console layout
   b. ___ Identify parameters and procedures for entering patient information
   c. ___ Identify parameters on console for Image Directory (storing images)
   d. ___ Identify parameters console for Disc View
   e. ___ Identify “Help” button on the console
   f. ___ Demonstrate use of Roadmap
   g. ___ Demonstrate use of Subtraction (a.k.a. “Playback”)
   h. ___ Demonstrate correct orientation of image
   i. ___ Demonstrate use of the “Save” function
   j. ___ Demonstrate proper use of KV, MAS (Tech Lock) settings
   k. ___ Identify and demonstrate beam size restriction (collimation)
   l. ___ Identify and demonstrate Fluoro Time Reset
Identify and demonstrate use of Magnification
Identify and demonstrate manipulation of Image Gain (contrast, brightness)
Identify and demonstrate image rotation
Demonstrate sending images to PACS and Dicom reflector (for Azyxxi)
Identify and check for images in PACS and Dicom reflector (through Azyxxi)

IV. Appropriate C-Arm Locks & Movements

a. Demonstrate C-Arm extension movement
b. Demonstrate C-Arm Wig-Wag (L→R) movement
c. Demonstrate lateral C-Arm movement
d. Demonstrate vertical C-Arm movement
e. Demonstrate C-Arm angulation (e.g., pelvic inlet and outlet views)
f. Demonstrate correct movement of C-Arm over patient
g. Demonstrate engagement of workstation wheel locks for C-Arm and monitor.

V. Photography of Cases Using:

a. Demonstrate proper loading and development of ultrasound cassettes
b. Demonstrate utilization of VCR
c. Demonstrate utilization of Diskette

VI. Basic Understanding of C-Arm Procedures, Exam Charges and Other Bill-Only Items.

a. Identify vascular procedures and its respective exam charges
b. Identify chest catheterization procedures, heart biopsies and their respective exam charges
c. Identify orthopedic cases, cholangiography studies, & respective exam charges
POB

RULES AND PROTOCOLS

• SHIFT BEGINS AT 8 am
  o CALL & INFORM @ 202-877-4710 IF TARDY OR CALLING OUT

• HAVE POCKET POSITIONING/TECHNIQUE BOOK & MARKERS; STUDYING/HOMEWORK ALLOWED IF DOWNTIME

• MORNING/DAILY DUTIES
  o SECONDARY ERASE CASSETTES; AS NEEDED WIPE DOWN ROOMS, STOCK LINEN & CHANGE LINEN HAMPERS

• AS ORDERS COME THROUGH
  o TAKE REQUISITION FROM PRINTER; USE LABEL FOR PREGNANCY FORM, OTHERWISE DISCARD
  o CALL PATIENT BACK USING NEMO-Q, COLLECT SCRIPT(S) & HAVE THEM CHANGE INTO GOWNS AS NEEDED
  o ALL ORDERS MUST BE CHECKED BY TECH BEFORE STARTING EXAM

• CONFIRM PATIENTS NAME/DOB/DOCTOR & STUDY BEING DONE
  o HAVE PATIENT INITIAL REQUISITION
  o ALL WOMEN UNDER 55 MUST FILL OUT PREGNANCY FORM

• IF GETTING A GRADE YOU MUST INFORM TECH AT THE BEGINNING WHEN REQUISITION IS PRINTED

BE ABLE TO USE THE FOLLOWING

• EXAM TABLE, TABLE BUCKY & UPRIGHT BUCKY
• CONTROL PANELS
• FUJI WORKSTATIONS
• CERNER
• NEMO-Q TICKET SYSTEM
• CASSETTE PROCESSORS
• PACS SCANNER
• AMALGA, iSITE & iSUITE
Ortho rules

- Be on time
- Give prior notice of absences and early departures
- E-mail or call 6-1074 if you will be late
- Always have your "markers"
- Verify all exams with technologist before bringing the patient into the room
- Images that have been taken should be verified by the technologist before sending to Amalga.
- I.D Badge should always be visible
- La Janca Lewis
- Radiologic Technologist
- 202-677-4040 or 6-1074
4C Portable Rules and Regulations

1. Students are expected to arrive to 4C on time.
2. Students are expected to wear appropriate uniform including badge and markers.
3. If student will be late or absent from 4C, please inform us.
4. Students may bring books to study/do homework during downtime but are expected to contribute to the workflow when necessary.

Expectations

1. Hand hygiene before and after each patient encounter.
2. Work safely and efficiently around support devices while in patient rooms.
3. Learn how to read and utilize the worklist.
4. Show initiative and work towards independence.
Be on time for clinic
Have student technique book
Ask questions
Take notes
Have right attitude
Be aggressive
Practice positioning when possible
Accept constructive criticism
Learn and use technique factors
Properly access patients
Main Diagnostic Rules and Protocols for Students

X-Ray Processors and Other Related Equipment Proficiency

- Consistent use of ALL equipment détenes (table, vertical, longitudinal, transverse)
- Raising and lowering telescoping tables, vertical buckys, and x-ray tubes.
- Adjusting vertical bucky sensors to horizontal or angled positions.
- Patient safety standards: locking in or locking down equipment accessories (e.g., lock in bucky bars, locking table to prevent accidental movement)
- Rotate and angle x-ray tube.
- Appropriate use of legacy podiatry stand and selecting technical factors
- Use of Merchant View stand
- Knowledge of centering points
- Process images using the FUJI computers and Philips processors (including scanning cassettes)
- Basic equipment troubleshooting
- Cassette and screen maintenance (latch operations, screen insertions, et. al.)
- Adding, changing or removing views on FUJI processors
- Q.A. images for sensitivity ranges, contrast, positioning, structures shown, etc.
- Image shuttering, window level adjustments, annotating information on images.
- Suspend images
- Printing images where available
- Query names at workstations from interface
- Manually query names from workstations
- Add/register names and exam protocols when interfaces are slow or down
- Query multiple studies on patient at workstations; while remaining on correct accession.
- Choosing bucky or tables options (DR) vs. table top (cassette) options (CR)
- Familiarity/overview of PACS iSite/iSuite
- Use of HEPA filters
Main Diagnostic Rules and Protocols for Students

- We welcome your on-time arrival of no later than 8am.
- Eat breakfast **PRIOR** to arriving on the clinical area.
- Must call and inform senior tech @ 202-877-6760 or x-9302 if tardy or calling out. Follow up with an email.
- Be ready to work. Have your pocket positioning handbook, anatomic markers & film badge.
- We welcome all questions. Techs are here to help!! Then ask again, and again.
- If necessary make temporary markers prior to patients arriving on floor.
- If a grade is needed on a patient exam, you must inform the appropriate tech **PRIOR** to the exam. The tech will decide if the exam is appropriate for a grade. Do not request a grade after the exam has been performed.
- Students are welcomed to bring books to study/do homework during downtime; but clinical workflow and patient care takes precedence over study time.
- Students are strongly encouraged to aggressively pursue exams with utmost care with safety-first in mind.
- Be able to identify anatomy during exams and ensure structures needed are the structures that are shown in the image.
- Use protective shielding and utilize collimation.
- Remain flexible when dealing with severe or critical cases during exams; occasionally, more experienced techs may need to take over the exam.
- Become familiar with assist-devices and accessories used to position patients (i.e., positioning sponges, cassette holders, removable grids, etc.)
- May practice in the rooms during slow periods.
- NEVER ...EVER unnecessarily access patient records unless you are given an assignment or working with that patient.
- Do your best to protect patient privacy and health information at all times (this including printing films, reports, requisitions). Dispose patient information safely (designed recycle bins, film boxes, etc.)
- NEVER ...EVER dispose of ANY patient information in regular trash cans.
- Other rules not otherwise indicated shall be followed.
Daily Duties

- Secondary erase and wipe down cassettes
- Wipe down rooms (table, buckys, etc.)
- Ensure changing booths have at least 2 clean gowns; and place used gowns in hamper.
- Stock linen closet and exam rooms with needed linen (please do not over stock!!)
- Stock changing booths with clean patient gowns; remove used gowns
- Stock blanket warmer
- Wipe down keyboards, phones and desks in tech work area.
- Please use caution!! Do not wipe down computer or workstation monitors with wipes...especially plasma (touch-screen) workstation monitors.
- Change laundry bags; replace with new bags
- Check O₂ tanks. Exchange tanks in Respiratory Department if necessary.
- Stock room supplies (gloves, isolation gowns, tape, wipes, tissues, etc.)
- Other duties as assigned

Inpatient Exams

- Prior to approaching the patient, check patient hand-off form for SBAR information. After verifying that the correct chart has arrived with the correct patient, SIGN CHART (this is mandatory)!!
- Set up the exam room first and ensure that it is clean prior to bringing in the patient.
- Check with a tech to ensure that the views ordered are appropriate for the reason-for-exam/clinical indication
- Always perform PPID (positive patient identification: name & DOB)
- Look for special instructions from the physician on the requisition.
- Verify with patient that their physician ordered the correct side.
- Knowledge of “TLC” protocol for post-op heart and TAVR patients

Outpatient Exams

- Prior to approaching patient, verify that the correct referral is with the correct requisition.
- Have age and gender appropriate patients complete a pregnancy form.
• Read the physician’s referrals & orders very carefully!! Some orders may request special views or instructions. Then, verify that the correct order was generated against the physician’s referral.

• Always perform PPID (positive patient identification: name, DOB). Note: some patients will answer to any name. Ensure you have the correct patient.
• Always verify with patient that their physician ordered the correct side.

_Demonstrate proficiency with the following:_

• Logging into hospital network
• Logging into and perform Cerner Radnet applications
• Logging into Cerner PowerChart (aka: MedConnect) Search for a patient under the correct visit.
• Logging into Teletracking. Send for a patient. Return a patient.
• Logging into PACS. Scanning patient documents.
• Logging into Amalga. Search for patient’s study under the correct visit.
• Starting and completing exams in Radnet
• Navigate Radnet Online Worklist
• Navigate Radnet Order Viewer
• Replacing and canceling exams
• How to search for patient information in Radnet
• Reprint requisition (Diao does not use labels)
• Type electronic notes on electronic requisitions for another shift or modality.
• Know the difference between CR and DR processing
• Answer phones, place on hold, transfer calls, etc.
• Telephone communication with unit clerks, RNs, MDs, transporters, etc.
• Using the STAT Telemetry phone lines
• Safely handle stretchers, wheelchairs, lifting devices (breaks, locks, arm rails, wheels, footrests, steering, etc.)
• Use of appropriate language and equipment for bariatric patients
• Consistently practice hand hygiene before and after patient care.
• Donning gloves, gowns, masks when appropriate when handling patients
• Knowledge for proper protocol for AIRBORNE isolation patients
TFO EXPECTATIONS

- Student should be in TFO by 8:00 sharp. Dressed in green, had breakfast and ready to go.

- If you are late or not coming in you should call the TFO at extension 7-0501 by 7:45 AM.

- Bring a notebook and pen to take notes. Read section on Urinary System in your handbook.

- Student can bring a scrub jacket to wear if they are cold. You cannot wear coats and sweaters while walking through the OR.

- This is a sterile area. No food or drink is allowed to be brought back into the TFO.

- You must remove all hats, shoe covers and mask before exiting the TFO.

- Have your badge, markers and Technique book with you.

- Come with a positive attitude and ready to learn. Accept criticism and learn from it.
Cystology is the area in the 3rd floor operating room where surgical procedures to visualize the urinary tract are performed. There are several different studies done in this area all of which concentrate on structures of the urinary tract as opposed to function. For example, these studies might be performed to locate a stone or a constricted area of a ureter. If a doctor is interested in demonstrating function of the urinary system, an IVP in Radiology or a renal scan in nuclear medicine would be ordered to demonstrate the kidneys’ ability to perform their normal function of filtering certain materials out of the blood. Depending on the patient’s medical history and condition the Urologist will decide if the procedure should be performed under local or general anesthesia.

Most of the time, you will be asked to take a pre-film of the abdomen before the procedure begins. The advantage of taking a pre-film is that it gives you an opportunity to check your technique and positioning both of which are critical to producing a diagnostic film after injection of the contrast material.

For the exam, the Urologist inserts a cystoscope through the urethra into the patient’s bladder. A cystoscope is a hollow metal tube with an electric light bulb on the end, which illuminates the interior of the patient’s bladder. By means of special lenses and mirrors, the doctor can examine the lining of the bladder for inflammation, stones and tumors.

One of the most common exams performed in Cysto is the cystogram - a study to visualize only the bladder. The patient’s bladder is catheterized - inserted with a flexible tube through the urethral opening in the bladder wall, and then the bladder is filled to capacity with a dilute solution of contrast material. The average bladder capacity is 350 - 500 cc in an unanaesthetized patient. Once filled to capacity, the catheter is clamped off, and one KUB film is taken. The film should be centered a little lower than a routine KUB so that all of the bladder will show on the film. Cystograms are done to examine the contour of the bladder to check for reflux of fluid from the bladder into the ureters and to rule out stones. A patient history of incontinence (inability to control urination) frequency of urination or pelvic pain can be an indication for a cystogram.

A urethrogram is a study of the urethra. It is helpful in determining if there is a blockage anywhere in the urethra which may be causing urinary retention. The patient is placed in an oblique position and again centering should be lower than normal in order to include all of the urethra. Immediately after injection of the contrast by the Urologist, one film is taken.

A voiding cystourethrogram is sometimes included with a cystogram. Again the bladder is filled to capacity with contrast material via a catheter. Then the catheter is removed and the patient is asked to void. While the patient is voiding, several KUB films are taken with the patient in an oblique position. This study enables the Urologist to see how the bladder empties and shows the entire length of the urethra.

Another study performed in Cysto is a retrograde pyelogram. The root word pyelo- refers to the renal pelvis. This area of the kidney is the upper expanded end of the ureter that connects to the calices. A retrograde pyelogram can be either unilateral or bilateral. In a unilateral study only one side of the urinary tract is examined. In a bilateral study, both sides are examined, one at a time. The term retrograde means going against the normal flow. The normal flow of urine is from the kidneys through the calices and renal pelvis into the ureters and from the ureters down to the bladder and out the urethra. In a retrograde study, a catheter is threaded through the urethra and bladder and into the
quiz

1) The pair of tubes which extend from the renal pelvis of each kidney to the bladder are called ____________________________.
   In a person of normal body build, the kidneys extend from the upper border of ______ vertebra to the transverse processes of ______ vertebra.

3) Is the right kidney higher or lower in position than the left? why/__________.

4) The longitudinal slit in the medial border of each kidney that transmits nerves and blood vessels and the ureter is the ____________________________.

5) The expanded, funnel-shaped area that drains urine from the major calyces into the ureter is the ____________________________.

6) The triangular area between the 2 ureteral orifices and the urethral opening in the bladder is called the ____________________________.

7) the ____________________________ is the tube which conveys urine from the bladder to the exterior.

8) It is sometimes possible to see the kidneys on plain abdomen films because they are surrounded by ____________________________.

9) The glandular organ sitting below the bladder and surrounding the urethra in a male is ____________________________.

10) All exposures in abdominal films should be made on what phase of respiration ____________________________.

11) What does IVP stand for ____________________________.

12) List possible reactions to contrast injections (iodine)* ________________

   Name 2 contraindications for contrast injection ____________________________

quiz

1) what are 3 types of micro-organisms that hospital disinfectants must be effective against ____________________________.

2) list 5 rules of surgical asepsis ____________________________

3) What is the difference between an antegrade and a retrograde study ____________________________

4) what is a urinary catheter ____________________________.

5) True or false  The drainage bag should be kept above the level of the bladder.

6) True or false - The bladder is an unsterile area.

7) for the following studies done in cysto, list the anatomical structures shown:

   - Cystogram
   - Retrograde pyelogram
   - urethrogram

8) List 2 methods of sterilization of instruments in the OR ____________________________.
UROLOGICAL X-RAY STUDIES

KUBGRAM:
Do KUB prefilm. Be sure to include a little below symphysis bone. Dr. catheterizes the patient and fills the bladder with a mixture of contrast and water. He clamps the catheter and steps out. We shoot KUB and anything else the Dr. requests. (14X17's) [looking at bladder]

RETROGRADE PYELOGRAM:
Do KUB prefilm. Dr. threads a catheter into a ureter and injects Reno 30 (contrast). We shoot KUB when Dr. yells SHOOT! Dr. usually stays during exposure. One ureter at a time is done. Can be a unilateral or bilateral study. (14X17's) [looking at kidneys & uretris]

URETHROGRAM:
MALE***Do KUB pre-film. Patient then obliqued. Center on penis/bladder. We shoot film as Dr. pushes contrast through the urethra (usually by catheter or bulb syringe). Dr. yells when to shoot. (14X17's) [looking at entire male urethra]

FEMALE***Do KUB prefilm. Patient in AP position. Center 3-4 inches below the crest to include 3-4 inches below the symphysis bone. Usually done through a double-bulb catheter. Dr. yells when to shoot. (14X17's) [looking at entire female urethra]

VOIDING CYSTOURERHROGRAM:
Dr. fills bladder. (usually a cystogram is done first). Patient is then obliqued. Center just like a urethrogram (over penis/bladder). We shoot film WHILE PATIENT IS VOIDING. If patient can't void, we do a postvoid instead. Usually in ladies the voiding film is done AP not obliqued—depends on the doctor. (14X17's) [looking at bladder & entire urethra]

STENT INSERTION/CHANGE OR STONE MANIPULATION:
We shoot KUB's & provide fluoroscopy as the Dr's advance guidewires, cathetars, stents or stone manipulation devices in efforts to relieve urinary obstructions due to stones, tumors, or disease.

CAVERNSOGRAM:
Do oblique pelvis prefilm. Center on penis, like a urethrogram. Dr. fills corpus cavernosum with an injection at the base of the penis. We shoot film when cavernosum is full (penis will be erect Dr. will say when). Dr. then allows cavernosum to empty (penis will go flacid) we shoot another film. (14X17's) [looking for physical cause of male impotence]
3RD OR Procedures

ANGIOGRAPHY/ANGIOPLASTY

Angiography is done under fluroscopy in patients with Renal failure to determine thrombosis and/or stenosis of dialysis grafts or fistulas. This information is then used to aid the surgeon in the thrombectomy & angioplasty (ballooning) of the affected areas.

CHEST CATHETERS

We do a number of different chest catheter placements for "Vascular Access". Most commonly they are used for short or long term therapy such as; Chemotherapy (for Cancer), Renal dialysis (ESRD), Nutritional support (HIV), and antibiotic therapy (for Diabetes).

depending on the surgeon, a portable CXR may be sufficient to show line placement. Some surgeons prefer to do insertions with the guidance of a C-arm, after which we then take a portable CXR for documentation.

NERVE BLOCKS

C-arm guidance is used during the positioning of needles for the management of pain.

PODIATRY

Often during foot surgery, when pins or screws are placed or removed, we use fluroscopy or portable x-rays, depending on surgeons preference.

LAPAROSCOPIC CHOLECYSTECTOMY

This procedure uses a laparoscope and video camera through portals in the abdomen to remove the gall bladder. Sometimes a cholangiogram is done to R/O stones in the ducts.

INTERSTIM INSERTION

Nerve stimulator leads are implanted into S2-3 & 4 levels to help stimulate & control urinary incontinence. Leads are connected to a device, first worn on the outside of the body then later implanted under the skin. Usually done in 2 procedures. ***Images are done for documentation.
Setup and System Controls

Figure 2-1. C-Arm controls

1. Horizontal extension handle
2. Horizontal extension arm lock
3. C-Arm lift switches
4. C-Arm rotation switches
5. C-Arm control panel
6. Wig-wag brake
7. X-ray hand control hanger
8. Power panel
9. Image intensifier
10. C-Arm pivot lock
11. X-ray tube cover
12. X-ray tube
13. Flip-flop lock
14. Surgi-glide pivoting/brake ped
15. X-ray footswitch shelf
16. Guide handles
17. Positioning handles
Moving the C-arm system

(1) Vertical travel (motorized)
   Lift and lower C-arm up to 45 cm

(2) Orbital movement
   Change between a.p. and lateral position
   - Starting from the basic position (0°)
     - 40° or to + 90° (130° in total).

(3) Angulation
   Rotate C-arm about support arm in sagittal plane
   by up to 190° in both directions

(4) Horizontal travel
   Move C-arm horizontally up to 20 cm
   - Ideal for fine adjustments directly to OR-table.

(5) Swivel
   Swivel C-arm about unit column in horizontal plane
   by up to 12.5° in each direction
   - Ideal for fine adjustments directly to OR-table.
Medstar Washington Hospital Center Medical Imaging School

MRI Policy

Students may rotate thru MRI as an elective observation rotation in their senior year. Students need to be aware of the MRI zones when in the MRI Area. Information on MRI safety and MRI zones will be discussed in MRI Safety Orientation and Screening form will be completed for students by the senior technologist in MRI. Before entering the MR environment or MR system room, students may be advised to remove the following metallic objects including hearing aids, dentures, partial plates, keys, beeper, cell phone, eyeglasses, hair pins, barrettes, jewelry, body piercing jewelry, watch, safety pins, paperclips, money clip, credit cards, bank cards, magnetic strip cards, coins, pens, pocket knife, nail clipper, tools, clothing with metal fasteners, & clothing with metallic threads.

Rev 6/23/2016
# Imaging School MRI Rotation Orientation Checklist

**Student:** Complete

<table>
<thead>
<tr>
<th>Task</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Safety orientation from Sr Technologist</td>
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<tr>
<td>Student completes safety questionnaire</td>
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<tr>
<td>Screen student for contraindicated implant/metal</td>
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<tr>
<td>Watch safety video</td>
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<tr>
<td>Review of safety procedures/policy</td>
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<tr>
<td>Operational overview</td>
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<tr>
<td>Rotation expectations discussed with students</td>
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<tr>
<td>Student assigned training location</td>
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<tr>
<td>Student given an opportunity to ask questions</td>
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</table>

**MRI Associate**

Print Name: __________________

Date: __________

**Signature of Employee**

Print Name: __________________

Date: __________
PORTABLE RADIOGRAPHY QUIZ

1. Why is it preferable to shoot the portable chest x-ray with the patient upright instead of supine?

2. Can you demonstrate true heart size on a CXR of you shoot at less than 72"?

3. When shooting x-rays on reverse isolation patients, for whose protection do you wear gown, gloves and mask?

4. To demonstrate a right pleural effusion, you would shoot a _____ lateral decubitus chest.

5. Describe the following types of tubes or lines:
   - CVP line
   - ET tube
   - NG tube
   - Chest tube

6. True or False:
   - ___ a patient who can sit in a bedside chair should never have a portable x-ray.
   - ___ traction on fractured limbs should be removed before you take the x-ray.
   - ___ portable patients should have gonadal shielding and collimation just like patients in the main dept.
   - ___ a cardiac patient's nurse should be consulted before you raise or lower the patient's bed.
Interventional Radiography Quiz

1. What are vascular stents used for?

2. Where is an IVC Filter placed?

3. What is an embolization?
Main Operating Room Quiz

1. What are the specific areas of a surgical gown that are considered sterile?

2. For what use is the c-arm designed for?

3. Why is the patient on the operating room table draped in sterile sheets?

4. What poison should a patient be placed on the table for a laminectomy?

5. What single projection should be taken for a laminectomy?

6. What projection of what body part is done for a mediport placement?
Digital radiography quiz

1. What is digital radiography?

2. Name at least 2 detectors used to acquire images.

3. Explain the difference between indirect conversion & direct conversion.

4. When was computed radiography invented and by who? (Hint a company)
Computed Tomography Quiz

1. What does pitch mean?

2. What is a matrix?

3. Give a size of a matrix.

4. What is a pixel?

5. What is a voxel?
9. Fill in the blanks from the following diagram:

1. ____________________

2. ____________________

3. ____________________

4. ____________________

5. ____________________

6. ____________________

What other structures do you know?
BARIUM ENEMA QUIZ

1. What is the patient preparation for a BE?

2. What is the purpose of the prep?

3. The portion of the colon demonstrated on the angle shot is the _________.

4. The flexure of the colon demonstrated on an RPO is the _________.

5. What are the 2 contrast agents routinely used for a BE?

6. What is shown on a lateral decubitus film?

7. What is a colostomy?

8. The ________ flexure sits lower in the body because it is pushed down by the liver.

9. The first portion of the colon which connects with the small bowel is the _________.

10. Complete the diagram on the following page.
CRITICAL CARE RADIOLOGY QUIZ

1. What shot should you take first on a car accident victim with cervical spine injuries?

2. How should you position the patient for the shot in #1?

3. What kind of information will an erect abdomen film provide that does not show on a supine abdomen film?

4. What is the hospital’s radiation safety policy on holding patients for x-ray exams?

5. The plane passing vertically through the midline of the body is ____________________.

6. What does the term ALARA refer to?

7. What is a REM?

8. What is the difference between a ventral decubitus and the prone position?

9. List 2 methods of reducing patient exposure to radiation:
UPPER GASTROINTESTINAL TRACT QUIZ

1. What does NPO mean?

2. Why do patients for UGI need to be NPO?

3. What contrast materials are used for an UGI?

4. The opening between the stomach and esophagus is the ___________ ___________.

5. The lateral curved border of the stomach is called the _________________.

6. The first portion of the small intestine that connects to the stomach by way of the pyloric valve is the ____________.

7. What purpose do the fizzies given to the patient serve?

8. At what time intervals are small bowel films taken and when do you stop?
CYSTOLOGY QUIZ

1. What are the 4 types of micro-organisms that hospital disinfectants must be effective against?

2. List at least 4 principles or rules of surgical asepsis.

3. Describe at least 2 methods of sterilization.

4. What is the difference between an antegrade and a retrograde study?

5. True or false - the drainage bag should be kept above the level of the bladder.

6. True or false - the bladder is an unsterile area.

7. For the following studies performed in Cysto, list the anatomical structures demonstrated:
   - Cystogram:
   - Retrograde pyelogram:
MAMMOGRAPHY QUIZ

1. What are the 2 standard projections for a mammogram?

2. List at least 3 things accomplished by compressing the breast.

3. What portion of the breast should be in profile on the radiograph on a CC if the patient has been properly positioned?

4. Why is it so important to keep the cassettes meticulously clean?

5. State the American Cancer Society and American College of Radiology recommendations on breast screening (when should women have mammograms?)
Chest Radiography Quiz

1. Why are chest x-rays routinely shot at 72”?

2. Why are chests usually shot in the erect position?

3. Why is the PA preferred to the AP chest?

4. List 3 body parts that are located in the mediastinum of the chest.

5. What phase of respiration are chests shot on?

6. Why are the elbows rotated forward for the PA chest?

7. Which lateral projection is preferred for chest radiography and why?

8. What is the purpose in shooting a pre-operative chest x-ray?

9. When shooting chest x-rays for line or tube placement, how should your technique be adjusted?
General Diagnostic Quiz for Main and Outpatient Radiology

1. What is the purpose of draping an x-ray table with a clean sheet prior to placing an isolation patient on it?

2. What type of disinfectant is preferred for cleaning x-ray equipment?

3. What identification information should be included on all radiographs?

4. On a central decubitus film, which side of the patient’s body touches the table?

5. List 3 ways to limit radiation exposure to the patient.

6. List 2 ways to limit your own radiation exposure.

7. What is the MPD for occupationally exposed persons?

8. If you wanted to demonstrate structures closer to the anterior surface of the body, would you position the part for an AP or a PA projection?

9. For lateral projections of the head and trunk (spine, chest, abdomen, and pelvis) what marker is used?
Radiography

1. Introduction

Candidates for certification and registration are required to meet the Professional Education Requirements specified in the ARRT Rules and Regulations. ARRT’s Radiography Didactic and Clinical Competency Requirements are one component of the Professional Education Requirements.

The requirements are periodically updated based upon a practice analysis which is a systematic process to delineate the job responsibilities typically required of radiographers. The result of this process is a task inventory which is used to develop the clinical competency requirements (see section 4 below) and the content specifications which serve as the foundation for the didactic competency requirements (see section 3 below) and the examination.

2. Documentation of Compliance

To document that the Didactic and Clinical Competency Requirements have been satisfied by a candidate, the program director (and authorized faculty member if required) must sign the ENDORSEMENT SECTION of the Application for Certification and Registration included in the Certification and Registration Handbook.

Candidates who complete their educational program during 2017 or 2018 may use either the 2012 Didactic and Clinical Competency Requirements or the 2017 requirements. Candidates who complete their educational program after December 31, 2018 must use the 2017 requirements.

3. Didactic Competency Requirements

The purpose of the didactic competency requirements is to verify that individuals had the opportunity to develop fundamental knowledge, integrate theory into practice and hone affective and critical thinking skills required to demonstrate professional competency. Candidates must successfully complete coursework addressing the topics listed in the ARRT Content Specifications for the Radiography Examination. These topics would typically be covered in a nationally-recognized curriculum such as the ASRT Radiography Curriculum. Educational programs accredited by a mechanism acceptable to ARRT generally offer education and experience beyond the minimum requirements specified here.

4. Clinical Competency Requirements

The purpose of the clinical competency requirements is to verify that individuals certified and registered by the ARRT have demonstrated competency performing the clinical activities fundamental to a particular discipline. Competent performance of these fundamental activities, in conjunction with mastery of the cognitive knowledge and skills covered by the radiography examination, provides the basis for the acquisition of the full range of procedures typically required in a variety of settings. Demonstration of clinical competence means that the candidate has performed the procedure independently, consistently, and effectively during the course of his or her formal education. The following pages identify the specific procedures for the clinical competency requirements. Candidates may wish to use these pages, or their equivalent, to record completion of the requirements. The pages do NOT need to be sent to the ARRT.
4.1 General Performance Considerations

4.1.1 Patient Diversity

Demonstration of competence should include variations in patient characteristics such as age, gender, and medical condition.

4.1.2 Simulated Performance

The ARRT requirements specify that certain clinical procedures may be simulated as designated in the specific requirements below. Simulations must meet the following criteria:

- The candidate must simulate the procedure on another person with the same level of cognitive, psychomotor, and affective skills required for performing the procedure on a patient. Examples of acceptable simulation include positioning another person for a projection without actually activating the x-ray beam and performing venipuncture by demonstrating aseptic technique on another person, but then inserting the needle into an artificial forearm or suitable device;
- The program director must be confident that the skills required to competently perform the simulated procedure will transfer to the clinical setting, and, if applicable, the candidate must evaluate related images.

4.1.3 Elements of Competence

Demonstration of clinical competence requires that the program director or the program director's designee has observed the candidate performing the procedure independently, consistently, and effectively during the course of the candidate's formal educational program.

4.2 Radiography-Specific Requirements

As part of the educational program, candidates must demonstrate competence in the clinical activities identified below:

- Ten mandatory general patient care activities;
- 37 mandatory imaging procedures;
- 15 elective imaging procedures selected from a list of 34 procedures;
- One of the 15 elective imaging procedures must be selected from the head section; and
- Two of the 15 elective imaging procedures must be selected from the fluoroscopy studies section, one of which must be either upper GI or contrast enema.

These clinical activities are listed in more detail in the following sections.
4.2.1 General Patient Care

Candidates must be CPR certified and demonstrate competence in the remaining nine patient care activities listed below. The activities should be performed on patients whenever possible, but simulation is acceptable.

<table>
<thead>
<tr>
<th>General Patient Care Procedures</th>
<th>Date Completed</th>
<th>Competence Verified By</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPR Certified</td>
<td></td>
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<tr>
<td>Vital Signs – Blood Pressure</td>
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<tr>
<td>Vital Signs – Temperature</td>
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<tr>
<td>Vital Signs – Pulse</td>
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<tr>
<td>Vital Signs – Respiration</td>
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<tr>
<td>Vital Signs – Pulse Oximetry</td>
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<td></td>
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<tr>
<td>Sterile and Medical Aseptic Technique</td>
<td></td>
<td></td>
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<tr>
<td>Venipuncture</td>
<td></td>
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<tr>
<td>Transfer of Patient</td>
<td></td>
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</tr>
<tr>
<td>Care of Patient Medical Equipment (e.g., Oxygen Tank, IV Tubing)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Imaging Procedures

Candidates must demonstrate competence in all 37 procedures identified as mandatory. Procedures should be performed on patients whenever possible. A maximum of eight mandatory procedures may be simulated if demonstration on patients is not feasible.

Candidates must demonstrate competence in 15 of the 34 elective procedures. Candidates must select at least one of the 15 elective procedures from the head section. Candidates must select either upper GI or contrast enema plus one other elective from the fluoroscopy section as part of the 15 electives. Elective procedures should be performed on patients whenever possible. If demonstration on patients is not feasible, electives may be simulated.

Institutional protocol will determine the positions and projections used for each procedure.

Demonstration of competence must include:
- patient identity verification
- examination order verification;
- patient assessment;
- room preparation;
- patient management;
- equipment operation;
- technique selection;
- patient positioning;
- radiation safety;
- imaging processing; and
- image evaluation.
4.2.2 Imaging Procedures (continued)

<table>
<thead>
<tr>
<th>Imaging Procedures</th>
<th>Mandatory or Elective</th>
<th>Date Completed</th>
<th>Patient or Simulated</th>
<th>Competence Verified By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest and Thorax</td>
<td></td>
<td></td>
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<tr>
<td>Chest Routine</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>Chest AP (Wheelchair or Stretcher)</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribs</td>
<td>✓</td>
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<tr>
<td>Chest Lateral Decubitus</td>
<td></td>
<td>✓</td>
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</tr>
<tr>
<td>Sternum</td>
<td>✓</td>
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<tr>
<td>Upper Airway (Soft-Tissue Neck)</td>
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<tr>
<td>Upper Extremity</td>
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<tr>
<td>Thumb or Finger</td>
<td>✓</td>
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</tr>
<tr>
<td>Hand</td>
<td>✓</td>
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<tr>
<td>Wrist</td>
<td>✓</td>
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<tr>
<td>Forearm</td>
<td>✓</td>
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<tr>
<td>Elbow</td>
<td>✓</td>
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<tr>
<td>Humerus</td>
<td>✓</td>
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</tr>
<tr>
<td>Shoulder</td>
<td>✓</td>
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</tr>
<tr>
<td>Trauma: Shoulder or Humerus (Scapular Y, Transthoracic or Axial)*</td>
<td>✓</td>
<td></td>
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<tr>
<td>Clavicle</td>
<td>✓</td>
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<tr>
<td>Scapula</td>
<td>✓</td>
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<tr>
<td>AC Joints</td>
<td>✓</td>
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<td></td>
</tr>
<tr>
<td>Trauma: Upper Extremity (Non Shoulder)*</td>
<td>✓</td>
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<tr>
<td>Lower Extremity</td>
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<tr>
<td>Toes</td>
<td>✓</td>
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<tr>
<td>Foot</td>
<td>✓</td>
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<tr>
<td>Ankle</td>
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<tr>
<td>Knee</td>
<td>✓</td>
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<tr>
<td>Tibia-Fibula</td>
<td>✓</td>
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<tr>
<td>Femur</td>
<td>✓</td>
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</tr>
<tr>
<td>Trauma: Lower Extremity*</td>
<td>✓</td>
<td></td>
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<tr>
<td>Patella</td>
<td>✓</td>
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<tr>
<td>Calcaneus</td>
<td>✓</td>
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</tr>
</tbody>
</table>

* Trauma is considered a serious injury or shock to the body and requires modifications in positioning and monitoring of the patient’s condition.
### 4.2.2 Imaging Procedures (continued)

<table>
<thead>
<tr>
<th>Imaging Procedures</th>
<th>Mandatory or Elective</th>
<th>Date Completed</th>
<th>Patient or Simulated</th>
<th>Competence Verified By</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fluoroscopy Studies</strong> – Candidates must select either upper GI or contrast enema plus one other elective procedure from this section.</td>
<td></td>
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</tr>
<tr>
<td>Upper GI Series, Single or Double Contrast</td>
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<tr>
<td>Contrast Enema, Single or Double Contrast</td>
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<tr>
<td>Small Bowel Series</td>
<td>✓</td>
<td></td>
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<tr>
<td>Esophagus</td>
<td>✓</td>
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</tr>
<tr>
<td>Cystography/Cystourethrography</td>
<td>✓</td>
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<tr>
<td>ERCP</td>
<td>✓</td>
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</tr>
<tr>
<td>Myelography</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arthrography</td>
<td>✓</td>
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<tr>
<td>Hysterosalpingography</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td><strong>Mobile C-Arm Studies</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>C-Arm Procedure (Requiring Manipulation to Obtain More Than One Projection)</td>
<td>✓</td>
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</tr>
<tr>
<td>Surgical C-Arm Procedure (Requiring Manipulation Around a Sterile Field)</td>
<td>✓</td>
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<tr>
<td><strong>Mobile Radiographic Studies</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Chest</td>
<td>✓</td>
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<td></td>
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<tr>
<td>Abdomen</td>
<td>✓</td>
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<tr>
<td>Orthopedic</td>
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<tr>
<td><strong>Pediatric Patient (Age 6 or Younger)</strong></td>
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<tr>
<td>Chest Routine</td>
<td>✓</td>
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<tr>
<td>Upper Extremity</td>
<td>✓</td>
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<tr>
<td>Lower Extremity</td>
<td>✓</td>
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<tr>
<td>Abdomen</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile Study</td>
<td>✓</td>
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<tr>
<td><strong>Geriatric Patient (Physically or Cognitively Impaired as a Result of Aging)</strong></td>
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</tr>
<tr>
<td>Chest Routine</td>
<td>✓</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Upper Extremity</td>
<td>✓</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Lower Extremity</td>
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</tbody>
</table>
### 4.2.2 Imaging Procedures (continued)

<table>
<thead>
<tr>
<th>Imaging Procedures</th>
<th>Mandatory or Elective</th>
<th>Date Completed</th>
<th>Patient or Simulated</th>
<th>Competence Verified By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skull</td>
<td>✓</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Paranasal Sinuses</td>
<td>✓</td>
<td></td>
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<tr>
<td>Facial Bones</td>
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<tr>
<td>Orbits</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>Zygomatic Arches</td>
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<tr>
<td>Nasal Bones</td>
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</tr>
<tr>
<td>Mandible</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temporomandibular Joints</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spine and Pelvis</td>
<td></td>
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<tr>
<td>Cervical Spine</td>
<td>✓</td>
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<tr>
<td>Thoracic Spine</td>
<td>✓</td>
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<tr>
<td>Lumbar Spine</td>
<td>✓</td>
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<tr>
<td>Cross-Table (Horizontal Beam)</td>
<td>✓</td>
<td></td>
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<tr>
<td>Lateral Spine</td>
<td>✓</td>
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<tr>
<td>Pelvis</td>
<td>✓</td>
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<tr>
<td>Hip</td>
<td>✓</td>
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<tr>
<td>Cross-Table (Horizontal Beam)</td>
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<tr>
<td>Lateral Hip</td>
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<tr>
<td>Sacrum and/or Coccyx</td>
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<tr>
<td>Scoliosis Series</td>
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<tr>
<td>Sacroiliac Joints</td>
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<tr>
<td>Abdomen</td>
<td></td>
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</tr>
<tr>
<td>Abdomen Supine (KUB)</td>
<td>✓</td>
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<tr>
<td>Abdomen Upright</td>
<td>✓</td>
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<tr>
<td>Abdomen Decubitus</td>
<td>✓</td>
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<td></td>
</tr>
<tr>
<td>Intravenous Urography</td>
<td>✓</td>
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</tbody>
</table>
Washington Hospital Center
scrubEx & alEX User Information
PRINT CLEARLY

User Last Name __________________________
User First Name __________________________ Expiration Date for Students and Residents
Phone Extension __________________________

BADGE NUMBER
FIVE TO SIX DIGITS

Please choose one of the following for Occupation and one for Department:

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancillary Staff</td>
<td>Cath Lab</td>
</tr>
<tr>
<td>Anesthetist</td>
<td>ER</td>
</tr>
<tr>
<td>Nurse</td>
<td>GME</td>
</tr>
<tr>
<td>OR Staff</td>
<td>Main OR</td>
</tr>
<tr>
<td>Perfusion</td>
<td>3rd Floor OR</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>Labor &amp; Delivery</td>
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<td>Physician</td>
<td>3G</td>
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<td>4H</td>
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<td>Resident</td>
<td>Intervention</td>
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<td>Other (specify)</td>
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<td>Surgeon</td>
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<tr>
<td>Technician</td>
<td></td>
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<tr>
<td>Vendor</td>
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</table>

Scrubsuit Size: Choose your appropriate size Combination (Top/Bottom)

<table>
<thead>
<tr>
<th>Size Combination</th>
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<tbody>
<tr>
<td>Small/Small</td>
</tr>
<tr>
<td>Medium/Medium</td>
</tr>
<tr>
<td>Large/Large</td>
</tr>
<tr>
<td>X-Large/X-Large</td>
</tr>
<tr>
<td>2X/2X</td>
</tr>
<tr>
<td>3X/3X</td>
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<tr>
<td>4X/4X</td>
</tr>
</tbody>
</table>

THIS AREA TO BE COMPLETED BY MANAGER/DIRECTOR

scrubEx Machine Location
3rd Floor OR
5th Floor L&D
6th Cath lab
Main OR

alEX Machine Location
Basement
ER
GME

Authorizing Signature (Manager/Director)
**WASHINGTON HOSPITAL CENTER**

**COMPETENCY ASSESSMENT : Using the AIDET Communication Program**

### Associate Name: ____________________________  Job Title: ____________________________

### Department (✓) □ CT □ MRI □ US □ IR □ X-Ray □ Pt Transport

#### Instructions:
The evaluator's signature validates the completion of each skill and copy kept in associate's file.

#### Method of Evaluation:
The evaluator's signature validates the completion of each skill and copy kept in associate’s file.

#### Competency Statement:
All staff will display consistent proficiency in using AIDET when communicating with patients, visitors, physicians, peers, managers and volunteers.

#### Policies to Review and Learning Resources
- Mandatory AIDET video, staff meeting & one-on-one communication

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### Performance Criteria

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- **Identifies the purpose of using the AIDET principle.**
- **Utilizes the AIDET principle to communicate with others, with a focus on patients and their families:**
  - ACKNOWLEDGES the customer: (by name if possible): • Smiles, makes eye contact and greets them in a pleasant manner.
  - INTRODUCES self: • States name, and role at Washington Hospital Center (WHC) • Highlights skill and expertise of self and other healthcare team member.
  - DURATION: • Gives the customer a time expectation. • Keeps the customer informed as to the amount of time a procedure or process will take. • Includes letting them know if there is a wait time; gives time expectation of that wait.
  - EXPLANATION: • Keeps customers informed by explaining all processes and procedures. • Assists customers to have clear expectations of what will be occurring.
  - THANKS the customer: • Consistently thanks customers for their time and, if a patient, for choosing (WHC) • Expresses appreciation that they have chosen WHC as their healthcare facility. • Asks if there is anything else he/she can do for the customer before ending the interaction.

- **Ensures non-verbal communication conveys the AIDET principle:**
  - Makes eye contact.
  - Respects customer's personal space (as possible).
  - LISTENS to what the customer is saying; allows for silence; does not interrupt with his/her own thoughts.
  - Ensures body language is relaxed, open and non-threatening.
  - Displays a calm manner.

### Associate Signature: ____________________________  □ Competency Met  □ Competency Not Met

### Video Viewed: ____________________________

### Comments: ____________________________

---

**Supervisor’s Signature**

**DATE:**

**Supervisor’s Name** ____________________________
Welcome to Children’s Hospital

- Before you begin work at our facility, we want to provide you with useful information and offer you the opportunity to ask questions.

- This booklet contains important information on safety and emergency procedures—please review it carefully.

- Orientation must be completed before you begin working with Children’s Hospital.

- We hope you have an enjoyable experience working at Children’s Hospital!
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Children’s Hospital
Mission Statement

To be preeminent in providing pediatric health care services that enhances the health and well-being of children regionally, nationally, and internationally. Through leadership and innovation, CNMC will create solutions to pediatric health care problems. To meet the unique health care needs of children, adolescents and their families, CNMC will excel in: Care, Advocacy, Research, and Education.

While working for our organization, you are expected to uphold our mission.

General Information

Cultural Competency

Children’s Hospital is committed to addressing the health needs of diverse populations by recognizing the value of cultural and ethnic differences. Employees of Children’s show respect, sensitivity and an appreciation for cultural and ethnic diversity by seeking to understand and respond to individual differences based on nationality, gender, race, religion, sexual orientation, age etc. in order to enhance the care and work environment.

Drug-Free Workplace

Children’s Hospital is a drug-free workplace – this means that those working at the facility cannot use illegal drugs under any circumstances on or off-site. Violators will be dismissed.

Handwashing

Handwashing is the #1 way to stop the spread of infections. Always follow our handwashing requirements. If you have questions about the requirements, please let your supervisor know and they will direct you to the experts.

Isolation Precaution

Isolation precautions means placing a barrier between the infected individual and other people in order to stop transmission of communicable diseases at the hospital.

Employees are required to use isolation precautions when necessary. Contact Infection Control at x5053 for more information.

Barriers include:
- Private rooms
- Gowns
- Gloves
- Masks
Unacceptable Activities

Children’s Hospital has developed a number of professional conduct rules to protect the safety of our patients and employees. While at Children’s Hospital please do not:

- Eat or drink in work areas
- Conduct personal grooming in work areas
- Bring or use alcohol or unauthorized drugs
- Keep items such as razors, scissors, aerosols and tools within the reach of patients
- Bring electrical equipment, such as radios
- Bring or keep valuables at the hospital
- Smoke in unauthorized areas
- Enter patient care areas (unless it is part of your job)
- Use cell phones in the hospital. Cell phones must be turned off when in the hospital because they can negatively affect patient equipment.

Harassment/Violence in the Workplace

We are a harassment-free workplace committed to providing an environment in which the diversity of our workforce is valued and respected. Harassment (including sexual harassment) and violence, whether verbal or physical, are illegal, unacceptable and will not be tolerated. In the event an individual’s actions become violent and pose a safety risk to the individual or others, security and/or other trained staff may restrain the individual until rational behavior is restored, or help arrives.

Smoking

Children’s Hospital is a non-smoking facility. You may not smoke anywhere in the facility. A designated smoking area is located outside the Emergency Department ambulance drive. Smoking is a serious fire and life safety factor. Violators will be asked to leave the premises.

Employee Identification

Everyone must wear an ID badge. Non-hospital personnel must be cleared by Occupational Health in order to receive a badge. The ID badge forms are found in HR and Security Services releases all badges.

Parking

Paid parking is available for staff. Your supervisor will instruct you on parking prior to coming to Children’s Hospital. Park only in authorized areas.

Patient Confidentiality

You must respect the patients’ right to privacy. You will be asked to sign a confidentiality and HIPAA agreement. You may be exposed to confidential patient information and must not discuss the information with individuals not directly involved with the patient’s care.
Complaint/Grievance Management

Children’s Hospital recognizes a patient’s right to voice their issues of concern, to express their complaint, and to be provided with a timely and appropriate response. Children’s Hospital expects its staff to resolve routine patient/parent complaints at the point of service. All patient complaints will receive prompt and appropriate responses. When a complaint is not resolved to the customer’s satisfaction or remains unresolved, staff will refer it to the appropriate person in their chain of command (i.e. manager) who will assist. Oral or written grievances submitted by patients, parents, or visitors will be resolved in accordance with federal regulations.

Cafeteria (Located on the 2nd Floor)

Our cafeteria hours are 6:30am to 7:15pm
Breakfast: 6:30am - 9AM
Lunch: 11am - 2:30pm
Dinner: 5pm - 7:15pm

Types of Hazards

There are many types of hazards found in medical facilities. Due to the nature of our work, hospitals and clinics may have hazards, such as bloodborne pathogens, that require special attention. By reading the following information on hazards you can help create a safer environment for our patients, visitors, and employees.

Electrical Shock

- Control of hazardous energy is important, including proper handling of electrical cords and outlets
- Do not overload outlets
- Do not bring extension cords into the facility
- Red electrical outlets are connected to the emergency generators and are only used for patient care equipment
- Patient care equipment should always be plugged into red outlets
- Ask your supervisor if you have any questions about red outlets

Patient Equipment

- Must be handled only by authorized personnel.
- If you have not been specifically trained and authorized to operate patient equipment do not touch
- If you have a concern about a piece of patient equipment contact a nurse immediately

Slips, Trips, and Falls

- Be careful when walking
- Wear footwear that provides good tread and foot support
- Please watch for trip, slip and fall hazards - Report them as soon as possible
Radiation Safety

- Radiation can be alpha, beta or gamma
- In hospitals and clinics you will see these symbols in areas at risk to radiation

![Radiation Symbols]

- Always ask before working in these areas

Bloodborne Pathogens

- Blood and body fluids can contain a wide variety of hazardous agents
- If directly exposed to blood or other bodily fluids:
  - Clean the area with soap and water
  - Notify the staff supervisor and contact Occupational Health at x2035
  - Complete a Visitor Accident/Variance Report
- If exposure of after regular business hours, have the operator contact the on-site Nursing Administrator in charge

Biohazard

- A biohazard symbol is used at Children's Hospital to designate objects which are contaminated with blood or other bodily fluids

![Biohazard Symbol]

- A bloodborne pathogen could be present - Avoid contact with these containers
- Likewise, any waste that you produce which you know is biohazardous must be placed into one of these specially labeled containers for proper disposal
Chemical Hazards

- Many products have some hazardous components that require special precaution
- These chemicals may give off toxic fumes that can affect you, our patients and staff
- Read labels carefully before using products in the hospital
- Make sure every chemical container has a label
- Never use a product in an unmarked container
- Control fumes and hazards
- Dispose of waste properly
- If you have a question, ask the Volunteer Director or Safety Director
- Example of a chemical hazard warning symbol

Chemical Spills

- If a product with a hazardous component spills, special precautions should be taken
- Immediately report the spill to Environmental Services by paging #6333
- Do not attempt to clean up the spill yourself unless you have been specifically trained to do so

Material Safety Data Sheets

- MSDS sheets are available on the Intranet
- MSDS sheets detail:
  - chemical ingredients,
  - dangers,
  - emergency response actions,
  - safe handling procedures, and
  - proper disposal
- Read carefully before using chemical(s)
- Let your supervisor known if you have any questions

Flammable Products

- Flammable products will have a label indicating such
- Example of a flammable symbol
- Extreme caution should be used when transporting, using and storing flammable items
- Storage of these items requires placement in a designated room or cabinet
- If your work at Children’s Hospital requires you to bring a flammable product, you must take the product with you when you leave each day
- Let your supervisor know if you have any questions
Recognizing Hazard Warning Labels

Biohazard

Radiation Hazard

Flammable Product Hazard

Chemical Hazard

Preventing and Reporting Accidents

- You are the most important element in preventing workplace injuries, illnesses, accidents or incidents
- You should be aware of all hazards within your work environment
- If you recognize a hazardous situation or condition, please report it as soon as possible so we can take immediate action
- If you are injured, report it promptly to your staff supervisor and contact Occupational Health at x2035
- Complete a Visitor Accident/Variance Report form
Emergency Codes

In an effort easily alert all staff to emergencies, an emergency code alert system has been developed by Children's Hospital. Please pay special attention to the information on the emergency codes.

Overhead Announcements

- Always pay attention to overhead announcements!
- When a disaster or emergency occurs, the hospital often communicates to all personnel using the overhead paging system.
- For your safety and the safety of our patients please pay attention to the emergency code alerts.

Emergency Code Alerts

- Code Red = Fire
- Code Yellow = Caution
- Code Green = All Clear (emergency is over)
- Code Gray = Tornado Warning
- Code MCI = Disaster (internal or external) mass casualties coming
- Code Purple = Disaster with nuclear, biological, or chemical agent
- Code Lockdown = Lockdown of all exterior doors. Do not attempt to leave.
- Code Pink = Infant/Child Abduction
- Code Blue = Cardiac Arrest
- Code White = Bomb, Threat, Suspicious Package Call x2222
- Code Evac = Evacuation order (partial or total orders may be given, follow announced instructions)

(Please refer to the specific information below for more information on each code situation)

Code Red = Fire

- A fire situation has been detected in the facility.
- Corridors must be immediately cleared of objects.
- Follow RACE if you find a fire:
  - Rescue people in immediate danger
  - Alarm by calling x3473 and activate pull station
  - Contain by closing all doors
  - Extinguish (if possible) or evacuate
- Know your fire safety - the lives of our patients depend upon your actions!

Using a Fire Extinguisher

- A Fire Response Team goes to Code Reds in the hospital.
- If you need to use a fire extinguisher, follow PASS:
  - Pull the extinguisher pin. Stand back 10 feet. Keep your back to an exit for escape.
  - Aim at the base of the fire at the leading edge of the fire.
  - Squeeze the handles together.
  - Sweep slowly back and forth.
- Please make sure you activate the fire alarm/call x3473 prior to using the extinguisher!
Code Yellow = Caution

- A Code Yellow follows a Code Red
- The Fire Response Team has ruled out an active fire and is continuing to investigate the cause of the alarm.
- May also be used when the facility fire systems are out of service.

Code Green = All Clear

- Informs staff that the emergency is over
- Return to normal operation

Code Gray = Tornado Warning

- A tornado warning has been issued in the vicinity of the facility
- All persons should prepare for a tornado immediately
  - Evacuate from rooms with windows into the corridors
  - Stand close to corridor walls
  - Close the doors to evacuate rooms to protect from flying glass
  - Wait for further instruction

Code MCI = A Mass Casualty Incident

- An incident has occurred and the hospital expects large number of victims to arrive in the Emergency Department
- The hospital will be busy assisting the victims
- The facility will be immediately put in lockdown
- Do not attempt to leave or allow anyone else to enter
- The only entry will be through the Emergency Department
- Report to the department that contracted your service and wait for further instruction
- Do not speak to the media

Code Purple = MCI with Nuclear, Biological or Chemical Agents

- Mass casualty incident involving nuclear, biological or chemical agents requiring victim decontamination
- The facility will immediately be put into lockdown
- Do not attempt to leave or allow anyone to enter the hospital
- The only entry will be through a decontamination zone outside the Emergency Department Ambulance entrance
- Report to the department that contracted your service and wait for further instructions

Code Lockdown

- Lockdown of all exits and entrances is initiated in response to an event (internal or external) that may threaten occupants of the building
- Do not attempt to leave the building
• Do not allow anyone to enter the building
• Report to the department that contracted your service and wait for further instructions

**Code Pink = Possible Infant/Child Abduction**

• Remain where you are
• If there are exit doors, stairs or elevators in the area ask anyone in your area attempting to leave your area to please remain
• Anyone who insists on leaving an area must be reported to Security immediately - include exit route and description of individual(s)
• Do not attempt to stop them yourself
• Wait for further instruction

**Code Blue = Cardiopulmonary Arrest**

• A person has gone into cardiac (heart) or respiratory (lungs) arrest within the hospital
• Once notified, the Code Blue team responds to the location with a crash cart
• All non-essential individuals should keep clear of the area

**Code White = Bomb Threat/Suspicious Item**

• A possible threat may exist
• Report to your assigned area and await additional information/instructions
• Note: Preparedness includes daily awareness of any suspicious activity or objects. Report any suspicious activity or objects to STAT at x2222

**Code Evac = Evacuation**

• Evacuation may be necessary due to fire or other causes
• Hospitals try to limit the amount of patient displacement by first attempting horizontal evacuation (move to a different part of the same floor) whenever possible
• Vertical evacuation is the second option, depending on the circumstances
• Many of our patients require special handling, nursing will take charge of patient evacuation needs
• If possible, depending on the situation, report to the nearest unit charge nurse for instructions
• Always use the stairs!!

**Emergency Telephone Numbers**

• Children's Hospital has telephone numbers that you can call to report hazardous conditions, emergencies, and accidents/incidents
  • Fire x3473
  • Security x2065
  • Engineering Control x6040
  • STAT (other emergencies) x2222
• These numbers are also found on yellow stickers on hospital phones
• Non-hospital locations dial “911”
Restraint/Seclusion

Definition of Seclusion and Restraint

- **Restraint** - any method of physically restricting a person’s freedom of movement, physical activity or normal access to his or her body
- **Seclusion** – involuntary confinement of a person alone in a room where the person is physically prevented from leaving

Administrative Restraint/Seclusion

- Administrative restraints are measures used by forensic staff for legal or disciplinary purposes. Administrative restraints are used for restriction according to forensic criteria. Non-clinical restraint or seclusion must be discussed with patient care provider.
- Should care require the release of administrative restraint or release from administrative seclusion, forensic staff will collaborate with the patient care provider and security on the safest means for carrying out the required procedures.
- Hospital security will assist the agency officer during this process and maintain presence until restraints are back in place.

Clinical Justification of Restraint/Seclusion

- The clinical staff utilizes clinical restraints in order to protect the patient from immediate danger to self or others. The nurse, with the assistance of hospital security or others whose competence has been demonstrated in the application of restraints may initiate restraint, or place the patient into the designated seclusion room. If the institutionalized patient requires restraints for clinical purposes, Children’s policy on the use of restraints will be followed.
Mandatory Quiz (to be kept in department file)

1. Handwashing is the #1 way to stop the spread of infections in hospitals. True False

2. While performing services at Children’s Hospital I must:
   a) Smoke in the designated area,
   b) Not use & turn off my cell phone,
   c) Follow all safety regulations,
   d) Protect patient privacy
   e) All of the above

3. I must respect patient confidentiality. This means I must not discuss patient information with individuals not directly involved in the patient’s care. True False

4. Fire egress routes must be kept clear at all times as part of fire safety and slip, trip and fall safety. True False

5. Chemical safety includes:
   a) Using safe handling procedures,
   b) Control of fumes to prevent exposure,
   c) Reporting spills to 2044 immediately,
   d) Proper disposal of wastes and chemicals,
   e) All of the above

6. In Code Gray (Tornado Warning) I should:
   a) Evacuate rooms with windows, close all doors, and stand in the hallway
   b) Go to the window to watch

7. Fire (life) safety includes the following:
   a) Not smoking in the hospital,
   b) Knowing RACE,
   c) Knowing how to use a fire extinguisher (PASS),
   d) Following all safety regulations,
   e) All of the above

8. Code MCI and Code Purple both require immediate lockdown of the hospital. True False

9. Emergency preparedness includes daily awareness of suspicious objects or activity in my work area and reporting them to security. True False

10. Emergency phone numbers at Children’s Hospital include:
    a) Fire = 3473,
    b) Security = 2065,
    c) Engineering Control Room = 6040,
    d) STAT = 2222,
    e) All of the above
I acknowledge receipt of my copy of the Contract/Agency/Non-Agency/Volunteer Orientation Brochure and understand that it is my responsibility to know and abide by its contents.

Print Name: ____________________________

Signature: ____________________________

Date: ________________________________

Department: __________________________
CHILDREN’S NATIONAL MEDICAL CENTER
EMPLOYEE CONFIDENTIALITY AGREEMENT (to be kept in department file)

Employee Name ____________________________  Employee ID: ____________

Employee Department ____________________________

Children’s National Medical Center is committed to maintaining the highest standards of confidentiality. Recognizing that preserving confidential information rests with each employee, the intent of this statement and agreement is to alert employees to their specific responsibilities.

I, the undersigned, acknowledge that I understand and agree to adhere to the following statements:


2. All patient information (oral, written or electronic, past, present and future, medical, financial or demographic) will be held to the highest level of confidentiality. I will not release, discuss, or disclose any patient information that is not allowed under Federal HIPAA Regulations, or is appropriately authorized or is required by law.

3. I understand that in the performance of my duties I may have access to sensitive information and/or reports related to other employees, organizational design or systems design, source codes, business and financial planning or status and other information related to organizational performance, planning, and development. I agree that I will not disclose such information.

4. System Security and Access:
   a. I consider my CNMC logon ID to be the equivalent of my signature and I am responsible for all entries made under my logon ID.
   b. I will maintain proper password security by not revealing my password to anyone.
   c. I will protect the security of the CNMC Information Systems by not providing anyone else access to the information system.
   d. I will not leave my workstation/terminal unprotected while I am logged onto the CNMC Information System.
   e. I will report suspected security violations immediately to my Supervisor or the Security Coordinator or Director of my Department.
   f. I will access information resources specifically computer systems, only for purposes related to the performance of my assigned job responsibilities.
   g. I understand that CNMC reserves the right to monitor information systems file access at any time. I will cooperate with periodic necessary inspection of data and equipment assigned to me.
   h. I understand that all CNMC systems and applications belong to the organization. As such, CNMC has the right to audit, monitor, and inspect all information on the systems including but not limited to use of e-mail, databases, and documents.

5. I understand that this form will become an official part of my employee file. Failure to comply with the provisions in this document as well as the policies referred to within it, will result in disciplinary actions up to and including termination of employment from Children’s National Medical Center.

Employee Signature ____________________________ Date: ____________
DEPARTMENT OF DIAGNOSTIC IMAGING AND RADIOLOGY

DIAGNOSTIC RADIOLOGIC PROCEDURES

ANATOMICAL PROTOCOL

Revised.
11/20/2012
IMAGES ARE TO BE COLLIMATED AT TIME OF EXAM
THERE IS TO BE NO POST-COLLIMATION

I. All females, who have started their menses (period) must be asked if:
   A. Last menstrual period (LMNP must be listed in Centricity)
   B. If possibility of pregnancy is confirmed, consult with Radiologist immediately.

II. A. Lead markers on all films; do not electronically annotate; do not ask Radiologist for exception.
    B. Cone cut edges on all films, No post collimation.
    C. Shield all patients, except for female abdomen and female pelvis x-rays

III. A. Record all necessary information in comment section of Centricity, particularly those reasons that resulted in suboptimal films not being repeated.
    B. Complete exams in Centricity immediately after completion of study so that the study can be dictated.

IV. A. Use 40-inch focal film distance whenever possible
    B. Use 72-inch FFD on upright chest

V. Comparison views only at request of radiologist or from requesting physician

VI. Any long bone radiograph MUST include both joints
HEAD WORK

SKULL
A. AP
B. Towne’s (30 deg. Caudal; CR: 2.5 in above Glabella
C. Both Laterals 2 in sup. To EAM

SINUSES – Upright if possible
A. PA (Caldwell views) 15 deg.
   Caudal CR: horizontal CR exiting nasion
B. Water’s CR: MML is perpendicular to film
C. Lateral CR: center midway b/n outer cantus and EAM

ORBITS
A. Modified Waters
B. Caldwell
C. Bilateral Rims (3 point landing imaging up side)

OPTIC FORAMINA (always bilateral)
Three point landing (Rhese) (both orbits on both views)

NASAL BONES
A. Water’s view
B. Both Laterals to include nasal bone and anterior nasal spine (2 views on 1 film)

MAXILLAE
See FACIAL BONES
MANDIBLES
A. PA CR: OML perpendicular to film
B. Both lateral obliques (25 deg cephalic) CR: mandibular region
C. AP Towne’s for condyles (cone down 30 deg caudal) CR: Glabella

MASTOIDS (both sides all patients)
A. Tape ears forward, if possible
B. Arcelin - AP 10° caudad, affected side up - head rotated 45° (2 views)
C. Laws - 15° caudad with face angled 15° to table (2 views)
D. Axial Towne’s - 40° caudad angle (Cone down) (1 view)

FACIAL BONES
A. Modified Water’s
B. Lateral (affected side)
C. Caldwell

TEMPOROMANDIBULAR JOINTS (TMJ)
A. Modified Towne’s
B. AP with 25° caudad, CR through joints
C. One lateral – open and close mouth (affected side)
CERVICAL SPINE

A. AP

B. Odontoid – 5 years and older must be included as part of the study

C. Lateral * Must have neutral lateral if none was previously done* (Oblique flexion and extension views on request).

Down’s syndrome lateral flexion / extension images only DO NOT push or hold patients head in position for these images.

NECK FOR SOFT TISSUES – High KVP (90) Low MAS

A. AP

B. Lateral (superior enough to include nasal passage)

C. When order is for Adenoids do lateral only!
CHEST - (should be done upright when possible)
Cone superiorly to ear lobes, laterally to chest wall and inferiorly to Lung bases to include costophrenic sulci.

A. AP or PA (PA preferable)
B. Left Lateral

CLAVICLE (new as of 8/19/2013)
A. AP of Both clavicles (one film)
B. AP- 15° to head (include entire affected side plus 1/3 proximal of other clavicle)

New Additions: AC Joints AP both joints same film. (non weight bearing)

STERNUM
A. Lateral
B. LAO or RPO breathing

RIBS
A. Upright PA/AP chest (lung technique)
B. Oblique of affected side to show axillary border * Place BB over specific area of Pain if focal.
THORACIC SPINE
A. AP
B. Lateral (breathing technique)

SHOULDER
A. AP Internal Rotation
B. AP External Rotation
C. Scapula “Y” view
D. Axillary view (with suspected dislocation or to R/O dislocation.
Consult Radiologist or Ortho Resident for Assistance if needed
Grashey method (Orthopaedics)
Rotate body 30-45 deg towards affected side.
CR: center to glenohumeral joint

HUMERUS – Must include both joints
A. Internal rotation
B. External rotation

FOREARM (Must include both joints)
A. AP
B. Lateral
C. Coned down lateral elbow
ELBOW
A. AP
B. Lateral
C. Oblique (external for Radial head)

WRIST
A. PA
B. Lateral
C. 45 degree oblique

SCAPHOID / NAVICULAR
A. PA Ulna deviation with a 20° proximal angulation through the scaphoid bone
B. Lateral (upon request)

HAND
A. PA and oblique
B. Lateral with fingers fanned (fingers should not be touching while fanned).

FINGER
A. PA hand
B. Oblique and lateral of affected finger

Follow-up Finger (Orthopaedics)
A. PA of finger
B. LAT of finger
ABDOMEN
A. AP or KUB (must include Symphysis Pubis)
B. ABDOMEN UPRIGHT or ABDOMEN DECUBITIS
   1. Upright Abdomen must include diaphragm
   2. If an Upright Abdomen cannot be performed then a left lateral decubitis must be done which includes the domes of the diaphragms.
   • All children 4 years and younger who have an order for a two view Abdominal series must receive an AP and Left Lateral Decub not an upright. **
   • NG Tube placement must include diaphragm and costophrenic angle on the single view AP

LUMBAR SPINE
A. AP
B. Lateral
C. Cone down L5-S1 on larger patients, if requested
D. Obliques on request

HIPS / PELVIS - 3 MONTHS AND UNDER do table top non shielded
It is extremely important to have no rotation. Coccyx bisects pubic symphysis.
A. HIPS Bilateral
   1. AP Pelvis for both hips
   2. AP frog lateral of both hips
B. HIP Unilateral
   1. AP pelvis (no shield)
   2. Lateral of affected hip (shielded)
INLET and OUTLET VIEWS

CENTRAL RAY:
1. Inlet-35° caudal angle entering at midline at the level of the ASIS.
2. Outlet-35° cephalic angle entering at midline at the symphysis.

Judet Views of the Acetabulum
A. Oblique patient 45deg.
B. CR perpendicular to the IR and entering 2 inches inferior to the ASIS of the affected side

SACRUM
A. AP 15° cephalad
B. Lateral

COCCYX
A. AP tilt, caudad 10°
B. Lateral

SACROILIAC - JOINTS (SI JOINTS)
A. “Ferguson” view
   Patient supine, knees slightly flexed, ankles together, angle 23° cephalad C/R 1 1/2 inch superior to the pubic symphysis
B. LPO & RPO to demonstrate the elevated side.
FEMUR (MUST include both joints)
A. AP
B. Lateral

KNEE
A. AP
B. Lateral
C. Oblique - (Internal)
D. Tangential (sunrise) view—knee flexed 30°—patient sitting

External oblique, tunnel view and tangential view of knee and patella on request).
**Do not use grid or bucky except with large patients.

PATELLA
A. PA
B. Lateral with knee straight
C. Sunrise view

LEG - TIBIA AND FIBULA
(MUST include both joints)
A. AP
B. Lateral
ANKLE – (All images must cover the same anatomical structures)
A. AP
B. Lateral
C. Internal oblique (Mortise)

Follow-up Ankle (Orthopaedics, FX)
A. AP
B. LAT

CALCANEUS /OS CALSIS
A. Lateral Heel
B. Axial view

FOOT
A. AP
B. Lateral
C. Internal oblique
D. Weight bearing AP and Lateral upon request

TOES
A. PA Foot
B. Cone down oblique and lateral of affected toe
SPECIAL PROCEDURES

1. SHUNT SERIES
2. SKELETAL (BONE) SURVEY
3. SCOLIOSIS
4. FOREIGN BODY
5. ARTHRITIC SERIES
6. LEAD LINES / Pb INGESTION
7. SCANOGRAM (LEG LENGTH)
8. RICKETS
9. TRAUMA SERIES
10. HIP DEVELOPMENTAL DYSPLASIA
**SHUNT SERIES**

VA SHUNT – Ventriculo-Atrial Shunt (FILMS SHOULD OVERLAP)
A. AP and Lateral Skull and Neck
B. AP Chest

VP SHUNT - Ventriculo-Peritoneal Shunt (FILMS SHOULD OVERLAP)
A. AP and Lateral Skull and Neck
B. AP Chest and Abdomen (must include symphysis pubis, take two films if needed)

**SKELETAL SURVEY**

ALL VIEWS ARE IMAGED INDIVIDUALLY ONE IMAGE PER PLATE
(right hand on one plate left hand on another plate etc)

- Bilateral AP Humeri (to include both joints)
- Bilateral AP Forearms (to include both joints)
- Bilateral PA Hands
- Bilateral AP Femurs (to include both joints)
- Bilateral AP Lower Legs (to include both joints)
- Bilateral AP Feet
- AP Chest/Abdomen for Thoracic/Lumbar spine
- Lateral of Thoracic/Lumbar spine – must be done as a lateral on side not cross table. This will insure that the posterior spinous processes are not clipped.
- Cervical spine (lateral)
- Pelvis AP
- Skull (AP and Lateral)
- Ribs - Bilateral posterior shallow oblique of the ribs to include entire thorax should be done on all patients 2 years and younger. A patient is 2 years until they are 3 years.

*** ADDITIONAL SURVEY INFO ***

Use a minimum of > 2MAS and > 50 KVP for all images
Skull, pelvis, T & L spine must be done bucky.
Bone techniques for ribs & T L spine should be processed as thoracolumbar spine in AGFA.
FOLLOW-UP/ MODIFIED/ LIMITED SKELETAL SURVEY – All images except:

A. Skull
B. Spine
C. Pelvis

*** SKELETAL SURVEY’S *** (effective 2/21/12)

Additional reasons for performing skeletal surveys other than NAT are:

A. Dysplasia
B. Short Stature
C. Genetics Work-Up (NO oblique ribs included)

SCOLIOSIS – (Use shielding for breast and pelvic areas when applicable)

A. Upright PA spine (entire spine, chin to iliac crests, shoes off)
B. Use filter, mobile apron top at ASIS
C. Lateral and or bending films as requested

FOREIGN BODY SERIES

A. AP - from top of Ear to Symphysis Pubis
B. Cone down lateral view of area of interest
C. Lateral neck

FOLLOW-UP FB SERIES

A. AP and Lateral of requested area.
B. Lateral Neck upon request by physician or radiologist only.
C. Chest for FB or question of aspiration from FB take both Lateral Decubitus

ARTHRITIS SERIES  (see Radiologist first)

A. Both hands and wrists Ball catchers view (AP and Lat) (Both sides on 1 film)
B. Bilateral AP of elbows
C. Standing pelvis
D. Standing bilateral knees (AP and Lat)
E. Standing bilateral feet and ankles
LEAD LINES - Pb INGESTION
   A. AP both wrists (both sides on 1 film)
   B. AP both knees (both sides on 1 film)
   C. KUB if requested to show recent ingestion

LEG LENGTH (Scanogram)
AP cone down views of both hips, knees and ankles using Bell-Thompson ruler.

RICKETS (revised 2/23/2012)
   A. 2 years and under, AP Knees
   B. 2 years and older, PA Wrist

TRAUMA SERIES (PORTABLE)
   A. Lateral C-Spine
   B. AP Chest
   C. AP pelvis

** If the three (3) film trauma series gets changed from three views to two then each exam is scheduled separately ***
HIPS FOR DEVELOPMENTAL DYSPLASIA effective 11/2/2012

1. < 6 months old=Ultrasound will be performed.
2. 6-8 months old=Our radiology COR’s will ask pediatrician to order BOTH ultrasound and conventional radiograph. If the US is interpretable, DON’T do radiograph; if US is not interpretable, do radiographs.
3. >8 months old=Conventional radiograph will be performed.
GUH Orientation Day 1

1. Hospital Policies
2. Radiology Policies
3. Confidentiality Agreement
4. Tour of hospital and Radiology Department
5. Establish ID Card
6. Parking permit
Total Travel Estimate: 5.23 miles - about 14 minutes
Trip to:
Georgetown University Hospital Center
3800 Reservoir Rd NW
Washington, DC 20007
(202) 444-2000
5.18 miles
16 minutes

Washington Hospital Center
110 Irving St NW, Washington, DC 20010
(202) 877-3627
1. Start out going east on Irving St NW toward 1st St NW.

2. Take the North Capitol Street South ramp.

3. Turn slight right onto N Capitol St NW.

4. Turn slight right to stay on N Capitol St NW.

5. Take the 3rd right onto Rhode Island Ave NW / US-1 S. Continue to follow Rhode Island Ave NW.

6. Turn slight right onto R St NW.

7. Turn left to stay on R St NW.

8. Enter next roundabout and take the 2nd exit onto 23rd St NW.

9. Turn right onto Q St NW.

10. Turn right onto Wisconsin Ave NW.

11. Turn left onto Reservoir Rd NW.

Notes

Miles Per Section

Go 0.3 Mi

Go 0.2 Mi

Go 0.7 Mi

Go 0.2 Mi

Go 0.7 Mi

Go 1.6 Mi

Go 0.02 Mi

Go 0.1 Mi

Go 0.8 Mi

Go 0.2 Mi

Go 1.6 Mi

http://www.mapquest.com/print?a=app.core.b072567dfe9a055aa126d7f6

8/17/2011
Reservoir Rd NW is just past 33rd St NW
If you reach R St NW you've gone a little too far

12. 3800 RESERVOIR RD NW is on the left.
Your destination is just past 38th St NW
If you reach 38th St NW you've gone a little too far

Georgetown University Hospital Center
3800 Reservoir Rd NW, Washington, DC 20007
(202) 444-2000

Go 0.4 Mi

5.2 mi
THE MARYLAND SOCIETY OF RADIOLOGIC TECHNOLOGISTS

MEMBERSHIP APPLICATION

In order for this application to be processed, please print and complete the entire form.

Name of Applicant ____________________________________________

(first) (middle) (last)

Address ______________________________________________________ Home Phone ____________________

____________________________________________________________ Email Address ____________________

Place of Employment __________________________ ARRT No. __________________________

Business Address __________________________ Business Phone __________________________

☐ Active member $32.00
   (Registered or Certified)
   (Voting Privileges)

☐ Student member $15.00
   (Approved Program)

☐ Supporting member $47.00
   (Other than Active)

☐ Associate member $47.00
   (Non RT, Other Licensed Professionals)

Bank __________________________ Check No. __________________________

Please indicate all modalities in which you are registered. Proof of registration, certification, and/or license is required:

☐ Radiography ____________ ☐ Nuclear Medicine ____________
   (Registered or Certified)
   (Voting Privileges)

☐ Ultrasound ____________ ☐ Radiation Therapy ____________
   (Approved Program)

☐ Mammography ____________ ☐ Interventional ____________

☐ Student 1st Year ☐ 2nd Year

Name of Program ____________ Signature of Program Director ____________

District to which you will belong:

☐ Northwest ☐ Southern ☐ Central Maryland ☐ Eastern Shore

☐ Greater Baltimore ☐ Hagerstown ☐ Western Maryland

If accepted, I agree to support the Constitution and By-laws of the Maryland Society of Radiologic Technologists, Inc. and conform to the Code of Ethics adopted by the American Society of Radiologic Technologists.

Signature __________________________ Date __________________________

Make checks payable to:
The Maryland Society of Radiologic Technologists, Inc.

Send to: Executive Secretary
         P.O. Box 617
         Fallston, MD 21047

Outside groups occasionally buy our membership list; if you do not want your name released, please check ☐
**Membership Application**

**Member Information** Please print.

- **First Name**: [Input]
- **M.I.**: [Input]
- **Last Name**: [Input]

**Social Security Number (used only to track CE)**

Make sure your name, date of birth and Social Security number are identical to what is on file with the ARRT. Your Category A and A+ CE credits will be transferred directly to ARRT.

- **Date of Birth (mm/dd/yyyy)**: [Input]
- **Male** [ ] **Female** [ ]

**Mailing Address**

- **City**: [Input]
- **State**: [Input]
- **ZIP**: [Input]
- **Country**: [Input]

**E-mail Address**: [Input]

**Home Phone** ( ) ________ **Work Phone** ( ) ________ **Ext.** ________

**Certifications** Select all current certifications that apply.

- **Date You Were Originally Certified (mm/yy)**: [Input]

- **ARRT Number**: [Input]
- **ARDMS Number**: [Input]
- **NMTCB Number**: [Input]
- **MDCB Number**: [Input]

We will obtain your Registry credentials directly from the ARRT.

- **RVT**: [ ] **RDMS**: [ ] **RDRE**: [ ]
- **RVT**: [ ] **RDCS**: [ ]
- **RVT**: [ ] **RMSK**: [ ]
- **RVT**: [ ] **RTE**: [ ]
- **RVT**: [ ] **ORTE**: [ ]
- **RVT**: [ ] **Other** [ ]

**Licenses/Permits** If applicable, indicate state(s) where you have a license or limited x-ray machine operator permit.

- **I have an unlimited state x-ray license**: [ ]
  - **State**: [Input]
  - **Expires (mm/yy)**: [Input]
- **I have a limited permit**: [ ]
  - **State**: [Input]
  - **Expires (mm/yy)**: [Input]

**Member Categories** Select one. Membership pricing is subject to change without notice.

**Active** members are certified by the American Registry of Radiologic Technologists (ARRT) or its equivalent, or hold unlimited licenses under state statute. They may vote, hold office, serve as a delegate and enjoy unlimited access to all ASRT member benefits.

**Student** members are those who are enrolled in primary radiologic science programs. They have all rights, privileges and obligations of Active members. Students applying for Student membership shall demonstrate that they are currently enrolled in a primary educational program in the radiologic sciences. Eligibility for Student membership shall terminate upon initial certification.

**Associate** members are employed in the technical, educational, managerial or corporate aspects of the radiologic sciences and do not qualify for Active membership. Associate members enjoy all membership privileges except voting, holding office or serving as a delegate.

**Retired** members are those who hold retired status with the ARRT or equivalent or who meet Social Security Administration requirements for retirement. They have all rights, privileges and obligations of Active members except to hold office or serve as a delegate.

**Limited X-ray Machine Operator** members hold a limited permit in the radiologic sciences and do not qualify for Active membership. LMO members enjoy all membership privileges except voting, holding office or serving as a delegate.

**Radiologist Assistant** members are certified by the ARRT and hold the R.R.A. credential. They have all rights, privileges and obligations of Active members.

**International** members are employed in the technical, educational, managerial or corporate aspects of the radiologic sciences outside of the United States and do not qualify for Active membership. International members enjoy all membership privileges except voting, holding office or serving as a delegate.

---

**Questions? E-mail memberservices@asrt.org.**

**Mail to ASRT,**
15000 Central Ave. SE, Albuquerque, NM 87123-3909.

**Call ASRT at 800-444-2778 or 505-298-4500.**

**Please complete Page 2.**
Membership Personalization

Select Your CE Preference
Selecting a continuing education preference enables us to provide content based on your needs and interests. It does not have to be your area of practice nor match any of your credentials.

Select only one.
- Bone Densitometry
- Breast Sonography
- Cardiac Interventional
- Computed Tomography
- Education
- Magnetic Resonance
- Mammography
- Management
- Nuclear Medicine
- Quality Management
- Radiation Therapy
- Radiography
- Radiologist Assistant
- Sonography
- Vascular Interventional
- Vascular Sonography

Select Your Chapter

ASRT chapters allow members in different disciplines, specialties or career pursuits special representation in the Society's governing body, the ASRT House of Delegates. Enroll in one primary chapter is included free as a standard part of membership.

Joining an additional ASRT chapter connects you with even more like-minded professionals and shows your commitment to your profession. Joining secondary chapters costs $5 per chapter per year. If selecting more than one chapter, indicate chapter in numeric preference (1, 2, 3...).

Select chapter(s):
- Bone Densitometry
- Cardiovascular-Interventional
- Computed Tomography
- Medical Dosimetry
- Education
- Magnetic Resonance
- Mammography
- Management
- Military
- Nuclear Medicine
- Quality Management
- Radiation Therapy
- Radiography
- Radiologist Assistant
- Sonography

Payment Information

Member dues payment ........................................... $ 0.00
Premium option (2 x $20 per year) .................................. $ 0.00
Total secondary chapter fees (2 x $5 per chapter per year) ........ $ 0.00
ASRT foundation donation ......................................... $ 0.00
Application fee (not refundable) ................................. $ 10.00
Total enclosed ...................................................... $ 

Membership Options

Premium Option
Get more from your ASRT membership for only $20.
- Specially designed membership card
- Collectible lapel pin
- ASRT Insider newsletter
- 25% off select items in ASRT Store
- 10% off ASRT Educational Symposium fee
- 10% off NRTW® products

Payment Method
Please indicate payment method.
- Check or Money Order
- Credit Card

Card No. ____________________________ Signature (as it appears on card) ____________
Expires (mm/yy) __ / __

From your member dues, $1.16 per year applies to a subscription to ASRT Scanner, $13.15 per year to Radiologic Technology and $1.05 per year to Radiation Therapy. In accordance with Sec. 6033(e) of the Internal Revenue Code, please be advised that 4 percent of membership dues are allocable to lobbying activities of ASRT, and as such, may not be deductible for tax purposes under Sec. 162(e) of the Code. Membership dues are not deductible as charitable contributions, but might be deductible as a business expense. Members should seek a tax professional's advice regarding dues deductibility as a business expense.

Promo Code ____________________________
Rev. 09/15

When you provide a check as payment, you authorize ASRT to use information from your check to make a one-time electronic fund transfer from your account or to process the payment as a check transaction.

Renewal Application

Please Print First and Last Name ____________________________

Select only one.
- Bone Densitometry
- Breast Sonography
- Cardiac Interventional
- Computed Tomography
- Education
- Magnetic Resonance
- Mammography
- Management
- Nuclear Medicine
- Quality Management
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Rev. 09/15

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Student Application

1. Name of student as it should appear on the certificate (please type):

   ____________________________  ____________________________  ____________________________
   First                        Middle (if desired)               Last

Applications must be typed!
A typed list of prospective members may be accompanied by one application.

2. Name and address of officially recognized Chapter:

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

3. Official contact person for the Chapter:

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ____________________________  ____________________________
   Name and Title

A one-time student induction fee of $20 should be enclosed. Make checks payable to Lambda Nu.

*By my signature I hereby attest that the above named student is enrolled in and in good standing at the institution of the above chapter. I further attest that they have met the criteria for membership of the Chapter as listed in the Chapter Bylaws on file with the national Lambda Nu office.

Please allow 2-3 weeks for delivery.

______________________
Signature of official Chapter contact
Research Resources for the MWHC Medical Imaging School of Radiography

Available from the Health Sciences Library

The library has many resources available for the students of the Medical Imaging School. The library is located in Room 2A-43, on the second floor between the A and B elevators across from Administration. Computers, a copier, scanners, and a fax machine are available for student use.

The online resources are available through the library's Intranet page. To access, go to Starport, then select the Site Services tab and click on Library and Media Services.

This resource guide lists resources that are available both through the library and on the Web. Please contact the library staff if you need any assistance.

Contact Us

Email: WHCLibrary@Medstar.net or Phone: 202-877-6221
Librarians: Fred King, Layla Heimlich, and Jory Barone

Medical Imaging School Textbook List

The library has current textbooks recommended by the Medical Imaging School available to students to borrow for up to 5 days from the library's reserve collection. These books can be checked out from the library office during regular working hours.

- Introduction to Radiologic Technology. 7th ed. (RES WN 160.I62 2011)
- Lange Q & A. Radiology Examination. 10th ed. (RES WN 18.2.S132 2016)
- Patient Care in Radiography. 9th ed. (RES WN 300.WE33 P2017)
- Quick & Easy Medical Terminology. 8th ed. (RES W 18.2.L581 Q2016)
- Radiation Protection in Medical Radiography. 7th ed. (RES WN 650.S787 R2014):

E-books

There are a number of radiology books available as E-books through the library. They can be found by searching the library catalog or under E-books and following the links to the full text.

June 17, 2016
Finding Print Books on Radiology

The library collection contains many books on different aspects of radiology. These books can be located by searching the online library catalog, which is found on the library intranet page (click on the Catalog tab). You can search by keyword or topic, subject heading (e.g., "Radiology" or "Radiography"), title, or author to find books in your area of interest.

Books specifically on radiology are located on the WN shelves ("Radiology & Diagnostic Imaging") of the Reference and Circulating sections of the collection. Other areas holding books of interest include:

- **WE** (Musculoskeletal system), with books such as Bone and joint imaging; Computed tomography of the head and neck; Bone densitometry for technologists; Foot and ankle: a sectional imaging atlas; and Radiation therapy for head and neck neoplasms

- **WG** (Cardiovascular System): Diagnostic atlas of the heart; Cardiac imaging

Books that look at imaging of a particular area of the body, or diagnostic or therapeutic radiation are located in the collection under that anatomical system. Books that look at the use of diagnostic imaging in a particular practice setting, such as emergency medicine, are located with other books in that field.

Online databases

If you are interested in doing a search for scholarly literature (books and journal articles) on a specific topic, access to PubMed and Ovid (PubMed) are available on the library Intranet page. Please contact one of the librarians if you need assistance doing a search.

Journals and Newsletters

- **American Journal of Roentgenology.** The library has a subscription; it can be accessed from the library intranet page under the Journals tab.

- **Radiologic Technology.** The library has a subscription; it can be accessed from the library intranet page under the Journals tab.

- **Radiology Today.** The library has a subscription but it is also available at no cost to requestors. [http://www.radiologytoday.net/](http://www.radiologytoday.net/)


Other resources

- **American Society for Radiologic Technologists (ASRT)** Professional association for radiologic science professionals. [https://www.asrt.org/home](https://www.asrt.org/home)


June 17, 2016
CONTINUING QUALIFICATION REQUIREMENTS (CQR)

For all R.T.s, primary and post-primary certifications and registrations earned on or after January 1, 2011, are time-limited to 10 years. Recertification requires completion of the CQR process, and the very first CQR deadline is not until 2021. Registered Radiologist Assistants (R.R.A.s) are unique in that R.R.A. certification and registration has always been time-limited and the CQR process begins in 2013.

With that to ease your mind, here's an update for you.

CQR has three related components. First, R.T.s will assemble a professional profile that highlights achievements related to education, work, special skills and professional development. This important first step gives a big-picture look at how an R.T. has maintained qualifications since first becoming certified and registered. Second, ARRT is developing a unique structured self-assessment process. It's not a test — it's different — particularly because it can't be passed or failed. It's a learning tool designed to evaluate strengths and weaknesses in knowledge and skills based on the qualifications expected of those becoming certified and registered in the current year. Assessments will use the current content specifications based upon the most recent practice analysis.

Through the self-assessment findings, participants may receive a customized list of “targeted” learning opportunities. These are learning-specific topics targeted to the identified knowledge areas. Completing continuing education activities in these identified areas is the third component of the CQR process.

The CQR process is complementary to existing components of certification and registration requirements. CQR provides the opportunity to demonstrate that your knowledge and skills are up-to-date, helping you re-energize your passion and enjoyment of work and your connection to patients and healthcare.

Because of accelerating advancements in technology and growing capabilities in the healthcare field, the idea of “Once certified, forever qualified” no longer meets the expectations of patients or the profession. Today, this is more accurately described as “Once certified, forever learning, evolving and developing as a qualified professional.” Continuous quality improvement is an expectation across all healthcare facilities, systems and professions.

An R.T.'s compliance phase with CQR will begin seven years into the initial 10-year certification and registration period. For example, for R.T.s earning certification and registration in 2011, the compliance phase can begin in 2018, allowing three years to complete the professional profile, self-assessment and targeted continuing education by 2021. And remember, CQR applies to R.T.s with primary or post-primary certifications and registrations earned since January 1, 2011.

ARRT is working with a number of committees made up of volunteers from across the profession to develop a meaningful CQR process — and is committed to helping you stay up-to-date and preparing you to take full advantage of the opportunity when CQR phases begin for the very first R.T.s in 2018.

You may also want to watch our CQR video and check out the CQR FAQs for additional information.

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