

# Radiologic Sciences Program BSRS, Nuclear Medicine, and Medical Imaging

# 2017-18 Student Handbook

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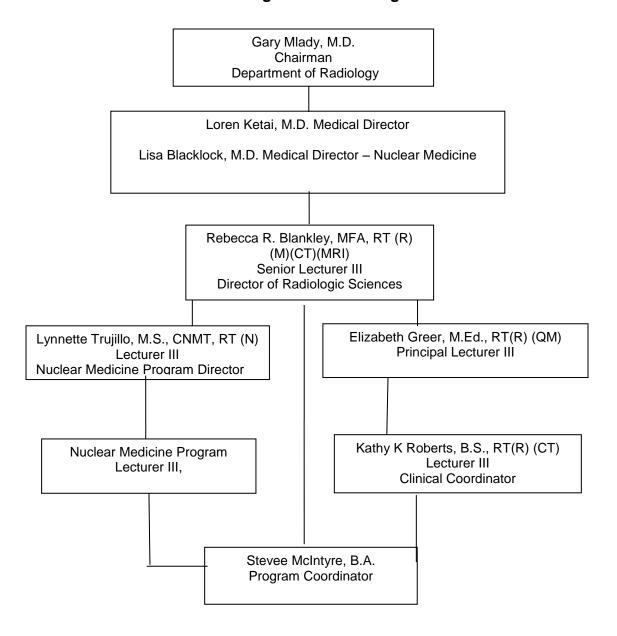
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The UNM catalog and this Student Handbook are designed primarily to describe the programs, course of instruction, and academic regulations of the University of New Mexico and the Radiologic Sciences Program. The provisions of this handbook and the UNM catalog are not to be regarded as an irrevocable contract between the student and the University. The University reserves the right to change any provisions or requirements at any time within the student's term of residence.

# Organizational Chart UNM Radiologic Sciences Program



# 2017-2018 RADIOLOGIC SCIENCES PROGRAM

# **Bachelor of Science Degree**

The Bachelor of Science in Radiologic Sciences (BSRS) degree is available through the University of New Mexico (UNM), School of Medicine (SOM), in partnership with the New Media and Extended Learning (NMEL) distance education programs. The courses are delivered through the use of UNM's Learning Management System - Blackboard LEARN.

This program provides:

BSRS degree and/or primary certification for Nuclear Medicine to entry-level students or BSRS and/or post- primary certification in Computed Tomography or Magnetic Resonance Imaging to primary-certified Technologists in active status.

Each individual educational program is designed to prepare the student for eligibility to successfully complete one or more nationally recognized certification examinations in the content area specified. The Certificates are completed in 12 to 24 months depending on the selected program. Prospective students are selected through an application and interview process.

Students are required to transfer their previously completed college course work each semester to the University of New Mexico for approval in order to be included in a degree/certificate granting program. This course work includes prerequisites for the Nuclear Medicine program.

# **BSRS Program Mission Statement**

To enable students to develop the critical knowledge and skills required to assume professional responsibility and leadership roles in health promotion, excellent patient care delivery and clinical practice in a variety of health-care settings. Radiologic Sciences faculty are committed to student-centered learning, scholarship and service.

#### **Completion of the BSRS degree in Nuclear Medicine:**

The BSRS with an emphasis in Nuclear Medicine Includes additional course work specifically for completion of the primary pathway to certification for Nuclear Medicine Technologists. Once accepted into the Nuclear Medicine program this primary pathway course work is completed through face to face participation in classrooms, clinical rotations as well as in hybrid classes. This course work follows national curriculum standards as set forth by the Society of Nuclear Medicine and Molecular Imaging (SNMMI) which is reviewed annually for adoption by the UNM Nuclear Medicine faculty. The BSRS degree course work in Nuclear Medicine for primary certification consists of prerequisites + BSRS courses + Nuclear medicine course work and clinical requirements.

Certified Nuclear Medicine Technologists seeking to complete the BSRS degree will be required to transfer all course work to UNM. Students are required to remain in good standing in a Primary Certification while completing the BSRS. Proof of certification will be requested before starting the degree completion program.

# **Completion of the BSRS degree in Medical Imaging:**

The BSRS with an emphasis in Medical Imaging offers a degree completion pathway for technologists who have successfully passed one or more of the five American Registry of Radiologic Technologists (ARRT) Primary Certifications. Also recognized are Primary Certifications completed through the Nuclear Medicine Technology Certification Board (NMTCB) and the American Registry of Diagnostic Medical Sonography (ARDMS).

Through participation in this degree completion program, registered technologists may earn up to an additional 50 credit hours of under-graduate course work to fulfill the BSRS degree requirements. The BSRS program offers a variety of subject content and course work emphasizing medical imaging ethics and professionalism, cross-sectional anatomy and pathology as well as research topics within the field.

# **Completion of the Computed Tomography or Magnetic Resonance Imaging Certification:**

Participants are selected through an interview process offered once a year following completion of a primary certification (i.e. primary certification in radiography, nuclear medicine, radiation therapy or ultrasound).

The BSRS may be completed along with the post- primary certification through a degree completion program in advanced coursework in Magnetic Resonance Imaging (MRI) (face to face in classroom and clinical rotations as well as hybrid courses) and/or Computed Tomography (CT) (online course work and clinical rotations). The Post-Primary Certification pathways also provide opportunities for the student to gain the BSRS degree. Certification training and education provides opportunities for those with a bachelor degree or higher or who are a Primary Certified Technologist to gain an additional Post-Primary Certification.

The Radiologic Sciences certificate program offers enhanced clinical and didactic training and expertise without additional courses such as English, math or psychology. The UNM Radiologic Sciences CT and/or MRI certificate program qualifies for verification of completion of the ARRT certification eligibility requirements of a minimal of 16 hours of content specific course work needed to be eligible to complete the ARRT Post Primary Certification in Computed Tomography and/ or Magnetic Resonance Imaging.

#### Why continue advance education and training?

Advanced Imaging offers career advancement and mobility for registered technologists. The curriculum is innovative in its online delivery and geared to the changing practice environment. Annual review of curriculum and comparison to state and national standards of practice as well as national curriculum standards are implemented yearly.

Faculty and staff stay up on current trends and technology advancement through participation in state and national conferences. Current information is added to the UNM Radiologic Sciences Program's curriculum to meet the demands and changes asked of today's medical imaging technologist. The program feels confident these changes will be implemented through curriculum design and advisement as the field changes.

# **KNOWLEDGE**

**Nuclear Medicine/CT/MRI** - Demonstrate application, critical analysis, integration synthesis and evaluation of concepts and theories in the performance of medical imaging procedures.

# Student Learning Outcomes:

Course examinations and Clinical evaluations

- Participate in self-assessment exercise, identify strengths and limitation and develop own learning goals.
- Demonstrate ALARA principals of radiation protection and safety with self and others.
- Demonstrate knowledge of human structure, function, pathology as it relates to medical imaging.

# Clinical competencies

- Demonstrate clinical competence by demonstrating accurate positioning skills and selecting appropriate technical factors.
- Successful completion of comprehensive registry

**BSRS** - Student will demonstrate application, critical analysis, integration synthesis and evaluation of concepts and theories in the performance of evaluating cross-sectional medical images

# Student Learning Outcomes:

- Chapter examinations are multiple choice which demonstrate to student and instructor the ability to analyzed and evaluate cross-sectional images utilized in advance modalities
- Group and individual discussion participation takes place through online discussions, graded for participation and correct content
- Homework assignments
- Comprehensive midterm examination
- Comprehensive final exam.

# COMMUNICATION

**Nuclear Medicine/CT/MRI** - Demonstrate effective oral and written communication strategies with patients and family members, the public and members of the healthcare team to safely perform medical procedure.

#### Student Learning Outcomes:

Written and oral clinical midterm and final examinations

- Learn clear and concise medical language as it pertains to the imaging medical field.
- Demonstrate oral and written communication with referring physician and Radiologist.
- Demonstrate effective communication strategies with patients and family members, the public and members of the healthcare team.

#### Successful completion of comprehensive registry

Comprehensive clinical competencies of diagnostic procedures

Evaluation of student by clinical personal

• Student completes the site evaluation at the end of each rotation

**BSRS** - Student will demonstrate mastery of APA format through the completion of a research question, an annotated bibliography, and literature review outline culminating in a final literature review

Student Learning Outcomes:

- Development of a proficient research question with a minimal 3 variables assessed by the student
- Completion of annotated bibliography formatted in APA
- Completion of a literature review outline as well as a final formatted in APA literature review

# INTERPERSONAL AND CULTURAL SKILLS

**Nuclear Medicine/CT/MRI** – Demonstrate patient care skills including communication and professionalism that minimize the potential negative impact of social-cultural differences (e.g.: socio-cultural status, family and communities structure and function, race, creed, color, gender, sexual orientation or disability/health status) on access to health care services as well as needs, attitudes, beliefs and practices relative to health care.

Student Learning Outcomes:

Diagnostic image critique/assessment and objective structured course examinations

- Learn clear and concise medical language as it pertains to the imaging medical field.
- Demonstrate effective communication strategies while affirming the dignity and worth of all patients, family members, the public and members of the healthcare team

Evidence based presentation component is ongoing throughout the clinical courses.

• Learn to recognize cultural and socioeconomic differences while performing medical imaging procedures on children and adults.

**BSRS** – students will be able to: identify the characteristics of a team, examine the roles of community service in the health care field, identify and assess useful healthcare information, analyze patient care information sources, determine the characteristics of a team leader

Student Learning Outcomes:

- Reflective journals submitted weekly of community service/service learning experiences
- Group learning through online discussions, graded for participation and correct content
- Assignments graded with rubrics listing success criteria

# PROFESSIONALISM AND PATIENT CARE

**Nuclear Medicine/CT/MRI** - Demonstrate professional values in relevant aspects of patient care as defined by the governing bodies of Medical Imaging.

Student Learning Outcomes:

Clinical competencies of student's performance and comprehensive examination and National registry examination

- Participate in personal and professional organizational opportunities.
- Adhere to professional appearance
- Establish professional relationships with imaging professionals
- Awareness of culturally sensitive factors impacting delivery of healthcare and acting with professionalism
- Not discriminate based on age, ethnicity, gender identity, disability and sexual orientation.
- Determining patient needs and providing appropriate education.

**BSRS** – Student will be able to: Discuss the current status of the U.S. healthcare system and the Affordable Care Act, discuss U.S. Health Care unions, and marginalized groups in relation to receiving health care. The mastery and completion of a professional resume

# Student Learning Outcomes:

- Course discussions participation on topics of socioeconomic, cultural, and ethical issues.
- Reflective writings assignments graded with rubrics listing success criteria
- Topic assigned writings and final paper on topic/argument specific research graded with rubric listing success criteria

#### Accreditation

The Commission on Institutions of Higher Education has granted, through the Higher Learning Commission, reaccreditation to UNM since1922 and the university holds accreditation in good standing through to the 2018-2019 academic year. http://www.ncahlc.org/component/directory/?Action=ShowBasic&Itemid=&instid=1511&lang=en

The UNM Radiologic Sciences Program has been approved through UNM faculty senate since 2001, and the Nuclear Medicine Imaging program since 1973 to offer training and education. A baccalaureate degree in Radiologic Sciences with special emphasis in Advanced Imaging was implemented spring of 2009.

Upon successful completion of program requirements, students are awarded a transcripted Certificate in the area of study and are eligible to apply for national certification given by the American Registry of Radiologic Technologists (ARRT) and or the Nuclear Medicine Technology Certification Board (NMTCB).

#### PROGRAM STANDARDS

#### **Student Technical Standards**

- Emotional stability for exercising good judgment in assessing and responding to patient care needs associated with diagnostic imaging and therapy procedures.
- Maintain composure and emotional ability to respond to patient care needs in both routine and emergency clinical settings.
- Visually monitor patients during the imaging procedure and recognize when patients are in distress and effectively respond to emergent situations.
- Utilize the ability to practice previously learned knowledge and critical thinking skills. These skills apply to reading, interpreting and applying written orders.
- The ability to comprehend 2D and 3D relationships to anatomical structures identified on medical images.
- Must be free from health or medical disorders that limit the ability to completely and
  efficiently perform the duties of an advanced imaging student. The student must not be
  chemically dependent.
- Ability to move/ transfer and skillfully position patients weighting up to 400 pounds.
- Ability to lift/ handle and carry objects up to 35 pounds.
- Must be able to communicate effectively in both the academic and clinical setting. The clinical environment involves both routine and emergency situations in the clinical health care system.
- The student must be able to set up advanced imaging procedures and protocols and perform examinations from beginning to end within the area of their training.

The Radiologic Sciences Program is cognizant of its responsibilities under the Americans with Disabilities Act. Any applicant with a disability that has any questions or needs with respect to the above standards, he/ she should contact the Director of Radiologic Sciences at (505) 272-5254 or <a href="http://as2.unm.edu/">http://as2.unm.edu/</a> UNM Accessibility Center

# **Essential Cognitive/Conceptual Quantitative Abilities and English Language**

Students are required to have the ability to read and understand written documents in English and solve problems involving measurement, calculation, reasoning, analysis and synthesis of routine procedures. They must have the ability to gather data, to develop a plan of action, establish priorities and have the ability to react effectively in a routine and emergency situation.

All lectures, labs, and clinical education rotations are conducted in English, thus an above average knowledge and demonstration of written and spoken English is essential for successful student outcomes.

Per UNM undergraduate admission requirements:

http://geo.unm.edu/admission/undergraduate/index.html

If English is not the student's first language, the student is required to demonstrate English language proficiency. Students may need to submit official English proficiency test scores (details provided in the link above) that are *less* than 2 years old.

**English Proficiency Test Requirements:** 

To demonstrate English proficiency, students can complete one of the following::

- The International English Language Testing System (IELTS)
- The Test of English as a Foreign Language (TOEFL)
- Cambridge CPE or CAE.

Minimum score requirements are listed in the web link provided. Official test results must be sent directly to the University of New Mexico. The TOEFL code for UNM is 4845.

#### **Essential Communication Skills**

- Ability to understand complex and detailed written and spoken instructions
- Ability to apply instructions while ensuring the safety of patients and staff
- Communicate effectively with all levels of personnel, patients and the public

Both the Radiologic Sciences profession and program's clinical sites require the technologist and student have a mastery of conversational English in order to be able to converse effectively with patients and staff. For patient and radiation safety requirements, it is vital that technologists and students be able to clearly explain a procedure and record a comprehensive history upon the first encounter with a patient.

# STUDENT RESOURCES

# UNMH SOM / HSC Student ID Badge

Authorized through the University of New Mexico Hospital (UNMH) security office. (Required for library and computer pod facilities)

#### **Library Facilities**

Students have full privileges in all University of New Mexico libraries. Students are encouraged to utilize the Health Science Library resources for submission of academic papers and research proposals.

# **Health Sciences Library & Informatics Center (HSLIC)**

HSC library link: http://hslic.unm.edu

Hours of operation:

Monday - Thursday: 7am - 11pm Friday: 7 am - 6 pm Saturday: 9:30 am - 6 pm Sunday: 12 noon - 11 pm

Library Info Desk: 505-272-2311

Radiologic Sciences program library resource page: <a href="http://libguides.health.unm.edu/radiologic">http://libguides.health.unm.edu/radiologic</a>

#### **Computer Facilities**

Computers are available daily thorough the Health Sciences Library-HSLIC at:

# http://it.unm.edu/pods/index.html

#### Students with Disabilities

Office of Academic Resources and Support (OARS) <a href="http://som.unm.edu/education/md/ume/oars.html">http://som.unm.edu/education/md/ume/oars.html</a>

Academic support services are offered to School of Medicine students as part of Undergraduate Medical Education Office of Academic Resources and Support (OARS). Please visit the link listed above for more information. Learning specialists assist students in assessing and addressing the following:

- Study Skills
- Test-taking Strategies
- Test Anxiety
- Time Management
- Organizational Skills
- Problem-Solving Conceptualization
- Learning and communication style assessments to help your understanding and address your learning issues
- Issues related to clinical skills, communication skills, and professionalism and ethics
- Related Areas of Concern
- Referrals. Students are directed to available resources, special courses (Boards Review), or special diagnostics as needed.

Students with diagnosed disabilities who need accommodations for learning and/or testing must maintain current documentation in the OARS office. OARS will guide students through the process of acquiring services and suggesting relevant accommodation formats, (e.g., laptop computer and printer instead of handwriting patient notes). An HSC advisory committee evaluates the necessity for and appropriateness of accommodation requests to assist students in meeting the technical standards necessary for successful completion of the Radiologic Sciences Program.

#### **UNM Net ID and Password**

UNM Net ID and password are required to access Learning Central to complete on-line modules for all clinical students. A separate password will be required to complete the Presbyterian Health Systems online modules for clinical participation (introduced prior to clinical rotation). https://netid.unm.edu/form\_new\_netid.php

#### **Student Needle Stick Insurance**

Each student will be charged a required \$20 fee for needle stick insurance. This fee will automatically be charged to the student account each semester (excluding the final summer semester prior to graduation).

#### **Tuition and Fees**

Students will pay to the UNM Bursar's office the current published tuition rate and fees for all courses.

To obtain a list of the current rates students can refer to the Bursar's office website under tuition and fees. http://bursar.unm.edu/

#### **Financial Aid**

The SOM financial aid office will assist students in navigating the process for obtaining financial support for their education. A comprehensive Financial Aid Handbook is available in the SOM Financial Aid Office, BMSB 147, or call 272-8008. Questions regarding financial aid should be directed to the financial aid office.

Website: http://financialaid.unm.edu/contact/north.html

#### **Student Academic Records**

The Office of Student Services maintains an academic record for each student. The record contains all grades and narrative evaluations submitted by faculty for completed academic coursework. The file is available for student review during regular working hours (Monday-Friday 8 am- 5 pm). All student files are governed by the Student Records Policy of The University of New Mexico, as well as FERPA. For more information, review the catalog link: <a href="https://registrar.unm.edu/privacy-rights/ferpa.html">https://registrar.unm.edu/privacy-rights/ferpa.html</a>

# **Parking and Transportation Expenses and Liability**

As a student, you will be expected to pay for parking and transportation expenses for all class and clinical related activities. Some clinical sites provide parking free of charge or at a discounted rate. The University assumes no responsibility for damage to any student's vehicle or injuries that may occur during transportation to and from class related activities.

# Office of Equal Opportunity

OEO has the responsibility for implementing the University's affirmative action policy. As part of that responsibility, OEO shall receive inquiries regarding issues involving civil rights issues; counsel claimants; evaluate claims; receive and process formal claims; prepare written investigative reports, which contain findings of fact; and conciliate meritorious claims separately or jointly with the parties. OEO will also refer claimants to other offices, if appropriate. The office is located at 609 Buena Vista NE, 277-5251. For more information, review the catalog link: <a href="http://www.unm.edu/~oeounm/">http://www.unm.edu/~oeounm/</a>.

# **Equal Educational Opportunity Policy**

The University of New Mexico is committed to providing equal educational and employment opportunity regardless of sex, marital or parental status, race, color, religion, age, national origin, ethnicity, physical handicap, or military involvement (Vietnam era veteran or handicapped veterans). Title IX of the Educational Amendments of 1972, prohibits discrimination on the basis of sex in any educational program or activity receiving federal financial assistance by way of grant, contract or loan. Title VI of the Civil Rights Act of 1964 is similar in its prohibition of discrimination on the basis of race, color or national origin and section 504 of the Rehabilitation Act of 1973 prohibits discrimination against qualified handicapped persons. Equal educational opportunity

includes: admission, recruitment, extracurricular programs and activities, housing, facilities, access to course offerings, counseling and testing, financial assistance, employment, health and insurance services and athletics.

- Responsibility for equal employment and educational opportunity throughout the University
  rests with the UNM President. The President has appointed an Affirmative Action Director,
  and has assigned responsibility to him/her for promoting and encouraging progress in
  meeting the University's equal opportunity goals. All grievances, questions or requests for
  information relating to these concerns should be referred to the OEO office located at:
- UNM Office of Equal Opportunity 609 Buena Vista Dr. NE, ABQ., NM 87106 Phone: 505-277-5251
- It is the policy of the University that "no person...shall, on the ground of race, color, national origin, sex, marital status, age or religion be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity..."

For more information, review the catalog link: <a href="http://oeo.unm.edu/">http://oeo.unm.edu/</a>

# **UNM Safe Reporting Sites for Students**

In addition to the UNM Office of Equal Opportunity, students have other options for which to make a complaint of sexual harassment or misconduct to. For more information, please review the lists of available sites.

1) UNM Student Health & Counseling (SHAC) PHONE 277-3136 https://shac.unm.edu/

 LBGTQ Resource Center PHONE 277-5428 http://lgbtqrc.unm.edu/

> MSC05 3155 608 Buena Vista Dr. NE Albuquerque, NM 87131 Physical Location: Bldg 20A

Basement floor (accessibility access phone on ground level)

3) Lobo Respect Advocacy Center

LoboRESPECT Advocacy Center PHONE 277.2911 <a href="http://loborespect.unm.edu/">http://loborespect.unm.edu/</a>

University Advisement and Enrichment Center Room 262 ABQ, NM 87131

4) Woman's Resource Center PHONE 277-3716

#### https://women.unm.edu/

MSC 06 3910 Mesa Vista Hall 1160 1 University of New Mexico Albuquerque, NM 87131

#### 5) Faculty SAFE

https://facultysafeunm.wordpress.com/

#### Lockers

Lockers can be assigned for student use in the Health Sciences and Services Building (HSSB). Students will need to supply their own locks.

# **Professional Organizations**

Students are eligible and strongly encouraged to join professional organizations that support the modality of their training. The American Society of Radiologic Technologists (ASRT) and the Society of Nuclear Medicine and Molecular Imaging offer student rates for membership (see Appendix D for websites).

# **Program Copy Machine Policy**

Students are able to make duplicate copies at their own expense. Minimal duplicates will be allowed to be made through the program copy machine and will require faculty or staff to be present.

#### CLINICAL POLICIES

# **Personal Appearance**

Students are expected to maintain a clean, neat PROFESSIONAL appearance as they are directly involved in patients in the clinical setting. Professional solid colored scrubs (cherry bottoms, silver tops) are to be worn. If required by a clinical site, a clean white laboratory coat will be worn over the scrubs. The UNM photo ID badge and name badge is to be prominently displayed at all times. A local vendor that carries the required scrub colors and lab coats is listed below:

Scrubs Beyond 5001 Montgomery Blvd NE Suite A21C Albuquerque, NM 87109 505-881-7877 505-881-0025 F

Should the student arrive at any clinical institution dressed in an inappropriate manner, the student will be sent home to change attire. Any missed clinical time must be made up by the end of each semester.

Students with long hair are asked to keep it tied back off the face. Perfume, cologne and aftershave should not be worn as perfume odors may cause nauseated patients additional discomfort.

In addition, student must abide by the UNM Hospital dress code as outlined at the following website:

Title: HR 140 – Professional Presentation & Appearance (Dress Code) https://hospitals.health.unm.edu/intranet7/apps/doc\_management/index.cfm?project\_id=1

Search: for policy – Dress Code. Select *Professional presentation and Appearance (Dress Code).* Highlights of the UNMH dress code policy include but is not limited to:

#### For All Students

- Good personal hygiene is required, including bathing and grooming. Clothing must be neat, clean, wrinkle-free, and in good repair.
- Jewelry must be kept to a minimum. The use of jewelry should be in keeping with the
  professional and business functions of the organization. Jewelry that may interfere with job
  functions or possibly result in injury to the staff member or patient is prohibited. Dangling
  earrings and rings of excessive size or number, for example, can be dangerous to both staff
  and patient and generally would be considered inappropriate.
- Highly fragranced lotion, perfume, cologne and/or smoke odor must be avoided
- Hair must be worn in a way that prevents contamination and does not present a safety hazard; no unnatural hair colors.
- Mustaches and beards must be well groomed and closely cropped.
- Visible body piercing must be limited to minimal ear piercings.
- Tattoos and/or any form of body art must be covered during the clinical setting.

# For Areas Involving <u>Direct Patient Care</u>

- Footwear should be safe, supportive, clean, and non-noise producing; no open-toe shoes may be worn.
- Hose, stockings, or socks must be worn.
- Artificial nails are prohibited; natural nails must be kept short (no longer than ¼ inch beyond the fingertip) and clean.

#### **Professional Conduct**

# Student must abide by the UNM Hospital Conduct/Supervision code as outlined at the following website:

Title: HR 140 – Radiology-Student Supervision

https://hospitals.health.unm.edu/intranet7/apps/doc\_management/index.cfm?project\_id=1

Professional conduct will be maintained by the student <u>in the clinical facilities and in the classroom</u>. This includes being considerate to fellow students. Congregating and socializing in the patient reception areas, patient imaging rooms, radiopharmacy, and halls is not considered professional. Care must always be taken not to discuss any patient study within earshot of any patient/family member. Any unprofessional conduct will result in disciplinary action.

<u>Professional ethics demand that health personnel neither consume alcohol/drugs within the</u> hospital nor arrive/return to the hospital after alcohol/drug consumption. Students who

violate this policy will be excused from the clinic and appropriate disciplinary action will be taken. (See Disciplinary Policy).

Student must abide by the UNM Hospital policy on alcohol and drug use as outlined at the following website:

Title: HR 145 - Drug and Alcohol Free Workplace

https://hospitals.health.unm.edu/intranet7/apps/doc\_management/index.cfm?project\_id=1

The program has the right to randomly drug test the student throughout the duration of the program if abuse is suspected.

#### **Professional Attitude**

Insubordination to physicians, clinical technologists and staff will not be tolerated. Students in violation of this policy will receive disciplinary action. (See Disciplinary Policy).

#### **Patient Care**

Patient care is the primary concern at UNMH, VAH, and all other clinical facilities. Respect for patient dignity is required of all students. Patient medical records are confidential. **Patient information may NOT be discussed with any patient or student in a non-professional context.** Students are expected to treat each patient with respect and dignity. A kind word, fresh linens, explanation of procedure, and keeping patients covered at all times are just a few of the ways to make their experience more pleasant. Each patient should ALWAYS be treated with the kindness, courtesy and respect one would wish for an immediate family member.

# **Health Information Portability and Accountability Act (HIPAA)**

All verbal, electronic, and written information relating to patients/clients and contracted agencies is considered confidential and is not to be copied or discussed with anyone. Information may be disclosed only as defined in HIPAA guidelines for educational purposes. Breach of confidentiality will result in disciplinary action, up to and including dismissal from the program and or course. https://hospitals.health.unm.edu/intranet7/apps/doc\_management/index.cfm?project\_id=1

<u>Students are cautioned that ONLY a physician may discuss diagnoses/possible diagnoses</u> <u>with the patient or other physicians</u>. Students must take extreme care not to practice outside of the scope of practice while in the program. This includes denying telephone requests for diagnoses of examinations. The caller is to be referred to a physician. Any deviation from this regulation will NOT be tolerated and will result in disciplinary action, up to and including dismissal from the program and or course.

# **Study Interpretation Policy**

- All interpretation of results to clinicians must be performed by Radiology Resident or Staff Physician. No exceptions.
- All <u>reporting</u> of results will be completed by Radiology Residents or Staff Physicians if available. This includes telephone inquiries as well as in-person requests for exam results. .

- It is understood that patients are not to be given results of any procedure performed. All patients will be referred to the primary physician for results.
- Medical Imaging students will not show images to any patient.

# **Injection Policy**

- All injections (including radioactive sources) must be performed under the direct supervision of a certified Medical Imaging technologist.
- A student may only inject with the permission from a supervising certified technologist.
   See Appendix F for information on adjunctive medications.

# **Collimator Change Policy**

- All collimator changes must be performed under the direct supervision of a Nuclear Medicine technologist. If a certified technologist is not present, the collimator may not be changed.
- Nothing is allowed to be placed on top of any collimator. (No paper clips, flood phantoms, notebooks, etc.) No exceptions.

#### **Practical Curriculum**

Nuclear medicine students will perform clinical nuclear medicine procedures, instrumentation quality assurance, radiopharmaceutical preparation/quality assurance, and other procedures under the supervision of staff Nuclear Medicine Technologists or the Program Director at individual clinical sites.

CT and MRI students will perform clinical CT/ MRI procedures, quality control procedures, and contrast media preparation and injection, and other procedures under the supervision of staff Radiologic Technologists or the clinical instructor at individual sites.

# **Competency Evaluations**

Performance objectives for the clinical practicum will be tested using a task-oriented evaluation competency database. Students are encouraged to attempt new tasks/ exams early in the practicum to gain as much clinical experience as possible. Students are technologists-in-training and must realize, however, that staff technologists will not allow errors in patient care to go uncorrected and may, upon occasion, deny the student performance of a particular procedure if the patient's physical/emotional condition warrants. Completion of all competencies should reflect entry-level performance of each exam by the student. Because of this expectation, the clinical instructor plays a crucial role in determining the level of clinical skills of our graduates. Evaluations will be discussed with each student on an individual basis and retained in the student's personal file. At the conclusion of each practicum, a written examination covering the clinical objectives will be given and retained in the student's personal file.

#### **Handheld Device**

Students participating in the Radiologic Sciences clinical program will be required to purchase a handheld device to be used by the student to track the clinical experiences while attending the program. It may also be utilized as a storage and retrieval device for class materials, clinical protocols and techniques.

List of handheld devices:

- Apple iPod Touch
- Apple iPhone
- Apple I Pad and I Pad mini
- Android Phone/ Tablet

# **Handheld Policy**

Students are responsible for copying their handheld clinical databases to the classroom computer at least monthly. In addition, students should synchronize their handheld databases with their personal computers as often as possible to avoid loss of data. MRI/CT students are required to submit databases weekly.

 Students have the option to purchase additional software for their personal computer at home, to synchronize the databases. Students will be responsible for any lost DATA.

Students are not allowed to photograph, record or video tape patient's interactions, procedures or any related information. <u>No Exceptions.</u> Violation of this policy is against federal law and may result in legal disciplinary action including dismissal from the program.

#### CLINICAL ROTATIONS

# Nuclear Medicine Clinical Rotation Hours (<u>subject to change</u>)

The following clinical rotations will be in effect:

VAH Imaging/Cardiac	7:00 – 3:30
VAH Radiopharmacy/Laboratory	6:00 – 2:30
VAH General Imaging	6:30 – 3:30
Presbyterian Hospital General Imaging	7:00 – 3:30
Presbyterian Heart Group	7:30 – 4:00
UNM Hospital Radiopharmacy/Laboratory	6:30 – 3:00
UNM Hospital General Imaging	7:00 – 3:30
UNM Hospital Cardiac Imaging/Access	7:30 – 4:00

UNM PET/CT Imaging	7.00 3.30
UNIVIPET/CT IMaging	7:00 – 3:30

Christus St. Vincent General 6:30 – 2:30 Week 1

7:30 – 3:30 Week 2

# Advanced Imaging Clinical Rotation Hours (<u>subject to change</u>)

The following clinical rotations will be in effect for MRI:

PRES Main 8:00 – 6:00 (Mon. - Sat.)

PRES Kaseman 8:00 – 6:00 (Mon. - Sat.)

PRES RUST 8:00 – 6:00 (Mon. -Sat.)

UNMH 8:00 – 8:00 (Mon. –Sat.)

UNMH OSIS 8:00 – 6:00 (Mon. -Sat.)

SRMC 8:00 – 6:00 (Mon. -Th.)

Christus St. Vincent 8:00 – 6:00 (Mon. -Sat.)

The following clinical rotations will be in effect for CT:

PRES Main 8:00 – 6:00 (Mon. -Sat.)

PRES Kaseman 8:00 – 6:00 (Mon. - Sat.)

PRES RUST 8:00 – 6:00 (Mon. - Sat.)

UNMH 8:00 –6:00 (Mon. -Sat.)

UNMH OSIS 8:00 – 6:00 (Mon. –Sat.)

SRMC 8:00 – 6:00 (Mon. -Th.)

Christus St. Vincent 8:00 – 6:00 (Mon. -Sat.)

#### CT/ MRI Clinical Schedule: 2017-2018

Fall Semester dates: September 6 to December 10, 2017

Fall break: October 13 and 14, 2017 (10 Clinical hours required)

Thanksgiving break: November 24 and 25 2017 (10 clinical hours required)

Spring Semester dates: January 17 to May 6, 2018

Spring break: March 13-17, 2018 (No clinical hours required if completed competency goal)

Summer Semester dates: May 30, to July 22, 2018

Independence Day: July 4, 2018 (10 Clinical hours required)

# **Nuclear Medicine Clinical Teaching Staff**

# **Veterans Administration Hospital**

Department Supervisor: Nicole Lucero, B.S., CNMT

Clinical Site Preceptor: Ernesto DeLilla, B.S., RT (N), CNMT

Staff Technologists: Gabriel Munoz, B.S., RT (N), CNMT

Minh Phan, B.S, RT (N), CNMT

Jenny Molden, B.A., B.S., RT(N)(CT), CNMT

George Mezori, CNMT

# **Presbyterian Hospital**

Department Supervisor: Don Allison, B.S., RT(R) (N)

Clinical Site Preceptor: TBD

Staff Technologists: Kris Lee, BS, RT (N), CNMT

Kevin Ponte, CNMT

Matthew Driver, B.S., RT (N), CNMT

Christina Stanfield, CNMT

# **UNM Hospital**

Clinical Site Preceptor/

Department Supervisor: Chris Wallace, BS, RT (N), CNMT

Staff Technologists: Brad Kappenman, B.S., CNMT

Utashni Bhakta, B.S., CNMT, RT (CT)

Moises Rosales, B.S., CNMT, RT (N) (CT)

Melissa Hess, B.S., RT(N)(CT), CNMT

Laura Morillon, B.S., RT(N)(R), CNMT

Karyn Estrada, B.S., RT(N), CNMT

Felicia Vaisa, B.S., CNMT, RT(N)

# **Christus St. Vincent Hospital**

Radiology Manager: Yvonne Bieg-Cordova

Clinical Site Preceptor: Feliz Vigil, B.S., RT (N) (MRI), CNMT

Staff Technologists: Timothy Valdez, RT

# **New Mexico Heart Institute**

Department Supervisor: Albert Brieden, B.S., CNMT

Clinical Site Preceptor: Albert Brieden, B.S., CNMT

Staff Technologists: Janet Berry, B.S., CNMT

Kiahle Swaziek, B.S., RT (N) (MRI), CNMT

Tess Moraga, B.S., RT (N), CNMT

#### **Clinical Coordinator, Instructor, and Preceptor**

**Clinical Coordinator:** The UNM faculty member that serves as the liaison between the Radiologic Sciences program and the clinic sites that provide clinical training to the students; monitors all student documentation and may assign final clinical grades.

**Clinical Instructor:** The UNM faculty member authorized to visit clinic sites and to report to the Clinical Coordinator; provides clinical support and direction to Clinical Preceptor and students.

Clinical Supervisor and/or Preceptor: The technologist at each clinic site that provides clinical support and direction in the training of students and communicates with the Clinical Coordinator, Program Director and Clinical Instructors.

**Clinical Staff Technologist.** Refer to Clinical Preceptor / Supervisor for direct clinical requirements defined below.

# Requirements, Knowledge, and Skills for Clinical Site Preceptors, Instructors and Coordinator

- Provide yearly updated resume
- Be able to interact with students and if not, provide information to another participating clinical Instructor/supervisor (Weekend and swing shift of rotating students).

- Participate in faculty development activities
- Become familiar with ARRT/ NMTCB practice and standards for completing competencies
- Be familiar with required competencies
- Have access to break room and locker room to provide student access
- Be able to interact with students at least once a week
- Preform competencies for students and provide guidance to other technologists performing the task
- Communicate effectively with Clinical Coordinator/Instructors/Preceptors on a weekly basis via text or e-mail &/or face to face

# **Clinical Instructor Duties and Responsibilities**

- Make weekly site visits
- Assist database grading
- Provide instruction and clinical teaching in courses pertinent to area of study
- Provide image evaluation
- Tracks and reports student progress
- Provide support and direction to Clinical Preceptor and technologists
- Provide support and direction to student

# **Clinical Coordinator Duties and Responsibilities**

- Assist in maintaining and posting clinical schedules
- Review radiation reports with students
- Ongoing verification and update of clinical handbooks in clinical site
- Clinical compliances for students (immunizations)
- Maintain clinical affiliation contracts
- Obtain weekly databases and grade or assist with clinical courses
- Make weekly site visits
- Drug screening, background checks, finger printing, and certification verification
- Assist with providing image evaluation
- Coordinate radiation safety training
- Assist in update databases
- Oversee training for Clinical Preceptors and staff

#### ATTENDANCE POLICIES

In order to gain certification in Advanced Imaging or Nuclear Medicine Imaging, students are required to spend 12-14 months rotating in the clinical affiliation sites. Students are required to be present for all scheduled classes and clinical education assignments. Tardiness or absenteeism is not permitted. All absenteeism, regardless of reason, will be recorded and may negatively impact the final student grade. The Program Director may count any tardy as an absence.

#### **Didactic**

The student is expected to attend all scheduled didactic courses.

#### Clinical

The student is expected to attend all scheduled clinical rotations Daily attendance will be recorded on each student's handheld device. Students are required to have a supervising technologist sign in and sign out both their arrival and departure times on the handheld device. Students are required to sign in as soon as they arrive in the clinical setting. Failure to do so will result in tardiness. It is the expectation that you are present for each and every clinical shift. However; students are permitted to miss two (2) shifts per semester without academic penalty. Students missing more than (2) shifts will receive a full letter grade reduction. Students missing more than three (3) shifts will receive advising and will be placed on clinical probation. Further clinical absenteeism may result in removal from the program. Clinical attendance will be reflected in the clinical grade. The following procedures will apply to clinical attendance:

#### **Lateness or Absenteeism**

Students must initiate contact by calling and emailing their assigned clinical instructor and clinical site at the beginning of the scheduled shift if they will be late or absent, or if they need to leave early. Additionally, students must e-mail the Clinical Coordinator at least thirty (30) minutes before the beginning of the scheduled shift if they will be late or absent or immediately when they know they will be leaving early. No show/no call will result in a referral to the Program Director and will be reviewed.

The following procedures must be followed regarding schedule changes:

# All Clinical Students

- 1. Students who do this more than once in a semester will fail their clinical course.
- 2. This is exclusive of the scheduled lunch break. **Students may not work through lunch in order to leave clinic early.**

#### **CT/MRI Students ONLY**

- 1. Students are responsible to attend their entire shift to receive full credits for the hours attended.
- 2. Students do not received partial points for hours worked. For example, if a student works 9.5 hours, the student will only receive 9 points for that shift.
- 3. Schedule changes must be initiated by the clinical site and approved in advance by Program Director or Clinical Coordinator prior to the date(s) involved. All procedures listed above apply to any new schedule approved. This is due to the nature of the clinical assignments and the limited access to clinical sites.
- 4. Scheduled changes for time off must be submitted one week prior to gain approval prior to the time of schedule change. Changes need to be approved by both the Radiologic Sciences Department and the clinical site Supervisor.
- 5. If a student must be absent due to an injury or illness a note from his/her physician requesting an excused absence will be considered for replacing the unexcused absence. The student MUST use his/her 2 allotted clinical absences prior to a physician's note being considered. It is important to note that the student, although excused, is still responsible to complete all course requirements during each semester.
- 6. Make-up time must be approved by the Clinical Coordinator and Clinical Supervisor one week prior to approve any clinical changes to the schedule.

#### Scheduled Absences

If a student knows in <u>advance</u> that they will not be in clinic (due to doctor's appointment, etc.) they must submit in writing to the <u>Clinical Coordinator and Clinical Supervisor</u> at least <u>24 hours in advance</u>.

The Clinical Coordinator will decide if the missed clinical hours must be made up prior to the end of the semester and the student may be required to remain beyond the scheduled date of program completion to fulfill required clinical hours and or clinical requirements.

#### Lunch

Students do not have scheduled lunch periods during clinical rotations, but a minimum of 30 minutes will be assigned by the supervising staff technologist. This applies to students who perform a clinical rotation more than six hours in duration.

#### **Down Time**

During periods when there are no clinic patients or equipment is down, students are expected to restock rooms and help with any clinical exams per the clinical preceptor or technologist they are shadowing. The student should check with their clinical preceptor and gain permission to work on classwork or read program related material.

# **Leaving Early**

Students are allowed to leave early with <u>only</u> the approval of both the <u>Clinical Coordinator and Clinical Supervisor</u>. There are special circumstances when the Program Director will have the students leave early for guest lecturers or laboratory sessions. Any time a student leaves early, it must be recorded as such on the student attendance record, including a required call to the Radiologic Sciences Program at 505-272-5254.

# **Leave and Holidays**

The following holidays are observed at the University of New Mexico Hospital:

Labor Day Christmas Eve New Year's Day
Thanksgiving Day Christmas Day Memorial Day
Day after Thanksgiving Day New Year's Eve Independence Day

The VAH observes several holidays (Columbus Day, Veteran's Day, and President's Day) that UNM does not. Students who are assigned to the VAH on federal holidays not observed at UNM will arrange with the Clinical Faculty/Clinical Coordinator to either make up the clinical hours, or report to a different clinical site on that day.

# **Snow Delays and Cancellations**

It has been noted that UNM tends to announce delays and cancelations late at night or early in the morning due to weather concerns. The late announcement can make it difficult to decide whether to go into clinic or not. As a result, we follow the APS schedule in regard to clinical attendance. For example, If APS goes on a delay, then clinical start time will also follow the delay. Students will not be penalized for going to clinic late due to weather issues. If APS cancels, then do not go to clinic. Note this <u>only</u> applies to clinic. You may still be required to go to classes in the afternoon dependent upon UNM closures or delays. Faculty will notify students by phone, text, or email for delay or late arrival time.

If you have car trouble, heating problems or other types of weather related issues, call the Radiologic Sciences Program and the Clinical Coordinator to explain the issue. Also call the clinic site and notify them that you will be late.

# **Discretionary Leave**

Students are allowed two days (20 hours) of discretionary leave per semester. Student must notify the Radiologic Sciences Clinical Coordinator and Clinical Supervisor\_as soon as possible with any changes to the schedule. Discretionary leave should be reserved for family emergencies or other personal circumstances. If a student does not use their discretionary leave by the end of the semester, the student may utilize these hours during finals week. <u>Discretionary leave hours</u> <u>cannot be carried over into the next semester.</u> Use of discretionary leave DOES NOT excuse a student from making up assignments that are due or making up a scheduled exam.

#### **Sick Leave**

All sick leave requires a doctor's permission note for excused absence from your clinical rotation. Otherwise, all absences will be recorded as unexcused. For instance, if the student is sick and may be "contagious" DO NOT GO TO CLINIC. A note is required from your health care provider to receive discretionary leave. The Student Health Center on main campus is available for physician care. The telephone number of Student Health is 272-3136.

If the Program Director and/or Clinical Coordinator feel that a student is unable to perform their clinical duties due to an injury or illness, then the student may be required to leave clinic. The Clinical Coordinator and or Clinical Supervisor\_will decide when a student may return to clinic based on the documented physician release provided to the program.

Students must call and e-mail the Radiologic Sciences Program (505-272-5254) and the assigned Clinical Supervisor within 30 minutes of the start of the clinical rotation, identify themselves, and provide the anticipated time of return to the clinic site. Failure to notify faculty and the clinical site will result in an unexcused absence.

Note: The Program Director will decide if missed clinical hours must be made up prior to the completion of the semester and students may be required to remain beyond the program completion date to complete clinical requirements.

#### **Bereavement Leave**

Student will make arrangements with the Program Director and Clinical Coordinator to make up clinical and didactic coursework.

# **Outside Employment**

#### **Employment as a Student**

Outside Employment in Nuclear Medicine Program: Due to the intensity of the Nuclear Medicine Program, the program recommends that students do not work during the program. However, if you need to or elect to work, your employment hours <u>cannot</u> interfere with attendance requirements of the program. Likewise, employment during clinical rotations must also be outside of rotation time. Typical class time on campus is between 6:00 am – 5:00 pm, Monday through Friday. Typical clinical rotation times are 6:00 am to 5:00 pm, Monday through Friday

<u>Nuclear Medicine Employment:</u> National standards and state licensure does not allow students to perform Nuclear Medicine examinations in the role of a technologist or student technologist. Students will need to have completed the national certification through JRCNMT and/or ARRT-Nuclear Medicine. Students also need to be awarded a State of New Mexico Medical Imaging and Radiation Therapy Program License through the State of New Mexico before practicing in Nuclear Medicine. At no point will students be substituted for regular staff.

# **HEALTH REGULATIONS AND POLICIES**

#### General

Students **must be** covered by adequate health/major medical insurance, including hospitalization coverage (with a company of their choice) throughout the entire program. Students are eligible to participate in the student health insurance program available through the University of New Mexico AcademicBlue Student Health Plan or AHP.

Students must present evidence of having a physical examination which must include complete blood count, urinalysis, and PPD results, within six months prior to program entry. In addition, immunization for Hepatitis B is **required.** Physicals and the Hepatitis B series are available through the Student Health Center.

The Radiologic Sciences Program reserves the right to schedule physical examinations for any student experiencing prolonged or chronic illness and further reserves the right to terminate a student if satisfactory health is not maintained throughout the duration of the program.

Students are cautioned to maintain a professional attitude toward their personal health at all clinical sites. Faculty and resident physicians should not be asked to diagnose, treat or prescribe medication for students.

# **Student Health Center and Counseling (SHAC)**

SHAC is a comprehensive outpatient health care service for UNM students. It provides essentially the same kind of health facilities that would be provided at private clinics but at a greatly reduced cost due to the fact that it is funded by a budget allocation from student fees. Fees are charged for

lab tests, x-rays, infirmary admissions, procedures and medication, but at a reduced price. The center provides immediate care under the walk-in service. The SHAC is located on the main campus north of Johnson Center and across the mall from (east of) the Student Union Building (SUB).

Limited patient parking is available behind Student Health & Counseling. Students may obtain parking permits from the SHAC Reception Area, Counseling Services, or the Pharmacy. SHAC provides medical care, counseling and therapeutic services, and health education. SHAC is open Monday - Friday, 9:00 AM - 5:30 PM. (The last appointment of the day is at 5:30 PM.) SHAC is closed on all official UNM holidays (and campus closures due to weather/unforeseen circumstances).

Medical services include primary medical care by appointment and a Walk-in Clinic. Specialty consultations are also available in allergy, dermatology, internal medicine, nutrition, physical therapy, podiatry, psychiatry, and surgery. There are separate Women and Men's Health Services, plus an Allergy & Immunization Clinic which offers routine and travel immunizations. All patient information is held in strict confidence. Student Health and Counseling (SHAC) services are available to all currently enrolled UNM students.

For information on health insurance and fees for services, please visit the SHAC website, listed below. Or call Student Health & Counseling at 505-277-3136.

Website: http://shac.unm.edu/

#### **Health Insurance Available**

# **Undergraduate Students**

All students are required to show proof of health insurance coverage each semester. It is the student's responsibility to notify staff when/ if health coverage expires or is no longer valid.

To ensure that all students will be covered, each student will automatically be billed for UNM Student Health Insurance (AcademicBlue Student Health Plan or AHP) at the beginning of the fall and spring/summer sessions unless you formally waive the insurance

Waiver procedures and deadline information are available at

https://unm.myahpcare.com/

https://hr.unm.edu/benefits/student-health-plan

To purchase medical group insurance please visit: <a href="https://hr.unm.edu/benefits/student-health-plan">https://hr.unm.edu/benefits/student-health-plan</a>

According to the University of New Mexico Health Science Center Affiliation Agreement Section V, Item D:

"In the event of injury to a Student at the Clinical Facility, the Student will seek treatment at a facility selected by the Student. If necessary, the Clinical Facility will provide emergency

medical treatment to Students while they are assigned to the Clinical Facility. The cost of such treatment will be paid by the Student or the Student's third party payer."

If you need further assistance, call (505) 277-3136 to schedule an appointment with a Health Insurance Navigator.

# **Background Check**

All students will be required to complete and pass a New Mexico Department of Health and Presbyterian Health Systems background check, arranged by the Medical Imaging program, prior to assigned clinic rotations. Students will be responsible for the cost of the test.

# **Urine Drug Screening**

All students will be required to complete a urine drug screening test, arranged by the Radiologic Sciences Program, prior to assigned clinic rotations. Students will be responsible for the cost of the test. Students are subject to random drug tests through-out the program at the discretion of the Radiologic Sciences Program.

#### **Universal Precautions**

# The following are universal precautions and will be observed by all Radiologic Sciences students while participating in the program:

#### Hands

Hands should always be washed before and after contact with patients. Hands should be washed when gloves are used. If hands come in contact with blood, body fluids or human tissue, they should be immediately washed with soap and water.

#### Gloves

Gloves will be worn when contact with blood, body fluid, tissues or contaminated surfaces are indicated. Gloves are required when performing IV injections.

#### Gowns

Gowns or plastic aprons are indicated if blood splattering is likely.

#### Masks and Protective Goggles

Masks and protective goggles will be worn if aerosolization or splattering are likely to occur such as in certain dental and surgical procedures, wound irrigations, post- mortem examination and bronchoscopy.

# • Emergency Equipment

To minimize the need for emergency mouth-to-mouth resuscitation, mouth pieces, resuscitation bags, or other ventilation devices are strategically located and available for use in areas where the need for resuscitation is predictable.

#### Sharps

Sharp objects should be handled in such a manner as to prevent accidental cuts or punctures. Used needles should not be bent, broken, reinserted into their original sheath or

unnecessarily handled. They should be discarded intact immediately after use into an impervious needle disposal box which should be readily accessible (placed in all clinical areas, including patient rooms). All needle stick accidents, mucosal splashes or contamination of open wounds with blood or body fluids will be reported immediately to the Clinical Coordinator and Clinical Supervisor.

# Blood Spills

Blood spills will be cleaned up promptly with a disinfectant solution such as a 1:10 dilution of bleach.

Blood Specimens
 All patients' blood specimens will be considered bio hazardous.

# **Accident/Injury/Needle Stick Procedures**

The student will report any accident/injury immediately to their Clinical Site Instructor and Clinical Faculty/Clinical Coordinator, and will begin following the UNM SOM needle stick accident protocol, as seen below

The form to be filled out when a student received a needle stick is under "Obtaining Medical Care" http://shac.unm.edu/bloodbodymedcare.pdf . This is the statement from the site:

"The student should notify his/her supervisor immediately. The supervisor and student should fill out a UNM Notice of Incident form. This form should go with the student to his/her evaluation for treatment."

The incident form is located in this handbook or downloaded from the following link: http://policy.unm.edu/common/documents/6150-exhibit-d.pdf

# Students need to report to the following departments if an accident/ injury or needle stick occurs:

- 1. Student needs to notify the Clinical Coordinator and the Clinical Supervisor immediately upon exposure/ incident.
- 2. After accidental exposure/ or incident occurs, the student is to report to SHAC on main campus. SHAC is open during normal business hours of 8:00 to 5:00 PM.
- 3. After hours, the student needs to report to the clinical site ER or student's choice for medical care. The student needs to notify ER personal immediately regarding the incident so that treatment is not delayed.
- 4. Student needs to have Appendix forms B and C filled out with a copy provided to the Radiologic Sciences program.

#### **Blood & Body Fluid Exposure/Needle-Stick**

#### **OBTAINING MEDICAL CARE FOR EXPOSURES**

#### 1. When an exposure occurs:

Wounds and skin sites that have been in contact with blood or body fluids should be washed with soap and water; mucous membranes should be flushed with water. There is no evidence that the use of antiseptics for wound care or expressing fluid by squeezing the wound further reduces the

risk for HIV transmission. However, the use of antiseptics is not contraindicated. Use of caustic agents, e.g., bleach is not recommended.

#### 2. Medical Evaluation:

It is very important that medical evaluation take place immediately because <u>treatment decisions</u> <u>must be made within 2 hours after exposure.</u> HIV prophylaxis for high-risk exposure appears most effective if started within 2 - 4 hours. It is also extremely important to evaluate the donor's risk status immediately.

#### 3. Medical Evaluation Facilities:

The student should report IMMEDIATELY to UNM Student Health & Counseling (SHAC). SHAC Hours: 9 am to 5:30 pm, Mon. through Fri. Hours are subject to change; check website <a href="http://shac.unm.edu/">http://shac.unm.edu/</a> for updates.

Outside of these hours, the student should go IMMEDIATELY to the nearest emergency room associated with the clinic or office where the incident occurred for the initial evaluation. Follow-up can be done at SHAC. (Do not go to UNM Employee Occupational Health unless you are a student employee and the exposure occurred after business hours).

The student should notify his/her supervisor immediately. The supervisor and student should fill out a **UNM Notice of Incident form (Appendix C)**, located in the clinical handbook. This form should go with the student to his/her evaluation for treatment.

Note: If the incident occurs at the VA Hospital, the VA Employee Health Clinic will do the initial evaluation.

Note: The supervisor and student should also fill out a **UNM RADIOLOGIC SCIENCES PROGRAM STUDENT ACCIDENT/INJURY REPORT** (Appendix B).

#### 4. Laboratory Testing/Treatment:

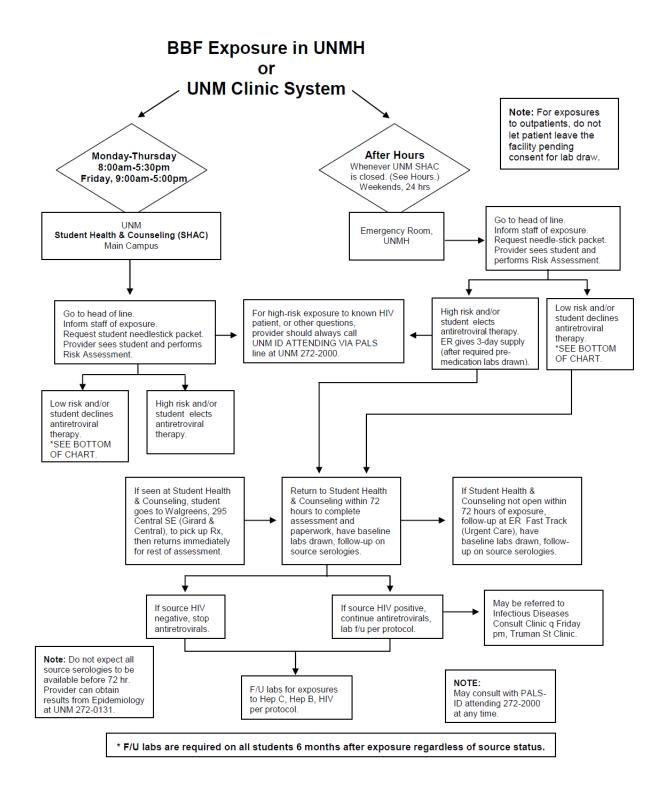
a) To determine whether treatment of the student is necessary, blood must be drawn from the patient/donor to evaluate Hepatitis B, C, and HIV status.

Call the Infection Control Nurse or Nursing Supervisor to order these tests on the patient/donor. The Infection Control Nurse (7 am to 4 pm) or Nurse Supervisor (after hours) should review the medical record, question the patient/donor about risk factors, and obtain the patient's/donor's consent to do the tests necessary to evaluate their health status.

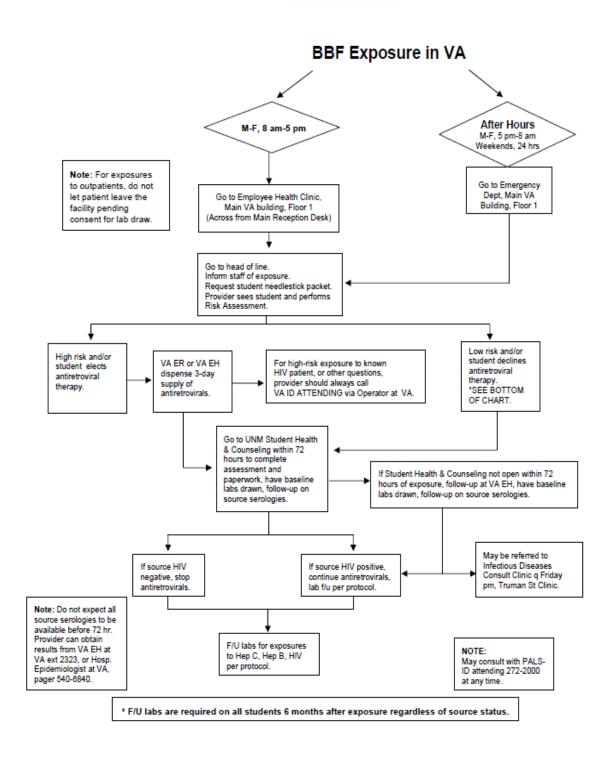
b) If the exposure occurs in an outpatient setting (and these tests cannot be done), send the patient/donor to Student Health & Counseling (SHAC) with the exposed student for evaluation.

#### 5. For more information on testing and treatment decisions or protocols:

- PALS line, Infectious Disease physician on call: (505) 272-2000 or 1-888-UNM-PALS (1-888-866-7257)
- Student Health & Counseling (SHAC): (505) 277-3136 (Mon. through Fri., 9 am to 5:30 pm. Hours are subject to change; check website [shac.unm.edu] for updates.)
- Student Health & Counseling (SHAC) Needle-Stick Web Page: <a href="http://shac.unm.edu/bbp.htm">http://shac.unm.edu/bbp.htm</a>



This flowchart is updated by UNM Student Health & Counseling. Revised 08/16/13



This flowchart is updated by UNM Student Health & Counseling. Revised 1/31/13 X:1PoliclesiMedicaliPractice GuidelinesiBlood BodyFluidiBBF VA Flow Chart.doc

#### LIABILITY

#### General

As stated in the Radiologic Sciences Affiliation agreement:

#### V. LIABILITY AND COVERAGE

A. As between the parties, each party acknowledges that it will be responsible for claims or damages arising from personal injury or damage to persons or property to the extent they result from negligence of that party's employees or (in the case of School) Students. The Clinical Facility understands that School is not indemnifying Clinical Facility for the acts or omissions to act of School's Students and/or employees. The liability of School, its Students and employees will be subject in all cases to the limitations and immunities of the New Mexico Tort Claims Act, Sections 41-4-1 et seq. NMSA 1978, as amended.

B. The New Mexico Risk Management Division provides professional liability coverage of School, its Students and employees for their health care instructional activities at the Clinical Facility as set forth in the New Mexico Tort Claims Act.

#### RADIATION SAFETY

Government regulations state that eating, drinking, smoking and application of cosmetics are not permitted in areas exposed to ionizing radiation. Eating and drinking at clinical sites are allowed only in **non-restricted** areas designated for food consumption.

**Gloves** are worn during the preparation of radiopharmaceuticals by nuclear medicine students and injections by all students to protect their hands from contamination. Contamination will occur if gloves contaminated in the Radiopharmacy are worn elsewhere in the department. Students are cautioned to remove their gloves before leaving the Radiopharmacy and quickly **survey their hands** for contamination. Not wearing gloves and other personal protective equipment is in violation of program policy and may result in disciplinary action and/or negatively affecting the student clinical evaluations.

#### **Dosimetry**

Whole body and ring thermoluminescent dosimeters (TLDs) to monitor exposure to ionizing radiation <u>must be worn at all times</u> by students in the clinical facilities. Failure to wear body and/or ring dosimeter, is considered to be out of uniform and non-compliant. <u>For example, if a ring badge is in the student's back pocket, then the student is in violation of program policy and appropriate disciplinary action may be taken. Students will be sent home if they do not have their dosimeters and time will be deducted from their discretionary time. Radiation badges are replaced quarterly and students are informed as to their updated exposure levels. The University must pay a fee for each badge lost, so students must be responsible for monitoring devices. Maximum exposure may be reported for the student for the period covered by the lost badge. Whole body badges are to be worn at or near the collar and ring badges are worn with the TLD turned inward on the index finger of the dominant hand. MRI students are exempt from wearing TLD's.</u>

#### **Authorized Use of Radiopharmaceuticals (Nuclear Medicine Students)**

Radiopharmaceuticals may not be administered to technologists, students, and other individuals without a Doctor's order for the exam and must be for a medical reason. Educational exercises, demonstrations, and other non-medical reasons are not sufficient reason for administration of radiopharmaceuticals. Any use of radiopharmaceutical doses or nuclear scans done without a written directive specifically for medical use will not be tolerated.

#### **Radioactive Spills**

Nuclear medicine students should be familiar with each clinical site's policy and procedure for cleaning and reporting any spills involving radioactivity (see Appendix E). Any spill must be reported immediately to the Clinical Site Instructor, Program Director, and Clinical Coordinator. A student who is present during a radioactive spill, whether directly responsible or not, must report the spill immediately to the Clinical Coordinator.

#### **Pregnancy Policy**

See Appendix L: Pregnancy Declaration Form & NRC Guidelines The University of New Mexico Radiologic Sciences Program has adopted the guidelines for occupationally exposed pregnant workers identified in the National Council on Radiation Protection (NCRP), Report #39, as its policy on student pregnancy. Exposure to the fetus shall be maintained below 0.5 rem during the period of pregnancy. The student will wear protective clothing as appropriate and will wear a fetal monitor external to and below the protective clothing so that the Program Director/Clinical Coordinator/Radiation Safety Specialist can ascertain at any time that exposure is not above the recommended level. The student will not be considered pregnant until written notification is provided to the Program Director and Radiation Safety Officer (RSO) using the declaration form (Appendix J). The declaration form requires the signature of the Medical physicist. A student is not required to declare a pregnancy. UNM and its employees cannot be held responsible for the radiation safety of a fetus if the mother decides not to declare her pregnancy. The student is highly encouraged to inform the Program Director and Clinical Coordinator of the pregnancy as soon as possible so that proper radiation safety practices can be initiated. Students are also strongly advised to consult with the RSO or designee before she declares in order to make an informed decision. It is anticipated that exposure would never exceed the recommended level. If there is a possibility that exposures may exceed 0.5 rem, clinical rotations in the Radiologic Sciences program will be discontinued. All time away from the program must be made up. A written request to the Program Director to resume clinical activity must be on file before returning. The student is encouraged to complete required course work.

As stated in the declaration form, if the student is notified they are not pregnant, or if the pregnancy is terminated, the student must promptly inform the RSO in writing that the pregnancy has ended. The student may un-declare the pregnancy at any time and for any reason (in writing to the RSO).

#### SCHOLASTIC POLICIES

#### **Performance and Evaluations**

It should be understood that teachers are helpers, not authority figures, and each student is expected to accept responsibility for his/her own academic performance. Grades are used to

indicate how well each student is performing and progressing toward his/her individual objectives, and are not used to compare one student's academic performance with another student.

All students must maintain a 76% average **in all courses** to remain in good standing in the Radiologic Sciences program. A student who receives less than 76% in any course will be placed on **academic review** and must bring the course average up to 76% prior to the conclusion of the course/ semester.

Students who earn a final grade which falls **below 76% in any course will be dismissed from the program.** The program reserves the right to terminate any student who fails to meet minimum academic or clinical standards.

Grading: The following grading system is used by the UNM Radiologic Sciences Program

A+	>97
Α	93-96
A-	90-92
B+	87-89
В	83-86
B-	80-82
C+	77-79
С	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	< 60

#### **Competency-Base Clinical Program**

This is a competency-based clinical program. Students are required to demonstrate clinical proficiency through the successful completion of competency exams. Competency exams in which the student is required to master are identified each clinical semester. Students cannot progress clinically or didactically to the next semester without the successful completion of the clinical competency exams per semester.

Students will receive periodic clinical evaluations during the clinical rotations. Evaluations will be discussed with each student on an individual basis.

All written examinations will be maintained in the student's personal files in the Radiologic Sciences Program office. Students may refer to these examinations during the course of the program.

Students who fail to meet the minimum academic/clinical standards as outlined in the clinical and didactic course objectives will not receive the designated certificate and will be ineligible to sit for national certifying examinations.

For promotion, the student must demonstrate satisfactory performance in lecture and clinical practice, as well as personal qualities appropriate to the profession of Medical Imaging. Reports on progress are given to students at the completion of each semester.

The faculty of the Radiologic Sciences Program reserves the right to terminate the education of any student who, in our judgment, does not satisfy the requirements of scholarship, health, or personal suitability for a medical imaging profession.

A further statement of policy by the Regents of the University of New Mexico may be found in the appendix section of The UNM Pathfinder. University Standards, Policies, and Regulations can be accessed at: <a href="http://pathfinder.unm.edu">http://pathfinder.unm.edu</a>

#### **Make-Up Examinations**

Arrangements to make up missed examinations (missed because of **illness only and/or family emergency**) must be made directly with the instructor and always within a period of **3 days** from the initial testing date. Failure to do so will result in a "0" grade for the examination. A penalty will be imposed on any make-up examination. No repeat or make-up final exam is allowed. The final exam must be taken on the scheduled day and time. Late Homework will not be accepted.

#### **Due Process**

A student who feels they were assigned an incorrect grade or dealt with inappropriately by any member of the staff or faculty may appeal to the Program Director for resolution of the matter. Students need to submit a written letter describing the incident to: Rblankley@salud.unm.edu. Rebecca Blankley, MFA, RT (R) (M) (CT) (MRI), Radiologic Sciences Director.

If the matter is not resolved, the student may appeal (in writing) to the UNM School of Medicine Health Professional Programs Student Due Process Policy:

The current HPP due process has not been approved by the Board of Regents. A final copy will be made available to the student upon final approval.

#### **Academic Honesty**

Radiologic Sciences Academic Honesty policy is reviewed and signed at the beginning of the students' academic semester for the Radiologic Sciences program. Please see (*Appendix P*) for the complete policy.

Refer to UNM Policy Office for Academic Dishonesty Policy. <a href="http://policy.unm.edu/regents-policies/section-4/4-8.html">http://policy.unm.edu/regents-policies/section-4/4-8.html</a>

The following statement appears among the scholastic regulations listed in the School of Medicine Student Handbook, regarding dishonesty in academic matters

"Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet these standards.

Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; and nondisclosure or misrepresentation in filling out applications or other university records."

#### STUDENT APPEAL PROCESS FOR ACADEMIC FAILURE

#### **Submission in Writing**

The applicant must submit in writing to the Program Director an explanation of his/her particular circumstances that would warrant special consideration. Relevant information may include health problems, financial situations, or reasons for recent changes in academic performance. The case will be reviewed by an advisory committee consisting of the Radiologic Sciences Program Director, Radiologic Science faculty as well as a faculty advocate provided to the student from another program within the Health Professional Programs (HPP) located in the School of Medicine. Each applicant's case will be considered on an individual basis.

Following the meeting of the Advisory Committee, the student will be notified regarding the Committee's decision.

#### **Withdrawal Policy**

A student may withdraw from the Radiologic Sciences Program in accordance with UNM policies and deadlines if he/she is unable to fulfill the established academic/clinical criteria. Withdrawals are subject to grades of W (Withdraw), to be determined by the Program Director at the time of the withdrawal. A W will not jeopardize the student's possible return into the program the following year in the event time cannot be made up (in cases of chronic illness, for instance). Each situation will be evaluated individually by the Program and students who withdraw must reapply for readmission <a href="http://registrar.unm.edu/forms/enrlauth-univwith.pdf">http://registrar.unm.edu/forms/enrlauth-univwith.pdf</a>

#### **DISCIPLINARY POLICY**

#### **Inappropriate Behavior**

\*Disciplinary action taken will be determined by the Program Director. The following actions should be considered a general guideline and will be adjusted to fit the circumstances.

Severe violations may warrant immediate dismissal from the program.

Some examples of inappropriate behavior which may result in disciplinary procedures is inclusive but not limited to the following:

- Dress code violation
- Tardiness
- Failure to call in absence to the Nuclear Medicine, CT, MRI program, Clinical Coordinator and clinical site
- Insubordination and/or unprofessional behavior
- Failure to maintain academic or clinical proficiency.
- Under influence of alcohol or drugs
- Abusive language
- Injecting and/or scanning without direct supervision of staff technologist
- Performing a competency without direct supervision of a staff technologist
- Falsifying clinical attendance or competency records
- Unprofessional hygiene
- Failure to follow HIPAA regulations. This includes storing patient information on handheld device.

- Personal cell phone usage during class time and clinical rotation is prohibited.
- Academic dishonesty such as copying homework cheating on quizzes or exams and/or plagiarism.

#### **Cell Phone Usage**

#### Student must abide by the Radiologic Sciences policy regarding cell phone usage:

Personal cell phones may be retrieved and used <u>during break time and lunch</u>. Students must go outside or to a <u>designated break area to respond to personal calls or text messages</u>. Cell phones are not permitted in areas with telemetry equipment or where cell phone restrictions are posted. Cell phones with games should not be played during clinical rotations. Camera phones will not be used to record protected health information, Hospitals' business, or unauthorized pictures of Hospitals' employees.

#### **Adverse and/or Corrective Action Policy and Procedure**

The Radiologic Sciences Program policy states that faculty/staff has the right to correct a student's behavior if the student violates the program's Handbook, UNM Pathfinder, or UNM School of Medicine polices as they relate to undergraduate student education.

The procedure for Student Adverse and/or corrective action:

The faculty/staff involved with the adverse and/or corrective action will try to resolve the issue with the student directly.

- Verbal warning: written record of the warning will be reviewed by the student and faculty member and a copy will be placed in student file.
- Written warning: written record of the warning will be reviewed by student and faculty member and a copy will be placed in student file.
- Coaching document (written plan outlining the issues and steps to correct the concern (s)
  If the issue cannot be resolved, the faculty will refer the matter in writing, including supportive
  documents, to the Program Director within three business days of non-compliance of the
  coaching document.

#### **Student Grievance Policy and Procedure**

Note: The student has the right to appeal the corrective action of the faculty/staff member. Students can find more information from the UNM Pathfinder at the link provided: <a href="http://pathfinder.unm.edu/student-grievance-procedure.html">http://pathfinder.unm.edu/student-grievance-procedure.html</a>

The Radiologic Sciences Program must abide by the Health Professional Program (HPP) Due Process policy. It is the student's responsibility to read and understand the HPP Due Process policy and adhere to the guidelines.

The current HPP Due Process policy has not been approved by the Board of Regents. A final copy will be made available to the student upon final approval.

• The student has the right to submit a written statement to the Radiologic Science Program Director or appear in person to drop off statement.

- The Program Director reserves the right in consultation with the Assistant Dean of Health Professions Programs, to remove a student from any aspect of training when there is a concern of safety to the student, faculty and staff, patients or other healthcare workers. The student will be informed in writing of the action to remove them from training.
- Note: The Program Director reserves the right to convene a committee in lieu of steps 1 and 2 if the violation of any policy is serious in nature.
- The Student has the right to appeal the Program Director's decision to the Assistant Dean of the HPP. The student may bring a formal appeal of the decision as set forth in the UNM Pathfinder <a href="http://pathfinder.unm.edu">http://pathfinder.unm.edu</a> under article 2 Academic disputes specifically 2.3 Formal Appeals of Academic Matters.

## **Situations Warranting Immediate and Permanent Dismissal from the Radiologic Sciences Program**

Some actions by students warrant immediate and permanent dismissal from the Radiologic Sciences Program because they constitute a violation of UNM policy and the Code of Ethics for the profession.

#### These situations include:

- Cheating or plagiarism
- Under the influence of alcohol or illegal drugs during program activities
- Falsifying clinical records (e.g., time sheets, evaluations)
- Repeated clinical incidents of misadministration of a radiopharmaceutical and/or contrast and/or scanning of the wrong patient.

The student **may be** permanently dismissed from clinical rotations for unsafe or inappropriate clinical practice any time during the clinical semester. In such cases a grade of "F" will be recorded for the course in which the unsafe or inappropriate practice occurred and the student will be permanently dismissed from the program.

Reasons for unsafe or inappropriate clinical practice include, but are not limited to the following:

- Failure to attain the required level of cognitive or motor skills following documented corrective action.
- Inadequate preparation following documented corrective action.
- Inaccurate documentation following corrective action.
- The inability to perform motor skills safely following corrective action.
- The inability to establish rapport with patients or staff following corrective action.
- Lack of integrity, initiative, interest, or dependability following corrective action

#### Appendix A

#### **Emergency Student Preparedness**

Students of the University of New Mexico recognize the classroom leadership of their faculty. In the event of an emergency, students will expect their faculty to provide guidance to mitigate and respond to the situation. The following is offered as a guide to develop those plans in advance of an incident.

- 1. In Case of Emergency If one encounters an emergency situation, they must first provide for their own safety. The UNM Police Department is available 24/7 and provides more than just emergency response. In addition to the items listed, they also house "lost and found", bicycle registration and fingerprinting, offer an escort service, and can provide copies of Police Reports.
  - a. If you come across an emergency situation, you should:
    - i. **Step One**: Make yourself safe
    - ii. Step Two: Warn others in the immediate area of the situation
    - iii. **Step Three**: Call for assistance. DO NOT assume that someone else has called. UNM PD: (505) 277-2241; 911 from a campus phone; or, via blue light phone.
- 2. UNM Communications Systems The primary ways that UNM can provide emergency updates to students, faculty and staff are via LoboAlerts (<a href="http://loboalerts.unm.edu">http://loboalerts.unm.edu</a>) and the Warning Siren. Although cell phones may be a distraction in the classroom, it is recommended that at least one device be left available to receive LoboAlerts messages. Since different devices and service providers may account for messages being received at different times, it may be prudent to allow several devices to be active for such messages.

Other than testing, a sounding of the warning siren means that something has occurred which makes it unsafe to be outdoors. All persons should take shelter in the nearest building, and look for additional information which will be coming via LoboAlerts, local media, email or the UNM Webpage.

- 3. Shelter In Place In some instances, it is safer to shelter in place and wait for further instructions. If you are instructed to Shelter in Place, then:
  - a. Remain calm
  - b. Move away from windows and glass.
  - c. Silence your cell phones.
  - d. Lock the door and wait for further instructions.
  - e. Keep the telephone lines free for emergency information. Do not call 911 or the UNM Police Department for information. However, if you are trapped or need assistance, please call 911 for assistance!
  - f. Don't leave your room until instructed by a Police Officer, authority figure or LoboAlerts.
- **4. Evacuation** Know two ways to get out of your building, and determine a location to meet to make sure that everyone is accounted for. Share this plan with your students in advance.
- 5. Suspicious Behavior There are many ways to report behavior that is concerning (AGORA, BIT, CARS, etc.). Report suspicious person(s) and/or activities to the UNM Police promptly.
- **6.** Awareness The first level of prevention is awareness of your surroundings.

#### For further information please contact:

UNM Police Department (505) 277-2241 <a href="https://campussafety.unm.edu/">https://campussafety.unm.edu/</a> UNM Office of Emergency
Byron Piatt, MPA, CEM
Emergency Manager
(505) 277-0330
bpiatt@salud.unm.edu

#### Appendix B

## UNM RADIOLOGIC SCIENCES PROGRAM STUDENT ACCIDENT/INJURY REPORT

Program:		Date: DOB:			
Name of Student:					
Home Address:					_
City, State			Zip Code		
Home Phone:	Work Phone	e:			
Date of Injury:		Time:	AM/PM		
Exact Location:					
Type of Injury:bruice Exact part of the body in		puncture	strain	abrasion _	othe
Describe in full how injur	y occurred:				
Names of witnesses:					
Immediate supervisor inf Signature:					_
Supervisor:		Date:			
Student:		Date:			
Review cause of accider	t and state action tal	•			:
Supervisor's Signature: _					
First Aid and/or instruction	ons given:				
Treated by:			& Time:		_
PHYSICIAN'S FINDINGS Physician Findings:	S & DISPOSITION				
Diagnosis:					
Treatment:					-
Disposition:					_
Date of Examination:		Time:	AM/	/PM	
Signature of Physician: _			, M.D.		

ADMIN/INJURY.RPT 6/14/17

# Appendix C NOTICE OF INCIDENT/UNM Department of Safety and Risk Services (Record Only) Revised: 06/01/07

This form must be completed when a claim is not expected for personal injury or property damage. It is for record only and should be completed as soon as practical after the occurrence, but within ninety (90) days of the occurrence. File the form with:

Department of Safety and Risk Services 1801 Tucker St. NE, Bldg 233 MSC07 4100 1 University of New Mexico Albuquerque, New Mexico 87131-0001

http://policy.unm.edu/common/documents/6150-exhibit-d.pdf

Full Name	de)
Amount of damages (if known) \$  Describe WHERE, WHEN, and HOW the dinvolved and any witnesses, including their	damages or injury occurred. Include names of all persons
Description of the	roximate Time:
Describe the injury or damage you sustaine estimates of repairs.	ed and attach copies of all medical reports, bills, or
	e true and correct to the best of my knowledge.

#### Appendix D NMTCB Code of Ethics

#### Code of Ethics

Technologists qualified to perform nuclear medicine procedures are members of the health care profession and must strive as individuals and as a group to maintain the highest ethical standards by adhering to the *Nuclear Medicine Technologist Code of Ethics* approved by the *Society of Nuclear Medicine and Molecular Imaging Technologist Section* (SNMMITS).

The principles of the *Nuclear Medicine Technologist Code of Ethics* as listed below are not laws, but standards of conduct to be used as ethical guidelines by nuclear medicine technologists.

#### Principle 1

The nuclear medicine technologist will provide services with compassion and respect for the dignity of the individual and with the intent to provide the highest quality of patient care.

#### Principle 2

The nuclear medicine technologist will provide care without discrimination regarding the nature of the illness or disease, gender, race, religion, sexual preference, or socioeconomic status of the patient.

#### Principle 3

The nuclear medicine technologist will maintain strict patient confidentiality in accordance with state and federal regulations.

#### Principle 4

The nuclear medicine technologist will comply with the laws, regulations, and policies governing the practice of nuclear medicine.

#### Principle 5

The nuclear medicine technologist will continually strive to improve his or her knowledge and technical skills.

#### Principle 6

The nuclear medicine technologist will not engage in fraud, deception, or criminal activities.

#### Principle 7

The nuclear medicine technologist will be an advocate for his or her profession.

https://www.nmtcb.org/policies/ethics.php

#### http://snmmi.files.cms-

<u>plus.com/docs/hpra/NMT%20SOP%20Clinical%20Performance%20Standards%20June%202014.pdf</u>

# Appendix E American Society of Radiologic Technologists Code of Ethics

- 1. The radiologic technologist conducts herself or himself in a professional manner, responds to patient needs and supports colleagues and associates in providing quality patient care.
- 2. The radiologic technologist acts to advance the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.
- 3. The radiologic technologist delivers patient care and service unrestricted by concerns of personal attributes or the nature of the disease or illness, and without discrimination on the basis of sex, race, creed, religion or socio-economic status.
- 4. The radiologic technologist practices technology founded upon theoretical knowledge and concepts uses equipment and accessories consistent with the purpose for which they were designed and employs procedures and techniques appropriately.
- 5. The radiologic technologist assesses situations; exercises care, discretion and judgment; assumes responsibility for professional decisions; and acts in the best interest of the patient.
- 6. The radiologic technologist acts as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment of the patient and recognizes that interpretation and diagnosis are outside the scope of practice for the profession.
- 7. The radiologic technologist uses equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice and demonstrates expertise in minimizing radiation exposure to the patient, self and other members of the health care team.
- 8. The radiologic technologist practices ethical conduct appropriate to the profession and protects the patient's right to quality radiologic technology care.
- 9. The radiologic technologist respects confidences entrusted in the course of professional practice respects the patient's right to privacy and reveals confidential information only as required by law or to protect the welfare of the individual or the community.
- 10. The radiologic technologist continually strives to improve knowledge and skills by participating in continuing education and professional activities, sharing knowledge with colleagues and investigating new aspects of professional practice.

Revised and adopted by the American Society of Radiologic Technologists and the American Registry of Radiologic Technologists, February 2003 (updated 2015-16)

http://www.asrt.org/docs/default-source/practice-standards/codeofethics.pdf

#### Appendix F

#### **Useful Websites**

Nuclear Medicine Technology Certification Board <a href="http://nmtcb.org">http://nmtcb.org</a>

Society of Nuclear Medicine and Molecular Imaging <a href="http://www.snmmi.org">http://www.snmmi.org</a>

The American Registry of Radiologic Technologists <a href="http://www.arrt.org">http://www.arrt.org</a>

American Society of Radiologic Technologists <a href="https://www.asrt.org">https://www.asrt.org</a>

American College of Radiology http://www.acr.org

New Mexico Society of Radiologic Technologists <a href="http://www.nmsrt.com/">http://www.nmsrt.com/</a>

Society of Diagnostic Medical Sonographers <a href="http://www.sdms.org/">http://www.sdms.org/</a>

New Mexico Environment Department Radiation Control Bureau Medical Imaging and Radiation Therapy Program http://www.nmenv.state.nm.us

### Appendix G Radioactive Spill Procedures

UNM Hospitals	R.	oplies To: UNM Hospitals esponsible Department: uclear Med. Revised: 11/2013
Title: Radiology - Nuclear Medicine - Radioact		Procedure
Patient Age Group: () N/A(X) All Ages(		
https://hospitals.health.upm.edu/intranet7/apps/do	c mar	nagement/index cfm2project_id=

https://hospitals.health.unm.edu/intranet7/apps/doc\_management/index.cfm?project\_id=1

#### **DESCRIPTION/OVERVIEW**

An accident may happen to even the most careful of workers, and any worker may be called upon to assist in the case of a radioactive spill, a contamination incident, or an emergency. The following procedure defines major and minor spill, indicates who to notify and how to respond to a radioactive spill.

The UNM Radiation Safety Officer / Radiation Safety Division must be notified <u>immediately</u> on all major radioactive spills or any other questionable situation involving ionizing radiation, e.g., accidental injection or ingestion of radionuclides into a person, contaminated wounds, contaminated person or personal effects, unauthorized release of radioactivity into the air or sewage system or to normally non- contaminated areas, unauthorized removal of radioactive materials, and known or suspected overexposure of personnel to ionizing radiation.

#### REFERENCES

- New Mexico Radiation Protection Regulations, Part 4 (Standards for Protection Against Radiation), NMAC 20.3.4.7
- New Mexico Radiation Protection Regulations, Part 7 (Medical Use of Radionuclides), NMAC 20.3.7.702
- US Nuclear Regulatory Commission, NUREG-1556, Vol. 9, Rev. 2 (January 2008), Consolidated Guidance
- UNM Radiation Safety Manual

#### AREAS OF RESPONSIBILITY

- <u>Nuclear Medicine Technologist</u> manages the initial spill response appropriately and notifies <u>Nuclear Medicine Supervisor and Radiation Safety Officer / Radiation Safety Division</u>; fills out Radiologic Spill Log Sheet, takes steps to prevent a spill by following safe handling practices as described in the "Radiology Nuclear Medicine Radiopharmaceutical Administration and Handling" procedure. Assess whether the patient may be at risk of urinary incontinence (child or elderly patient), and take steps to minimize the impact of a urine loss.
- <u>Nuclear Medicine Supervisor</u> ensures all Nuclear Medicine staff have access to incident contact phone numbers, spill procedures and support necessary to ensure safety and compliance. Confirms notification of RSO/RSD and supervisory personnel as detailed in the attached flowchart. Confirms spill report form has been appropriately filled out. Is responsible for staff compliance with this procedure and audits.
- <u>Nuclear Medicine Attending Radiologist</u> the radiologist covering the Nuclear Medicine section at the time of the spill (may or may not be the Nuclear Medicine Section Chief or another Authorized User). <u>Nuclear Medicine Section Chief or Authorized User</u> (if the section chief is unavailable)—part of the notification chain as described below.

• <u>UNM Radiation Safety Officer (RSO) and Radiation Safety Division (RSD)</u> — manages all major spills; assists with management of minor spills as needed.

#### **PROCEDURE**

The response to any radiological incident shall be immediate. The response shall be initiated by the individual(s) who first identify the occurrence. For major spills, the initial response requires concurrent, immediate notification of the Radiation Safety Officer (RSO) / Radiation Safety Division.

The primary hazard should always be addressed first (e.g., extinguish fire, manage the radiological issue next).

Life-saving measures take precedence over radiation exposure received by attending medical personnel. Only those persons required for medical management of a life-threatening situation where radiation is also involved shall be allowed access.

Major and minor spills (defined below) require different responses.

#### **MINOR SPILL:**

Small quantities of radioactive material, spilled within the Restricted Area of Nuclear Medicine only, with no contamination of people, where cleanup can be safely and effectively handled by NMTs without contacting the RSO. If there is doubt, call the RSO/RSD immediately.

Process for handling minor spills:

- **ATTEND TO** all persons in the immediate vicinity of a spill. If staff or other person(s) are contaminated, immediately contact the RSO. People first, and then clean up!
- ALERT people outside the area to stay out.
- **LIMIT MOVEMENT** in and out of the area, except when medically necessary, to avoid spreading contamination. If any person must leave the immediate area, they must be surveyed from head to toe to ensure that they have no contamination (i.e., survey levels should be similar to background).
- **PUT ON PROTECTIVE EQUIPMENT** such as double gloves, safety goggles, and shoe covers. Change gloves, shoe covers, and gown frequently as needed to avoid spread.

#### **CLEAN UP:**

- Place absorbent paper towels or blue pads over liquid spills.
- Find the spill perimeter using a survey meter. Decontaminate from the outer boundary moving inward to avoid spread, and from areas of lower contamination to higher.
- Place all materials into plastic bags, seal the bags and transfer to the designated radioactive waste containers.

#### SURVEY/WIPE:

- Use the Radiologic Spill Log Sheet.
- Draw a map and take multiple surveys and wipes of the entire affected area, remembering the floors, equipment, handles, rails, and wall switches.
- Determine whether all removable contamination has been removed by confirming contamination levels are below trigger levels (see table below). This is to be performed by a Nuclear Medicine Technologists or RSD

#### **REPEAT CLEANUP** if contamination is still detected.

- Use Radiac Wash or other similar decontaminant to clean up the remains of the spill.
- Repeat cleanup/decontamination until contamination is below trigger levels.
- If survey or wipe activity cannot be reduced below trigger levels (see below),
- Add shielding to reduce exposure levels at 5 cm to less than trigger limits.
- If shielding does not reduce exposure levels at 5 cm to less than trigger levels, contact the RSO/RSD staff.

**DOCUMENT:** Verify and document area to be free of contamination and that proper spill procedure was followed. Use the attached Radiologic Spill Log Sheet and provide to the Nuclear Medicine supervisor to be placed in a log.

**INFORM:** The NMT involved in the spill must inform the Nuclear Medicine Supervisor as soon as feasible of the spill and cleanup procedure. The Nuclear Medicine Supervisor will report the spill to the Radiology Executive Director and the Nuclear Medicine Attending Radiologist on the day that it occurs.

Contamination trigger levels:

Containination trigger levels.	
Survey	Wipe Test (dpm)
Minor Spill, Restricted Area 1 mR/hr	at 5 cm 1500 dpm

#### **MAJOR SPILL:**

If a spill meets ANY ONE of the following criteria, it is a major spill:

- Occurs outside the Restricted Areas of Nuclear Medicine (defined above), OR
- Quantity of radioactive material spills is near or exceeding the amounts below, OR
   Not readily or easily contained and cleaned by NM technologists, OR
- Involves any injury, or contamination of a person or persons (e.g., skin) or possible internal contamination due to inhalation, ingestion, or skin absorption, OR
- Radioactive materials that are volatile or may become airborne, or spread to the environment (air, sewer, water, ground) OR
- Initially a minor spill, but continues to have exposure rates greater than 1 mR/hr at 5 cm after cleanup, OR
- The person responsible for the radioactive material cannot immediately attend to the spill for any reason.

The following will be considered a major spill: Any quantity: Beta emitters (131 I, 153 Sm, 90 Y, 89 Sr)

>Exposure rate greater than 30mR/hr at 5 cm

If there is any question about whether a spill is a major or minor spill, handle as a major spill and contact the RSO/RSD immediately for guidance.

#### Process for handling major spills:

 NOTIFY all persons in the immediate vicinity that a spill has occurred. Clear the area of all persons not involved in the spill. People FIRST!

- PREVENT THE SPREAD: Contain the spill by placing absorbent material over liquids to
  prevent spread of contamination. <u>Do not attempt to clean spill.</u> <u>Limit movement</u> of
  people to prevent spread of contamination. <u>Do not allow people to leave the area</u> (unless
  medically necessary) until confirmed that they are not contaminated (survey to background)
- CONSIDER EVACUATING AND CLOSING THE ROOM: Specific details of each situation will be evaluated by the RSO/RSD/Nuclear Medicine Authorized User in collaboration with the Professional and Support Services Administrator and a decision will be made to ensure ALARA and the health and safety of patient and staff. —this is not typical for nuclear medicine diagnostic examinations. If evacuation is performed, close and lock the doors or secure area to prevent entry.
- NOTIFY: Notify the RSO/RSD immediately. Cleanup and decontamination of major spills should be conducted under the supervision of the RSO/RSD staff. The RSO/RSD staff will man and gethe situation. The NMT must remain at the major spill location and does everything possible to reduce the hazards generated by the spill until the RSD staff arrive. RSD staff will then either assist, oversee, or take over depending on the situation.
- **DECONTAMINATE** personnel/patients by procedure below.
- STAY IN THE AREA to control access to the room and to inform/assist the RSO/RSD staff
  upon arrival. Do not leave the area until instructed to do so by the RSO/RSD staff.
- **DOCUMENT:** Document spill and any containment/cleanup procedure performed prior to arrival of the RSO/RSD staff on the Radiologic Spill Log Sheet. The RSO/RSD may continue to document on this form, or may ask the NMT to assist with this documentation. A copy of the completed form should be given to the NM Supervisor to be placed in a log.
- **INFORM:** Nuclear Medicine Supervisor, Radiology Executive Director, Nuclear Medicine Attending Radiologist (covering the nuclear medicine service that day), and Nuclear Medicine Section Chief or other Authorized User as soon as feasible. (Please refer to attached flow chart.)

#### **SKIN DECONTAMINATION (STAFF OR OTHERS):**

- REMOVE contaminated clothing, bag and place the bag in the Nuclear Medicine Storage until decayed.
- WASH contaminated skin. Wet the skin thoroughly and apply mild detergent. Avoid irritating or breaking the skin. Do not use abrasives or solvents. Work up to a full lather and keep it wet. Wash contaminated area for 2-3 minutes. Work over a sink or wash container to avoid spread of contamination onto surfaces or other areas of skin.
- RINSE thoroughly with lukewarm water, dry with towels, place towels in bag, and store in Nuclear Medicine Storage until decayed.
- MONITOR effectiveness using survey meter, writing down all survey measurements at 5 cm and recording the area of skin involved.
- **REPEAT** 3-4 times, using a soft brush if necessary, but avoid irritation of skin. Goal is for contamination to be below 0.1 mR/hr near skin surface.
- PROTECT SKIN by applying a gentle hand lotion to prevent chapping.

If contamination of skin cannot be fully removed (that is, if exposure rates are still > 0.1 mR/hr near skin surface), cover affected area with a bandage, instruct affected person to continue washing at home (if appropriate), and have them return to Nuclear Medicine the next day to document decay and return of skin to background radiation levels.

#### **UNINTENTIONAL RELEASE OF Xe-133:**

Evaluate hazard.

- If possible, remove the patient and staff from the room.
- If the room has been evacuated, close it off.
- Remain outside the imaging room for the posted amount of time to allow the xenon concentration to be reduced to an acceptable level.
- Survey the room; if exposure levels are acceptable, then the room may be used. If exposure levels are still high, close room and wait an additional amount of time.
- Document the release and that the decontamination procedure (i.e. closing doors and waiting for ventilation system to clear room).

If the activity spreads or has the potential for spreading beyond the building or area, additional assistance may be obtained from the University Police Department.

The RSO/RSD and the Nuclear Medicine Department Staff must participate in routine drills or reviews of spill clean-up/containment practices. The Nuclear Medicine Supervisor will ensure the staff and self undergoes spill drills by conducting the spill drills at a minimum of once every other month. All NMT's will attend an annual 1-hour in-service by the RSO/RSD that reviews the Spill SOP, reviews lessons learned from spills occurring over the previous year, and has a quiz to demonstrate competency. These drills and in-services must be documented and logged in the Spill Report Binder. The RSO/RSD will at a minimum review and conduct audits of spill drill documentation, spill logs, and spill procedures quarterly. The audit report will be recorded and available for review in the Nuclear Medicine Department Spill note book. The audits conducted on the report sheet will be annotated as "Spill Audits," and a submitted copy will be sent to the Radiology QA meeting and then reported to the Radiation Control Committee and to the hospital Quality Oversight Committee.

#### **DEFINITIONS**

Restricted areas of Nuclear Medicine: A restricted area is an area to which access is limited by the licensee or registrant for purposes of protection of individuals against undue risks from exposure to sources of radiation. These are the areas within the posted "Restricted Area: Radioactive Materials" signs in UNMH Nuclear Medicine, UNMH SPECT-CT, UNMH PET-CT, and OSIS PET-CT.

#### **SUMMARY OF CHANGES**

Replaces the 6/2011 Radiology-Nuclear Medicine document.

6/2014: Minor changes to Spill Log Sheets and phone number updated on Notification Flow Diagram.

#### **DOCUMENT APPROVAL & TRACKING**

Item	Contact	Date	Approval		
Owner	ED, Radiology				
Consultant(s)	Joanna Fair, MD (Nuclear Medicine Section Chief), Meaghan Carey (Radiology Unit Director), Greg Chambers, Cathy Anderko				
Committee(s)	Clinical Operations PP&G Committee, Rad	diation Contro	lΥ		
Medical Director	Gary Mlady, MD		Υ		
Official Approver	Erin Doles, Professional and Support Svcs	Administrato	rY		
Official Signature		Date: 11/21/2	2013		
Effective Date		11/21/2013			
Origination Date		6/2011			
	Clinical Operations Policy Coordinator	11/25/2013	ar		

#### **ATTACHMENTS**

Radiological Spill Report Log Sheet Radiological Spill Report Log Sheet Part II Notification Flow Diagram

# UNMH Radiological Spill Log Sheet \*Keep this form for your records\*

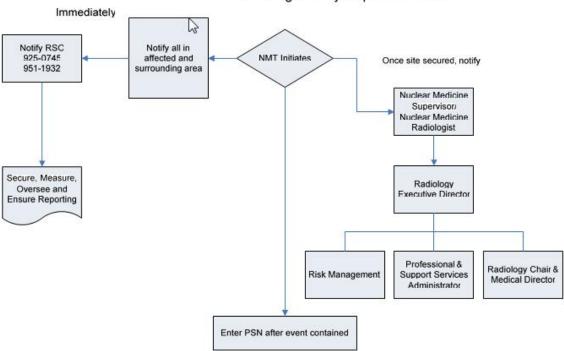
The spill occurred at		_on	in room	of	
	Time	Date		#Building	
Instrument used to c	heck for	contaminati	ion:		
Meter model: Meter s	serial nun	nber:			
Personnel Present: I	Personne	el Contamin	ation Results	S:*	
_					
`				involved and location decontamination, add	on body) ditional monitoring, or
Survey the spill area conduct a post clear				egin decontamination ee page two.)	. When finished,
Radioisotopes presei	nt or sus	pected in th	ne spill:		
mCi ofas					
mCi ofas					
mCi ofas					
Give a brief description	on of the	accident:			
Give a brief description	on of foll	ow-up actio	ns to preven	t recurrence:	
Name:				Date:	

# Radioactive Spill Log Sheet, Part II \*Keep this form for your records!\*

The spill occurred	d at	on	in room	of
	Time	Date		#Building
Survey area/wipe	e map of conta	minated roo	m/area:	
	Survey mR/hr	Post-clean Survey mR/hr:	Post-clean Wipe dpm /100 cm <sup>2</sup>	
Signature:				

Date: \_\_\_\_\_

#### Radiological Major Spill Notification



#### **Presbyterian Healthcare Services**

#### **Radioactive spill Procedures**

- Minor spills of liquids and solids:
  - 1. Notify persons in the area that a spill has occurred
  - 2. Prevent the spread of contamination by covering the spill with absorbent paper.
  - 3. Clean up the spill using disposable gloves and absorbent paper. Carefully fold the absorbent paper with the clean side out and place in a plastic bag for transfer to a radioactive waste container. Also, put contaminated gloves and any other contaminated disposable material in the bag.
  - 4. Survey the area with a low-range radiation detector survey meter. Check the area around the spill, also check your hands, clothing, and shoes for contamination.
  - 5. Report the incident to the RSO
  - 6. The RSO will follow up on the cleanup of the spill and will complete the appropriate forms or documentation letter.
- Major spills of liquids and solids:
  - 1. Clear the area. Notify all persons not involved in the spill to vacate the room.
  - Prevent the spread of contamination by covering the spill with absorbent paper, but do not attempt to clean it up. To prevent the spread of contamination, limit the movement of all personnel who may be contaminated.
  - 3. Shield the source if possible. This should be done only if it can be done without further contamination or a significant increase in radiation exposure.
  - 4. Close the room and lock or otherwise secure the area to prevent entry.
  - 5. Notify the RSO immediately
  - 6. Decontaminate the personnel by removing the contaminated clothing and flushing contaminated skin with lukewarm water and then washing with mild soap. If contamination remains, induce perspiration by covering area with plastic. Then wash the affected area again to remove any contamination that was released by perspiration
  - 7. The RSO will supervise the clean-up of the spill and prepare documentation

# **Presbyterian Healthcare Services**RADIOACTIVE SPILL REPORT

ime of spill	Institution am/pm Date	۵	Room
me or spiii	ani/pin bat	C	Koom
Give a brief desc	cription of the incider	nt:	
Radioisotopes p	resent or suspected	in the spill:	
Radionuclide	Activity	-	Form
_			
	to check personnel		
Survey Meter	Serial Number	Probe	Serial Number
Model		Model	
lumber		Number	
Radioactive Spil	I Contamination Surv	/ev	
nitial survey			ntamination
_ocation	mR/hr	mR/hr	dpm/100cm <sup>2</sup>
Give a brief desc	cription of follow-up a	actions taken t	o prevent recurrence:
			·
Technologist/			
Physicist			

#### POLICIES AND PROCEDURES MANUAL NUCLEAR MEDICINE SECTION

#### ALBUQUERQUE VAMC

**AUGUST 28, 1990** 

#### SPILL PROCEDURES

(Adopted from APPENDIX J) (See 35.21)

#### Minor Spills of Liquids and Solids

- 1. Notify persons in the area that a spill has occurred.
- 2. Prevent the spread of contamination by covering the spill with absorbent paper.
- 3. Clean up the spill using disposable gloves and absorbent paper. Carefully fold the absorbent paper with the clean side out and place in a plastic bag for transfer for a radioactive waste container. Also put contaminated gloves and any other contaminated disposable material in the bag.
- 4. Survey the area with a low-range radiation detector survey meter. Check the area around the spill. Also check your hands, clothing, and shoes for contamination.
- 5. Report the incident to the Radiation Safety Officer (RSO).
- 6. The RSO will follow up on the cleanup of the spill and will complete the Radioactive Spill Report (attached) and the Radioactive Spill Contamination Survey (attached).

#### Major Spills of Liquids and Solids

- 1. Clear the area. Notify all persons not involved in the spill to vacate the room.
- 2. Prevent the spread of contamination by covering the spill with absorbent paper, but do not attempt to clean it up. To prevent the spread of contamination, limit the movement of all personnel who may be contaminated.
- 3. Shield the source if possible. This should be done only if it can be done without further contamination or a significant increase in radiation exposure.
- 4. Close the room and lock or otherwise secure the area to prevent entry.
- Notify the RSO immediately.
- 6. Decontaminate personnel by removing contaminated clothing and flushing contaminated skin with lukewarm water and then washing with mild soap. If contamination remains, induce perspiration by covering the area with plastic. Then wash the affected area again to remove any contamination that was released by the perspiration.
- 7. The RSO will supervise the cleanup of the spill and will complete the Radioactive Spill Report (attached) and the Radioactive Spill Contamination Survey (attached).

8. Table J-1 and the Decontamination Principles further explain this procedure.

#### NOTE:

The decision to implement a major spill procedure instead of a minor spill procedure will be made by the RSO or his designee. This decision depends on many incident-specific variables such as the number of individuals affected, other hazards present, likelihood of spread of contamination, and types of surfaces contaminated as well as the radiotoxicity of the spilled material. For some spills of short-lived radionuclides the best spill procedure may be restricted access pending complete decay.

TABLE J-1

Relative Hazards of Common Radionuclides

Estimate the amount of radioactivity spilled. Initiate a major or minor spill procedure based on the following dividing line. Spills above these millicurie amounts are considered major, below are considered minor.

				Radionuclide	Millicuries	Radionuclide	<u>Millicuries</u>
P-32	10		Tc-99m	100			
Cr-51	100	Ì	In-111	10			
Co-57	100	ĺ	I-123	10			
Co-58	10	1	I-125	1			
Fe-59	10	Ĺ	I-131	1			
Co-60	1	ĺ	Yb-169	10			
Ga-67	100		Hg-197	100			
Se-75	10		Au-198	10			
Sr-85	10		TI-201	100			

#### Spill Kit - LOCATED IN 2B111 (BONE DENSITIOMETRY)

The spill kit contains:

Instructions for "Spill Procedures"

- 2 surgical gowns
- 1 plastic gown
- 2 pairs plastic booties
- 8 paper scrubs (tops)
- 4 paper scrubs (bottoms)
- 6 paper caps
- 8 face masks
- 4 pairs (size 6 gloves)
- 4 pairs (size 7 gloves)
- 4 pairs (size 8 gloves)
- 20 plastic bags

Isoclean, decontamination liquid

Isopropyl ETOH spray bottle

Radiation Hazard labels

10 chux

1 package 4X4 inch cotton squares

1 package 2X2 inch cotton squares - wipe tests

#### Marking Pen/Pencil

<u>Forms</u>
Decontamination Principles Radioactive Spill Procedures Radioactive Spill Report Radioactive Spill Contamination Survey Forms
Radioactive Spill Report (Adopted from EXHIBIT 10)
am The spill occurred at:pm on, room
Instrument used to check for personnel contamination:  Meter model: Probe Model:  Meter S/N: Probe S/N:
Personnel present Personnel contamination results*
*On the back of the sheet, indicate any personnel decontamination, additional monitoring, or care instituted.
Survey the spill area to identify hot spots, then begin contamination. When finished, conduct a post cleaning contamination wipe-test.
Radioisotopes present or suspected in the spill:
mCi of as
mCi of as
mCi of as
Give a brief description of the accident:
Give a brief description of follow up actions taken to prevent recurrence:
NAME:

# Radioactive Spill Contamination Survey (Adopted from EXHIBIT 11) am The spill occurred at \_\_\_:\_\_pm on \_\_\_-\_\_\_ in room \_\_\_\_. am Decontamination completed at \_\_\_:\_\_pm. | |pre- | post-clean | | |clean| dpm/ | \_\_\_\_\_lloc|mR/hr|mR/hr|100cm2| NAME:\_\_\_\_\_

## Appendix H Nuclear Medicine Adjunctive Medications

#### **Adjunctive Medications:**

Involves the identification, calculation, documentation, administration, and monitoring of adjunctive medication(s) used during an in vitro, diagnostic imaging, or therapeutic procedure. Adjunctive medications are defined as those medications used to evoke a specific physiological or biochemical response. Also included are the preparation and administration of oral and IV contrast used in the performance of imaging studies.

A nuclear medicine technologist displays:

- A. A thorough understanding and knowledge of indications, contraindications, warnings, precautions, proper use, drug interactions, and adverse reactions for each adjunct medication to be used.
- B. The ability to procure and maintain pharmaceutical products and adjunct supplies by:
  - 1. Anticipating and procuring a sufficient supply of pharmaceuticals for an appropriate period in accordance with anticipated need.
  - 2. Storing pharmaceuticals and supplies in a manner consistent with labeled product safeguards and established facility policies.
- C. The ability to properly prepare and administer pharmaceuticals under the direction of an authorized user in accordance with all federal and state regulations, and institutional policies by:
  - 1. Employing aseptic technique for manipulation of sterile products and preparations (see Section V.C.).
  - 2. Selecting and preparing pharmaceuticals in accordance with the manufacturer's specifications.
  - 3. Confirming the quality of a pharmaceutical in accordance with accepted techniques and official standards.
  - 4. Documenting the administered dose, date, and time of all pharmaceuticals in a permanent medical record.
  - 5. Observing the patient for possible complications (e.g., adverse reactions) of adjunctive medication administration, and handling such complications appropriately in conjunction with other available staff.

#### Reference:

http://snmmi.files.cms-

<u>plus.com/docs/hpra/NMT%20SOP%20Clinical%20Performance%20Standards%20June%202014.pdf</u>

#### **Nuclear Medicine Adjunctive Medications**

#### **Interventional Pharmaceuticals**

dipyridamole
adenosine
dobutamine
aminophylline
regadenoson
captopril
enaloprilat
furosemide
insulin
acetazolamide
cholecystokinen/sincalide/CCK
morphine
cimetidine/ranitidine/famotidine

#### **Miscellaneous Non-Radioactive Agents**

ACD solution
heparin
ascorbic acid
hetastarch
contrast media
Lugol's solution/SSKI
TSH
EDTA
Lidocaine
Lidocaine (EMLA) cream
atropine
recombinant human TSH

#### Reference:

http://www.nmtcb.org/exam/pharmalist.php

## Appendix I UNM 2017-18 EVIDENCE OF COVERAGE

#### EVIDENCE OF COVERAGE

#### MEMORANDUM NUMBER: RMD-EOC-FY18

This Evidence of Coverage is used as a matter of information only and confers no rights upon the Certificate Holder. This Evidence of Coverage does not amend, extend, or alter the coverage afforded by the Tort Claims Act or the applicable Certificates of Coverage or policies for the type(s) of coverage listed below.

#### CERTIFICATE HOLDER INFORMATION

INSURED: STATE OF NEW MEXICO LOSS PAYEE: TO WHOM IT MAY CONCERN and

University of New Mexico (96900)

#### Coverage Period:

#### 12:01 AM 07/01/17 to 12:01 AM 07/01/18

This is to certify that the Insured has the coverages listed below for the period indicated. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this Evidence of Coverage may be used or may pertain, the coverages indicated in this Evidence of Coverage are subject to all terms, exclusions, and conditions of the Certificates of Coverage and other insurance policy(s) to which this Evidence of Coverage pertains. Property and Liability Certificates of Coverage may be obtained at <a href="http://www.generalservices.state.nm.us/riskmanagement/Resources.l.aspx">http://www.generalservices.state.nm.us/riskmanagement/Resources.l.aspx</a>

Type of Coverage	Limit of Liability/Coverage
A) Liability     i. General Liability     ii. Automobile Liability     iii. Law Enforcement     iv. Civil Rights	Statutory Limit NMSA § 41-4-19
B) Workers Compensation	Statutory Limits NMSA § 52-1-1 et seq.
C) Property i. Auto Physical Damage	\$550,000,000.00 Limit Actual Cash Value (ACV)
D) Medical Malpractice	Statutory Limit NMSA § 41-4-19
E) Boiler & Machinery	\$100,000,000.00 Limit
F) Fine Arts	\$300,000,000.00

Per 66-5-207, NMSA 1978, - A motor vehicle owned by the United States Government, any state, or political subdivision of the state, is exempt from the Mandatory Financial Responsibility Act.

Per 66-6-15(E), NMSA 1978, - A vehicle or trailer owned by and used in the service of the State of New Mexico or any county or municipality thereof need not be registered but must continually display plates furnished by the Transportation Services Division of the General Services Department.

Should any of the above coverages for the Covered Party be changed or withdrawn prior to the expiration date issued above, the State of New Mexico will notify the Certificate Holder, but failure of such notification shall impose no obligation or liability of any kind upon the State of New Mexico, its agents, or representatives. If you have any questions, contact:

Authorized Representative:		FaraMhetet Jun	
Date Issued:	7-1-2017	Lara White Davis, Director, Risk Management Division	GSD

# Appendix J UNM Radiation protection Policy for Workers Declaration of Pregnancy Form



OFFICE OF RESEARCH - RADIATION SAFETY

POLICY AND PROCEDURE

Clinical and Translational Science Center Animal Resource Facility

Biomedical Research
Education Program

Biohazard Compliance

Clinical Trials

Center

Conflict of

Interest

Export

Control

Human Research

Protections Office of

Animal Care

Compliance

Radiation Safety

TITLE: UNIVERSITY OF NEW MEXICO (UNM)
RADIATION PROTECTION POLICY FOR PREGNANT WORKERS

**POLICY:** Under applicable regulations of the State of New Mexico Radiation Protection Regulations <sup>(1)</sup>, and other applicable federal statutes <sup>(2)</sup>, it is the policy of the University of New Mexico to monitor and limit the radiation dose to the embryo/fetus of a declared pregnant woman to 5 mSv (0.5 rem) over the entire gestation period <sup>(3)</sup>. The University of New Mexico shall review the exposure history of the declared pregnant woman and adjust working conditions so as to avoid a monthly exposure of more than 0.5 mSv (0.05 rem) to the declared pregnant woman <sup>(4)</sup>.

Further, it is the policy of the University of New Mexico to provide counseling and education to the pregnant woman prior to declaration with regard to the risks of radiation exposure and to consult with her regarding recommendations for maintaining the radiation dose to the embryo/fetus within the above limits and As Low As Reasonably Achievable (ALARA) principles. Declarations and records under this policy are confidential. Her employer specifically protects the declared pregnant woman from discharge or discrimination as a result of her pregnancy.

A copy of this policy shall be made available to each radiation worker at the University

of New Mexico. This policy shall be incorporated into the UNM Radiation Safety Manual, and a copy of this policy shall be prominently posted.

**RESPONSIBILITY:** The University of New Mexico Radiation Safety Officer (RSO) and his/her designee are responsible for administering the above policy at the University of New Mexico and associated University of New Mexico facilities. In administering this and all other radiation safety policies at the University of New Mexico, the Radiation Safety Officer shall be provided sufficient authority and organizational freedom to identify radiation safety problems, initiate, recommend, or provide corrective actions, and verify implementation of corrective actions.

PROCEDURE: The University of New Mexico Radiation Protection Policy For Pregnant Workers shall be implemented as follows:

#### 1. Method of instruction to workers:

As part of their initial employment, all radiation workers are required to receive from the Radiation Safety Office, instructions in radiation protection. These instructions may be given at a new employee orientation or at a scheduled radiation safety lecture for new employees. These instructions should include: the effects of radiation to the embryo/fetus, a statement of the special limit for protection of the embryo/fetus of a declared pregnant woman, the responsibility of the pregnant woman to declare her condition to the Radiation Safety Officer and the importance of her doing so. A copy of this policy should be distributed to each new radiation worker at his or her initial radiation safety orientation.

Instruction in the special limit for protection of the embryo/fetus of a declared pregnant woman and the University of New Mexico pregnancy policy should be included in all annual refresher training. Copies of this policy, the U.S.N.R.C. Regulatory Guide 8.13, Instruction Concerning Prenatal Radiation Exposure, and the Declaration of Pregnancy Form shall be made available in all refresher training courses.

At the time of her Declaration of Pregnancy, the declared pregnant woman will receive individual counseling from the RSO or designee. The RSO or designee will discuss with the employee the regulations and potential concerns regarding exposure to radiation and/or radioactive material, precautions or procedures to minimize exposure, and the purposes and functions of protective devices employed. The information shall be tailored to address the specific radiological health concern and shall also include how the worker's duties or schedule could be affected if the fetal exposure approaches or exceeds the regulatory limits.

#### 2. Responsibility of workers:

Federal statute <sup>(5)</sup> mandates that; "It is the fundamental responsibility of the pregnant worker to decide when or whether she will formally declare her condition to her employer". Declaration of pregnancy is optional and requires no physical evidence or proof. A radiation worker may declare pregnancy if pregnancy is known, expected, or anticipated by the employee. It is the policy of the University of New Mexico Radiation Safety division that formal declaration is defined as filing a completed, signed and dated Declaration of Pregnancy form with the RSO or designee. A copy of the Declaration of Pregnancy Form, RSF-54-1, is attached. If she chooses not to declare her pregnancy, the Radiation Safety Officer or designee will continue to ensure that she receives all normal occupational protections - the annual occupational dose limit of 50

mSv (5.0 rem) <sup>(6)</sup> and all ALARA considerations will be in effect. All rights of declaration rest with the pregnant woman. The declaration of pregnancy remains in effect until the declared pregnant woman withdraws the declaration with a signed, dated, written statement of withdrawal filed with the Radiation Safety Officer or if she is no longer pregnant <sup>(7)</sup>. A separate written declaration must be completed for each pregnancy.

#### 3. Regarding work assignments for pregnant workers:

In order to ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 5 mSv (0.5 rem), the Radiation Safety Officer shall review the exposure history and the present job duties of the declared pregnant woman and require the adjustment in working conditions so as to avoid a monthly exposure of more than 0.5 mSv (0.05 rem) to the embryo/fetus.

If, by the time the pregnant worker declares pregnancy to the Radiation Safety Officer, the dose to the embryo/fetus has exceeded 4.5 mSv (0.45 rem), the Radiation Safety Officer shall ensure that additional occupational dose to the embryo/fetus does not exceed 0.5 mSv (0.05) rem during the remainder of the pregnancy <sup>(8)</sup>. The radiation dose to the embryo/fetus is defined as the sum of the deep dose equivalent to the declared pregnant woman most representative of the dose to the embryo/fetus from external sources of radiation, such as X-rays and gamma-rays, and the internal dose to the embryo/fetus from the uptake of radionuclides by the declared pregnant woman and by the embryo/fetus <sup>(9)</sup>.

Due to privacy provisions noted in the following section, if an adjustment of working conditions is necessary, the Radiation Safety Officer will consult with the declared pregnant woman, discuss with her any adjustment of working conditions that may be required, and obtain her written authorization prior to discussing such adjustments with her supervisor.

An employee may consult with Human Resources for alternative solutions to refrain from working during pregnancy in lieu of complying with this policy. Solutions may include a personal leave of absence.

#### 4. Implementation, records, and reports of the declaration of pregnancy:

#### A) Issuance of badges

Upon completion of declaration via RSF-54-1 "Declared Pregnant Worker" Form, if the declared pregnant woman is likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 1 mSv (0.1 rem), a monthly exchange fetal

badge shall be issued in addition to the whole body badge, which is exchanged at the normal frequency <sup>(10)</sup>. The fetal badge should be worn each business day, in the abdominal area, underneath lead when applicable and stored in a radiation-free area

in the department (along with the whole body badge) while not working. The fetal badge is labeled to clearly distinguish it from the whole body badge. It is the employee's responsibility to correctly wear the two badges.

# B) Records

Declarations and records required under this policy should be protected from public disclosure because of their personal privacy nature. These records are protected by State and Federal privacy statutes <sup>(11)</sup>. The Declaration of Pregnancy Form, including the estimated date of conception will be maintained in a separate file from the dose records of the declared pregnant woman and the embryo/fetus <sup>(12)</sup>. The Declaration of Pregnancy Form will be over-stamped or bear the prominent heading, "CONFIDENTIAL."

# C) <u>Informing workers of exposure received during gestation</u>

The Radiation Safety Officer shall advise each worker annually of the worker's exposure to radiation as required <sup>(13)</sup> and shall furnish a report of the worker's (or former worker's) exposure to sources of radiation at their request <sup>(14)</sup>. The RSO may also notify each worker of their monthly fetal exposure given the same requirements. If the Radiation Safety Officer is required to report to the State of New Mexico, New Mexico Environment Department (NMED) any exposure of an individual to radiation or radioactive material, the Radiation Safety Officer shall also notify the individual at a time not later than the transmittal to the Radiation Control Bureau (15)

Notification or report to a worker shall be in writing, shall include appropriate identification of the licensed institution, University of New Mexico, the name and identification number of the individual worker, their exposure information and shall contain the statement, "This report is furnished to you under the provisions of the State of New Mexico, NMED. You should preserve this report for further reference." (16).

## D) Reports

The Radiation Safety Officer shall submit a written report to the State of New Mexico, NMED, within thirty days after learning that the 5 mSv (0.5 rem) dose limit for an embryo/fetus of a declared pregnant woman has been exceeded <sup>(17)</sup>. The report shall describe the extent of exposure of the embryo/fetus and of the declared pregnant woman to radiation and radioactive materials and include as appropriate: estimates of each individual's dose; the levels of radiation and concentrations of radioactive material involved; the cause of the elevated exposures, dose rates or concentrations; and corrective steps taken or planned to ensure against a recurrence <sup>(18)</sup>. This report shall be prepared so that identifiers such as name,

identification number and date of birth are stated in a separate and detachable portion of the report in order to conform to privacy laws <sup>(19)</sup>.

ALARA review <sup>(20)</sup> of the declared pregnant woman's Personnel Radiation Dosimetry Report will be performed on a monthly basis to identify a monthly exposure of more than 0.5 mSv (0.05 rem). The declared pregnant woman will be notified in writing if her monthly radiation dose exceeds the 0.05 rem ALARA level and an appropriate ALARA investigation will be performed. The University of New Mexico Radiation Control Committee (RCC) will receive ALARA reports for declared pregnant women with identifiers such as name, identification number and date of birth in a separate and detachable portion of the report.

### 5. Provision of further information:

Any individual or group having questions related to the radiation protection of the embryo/fetus

is strongly encouraged to contact the Radiation Safety Officer. The Radiation Safety Officer will

provide appropriate and confidential education and

counseling. Further information may be found in the

following publications:

Regulatory Guide 8.13, <u>Instruction Concerning Prenatal Radiation Exposure</u>, U.S. Nuclear Regulatory Commission, Revision 3, June 1999.

Federal Register, Volume 56, No. 98, Tuesday, May 21, 1991, Rules and Regulations, 10 CFR

20, Standards for Protection Against Radiation, Final Rule.

N.C.R.P. Report No. 54, Medical Radiation Exposure of Pregnant and Potentially Pregnant Women, National Council on Radiation Protection and Measurements, July 15, 1977.

N.C.R.P. Commentary No 9, Considerations Regarding the Unintended Radiation Exposure of The Embryo, Fetus or Nursing Child, National Council on Radiation Protection and Measurements, May 1, 1994.

# 6. Applicable State of New Mexico and Federal statutes referenced:

- (1) New Mexico Radiation Protection Regulations, 20.3.4 NMAC.
- (2) Federal Register, Vol. 56, No. 98, Tuesday, May 21, 1991, Rules and Regulations, Final Rule, 10CFR20, Standards for Protection Against Radiation, p. 23397, 20.1208, Dose to an embryo/fetus.

- (3) New Mexico Radiation Protection Regulations, 20.3.4.412 (A)
- NMAC. (4) New Mexico Radiation Protection Regulations,
- 20.3.4.412 (B) NMAC.
- (5) Federal Register, Vol. 56, No. 98, Tuesday, May 21, 1991, Rules and Regulations,
   Final
   Rule, 10CFR20, Standards for Protection Against Radiation, p. 23373.
- (6) U.S. Nuclear Regulatory Commission, Regulatory Guide 8.13, Revision 3, June 1999, Part B, p. 2.
- (7) New Mexico Radiation Protection Regulations, 20.3.4.7 (V) NMAC.
- (8) New Mexico Radiation Protection Regulations, 20.3.4.412 (D) NMAC.
- (9) New Mexico Radiation Protection Regulations, 20.3.4.412 (C) NMAC.
- (10) New Mexico Radiation Protection Regulations, 20.3.4.417 (A)(3) NMAC.
- (11) Federal Register, Vol. 56, No. 98, Tuesday, May 21, 1991, Rules and Regulations, Final

Rule, 10CFR20, Standards for Protection Against Radiation, p. 23405, 10CFR 20.2106(d); and,

Privacy Act of 1974, Public Law 93-579, 5U.S.C. 552a, and

10CFR19; and, New Mexico Radiation Protection Regulations,

20.3.4.446 (G) NMAC.

- (12) New Mexico Radiation Protection Regulations, 20.3.4.446 (D) NMAC.
- (13) New Mexico Radiation Protection Regulations, 20.3.10.1003 (B)(1)

NMAC.

(14) New Mexico Radiation Protection Regulations, 20.3.10.1003 (B)(2)

NMAC.

- (15) New Mexico Radiation Protection Regulations, 20.3.10.1003 (D) NMAC.
- (16) New Mexico Radiation Protection Regulations, 20.3.10.1003 (A) NMAC.
- (17) New Mexico Radiation Protection Regulations, 20.3.4.453 (A)(2)(c) NMAC.
- (18) New Mexico Radiation Protection Regulations, 20.3.4.453 (B)(1) NMAC.
- (19) New Mexico Radiation Protection Regulations, 20.3.4.453 (B)(2) NMAC.
- (20) New Mexico Radiation Protection Regulations, 20.3.4.404 (B) NMAC.



### **REGULATORY GUIDE 8.13**

(Draft was issued as DG-8014)

#### INSTRUCTION CONCERNING PRENATAL RADIATION EXPOSURE

#### A. INTRODUCTION

The Code of Federal Regulations in 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," in Section 19.12, "Instructions to Workers," requires instruction in "the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed." The instructions must be "commensurate with potential radiological health protection problems present in the work place."

The Nuclear Regulatory Commission's (NRC's) regulations on radiation protection are specified in

10 CFR Part 20, "Standards for Protection Against Radiation"; and 10 CFR 20.1208, "Dose to an Embryo/Fetus," requires licensees to "ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv)." Section 20.1208 also requires licensees to "make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman." A declared pregnant woman is defined in 10 CFR 20.1003 as a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.

This regulatory guide is intended to provide information to pregnant women, and other personnel, to help them make decisions regarding radiation exposure during pregnancy. This Regulatory Guide 8.13 supplements Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure" (Ref. 1), which contains a broad discussion of the risks from exposure to ionizing radiation.

Other sections of the NRC's regulations also specify requirements for monitoring external and internal occupational dose to a declared pregnant woman. In 10 CFR 20.1502, "Conditions Requiring Individual Monitoring of External and Internal Occupational Dose," licensees are required to monitor the occupational dose to a declared pregnant woman, using an individual monitoring device, if it is likely that the declared pregnant woman will receive, from external sources, a deep dose equivalent in excess of 0.1 rem (1 mSv). According to Paragraph (e) of 10 CFR 20.2106, "Records of Individual Monitoring Results," the licensee must maintain records of dose to an embryo/fetus if monitoring was required, and the records of dose to the embryo/fetus must be kept with the records of dose to the declared pregnant woman. The declaration of pregnancy must be kept on file, but may be maintained separately from the dose records. The licensee must retain the required form or record until the Commission terminates each pertinent license requiring the record.

The information collections in this regulatory guide are covered by the requirements of 10 CFR Parts 19 or 20, which were approved by the Office of Management and Budget, approval numbers 3150-0044 and 3150-0014, respectively. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### **B. DISCUSSION**

As discussed in Regulatory Guide 8.29 (Ref. 1), exposure to any level of radiation is assumed to carry with it a certain amount of risk. In the absence of scientific certainty regarding the relationship between low dose exposure and health effects, and as a conservative assumption for radiation protection purposes, the scientific community generally assumes that any exposure to ionizing radiation may cause undesirable biological effects and that the likelihood of these effects increases as the dose increases. At the occupational dose limit for the whole body of 5 rem (50 mSv) per year, the risk is believed to be very low.

The magnitude of risk of childhood cancer following in utero exposure is uncertain in that both negative and positive studies have been reported. The data from these studies "are consistent with a lifetime cancer risk resulting from exposure during gestation which is two to three times that for the adult" (NCRP Report No. 116, Ref. 2). The NRC has reviewed the available scientific literature and has concluded that the 0.5 rem (5 mSv) limit specified in 10 CFR 20.1208 provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers associated with radiation exposure during pregnancy.

In order for a pregnant worker to take advantage of the lower exposure limit and dose monitoring provisions specified in 10 CFR Part 20, the woman must declare her pregnancy in writing to the licensee. A form letter for declaring pregnancy is provided in this guide or the licensee may use its

own form letter for declaring pregnancy. A separate written declaration should be submitted for each pregnancy.

#### C. REGULATORY POSITION

#### 1. Who Should Receive Instruction

Female workers who require training under 10 CFR 19.12 should be provided with the information contained in this guide. In addition to the information contained in Regulatory Guide 8.29 (Ref. 1), this information may be included as part of the training required under 10 CFR 19.12.

# 2. Providing Instruction

The occupational worker may be given a copy of this guide with its Appendix, an explanation of the

contents of the guide, and an opportunity to ask questions and request additional information. The information in this guide and Appendix should also be provided to any worker or supervisor who may be affected by a declaration of pregnancy or who may have to take some action in response to such a declaration.

Classroom instruction may supplement the written information. If the licensee provides classroom instruction, the instructor should have some knowledge of the biological effects of radiation to be able to answer questions that may go beyond the information provided in this guide. Videotaped presentations may be used for classroom instruction. Regardless of whether the licensee provides classroom training, the licensee should give workers the opportunity to ask questions about information contained in this Regulatory Guide 8.13. The licensee may take credit for instruction that the worker has received within the past year at other licensed facilities or in other courses or training.

## 3. Licensee's Policy on Declared Pregnant Women

The instruction provided should describe the licensee's specific policy on declared pregnant women, including how those policies may affect a woman's work situation. In particular, the instruction should include a description of the licensee's policies, if any, that may affect the declared pregnant woman's work situation after she has filed a written declaration of pregnancy consistent with 10 CFR 20.1208.

The instruction should also identify who to contact for additional information as well as identify who should receive the written declaration of pregnancy. The recipient of the woman's declaration may be identified by name (e.g., John Smith), position (e.g., immediate supervisor, the radiation safety officer), or department (e.g., the personnel department).

### 4. Duration of Lower Dose Limits for the Embryo/Fetus

The lower dose limit for the embryo/fetus should remain in effect until the woman withdraws the declaration in writing or the woman is no longer pregnant. If a declaration of pregnancy is withdrawn, the dose limit for the embryo/fetus would apply only to the time from the estimated date of conception until the time the declaration is withdrawn. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

### 5. Substantial Variations Above a Uniform Monthly Dose Rate

According to 10 CFR 20.1208(b), "The licensee shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the limit in paragraph (a) of this section," that is, 0.5 rem (5 mSv) to the embryo/fetus. The National Council on Radiation Protection and Measurements (NCRP) recommends a monthly equivalent dose limit of 0.05 rem (0.5 mSv) to the embryo/fetus once the pregnancy is known (Ref. 2). In view of the NCRP recommendation, any monthly dose of less than 0.1 rem (1 mSv) may be considered as not a substantial variation above a uniform monthly dose rate and as such will not require licensee justification. However, a monthly dose greater than 0.1 rem (1 mSv) should be justified by the licensee.

#### D. IMPLEMENTATION

The purpose of this section is to provide information to licensees and applicants regarding the NRC staff's plans for using this regulatory guide.

Unless a licensee or an applicant proposes an acceptable alternative method for complying with the specified portions of the NRC's regulations, the methods described in this guide will be used by the NRC staff in the evaluation of instructions to workers on the radiation exposure of pregnant women.

#### REFERENCES

- 1. USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1, February 1996.
- 2. National Council on Radiation Protection and Measurements, *Limitation of Exposure to Ionizing Radiation*, NCRP Report No. 116, Bethesda, MD, 1993.

#### QUESTIONS AND ANSWERS CONCERNING PRENATAL RADIATION EXPOSURE

# 1. Why am I receiving this information?

The NRC's regulations (in 10 CFR 19.12, "Instructions to Workers") require that licensees instruct individuals working with licensed radioactive materials in radiation protection as appropriate for the situation. The instruction below describes information that occupational workers and their supervisors should know about the radiation exposure of the embryo/fetus of pregnant women.

The regulations allow a pregnant woman to decide whether she wants to formally declare her pregnancy to take advantage of lower dose limits for the embryo/fetus. This instruction provides information to help women make an informed decision whether to declare a pregnancy.

### 2. If I become pregnant, am I required to declare my pregnancy?

No. The choice whether to declare your pregnancy is completely voluntary. If you choose to declare your pregnancy, you must do so in writing and a lower radiation dose limit will apply to your embryo/fetus. If you choose not to declare your pregnancy, you and your embryo/fetus will continue to be subject to the same radiation dose limits that apply to other occupational workers.

# 3. If I declare my pregnancy in writing, what happens?

If you choose to declare your pregnancy in writing, the licensee must take measures to limit the dose to your embryo/fetus to 0.5 rem (5 millisievert) during the entire pregnancy. This is one-tenth of the dose that an occupational worker may receive in a year. If you have already received a dose exceeding 0.5 rem (5 mSv) in the period between conception and the declaration of your pregnancy, an additional dose of 0.05 rem (0.5 mSv) is allowed during the remainder of the pregnancy. In addition, 10 CFR 20.1208, "Dose to an Embryo/Fetus," requires licensees to make efforts to avoid substantial variation above a uniform monthly dose rate so that all the

0.5 rem (5 mSv) allowed dose does not occur in a short period during the pregnancy.

This may mean that, if you declare your pregnancy, the licensee may not permit you to do some of your normal job functions if those functions would have allowed you to receive more than 0.5 rem, and you may not be able to have some emergency response responsibilities.

# 4. Why do the regulations have a lower dose limit for the embryo/fetus of a declared pregnant woman than for a pregnant worker who has not declared?

A lower dose limit for the embryo/fetus of a declared pregnant woman is based on a consideration of greater sensitivity to radiation of the embryo/fetus and the involuntary nature of the exposure. Several

scientific advisory groups have recommended (References 1 and 2) that the dose to the embryo/fetus be limited to a fraction of the occupational dose limit.

# 5. What are the potentially harmful effects of radiation exposure to my embryo/fetus?

The occurrence and severity of health effects caused by ionizing radiation are dependent upon the type and total dose of radiation received, as well as the time period over which the exposure was received. See Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Exposure" (Ref. 3), for more information. The main concern is embryo/fetal susceptibility to the harmful effects of radiation such as cancer.

# 6. Are there any risks of genetic defects?

Although radiation injury has been induced experimentally in rodents and insects, and in the experiments was transmitted and became manifest as hereditary disorders in their offspring, radiation has not been identified as a cause of such effect in humans. Therefore, the risk of genetic effects attributable to radiation exposure is speculative. For example, no genetic effects have been documented in any of the Japanese atomic bomb survivors, their children, or their grandchildren.

# 7. What if I decide that I do not want any radiation exposure at all during my pregnancy?

You may ask your employer for a job that does not involve any exposure at all to occupational radiation dose, but your employer is not obligated to provide you with a job involving no radiation exposure. Even if you receive no occupational exposure at all, your embryo/fetus will receive some radiation dose (on average 75 mrem (0.75 mSv)) during your pregnancy from natural background radiation.

The NRC has reviewed the available scientific literature and concluded that the 0.5 rem (5 mSv) limit provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers. If this dose limit is exceeded, the total lifetime risk of cancer to the embryo/fetus may increase incrementally. However, the decision on what level of risk to accept is yours. More detailed information on potential risk to the embryo/fetus from radiation exposure can be found in References 2-10.

# 8. What effect will formally declaring my pregnancy have on my job status?

Only the licensee can tell you what effect a written declaration of pregnancy will have on your job status. As part of your radiation safety training, the licensee should tell you the company's policies with respect to the job status of declared pregnant women. In addition, before you declare your pregnancy, you may want to talk to your supervisor or your radiation safety officer and ask what a declaration of pregnancy would mean specifically for you and your job status.

In many cases you can continue in your present job with no change and still meet the dose limit for

the embryo/fetus. For example, most commercial power reactor workers (approximately 93%) receive, in 12 months, occupational radiation doses that are less than 0.5 rem (5 mSv) (Ref. 11). The licensee may also consider the likelihood of increased radiation exposures from accidents and abnormal events before making a decision to allow you to continue in your present job.

If your current work might cause the dose to your embryo/fetus to exceed 0.5 rem (5 mSv), the licensee has various options. It is possible that the licensee can and will make a reasonable accommodation that will allow you to continue performing your current job, for example, by having another qualified employee do a small part of the job that accounts for some of your radiation exposure.

### 9. What information must I provide in my written declaration of pregnancy?

You should provide, in writing, your name, a declaration that you are pregnant, the estimated date of conception (only the month and year need be given), and the date that you give the letter to the licensee. A form letter that you can use is included at the end of these questions and answers. You may use that letter, use a form letter the licensee has provided to you, or write your own letter.

# 10. To declare my pregnancy, do I have to have documented medical proof that I am pregnant?

NRC regulations do not require that you provide medical proof of your pregnancy. However, NRC regulations do not preclude the licensee from requesting medical documentation of your pregnancy, especially if a change in your duties is necessary in order to comply with the 0.5 rem (5 mSv) dose limit.

## 11. Can I tell the licensee orally rather than in writing that I am pregnant?

No. The regulations require that the declaration must be in writing.

# 12. If I have not declared my pregnancy in writing, but the licensee suspects that I am pregnant, do the lower dose limits apply?

No. The lower dose limits for pregnant women apply only if you have declared your pregnancy in writing. The United States Supreme Court has ruled (in *United Automobile Workers International Union v. Johnson Controls, Inc.*, 1991) that "Decisions about the welfare of future children must be left to the parents who conceive, bear, support, and raise them rather than to the employers who hire those parents" (Reference 7). The Supreme Court also ruled that your employer may not restrict you from a specific job "because of concerns about the next generation." Thus, the lower limits apply only if you choose to declare your pregnancy in writing.

# 13. If I am planning to become pregnant but am not yet pregnant and I inform the licensee of that in writing, do the lower dose limits apply?

No. The requirement for lower limits applies only if you declare in writing that you are

already pregnant.

# 14. What if I have a miscarriage or find out that I am not pregnant?

If you have declared your pregnancy in writing, you should promptly inform the licensee in writing that you are no longer pregnant. However, if you have not formally declared your pregnancy in writing, you need not inform the licensee of your nonpregnant status.

# 15. How long is the lower dose limit in effect?

The dose to the embryo/fetus must be limited until you withdraw your declaration in writing or you

inform the licensee in writing that you are no longer pregnant. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

# 16. If I have declared my pregnancy in writing, can I revoke my declaration of pregnancy even if I am still pregnant?

Yes, you may. The choice is entirely yours. If you revoke your declaration of pregnancy, the lower dose limit for the embryo/fetus no longer applies.

# 17. What if I work under contract at a licensed facility?

The regulations state that you should formally declare your pregnancy to the licensee in writing. The licensee has the responsibility to limit the dose to the embryo/fetus.

# 18. Where can I get additional information?

The references to this Appendix contain helpful information, especially Reference 3, NRC's Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," for general information on radiation risks. The licensee should be able to give this document to you.

For information on legal aspects, see Reference 7, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children—What Can the Employer Do?" which is an article in the journal *Radiation Protection Management*.

You may telephone the NRC Headquarters at (301) 415-7000. Legal questions should be directed to the Office of the General Counsel, and technical questions should be directed to the Division of Industrial and Medical Nuclear Safety.

You may also telephone the NRC Regional Offices at the following numbers: Region I, (610) 337-5000; Region II, (404) 562-4400; Region III, (630) 829-9500; and Region IV, (817) 860-8100. Legal

questions should be directed to the Regional Counsel, and technical questions should be directed to the Division of Nuclear Materials Safety.

#### REFERENCES FOR APPENDIX

- 1. National Council on Radiation Protection and Measurements, *Limitation of Exposure to Ionizing Radiation*, NCRP Report No. 116, Bethesda, MD, 1993.
- 2. International Commission on Radiological Protection, 1990 Recommendations of the International Commission on Radiological Protection, ICRP Publication 60, Ann. ICRP 21: No. 1-3, Pergamon Press, Oxford, UK, 1991.
- 3. USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1, February 1996. 11 (Electronically available at www.nrc.gov/NRC/RG/index.html)
- 4. Committee on the Biological Effects of Ionizing Radiations, National Research Council, *Health Effects of Exposure to Low Levels of Ionizing Radiation* (BEIR V), National Academy Press, Washington, DC, 1990.
- 5. United Nations Scientific Committee on the Effects of Atomic Radiation, Sources and Effects of Ionizing Radiation, United Nations, New York, 1993.
- 6. R. Doll and R. Wakeford, "Risk of Childhood Cancer from Fetal Irradiation," *The British Journal of Radiology*, 70, 130-139, 1997.
- 7. David Wiedis, Donald E. Jose, and Timm O. Phoebe, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children—What Can the Employer Do?" *Radiation Protection Management*, 11, 41-49, January/February 1994.
- 8. National Council on Radiation Protection and Measurements, Considerations Regarding the Unintended Radiation Exposure of the Embryo, Fetus, or Nursing Child, NCRP Commentary No. 9, Bethesda, MD, 1994.
- 9. National Council on Radiation Protection and Measurements, *Risk Estimates for Radiation Protection*, NCRP Report No. 115, Bethesda, MD, 1993.

<sup>1</sup>Single copies of regulatory guides, both active and draft, and draft NUREG documents may be obtained free of charge by writing the Reproduction and Distribution Services Section, OCIO, USNRC, Washington, DC 20555-0001, or by fax to (301)415-2289, or by email to

<DISTRIBUTION@NRC.GOV>. Active guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained

by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161. Copies of active and draft guides are available for inspection or copying for a fee from the NRC Public Document Room at 2120

L Street NW., Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; telephone (202)634-3273; fax (202)634-3343. National Radiological Protection Board, *Advice on Exposure to Ionising Radiation During Pregnancy*, National Radiological Protection Board, Chilton, Didcot, UK, 1998.

 M.L. Thomas and D. Hagemeyer, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities, 1996," Twenty-Ninth Annual Report, NUREG-0713, Vol. 18, USNRC, 1998.<sup>22</sup>

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<sup>&</sup>lt;sup>2</sup>Copies are available at current rates from the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20402-9328 (telephone (202)512-1800); or from the National Technical Information Service by writing NTIS at 5285 Port Royal Road, Springfield, VA 22161. Copies are available for inspection or copying for a fee from the NRC Public Document Room at 2120 L Street NW., Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; telephone (202)634-3273; fax (202)634-3343.

# Appendix J: Pregnancy Declaration Form (Cont.)



# RSF-54-1

# UNM RADIATION SAFETY DIVISION Declared Pregnant Worker

Please read U.S. Nuclear Regulatory Commission (NRC) Regulatory Guide 8.13 <u>Instruction Concerning Prenatal Radiation Exposure</u>. (revision 3, June 1999). Contact Radiation Safety at 925-0745 or 925-0743 regarding questions on this material.

A "declared pregnant worker" is a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception. \_\_\_\_\_ UNMH Employee ID/BannerID:\_\_\_ Full Name:\_\_\_ My Date of Birth:\_\_\_\_\_\_ Participant #\_ (see reverse for finding your Part#) In accordance with the State of New Mexico's regulations at 20.3.4.412 "Dose Equivalent to an Embryo / Fetus," I am declaring that I am pregnant. I believe I became pregnant in \_\_\_\_\_\_(Enter Month and Year). I have been provided a copy of NRC Regulatory Guide 8.13 Instruction Concerning Prenatal Radiation Exposure, and have read and understand this document. I have also been given the opportunity to ask questions regarding radiation dose to the embryo/fetus, and understand that I may call the Radiation Safety Office at any time with additional questions. I understand the licensee shall ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman does not exceed 500 millirems (5 millisieverts). I also understand the licensee shall make efforts to avoid a substantial variation above a uniform monthly exposure rate (50 millirem) to a declared pregnant woman so as to satisfy the limit of 500 millirem. I also understand that meeting the lower dose limit may require a change in job or job responsibilities during my pregnancy. If I find out that I am not pregnant, or if my pregnancy is terminated, I will promptly inform you in writing that my pregnancy has ended. I also understand that I may un-declare my pregnancy at any time and for any reason (in writing to the RSO). I have been provided a copy of this completed form: Signature: \_\_\_\_\_ Email: \_\_\_\_ \_\_\_\_Phone: \_\_\_\_ Title: Department: \*Supervisor in Attendance/Informed: Yes No (\*you are not required to inform your supervisor) If yes, complete the following Supervisor Full name Supervisor email Health Physicist: Date: \_\_\_

S:\Radiation\WORD\HPFORMS\RSF-5x Dosimetry\RSF-54-1 Declared Pregnant Woman.docx

Your Part# can be found on the backside of your dosimeter

Remove from clip holder.



Back

Information on the back of the dosimeter



Location Code, three letters underlined in yellow here

Wearer's Participant Number, 5 digits, underlined in red here. <u>Look at vour dosimeter</u> and give us that number.

Dosimeter SN number, each dosimeter has it's own serial number. Underlined in blue here.

Put your dosimeter back into the clip holder. Make sure it snaps in place.



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11/2013

Committee Opinions from the American College of Obstetricians and Gynecologists (ACOG).

http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Guidelines-for-Diagnostic-Imaging-During-Pregnancy-and-Lactation?IsMobileSet=false

# Appendix K: Incomplete Grade Policy (BSRS)



### Radiologic Sciences Program

# **INCOMPLETE GRADE POLICY**Bachelor of Science Radiologic Sciences

Incomplete (I) Grade

According to academic policy, incomplete grades must be completed before a student is eligible to graduate from the University of New Mexico.

The grade of I is given only when circumstances beyond the student's control have prevented completion of the coursework within the official dates of a semester/session.

Students should not re-enroll or re-register (for credit) in a course in which an" I" (Incomplete) grade has been assigned in order to resolve it. If an instructor requires the student to repeat the class in order to resolve the Incomplete, the student must register for the course on an audit basis.

Grade changes: Incomplete grades must be received no later than one year (twelve months) from the published end day of the term in which the grade was assigned. Incomplete grades not resolved within the time frame stated in this policy are automatically converted to an F (Failure) grade.

Students who resolve Incompletes in the term of graduation must have the process completed (including the reporting of the grade to the Records and Registration Office, by the deadline). Students are responsible for informing instructors that they are graduating and the grade(s) must be reported by the appropriate deadline. Failure to complete the process as described could result in the postponement of graduation until the following term.

The instructor of record reports the final grade for the course in which the Incomplete was assigned to the Records and Registration Office. Graduate students see the section on Graduate Programs related to this policy.

Extension of Incomplete

A student may apply for an extension of the time allowed to complete the course work required to remove the "I" grade. The request for extension form may be obtained in the Records and Registration Office. A student who re-enrolls in residence may be granted a one-semester extension. If an extension is granted, it is the student's responsibility to ensure the "I" grade is removed by the date indicated. Graduate students are required to obtain the additional signature of the Dean of Graduate Studies. The request form must be submitted no later than the last day of the term.

If a student wants to receive an "incomplete" in their class(es), they need to discuss it with their instructor(s). If the instructor(s) assigns an "incomplete" the student needs to complete whatever work the instructor requires. The instructor will submit an "I" on the grade report. Incomplete grades must be resolved no later than one year (twelve months) from the published end day of the semester in which the grade was assigned. Incomplete grades not resolved within the time frame stated in this policy will be converted automatically to an IF (failing) grade. The student is responsible for making arrangements with the instructor for resolving an incomplete grade.

http://catalog.unm.edu/catalogs/2016-2017/student-services-information.html

	_
Instructor Signature	Date
Student Signature	Date

# Appendix L: Consent for Photography/Videotaping/Filming/Imaging



# Consent for Photography/Videotaping/Filming/Imaging

Name:	Banner Num	Banner Number:	
Date:	Purpose:		
at the UNM Health Scien	g photographed, videotaped, nces Center. I understand an s, films, or images may be us	nd agree that these	
Educational activi UNMHSC staff ar Research activitie Legal Purposes Public media, incl	es luding news media, television	olving others besides  n, advertisements, public	
Signature	Print Name	Date	
Signature of Witness	Print Name	Date	

Radiologic Sciences Program at the University of New Mexico MSC09.5260.2500 Marble Ave NE, HSSB Room 217, Albuquerque, NM 87131-0001. 505-272-5254/505-272-8079 fax

# Appendix M

# The Nuclear Medicine clinical Supervisor's and/or Preceptor's Responsibilities

The Clinical Supervisor's and/or Clinical Preceptor responsibilities include the following clinical education of students:

- HIPAA:
  - Compliance with Health Insurance Portability and Accountability Act (HIPAA) as they relate to patient care and patient record keeping.
- Radiation safety:
  - Techniques that will minimize radiation exposure to the patient, public, fellow workers and self.
  - Utilize ALARA
- Quality control program:
  - All quality control procedures required of department including but not limited to extrinsic floods, intrinsic floods, weekly bars, CORs, daily constancy, and daily surveys and wipes.
- Radiopharmacy (Radiopharmaceutical):
  - Preparation, calculation, identification administration (where permitted), and disposal of radiopharmaceuticals and the performance of all radionuclide quality control procedures.
- Diagnostic Nuclear Medicine procedures:
  - Performance of an appropriate number and variety of diagnostic nuclear medicine procedures to achieve desired clinical competencies.
- Therapeutic Nuclear Medicine procedures (if applicable):
  - Observations with a variety of therapeutic nuclear medicine procedures to achieve desired clinical competencies.
- Image processing:
  - ROI, SPECT, ROI curves, Image format, Image contrast, Image labeling
- Venipuncture:
  - Vein selection, identification of patient, proper supplies, aseptic technique, tourniquet protocols, hand washing protocol, and recapping of needles.
- Blood draw:
  - Proper blood draw technique per site protocol.
- Review indications:
  - Review indication for exam prior to performing exam
- Review order:
  - Proper review of physician orders
- Patient identification:
  - Verify that patient identification is conducted properly. Two forms of identification.
- Patient care, patient safety:

- Ensure that all students are conducting proper patient care and patient safety.
- Patient interview:
  - Verify that students are conducting patient interviews according to clinical site standards and patient satisfaction.
- Competency evaluation:
  - Evaluate students using electronic device with HanDBase software for required competencies.
- Aseptic technique:
  - Verify students are using proper aseptic techniques for all procedures.
- Medical informatics:
  - Computer application and image storage per site protocol and according to HIPAA.
- Collimation:
  - Verifies that the students understand the proper collimation needed for each exam.
- Patient positioning:
  - Students understand proper positioning of patient for each exam.
- Camera positioning:
  - o Camera distance, location and angle are positioned properly.
- Supplies :
  - o Students are aware of supplies available and use them properly.
- Cross reference modality:
  - Cross reference various modalities related to the exam when appropriate.
- Needle disposal:
  - Students properly cap and dispose of needles in correct disposal location (no two handed capping).
- Proper disposal of waste material:
  - Proper disposal of biohazard material, cold pharmaceuticals, radioactive materials, and trash in the proper location.
- Emergency protocols:
  - Hospital codes and colors for emergencies along with telephone numbers.
- Serve as a liaison between the clinical coordinator, clinical instructor(s), program director, and staff technologists.
- Be aware of ARRT/ NMTCB competency requirements.
- Be familiar with the Radiologic Sciences Program Handbook.
- Provides feedback to other staff technologists who are completing competencies for the students.
- Models professionalism and provides proper clinical and communication skills.
- Facilitates constructive feedback between students and staff about specific skills and tasks related to performing competencies.

- Facilitates student learning through image evaluation.
- Monitors student interaction with the patient and provides feedback to the student.
- Provides timely written feedback for student write-ups and/or discipline.
- Interacts with the clinical coordinator, clinical instructor(s) and/or program director on a weekly basis to provide feedback for students and demonstrate awareness of weekly goals for students.
- Documents student attendance via electronic device using HanDBase software.
- Addresses concerns with student performance to the clinical coordinator, clinical instructor(s), and program director via e-mail, text, or phone call.
   All concerns will be documented in a weekly log.
- Complete midterm and final semester evaluations for each student(s) he/she works with throughout each semester.
- Provides recommendations for a successful clinical experience to the student and faculty.

# Appendix N Computed Tomography Clinical Supervisor's and/or Preceptor's Responsibilities

The clinical Supervisor's and/or Preceptor's responsibilities include the following clinical education of students:

#### General:

- Liaison between the clinical instructor and Radiologic Sciences staff and department.
- Aware of ARRT competency requirements as included in on-site Handbook
- Provide feedback to other participating technologists who are completing competencies for the students.
- Provide role model professionalism, clinical and communication skills captured through evaluation process.
- Facilitate constructive feedback between students and staff about specific skills and tasks related to performing competencies through evaluation process.
- Verify student learning through image evaluation.
- Monitor student interaction with patient and provide feedback to students through direct supervision.
- Address concerns with student performance to the clinical coordinator, clinical instructor(s), and program director via email, text, or phone call.
  - Concerns will be documented in weekly log.
- Interact with clinical instructors and/or the clinical coordinator on a weekly basis to provide feedback for students and be aware of weekly goals for students.
- Facilitate student entry of student attendance, daily clinical records and competency records.
- Complete midterm and final semester evaluations for each student
   (s) he / she works with throughout each semester.
- Provides recommendations for a successful clinical experience to the student and faculty.

## Radiation safety:

- Techniques that will minimize radiation exposure to the patient, public, fellow workers and self.
- Utilize ALARA.
- Quality control program:
  - All quality control procedures required of department including but not limited to daily quality assurance testing, proper shutdown-

reboot of scanner and notification processes for scanner hardware/software errors.

- Image processing:
  - ROI, MPR, curved MPR, 3D Reformatting, Modality applications, Image labeling.
- Venipuncture:
  - Vein selection, identification of patient, proper supplies, aseptic technique, tourniquet protocols, hand washing protocol, and recapping of needles.
- Review indications:
  - Review indications for exam prior to performing exam.
- Review order:
  - o Proper review of physician orders.
- Patient identification:
  - Verify that patient identification is conducted properly. Two forms of identification.
- Protocol verification:
  - Verify correct protocol selected for exam based on patient history and indication.
- Patient care, patient safety:
  - Ensure that all students are conducting proper patient care and patient safety.
  - Review patient laboratory values and allergy history for possible contraindications to contrast medium.
- Patient interview:
  - Verify that students are conducting patient interviews according to clinical site standards and patient satisfaction.
- Competency evaluation:
  - Evaluate students using electronic device with HanDBase software for required competencies.
- Aseptic technique:
  - Verify students are using proper aseptic techniques for all procedures.
- Medical informatics:
  - Computer application and image storage per site protocol and according to HIPAA.
- Patient positioning:
  - Students understand proper positioning of patient for each exam.
- Supplies :
  - Students are aware of supplies available and use them properly.
- Cross references modality:
  - Cross reference various modalities related to the exam when appropriate.
- Needle disposal:
  - Students properly cap and disposes of needles in correct disposal location (no two handed capping).

- Proper disposal of waste material:
  - Proper disposal of biohazard material and trash in the proper location.
- Emergency protocols:
  - Hospital codes and colors for emergencies along with telephone numbers.
  - o Procedure for contacting clinical instructor if issues arise.

# Appendix O Magnetic Resonance Imaging Clinical Supervisor's and/or Preceptor's Responsibilities

The clinical Supervisor's and/or Preceptor's responsibilities include the following clinical education of students:

#### General:

- Provide students with interactive process of patient screening.
- Provide students with entry / exit procedures into MR Zone I, II, III,
   IV.
- Liaison between the clinical instructor and Radiologic Sciences staff and department.
- Aware of ARRT competency requirements as included in on-site Handbook.
- Provide feedback to other participating technologists who are completing competencies for the students.
- Provide role model professionalism, clinical and communication skills captured through evaluation process.
- Facilitate constructive feedback between students and staff about specific skills and tasks related to performing competencies through evaluation process.
- Verify student learning through image evaluation.
- Monitor student interaction with patient and provide feedback to students through direct supervision.
- Address concerns with student performance to the clinical coordinator, clinical instructor(s), and program director via email, text, or phone call.
  - Concerns will be documented in weekly log.
- Interact with clinical instructors and/or the clinical coordinator on a weekly basis to provide feedback for students and be aware of weekly goals for students.
- Facilitate student entry of student attendance, daily clinical records and competency records.
- Complete midterm and final semester evaluations for each student
   (s) he / she works with throughout each semester.
- Provides recommendations for a successful clinical experience to the student and faculty.

#### Safety:

 Procedures for proper patient screening prior to entering a magnetic field environment.

- Provide students with entry / exit procedures into MR Zone I, II, III, IV.
- Methods for minimizing SAR rates.
- Review patient laboratory values and allergy history for possible contraindications to contrast medium.

# Quality control program:

- All quality control procedures required of department including but not limited to departmental quality assurance testing, proper shutdown-reboot of scanner and notification processes for scanner hardware/software errors.
- Image processing:
  - o ROI, MPR, 3D Reformatting, Modality applications, Image labeling.
- Venipuncture:
  - Vein selection, identification of patient, proper supplies, aseptic technique, tourniquet protocols, hand washing protocol, and recapping of needles.
- Review indications:
  - Review indications for exam prior to performing exam.
- Review order:
  - Proper review of physician orders.
- Patient identification:
  - Verify that patient identification is conducted properly. Two forms of identification.
- Protocol verification:
  - Verify correct protocol selected for exam based on patient history and indication.
- Patient care:
  - Ensure that all students are conducting proper patient care and patient safety.
- Patient interview:
  - Verify that students are conducting patient interviews according to clinical site standards and patient satisfaction.
- Competency evaluation:
  - Evaluate students using electronic device with HanDBase software for required competencies.
- Aseptic technique:
  - Verify students are using proper aseptic techniques for all procedures.
- Medical informatics:
  - Computer application and image storage per site protocol and according to HIPAA.
- Patient positioning:
  - Students understand proper positioning of patient for each exam.
- Coil positionina:
  - Students understand coil placement and indications of coil use.
- Supplies :

- Students are aware of supplies available and use them properly.
- Cross references modality:
  - Cross reference various modalities related to the exam when appropriate.
    - Evaluation of potential metallic foreign body.
- Needle disposal:
  - Students properly cap and disposes of needles in correct disposal location (no two handed capping).
- Proper disposal of waste material:
  - Proper disposal of biohazard material and trash in the proper location.
- Emergency protocols:
  - Hospital codes and colors for emergencies along with telephone numbers.
  - Procedure for contacting clinical instructor if issues arise.

### **Appendix P**

# **UNM Radiologic Sciences Program Academic Honesty Policy (2017-18)**

1. Cases of academic dishonesty in undergraduate courses.

According to the UNM School of Medicine Handbook Plagiarism Policy, in cases of suspected academic dishonesty, the faculty member should meet with the student and allow the student to explain what happened. If the faculty member then judges that academic dishonesty has occurred, the faculty member may then choose to impose a sanction. For the complete policy, go to the University of New Mexico, School of Medicine student policies:

http://www.unm.edu/~unmvclib/handouts/somplagiarism.pdf

Typical sanctions may include:

- --grade reduction or grade of F on the assignment
- --additional assignments or rewrite of the assignment
- --grade reduction or grade of F in the course
- --forced withdrawal from the course

In addition, the faculty member may report the incident to the office of the Dean of

Students for further disciplinary action at the University level.

2. Cases of academic dishonesty in graduate courses.

Academic dishonesty is significantly more serious at the graduate level than the undergraduate level, because it is a violation of the ethics of the professional field which the student aspires to join. Ignorance of professional standards of scholarship is outrageous at this level. Therefore, in addition to whatever sanctions the faculty member may choose to impose (as outlined in point 1, above) the faculty member must also report the case to the Committee on promotions and Evaluation, and the chair of the student's Committee on Studies (if the student has one).

#### 3. Student appeals.

If a student believes that s/he has received unfair treatment in an academic matter, s/he should follow the procedures outlined in the due process policy for this program. The link is listed directly below. Please also review the Article 2 of the Pathfinder link for more information for students. This includes meeting with the instructor to discuss the matter, then if necessary meeting with the department director. If the dispute cannot be resolved informally through these means, then the student may file a grievance with the Dean of the School of Medicine. For the complete policy, go to the Pathfinder at

http://radiology.unm.edu/common/docs/dueprocesspolicy.pdf

http://handbook.unm.edu/section-d/d100.html

"Student Grievance Procedure" http://handbook.unm.edu/section-d/d175.html

# What is Academic Dishonesty?

UNM Health Sciences Library has tutorials on avoiding plagiarism. For more information please visit this site.

http://libguides.health.unm.edu/c.php?g=238034&p=1582600

### UNM Policy on Academic Dishonesty

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

# School of Medicine, Health Sciences Center, Health Professions and Public Health Programs policy on Academic Dishonesty

Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or outside of the University; and nondisclosure or misrepresentation in filling out applications or other University records.

# **Forms of Academic Dishonesty**

Students should ask their professors for clarification of these terms if they have any questions or confusion.

# 1. Plagiarism.

You commit plagiarism if you fail to acknowledge the sources of any ideas or information in your paper which are not common knowledge or your own personal knowledge. In other words, plagiarism is claiming credit for ideas and information that are not your own.

#### This includes:

- --copying word for word from sources without adequate documentation
- --using phrases and ideas from sources without adequate documentation
- --paraphrasing or summarizing a source without adequate documentation
- --misrepresenting source material
- --purchasing a pre-written paper

- --letting someone else write a paper, or portions of a paper, for you
- --paying someone else to write a paper, or portions of a paper, for you
- --using someone else's data to complete an assignment

#### Collusion.

You collude in academic dishonesty if you collaborate with another person in an unauthorized manner in academic assignments.

This includes:

- --allowing someone else to write your papers
- --allowing someone else to copy your work
- --writing a paper for another person
- --taking a test or exam in place of another person
- --taking any action that could enable another student to violate the UNM Policy on

#### 3. Fraud.

You commit fraud if you falsify or invent data or source material.

4. Multiple Submissions.

It is unethical to submit assignments (or parts of assignments) for credit in more than one class without the permission of the instructors.

#### Plagiarism and How to Avoid It

Why is it important to acknowledge sources in academic writing?

In universities, scholars produce new knowledge through interactions with others. We read articles and books written by other scholars, and discuss our ideas with our colleagues, whether informally or at professional conferences. Virtually nobody comes up with a brilliant new idea in total isolation – and even if they did, the first thing they would have to do is to demonstrate how their new idea fits into the existing field of knowledge.

So we are always building on each other's knowledge, and this is just as true for students as for professors. When a student writes a paper for a course, s/he is in effect entering the researchers' community of discourse, and must therefore abide by the same rules that professional researchers' do. Researchers' are continually in dialogue not only with other researchers', but also with the discoveries from the past. It is crucial therefore to acknowledge where the ideas

in your papers come from, not only to give credit where credit is due, but also to clarify where you make your own original contribution to the field.

Plagiarism occurs when an author takes credit for work that is not the author's own. This is a kind of intellectual theft, and it is extremely serious no matter what form it takes, whether purchasing an essay online, or misusing sources in more subtle ways.

This information has been offered to you before beginning this course/program of study.

Student signa	9
Print na	e
Date	

# STUDENT STATEMENT OF UNDERSTANDING

described in the Student Handbook them.	
Signed:	
Student Signature	Date
Print Name	