

CENTRAL NEW MEXICO COMMUNITY COLLEGE
School of Health, Wellness & Public Safety
Veterinary Technology Program
Laboratory and Procedural Safety Plan

PURPOSE: The safety management program is designed to develop an overall awareness of safety by students and faculty. This will be accomplished by having written policies and by student and faculty participation in ongoing training sessions.

MECHANICS: Plan by which everyone will become aware of safety:

- A. Have every student and faculty member read the safety plan during orientation and annually thereafter or as changes in the plan occur.
- B. Complete a safety check list for each student at orientation.
- C. Participation in scheduled and ongoing safety training sessions within and outside the laboratory, and for specific procedural activities or off campus locations.
- D. Have periodic lab wide sessions using audiovisual aids.

DOCUMENTATION: All training sessions will be documented and filed in student and faculty folders.

LABORATORY SAFETY PLAN

GENERAL REQUIREMENTS FOR PERSONAL AND LABORATORY SAFETY

IN ORDER TO HAVE A SAFE WORKING ENVIRONMENT, IT IS NECESSARY THAT ALL STUDENTS AND FACULTY KNOW AND ABIDE BY CERTAIN BASIC SAFETY PRECAUTIONS. THIS PLAN HAS BEEN DEVELOPED TO OUTLINE THE PRACTICES AND PROCEDURES REQUIRED ASSURING SAFE PERFORMANCE IN OUR OPERATION, AND FOLLOWING ACCEPTED VETERINARY STANDARDS OF PRACTICE.

I. GENERAL INSTRUCTIONS SECTION

- A. General precautions
- B. Dress code
- C. Smoking
- D. Eating and drinking
- E. Contact Lenses / Cosmetics
- F. Protective equipment
- G. Pipetting
- H. Handwashing
- I. Centrifugation
- J. Standard Precautions
- K. Housekeeping
- L. Disposal of needles and other sharp objects
- M. Infectious waste disposal
- N. Glassware
- O. Safety equipment

A. GENERAL PRECAUTIONS

1. Safe work practices, engineering controls, and personal protective equipment are required to eliminate or minimize occupational exposure to infectious agents. All blood, body fluids, and tissues are considered potentially infectious. Since the infectious potential of any patient sample is unknown, all blood and other potentially infectious material (OPIM) will be treated the same. Appropriate barrier protection will be used whenever specimens are collected and handled in transport, processing, testing or culturing, and disposing. All specimens of blood and body fluids will be placed in appropriate containers with a secure lid to prevent leaking during transport.

*****IMPLEMENTATION OF STANDARD BLOOD AND BODY-FLUID PRECAUTIONS FOR ALL SPECIMENS ELIMINATES THE NEED FOR WARNING LABELS ON SPECIMENS SINCE BLOOD AND OTHER BODY FLUIDS FROM ALL PATIENTS SHOULD BE CONSIDERED INFECTIOUS.**

2. Examination gloves shall be worn in keeping with common veterinary standards of practice while handling and processing laboratory samples. Masks, protective eyewear or face shields may also be used. Gloves will be discarded and hands washed after completion of specimen processing. If at any time any human blood, tissue or fluid is utilized, gloves will be worn for such handling.

3. All accidental needle puncture wounds, or significant exposure to any human body fluid, must be reported immediately. The following should be done:

a) Report the exposure to your clinical instructor.

b) Call the On-Call Service at Presbyterian Hospital at 841-1234 to report the exposure to the on-call Infection Control Nurse within 1 (one) hour of occurrence.

c) Meet with a nurse from that department as soon as possible if requested to do so by the nurse evaluating the exposure. You are excused from clinicals for the day.

d) Adhere to the requirements of the PHS Exposure Policy.

e) Report the exposure to the Program Director at 224-5043.

Additional related information may be found in the Student Handbook under Health Policies.

4. All mouth pipetting is prohibited. Unopette systems or other automatic pipettes, Pasteur pipettes with bulbs or other pipetting devices will be used to eliminate exposure of the mucous membranes of the mouth to potentially infectious agents.

5. Laboratory work surfaces should be decontaminated with a school approved chemical germicide after a spill of blood or other body fluids and when work activities are completed. More information is provided in section under Housekeeping, section K of this plan.

6. Contaminated materials used in laboratory tests should be decontaminated before reprocessing or be placed in bags and disposed of in accordance with institutional policies for disposal of infectious waste.

7. All persons should wash hands after completing laboratory activities and should remove protective clothing (laboratory coats) before leaving the laboratory or eating.

B. **DRESS CODE**

While in the laboratory, everyone will wear a laboratory coat (or other protective clothing as directed by the instructor) and closed shoes. No sandals. Hair should be worn in a manner that will prevent it from contact with contaminated materials or surfaces and from equipment with movable parts such as centrifuges. Beards are subject to the same precautions. Jewelry that can become caught in equipment or hang into infective materials should not be worn.

Laboratory coats used in the analytical area will not be worn in other areas of the campus.

Finger nails will be kept to a reasonable length. Polish and nail applications are not permitted.

C. **SMOKING**

Smoking is prohibited in the laboratory area.

D. **EATING AND DRINKING**

There will be no eating, drinking or storage of food in the laboratory. Food or drinks are not permitted to be stored in technical refrigerators defined for storage of laboratory reagents or samples. Foreign objects such as pens, pencils, fingers, etc. are not to be put in the mouth.

E. **CONTACT LENSES / COSMETICS**

The application or removal of contact lenses in the laboratory area is prohibited, as is the application of cosmetics.

F. **PROTECTIVE EQUIPMENT**

Protect your eyes, face, hands, body, and clothes. Face masks and safety goggles (students are requested to provide their own) must be worn if mucous-membrane contact from splatter of blood, body fluids or chemical reagents is anticipated. Where possible, engineering controls, such as

counter-top based plastic shields, may be utilized in place of face masks and protective eyewear. Laboratory coats must be worn at all times in the analytical area and should be removed when leaving the laboratory. Latex gloves shall be worn in keeping with common veterinary standards of practice. Alternative gloves are available for persons identified as latex or powder sensitive, and for dealing with chemical reagents for which latex is not appropriate. Individuals demonstrating sensitivity to latex must be referred immediately by faculty to program director.

G. **PIPETTING**

Pipetting of all reagents and specimens must be done using a rubber bulb or other safety device. Never pipette by mouth. Never use broken or chipped pipettes.

H. **HAND WASHING**

Hand washing is one of the most important safety precautions of all. It should be accomplished with an effective soap cleanser and is mandatory upon leaving the laboratory. Always wash hands prior to eating, drinking, or smoking and after completing your work.

I. **CENTRIFUGATION**

Do not centrifuge uncovered tubes with specimens or flammable liquids. The top of the centrifuge should remain closed until the unit has come to a complete standstill. All centrifuges, including microhematocrit centrifuges, should be cleaned regularly with a school-approved disinfectant. In the event of tube breakage in the centrifuge, the cleaning procedure should be carried out thoroughly with the appropriate disinfectant. Due care should be exercised in removing broken glass.

J. **STANDARD PRECAUTIONS**

1. Blood and body fluid precautions should be used consistently for all patients, in keeping with common veterinary standards of practice. Used syringes, needles, and lancets should be placed into properly labeled sharps containers.

2. All equipment will be carried securely, such as with two hands for microscopes. Equipment must be placed safely on counters so as to prevent accidental bumps or potential dropping to the floor. Students may be excused from any lab setting if safety issues persist.

3. Walkways will be kept free from clutter, electrical cords, etc.

K. **HOUSEKEEPING**

1. All work surfaces in the technical work areas of the laboratory will be decontaminated with an appropriate school approved disinfectant. This will be done after completion of a procedure, when surfaces are visibly contaminated, immediately after any blood or OPIM spill, and at the end of a laboratory session. Gloves and other appropriate personal protective equipment will be worn when dealing with sample spills and grossly contaminated surfaces.

2. When in use, analytical instruments will be decontaminated on a regular basis in accordance with manufacturer's recommendations. Centrifuges, water baths and the like will also be cleaned on a regular basis.

3. Trays, cans and similar receptacles intended for reuse and exposed to potentially infectious material will be inspected, cleaned and decontaminated on a regular basis and as needed.

4. Reusable instruments contaminated with blood or OPIM, such as hemacytometers and forceps, will be cleaned well in accordance with manufacturer's recommendations after every use.

5. Since most disinfectants are less active, or even ineffective, in the presence of high concentrations of protein such as found in blood and serum, the majority of the spill should be absorbed prior to disinfecting. Initially, absorb the spilled material with disposable absorbent material such as paper towels or tissue wipes. Clean the spill site of any visible material with an aqueous detergent solution or 1:10 dilution of bleach. Absorb the liquid prior to final disinfecting. Disinfect the spill area using a school-approved disinfectant by flooding or wiping down the area so as to make the site glistening wet. The disinfectant should be allowed to remain on the area for the period of time recommended by the manufacturer. Absorb the solution with disposable paper towels. All items used for clean up should be discarded in biohazard labeled waste receptacles.

6. If bleach solutions are used, dilutions should be made up weekly with tap water to prevent the loss of germicidal action during storage. Spill proof bleach bottles should be labeled as to bleach concentration, preparation date, expiration date and initials of the individual preparing the solution.

7. All corridors, stairways, laboratory areas, and storerooms should be kept free of accumulations of trash and clutter. Exit areas, eyewash/shower stations, fire blanket stations, and fire extinguisher locations should never be blocked or cluttered.

L. **DISPOSAL OF NEEDLES AND OTHER SHARP OBJECTS**

All contaminated needles and sharp objects must be disposed of in the special plastic sharps containers supplied for this purpose. Containers should be replaced when about 3/4 full. **NEVER OVERFILL.**

M. **INFECTIOUS WASTE DISPOSAL**

1. All infectious waste destined for disposal will be discarded in appropriate biohazard labeled waste receptacles.

2. Specimens, specimen containers and disposable items contaminated with blood and other potentially infectious material (OPIM) are placed in designated receptacles containing red plastic bags. These are located at workstations throughout the laboratory. These bags should be no more than 2/3 full. At workstations where Vacutainer tubes are discarded, the bags should be filled no more than 1/2 full to prevent injury to personnel when lifting and to avoid the hazards of a ruptured bag.

3. Contaminated sharps capable of puncturing the skin are placed in red colored, biohazard labeled sharps containers. Such containers will not be filled to the point where sharps are visibly protruding from the opening. Once filled, the container is closed and placed within a large red colored biohazard bag.

4. All biohazard bags are secured and the containers sealed shut with lids. The containers are then placed in designated areas for scheduled pick-up and appropriate disposal by contracted vendors.

5. Waste generated by laboratory instrumentation from microsampling is disposed through drains or identified collection receptacles.

6. Large volumes of fluids such as urine are discarded at designated sinks with copious amounts of water.

N. **GLASSWARE**

Broken, chipped, or cracked glassware must be disposed of in specially marked containers. If necessary, autoclave container (only if contaminated with blood or OPIM. **CAUTION: Handle all broken glassware with extreme care.**

O. **SAFETY EQUIPMENT**

Students and faculty should know the location of safety showers, eye wash stations, fire blankets and fire extinguishers, and be familiar with their use.

II. WARNING SIGNS AND LABELS SECTION

- A. Purpose
- B. Labeling
- C. Signs

A. **PURPOSE**

1. To provide a uniform policy and procedure to be followed for hazard communication regarding chemicals.
2. Instruction on the purpose and use of Material Safety Data Sheets will be provided to students and faculty. The location of MSDSs will be known to all involved in the program.

B. **LABELING**

1. There must be a Material Safety Data Sheet (MSDS sheet) for each chemical used in the laboratory. The data sheets must be readily available in the event they are needed.
2. Labels with appropriate warnings will be affixed to all chemicals in addition to required labels indicating content.
 - a) All chemicals, reagent kits and solutions must be labeled in regard to:
 - Contents
 - Concentration (if applicable)
 - Date received or prepared (if prepared, initials of person)
 - Date placed in service and initials of person who opened
 - Expiration date (as applicable)
 - Storage requirements

b) Label must also contain any specific hazards with regard to:

- Type of hazard (poison, irritant, inhalant, etc.)
- Precautions (avoid skin contact, do not pipette, etc.)
- Instructions in case of accident (wash immediately)
- Cautions regarding flammability (if any)
- Cautions regarding stability (if any)
- Cautions regarding health (if any)
- Any other special information (if any)

C. SIGNS

1. Signs should be posted as needed.

III. CHEMICAL HAZARDS SECTION

- A. Introduction
- B. Classification
- C. Storage of Corrosives
- D. Storage of Flammables
- E. Breaks and Spills
- F. Disposal of Chemical Waste

A. INTRODUCTION

1. A number of routine procedures in a laboratory involve the use chemicals, reagent kits or solutions, some of which may be caustic, poisonous, or flammable reagents. These should be appropriately labeled to indicate the hazard. Read labels and observe precautions.

B. CLASSIFICATION

Dangerous chemicals may be grouped into the following:

1. **Caustic or Corrosive**

Acids and alkalines may cause burns of skin or mouth, or eyes and may also cause damage to equipment and storage areas. Individual hazards are listed below for those chemicals used in the student laboratory.

a) Hydrogen Peroxide - Will cause silent burns if it is not immediately rinsed from the skin (refers to concentrated, such as 30%).

b) Sodium Hypochlorite 5% (Bleach, i.e. Clorox) - A very caustic alkaline, as well as an oxidizing agent. It will cause sloughing of skin if not quickly rinsed with water. Has an unmistakable odor. NEVER mix with ammonia.

NEVER PIPET BY MOUTH - FLUSH ALL CHEMICALS FROM TISSUE WITH COPIOUS AMOUNTS OF WATER!!!

2. POISONS

Almost any substance in quantity can be poisonous. For these purposes, a poison will be classified as a substance which may cause death or serious effects if relatively small amounts are inhaled, ingested or come in contact with the skin, such as concentrated phenols. Poisons may be gas, liquid, or solid. Following are some specific hazards.

a) Cyanide (NaCN, KCN) - Is a specific poison for cytochrome oxidase. DO NOT COUNT ON ANTIDOTES. Work under a hood as cyanides evolve HCN a deadly gas that smells musty or almond-like.

b) Carcinogens - Are defined as any type of agent that can be cancer producing. OSHA lists fourteen substances to be carcinogenic and requiring special precautions. Benzidine and its salts are more commonly found in the laboratory. Precautions in using these agents include protective clothing and equipment, handwashing, showering and record keeping.

c) Flammables - Such materials that easily ignite, burn and serve as fuel for a fire. All such materials will be stored in a special cabinet for flammable and combustible materials.

C. STORAGE OF CAUSTICS/CORROSIVES

1. Store caustic and corrosive materials near the floor to minimize danger of bottles falling from shelves.
2. Separate containers to facilitate handling.

D. STORAGE OF FLAMMABLES

1. Quantities of one gallon or over must be stored in a safety can. If a reagent must be stored in glass for purity, the glass container may be placed in a bottle carrier to lessen the danger of breakage.
2. Small quantities (i.e. pint bottles) may be stored on open shelves, but bulk storage (more than five gallons) must be in a flammable storage cabinet.
3. Do not store in a closed area, such as a refrigerator. Do not store flammables in areas exposed to direct sunlight.

E. BREAKS AND SPILLS

1. Skin/mouth contact: **WASH AREA IMMEDIATELY.**
2. Spills on clothing: Take items of clothing off immediately to avoid soaking through to skin. This includes belts and shoes if affected.
3. Contain spills with sand or absorbent materials. Wash area thoroughly after clean up.
4. Disposal: Liquids should be flushed down the sink with copious amounts of water. Sand or absorbent material should be placed in a sealed can and marked "**CHEMICAL WASTE - - HAZARDOUS**".

F. DISPOSAL OF CHEMICAL WASTES

1. Dispose of in accordance with institutional policy.

IV. INFECTIOUS HAZARDS SECTION

- A. Routes of Infection
- B. Handling of Specimens
- C. Policy for Processing Cultures
- D. Policy for Disposal of Contaminated Materials
- E. Procedure to be followed for accidental spills

A. ROUTES OF INFECTION

1. Air Borne - droplets and aerosols may be formed by simply removing caps or swabs from tubes. Heating liquids or needles too rapidly may also create an aerosol. **BREAKAGE IN THE CENTRIFUGE IS A SERIOUS INCIDENT.**
2. Ingestion - may occur by failure to wash hands after contact with specimens or cultures.
3. Direct Inoculation - scratches, needles, or broken glass may permit direct inoculation.
4. Skin Contact - some very virulent organisms may enter the body through unbroken skin.

B. HANDLING OF SPECIMENS

1. All specimens should be handled as if they are potentially infectious (**Standard Precautions**). Gloves will be worn in keeping with common veterinary practice standards.
2. Specimens with gross external contamination should be handled with caution. The external surfaces of the container should be decontaminated.
3. Give close attention to all specimens that must be centrifuged, cover if necessary with a sealed cap to prevent aerosol formation.

C. POLICY FOR PROCESSING CULTURES

1. **ALL CULTURES ARE POTENTIALLY PATHOGENIC - USE PROPER TECHNIQUE AT ALL TIMES.**
2. Large numbers of plates should be handled in baskets. Test tube racks or trays are required for tubed cultures.
3. Needles and loops should be sterilized so as not to cause spattering of material on heating.
4. Work benches should be disinfected at the end of the laboratory session or when spills occur.

D. POLICY FOR DISPOSAL OF CONTAMINATED MATERIALS

1. Discard specimens and cultures into biohazard labeled containers with red liners. Bags should be changed when about half full.
2. Bags should be sealed securely to prevent leakage.
3. Contaminated reusable instruments or other materials that are to be reused should be autoclaved prior to cleaning.
4. Any breakage of bags or leakage of contaminated materials should be properly decontaminated and cleaned up immediately.

E. PROCEDURE TO FOLLOW FOR ACCIDENTAL SPILLS

1. Notify the faculty instructor.
2. Instructor will assess the type of spill and degree of hazard involved.
3. Determine the most effective and least hazardous approach to decontamination and clean up.
 - a) Spills on the bench top or on the floor.
 - 1) Flood areas with a school approved disinfectant.
 - 2) Clean up the disinfectant and contaminated material with a paper towel and dispose of in an autoclave bag or sealed container. **MAKE SURE GLOVES ARE WORN DURING ALL PHASES OF CLEAN UP.**
 - 3) Spill area should be thoroughly washed after clean up.
 - 4) Place all contaminated items in a biohazard waste receptacle.
 - b) Centrifuge spills
 - 1) Shut off instrument.
 - 2) Person doing the clean up should wear protective clothing, gloves and face mask if needed.
 - 3) If liquids are present handle as above, and then decontaminate the instrument thoroughly.

c) Spills in incubators

- 1) If there is a liquid spill, soak up liquid with an absorbent and dispose of in an autoclave bag.
- 2) Place a towel soaked in an appropriate disinfectant.
- 3) Wipe up and wash thoroughly.

V. ELECTRICAL SAFETY SECTION

- A. Grounding
- B. Reporting of Shocks
- C. Extension Cords

A. GROUNDING

1. All instruments, including household type appliances, coffee pots, etc. should be grounded

B. REPORTING OF SHOCKS

1. All shocks must be reported immediately to instructor, including small tingles. Small shocks often precede major shocks and a light tingle may indicate potential trouble.
2. Corrective action includes turning off and unplugging the instrument and removing it from service until repairs are completed.

C. EXTENSION CORDS

1. Extension cords should be avoided. If they must be used they must be the three-way type and be properly grounded.

VI. FIRE SAFETY AND PROTECTION SECTION

The information presented here should be used in conjunction with the institutional plan. Students and faculty should be familiar with institutional policies concerning fire safety.

- A. Responsibilities
- B. Prevention
- C. Early Detection and Reporting
- D. Containment
- E. Relocation and Escape Procedures

A. RESPONSIBILITIES

1. FACULTY WILL:

a) Oversee the safety of students during their respective class sessions. This will include insuring that students utilize safe work practices, appropriate personal protective equipment and engineering controls during laboratory sessions. As needed, such efforts are to be coordinated through the program director.

b) Report all unsafe conditions to the program director so that steps may be taken to correct.

2. ALL STUDENTS have an individual responsibility for general safety and fire awareness and will cooperate with their respective instructors and the Program Director to maintain a safe learning environment.

a) Eliminate or immediately report any hazard found in the laboratory work area to the instructor.

b) Follow the reporting procedures regarding needle puncture wounds or other body fluid exposures.

c) Familiarize themselves with and adhere to laboratory safe work practices; utilize the appropriate personal protective equipment when in the laboratory; and utilize engineering controls where applicable.

3. ALL STUDENTS AND FACULTY SHOULD KNOW THE LOCATION AND USE OF THE FOLLOWING:

a) Manual Fire Alarm Boxes

b) Fire Extinguishers

c) Showers and Fire Blankets

d) Sprinkler Systems (as available) and Smoke Detectors in the area.

e) All emergency exits from the area and building.

B. PREVENTION

1. Be aware of ignition sources -- open flames, heating elements and spark gaps. SMOKING is NOT PERMITTED in the laboratory areas and anywhere else as noted by institutional policies.
2. **DO NOT** leave flames unattended.
3. **DO NOT** use flammable liquids in presence of ignition sources, and conversely keep ignition sources away from areas where flammable liquids are used and/or stored.
4. Be sure flammable liquids are properly stored.
5. Keep all areas of the laboratory free of accumulations of trash.

C. EARLY DETECTION AND REPORTING

1. REPORT THE FIRE – follow institutional policies.
2. EVACUATE - This will precede reporting **ONLY** if persons are in immediate danger. In most cases, evacuation should be horizontal. WHEN VERTICAL EVACUATION IS NEEDED, USE THE NEAREST STAIRWELL.

D. CONTAINMENT

1. CONFINE THE FIRE - It is most important that smoke and fire be prevented from spreading throughout the facility. All doors must be closed once everyone is out. Avoid panic; the greatest danger in most fires is panic. Be calm and move with assurance.
3. ALL FIRE MUST BE REPORTED, NO MATTER HOW SMALL.

E. RELOCATION

1. Follow institutional guidelines for horizontal and vertical evacuation. Once evacuation is complete, account for all students and faculty at designated locations.

VII. HIGH RISK EQUIPMENT SAFETY PROCEDURES

- A. Responsibilities
- B. Criteria
- C. Documentation of Training

A. RESPONSIBILITIES

1. It will be the responsibility of the faculty member to ensure that all students under his/her class supervision have been trained in equipment safety. This will consist of safety training on all equipment that is used in the class session and has been deemed as high risk. This also includes all new pieces of equipment introduced to students.

B. CRITERIA

- 1. High risk equipment is identified by the following:
 - a. Equipment that is intrinsically hazardous, such as instruments with needle or blade components or moving parts.
 - b. Equipment that is frequently used and may have the potential for harm if an individual becomes lax in following appropriate safety procedures.
 - c. Equipment that is intended to protect if used correctly, such as biohazard hoods or fume hoods.

C. DOCUMENTATION OF TRAINING

- 1. Documentation will be done by course as scheduled.

VIII. TRAINING OF STUDENTS

- 1. All students will be subject to initial safety education. Identified faculty will conduct this instruction and documentation of such training in the form of checklists will be provided to and kept by the program director on each student.
- 2. Faculty is covered under institutional training policies.

IX. LABORATORY SAFETY INSPECTIONS

- 1. Safety inspections of laboratory areas will be done at the beginning of each trimester by identified faculty.
- 2. Report findings to the program director so that action may be taken to correct any unsafe conditions.

X. VETERINARY OR ANIMAL CARE PROCEDURES AND TASKS

- A. Animal care and handling
- B. Radiographic procedures
- C. Anesthetic procedures
- D. Dentistry procedures
- E. Special health issues and zoonotic concerns

A. ANIMAL CARE AND HANDLING

1. It will be the responsibility of the Program Director, Clinical Coordinator, and any other guest lecturers or faculty member present to ensure that all students under his/her class supervision have been instructed in restraint or safety protocols specific to the animals required for various skills. This will include safety training on any equipment that is used in the class session and has been deemed as high risk. Reasonable care for risks to any person from an animal (bites, kicks, etc.) will be implemented at all times.

2. Humane handling of all live animals will be overseen by the responsible faculty present. Documentation of procedures executed to any animal will be noted and kept on file appropriately.

a) If there appears to be a situation of potential harm to any given animal, student, or other person, the faculty present may direct any task to cease immediately, or ask a student to cease a procedure or be removed from the skill/task area.

b) The faculty member's warnings and directives must be adhered to immediately, or a student may be asked to leave the skill area (or clinical setting) for the day.

c) All IACUC policies will be adhered to as established by the institute's committee.

B. RADIOGRAPHIC PROCEDURES

1. All students and faculty (at risk of radiographic exposure) will be supplied with a dosimetry badge, which must be worn during radiographic procedures. If the badge is not with the individual he/she will not be permitted near the exposure field.

2. When faculty and/or students are directly involved in any exposure, they will place their initials in the appropriate facility log next to the data specifying the radiographic procedure.

3. Appropriate lead shielding will be utilized by all individuals in the proximity of the primary beam and exposure field.

4. Observers will remove themselves from the exposure field to a safe distance when radiographs are taken.
5. Radiographic chemicals will be handled according to OSHA guidelines, including as necessary PPE such as goggles or face shields.

C. ANESTHETIC PROCEDURES

1. Anesthesia machines will be in good working order, and under a program of proper maintenance.
2. Scavenger systems will be in place.
3. Unnecessary exposure to anesthetic inhalants will be minimized.
4. Individuals with certain medical conditions may be required to place themselves at safe distances from the anesthetic gasses.

D. DENTISTRY PROCEDURES

1. During all prophies PPE will be utilized, including masks, examination gloves, and safety goggles or face shields.
2. Gloves will be disposed of properly and thorough hand washing will follow the completion of dental procedures.

E. SPECIAL HEALTH ISSUES AND ZOO NOTIC CONCERNS

1. Intrinsic to veterinary medicine is the possibility of exposure to zoonotic pathogens. Care will be exercised by all faculty to limit such exposures, and accepted veterinary standards of practice will be followed to minimize potential exposures.

2. Faculty must be notified immediately of potential exposures to such cases as rabies, plague, or possible zoonotic diseases. The individual will be counseled to proceed with appropriate medical care, and the occurrence will be reported as required to the proper state or federal agency.

Exposure to rabies is always of concern, but New Mexico experiences most cases from contact to wild life. Please see the current information at the NMDOH (www.nmhealth.org/about/erd/ideb/zdp/rab/). Students admitted to the CNM Veterinary Technology Program are not required to receive the prophylactic rabies, and this is discussed upon entry into the Program. After the discussion, each student must sign a waiver for the series. If the student decides to obtain the prophylactic series, they will be directed to the NMDOH for the process, and the student would be responsible for the expense (approximately \$600 for the series).

3. Student's with certain health issues, such as, but not limited to, pregnancy, HIV, Hepatitis B, orthopedic conditions, etc. are to discuss such issues with the Program Director. Personal physician releases may be requested directing the student's participation or limitations to activities. Such conditions may affect the student's completion of required course competencies, and / or fulfillment of a specific course or the Program itself, but the health and safety of the student cannot be compromised.

AVMA Position on Veterinary Facility Occupational Risks for Pregnant Workers
(Approved by AVMA Executive Board, November 2004)

Although scientific data concerning the reproductive health effects of many occupational exposures is limited, the goal of creating a safe work environment for pregnant workers can be facilitated by awareness of inherent risks and then adopting procedures to minimize risk exposure.

This information, along with all safety guidelines and procedures, should be communicated to all workers, regardless of their gender or reproductive status. The key to a safe working environment is communication, planning ahead, and educating your workers on how to use protective equipment properly, and avoiding unnecessary risks.

Any pregnant workers or workers planning to become pregnant should consult with their health care provider to determine what, if any, additional precautions are needed based on their individual situation. It is the responsibility of the worker to communicate their needs to their manager as soon as possible in order for risk reduction to begin when it can be most effective, and also to determine if additional reasonable accommodations are necessary and if they can be made.

Areas requiring special attention to risk reduction include:

- Radiological – X-ray exposure presents a significant risk to the pregnant worker. Ideally, all exposure should be avoided. If this is not possible, the pregnant worker must, as all workers should, wear appropriate shielding protection and wear a monitoring badge. Pregnant workers should never, under any circumstances, hold film cassettes in place during radiographic procedures.
- Biological
 1. Rabies and tetanus are preventable through vaccination and all workers should have vaccinations as recommended by the worker's healthcare provider in conjunction with current CDC Advisory Committee on Immunization Practices recommendations.
 2. Diseases such as salmonellosis, brucellosis, leptospirosis, and chlamydiosis present hazards associated with fever and the drugs used in treatment. Diseases such as Venezuelan equine encephalitis and listeriosis have direct harmful effects on the developing fetus. Awareness of the agents and exposure avoidance is very important, when possible.
 3. Toxoplasmosis is known to cause damage to the developing fetus. Exposure to cat feces should be avoided by pregnant workers. If this is not possible, then protective gloves and thorough hand washing must be employed. Since *Toxoplasma oocysts* are not infectious for the first 24 hours after shedding, litter boxes should be cleaned and feces removed completely every 24 hours.
 4. The hazards associated with animal bites, wound infections and cat scratch disease are proportional to the severity of the wound and the resultant treatment. The use of protective gloves, thorough hand washing and chemical restraint of fractious and aggressive animals reduce these risks.

- Chemical
 1. Care should be used when handling any pesticide, hormone or chemotherapeutic agent. Read and understand the warnings on the label and circular. Pregnant workers should not apply pesticides. If this is not possible, adequate ventilation of the area is essential and absorption through the skin should be minimized through the use of protective gloves, aprons and coveralls. Handling of hormones and chemotherapeutic agents require the same precautions.
 2. Exposure to high levels of anesthetic gases by pregnant workers is known to increase the incidence of miscarriages and congenital abnormalities in newborns. Ideally, pregnant workers should not be exposed to anesthetic gases. If this is not possible, special attention should be paid to the maintenance of anesthetic machines to assure leak free operation and efficient scavenger systems used to remove waste gases.
 3. A Material Safety Data Sheets (MSDS) manual should be readily available for reference by all workers. Additional information on MSDS can be found on the Occupational Safety and Health Administration (OSHA) Web site at www.osha.gov.
- Regulatory Issues.
 1. The **Pregnancy Discrimination Act** (an amendment to Title VII of the Civil Rights Act of 1964) makes it unlawful to discriminate on the basis of pregnancy, childbirth, or related medical conditions. Additional information is on the U.S. Equal Employment Opportunity Commission (EEOC) Web site at www.eeoc.gov.
 2. The **Family and Medical Leave Act (FMLA)** requires that covered employers must grant eligible employees up to a total of 12 weeks of unpaid leave during any 12 month period for various reasons including the employee's own serious health condition and for the care of a newborn child. Additional information can be found on the Department of Labor Web site at www.dol.gov.
 3. The **Health Insurance Portability and Accountability Act (HIPAA)** primarily provides rights and protections for participants and beneficiaries in group health plans, but also prohibits discrimination against employees and dependents based on their health status and protects the confidentiality of an employee's health information. Additional information may also be found at www.dol.gov.
 4. The **Americans with Disabilities Act (ADA)** prohibits discrimination against people with disabilities in employment. The Pregnancy Discrimination Act mentioned above states disabilities caused or contributed to by pregnancy, childbirth or related medical conditions shall be treated the same as disabilities caused or contributed to by other medical conditions for all job-related purposes. Therefore the ADA may be applicable in certain situations. More information is available on the DOL Web site at www.dol.gov.

References

Fort Meade Regional Veterinary Laboratory Service, Standard Operating Procedure.

Occup Med 1999 Apr-Jun;14(2):225-34

Anesthesia hazards to animal workers.

Meyer RE.

J Am Vet Med Assoc 1996 Jul 1;209(1):75-7

Commentary and recommendations on control of waste anesthetic gases in the workplace.

American College of Veterinary Anesthesiologists

J Am Vet Med Assoc 2001 Apr 15;218(8):1251-2

Practices should take precautions to protect pregnant workers.

Crimmins WF, Vice President of Loss Control, Mack and Parker, Inc., 55 East Jackson Blvd.,
Chicago, IL 60604

J Am Vet Med Assoc 1999 Nov 15;215(10):1433-5

Survey of occupational hazards in large animal practices.

Poole AG, Shane SM, Kearney MT, McConnell DA.

J Am Vet Med Assoc 1998 May 1;212(9):1386-8

Survey of occupational hazards in companion animal practices.

Poole AG, Shane SM, Kearney MT, Rehn W.

For more information, please contact: Membership & Field Services, Council on Veterinary Service

XI REFERENCES

1. National Committee for Clinical Laboratory Standards: *Clinical Laboratory Waste Management; Approved Guideline*, NCCLS Document GP5-A, Vol. 13 No. 22, Villanova, Pennsylvania, December 1993.
2. National Committee for Clinical Laboratory Standards: *Protection of Laboratory Workers from Instrument Biohazards and Infectious Disease Transmitted by Blood, Body Fluids, and Tissue, Approved Guideline*, NCCLS Document M29-A, Vol. 11 NO. 14, Villanova, Pennsylvania, December, 1997.
3. College of American Pathologists: *Guidelines for Laboratory Safety*, Approved Guideline, NCCLS Document GP17-A, Villanova, Pennsylvania, September, 1996.
4. U.S. Department of Labor, Occupational Safety and Health Administration: *Occupational Exposure to Bloodborne Pathogens; Final Rule*, 29 CFR Part 1910.

Safety Plan Revision/Review Dates:

4/2016